

SOUTH CAROLINA Airports System Plan

2008

 South Carolina



Prepared for:

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TABLE OF CONTENTS

- 1.0 INTRODUCTION 1
- 1.1 Goals and Objectives of the Airports System Plan 1
- 2.0 FORECAST METHODOLOGY 3
- 2.1 Based Aircraft Forecasts 3
- 2.2 Airport Operations Forecasts 3
- 2.3 Enplanement Forecasts 3
 - 2.3.1 Objectives 3
 - 2.3.2 Forecast Procedure 3
 - 2.3.3 Enplanement Forecasts 3
 - 2.3.3.1 Large Commercial Service Airports 11
 - 2.3.3.2 Small Commercial Service Airports 11
 - 2.3.4 Regional Airline Enplanement Review 11
 - 2.3.5 Airport Areas of Influence 12
- 2.4 Statewide Forecasts 12
- 3.0 AIRPORT CLASSIFICATION STATEMENTS AND MINIMUM DESIGN STANDARDS... 13
- 3.1 State Classification I – Commercial Service (SC-I) 13
- 3.2 State Classification II – Corporate/Business (SC-II) 13
- 3.3 State Classification III – Business/Recreation (SC-III) 16
- 3.4 State Classification IV – Recreation/Local Service (SC-IV) 16
- 4.0 AIRPORT PRIORITY SYSTEM 17
- 4.1 Existing Airport Rating System 17
- 4.2 Proposed Priority System 18
 - 4.2.1 Priority System Outline with Maximum Point Values 18
 - 4.2.1.1 Category I – Project Justification (types with sub-types) 18
 - 4.2.1.2 Category II – Airport Classification and Demand 21
 - 4.2.1.3 Category III – Sponsor Responsibility (high of ten points or negative ten points) 21
 - 4.2.1.4 Category IV – Other Relevant Factors (high of 50 points) 21
- 5.0 MANAGING THE FUTURE AIRPORTS SYSTEM 23
- 5.1 Adding New Airports to the System 23
- 5.2 Removing Airports from the System 24
- 5.3 Proposed Airports/Study Areas in the System 24
 - 5.3.1 Cherokee County 26
 - 5.3.1.1 Finding and Conclusion 26
 - 5.3.2 Beaufort and Jasper County Region 27
 - 5.3.2.1 Finding and Conclusion 27
 - 5.3.3 NESAs Region 27

- 5.3.3.1 Finding and Conclusion 28
- 6.0 SPECIAL USE AIRSPACE 29
- 6.1 New Special Use Areas 34
- 6.2 Civilian Airport and Airways Use and MOA 34
 - 6.2.1 Gamecock I MOA 35
 - 6.2.2 Fort Jackson Range R-6001 A & B 35
 - 6.2.3 Poinsett Weapons Range R-6002 A, B, & C 35
 - 6.2.4 Poinsett MOA 35
 - 6.2.5 Gamecock B, C, & D and Robroy MOAs 35
 - 6.2.6 Beaufort 1, 2, and 3 MOAs 36
 - 6.2.7 Unnamed National Security Area Between Augusta, Georgia and Barnwell, South Carolina 36
 - 6.2.8 Conclusion 36
- 6.3 Charlotte-Douglas International Airport Class B Airspace Expansion 36
- 7.0 PRELIMINARY LEAKAGE ANALYSIS OF SOUTH CAROLINA’S COMMERCIAL SERVICE AIRPORTS 39
- 7.1 Leakage Definition 39
- 7.2 Analysis Methodolgy 39
- 7.3 Documents Reviewed 39
 - 7.3.1 Airport Comparison Tables 39
 - 7.3.2 Travel Price Comparison Tables 39
 - 7.3.3 Airport Service Area Drawings 40
- 7.4 Commercial Service Airport Analyses 40
 - 7.4.1 Hilton Head Island Airport (HXD) 40
 - 7.4.2 Charleston International Airport (CHS) 42
 - 7.4.3 Myrtle Beach International Airport (MYR) 44
 - 7.4.4 Florence Regional Airport (FLO) 46
 - 7.4.5 Columbia Metropolitan Airport (CAE) 48
 - 7.4.6 Greenville-Spartanburg International (GSP) 50
 - 7.4.7 Summary 53
- 8.0 FINANCIAL PLAN 55
- 8.1 Program Revenue Sources 55
 - 8.1.1 Commercial Service Airline Revenues (Airline Property Tax) 55
 - 8.1.2 General Aviation Revenues (General Fund/Aviation Fuel Tax) 56
 - 8.1.3 Revenue Forecast for 20-Year Planning Horizon 56
- 8.2 Estimated Aviation System Need 57
- 8.3 Estimated FAA, SCDOA, and Local Participation 57
- 8.4 State Aviation Programs of Financial Assistance 57
 - 8.4.1 Capital Improvement Program 63
 - 8.4.2 Maintenance Program 63
 - 8.4.3 Communications, Navigation, and Surveillance (CNS) Program 64
 - 8.4.4 Estimated SCDOA Funding Participation Need 64





South Carolina Airports System Plan



8.4.5 SCDOA Funding Deficit.....64

9.0 AIRPORTS SYSTEM PLAN WEB SITE.....67

10.0 AIRPORT SECURITY PLAN69

TABLES

2.1-1 Historical Based Aircraft.....4

2.2-1 Airport Operations Forecasts.....5

2.3.3-1 Commercial Service Airport Enplanements10

2.3.4-1 Regional Airline/Commuter Enplanements.....11

2.3.5-1 Air Carrier Airport Areas of Influence12

3.0-1 South Carolina Airports by Classification.....14

4.2-1 Priority System Scoring Values for Capital Improvement Program.....19

4.2-2 Example 2009-2013 Capital Improvement Program Projects by Priority Score.....20

5.3.3-1 Current Percentage of the Annual Service Volume for the Three Commercial Service Airports 28

6.0-1 Special Use Airspace in South Carolina.....29

7.4.1-1 Airport Comparisons – Hilton Head Island Airport40

7.4.1-2 Travel Price Comparisons – Hilton Head Island Airport.....41

7.4.1-3 Estimated Leakage – Hilton Head Island Airport.....42

7.4.2-1 Airport Comparisons – Charleston International Airport42

7.4.2-2 Travel Price Comparisons – Charleston International Airport.....43

7.4.2-3 Estimated Leakage – Charleston International Airport.....44

7.4.3-1 Airport Comparisons – Myrtle Beach International Airport.....45

7.4.3-2 Travel Price Comparisons – Myrtle Beach International Airport.....45

7.4.3-3 Estimated Leakage – Myrtle Beach International Airport46

7.4.4-1 Airport Comparisons – Florence Regional Airport47

7.4.4-2 Travel Price Comparisons – Florence Regional Airport47

7.4.4-3 Estimated Leakage – Florence Regional Airport.....48

7.4.5-1 Airport Comparisons – Columbia Metropolitan Airport.....48

7.4.5-2 Travel Price Comparisons – Columbia Metropolitan Airport.....49

7.4.5-3 Estimated Leakage – Columbia Metropolitan Airport50

7.4.6-1 Airport Comparisons – Greenville-Spartanburg International Airport.....51

7.4.6-2 Travel Price Comparisons – Greenville-Spartanburg International Airport.....52

7.4.6-3 Estimated Leakage – Greenville-Spartanburg International Airport53

7.4.7-1 Summary of Estimated Leakage53

8.1.1-1 Potential Commercial Service Airline Revenue Generation55

8.1.2-1 Potential Revenue Generation from Aviation Fuel Tax and Appropriated Funds.....56

8.1.3-1 Potential Revenue Generation from Aviation Sources.....56

8.2.1 20-Year Estimated Capital Improvement Needs Assessment.....58

8.2-2 Commercial Service Airports (CAE, CHS, GSP, and MYR) 20-Year Estimated Capital Improvement Needs Assessment.....59

8.2-3 Commercial Service Airports (FLO and HXD) 20-Year Estimated Capital Improvement Needs Assessment.....60

8.2-4 NPIAS General Aviation Airports 20-Year Estimated Capital Improvement Needs Assessment.....61

8.2-5 Non-NPIAS General Aviation Airports 20-Year Estimated Capital Improvement Needs Assessment.....62

8.3-1 Historic FAA and SCDOA Funding57

8.4-1 SCDOA Maintenance Funding.....57

8.4-2 SCDOA NAVAID Funding63

8.4.2-1 20-Year Estimated Maintenance and Communication, Navigation, and Surveillance Program Need.....64

8.4.4-1 Estimated SCDOA Funding Participation Need Without Over-Flight Fee Revenues.....64

FIGURES

1.0-1 South Carolina System Airports.....1

3.0-1 South Carolina Recommended Airports System.....15

5.3-1 Proposed Airport Study Areas25

6.0-1 Special Use Airspace in South Carolina30

6.0-2 Gamecock I MOA and R-600131

6.0-3 Poinsett Weapons Range R-6002-A, B and C31

6.0-4 Poinsett MOA32

6.0-5 Gamecock B, C, D, and Robroy MOAs.....32

6.0-6 Beaufort 1, 2 and 3 MOAs.....33

6.0-7 National Security Area33

6.0-8 Poinsett Transition Area.....34

6.4-1 Proposed New Charlotte-Douglas International Airport Class B Airspace.....37

7.4.1-1 Hilton Head Island Airport Service Area41

7.4.2-1 Charleston International Airport Service Area44

7.4.3-1 Myrtle Beach International Airport Service Area.....46

7.4.5-1 Columbia Metropolitan Airport Service Area50

7.4.6-1 Greenville-Spartanburg International Airport Service Area52





ACRONYMS AND ABBREVIATIONS

0A2	Hester Memorial Airport
35A	Union County, Troy Shelton Field Airport
38J	Hemingway-Stuckey Airport
3J0	Hampton-Varnville Airport
3J1	Ridgeland Airport
51J	Lake City Municipal, CJ Evans Field Airport
52J	Lee County Airport
5J5	Holly Hill Airport
5J9	Twin City Airport
6J0	Lexington County at Pelion Airport
6J2	St. George Airport
6J4	Saluda County Airport
6J6	Edgefield County Airport
88J	Allendale County Airport
99N	Bamberg County Airport
ACIP	Airport Capital Improvement Program
ADO	Airports District Office
ADS-B	Automatic Dependent Surveillance – Broadcast
AGS	Augusta Regional Airport
AIK	Aiken Municipal Airport
AIP	Airport Improvement Program
ALP	Airport Layout Plan
AMSL	Above Mean Sea Level
AND	Anderson Regional Airport
ARC	Airport Reference Code
ARW	Beaufort County Airport
ATL	Hartsfield-Jackson, Atlanta International Airport
AVL	Asheville Regional Airport
AWOS	Automated Weather Observations System
BBP	Marlboro County Jetport - H.E. Avent Field Airport
BNL	Barnwell County Airport
CAE	Columbia Metropolitan Airport
CDN	Woodward Field Airport (Camden)
CEU	Oconee County Regional Airport
CHS	Charleston AFB/International Airport
CKI	Williamsburg Regional Airport
CLT	Charlotte-Douglas International Airport
CNS	Communications, Navigation, and Surveillance
CQW	Cheraw Municipal/Lynch Bellinger Field Airport
CRE	Grand Strand Airport
CUB	Columbia Owens Downtown Airport
DCM	Chester Catawba Regional Airport

DLC	Dillon County Airport
DYB	Summerville Airport
EOE	Newberry County Airport
F&E	Facilities and Equipment
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FDW	Fairfield County Airport
FLO	Florence Regional Airport
GGE	Georgetown County Airport
GMU	Greenville Downtown Airport
GRD	Greenwood County Airport
GSP	Greenville-Spartanburg International Airport
GYH	Donaldson Field (South Carolina Technology & Aviation Center)
HIRL	High Intensity Runway Light
HVS	Hartsville Regional Airport
HXD	Hilton Head Island Airport
HYW	Conway-Horry County Airport
ILM	Wilmington International Airport
JZI	Charleston Executive Airport
LKR	Lancaster County-McWhirter Field Airport
LQK	Pickens County Airport
LRO	Mt. Pleasant Regional/East Cooper Airport
LUX	Laurens County Airport
MAO	Marion County Airport
MIRL	Medium Intensity Runway Light
MKS	Berkeley County Airport
MNI	Santee Cooper Regional Airport
MOA	Military Operations Area
MYR	Myrtle Beach International Airport
NESA	North Eastern Strategic Alliance
NPIAS	National Plan of Integrated Airport Systems
OGB	Orangeburg Municipal Airport
PAPI	Precision Approach Path Indicator
PHH	Robert F. Swinnie-Andrews Municipal Airport
PYG	Pageland Airport
RBW	Lowcountry Regional Airport (Walterboro)
REIL	Runway End Identifier Light
RJ	Regional Jet
S19	McCormick County Airport
SAV	Savannah/Hilton Head International Airport
SCAC	South Carolina Aeronautics Commission
SCASP	South Carolina Airports System Plan
SCCAIRS	South Carolina Comprehensive Information Reporting System
SCDOA	South Carolina Department of Commerce Division of Aeronautics





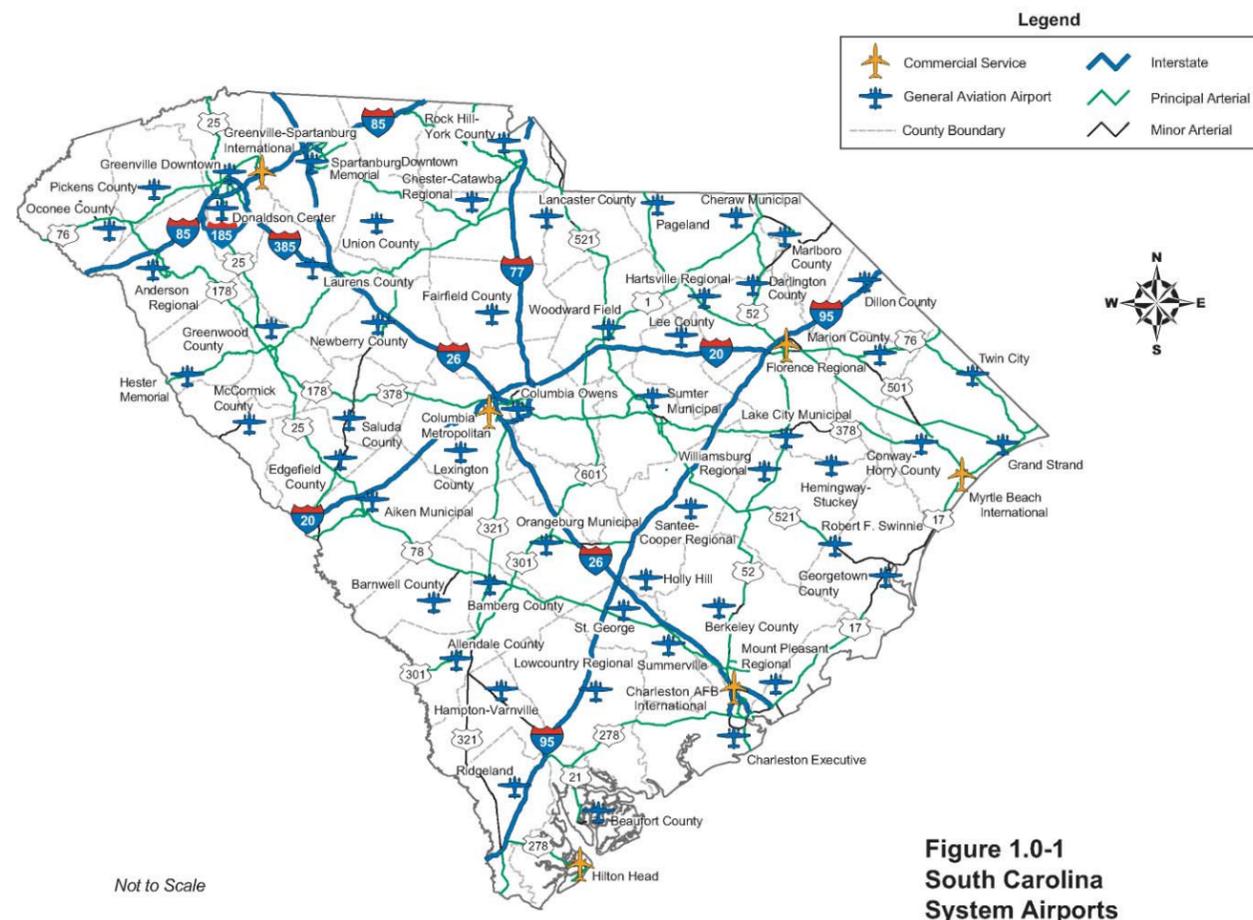
SMS	Sumter Airport
SPA	Spartanburg Downtown Memorial Airport
SUA	Special Use Airspace
TAF	FAA Terminal Area Forecasts
UDG	Darlington County Jetport Airport
USDOT	U.S. Department of Transportation
UZA	Rock Hill/York County/Bryant Field Airport





1.0 INTRODUCTION

The South Carolina Airports System Plan (SCASP) will be the South Carolina Department of Commerce, Division of Aeronautics' (SCDOA) 20-year plan for development at South Carolina's public use airports. The SCASP will incorporate traditional aviation planning techniques that identify future air traffic demands and the facilities required to meet these demands. It will also include a strategic planning element that will allow SCDOA to respond to changing aviation and economic trends including emerging technologies, projected funding shortfalls, and shifting priorities. The SCASP will provide a framework for investigating issues such as networking, economic impact of airports on their local communities and the state, and development of long-range strategies to meet the future aviation needs of South Carolinians.



1.1 GOALS AND OBJECTIVES OF THE AIRPORTS SYSTEM PLAN

The goal of an Airports System Plan is to provide guidelines for future system development, which will satisfy aviation demand in a cost-effective, feasible manner, while resolving aviation, environmental, and socioeconomic issues of the state in accordance with Federal Aviation Administration (FAA) Advisory Circular 150/5070-7 – The Airport System Planning Process.¹ The objectives of the plan are attainable targets that are action oriented and designed to address specific elements consistent with attainment of the goal. The objectives for the Airports System Plan are based on an initial evaluation of the airport system with SCDOA staff and the SCASP Technical Advisory Committee (comprised of ten members).

As information is developed during data-gathering efforts, objectives for the Airports System Plan should be flexible to assure an objective basis for the final product. The specific goals and objectives for the SCASP are:

- ➔ **Inventory of the existing public use airport system** – The inventory included on-site airport visits to discuss facilities, planning, airspace, and development issues; airport's capital improvement program (ACIP); and airport's vision of the future; and cataloging each airport's historic and current facilities and operational activity levels from the South Carolina Comprehensive Aviation Information Reporting System (SCCAIRS) database.
- ➔ **Identification of each public use airport's role within the system** – The system classification was accomplished by determining how each airport currently contributes to South Carolina's economic development needs, rather than design role, as well as minimum design standards for each classification.
- ➔ **Establishment of a priority system for state funding** – The existing priority system was updated and expanded to provide the SCDOA and South Carolina Aeronautics Commission (SCAC) with a tool to determine project priorities based on numerical value.
- ➔ **Identification of deficiencies in the system** – The system was analyzed to determine whether there was a need for new airports or replacement of existing airports. In addition, a system was recommended to manage the system airports by adding or removing airports.
- ➔ **Estimation of development costs and funding needs** – Costs and funding options that are required to enable the system airports to meet facility and service objectives for continued economic development for the State of South Carolina were estimated.
- ➔ **Establishment of an easily updated plan** – The SCASP will be a web-based plan that can be updated on an annual basis. The purpose of the SCASP is to allow for continued development throughout the system as the need arises.

¹U.S. Department of Transportation Federal Aviation Administration, "The Airport System Planning Process" AC No.: 150/5070-7 (November 4, 2004), <http://www.faa.gov/airports_airtraffic/airports/resources/advisory_circulars/media/150-5070-7/150_5070_7.pdf>.





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2.0 FORECAST METHODOLOGY

Forecasts of aviation activity were developed for each of the 60 public use airports in South Carolina as part of the SCASP. It was determined that a trend line forecast methodology would be applied to each airport using existing data from the FAA, SCDOA, and individual airports. This methodology provided a macro-level analysis of the aviation activity that could reasonably be expected over the next 20 years in South Carolina.

2.1 BASED AIRCRAFT FORECASTS

The first step in determining the 20-year aviation activity for the State of South Carolina was to determine the future based aircraft. A 20-year trend line of based aircraft was developed from historical annual based aircraft counts for each airport. This information was obtained from the FAA Terminal Area Forecast records.²

Aircraft types were then derived from the FAA Airport Master Record (5010) data and total based aircraft forecasts.³ These percentages remain constant through the planning period (Table 2.1-1, page 4).

2.2 AIRPORT OPERATIONS FORECASTS

The operations forecasts were developed a bit differently from the based aircraft forecasts. Instrument flight rules operations were forecast first and independently from total operations forecasts as detailed historical instrument flight rules operations data was provided by the FAA for each of the 60 system airports. The same linear trend line forecast was applied to the historical instrument flight rules operations data to determine the 20-year forecast instrument operations.

The total operations for each of the airports, from the FAA 5010 data, were divided into the total itinerant operations in order to determine the relationship between instrument flight rules operations and itinerant operations. This ratio was then used to forecast total itinerant operations. The FAA 5010 ratio of air carrier, commuter/air taxi, general aviation, and military operations within itinerant operations was then used to forecast these specific types for the planning period. With the exception of towered airports, total itinerant operations per based aircraft were capped at 400.

²Federal Aviation Administration, "Terminal Area Forecast (TAF)," <<http://aspm.faa.gov/main/taf.asp>>, accessed April 2007.

³GRC and Associates, Inc., "Airport IQ 5010 Airport Master Records and Reports," <<http://www.gcr1.com/5010WEB/>>, accessed April 2007.

The local operations per based aircraft ratios were then calculated for the most recent year of FAA 5010 data available. This ratio determined the total local operations for the 20-year planning period. General aviation and military local operations were then determined from the existing ratio of these groups from the FAA 5010 data. With the exception of towered airports, total itinerant operations per based aircraft were capped at 400 for airports with 20 or above based aircraft and capped at 300 for airports with less than 20 based aircraft.

The itinerant and local operations numbers were added in order to arrive at a total forecast operations level for each of the airports (Table 2.2-1, pages 5 through 9).

2.3 ENPLANEMENT FORECASTS

2.3.1 Objectives

- Generate aviation forecast of airline passenger enplanements for each of the state's six commercial service airports.
- Review the trends of regional (commuter) airline enplanements for each of the state's six commercial service airports.
- Analyze trends of enplanements for groupings of South Carolina commercial service airports with other, out-of-state, commercial service airports.

2.3.2 Forecast Procedure

To forecast commercial service passenger enplanements, a procedure of trend line forecasting is used. This procedure is identical to the procedure used for 'Based Aircraft' and 'Aircraft Operations' forecasting as shown in preceding system plan sections. The "FORECAST" program is a two variable program located within the 'Excel' computer program offerings.

The principal time line used is from 1998 through 2008. Enplanements for 1998 through 2008 were obtained from SCDOA records. An important assumption of non-restrained forecasting is used.

2.3.3 Enplanement Forecasts

Table 2.3.3-1 (page 10) illustrates the forecasts for commercial service passenger enplanements for the six South Carolina commercial service airports. The forecasts are for 5-, 10-, and 20-year time periods; i.e., 2013, 2018, and 2028.





South Carolina Airports System Plan



**Table 2.2-1
Airport Operations Forecasts
South Carolina Airports System Plan**

FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC	FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC		
			AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total							AC	A Taxi	GA	Mil	Total	GA	Mil	Total					
AIK	Aiken Municipal	5010/2008	0	2,600	14,000	500	17,100	38,000	0	38,000	55,100	400	67	MKS	Berkeley County	5010/2008	0	850	12,500	200	13,550	28,450	0	28,450	42,000	400	40		
		% Inst. Ops.					26.58%									% Inst. Ops.													
		% total splits	0.00%	15.20%	81.87%	2.92%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.					% total splits	0.00%	6.27%	92.25%	1.48%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	2,600	14,000	500	17,100	38,000	0	38,000	55,100	4,546	67			2008	0	850	12,500	200	13,550	28,450	0	28,450	42,000	406	40		
		2013	0	3,203	17,246	616	21,065	29,200	0	29,200	50,265	5,600	73			2013	0	2,512	36,946	591	40,049	20,000	0	20,000	60,049	1,200	50		
		2017	0	3,718	20,018	715	24,450	29,600	0	29,600	54,050	6,500	74			2017	0	2,931	43,103	690	46,724	22,400	0	22,400	69,124	1,400	56		
2028	0	4,747	25,561	913	31,221	31,200	0	31,200	62,421	8,300	78	2028	0	3,978	58,498	936	63,411	26,800	0	26,800	90,211	1,900	67						
88J	Allendale County	5010/2008	0	500	5,000	200	5,700	7,500	0	7,500	13,200	300	12	CHS	Charleston AFB/ International	5010/2008	21,151	33,450	28,774	16,441	99,816	1,171	11,300	12,471	112,287	356	35		
		% Inst. Ops.					13.95%									% Inst. Ops.													
		% total splits	0.00%	8.77%	87.72%	3.51%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.					% total splits	21.19%	33.51%	28.83%	16.47%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	500	5,000	200	5,700	7,500	0	7,500	13,200	795	12			2008	21,151	33,450	28,774	16,441	99,816	1,171	11,300	12,471	112,287	74,470	35		
		2013	0	692	6,918	277	7,887	4,200	0	4,200	12,087	1,100	14			2013	23,630	37,371	32,147	18,368	111,517	1,439	13,883	15,322	126,839	83,200	43		
		2017	0	881	8,805	352	10,038	4,800	0	4,800	14,838	1,400	16			2017	24,227	38,315	32,959	18,832	114,332	1,606	15,497	17,103	131,435	85,300	48		
2028	0	1,321	13,208	528	15,057	6,000	0	6,000	21,057	2,100	20	2028	25,363	40,111	34,504	19,715	119,693	1,941	18,726	20,666	140,360	89,300	58						
AND	Anderson Regional	5010/2008	26	4,500	28,600	400	33,526	20,000	0	20,000	53,526	256	78	JZI	Charleston Executive	5010/2008	0	2,000	15,000	3,000	20,000	35,000	0	35,000	55,000	400	66		
		% Inst. Ops.					12.76%									% Inst. Ops.													
		% total splits	0.08%	13.42%	85.31%	1.19%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.					% total splits	0.00%	10.00%	75.00%	15.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	26	4,500	28,600	400	33,526	20,000	0	20,000	53,526	4,278	78			2008	0	2,000	15,000	3,000	20,000	35,000	0	35,000	55,000	11,084	66		
		2013	27	4,734	30,084	421	35,266	25,128	0	25,128	60,394	4,500	98			2013	0	2,833	21,247	4,249	28,329	34,400	0	34,400	62,729	15,700	86		
		2017	32	5,470	34,764	486	40,752	29,231	0	29,231	69,982	5,200	114			2017	0	3,519	26,389	5,278	35,186	38,000	0	38,000	73,186	19,500	95		
2028	40	6,942	44,123	617	51,723	37,692	0	37,692	89,415	6,600	147	2028	0	4,872	36,539	7,308	48,719	46,000	0	46,000	94,719	27,000	115						
99N	Bamberg County	5010/2008	0	0	2,150	0	2,150	2,250	0	2,250	4,400	300	5	CQW	Cheraw Municipal/ Lynch Bellinger Field	5010/2008	0	0	6,500	200	6,700	14,000	0	14,000	20,700	400	28		
		% Inst. Ops.					2.70%									% Inst. Ops.													
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.					% total splits	0.00%	0.00%	97.01%	2.99%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	0	2,150	0	2,150	2,250	0	2,250	4,400	58	5			2008	0	0	6,500	200	6,700	14,000	0	14,000	20,700	345	28		
		2013	0	0	2,224	0	2,224	1,500	0	1,500	3,724	60	5			2013	0	0	6,594	203	6,797	13,200	0	13,200	19,997	350	33		
		2017	0	0	2,224	0	2,224	1,500	0	1,500	3,724	60	5			2017	0	0	6,594	203	6,797	14,800	0	14,800	21,597	350	37		
2028	0	0	2,224	0	2,224	1,500	0	1,500	3,724	60	5	2028	0	0	6,594	203	6,797	17,200	0	17,200	23,997	350	43						
BNL	Barnwell County	5010/2008	0	0	12,000	750	12,750	11,000	0	11,000	23,750	306	36	DCM	Chester-Catawba Regional	5010/2008	0	0	2,400	0	2,400	6,000	0	6,000	8,400	231	26		
		% Inst. Ops.					4.11%									% Inst. Ops.													
		% total splits	0.00%	0.00%	94.12%	5.88%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.					% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	0	12,000	750	12,750	11,000	0	11,000	23,750	524	36			2008	0	0	2,400	0	2,400	6,000	0	6,000	8,400	54	26		
		2013	0	0	13,740	859	14,599	12,222	0	12,222	26,821	600	40			2013	0	0	2,222	0	2,222	7,154	0	7,154	9,376	50	31		
		2017	0	0	13,740	859	14,599	14,667	0	14,667	29,266	600	48			2017	0	0	2,222	0	2,222	7,846	0	7,846	10,068	50	34		
2028	0	0	13,740	859	14,599	19,556	0	19,556	34,155	600	64	2028	0	0	2,222	0	2,222	9,000	0	9,000	11,222	50	39						
ARW	Beaufort County	5010/2008	0	1,535	14,845	0	16,380	25,595	0	25,595	41,975	400	45	CAE	Columbia Metropolitan	5010/2008	8,874	46,330	22,586	2,057	79,847	11,014	1,300	12,314	92,161	124	99		
		% Inst. Ops.					7.85%									% Inst. Ops.													
		% total splits	0.00%	9.37%	90.63%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.					% total splits	11.11%	58.02%	28.29%	2.58%	100.00%	89.44%	10.56%	100.00%		Inst. Ops.		
		2008	0	1,535	14,845	0	16,380	25,595	0	25,595	41,975	1,286	45			2008	8,874	46,330	22,586	2,057	79,847	11,014	1,300	12,314	92,161	68,275	99		
		2013	0	4,774	46,174	0	50,949	25,600	0	25,600	76,549	4,000	64			2013	8,877	46,347	22,594	2,058	79,876	13,795	1,628	15,424	95,300	68,300	124		
		2017	0	5,013	48,483	0	53,496	32,400	0	32,400	85,896	4,200	81			2017	8,877	46,347	22,594	2,058	79,876	17,022	2,009	19,031	98,907	68,300	153		
2028	0	5,610	54,255	0	59,865	46,000	0	46,000	105,865	4,700	115	2028	8,877	46,347	22,594	2,058	79,876	23,363	2,758	26,121	105,997	68,300	210						

Note: Rounding has been applied
 Source: Federal Aviation Administration (January 2009)
 South Carolina Division of Aeronautics (January 2009)
 Talbert & Bright, Inc. (March 2009)





South Carolina Airports System Plan



Table 2.2-1 (continued)
Airport Operations Forecasts
South Carolina Airports System Plan

FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC	FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC				
			AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total							AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total				GA	Mil	Total	
CUB	Columbia Owens Downtown	5010/2008	0	3,500	22,000	1,000	26,500	29,500	0	29,500	56,000	225	131	FDW	Fairfield County	5010/2008	0	500	5,000	300	5,800	11,200	0	11,200	17,000	373	30				
		% Inst. Ops.					30.74%																								
		% total splits	0.00%	13.21%	83.02%	3.77%	100.00%	100.00%	100.00%	0.00%	100.00%						% total splits	0.00%	8.62%	86.21%	5.17%	100.00%	100.00%	0.00%	100.00%				Inst. Ops.		
		2008	0	3,500	22,000	1,000	26,500	29,500	0	29,500	56,000	8,146	131			2008	0	500	5,000	300	5,800	11,200	0	11,200	17,000	920	30				
		2013	0	3,523	22,146	1,007	26,676	31,527	0	31,527	58,202	8,200	140			2013	0	489	4,891	293	5,674	13,440	0	13,440	19,114	900	36				
		2018	0	3,566	22,416	1,019	27,001	34,454	0	34,454	61,455	8,300	153			2018	0	598	5,978	359	6,935	14,933	0	14,933	21,868	1,100	40				
2028	0	4,168	26,197	1,191	31,555	40,309	0	40,309	71,865	9,700	179	2028	0	870	8,696	522	10,087	17,547	0	17,547	27,634	1,600	47								
HYW	Conway-Horry County	5010/2008	0	100	2,000	50	2,150	40,900	0	40,900	43,050	1,023	40	FLO	Florence Regional	5010/2008	2	5,355	15,586	1,998	22,941	4,220	920	5,140	28,081	99	52				
		% Inst. Ops.					249.02%									% Inst. Ops.															
		% total splits	0.00%	4.65%	93.02%	2.33%	100.00%	100.00%	100.00%	0.00%	100.00%					Inst. Ops.															
		2008	0	100	2,000	50	2,150	40,900	0	40,900	43,050	5,354	40			2008	2	5,355	15,586	1,998	22,941	4,220	920	5,140	28,081	11,053	52				
		2013	0	58	1,158	29	1,245	40,900	0	40,900	42,145	3,100	40			2013	2	5,378	15,652	2,006	23,039	4,382	955	5,338	28,376	11,100	54				
		2018	0	60	1,195	30	1,285	40,900	0	40,900	42,185	3,200	40			2018	2	5,378	15,652	2,006	23,039	4,869	1,062	5,931	28,969	11,100	60				
2028	0	64	1,270	32	1,365	40,900	0	40,900	42,265	3,400	40	2028	2	5,378	15,652	2,006	23,039	5,681	1,238	6,919	29,958	11,100	70								
UDG	Darlington County Jetport	5010/2008	0	500	3,500	100	4,100	5,500	0	5,500	9,600	300	12	GGE	Georgetown County	5010/2008	0	1,000	25,000	500	26,500	21,500	0	21,500	48,000	400	34				
		% Inst. Ops.					30.71%									% Inst. Ops.															
		% total splits	0.00%	12.20%	85.37%	2.44%	100.00%	100.00%	100.00%	0.00%	100.00%					Inst. Ops.															
		2008	0	500	3,500	100	4,100	5,500	0	5,500	9,600	1,259	12			2008	0	1,000	25,000	500	26,500	21,500	0	21,500	48,000	5,111	34				
		2013	0	516	3,614	103	4,234	4,500	0	4,500	8,734	1,300	15			2013	0	1,233	30,816	616	32,665	20,800	0	20,800	53,465	6,300	52				
		2018	0	516	3,614	103	4,234	4,500	0	4,500	8,734	1,300	15			2018	0	1,467	36,686	734	38,887	26,800	0	26,800	65,687	7,500	67				
2028	0	516	3,614	103	4,234	4,500	0	4,500	8,734	1,300	15	2028	0	1,976	49,403	988	52,367	38,800	0	38,800	91,167	10,100	97								
DLC	Dillon County	5010/2008	0	0	800	100	900	1,200	0	1,200	2,100	300	2	CRE	Grand Strand	5010/2008	2	3,466	29,883	1,065	34,416	14,375	210	14,585	49,001	243	60				
		% Inst. Ops.					6.00%									% Inst. Ops.															
		% total splits	0.00%	0.00%	88.89%	11.11%	100.00%	100.00%	100.00%	0.00%	100.00%					Inst. Ops.															
		2008	0	0	800	100	900	1,200	0	1,200	2,100	54	2			2008	2	3,466	29,883	1,065	34,416	14,375	210	14,585	49,001	13,331	60				
		2013	0	0	741	93	833	600	0	600	1,433	50	2			2013	2	3,510	30,262	1,079	34,852	14,375	210	14,585	49,437	13,500	60				
		2018	0	0	741	93	833	600	0	600	1,433	50	2			2018	2	3,718	32,055	1,142	36,918	14,375	210	14,585	51,503	14,300	60				
2028	0	0	741	93	833	600	0	600	1,433	50	2	2028	2	4,134	35,642	1,270	41,048	14,375	210	14,585	55,633	15,900	60								
GYH	Donaldson Field (South Carolina Technology & Aviation Center)	5010/2008	21	5,411	12,935	3,026	21,393	15,812	1,616	17,428	38,821	210	83	GMU	Greenville Downtown	5010/2008	7	21,964	25,306	2,089	49,366	20,996	129	21,125	70,491	87	244				
		% Inst. Ops.					19.31%									% Inst. Ops.															
		% total splits	0.10%	25.29%	60.46%	14.14%	100.00%	90.73%	9.27%	100.00%			Inst. Ops.																		
		2008	21	5,411	12,935	3,026	21,393	15,812	1,616	17,428	38,821	4,132	83			2008	7	21,964	25,306	2,089	49,366	20,996	129	21,125	70,491	21,215	244				
		2013	21	5,369	12,835	3,003	21,227	18,670	1,908	20,578	41,805	4,100	98			2013	9	26,918	31,014	2,560	60,500	23,405	144	23,549	84,050	26,000	272				
		2018	21	5,369	12,835	3,003	21,227	20,575	2,103	22,677	43,905	4,100	108			2018	10	30,956	35,666	2,944	69,575	25,298	155	25,454	95,029	29,900	294				
2028	21	5,369	12,835	3,003	21,227	24,385	2,492	26,877	48,104	4,100	128	2028	12	38,927	44,851	3,702	87,493	29,257	180	29,436	116,929	37,600	340								
6J6	Edgefield County	5010/2008	0	0	500	0	500	10,000	0	10,000	10,500	385	26	GSP	Greenville-Spartanburg International	5010/2008	6,248	37,689	11,817	1,267	57,021	572	567	1,139	58,160	76	15				
		% Inst. Ops.					9.60%									% Inst. Ops.															
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	100.00%	0.00%	100.00%					Inst. Ops.															
		2008	0	0	500	0	500	10,000	0	10,000	10,500	48	26			2008	6,248	37,689	11,817	1,267	57,021	572	567	1,139	58,160	52,630	15				
		2013	0	0	521	0	521	10,000	0	10,000	10,521	50	26			2013	6,244	37,668	11,810	1,266	56,988	801	794	1,595	58,583	52,600	21				
		2018	0	0	625	0	625	10,000	0	10,000	10,625	60	26			2018	6,244	37,668	11,810	1,266	56,988	801	794	1,595	58,583	52,600	21				
2028	0	0	1,042	0	1,042	10,000	0	10,000	11,042	100	26	2028	6,244	37,668	11,810	1,266	56,988	801	794	1,595	58,583	52,600	21								

Note: Rounding has been applied
 Source: Federal Aviation Administration (January 2009)
 South Carolina Division of Aeronautics (January 2009)
 Talbert & Bright, Inc. (March 2009)





South Carolina Airports System Plan



Table 2.2-1 (continued)
Airport Operations Forecasts
South Carolina Airports System Plan

FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC	FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC	
			AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total							AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total				
GRD	Greenwood County	5010/2008	0	1,000	13,900	100	15,000	25,000	0	25,000	40,000	400	62	5J5	Holly Hill	5010/2008	0	0	800	0	800	2,500	0	2,500	3,300	156	16	
		% Inst. Ops.					14.85%																					
		% total splits	0.00%	6.67%	92.67%	0.67%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.						0.00%	0.00%	100.00%	0.00%	100.00%		Inst. Ops.				
		2008	0	1,000	13,900	100	15,000	25,000	0	25,000	40,000	2,227	62				2008	0	0	800	0	800	2,500	0	2,500	3,300	5	16
		2013	0	988	13,731	99	14,818	30,000	0	30,000	44,818	2,200	75				2013	0	0	800	0	800	2,500	0	2,500	3,300	5	16
		2018	0	988	13,731	99	14,818	34,000	0	34,000	48,818	2,200	85				2018	0	0	800	0	800	2,500	0	2,500	3,300	5	16
2028	0	1,033	14,356	103	15,492	41,200	0	41,200	56,692	2,300	103		2028	0	0	800	0	800	2,500	0	2,500	3,300	5	16				
3J0	Hampton-Varnville	5010/2008	0	0	800	0	800	600	0	600	1,400	300	2	51J	Lake City Municipal/ C.J. Evans	5010/2008	0	15	1,514	8	1,537	1,500	0	1,500	3,037	300	5	
		% Inst. Ops.					4.63%																					
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.						0.00%	0.98%	98.50%	0.52%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.	
		2008	0	0	800	0	800	600	0	600	1,400	37	2				2008	0	15	1,514	8	1,537	1,500	0	1,500	3,037	256	5
		2013	0	0	865	0	865	600	0	600	1,465	40	2				2013	0	18	1,774	9	1,801	1,500	0	1,500	3,301	300	5
		2018	0	0	865	0	865	600	0	600	1,465	40	2				2018	0	19	1,952	10	1,981	1,500	0	1,500	3,481	330	5
2028	0	0	865	0	865	600	0	600	1,465	40	2		2028	0	24	2,425	13	2,462	1,500	0	1,500	3,962	410	5				
HVS	Hartsville Regional	5010/2008	0	0	2,700	300	3,000	3,000	0	3,000	6,000	125	24	LKR	Lancaster County/ McWhirter Field	5010/2008	0	350	10,000	300	10,650	14,350	0	14,350	25,000	400	34	
		% Inst. Ops.					16.53%																					
		% total splits	0.00%	0.00%	90.00%	10.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.						0.00%	3.29%	93.90%	2.82%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.	
		2008	0	0	2,700	300	3,000	3,000	0	3,000	6,000	496	24				2008	0	350	10,000	300	10,650	14,350	0	14,350	25,000	795	34
		2013	0	0	2,722	302	3,024	3,375	0	3,375	6,399	500	27				2013	0	396	11,321	340	12,057	13,600	0	13,600	25,657	900	34
		2018	0	0	2,722	302	3,024	3,500	0	3,500	6,524	500	28				2018	0	440	12,579	377	13,396	13,600	0	13,600	26,996	1,000	34
2028	0	0	2,831	315	3,145	3,750	0	3,750	6,895	520	30		2028	0	572	16,352	491	17,415	13,600	0	13,600	31,015	1,300	34				
38J	Hemingway-Stuckey	5010/2008	0	0	50	0	50	250	0	250	300	250	0	LUX	Laurens County	5010/2008	0	150	1,000	150	1,300	4,200	0	4,200	5,500	300	12	
		% Inst. Ops.					20.00%																					
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.						0.00%	11.54%	76.92%	11.54%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.	
		2008	0	0	50	0	50	250	0	250	300	10	0				2008	0	150	1,000	150	1,300	4,200	0	4,200	5,500	57	12
		2013	0	0	50	0	50	250	0	250	300	10	1				2013	0	150	1,000	150	1,300	3,600	0	3,600	4,900	57	12
		2018	0	0	50	0	50	250	0	250	300	10	1				2018	0	150	1,000	150	1,300	3,600	0	3,600	4,900	57	12
2028	0	0	65	0	65	250	0	250	315	13	1		2028	0	150	1,000	150	1,300	3,600	0	3,600	4,900	57	12				
OA2	Hester Memorial	5010/2008	0	0	400	0	400	200	0	200	600	250	0	52J	Lee County	5010/2008	0	0	400	0	400	300	0	300	700	300	1	
		% Inst. Ops.					4.25%																					
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.						0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.	
		2008	0	0	400	0	400	200	0	200	600	17	0				2008	0	0	400	0	400	300	0	300	700	4	1
		2013	0	0	471	0	471	250	0	250	721	20	1				2013	0	0	700	0	700	300	0	300	1,000	7	1
		2018	0	0	706	0	706	250	0	250	956	30	1				2018	0	0	800	0	800	300	0	300	1,100	8	1
2028	0	0	1,176	0	1,176	250	0	250	1,426	50	1		2028	0	0	1,100	0	1,100	300	0	300	1,400	11	1				
HXD	Hilton Head	5010/2008	1	9,467	22,728	577	32,773	2,835	517	3,352	36,125	39	87	6J0	Lexington County at Pelion	5010/2008	0	0	4,800	200	5,000	8,000	0	8,000	13,000	300	8	
		% Inst. Ops.					75.24%																					
		% total splits	0.00%	28.89%	69.35%	1.76%	100.00%	84.58%	15.42%	100.00%		Inst. Ops.						0.00%	0.00%	96.00%	4.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.	
		2008	1	9,467	22,728	577	32,773	2,835	517	3,352	36,125	24,657	87				2008	0	0	4,800	200	5,000	8,000	0	8,000	13,000	201	8
		2013	1	10,213	24,519	622	35,356	3,291	600	3,891	39,247	26,600	101				2013	0	0	5,015	209	5,224	2,400	0	2,400	7,624	210	8
		2018	1	10,943	26,270	667	37,881	3,584	654	4,238	42,119	28,500	110				2018	0	0	7,403	308	7,711	2,400	0	2,400	10,111	310	8
2028	1	12,325	29,589	751	42,666	4,171	761	4,932	47,598	32,100	128		2028	0	0	11,701	488	12,189	2,400	0	2,400	14,589	490	8				

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South Carolina Airports System Plan



Table 2.2-1 (continued)
Airport Operations Forecasts
South Carolina Airports System Plan

FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC	FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC		
			AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total							AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total					
RBW	Lowcountry Regional (Walterboro)	5010/2008	0	0	15,500	500	16,000	12,000	0	12,000	28,000	400	20	EOE	Newberry County	5010/2008	0	0	7,000	100	7,100	8,500	0	8,500	15,600	300	17		
		% Inst. Ops.					13.21%																						
		% total splits	0.00%	0.00%	96.88%	3.13%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.																	
		2008	0	0	15,500	500	16,000	12,000	0	12,000	28,000	2,113	20																
		2013	0	0	22,007	710	22,717	12,000	0	12,000	34,717	3,000	30																
		2018	0	0	27,142	876	28,017	16,000	0	16,000	44,017	3,700	40																
2028	0	0	38,145	1,230	39,375	24,000	0	24,000	63,375	5,200	60																		
MAO	Marion County	5010/2008	0	0	3,000	150	3,150	1,400	0	1,400	4,550	200	7	CEU	Oconee County	5010/2008	0	1,500	6,350	150	8,000	62,000	0	62,000	70,000	400	66		
		% Inst. Ops.					16.92%																						
		% total splits	0.00%	0.00%	95.24%	4.76%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.																	
		2008	0	0	3,000	150	3,150	1,400	0	1,400	4,550	533	7																
		2013	0	0	2,026	101	2,128	1,400	0	1,400	3,528	360	7																
		2018	0	0	2,251	113	2,364	1,400	0	1,400	3,764	400	7																
2028	0	0	2,758	138	2,896	1,400	0	1,400	4,296	490	7																		
BBP	Marlboro County Jetport/H.E. Avent Field	5010/2008	0	60	2,500	0	2,560	1,200	0	1,200	3,760	80	15	OGB	Orangeburg Municipal	5010/2008	0	170	13,000	50	13,220	9,200	0	9,200	22,420	279	33		
		% Inst. Ops.					9.22%																						
		% total splits	0.00%	2.34%	97.66%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.																	
		2008	0	60	2,500	0	2,560	1,200	0	1,200	3,760	236	15																
		2013	0	48	2,013	0	2,061	1,040	0	1,040	3,101	190	13																
		2018	0	51	2,119	0	2,169	1,120	0	1,120	3,289	200	14																
2028	0	53	2,225	0	2,278	1,280	0	1,280	3,558	210	16																		
S19	McCormick County	5010/2008	0	0	356	44	400	200	0	200	600	200	0	PYG	Pageland	5010/2008	0	0	1,000	0	1,000	1,300	0	1,300	2,300	144	9		
		% Inst. Ops.					27.75%																						
		% total splits	0.00%	0.00%	89.00%	11.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.																	
		2008	0	0	356	44	400	200	0	200	600	111	0																
		2013	0	0	513	63	577	200	0	200	777	160	1																
		2018	0	0	706	87	793	200	0	200	993	220	1																
2028	0	0	1,090	135	1,225	200	0	200	1,425	340	1																		
LRO	Mt. Pleasant Regional/ East Cooper	5010/2008	0	950	9,000	250	10,200	19,000	0	19,000	29,200	268	71	LQK	Pickens County	5010/2008	0	900	25,000	200	26,100	14,000	0	14,000	40,100	400	33		
		% Inst. Ops.					48.75%																						
		% total splits	0.00%	9.31%	88.24%	2.45%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.																	
		2008	0	950	9,000	250	10,200	19,000	0	19,000	29,200	4,972	71																
		2013	0	1,318	12,490	347	14,155	22,211	0	22,211	36,367	6,900	83																
		2018	0	1,681	15,929	442	18,053	24,620	0	24,620	42,673	8,800	92																
2028	0	2,407	22,808	634	25,849	29,972	0	29,972	55,821	12,600	112																		
MYR	Myrtle Beach International	5010/2008	16,917	22,036	17,726	2,946	59,625	5,060	1,919	6,979	66,604	140	50	3J1	Ridgeland	5010/2008	0	0	3,000	250	3,250	12,000	0	12,000	15,250	211	57		
		% Inst. Ops.					57.11%																						
		% total splits	28.37%	36.96%	29.73%	4.94%	100.00%	72.50%	27.50%	100.00%		Inst. Ops.																	
		2008	16,917	22,036	17,726	2,946	59,625	5,060	1,919	6,979	66,604	34,049	50																
		2013	18,234	23,752	19,106	3,175	64,267	6,882	2,610	9,491	73,759	36,700	68																
		2018	18,632	24,269	19,523	3,245	65,668	8,602	3,262	11,864	77,533	37,500	85																
2028	19,427	25,305	20,356	3,383	68,470	12,144	4,606	16,750	85,220	39,100	120																		

Note: Rounding has been applied
Source: Federal Aviation Administration (January 2009)
South Carolina Division of Aeronautics (January 2009)
Talbert & Bright, Inc. (March 2009)





South Carolina Airports System Plan



Table 2.2-1 (continued)
Airport Operations Forecasts
South Carolina Airports System Plan

FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC	FAA ID	Airport	Year/%	Itinerant Operations				Local Operations				Total Ops	Local Ops/ Based AC	Based AC			
			AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total							AC	Comm. A Taxi	GA	Mil	Total	GA	Mil	Total				GA	Mil	Total
PHH	Robert F. Swinnie-Andrews Municipal	5010/2008	0	0	500	0	500	500	0	500	1,000	125	4	DYB	Summerville	5010/2008	0	2,900	12,600	500	16,000	20,000	0	20,000	36,000	317	63			
		% Inst. Ops.					44.00%										% Inst. Ops.													
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%			Inst. Ops.					% total splits	0.00%	18.13%	78.75%	3.13%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	0	500	0	500	500	0	500	1,000	220	4			2008	0	2,900	12,600	500	16,000	20,000	0	20,000	36,000	1,226	63			
		2013	0	0	523	0	523	500	0	500	1,023	230	4			2013	0	3,548	15,416	612	19,576	26,032	0	26,032	45,608	1,500	82			
		2018	0	0	727	0	727	500	0	500	1,227	320	4			2018	0	4,021	17,471	693	22,186	31,111	0	31,111	53,297	1,700	98			
2028	0	0	1,136	0	1,136	500	0	500	1,636	500	4	2028	0	4,967	21,582	856	27,406	41,270	0	41,270	68,676	2,100	130							
UZA	Rock Hill/York County/ Bryant Field	5010/2008	0	400	12,500	100	13,000	29,500	0	29,500	42,500	284	104	SMS	Sumter	5010/2008	0	900	20,000	400	21,300	27,000	0	27,000	48,300	400	55			
		% Inst. Ops.					49.61%									% Inst. Ops.														
		% total splits	0.00%	3.08%	96.15%	0.77%	100.00%	100.00%	0.00%	100.00%			Inst. Ops.					% total splits	0.00%	4.23%	93.90%	1.88%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	400	12,500	100	13,000	29,500	0	29,500	42,500	6,449	104			2008	0	900	20,000	400	21,300	27,000	0	27,000	48,300	1,890	55			
		2013	0	490	15,312	122	15,925	32,053	0	32,053	47,978	7,900	113			2013	0	905	20,106	402	21,413	23,600	0	23,600	45,013	1,900	59			
		2018	0	558	17,445	140	18,142	32,337	0	32,337	50,479	9,000	114			2018	0	905	20,106	402	21,413	25,600	0	25,600	47,013	1,900	64			
2028	0	695	21,709	174	22,577	32,904	0	32,904	55,481	11,200	116	2028	0	905	20,106	402	21,413	29,600	0	29,600	51,013	1,900	74							
6J4	Saluda County	5010/2008	0	0	3,600	0	3,600	5,000	0	5,000	8,600	300	0	5J9	Twin City	5010/2008	0	0	600	0	600	600	0	600	1,200	75	8			
		% Inst. Ops.					2.39%									% Inst. Ops.														
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%			Inst. Ops.					% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	0	3,600	0	3,600	5,000	0	5,000	8,600	86	0			2008	0	0	600	0	600	600	0	600	1,200	88	8			
		2013	0	0	3,767	0	3,767	300	0	300	4,067	90	1			2013	0	0	955	0	955	975	0	975	1,930	140	13			
		2018	0	0	3,767	0	3,767	300	0	300	4,067	90	1			2018	0	0	1,091	0	1,091	1,200	0	1,200	2,291	160	16			
2028	0	0	3,767	0	3,767	300	0	300	4,067	90	1	2028	0	0	1,500	0	1,500	1,650	0	1,650	3,150	220	22							
MNI	Santee Cooper Regional	5010/2008	0	0	16,000	100	16,100	21,000	0	21,000	37,100	400	24	35A	Union County/ Troy Shelton Field	5010/2008	0	0	4,000	0	4,000	2,500	0	2,500	6,500	139	18			
		% Inst. Ops.					3.76%									% Inst. Ops.														
		% total splits	0.00%	0.00%	99.38%	0.62%	100.00%	100.00%	0.00%	100.00%			Inst. Ops.					% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	0	16,000	100	16,100	21,000	0	21,000	37,100	606	24			2008	0	0	4,000	0	4,000	2,500	0	2,500	6,500	604	18			
		2013	0	0	16,106	101	16,206	11,600	0	11,600	27,806	610	29			2013	0	0	3,113	0	3,113	3,194	0	3,194	6,307	470	23			
		2018	0	0	16,106	101	16,206	13,600	0	13,600	29,806	610	34			2018	0	0	3,510	0	3,510	3,750	0	3,750	7,260	530	27			
2028	0	0	16,106	101	16,206	17,600	0	17,600	33,806	610	44	2028	0	0	4,238	0	4,238	4,722	0	4,722	8,961	640	34							
SPA	Spartanburg Downtown Memorial	5010/2008	0	7,000	15,000	450	22,450	12,000	0	12,000	34,450	108	111	CKI	Williamsburg Regional	5010/2008	0	0	900	50	950	5,050	0	5,050	6,000	300	10			
		% Inst. Ops.					28.54%									% Inst. Ops.														
		% total splits	0.00%	31.18%	66.82%	2.00%	100.00%	100.00%	0.00%	100.00%			Inst. Ops.					% total splits	0.00%	0.00%	94.74%	5.26%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	7,000	15,000	450	22,450	12,000	0	12,000	34,450	6,408	111			2008	0	0	900	50	950	5,050	0	5,050	6,000	339	10			
		2013	0	7,100	15,215	456	22,772	14,595	0	14,595	37,367	6,500	135			2013	0	0	903	50	953	4,500	0	4,500	5,453	340	15			
		2018	0	7,428	15,918	478	23,823	17,405	0	17,405	41,229	6,800	161			2018	0	0	929	52	981	5,400	0	5,400	6,381	350	18			
2028	0	8,084	17,322	520	25,925	23,135	0	23,135	49,061	7,400	214	2028	0	0	956	53	1,009	7,500	0	7,500	8,509	360	25							
6J2	St. George	5010/2008	0	0	2,500	0	2,500	3,000	0	3,000	5,500	300	9	CDN	Woodward Field	5010/2008	0	450	21,500	350	22,300	20,000	0	20,000	42,300	400	38			
		% Inst. Ops.					1.44%									% Inst. Ops.														
		% total splits	0.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%			Inst. Ops.					% total splits	0.00%	2.02%	96.41%	1.57%	100.00%	100.00%	0.00%	100.00%		Inst. Ops.		
		2008	0	0	2,500	0	2,500	3,000	0	3,000	5,500	36	9			2008	0	450	21,500	350	22,300	20,000	0	20,000	42,300	1,285	38			
		2013	0	0	2,778	0	2,778	2,700	0	2,700	5,478	40	9			2013	0	455	21,751	354	22,560	19,200	0	19,200	41,760	1,300	48			
		2018	0	0	2,778	0	2,778	2,700	0	2,700	5,478	40	9			2018	0	490	23,424	381	24,296	22,400	0	22,400	46,696	1,400	56			
2028	0	0	2,778	0	2,778	2,700	0	2,700	5,478	40	9	2028	0	560	26,770	436	27,767	28,800	0	28,800	56,567	1,600	72							

Note: Rounding has been applied
Source: Federal Aviation Administration (January 2009)
South Carolina Division of Aeronautics (January 2009)
Talbert & Bright, Inc. (March 2009)



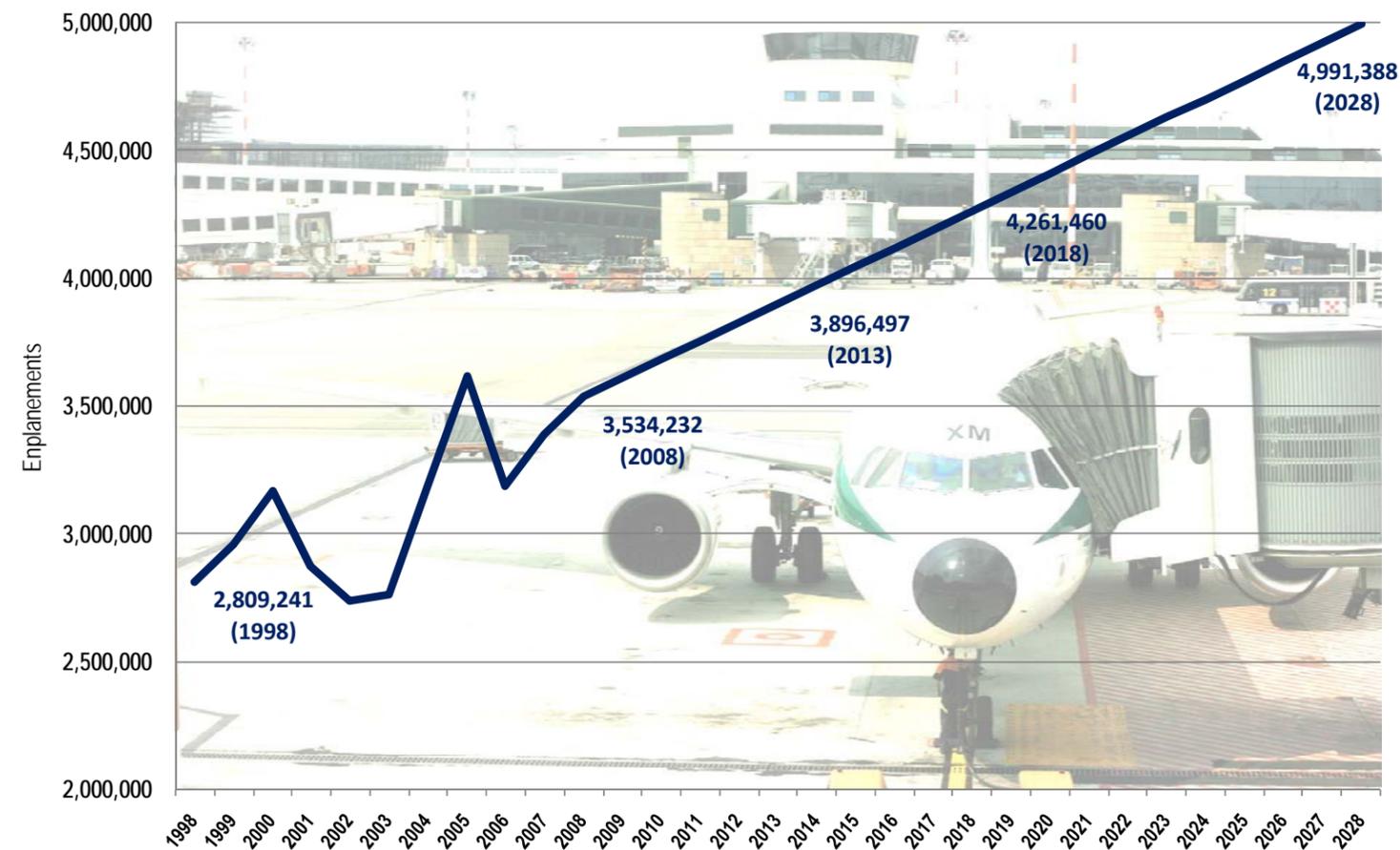


**Table 2.3.3-1
Commercial Service Airport Enplanements
South Carolina Airports System Plan**

FAA ID	Airport	Historical Enplanements											Forecast		
		1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2013	2018	2028
CHS	Charleston AFB/International	789,113	784,067	833,055	793,553	791,341	804,134	912,604	1,073,307	943,305	1,084,019	1,272,386	1,379,213	1,589,563	2,010,263
GSP	Greenville-Spartanburg International	715,753	761,685	801,609	712,310	698,092	677,891	761,555	904,282	769,479	767,743	737,332	803,563	825,524	869,446
MYR	Myrtle Beach International	604,908	698,217	792,529	711,520	631,283	668,951	768,944	785,321	723,882	777,102	767,046	841,437	896,235	1,005,831
CAE	Columbia Metropolitan	538,945	556,927	600,020	531,619	497,834	508,851	635,059	729,991	642,848	633,026	629,697	733,408	797,981	927,127
HXD	Hilton Head Island	99,907	99,947	91,767	79,974	74,376	60,929	66,324	66,422	61,149	76,599	80,419	83,697	91,607	107,426
FLO	Florence Regional	60,615	56,022	49,290	43,250	42,705	40,586	43,225	52,932	45,074	47,103	47,352	55,178	60,551	71,295

Source: South Carolina Division of Aeronautics (January 2009). Enplanement Data Base
Talbert & Bright, Inc. (March 2009)

Commercial Service Enplanements





2.3.3.1 Large Commercial Service Airports

Illustrated below are the forecast growth percentages of the four largest South Carolina airports:

	Growth Percentage (2008 to 2028)
Charleston International	57.9
Columbia Metropolitan	47.2
Greenville-Spartanburg International	17.9
Myrtle Beach International	31.1

The highest growth percentage forecast is for Charleston International. This forecast is considered reasonable given the existing extra terminal capacity and the trend of growing airline flight offerings.

All four airports illustrate significant growth; however, the final forecasts do not account for future major regional economic changes. In this respect, a trend line analysis for the Myrtle Beach International Airport may or may not be conservative.

Considering the trend line projections for the Columbia Metropolitan Airport, the static trend from 2006 to 2008 appears to contrast to the overall strong enplanement projections.

2.3.3.2 Small Commercial Service Airports

The small South Carolina commercial service airports include the Hilton Head Island and Florence Regional airports. The forecast growth percentages of these two airports are as follows:

	Growth Percentage (2008 to 2028)
Hilton Head Island	33.5
Florence Regional	50.6

The trend lines for these airports were developed from 2003 to 2008. This procedure was necessary in order to develop a positive upward analysis trend.

2.3.4 Regional Airline Enplanement Review

Regional airline (commuter) enplanements for South Carolina commercial service airports are documented by Table 2.3.4-1. The data used for this review comes from the FAA Terminal Area Forecasts (TAF) and will at times be slightly different in total enplanements from the Table 2.3.3-1 (page 10) enplanements. However, the TAF data does differentiate commercial service enplanements from commuter enplanements with commuter enplanements being the focus of this review.

**Table 2.3.4-1
Regional Airline/Commuter Enplanements
South Carolina Airports System**

FAA ID	Airport		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CHS	Charleston AFB/International	Regional Enp.	121,055	230,562	297,865	334,026	445,280	517,705	678,754	541,409	671,576	703,133
		Total Enp.	779,290	811,687	828,775	757,717	786,743	851,175	1,076,559	943,305	1,084,019	1,272,386
		Regional %	16%	28%	36%	44%	57%	61%	63%	57%	62%	55%
GSP	Greenville-Spartanburg International	Regional Enp.	288,473	356,420	419,822	466,947	495,675	536,180	721,138	636,026	640,535	615,169
		Total Enp.	739,310	771,821	751,390	663,272	676,246	724,939	915,480	769,839	767,743	737,332
		Regional %	39%	46%	56%	70%	73%	74%	79%	83%	83%	83%
MYR	Myrtle Beach International	Regional Enp.	164,353	200,813	186,953	177,526	213,111	210,956	254,929	204,187	262,013	224,168
		Total Enp.	620,458	741,427	733,726	615,639	618,488	746,607	783,071	723,882	777,102	767,046
		Regional %	26%	27%	25%	29%	34%	28%	33%	28%	34%	29%
CAE	Columbia Metropolitan	Regional Enp.	163,142	242,986	292,499	313,469	404,535	481,835	619,899	568,437	548,269	553,153
		Total Enp.	559,956	587,051	575,038	501,482	503,065	577,502	728,303	642,848	633,026	629,697
		Regional %	29%	41%	51%	63%	80%	83%	85%	88%	87%	88%
HXD	Hilton Head Island	Regional Enp.	103,028	94,247	84,812	75,209	64,099	61,419	66,679	61,149	76,599	80,419
		Total Enp.	103,028	94,247	84,812	75,209	64,099	61,419	66,679	61,149	76,599	80,419
		Regional %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
FLO	Florence Regional	Regional Enp.	58,473	51,414	47,849	40,013	41,930	41,291	53,825	45,074	47,069	47,314
		Total Enp.	58,473	51,575	48,008	40,172	41,930	41,291	53,825	45,074	47,103	47,352
		Regional %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: Federal Aviation Administration (January 2009). Terminal Area Forecasts Talbert & Bright, Inc. (March 2009)

Regional (commuter) airlines are, for this review, considered to be airlines with aircraft that hold 70 or fewer passengers and are less than 100,000 pounds in gross weight. The aircraft include 19- to 66-passenger turboprops and 50- to 70-passenger turbofan aircraft. Ninety-passenger aircraft are making their debut with regional airlines, but they are not believed to be a substantial part of the data under review.

Table 2.3.4-1 illustrates the almost exclusive use of regional aircraft at the Hilton Head Island and Florence Regional airports. The four largest South Carolina commercial service airports all show dramatic increases in regional aircraft enplanements. The possible exception is the Myrtle Beach International Airport with a relatively lower increase in regional enplanements. A contributing factor to the Myrtle Beach enplanement profile is the regular need to carry golf equipment, which is best suited for carriage in larger aircraft.





Charleston International Airport retains moderate commercial service level enplanements as of 2006; however, switching to regional aircraft has continued through the year 2007. Columbia Metropolitan and Greenville-Spartanburg International airports are generating lower total volumes of passengers with a dramatic switching to regional aircraft. Nevertheless, numerous long distance links are served with these aircraft, for example, New York, Chicago, Houston, Cincinnati, Philadelphia, and Orlando.

It is believed that the switch to regional aircraft on a percentage basis will probably run its course in South Carolina by 2008. A change could occur if future regional aircraft become more efficient for baggage carriage and thereby viable for additional routes. This would particularly apply for the Myrtle Beach International Airport.

2.3.5 Airport Areas of Influence

To review South Carolina commercial service airports with respect to selected out-of-state airports, groupings of airports are documented with respect to enplanement performance. The groupings were selected to represent areas where overlaps of influence could occur. The relative performances point to suggested areas of possible leakage of passengers from South Carolina to out-of-state airports.

The initial groupings compare the Columbia Metropolitan Airport with Charlotte-Douglas International and Augusta Regional Airport. Comparing 2004 through 2008, drops in enplanements are noted from 2005 to 2006 with all three airports. Recovery is evident for Charlotte and Augusta, but not for the Columbia Airport.

The second grouping of airports compares the Greenville-Spartanburg International Airport with Charlotte-Douglas International Airport and Asheville Regional Airport. As with the previous comparison, all three airports have drops in enplanements from 2005 to 2006. The Greenville and Asheville airports appear to have modest percentage recoveries compared with the Charlotte airport.

A third comparative grouping compares the Savannah International Airport with the Hilton Head Island Airport. While drops in enplanements are apparent for both airports between 2005 and 2006, the Hilton Head airport appears to be in a growth mode far in excess of Savannah International Airport.

The fourth comparative grouping includes the Wilmington Regional, Florence Regional, Myrtle Beach International, and Charleston International airports. As with the previous groupings, enplanement percentage drops are observed between 2005 and 2006 with recovery for all four airports by 2008.

In summary, the lack of a 2008 recovery by the Greenville-Spartanburg and Columbia Metropolitan airports implies a possible leakage or switch in airport enplanement direction to the Charlotte hub. Given rising prices for all commodities, it is possible that the ease of access along interstate highways to the Charlotte airport has assisted passengers in the decision to use this hub airport directly. The remaining South Carolina airports (Myrtle Beach, Charleston, Florence, and Hilton Head Island) do not appear to be significantly impacted by out-of-state airports within their spheres of influence, from a percentage enplanement growth comparison (Table 2.3.5-1).

**Table 2.3.5-1
Air Carrier Airport Areas of Influence
South Carolina Airports System Plan**

Airport Influence Combinations	FAA ID	Enplanements				
		2004	2005	2006	2007	2008
Charlotte-Douglas International, NC	CLT	12,754,542	14,084,021	14,828,149	16,235,146	17,002,298
	% change		10.4%	5.3%	9.5%	4.7%
Augusta Regional, GA	AGS	170,358	161,162	140,987	145,006	141,562
	% change		-5.4%	-12.5%	2.9%	-2.4%
Columbia Metropolitan, SC	CAE	635,059	729,991	642,848	633,026	629,697
	% change		14.9%	-11.9%	-1.5%	-0.5%
Charlotte-Douglas International, NC	CLT	12,754,542	14,084,021	14,828,149	16,235,146	17,002,298
	% change		10.4%	5.3%	9.5%	4.7%
Asheville Regional, NC	AVL	252,246	313,592	287,935	290,148	279,348
	% change		24.3%	-8.2%	0.8%	-3.7%
Greenville-Spartanburg International, SC	GSP	761,555	904,282	769,479	767,743	737,332
	% change		18.7%	-14.9%	-0.2%	-4.0%
Savannah/Hilton Head International, GA	SAV	969,173	1,048,372	967,210	990,803	995,996
	% change		8.2%	-7.7%	2.4%	0.5%
Hilton Head Island, SC	HXD	66,324	66,422	61,149	76,599	80,419
	% change		0.1%	-7.9%	25.3%	5.0%
Wilmington International, NC	ILM	288,471	337,258	322,542	373,298	388,668
	% change		16.9%	-4.4%	15.7%	4.1%
Florence Regional, SC	FLO	43,225	52,932	45,074	47,103	47,352
	% change		22.5%	-14.8%	4.5%	0.5%
Myrtle Beach International, SC	MYR	768,944	783,310	723,882	777,102	767,046
	% change		1.9%	-7.6%	7.4%	-1.3%
Charleston AFB/International, SC	CHS	912,604	1,073,307	943,305	1,084,019	1,272,386
	% change		17.6%	-12.1%	14.9%	17.4%

Note: Red color indicates negative % change

Blue color indicates positive % change

Source: Federal Aviation Administration (January 2009). Terminal Area Forecasts
Talbert & Bright, Inc. (March 2009)

2.4 STATEWIDE FORECASTS

The forecasts developed for each airport were added to provide a macro view of the aviation activity in South Carolina. The forecasts were also used to help classify each airport for development and program purposes as part of the SCASP.





3.0 AIRPORT CLASSIFICATION STATEMENTS AND MINIMUM DESIGN STANDARDS

One of SCDOA’s primary goals in the SCASP is to establish a classification system of airports. Each airport is different and should have a classification based on its proposed airport growth profile, runway dimensions, surrounding conditions, economic impact on the state, aeronautical services provided, and expansion capability. The SCDOA staff and the SCASP Technical Advisory Committee have placed each airport in a classification based on its current status; however, airports have the ability to change classification, if conditions change. The classifications are outlined below and illustrated on Table 3.0-1 (page 14) and Figure 3.0-1 (page 15).

In order to develop its system of airports to support economic development across the entire state, it is the SCDOA’s desire to establish minimum design standards for its airports that are based on each airport’s classification. These standards will be established based upon the FAA’s design criteria. The Airport Reference Code (ARC) is cited as a factor in the classification assignment for each individual airport in the system. Also, it is important that, as the SCDOA addresses funding requests from those airports that are not in the National Plan of Integrated Airport Systems (NPIAS), the airport requires a safe operating environment as a prerequisite to the approval of state funds in accordance with the *South Carolina Code of Laws*.

Upon completion and approval of the SCASP, each system airport will be assigned a classification based on its current and future service role in the system. There may be certain airports in each classification that do not meet all of the minimum design standards for that particular classification. This shortcoming does not infer that the airport should be reclassified but does signify that the airport shall work towards meeting these design standards based on current or future needs through a phased airport CIP for airport development. Each airport’s CIP shall specify the projects, with their funding requirements, to meet the standards and, each will be addressed annually by the FAA and the SCDOA based on its respective priority systems in order that, in time, each airport will meet all of the minimum standards.

As the SCASP is updated, each airport’s performance regarding operations, instrument operations, based aircraft, and aircraft mix will be monitored, and a specific confirmation will be made as to its classification for future years.

3.1 STATE CLASSIFICATION I – COMMERCIAL SERVICE (SC-I)

Commercial service airports provide scheduled service by airlines and/or commuter airlines, which are certificated under FAR Part 121 – Operating Requirements: Domestic, Flag, and Supplemental Operations, but not FAR Part 135 – Operating Requirements: Commuter and On-Demand Operations and Rules Governing Persons on Board such aircraft, with more than 10,000 annual passenger enplanements. The airport must comply with FAR Part 139 – Certification and Operations: Land

Airports Serving Certain Air Carriers requirements. A commercial service airport should have minimum instrument approach procedure minima of 200-1/2.

All airport design standards for commercial service airports shall be based on FAA criteria for the specific design aircraft, or most demanding aircraft, that is being used by the commercial carrier(s) serving that airport. Each airport shall have an Airport Layout Plan (ALP) approved by the SCDOA and the FAA. The only minimum standards that the SCDOA requires is that the instrument approach to the primary runway shall be an ILS/RNAV (GPS) LPV with minimums no higher than 200-1/2 and shall have unobstructed approaches in accordance with FAA AC 150/5300-13 – Airport Design (as amended).

3.2 STATE CLASSIFICATION II – CORPORATE/BUSINESS (SC-II)

Located in an urbanized environment or a rural location with a multi-jurisdictional service area, the SCASP has determined that these airports should have runways that are a minimum of 5,000 feet by 100 feet with ARC designations of B-II or C-II. The airport’s annual economic impact to the State of South Carolina has been quantified within the range of \$2.0 million to \$222.0 million as defined in the *South Carolina Economic Impact of Aviation*.⁴ These airports offer the full range of fuels and aviation services, and instrument approach procedures and are forecasted to have a growing population of based aircraft and annual operations. The future activity profile consists of between 30 percent and 50 percent of corporate and business operations with a smaller number of recreational or private users. The airports are not constrained by surrounding incompatible land uses or environmentally sensitive areas and have expansion capability for not only runways and taxiways but for support facilities, such as apron, hangar, and terminal facilities. Corporate/business airports should have LPV approach minima of no higher than 250-3/4.

All minimum airport design standards for classification SC-II airports shall be based on the FAA ARC B-II or C-II with the following additions:

- ➔ An ALP approved by the SCDOA
- ➔ Runway length of 5,000 feet
- ➔ Runway width of 100 feet
- ➔ Runway strength of 60,000 pounds dual wheel load
- ➔ Unobstructed approaches in accordance with FAA AC 150/5300-13 – Airport Design (as amended)

⁴Wilbur Smith Associates in association with EDR Group and Franks and Associates (May 2006). *South Carolina Economic Impact of Aviation*. Prepared for South Carolina Department of Commerce Division of Aeronautics.





**Table 3.0-1
South Carolina Airports by Classification
South Carolina Airports System Plan**

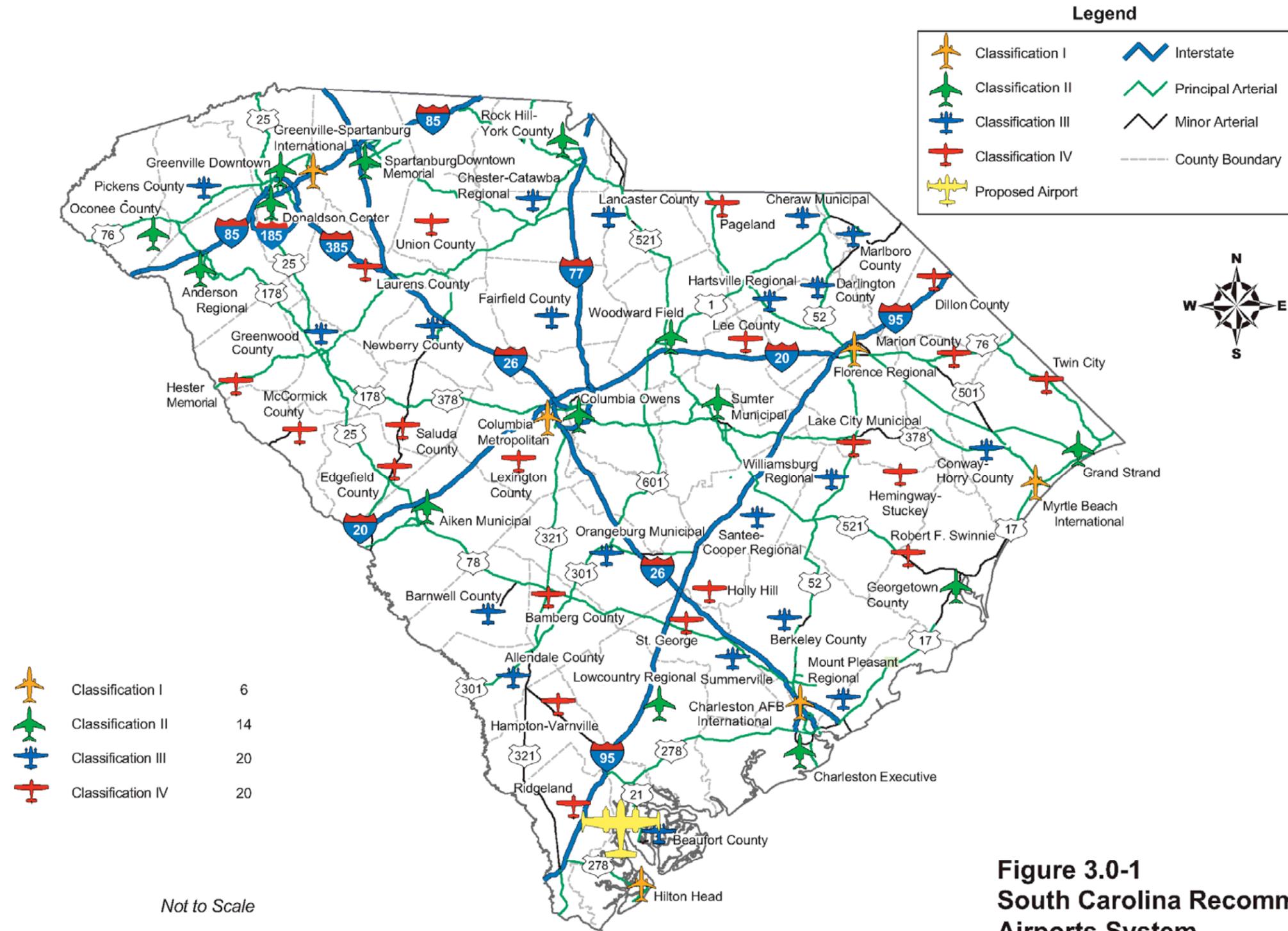
FAA ID	Airport	Existing System (1993)	Recommended System (2008)	FAA ID	Airport	Existing System (1993)	Recommended System (2008)
CHS	Charleston AFB/International	CA	SCI	99N	Bamberg County	BU	SCIV
CAE	Columbia Metropolitan	CA	SCI	DLC	Dillon County	GU	SCIV
FLO	Florence Regional	CA	SCI	6J6	Edgefield County	BU	SCIV
GSP	Greenville-Spartanburg International	CA	SCI	3J0	Hampton-Varnville	GU	SCIV
HXD	Hilton Head	CA	SCI	38J	Hemingway-Stuckey	BU	SCIV
MYR	Myrtle Beach International	CA	SCI	0A2	Hester Memorial	GU	SCIV
				5J5	Holly Hill	BU	SCIV
AIK	Aiken Municipal	TA	SCII	51J	Lake City Municipal/CJ Evans Field	BU	SCIV
AND	Anderson Regional	TA	SCII	LUX	Laurens County	BU	SCIV
JZI	Charleston Executive	TA	SCII	52J	Lee County	BU	SCIV
CUB	Columbia Owens Downtown	GU	SCII	6J0	Lexington County at Pelion	BU	SCIV
GYH	Donaldson Field (South Carolina Technology & Aviation Center)	TA	SCII	MA0	Marion County	BU	SCIV
				S19	McCormick County	BU	SCIV
GGE	Georgetown County	TA	SCII	PYG	Pageland	BU	SCIV
CRE	Grand Strand	TA	SCII	3J1	Ridgeland	BU	SCIV
GMU	Greenville Downtown	TA	SCII	PHH	Robert F Swinnie-Andrews Municipal	BU	SCIV
RBW	Lowcountry Regional (Walterboro)	TA	SCII	6J4	Saluda County	GU	SCIV
CEU	Oconee County Regional	GU	SCII	6J2	St. George	BU	SCIV
UZA	Rock Hill/York County/Bryant Field	TA	SCII	5J9	Twin City	BU	SCIV
SPA	Spartanburg Downtown Memorial	TA	SCII	35A	Union County, Troy Shelton Field	BU	SCIV
SMS	Sumter	TA	SCII				
CDN	Woodward Field (Camden)	TA	SCII				
88J	Allendale County	TA	SCIII				
BNL	Barnwell County	TA	SCIII				
ARW	Beaufort County	BU	SCIII				
MKS	Berkeley County	BU	SCIII				
CQW	Cheraw Municipal/Lynch Bellinger Field	GU	SCIII				
DCM	Chester Catawba Regional	TA	SCIII				
HYW	Conway-Horry County	BU	SCIII				
UDG	Darlington County Jetport	TA	SCIII				
FDW	Fairfield County	BU	SCIII				
GRD	Greenwood County	TA	SCIII				
HVS	Hartsville Regional	GU	SCIII				
LKR	Lancaster County-McWhirter Field	TA	SCIII				
BBP	Marlboro County Jetport - H.E. Avent Field	TA	SCIII				
LRO	Mt. Pleasant Regional/East Cooper	GU	SCIII				
EOE	Newberry County	GU	SCIII				
OGB	Orangeburg Municipal	GU	SCIII				
LQK	Pickens County	TA	SCIII				
MNI	Santee Cooper Regional	BU	SCIII				
DYB	Summerville	GU	SCIII				
CKI	Williamsburg Regional	GU	SCIII				

Notes:
 CA - Commercial Airports 6
 TA - Transport Airports 20
 GU - General Utility Airports 14
 BU - Basic Utility Airports 20
 SCI - State Classification I 6
 SCII - State Classification II 14
 SCIII - State Classification III 20
 SCIV - State Classification IV 20
 Source: WK Dickson & Company, Inc. in association with L.W. Corley, P.E., Chao and Associates, and Aero-Dynamics, Corp. (1992)
 Talbert & Bright, Inc. (February 2008)





South Carolina Airports System Plan





- ➔ Runway to taxiway centerline distance of 400 feet
- ➔ Runway supported by a full parallel taxiway
- ➔ Runway lighting shall consist of high intensity runway lights (HIRL), 2-box precision approach path indicator (PAPI), and runway end identifier lights (REILS)
- ➔ Airport shall attempt to achieve RNAV (GPS) LPV instrument approach minimums on the primary runway of 250-¾

- ➔ Airport shall attempt to achieve RNAV (GPS) LNAV instrument approach minimums on the primary runway of 400-1

3.3 STATE CLASSIFICATION III – BUSINESS/RECREATION (SC-III)

Generally located in rural localities, these airports serve small business and recreation aircraft. These airports do not typically serve multi-jurisdictional service areas but are generally confined to the communities in which they reside, or they are located near another airport whose service area is multi-jurisdictional. The SCASP has determined that these airports should have runways that are a minimum of 3,600 feet by 75 feet with ARC designations of B-I or B-II. The airport's economic impact to the state is within a range of \$0.25 million to \$2.0 million, as defined in the *South Carolina Economic Impact of Aviation*.⁵ These airports generally offer the full range of fuels and most aviation services. They have a non-precision approach and are also forecasted to have a growing population of aircraft and annual operations. A future airport profile consists of 5 percent to 20 percent of corporate and business use but a higher percentage of recreation use. The airport is not constrained by surrounding incompatible land uses or environmentally sensitive areas and has adequate expansion capability not only for runways and taxiways but for support facilities as well. Business/recreation airports should have approach minima of no higher than 400-1.

All airport design standards for classification SC-III airports shall be based on the FAA ARC B-I or B-II with the following additions:

- ➔ An ALP approved by the SCDOA
- ➔ Runway length of 3,600 feet
- ➔ Runway width of 75 feet
- ➔ Runway strength of 30,000 pounds dual wheel load
- ➔ Unobstructed approaches in accordance with FAA AC 150/5300-13 – Airport Design (as amended)
- ➔ Runway to taxiway centerline distance of 300 feet
- ➔ Runway lighting shall consist of medium intensity runway lights (MIRL), 2-box PAPI, and REILS

3.4 STATE CLASSIFICATION IV – RECREATION/LOCAL SERVICE (SC-IV)

Recreation/local service airports typically demonstrate low activity and are forecasted to remain fairly level. They provide very limited airport facilities and services and may have safety or development constraints that limit their need, as well as their ability to expand. Runway lengths are typically less than 3,600 feet by 60 feet in width, with ARC designations of A-I or B-I. Constraints may take the form of severe topography, airspace conflicts, environmental or land use obstacles, or other corporate or business airports that provide competing facilities and aeronautical services. Recreation/local service airports should not be designed to support instrument approach procedures except in specific instances where there is a need for emergency response in an area that is geographically isolated. Recreational/local service airports should be designed to meet only the minimum design standards as set forth by the SCDOA in their rules and regulations as mandated by Section 55-5-70, Duties and Powers of Division of the *South Carolina Code of Laws*.

All airport design standards for classification SC-IV airports shall be based on the FAA ARC A-I or B-I with the following additions:

- ➔ An ALP approved by the SCDOA
- ➔ Minimum runway length (paved or turf) of 2,000 feet with 200 feet of graded overrun on each end
- ➔ Unobstructed approaches in accordance with FAA AC 150/5300-13 – Airport Design (as amended) to instrument runways
- ➔ Primary surface of 200 feet in width and 2,400 in length
- ➔ Visual runway protection zones of 200 feet by 1,000 feet by 400 feet with a slope of 15:1
- ➔ Transition surface shall begin at the edge of the primary surface and extend outward and upward at a slope of 5:1
- ➔ Runway width of 60 feet
- ➔ Runway strength of 12,500 pounds wheel load
- ➔ Runway lighting shall consist of low intensity runway lights
- ➔ Airport shall not be approved for an instrument approach procedure unless it is required to support public safety or emergency services

⁵*Ibid.*





4.0 AIRPORT PRIORITY SYSTEM

During study discussions with the SCDOA staff, it became clear that planning is a key component of the success of its system of public use airports. It is also clear that planning is not an end unto itself, and one of the responsibilities of good planning is to build a solid bridge between planning and implementation. Therefore, one of the main policy tasks in the SCASP involves a review and possibly reconstruction of the priority system utilized by the SCDOA and SCAC to assist in making funding decisions. As in the case of most states, South Carolina will not always have adequate funds to support every eligible need at every eligible airport in the state. Therefore, the SCDOA needs to have a good, solid system whereby all projects are properly ranked in order of system importance.

This system should be reasonably easy to implement. Both the criteria and ranking of projects must make sense and must reflect sound public policy in its allocation of public funds. A key factor in the creation and implementation of any project ranking system is that this tool is just that, a tool. It is there to assist the decision-maker; it does not necessarily make the final decision. That authority is vested in the SCDOA and SCAC by the state legislature as mandated in Title 55 – Aeronautics of the *South Carolina Code of Laws*.

4.1 EXISTING AIRPORT RATING SYSTEM

The SCDOA’s existing priority system was reviewed to address all elements in an attempt to evaluate which should stay and which should not. Since the SCDOA currently has a Maintenance Program, which is funded separately from the capital improvement program, the new priority system will not include maintenance projects but will address maintenance separately as a specific sponsor responsibility and provide a system by which maintenance projects are also ranked in order of priority.

The existing system employs a two-dimensional system by invoking an airport rating system and a project rating system. This methodology will not be lost in any revamping of the system, as many of the same factors will always be central to any transportation project ranking system. The factors that are utilized in the existing airport rating system are:

- ➔ **Airport Activity** – based aircraft
- ➔ **Status of Airport** – sponsor’s compliance with state requirements
- ➔ **Importance of Airport in State System Plan** – whether or not the airport is essential to meet the aeronautical demand of the state’s air transportation system
- ➔ **Growth in Demand Rate** – the annual rate of growth in based aircraft
- ➔ **Economic Value** – consideration of the economic impact that the airport has on the community

- ➔ **General Aviation Reliever** – consideration of an airport’s classification as an existing or potential reliever for a commercial service airport in the system
- ➔ **Population Dependence** – describes the relationship between the numbers of based aircraft to the service area population
- ➔ **Access to Remote Areas** – recognizes that certain areas of the state may not have significant activity and population but may have a requirement for access to public and medical services and other necessities to be brought in via air transportation
- ➔ **Local Commitment** – quantifies the sponsor’s commitment to the project
- ➔ **Federal Funding Probability** – reflects the importance of the sponsor seeking federal funding
- ➔ **Economic Development** – awards points for the project as a requirement for new industry or an existing industry
- ➔ **Other Relevant Factors** – recognizes that there may be other factors that influence the need for this project; does not enumerate the factors for which points will be awarded

The SCDOA staff has indicated that the SCDOA has never really had to employ the existing airport rating system. However, it is critical to understand that if the system plan is accurate, the aeronautical demand is accurately stated, and the state is serious about meeting this demand, there will come a day when there will not be adequate state funding to meet all of the eligible facility requirements. As a result, the SCDOA will be forced to employ a good decision-making tool to properly allocate limited state funds to the most needed projects.

Critical is the core justification for each project. This factor must be registered and carry significant weight in the priority system. Safety projects should achieve the highest scoring. Others, such as preservation (rehabilitation), capacity, and economic development, should be accorded the appropriate number of points in descending order to achieve their proper places in the ranking of the system needs. Many of the other factors utilized in the existing system are critical and are required for any system; however, implementing a new classification system presents an opportunity to invoke system criteria that are measurable and exclude criteria that should be program showstoppers.

Another observation regarding the existing airport rating system is the relatively low numbers used in the possible points that can be achieved. The highest number of achievable points in any category is ten. This narrow point spread and low possible score tends to group many projects together and result in numerous ties in point values. An expansion of the point assignments should help reduce the number of ties and the number of occasions that will require the SCDOA to break a tie.

With government programs, there is always a fear of the unknown or misunderstanding. Therefore, a complex system does not always make a better system if it is difficult to understand. Simplifying the mathematical operation to achieve a total project score will enhance its understanding, both by the sponsor and public officials. Taking the mystery and complexity out of the system will allow the sponsor to use the system to his/her advantage in competing for state funds. The sponsor will know precisely what he/she has to do to:





- become eligible
- achieve a higher point score thereby improving the chances for funding

This enhancement can be achieved without sacrificing any integrity in the system and will help it gain status within the airport community.

First, determine what should be taken out of the current system. In one or two instances, factors are quantified to impact the projects score when in fact these factors should be removed from the priority system and revised to become eligibility criteria. The existing airport rating system criteria referred to as Status of Airport is one such criterion. Currently a failure to comply on the part of the sponsor negatively influences the funding decision. These factors are sponsor compliance issues, such as

- The absence of local zoning (land use compatibility/height restrictions)
- Not having an approved ALP
- Having obstructions/hazards to air navigation
- A violation of certification criteria

Due to the provisions of Title 55 – Aeronautics (*South Carolina Code of Laws*), it is believed that airport zoning should remain in the priority system, but the lack of approved ALPs, obstructions/hazards to navigable airspace, and violations of airport certification should become showstoppers, making any project ineligible for state funding approval. Since the *South Carolina Code of Laws* treats privately owned airports differently from publicly owned airports, the zoning issue should be addressed in the priority system and not be declared a showstopper.

Since the FAA eliminated the General Aviation Reliever designation from general aviation airports, South Carolina followed suit; therefore, there is no relevance in this criteria remaining in the system. However, the intent of this criterion is now being expanded and implemented in the airport classifications and their associated point values. Each classification will now be assigned a point value with the higher classifications having higher values and vice versa.

The existing system also quantifies local commitment as an influencing factor in project score. Local commitment is difficult to quantify in meaningful terms, and as local officials come and go, sponsor attitudes can change. The most meaningful way of local commitment is its approval of the local funding share. While the commitment of federal funds will likely ensure any project’s funding by the state regardless of that local commitment, with non-federal funding shares of 60 percent/40 percent for capital projects, it may stand to reason that this commitment by a sponsor speaks for itself, thereby removing its requirement for quantification.⁶

The significance of population dependence, as an influencing factor to project score when considered along with access to remote areas, which are typically rural, low population areas, will tend to offset each other. When determining factors that should influence airport projects, it usually is better to

⁶**Note:** However, these rates of state participation will be addressed in the plan section on the capital improvement program, and recommendations will be made for revisions to these rates.

adhere to those factors that reflect measurable airport characteristics and avoid community or regional characteristics, which may be difficult to measure and often lose relevance in the airport project setting. Population can often skew the results of a much-needed project at an airport in a rural setting due to low population numbers. However, when linked to the operational or based aircraft characteristics, the project may score well.

4.2 PROPOSED PRIORITY SYSTEM

The following section is an outline of a recommended priority scoring system that was presented to the SCASP Technical Advisory Committee on July 18, 2007. Included with this section is a table that provides the detail for a draft priority system (Table 4.2-1, page 19). The system received the SCDOA and SCASP Technical Advisory Committee approval and will replace the current system being used as a decision-making tool by the SCDOA and SCAC.

Some of the project categories and rated topics will have a range of points. For example, in Category I – Project Justification, point values for projects involving airport safety will range from a high of 60 points to a low of approximately 42 points. In Category II – Airport Classification and Demand, the airport classification point assignments will be based on a range of scores, which will be directly proportional to the classification to the South Carolina airports system. Other scoring criteria, on which the airport will be rated, will have only one point value. Most of these criteria involve certain sponsor responsibilities in Category III and special situations in Category IV.

An example of how the proposed priority system would work is outlined in Table 4.2-2 (page 20). This table takes projects currently outlined in the 2009-2013 Capital Improvement Program and implements the proposed priority system.

4.2.1 Priority System Outline with Maximum Point Values

4.2.1.1 Category I – Project Justification (types with sub-types)

- a. Safety Projects – high of 60 points
- b. Preserve or Rehabilitate Existing Facilities – high of 40 points
- c. New Air Service/Economic Development – high of 40 Points
- d. Planning Studies – high of 30 points
- e. Environmental Studies – high of 40 points
- f. Upgrade to Standards – high of 30 points
- g. Capacity Enhancement – high of 20 points
- h. Land Acquisition – high of 50 points





**Table 4.2-1
Priority System Scoring Values for Capital Improvement Program
South Carolina Airports System Plan**

Category I – Project Justification

Safety and Security Projects	Points
Obstruction removal to meet R/W end siting criteria (AC 150/5300-13)/TERPS	60
Obstruction removal to meet FAR Part 77	55
Rehab. non-functioning lighting system	50
Enhance runway condition or correction of problem related directly to safety	48
Airport security enhancements/ARFF	46
Special lighting to identify safety hazards	45
Runway safety area project	44
Safety condition identified by a professional evaluation or accident statistics	43
New or replacement NAVAID or visual aid that will affect operational safety	42

Preserve/Rehab. Existing Facilities	Points
Primary runway	40
Taxiway serving primary runway	39
Apron	38
Secondary runway	37
Taxiway serving secondary runway	36
Terminal building	34
Other eligible facilities	32

New Air Service/Economic Development	Points
New air service, new carrier or expansion of existing air service	40
New corporate/business with based aircraft	33
New corporate/business with itinerant aircraft	30

Planning Studies	Points
Master Plan, ALP and updates	30
Airspace studies	25
Terminal building studies	22
Regional system plans	20
Airport feasibility	15
F&E (NAVAID, AWOS) studies	12
Air service and air cargo studies	10
Compliance Documentation	10

Environmental Studies	Points
Environmental assessments and EIS	40
Wetlands delineation	35
FAR Part 150 Studies	30
Wash racks and BMP's	25
Cultural resource studies	20
Other special environmental studies	15

Upgrade to Standards	Points
Primary runway	30
Primary taxiway	28
Primary apron	26
Terminal building	25
Secondary runway	24
Secondary taxiway	22
Fencing	20
Access roads	18
Auto parking	14
Other eligible facilities	12

Capacity Enhancements	Points
Enhance landing area capacity, i.e., additional taxiways and parallel runways	20
Increase design aircraft, runway length and strength	19
New runway lighting systems	18
Primary taxiway construction, strengthening	17
New apron, apron expansion to accommodate additional aircraft growth	16
Apron expansion/strengthening for critical aircraft	15
Terminal building expansion to add capacity	14
Taxiway/apron to secondary area of the airport, hangars/T-hangars, etc.	13
Access road expansion to add capacity	12
Auto parking expansion to add capacity	11

Land Acquisition	Points
Land for obstruction removal	50
Land to acquire RPZ	40
Land for capacity enhancement	30
Land for noise control	25
Land for new airport	20
Land for future expansion	15

Category II – Airport Classification and Demand

Air Carrier Airports	Points
Category I – Air Carrier Airport	40

Annual Enplanements	Points
500,000+	25
250,000 - 499,999	20
100,000 - 249,999	15
0 - 99,999	10

Air Cargo (Annual Tonnage)	Points
500,000+	25
250,000 - 499,999	20
100,000 - 249,999	15
0 - 99,999	10

General Aviation Airports	Points
Category II – Corporate Airport	30
Category III – Business Airport	20
Category IV – Recreational/Local Service	15

Annual Operations	Points
25,000+	25
10,000 - 24,999	20
2,000 - 9,999	15
0 - 1,999	10

Based Aircraft	Points
100+	25
50 - 99	20
20 - 49	15
10 - 19	10
0 - 9	5

Category III – Sponsor Responsibility

Airport Security	Points
Approved security plan	10
No security plan	0
Implementing recommendations	10

Airport Minimum Standards	Points
Approved minimum standards	10
No minimum standards	0

Airport Maintenance	Points
More than meets expectations	10
Meets expectations	0
Does not meet expectation	-15

Compatible Zoning	Points
Yes	10
No	0

Category IV – Other Relevant Factors

Federal Funding	Points
Project in current year ACIP	25
FAA funding requested	10
Eligible for AIP but not requested	-15

Personal Property Tax Initiative	Points
Initiative implemented	10
Initiative not implemented	0

Special Conditions	Points
Phased project or design approved	50
Mandated by federal or state law	25
PFC project	20
SCAC policy	10

Source: Talbert & Bright, Inc. (February 2008)





**Table 4.2-2
Example 2009-2013 Capital Improvement Program Projects by Priority Score
South Carolina Airports System Plan**

Priority	Airport Name	Project Description	Category I							Category II			Category III				Category IV			Total Score		
			Saf	Reh	ED	Pl	Env	Stn	Cap	Lnd	Cat	Opn	BAC	ASF	AMS	Ma	CZ	AIP	PPT		SC	
II	Grand Strand (CRE)	Re-Wiring/Pavement Construction (Phase I)		40								30	25	15	0	10	0	10	10	0	50	190
II	Oconee County Regional (CEU)	Extend Runway 07-25 by 600 feet							30			30	25	20	0	10	0	0	10	0	50	175
II	Donaldson Field (South Carolina Technology & Aviation Center) (GYH)	Taxiway "B" Construction							18			30	25	20	0	10	0	10	10	0	50	173
II	Woodward Field (CDN)	Rehabilitate and Overlay Runway 06-24		40								30	25	15	0	10	0	10	10	0	0	140
II	Rock Hill/York County (UZA)	Extend Runway/Taxiway – 1,000 feet								19		30	25	25	0	10	0	10	10	0	0	129
III	Orangeburg Municipal (OGB)	Apron Expansion (Phase II)								17		20	20	15	0	10	0	10	10	0	0	102
III	Mt. Pleasant Regional (LRO)	Apron Expansion								17		20	25	20	0	10	0	0	10	0	0	102
II	Spartanburg Downtown (SPA)	New Terminal Building								12		30	25	25	0	10	0	0	0	0	0	102
II	Lancaster County (LKR)	Land Acquisition								15		30	20	15	0	0	0	10	10	0	0	100
III	Newberry County (EOE)	Perimeter/Security Fencing	46									20	20	15	0	0	0	0	10	0	0	91
IV	Marion County (MAO)	Partial Parallel Taxiway to Runway 22								17		15	15	10	0	10	0	10	10	0	0	87
IV	Hemingway-Stuckey (38J)	Runway Rehabilitation		40								15	10	5	0	0	-15	0	0	0	0	55

Notes:

Category I

- Saf – Safety and Security Projects
- Reh – Preserve/Rehab. Existing Facilities
- ED – New Air Service/Economic Dev.
- Pl – Planning Studies
- Env – Environmental Studies
- Stn – Upgrade to Standards
- Cap – Capacity Enhancements
- Lnd – Land Acquisition

Category II

- Cat – Air Carrier Airports or General Aviation Airports
- Opn – Enplanements or Operations
- BAC – Air Cargo or Based Aircraft

Category III

- ASF – Airport Security
- AMS – Airport Minimum Standards
- Ma – Airport Maintenance
- CZ – Compatible Zoning

Category IV

- AIP – Federal Funding
- PPT – Personal Property Tax
- SC – Special Conditions

Source: Talbert & Bright, Inc. (February 2008)





4.2.1.2 Category II – Airport Classification and Demand

- a. Commercial Service Airports:
 - 1) Airport Classification – 40 points
 - 2) Commercial Service Enplanements – high of 25 points (for commercial service projects only)
 - 3) Air Cargo Tonnage – high of 25 points (for air cargo projects only)
 - 4) Based General Aviation Aircraft – high of 25 points (for general aviation projects on commercial service airport)
 - 5) Annual General Aviation Operations – high of 25 points (for general aviation projects on commercial service airport)
- b. General Aviation Airports:
 - 1) Airport Classification – high of 30 points
 - 2) Based Aircraft – high of 25 points (for general aviation projects only)
 - 3) Annual Operations – high of 25 points

4.2.1.3 Category III – Sponsor Responsibility (high of ten points or negative ten points)

- a. Airport Security (general aviation airports only) – possible 20 points (10 points for security plan and 10 points for implementation of plan)
- b. Airport Maintenance – negative 15 points for poor maintenance, no points for good maintenance, 10 points for excellent maintenance
- c. Minimum Standards/Rules and Regulations – 10 points for approved set
- d. Airport Zoning – 10 points for approved zoning, no points for no zoning

4.2.1.4 Category IV – Other Relevant Factors (high of 50 points)

- a. Federal Funding – high of 25 points
- b. Personal Property Tax Reduction Initiative – implemented 10 points, not implemented zero points
- c. Special Conditions (a phased project or design completed, PFC project, mandated programs) – high of 50 points

once the airport facility is on the ALP, when requesting funding for a specific supplemental planning study, a benefit-cost analysis, environmental study, or specific mitigation action, which must take place as a prerequisite to the proposed airport facility, these studies or actions will carry the same point values as the proposed airport facility.

The points that are suggested are somewhat relative to the significance of the issue or deficiency being addressed; however, the point value or the range of points assigned to each particular topic is the decision of the SCDOA and SCAC.

It is also important to understand that when assigning points for a particular project scope, it is intended that all requisite studies or evaluations directly associated with a particular scope shall maintain their association with that scope from the ALP all the way through to final inspection. For instance,



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5.0 MANAGING THE FUTURE AIRPORTS SYSTEM

Our nation's infrastructure represents the underpinnings of a dynamic world economy. As such, airports, which are critical components of our global transportation system, are constantly appearing and closing; being replaced and expanded. In such an environment, each state's airports system plan must be prepared to add new airports and possibly remove airports from a system where it is necessary to respond to the needs of economic development and address safety and security issues. In South Carolina, there are jurisdictions that believe there is a justifiable need for a new airport that will position them to compete with other communities in South Carolina, North Carolina, or Georgia for economic development. It is also the state's goal to make every justifiable attempt to position these communities to compete in a global marketplace. While South Carolina has a mature airport system, there is no reason to rule out the possibility of a new airport requirement in the system during the next 20 years.

While a state airports system plan will generate some indicators as to the possible justification of a new airport, the macro level of state system planning does not afford the planners with many details that must be considered when making such a decision. A state airports system plan must approach the system from the bottom up; however, the plan evaluates the systematic interaction between airports more than it is able to study the precise need for a new airport in an area where there are no airports and no air traffic indicators. In some instances, there may be existing airports where air traffic does not justify significant development, and these airports with their projected air traffic indicators could be combined with markets that are not served and thereby justify a replacement airport that will meet the needs of an enlarged market area.

In contrast, airports are being lost to urban sprawl or lack of resources. There are airports in every state that are small, rural, and purely recreational in nature but are not significant contributors to the state's economy. These airports support an important component of the aviation community that is constantly being pushed out of the urban airports and simply want a location where it can operate in a leisurely fashion and not bother anyone. It should be highlighted that these airports provide access to these rural, often isolated communities and public lands for reasons of fire fighting, law enforcement, and rescue and emergency services. On the other hand, there are other small, rural airports that are approaching unsafe conditions due to the lack of maintenance or capital improvements. These airports must be addressed in the SCASP as the SCDOA has a codified responsibility to ensure the safety of each of its system airports to protect the flying public and enforce the state's risk management policy. Therefore, if an airport is truly unsafe, the SCDOA is obliged to notify the owner and begin a process by which the sponsor either brings the airport into compliance with applicable safety standards or removes it from the system and requires it to go private in accordance with the *South Carolina Code of Laws*.

The only reason that the SCDOA should attempt to close public use airports is for reasons of safety or security. The complexity of the small airport issue is a major justification for planning a system of airports that is classified utilizing a system that recognizes and supports the level of service that each airport provides to the system. This system provides for the continuation of each airport unless it

should be removed for reasons of safety or security while assisting the state in managing its funding investment.

The purpose of this section of the SCASP is to specify the processes by which the SCDOA can exercise leadership in identifying potential new or replacement airports, as well as those that should be removed where circumstances justify either of these actions.

5.1 ADDING NEW AIRPORTS TO THE SYSTEM

The issue that is paramount in future discussions between the SCDOA, SCAC, and those jurisdictions who wish to add a new airport to the system is whether there is sufficient justification for a new facility. A decision to add an airport will result in a significant commitment of limited public resources at all levels of government. There are currently 60 public use airports in South Carolina that are eligible for state financial assistance. These airports must be maintained, kept safe, and developed if they are to support economic development at a significant cost to the taxpayers of South Carolina. Therefore, the decision to add another new airport, also with its inherent requirements for maintenance, safety, and development, needs to be a conscious and an informed decision by both the SCDOA and the FAA, which will likely be asked to pay 97.5 percent or the majority of the cost.

In most instances, the initial indication that a new airport may be justified will naturally be generated at the local level as the community is the most knowledgeable about air transportation needs and possibly has conducted its own study that includes the details that may support such a decision. On the other hand, conditions at certain airports have been allowed to exist for such long periods of time that alternatives have been identified informally by the localities, the SCDOA, and the FAA but never have been implemented.

- ➔ Airports do not get built without a sponsor; therefore, the first step in the process of planning for a new airport and its acceptance into the South Carolina airports system is to identify a sponsor who will embrace the responsibility and provide the local share of funding for a planning study to research and evaluate the feasibility of a new airport. This study should be performed by either a planning region or a professional firm, which is knowledgeable and equipped for such a study. The study should not be conducted in a vacuum but should include citizen participation in the area or areas that are to be considered for possible siting or ownership. The study should receive financial assistance from both the SCDOA and the FAA. The SCDOA and the FAA staffs shall have the opportunity to review and accept or reject the assumptions, forecasts, and results and actively participate in the study process.
- ➔ If the study is rejected, the SCDOA and the FAA must formally respond to the sponsor stating the reasons for rejection. The SCAC should have the authority to hear any appeal by the sponsor and either uphold the decision by the SCDOA or find for the sponsor based on the evidence.



- ➔ If the study is accepted, the next steps for the sponsor involve an airport master plan to include site selection, an environmental assessment/impact statement, engineering design, and construction.

- ➔ The SCDOA shall notify the sponsor as to the date for the second inspection and request that the sponsor attend so that all may observe the conduct and the results of that inspection. Upon completion of the second inspection, if the airport is found to be in compliance with the standards, the SCDOA shall provide the sponsor a letter stating that the airport has been found to be in compliance, addressing each item, and that the sponsor may remove the NOTAM.
- ➔ If the second inspection reveals that the deficiencies have not been addressed, the SCDOA shall so inform the sponsor and state that he/she has 90 days to bring the airport into compliance. If the actions necessary to bring the airport into compliance have not been completed at the end of 90 days, the airport shall be removed from the South Carolina airports system, and the SCDOA will initiate procedures for removal under the *South Carolina Code of Laws*.

5.2 REMOVING AIRPORTS FROM THE SYSTEM

The closure of an airport should also represent a conscious and informed decision only after methodical due process has been followed by the SCDOA. Unlike identifying the potential for a new airport, which is likely to be the result of local initiative, identifying a candidate for removal will likely be the result of an airport inspection by the SCDOA or the FAA staff. However, when such a candidate has been identified, the following process shall be invoked in order to arrive at an informed and justifiable decision.

The *South Carolina Code of Laws* allows the SCDOA to order the airport to cease operation until the airport has complied with the requirements laid down by the SCDOA. It is clear from the *South Carolina Code of Laws* that the SCDOA has the authority to order the closing until the sponsor has brought the airport into compliance with applicable design standards. If the sponsor does not make an attempt to comply with the standard for a predetermined period, then it is justifiable and reasonable that the airport should be removed from the South Carolina airports system. While the process for removal may seem cumbersome and bureaucratic, the SCDOA has been charged with the responsibility for airport safety in South Carolina, and if it does not carry out this mandate properly and in a timely fashion, it may result in injury or fatality to a system user. In the event of such an occurrence, it is almost certain that in today's litigious society, the SCDOA will find itself in court along with the airport sponsor.

- ➔ Upon identifying an airport that does not meet the minimum safety standards, the SCDOA shall notify the sponsor in writing of its inspection including the date and time and identifying the specific areas of non-compliance. The letter needs to specify what actions must be taken to bring the airport back into compliance including a date (30 days) by which a response must be received. A non-compliance situation is not in every instance a safety issue. Therefore, whether the airport should be closed temporarily is a decision that should not be left to an engineering inspector. In order to make this determination, an experienced pilot shall be requested to fly to the airport, land, and take off, if this is feasible, and then determine if safety is at issue in this instance. The SCDOA should include both non-compliance and safety determinations in the one letter if timing allows avoiding any confusion. If the SCDOA decides that the airport should be closed temporarily, the letter shall direct the sponsor to file a notice to airmen (NOTAM) with FAA Flight Service closing the airport until further notice.
- ➔ The sponsor shall have 30 days to respond to the SCDOA. The response must include what specific actions will be taken to bring the airport into compliance and what date the actions will be completed in preparation for a second inspection by the SCDOA staff.

5.3 PROPOSED AIRPORTS/STUDY AREAS IN THE SYSTEM

There are certain areas of the state, which are experiencing constraints at an existing airport or are evaluating the feasibility of a new airport to meet a perceived aviation demand. Generally, the State of South Carolina is served well with a mature system of 60 commercial service and general aviation airports (Figure 5.3-1, page 25). However, there are three specific regions in the state that have been identified for consideration in the SCASP that need to be evaluated as possible candidates for new airports. These areas are:

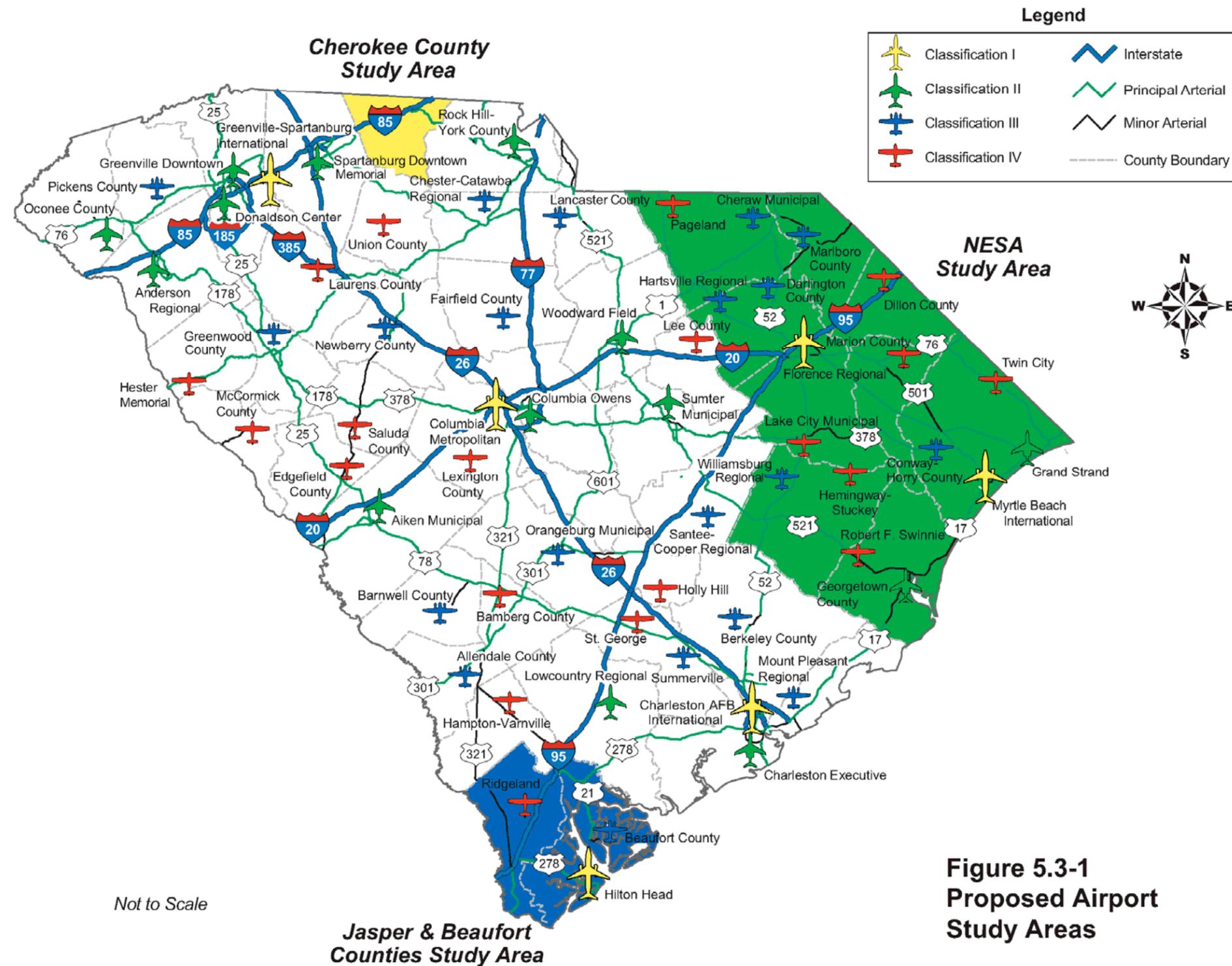
- ➔ Cherokee County in the northwestern portion of the state
- ➔ Beaufort and Jasper Counties in the southern portion of the state
- ➔ North Eastern Strategic Alliance (NESA), which includes nine counties in the northeastern portion of the state

While a state airports system plan will generate some indicators of possible justification of a new airport, the macro level of state system planning does not afford the planners with many details that must be considered when making such a decision. A state airports system plan approaches the system from the bottom up; however, the plan evaluates the systematic interaction between airports more than it evaluates the precise need for a new airport in an area where there are no airports and no air traffic indicators. Therefore, the following analysis relies on studies that have been completed or are being conducted by these localities or regional planning agencies to make any determination.





South Carolina Airports System Plan



**Figure 5.3-1
Proposed Airport
Study Areas**





5.3.1 Cherokee County

Cherokee County submitted a draft of a document *New Airport Justification Study for Cherokee County, South Carolina*⁷ to the FAA in April 2007. This draft was completed in March 2007 and submitted in support of a request to the FAA, Atlanta Airports District Office (ADO) for reconsideration of Cherokee County's entrance into the NPIAS. The FAA's response dated July 17, 2007, did not support entry and, in a subsequent letter dated September 26, 2007, from the ADO, in support of the SCDOA position (letter dated August 30, 2007), stated that a final determination would be made upon completion of the SCASP.

In reviewing the feasibility study, several points of information need to be addressed prior to making any determination as to the need and justification for a new general aviation airport in Cherokee County. The study indicates that the drive time between Gaffney (county seat for Cherokee County) and Shelby Municipal Airport (North Carolina) exceeds the 30-minute stated goal of the NPIAS; however, it does not state what the travel time is. It should also be stated that this drive time is a goal and not a requirement; there are numerous communities in most states that do not meet this goal. The SCDOA staff drove the route both up and back and found the time to be 29 minutes and 27 minutes, respectively; however, the SCDOA staff acknowledges that it could exceed those times depending on the time of day and traffic conditions. While much of Cherokee County, northwest and southeast of I-85, is greater than a 30-minute drive time from the nearest general aviation airport, the principal area of focus should be the I-85 corridor and those areas of Cherokee County that represent a five-mile to ten-mile corridor along I-85.

In reviewing the numerous surveys that were completed and submitted by aircraft owners and businessmen in the region that document the information used in the study, it appears that four new aircraft would be brought into the state by the owners. From the data submitted, of the 17 aircraft that would likely be located at the new airport, 4 would come from out of state and 13 would come from other airports in South Carolina, primarily Spartanburg Downtown and Union County airports. There were five respondents that indicated that they would consider purchasing or would purchase an aircraft and base it at a new airport in Cherokee County. It is possible that some new aircraft would be purchased; however, experience in other states indicates that the number of aircraft actually purchased rarely equals the number indicated on the surveys.

One of the questions on the survey asked for aircraft owners to indicate the runway length required for a new airport based on their aircraft requirements. The responses ranged from 100 feet to 6,000 feet. Based on a review of the aircraft types identified on the survey, only one aircraft required a runway length in excess of 4,000 feet; this was a King Air 220 possibly to be purchased by a local business. The other aircraft are single-engine or light twin-engine aircraft initially requiring a maximum of 3,500 feet of runway.

One of the most interesting surveys came from an out-of-state company, which owns a Bombardier Challenger 300 and a Hawker HS-25-B, both of which are midsize turbofan aircraft. The company is

located in New Canton, Ohio, and has a requirement for corporate travel with trip times averaging over one hour. The feasibility study does not address or follow through on the need for the company to fly to South Carolina. If so, where in South Carolina, and why would the company have a requirement to fly to Cherokee County? Even though these aircraft would not be based in Cherokee County, this piece of the puzzle might be more critical to justifying a new airport from an aircraft operating point of view. An attempt was made to contact and present these questions to the company, but it was unsuccessful.

The last and most critical discussion should be the forecast of economic development opportunities for the Gaffney-Blacksburg communities based on why businesses locate in Cherokee County. These two communities are located along one of the busiest interstates in the nation. Is this location currently influencing business and corporate entities to come to Gaffney and Blacksburg? If so why, and if not why not? While access to the nation's air transportation system is one of the top six or seven influencing factors for a corporate decision to locate or relocate, there are others that are higher in ranking, such as location, land/site availability, state/local business climate, state/local tax structure, and the availability of a skilled/unskilled labor force. It is entirely possible to plan and develop a general aviation airport and not have any corporations or businesses relocate due to the other factors. None of these factors are addressed in the draft feasibility study, but they need to be considered before making any decision as to demand and justification.

5.3.1.1 Finding and Conclusion

After a comprehensive review of the feasibility study submitted by Cherokee County, it is not possible to make a conclusive determination as to the present and future need for a new general aviation airport. While there is a forecast of potential based aircraft that may qualify its entry into the FAA's NPIAS, there remains a significant need to address the real reason that airports are built. Economic development and the associated business climate that might provide continuous support for a new general aviation airport in the long term are not discussed or quantified. With this critical analysis missing from the feasibility study, it is not possible to support a proposal for a new general aviation airport in Cherokee County. This issue needs to be reevaluated during the next airports system plan after the locality has addressed the issues as stated above.

Presently the FAA has not concluded that Cherokee County's proposed airport request would meet the minimum requirements for NPIAS inclusion. The SCDOA, SCAC, and SCASP Technical Advisory Committee have determined that there is not enough evidence at this time to support the entry of a new airport in the SCASP.

⁷WK Dickson & Co. Inc. (March 19, 2007). *New Airport Justification Study for Cherokee County, South Carolina*. Prepared for Cherokee County, South Carolina.



5.3.2 Beaufort and Jasper County Region

In 2001, Jasper County conducted an airport site selection study to examine the existing conditions and future needs of the Ridgeland Airport.⁸ In 2003, following the selection of a new site for an airport in Jasper County, an ALP and a Master Plan were completed.⁹ Three sites were analyzed in an environmental assessment, which resulted in the selection of the Cypress Woods site for the location of the new Jasper County Airport.¹⁰ However, as a result of the public hearing on February 24, 2004, and negotiations with the landowner of the Cypress Woods site, Jasper County determined that the site was unattainable without resorting to protracted and undesirable condemnation procedures. As a result, a fatal flaw analysis was performed on another site – Bailey Mills Plantation site – to determine whether a complete environmental assessment and ALP should be prepared.¹¹ The result of the fatal flaw analysis was that Jasper County could pursue development of the Bailey Mill Plantation site. However, the owner of the Cypress Woods site is no longer willing to sell the property, and the County is not pursuing the development of a new airport at this time.

A major proposal that will drive the need to expand or relocate the Ridgeland Airport in Jasper County is a recent proposal to develop a major bi-state port facility in Jasper County. Recently released was the information that the state ports authorities of South Carolina and Georgia are negotiating to jointly acquire and develop a potential port site at the mouth of the Savannah River.¹² The 1,500-acre site in Jasper County, now owned by the Georgia Department of Transportation and used by the U.S. Army Corps of Engineers as a disposal site for dredged sediment from the Savannah River, has been identified by both states as a prime location for the new port and container facility. If this proposal does go forward, the business and commerce generated by the port and the growth in businesses to support the new port will require access to the national air transportation system. The existing Ridgeland Airport will not provide this access with a runway length of 2,692 feet.

Impacting the Jasper County Airport issue is also the current situation involving Hilton Head Island Airport (HXD). Beaufort County is in discussions with the Town of Hilton Head Island regarding the expansion of HXD and maintaining the safety of the existing facility. The town has enacted a zoning change that would limit the airport's runway to its current length of 4,300 feet.¹³ At the current time, both US Airways and Delta Airlines provide commercial service to HXD. US Airways provides service between Charlotte, North Carolina, and Hilton Head Island. Delta Airlines provides service from Atlanta, Georgia. Both airlines provide service to Hilton Head Island with turboprop aircraft – Bombardier (Dehavilland) Dash 8 (78 passengers) and ATR-72-210 (66 passengers). While there is no published plan by either carrier to transition immediately from turboprops to regional jets (RJs) at HXD, the industry initiated such a move at the turn of the century nationwide and a long-term move to

the use of regional jets at HXD, such as the Embraer 134, 140, 145, or 170 is possible. These aircraft can provide service to Hilton Head Island. However, an RJ would only be able to operate without a penalty on the 4,300-foot runway on a route segment of 500 nautical miles or less, under ISA conditions with a full passenger load plus reserve fuel. On hot days when passenger loads are at their peak, it is anticipated that RJs would be limited to 70 percent or 80 percent capacity.

5.3.2.1 Finding and Conclusion

After evaluating the reports prepared for the planning and development of a new general aviation airport in Jasper County and having conversations with representatives of the airports in both Beaufort and Jasper counties it has been determined that:

1. The forecasted growth in general aviation aircraft and operations at Ridgeland Airport over the next 20 years is 100 percent
2. The proposed development of a new bi-state port facility on the Savannah River will be an economic engine for the region and generate the need for improved access to the nation's air transportation system
3. There is a potential future need to accommodate increased commercial service to the region generally and Hilton Head specifically and a transition to regional jets by the carriers

These factors justify the continued effort to plan for and develop an expanded Ridgeland Airport or a replacement/new airport to accommodate the air transportation needs of the region.

The SCDOA and SCAC conclude that there is enough evidence to support the entry of a new or replacement airport in the SCASP.

5.3.3 NESAs Region

In 2007, the FAA issued a grant for a planning study to determine if there is a requirement for additional airport facilities to meet the long-term aviation demand in a study area, which consists of nine counties in South Carolina and six (all or part) counties in North Carolina. However, it should be noted that the North Carolina Department of Transportation Division of Aviation and the airports located in North Carolina have no input in the study. As stated in Chapter 1, Study Introduction; *airports in the study area continue to grow and develop in relation to their own market area, but there has not been a strategic review of the study area's airport system in terms of developing a cohesive long-term aviation development strategy. It is the intent of this study to assess the study area's current relevant conditions, determine the region's long-term demand, and then determine if existing facilities appear capable of meeting this demand.*¹⁴

⁸Wilbur Smith Associates (2001). *Jasper County Airport Site Selection*. Prepared for Jasper County, South Carolina.

⁹Wilbur Smith Associates (2003).

¹⁰Wilbur Smith Associates with HSA Group (May 2005). *Final Environmental Assessment for a New Jasper County Airport*. Prepared for Jasper County, South Carolina.

¹¹Wilbur Smith Associates in association with Ward Edwards (October 2006). *Fatal Flaw Evaluation for a New Jasper County Airport*. Prepared for Jasper County, South Carolina.

¹²Jason Ryan, "States Work Out Joint Port Deal," *The State*, November 11, 2007, Impact.

¹³Tim Donnelly, "Island Mayor Tries to Reassure US Airways Express, Delta on Airport's Future," *The Island Packet*, November 24, 2007, Local News.

¹⁴Wilbur Smith Associates (March 2008). *NESA Airport Study Phase I*. Prepared for North Eastern Strategic Alliance (NESA).





The study area encompasses a total of three commercial service airports and 25 general aviation airports. Two of the commercial service airports, Florence Regional Airport and Myrtle Beach International Airport, are in South Carolina and one, Wilmington International Airport, is in North Carolina. There are 19 general aviation airports in South Carolina and six in North Carolina. The size of the area and number of airports being addressed in this NESAs study represents a major regional air transportation study. As such, this effort seems to be driven more by a perceived need or a desire to consolidate air service in the region and replace the existing commercial service airports than by any planned revisions to the general aviation airport system.

2008, states that *this study does not show a need for a fourth commercial airport within the study area...the most prudent option would be Option 2 – Improve Existing Facilities.*¹⁵

The SCDOA, SCAC, and SCASP Technical Advisory Committee conclude that there is not enough evidence to support the entry of a new or replacement airport in the SCASP.

In reviewing the total annual operations at each of the airports in the study area, it was determined that none of the airports is experiencing any capacity issues or delays. Utilizing the data from the current draft study, the three commercial service airports are operating well below the airport capacity when comparing annual operations to their annual service volume (ASV) as presented in Table 5.3.3-1.

**Table 5.3.3-1
Current Percentage of the Annual Service Volume
for the Three Commercial Service Airports
South Carolina Airports System Plan**

Airport	Annual Ops.	ASV	% ASV
Florence Regional	31,764	230,000	13.81%
Myrtle Beach International	62,748	230,000	30.61%
Wilmington International	68,415	200,000	34.21%

Source: NESAs Airport Study; Chapter 2, Table 2-4 by Wilbur Smith dated August 2007

Of the general aviation airports, only two, Conway-Horry County and Georgetown airports, are operating above 20 percent of capacity. All of the remaining airports are operating at 17 percent or below. It is clear from the data presented that none of the airports in the NESAs study area have capacity issues and that system capacity cannot be utilized as a justification for a new airport to meet the demand for either commercial service or general aviation. Therefore, the only possible reason for such a proposal might be to regionalize and consolidate air service at a new airport as an economic engine for the NESAs region. While this same concept has been studied in other states, the outcome has rarely reached the next step beyond the regional study phase. That is not to say that such a proposal is not a good idea for the long term. However, proposing to replace three existing commercial service airports, relocate air service farther from the major markets, incur hundreds of millions of dollars in cost, and find a sponsor willing to take on such responsibility is an extremely challenging scenario to sell to even a multi-jurisdictional entity. It is also a proposal that is difficult to cost-benefit for many years into the future.

5.3.3.1 Finding and Conclusion

The Phase I report was completed in March 2008 determined that *developing a new airport either as a fourth commercial airport for the system or as an alternative for one or more of the existing airports would provide sufficient capacity to meet higher demand levels both within and beyond the 20-year planning period. The feasibility of providing a new airport for the study area is greatly enhanced if this airport is an alternative airport, as opposed to an additional airport for the study area.* However, the FAA’s review dated September 22,

¹⁵Federal Aviation Administration, “NESAs Airport Study – Review and Comment,” letter addressed to North Eastern Strategic Alliance (NESAs), September 22, 2008.





especially challenging for all pilots. The situation is especially relevant when military aircraft are conducting night vision goggle training and operating with reduced lighting.

6.0 SPECIAL USE AIRSPACE

Federal Aviation Regulations (FAR) Part 73 – Special Use Airspace provides for the establishment volumes of airspace where aircraft and aviation-related activities must be confined because of their nature or when limitations must be imposed on aircraft operations that are not a part of those activities. In such instances, the United States government undergoes a process by which such activities may be confined to designated special use airspace (SUA). Several types of SUA are:

- Prohibited Areas
- Restricted Areas
- Military Operations Areas (MOAs)
- Warning Areas
- Alert Areas
- Controlled Firing Areas
- National Security Areas

Prohibited and restricted areas are classified as regulatory airspace and therefore subject to the federal rulemaking process. Nearly all SUA is assigned to U.S. Department of Defense activities for security or other reasons associated with the national welfare. SUA is defined by its vertical limits, horizontal limits (perimeter boundary), and times of use. There are several SUAs located in the State of South Carolina, and their use characteristics are outlined in Table 6.0-1. Figure 6.0-1 (page 30) illustrates the location of these SUAs within the state and provides an indication of the amount of airspace that has been assigned. Figures 6.0-2 through 6.0-8 (pages 31 through 34) illustrate the individual SUAs in more detail and are reviewed in the sections below.

Civilian aircraft use of restricted airspace when operating under visual flight rules (VFR) is not permitted. When operating under instrument flight rules (IFR), civilian aircraft may operate in restricted airspace when it is not active. When active, such clearance may be given under certain limited circumstances by the FAA air traffic control facility. However, it is much preferred that IFR aircraft be cleared to a routing that avoids entry into the restricted airspace.

MOAs provide the airspace needed for training pilots to fly their assigned missions in realistic operating conditions. Maneuvers and tactics include intercepts, air-to-air combat, aerial refueling, ground troop support, and high- and low-altitude navigation and bombing. As opposed to prohibited and restricted airspace, an active MOA can be used for IFR flight by both military and civilian aircraft when FAA air traffic control can provide the requisite separation. Otherwise, civilian aircraft will be rerouted or restricted. VFR flight into an active MOA is not controlled but is highly discouraged. The operating status of a MOA is monitored by the FAA and pilots opting to fly VFR into an active MOA can be given traffic advisories. Participating military aircraft are also advised of such entry. However, given the high speed and dynamic flight profiles being flown by military aircraft, to see and avoid other aircraft is

**Table 6.0-1
Special Use Airspace in South Carolina
South Carolina Airports System Plan**

Name	Vertical Limits	Times of Use
Gamecock I MOA (Figure 6.0-2, page 31)	100' AGL to 6,000' MSL	Intermittent 0800 - 2400
Fort Jackson Range R-6001 A & B (Figure 6.0-2, page 31)	Surface to 3,200' MSL	Continuously
Poinsett Weapons Range R-6002 A, B & C (Figure 6.0-3, page 31)	Surface to FL 230	Sporadically
	Surface to FL 230	Intermittent 0600 – 2300
		Monday – Friday, occasional Saturday and Sunday
Poinsett MOA (Figure 6.0-4, page 32)	300' AGL to 2,500' MSL	0600 – 2400 Monday – Friday
Gamecock B MOA (Figure 6.0-5, page 32)	10,000' MSL to but not including FL 180	0800 – 1600 Saturday
		Intermittent 0800 – 2400
		Not to exceed two consecutive weeks or four weeks per year
Gamecock C MOA (Figure 6.0-5, page 32)	100' AGL to 10,000' MSL	Intermittent 0800 - 2400
Gamecock D MOA (Figure 6.0-5, page 32)	10,000' MSL to but not including FL 180; with Air Traffic Control Assigned Airspace up to FL 220	Intermittent 0800 - 2400
Robroy MOA (not depicted) overlaps Gamecock C and Gamecock D	100' AGL to FL 220	Intermittent 0800 - 2400
Beaufort 1 MOA (Figure 6.0-6, page 33)	100' AGL to 10,000' MSL	Intermittent four daylight hours per day, two days per month
Beaufort 2 MOA (Figure 6.0-6, page 33)	100' AGL to 7,000' MSL	Intermittent four daylight hours per day, two days per month
Beaufort 3 MOA (Figure 6.0-6, page 33)	100' AGL to 2,000' MSL	Intermittent four daylight hours per day, two days per month
Unnamed National Security Area located ESE of Augusta and WNW of Barnwell (Figure 6.0-7, page 33)	Below 2,000' MSL	All hours

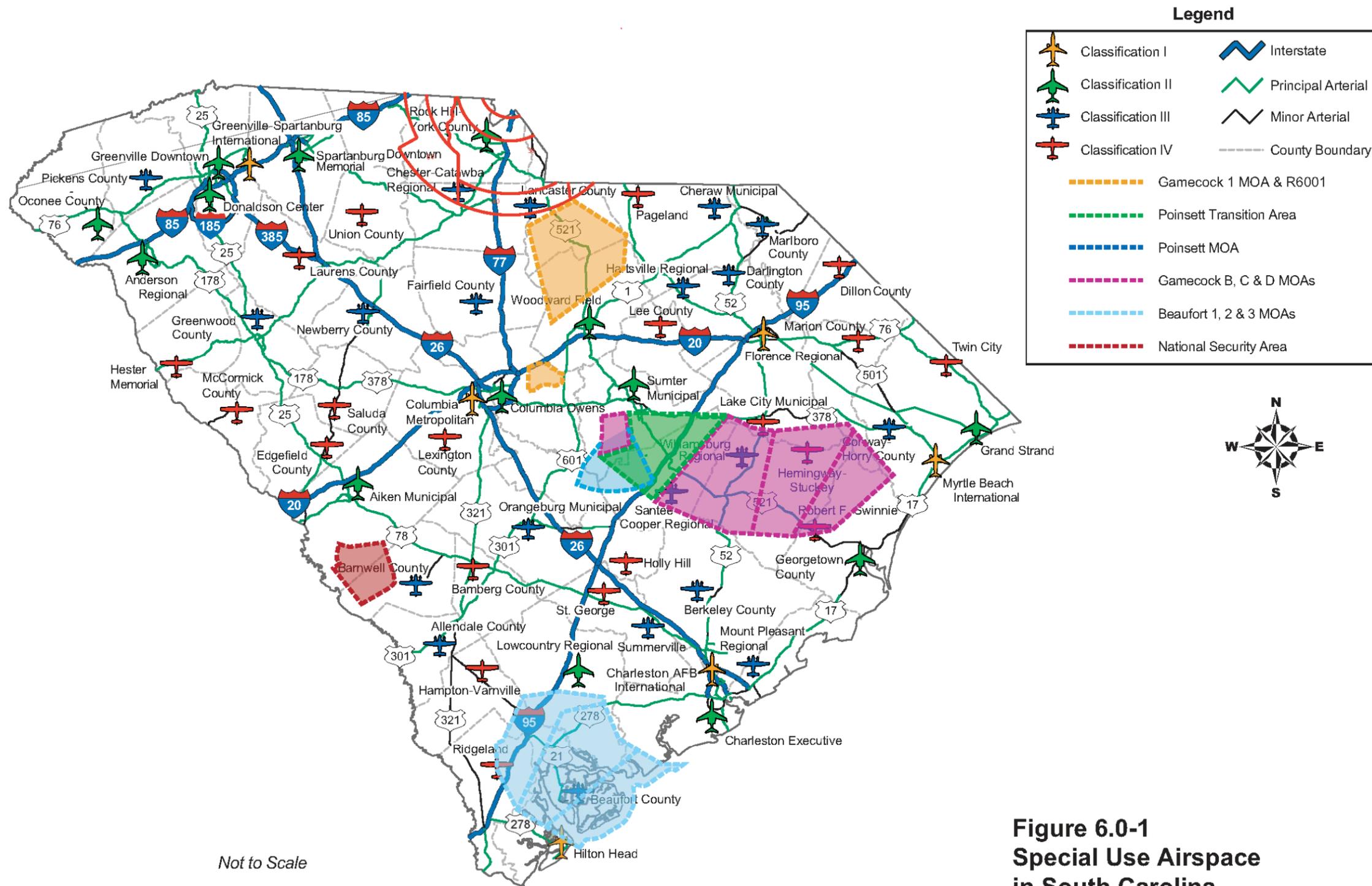
MOAs in South Carolina may be assigned to Shaw Air Force Base, located in the central eastern portion of the state 35 miles east of Columbia; Charleston Air Force Base, located on the Atlantic coast 75 miles south-southeast of Shaw Air Force Base; or McEntire Joint National Guard Base situated between these facilities. Additionally, aircraft assigned to Navy and Marine bases in the region use these MOAs.

MOAs should ideally be located near the military bases so that time and fuel resources are maximized for these maneuvers and tactics training activities. As an illustration, tactical aircraft typically carry 60 minutes to 90 minutes of fuel for the flight mission. Fuel used to transition to distant MOAs substantially reduces the effectiveness and efficiency of the training activity.





South Carolina Airports System Plan



**Figure 6.0-1
Special Use Airspace
in South Carolina**





South Carolina Airports System Plan



Source: South Carolina Aeronautical Chart (2006)

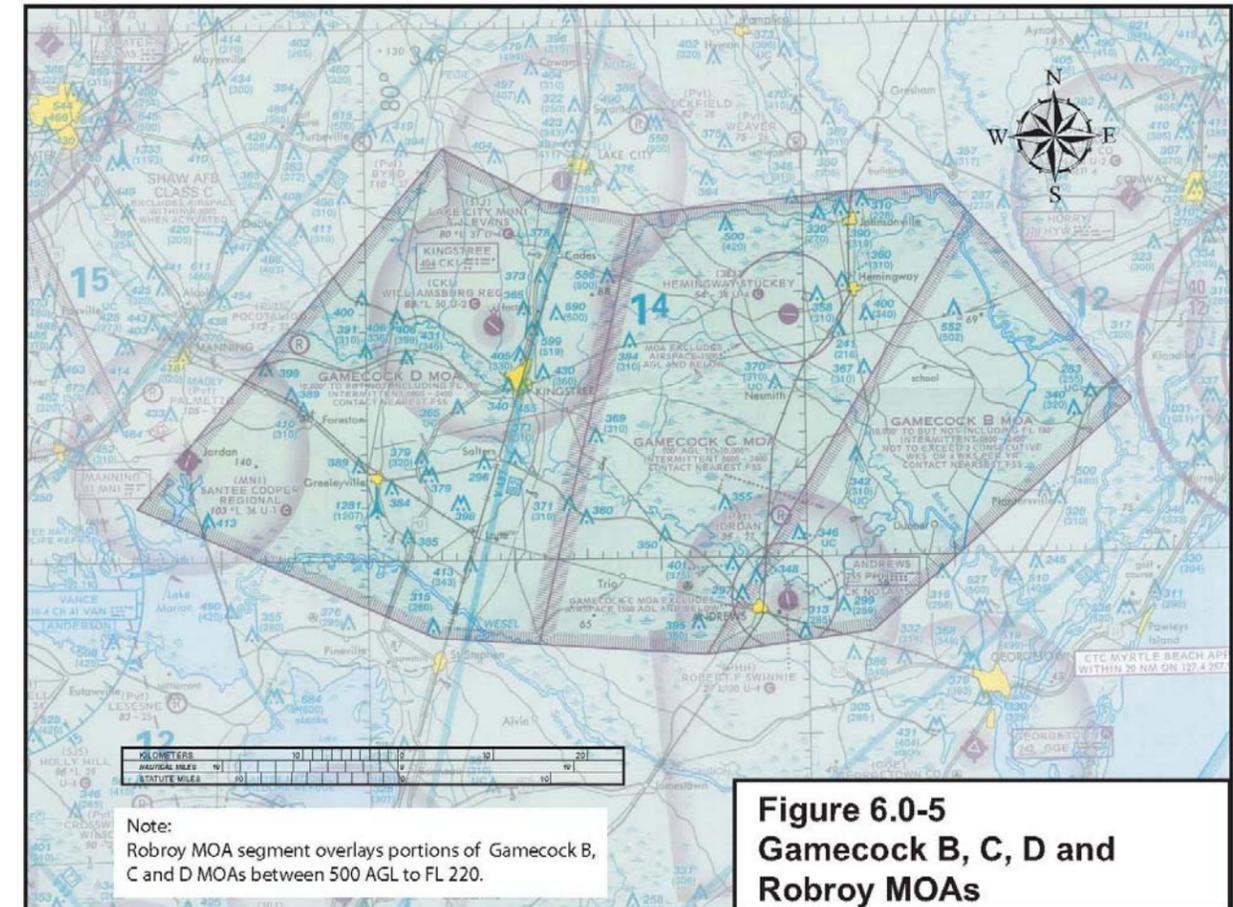


Source: South Carolina Aeronautical Chart (2006)



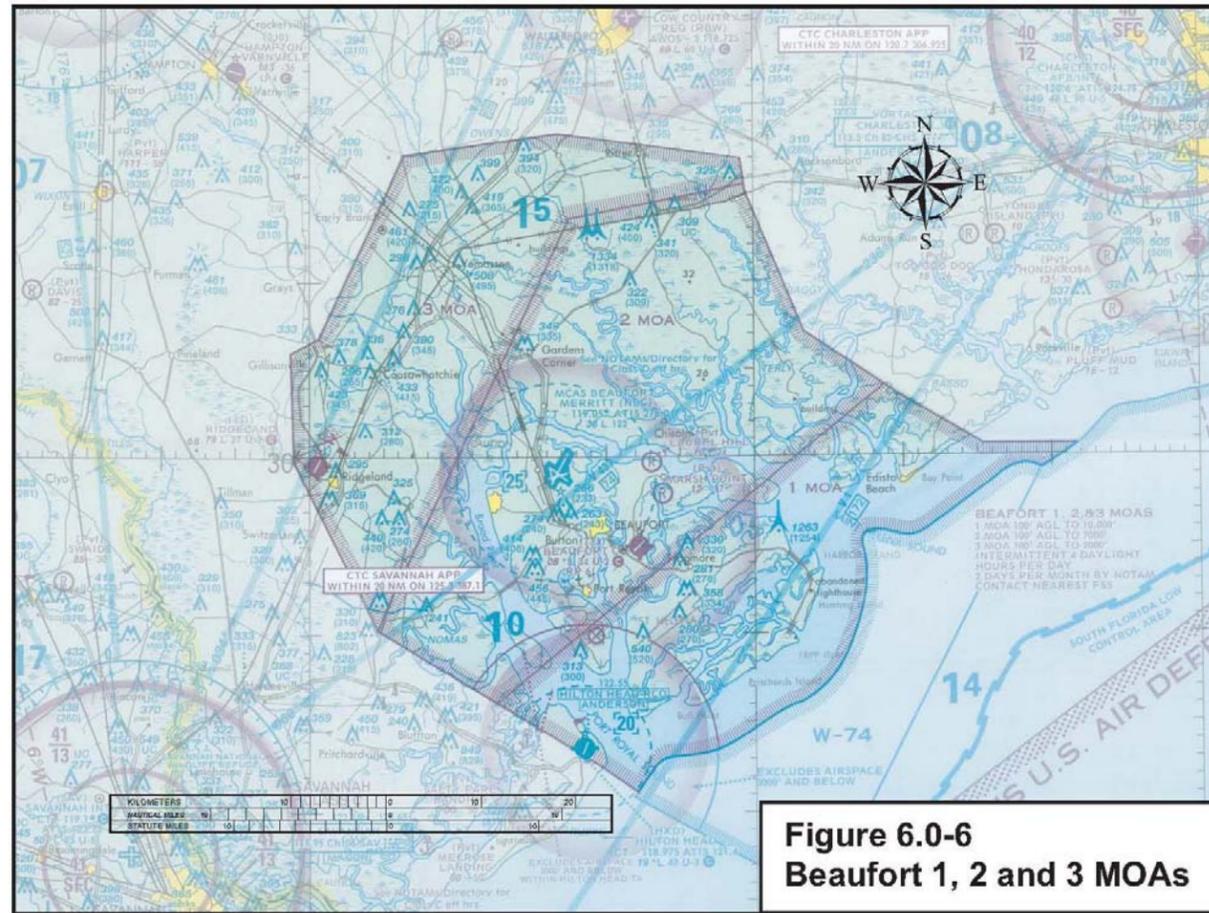


South Carolina Airports System Plan

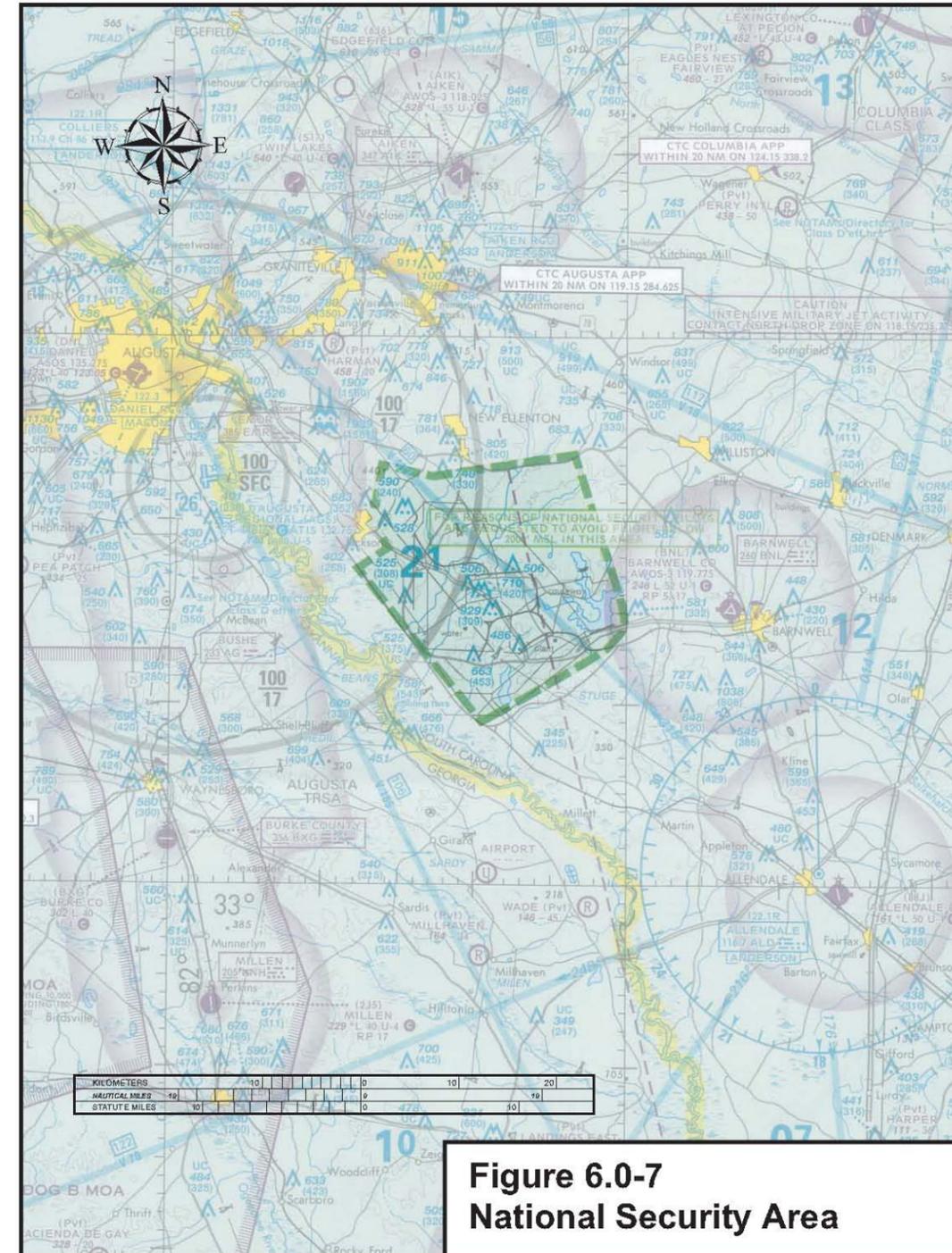




South Carolina Airports System Plan



Source: South Carolina Aeronautical Chart (2006)



Source: South Carolina Aeronautical Chart (2006)





6.1 NEW SPECIAL USE AREAS

As military aircraft fly faster and carry more advanced weapons technology, the need for greater volumes of airspace increases. The U.S. Department of Defense has sought to increase the volume of MOAs in South Carolina in the past few years. The FAA has the authority to grant such airspace use after its review of airspace interactions and consultation with the other users of the airspace system. Recent requests for such expansion have been denied by the FAA with one exception – the Poinsett Transition Area – that will link the Gamecock D MOA with R-6002 (Figure 6.0-8).

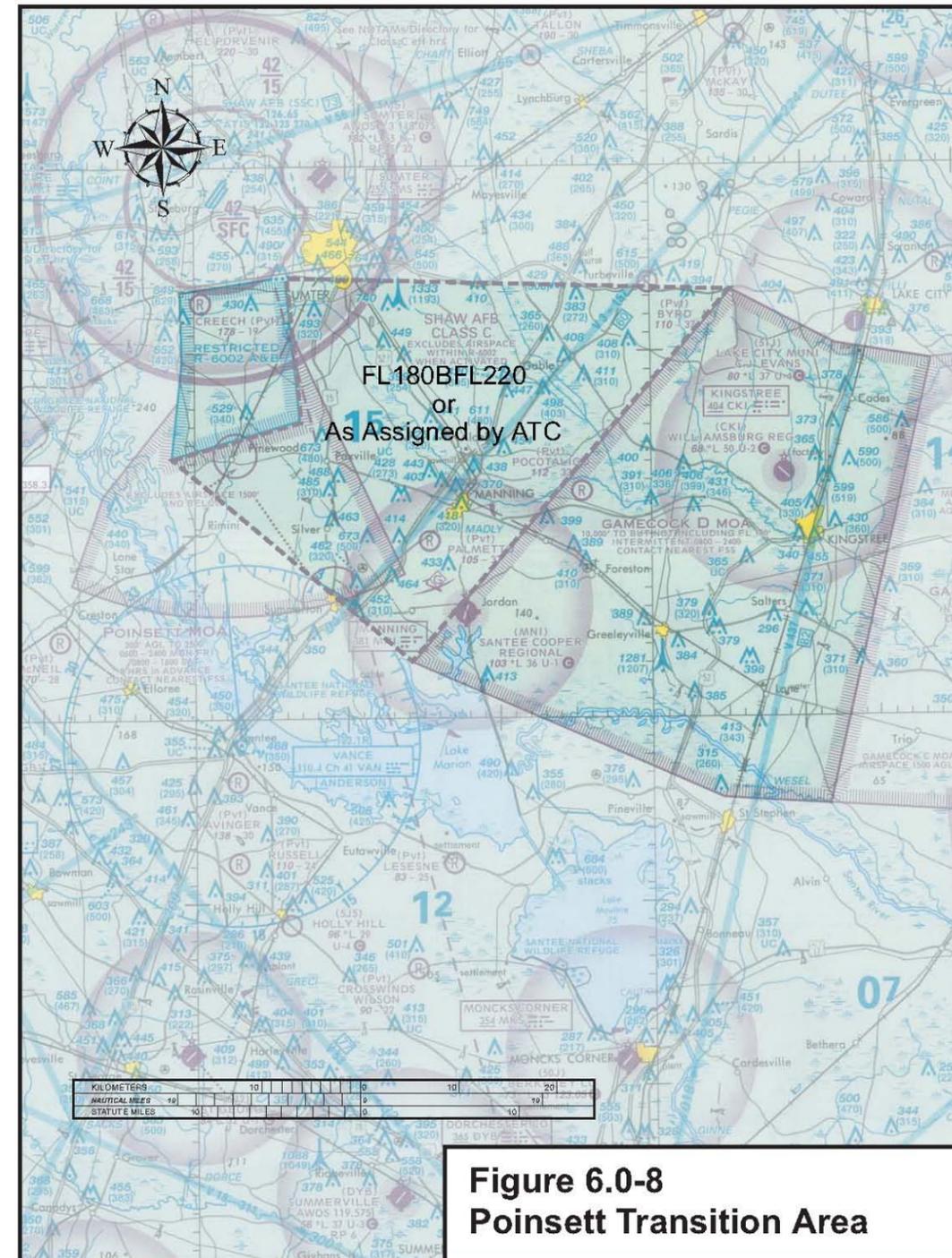
A transition area is not an MOA. Rather, a transition area allows for one-way flights between MOAs or restricted airspace areas. Aircraft using this area are not expected to loiter, reverse course, make 360° turns, or otherwise delay their flight through the area airspace.

The Poinsett Transition Area is designed to facilitate the tactical formation transit of F-16s from the 20th and 169th Fighter Wings at Shaw Air Force Base and McEntire Joint National Guard Base between the Gamecock D MOA and R-6002. The term tactical formation implies an aircraft separation of not greater than three nautical miles laterally and longitudinally. The flight activity in transit is not to require more than 15 minutes and will be assigned to altitudes of FL 180 up to but not including FL 220. Use of the Poinsett Transition Area may be initiated after a five-minute advance notice to the Jacksonville Air Route Traffic Control Center. Aircraft on IFR flight plans will be permitted to use the Poinsett Transition Area airspace provided that the Center can maintain positive separation with the military aircraft; otherwise, the aircraft will be rerouted.

The military may continue to seek new or expanded MOAs to support its missions in South Carolina. Such requests will be coordinated with the FAA and subject to the same evaluation and consultation process as in the past. The FAA is responsible for allocating airspace usage so as to not compromise flight safety and the efficiency of use by all users of the national airspace system.

6.2 CIVILIAN AIRPORT AND AIRWAYS USE AND MOAS

Civilian and military aircraft operators share the use of the limited airspace resources. Whether MOAs are active or not, there are situations in which public use airports and airways occupy the same area or volume. There are several instances where this occurs in South Carolina, and the impact of such shared airspace is reviewed in the following subsections.



Source: South Carolina Aeronautical Chart (2006)

**Figure 6.0-8
Poinsett Transition Area**





6.2.1 Gamecock I MOA

Kirk Air Base (T73), a private airport and not in the South Carolina airports system, is located southeast of the City of Lancaster in the northern portion of Gamecock I MOA (Figure 6.0-2, page 31). This airport serves general aviation aircraft that can operate from its 2,600-foot runway and adjacent seaplane water lane. Kirk Air Base has nine based aircraft and an estimated 2,000 annual aircraft operations. It is a VFR-only facility, and is located within Class G airspace.

Victor Airway V155 transits the Gamecock I MOA. Victor Airways link terminal navigational aids much like a highway in the sky and are classified as Class E airspace. Victor airways have a floor elevation of 1,200 feet above ground level (AGL) and extend to FL 180. They have a total width of eight nautical miles centered on the radial or bearing between the terminal navigational aids. V155 passes within 11 nautical miles south of Kirk Air Base.

Given the relatively low daily aircraft traffic levels at Kirk Air Base, the intermittent use of the Gamecock I MOA, and its ceiling of 6,000 feet above mean sea level (MSL), it was determined that the interaction of these airspace uses generates minimal impact on civilian aircraft operations.

6.2.2 Fort Jackson Range R-6001 A & B

There are no public use airports or Victor airways located within the boundaries of the Fort Jackson Range 6001 that is located northeast of Columbia and along the northern edge of the McEntire Joint National Guard Base (Figure 6.0-2, page 31). Although IFR aircraft activity may seek to pass through this range, other flight route options using the Columbia VORTAC are available to civilian aircraft to transit around the range without major disruption to their flight plans, whether the range is active or not. The Columbia VORTAC also serves the navigation needs of VFR aircraft.

6.2.3 Poinsett Weapons Range R-6002 A, B, & C

The restricted airspace 6002 A, B, and C links a southern portion of the Shaw Air Force Base Class C airspace with the Poinsett MOA (Figure 6.0-3, page 31). R-6002 has three vertical segments. Segments A and B include altitudes from the surface to FL 180, and Segment C is the segment between FL 180 and FL 230. R-6002 A, B, and C do not contain any public use airports or Victor airways. A small area within the restricted airspace excludes a 1.1 nautical mile radius area centered on the community of Pinewood at 1,500 feet MSL and below.

Because the weapons range is operational intermittently and adjoins two areas (Shaw Air Force Base Class C airspace and the Poinsett MOA) where military aircraft operations can be more frequent, it is likely that the demand by civilian aircraft operating IFR to transition R-6002 A and B is essentially nonexistent whether the range is active or not. Alternative IFR and VFR routings are available to support east-west navigation in this area south of Shaw Air Force Base. This suggests that the impact on civilian aircraft flight is minimal.

6.2.4 Poinsett MOA

The Poinsett MOA encompasses a small portion of the Class E airspace assigned to the Santee Cooper Regional Airport (MNI) and V3-157 skirts just inside the MOA's southeastern boundary (Figure 6.0-4, page 32). The Poinsett MOA has a ceiling of 2,500 feet MSL. At that altitude, its impact on transiting VFR and IFR civilian aircraft is judged negligible.

6.2.5 Gamecock B, C, & D and Robroy MOAs

At first glance, when active intermittently, the combined three Gamecock and the Robroy MOAs appear to negatively impact the flow of civilian air traffic generally between Columbia to the west and Myrtle Beach to the east and generally between Florence to the north and Charleston to the south (Figure 6.0-5, page 32). East-west traffic flows can be accommodated north and south of the Gamecock and Robroy MOAs. However, under such active MOA conditions, the Florence VORTAC and Vance VORTAC can serve as waypoints for the northern and southern routings, respectively. When civilian aircraft seek routings between points north and south of the Gamecock and Robroy MOAs, a primary option is available. This option is V437 that passes through the western portion of Gamecock D MOA whose floor elevation is 10,000 feet MSL and avoids the Robroy MOA overlap. As a secondary option, the Gamecock B MOA also has a relatively high floor elevation (10,000 feet MSL) that affords ample north-south flows along eastern South Carolina. Transit of the Gamecock C MOA is less inviting for civilian aircraft because of its 100-foot AGL floor and upper level (10,000 feet MSL) elevations.

The Gamecock B MOA includes the Robert F. Swinnie Airport (PHH) in its far southwestern corner. PHH is assigned Class E airspace with a floor of 700 feet AGL. The MOA excludes a 1.1 nautical mile radius area centered on PHH and includes airspace 1,500 feet MSL and below so that local traffic patterns can be flown without restriction. As a point of information, there are four based aircraft at PHH and an estimated 1,000 annual aircraft operations.

Within the Gamecock C MOA, an exclusion area at 1,500 feet MSL and below within a 1.1 nautical mile of the Hemingway-Stuckey Airport (38J) is provided for local traffic pattern flight activity. A portion of the exclusion area noted for PHH also extends into the Gamecock C MOA. The Hemingway-Stuckey Airport is reported as having no based aircraft and total aircraft operations of 300 annually.

The Williamsburg Regional Airport (CKI) and Santee Cooper Regional Airport (MNI) are located within the western half of Gamecock D MOA and beyond the overlap limits of the Robroy MOA. Each airport has been assigned Class E airspace with a floor elevation of 700 feet AGL. Given the high floor elevation of the Gamecock D MOA (10,000 feet MSL), there is no impact on aircraft operations at either of these airports. For informational purposes, CKI bases ten aircraft and generates some 3,950 annual operations. MNI is a relatively more busy facility with 22 based aircraft and an estimated 17,600 annual aircraft operations.



Overall, based on the elevation floors of the four MOAs in this region of South Carolina, the relatively low level of aircraft activity at the airports that lie within the areas, and the availability of alternative flight route options, it was determined that the sharing of the available airspace is not overly limiting civilian aviation use.

6.2.6 Beaufort 1, 2, and 3 MOAs

The three Beaufort MOAs located in the southern tip of South Carolina, home to some the state's primary vacation destinations, are designed to minimize the potential impact on civilian aviation users (Figure 6.0-6, page 33). Each of the three MOAs is operated intermittently four hours per day for two days per month.

The Beaufort 1 MOA occupies a volume of airspace from 100 feet AGL to 10,000 feet MSL. Located within the MOA are the Hilton Head Airport (HXD) and V1. HXD provides commercial airline service, is a base for 87 aircraft, and accounts for some 36,540 annual aircraft operations. Instrument approach procedures are available to each runway end. In order to accommodate the airspace requirements for local traffic area and the instrument approaches, HXD is assigned Class E airspace and the Beaufort 1 MOA excludes airspace 3,000 feet MSL and below within a radius of 7.3 nautical miles. The availability of V1 allows for unrestricted north-south flows along the eastern coastline provided that such flights are conducted above 10,000 feet MSL, an altitude that can be flown by most general aviation aircraft under VFR conditions. When that altitude is not attainable, these aircraft may transition between areas north and south via V43 that passes through the Beaufort 2 MOA and that has an upper elevation of 7,000 feet MSL. Another option is V3 that transits the Beaufort 3 MOA with an upper limit of 2,000 feet MSL.

Beaufort County Airport (ARW) is located at the southern edge of the Beaufort 2 MOA and is assigned Class E airspace that is contiguous with the Class E airspace assigned to Marine Corps Air Station Beaufort, approximately six nautical miles to the northwest. ARW has 51 based aircraft and is estimated to have 36,400 annual aircraft operations. Each runway end is served by an instrument approach. This sharing of airspace classification allows aircraft to be controlled by the Beaufort Approach Control when operating IFR and to obtain VFR traffic advisories when the MOA is active. This minimizes the potential for negative impacts on the use of the airspace by civilian aircraft when the MOA is active.

Ridgeland Airport (3J1) is located within the extreme southwestern edge of the Beaufort 3 MOA. 3J1 has 57 based aircraft, generates an estimated 15,250 annual aircraft operations, and has no published instrument approaches. The MOA has elevation limits of 100 feet AGL to 2,000 feet MSL. However, given the limited intermittent use of the MOA, it was determined that this interaction has minimal impacts on daily aircraft operations at the airport.

6.2.7 Unnamed National Security Area Between Augusta, Georgia, and Barnwell, South Carolina

Flights below 2,000 feet MSL are discouraged within this National Security Area (Figure 6.0-7, page 33). There are no airports within this area and V417 that traverses the area. Under these conditions, the impact on civilian aircraft operations is considered to be minimal.

6.2.8 Conclusion

South Carolina is home to several special use airspace areas justifiably needed for military aircraft training and homeland protection purposes. The intermittent use of most of these areas and their assigned elevations limit potential impacts on flights by civilian aircraft. The military, which is assigned the majority of the special use airspace as military operations areas, has been an effective steward of the airspace resource allocated to its mission. The airspace structure within South Carolina provides sufficient flight routes to avoid restricted airspace MOAs when they are active. Overall, the current special use airspace offers minimal impact on current civilian aviation.

As en route satellite-based navigation becomes more prevalent, the ability to reroute civilian aircraft around active SUAs will be improved in terms of distance and time requirements. Those airports located within MOAs that seek a new or improved instrument approach capability can request and expect to receive exclusions to the assigned MOA airspace to allow for such purposes.

The introduction of the Poinsett Transition Area will offer more efficient use of existing MOAs without unduly encumbering civilian flights. It is possible that over time the Poinsett Transition Area will be redesignated as an MOA to allow for flight training activity. Such action would require a request from the military to the FAA Air Route Traffic Control Center in Jacksonville, Florida, and would be dependent on the experience gained from use of the airspace as a transition area by civilian and military users and the air traffic controllers.

The military seeks to maximize its shared use of the limited airspace resource in South Carolina while minimizing the impact on civilian aviation. In turn, South Carolinians recognize the national defensive value of the military bases, the need for mission airspace, and the economic benefits that accrue at the state and local levels. Accommodation of the requisite airspace to allow the military to carry out its missions can continue to be a win-win situation.

6.3 CHARLOTTE-DOUGLAS INTERNATIONAL AIRPORT CLASS B AIRSPACE EXPANSION

The FAA has announced plans to expand the Class B airspace centered on the Charlotte-Douglas International Airport (CLT, Figure 6.3-1, page 37).¹⁶ The expansion is necessitated by the addition of a third parallel runway in early 2010. The new runway will be to the west of the existing north-south parallels, and all runways will accommodate aircraft arrivals and departures independently. This serves to increase the airfield capacity of CLT to meet anticipated growth in demand levels.

¹⁶Charlotte-Douglas International Airport (November 2007). *Preliminary Aeronautical Study – Charlotte/Douglas International Airport Class B Airspace Expansion*. Approved by the FAA December 19, 2007.





South Carolina Airports System Plan

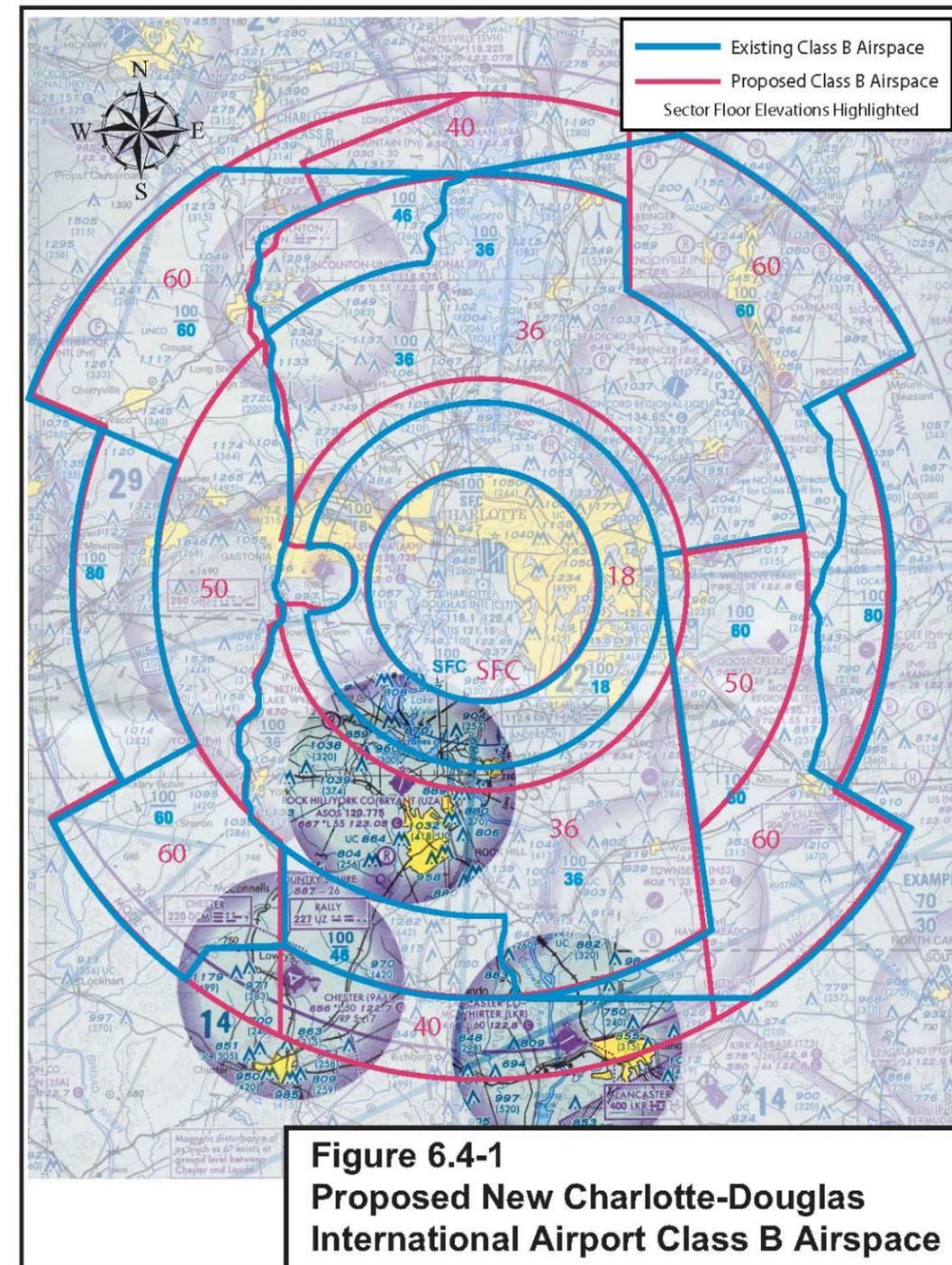


The proposed expansion of the Class B airspace includes increasing its radius, as well as lowering the floor levels in certain sectors to as low as 4,000 feet MSL, while maintaining the top elevation at 10,000 feet MSL. The expansion is to provide air traffic controllers with the airspace needed to direct aircraft routings that enable the simultaneous and independent use of the three parallel runways. This includes allowances that enable air traffic control to eastbound and westbound turboprop aircraft departures.

The lowering of the airspace in certain sectors includes areas within South Carolina. Several system general aviation airports may be effected by the expansion and lowering of the Class B airspace. These airports include Rock Hill/York County Airport (Bryant Field, UZA), Chester-Catawba Regional Airport (DCM), and Lancaster County-McWhirter Field Airport (LKR). Of these airports, only UZA underlies a sector of the existing Class B airspace that has a floor elevation of 3,600 feet MSL. UZA is also in an area that requires the use of a Mode C transponder.

UZA appears to be located in an airspace sector proposed for a lowering in its floor elevation from 3,600 feet MSL to 1,800 feet MSL. The exact boundary of the expansion to this sector of the Class B is just north of the center point of UZA. For the purposes of this evaluation, it is assumed that the boundary line incorporates the terminal airspace associated with UZA and its traffic pattern and instrument approach procedures. The ground elevation of UZA is 667 feet MSL. At a traffic pattern altitude of 1,700 feet MSL, there would be a buffer of 100 feet for local VFR aircraft operations conducted north of UZA. Runway 02 at UZA is served with a Category I ILS that has an initial approach fix altitude of 2,500 feet MSL, which is sufficiently below the floor elevation of the existing and proposed Class B airspace floor altitude of 3,600 feet AMSL. A GPS 2 approach is also published with an initial approach fix altitude of 3,000 feet MSL.

Although each instrument approach to Runway 02 is from the south and underlies that portion of the Class B airspace with an existing and proposed floor elevation of 3,600 feet MSL, a component of the missed approach procedure route will enter into the Class B airspace with its proposed floor elevation reduction from 3,600 feet MSL to 1,800 feet MSL. The missed approach procedure for the Category I ILS procedure incorporates a straight climb to 1,500 feet MSL and a climbing left turn to 2,500 feet MSL direct to the intermediate approach fix on the extended runway centerline. The GPS missed approach procedure is similar except that the climbing left turn terminates at 3,000 feet MSL and then proceeds directly to its assigned intermediate approach fix. This may cause additional complexity to the missed approach procedure, although the aircraft will be under the control of Charlotte Approach Control and presumably operating in accordance with the requirements of the Class B airspace.



Source: Charlotte Sectional Aeronautical Chart (2004)





Instrument approaches to Runway 20 may be more impacted by the proposed expansion and lowering of the Class B airspace than the GPS procedure to Runway 02. That procedure has an initial approach fix of 2,300 feet MSL, primarily due to its relative proximity to aircraft operations arriving and departing CLT to the north. This is lower than the existing 3,600-foot MSL floor elevation of the Class B airspace but higher than the proposed 1,800-foot MSL floor elevation. Again, aircraft operating IFR and flying this procedure will need to maintain contact with Charlotte Approach Control thereby continuing to comply with the Class B requirements. However, these aircraft and those operating IFR to Runway 02 will not be able to cancel their IFR flight plans until on the ground at UZA. The inability to cancel IFR flight plans in the air results in a loss of airspace capacity especially when other aircraft are attempting to fly the instrument approach procedure or seeking to depart UZA on an IFR flight plan.

Both DCM and LKR airports do not underlie the existing Class B airspace, although they are located within an area that requires the use of a Mode C transponder. These airports are currently located within Class E airspace, which has a floor elevation of 700 feet AGL and a top elevation up to FL 180 (18,000 feet MSL). However, the expansion of the Class B airspace will result in their inclusion at an elevation of 4,000 feet or more. Each airport is served with instrument approach procedures to both ends of their primary runway. The initial approach fix altitude for the GPS procedures to Runway 17 and Runway 35 at DCM is set at 2,300 feet MSL and is 2,200 feet MSL for the NDB procedure to Runway 35. At LKR, the initial approach fix for the RNAV (GPS) LNAV procedures to Runway 06/24 and the NDB approach to Runway 24 is set at 2,500 feet MSL. Further, the field elevations and traffic pattern altitudes for DCM and LKR are 1,700 feet MSL and 1,500 feet MSL, respectively, which places local aircraft well below the 4,000-foot MSL elevation proposed for that sector of the expanded Class B airspace in which these airports are located.

There is a parachuting operation (Skydive Carolina) at DCM, which is a major tenant at this facility. Skydive operations involve the use of a Twin Otter aircraft that departs DCM and climbs to about 14,000 feet MSL before the jumpers exit the aircraft. This allows for at least a one-minute freefall and enhances the skydiving experience. Typically, the aircraft departs to the south and climbs to this altitude. The jump location is based on prevailing winds at various altitudes so that the parachutists can land at DCM. The skydiving operator maintains radio contact with Charlotte Approach Control during all phases of the jump to ensure that there will not be aircraft below the parachutists. At times, the jump has been delayed in the air for en route air traffic. The imposition of the Class B airspace expansion has the potential to adversely affect the skydive operation. Aircraft departures may be held on the ground or diverted in order to accommodate the parachuting operation and other aircraft in the area. It would be advisable to request reconsideration of the proposed redesign of the Charlotte Class B airspace to include a “cutout” that offers relief for skydive operations. The floor of the Class B airspace within this cutout should be increased to 15,000 feet MSL. The cutout could be designed with an estimated five-nautical mile radius centered on DCM, similar in configuration to that currently afforded to the Gastonia Municipal Airport (AKH) located some ten nautical miles west of CLT. This radius offers the jump aircraft some margin for climbing to altitude and release range for the jumpers. It is recommended that the skydive operator begin to collect aircraft positioning data (altitude, latitude, and longitude) to provide documentation and justification for the required extent of the cutout volume. The

suggested cutout volume also eliminates potential conflicts with airspace use for instrument approaches, departures, and local traffic pattern activity at DCM.

The proposed expansion and lowering of the Class B airspace does not adversely affect the ability of LKR to maintain its instrument approach capabilities or local area flight altitudes. However, when pilots seek to operate VFR and IFR to and from LKR at altitudes of between 4,000 feet MSL and 10,000 feet MSL, they will be required to obtain air traffic control clearances. Additionally, when at these altitudes, the pilot must at least hold an endorsed student certificate. Further, all aircraft are to remain clear of clouds when operating at or above this altitude. This is not likely to affect those pilots operating to and from LKR as they should be able to maneuver and fly routings that avoid the need to be at altitudes of between 4,000 feet MSL and 10,000 feet MSL and thus in Class B airspace. Its location near the periphery of the expanded Class B airspace also serves to minimize the potential for adverse impacts on aircraft operations.

The same cannot be true of UZA, particularly with respect to local (VFR) traffic pattern flight activity and to a lesser extent with respect to the missed approach procedures for the Category I ILS and GPS approaches to Runway 02 and the GPS approach to Runway 20. The impacts to the instrument approach procedures are made less severe because aircraft operating under IFR will be under the control of Charlotte Approach Control and operating in accordance with the requirements of Class B airspace. Notwithstanding these impacts, it would be desirable to also request reconsideration of the proposed redesign of the Charlotte Class B airspace to include a cutout that offers relief for local traffic pattern flight operations. The floor of the Class B airspace within this cutout could remain at 3,600 feet MSL. The cutout could be designed with a 2.5-nautical mile radius centered on UZA.

In general, aircraft crossing the area must currently comply with the existing Class B airspace requirements, and it is likely that many general aviation aircraft avoid entry into this airspace whenever possible. The expanding and lowering of certain floor elevations within the Class B airspace is not anticipated to place an undue burden on this en route general aviation activity.



7.0 PRELIMINARY LEAKAGE ANALYSIS OF SOUTH CAROLINA'S COMMERCIAL SERVICE AIRPORTS

This section is a preliminary analysis and an estimate of potential air passenger leakage from the six South Carolina commercial service airports. To arrive at this preliminary estimate the following elements are reviewed:

- Runway facilities
- Airlines
- Flight frequency
- Flight direction
- Selected pricing
- Airport service areas

More accurate leakage estimates will require extensive passenger surveying and/or tabulations from U.S. Department of Transportation (USDOT) 10 percent coupon samples, which is USDOT's *Origin-Destination Survey of Airline Passenger Traffic* and includes a detailed series of statistics, arranged in tabular form, which result from a continuous survey of 10 percent of all of the passengers traveling on U.S. certificated air carriers.

7.1 LEAKAGE DEFINITION

For the purpose of this section, leakage estimates will include both in-state and out-of-state passenger usage of competing commercial service airports. When air passenger service areas overlap, the negative connotations of leakage are subject to question. In reality, the primary concerns of the State of South Carolina involve those passengers who utilize those out-of-state airports to fulfill their air travel needs. If, on the other hand, facility development will reduce the leakage from a given airport, then this fact will be considered in any funding decision.

7.2 ANALYSIS METHODOLOGY

In lieu of statistical survey data, judgments of passenger selection of a given airport were estimated in the following manner:

- **Provision of Airside Facilities and Approaches** – Provision of runways by length and number were considered to affect, in part, the decision of airlines to provide services. The

option to provide larger aircraft is at times a factor. The services provided attract or deter passengers. Provision of approach systems with reduced minimums also is a factor of airline services provided. Without low minimums, the predictability of flights becomes lessened.

- **Provision of Flights** – Flight provision is a service that will attract or deter passengers. This provision includes the number of flight options available, as well as the destinations. Special unique destinations also are considered, for example, flights to Florida.
- **Travel Price/Travel Time** – Part of the service provision picture is the price of travel, as well as the time of travel in the air.
- **Competitive Service Area Locations** – The relative distance to competing airports and the service footprints at each airport will affect the decisions of air passengers. The service area locations are preliminary judgments from which assumptions of passenger choice or leakage are made.

7.3 DOCUMENTS REVIEWED

For this section, four items were reviewed for each commercial service airport:

- Airport comparison tables
- Travel price comparisons
- Estimated leakage
- Service area drawings

7.3.1 Airport Comparison Tables

These tables provide listings of each runway by length and width. The most critical minimums for each runway are listed, as derived from U.S. Terminal Procedures approach plates. Listings of each air carrier with daily flights are given. While these flights frequently change, an impression of intensity and variety of destinations is gained.

7.3.2 Travel Price Comparison Tables

These tables provide a perspective of travel costs, travel time, and aircraft equipment for flights to either New York or Newark. Travel time is strongly determined by the en route stops versus nonstop flights. Dates of proposed travel ranged between January 21, 2008 and January 26, 2008.





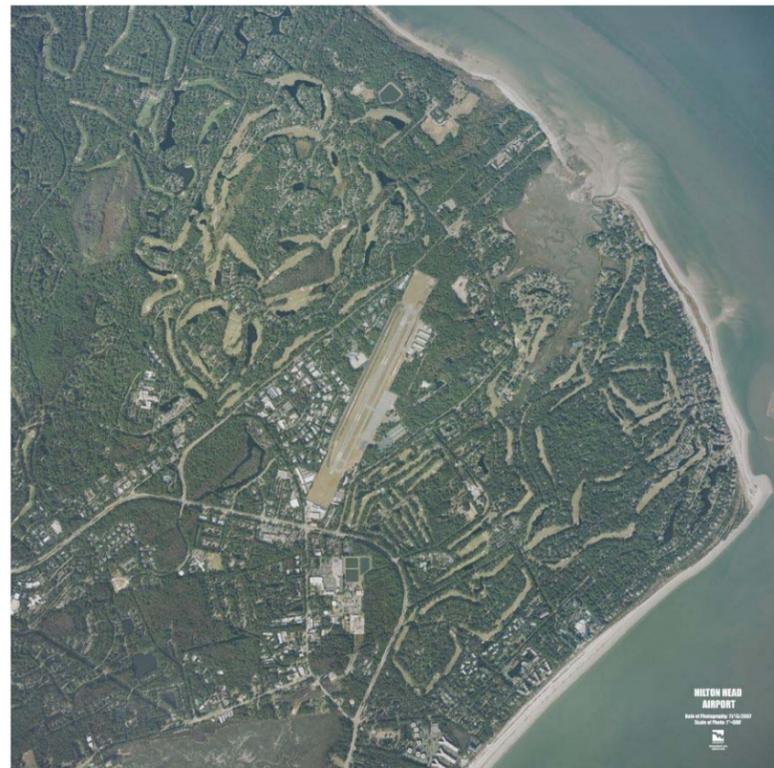
7.3.3 Airport Service Area Drawings

These drawings are intended to illustrate the principal service areas for the competing commercial service airports. The service areas are drawn based on intuitive impressions and review of the previous tables. They are subject to change pending quantitative inputs such as a passenger and/or parking lot survey.

7.4 COMMERCIAL SERVICE AIRPORT ANALYSES

7.4.1 Hilton Head Island Airport (HXD)

The Hilton Head Island Airport (HXD) analysis includes review of Tables 7.4.1-1, Table 7.4.1-2 (page 41), and HXD service area (Figure 7.4.1-1, page 41). Comparing HXD to its single relevant nearby competitor (Savannah/Hilton Head International Airport [SAV]), Table 7.4.1-1 depicts an overriding provision of runway facilities and flights at SAV. The comparison of 51 daily SAV flights to eight daily HXD flights is strong. Table 7.4.1-2 (page 41) illustrates that both price advantages, as well as flight time advantages, rest with SAV. In the past, HXD could provide some automobile travel time gains for residents living in the center of Hilton Head Island; however, the opening of a high speed toll road parallel to US-278 has probably intensified the options to use SAV for these residents.



**Table 7.4.1-1
Airport Comparisons – Hilton Head Island Airport
South Carolina Airports System Plan**

HXD		SAV	
RUNWAY		RUNWAYS	
03/21	4,300' X 100'	09/27	9,351' X 150'
		18/36	7,002' X 150'
MINIMUMS		MINIMUMS	
RNAV (GPS) RWY 03 540-1 1/2	521 CATEGORY C	ILS RWY 36 239-1/2	200
RNAV (GPS) RWY 21 480-1 1/4	462 CATEGORY C	ILS RWY 09 230/18	200
FLIGHTS		FLIGHTS	
US Airways	6 daily to Charlotte	Delta	9 daily to Atlanta
Delta	2 daily to Atlanta	Air Tran	3 daily to Atlanta
Total	8 daily flights	Northwest Air Link	1 daily to Detroit
		American Eagle	2 daily to Dallas
			1 daily to Miami
		Continental Express	3 daily to Newark
			3 daily to Houston
			1 daily to Cleveland
		United Express	3 daily to Washington, DC
			4 daily to Chicago
		US Airways	2 daily to New York
			8 daily to Charlotte
		SAV	
		Delta Connection	1 daily to Philadelphia
			4 daily to New York
			1 daily to Cincinnati
			1 daily to Boston
			4 daily to Atlanta
		Total	51 daily flights

Source: Talbert & Bright, Inc. (January 2008)





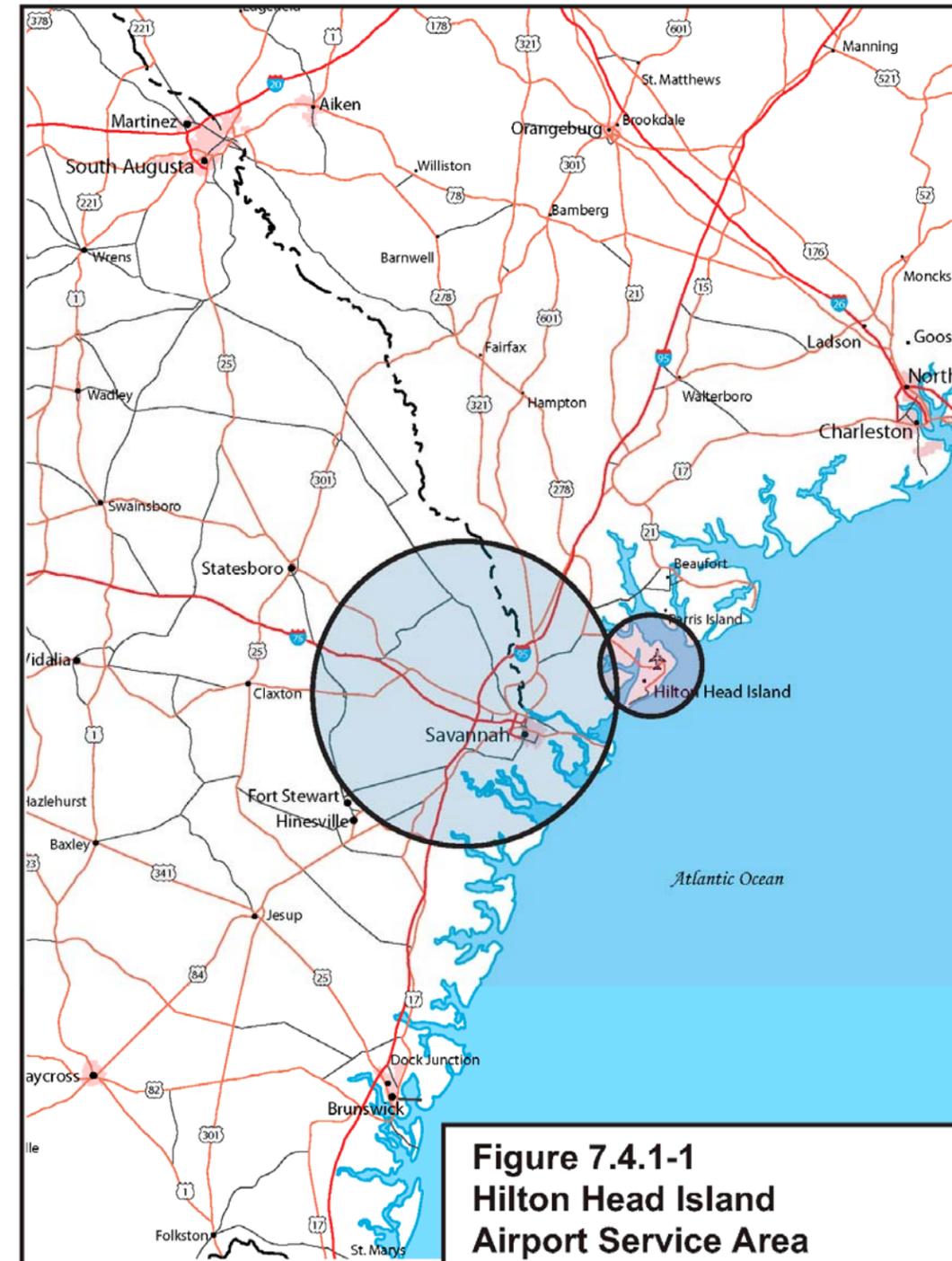
**Table 7.4.1-2
Travel Price Comparisons – Hilton Head Island Airport
South Carolina Airports System Plan**

Airline			Total Time	Stop	Equipment	Destination	Price*
HXD							
Delta Connection	Departure	6:25 AM	6hr. 34 min.	Atlanta	ATR 72	New York	\$596
	Arrival	12:59 PM					
Delta Connection	Departure	12:25 PM	4 hr. 36 min.	Atlanta	ATR 72	New York	\$857
	Arrival	4:16PM					
US Airways	Departure	5:45AM	4hr. 9min,	Charlotte	Dash 8	New York	\$601
	Arrival	9:54PM					
SAV							
Delta Connection	Departure	6:00 AM	2 hr. 25 min.	None	CRJ	New York	\$536
	Arrival	8:25 PM					
Delta Connection	Departure	12:14 PM	2 hr. 15 min.	None	CRJ	New York	\$827
	Arrival	2:01PM					
US Airways	Departure	12:49 PM	2 hr. 8 min.	None	Embraer RJ	New York	\$559
	Arrival	2:57PM					

* Prices are round trip without tax
Source: Talbert & Bright, Inc. (January 2008)



HXD Air traffic Control Tower (complete April 12, 2004)



**Figure 7.4.1-1
Hilton Head Island
Airport Service Area**

Source:



From the above analysis, it is estimated that the leakage percentage to SAV could be 70 percent to 80 percent. Using this percentage, Table 7.4.1-3 illustrates the estimated passenger leakage from HXD to SAV for the most recent 12 consecutive months for which complete data is available.

**Table 7.4.1-3
Estimated Leakage – Hilton Head
Island Airport
South Carolina Airports System Plan**

Year	Month	Passengers Enplaned		
		HXD	SAV	Total
2006	October	5,794	23,176	28,970
2006	November	4,313	17,252	21,565
2006	December	3,198	12,792	15,990
2007	January	3,145	12,580	15,725
2007	February	3,250	13,000	16,250
2007	March	6,273	25,092	31,365
2007	April	11,412	45,648	57,060
2007	May	8,682	34,728	43,410
2007	June	8,813	35,252	44,065
2007	July	8,498	33,992	42,490
2007	August	8,843	35,372	44,215
2007	September	8,141	32,564	40,705
Total		80,362	321,448	401,810

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008
Talbert & Bright, Inc. (February 2008)

7.4.2 Charleston International Airport (CHS)

The Charleston International Airport (CHS) analysis includes review of Table 7.4.2-1, Table 7.4.2-2 (page 43), and CHS service area (Figure 7.4.2-1, page 44). Comparing CHS to its competitors, it is observed that flight provisions appear to be equivalent to SAV, Myrtle Beach International (MYR), and Columbia Metropolitan (CAE) airports. Runway approach options are intensified at CAE because of the needs of the UPS hub located there. Price and flight times are generally competitive to New York with the exception of more competitive pricing at MYR. Given the competitive pricing and some specific flight additions (i.e., St. Petersburg, FL; Ft. Lauderdale, FL; Pittsburgh, PA; etc.), extra leakage is expected toward MYR. Leakage to SAV will depend mostly on access to I-95, which traverses close to SAV, and flight times.

**Table 7.4.2-1
Airport Comparisons – Charleston International Airport
South Carolina Airports System Plan**

CHS		SAV	
RUNWAYS		RUNWAYS	
15/33	9,001' X 200'	09/27	9,351' X 150'
03/21	7,004' X 150'	18/36	7,002' X 150'
MINIMUMS		MINIMUMS	
ILS CAT II RWY 15 143/12	100	ILS RWY 36 239-1/2	200
ILS or LOC RWY 33 245/24	200	ILS RWY 09 230/1800	200
FLIGHTS		FLIGHTS	
Air Tran	3 daily to Atlanta	Delta	9 daily to Atlanta
Continental	2 daily to Houston	Air Tran	3 daily to Atlanta
	2 daily to Newark	Northwest Air Link	1 daily to Detroit
Delta	10 daily to Atlanta	American Eagle	2 daily to Dallas
	4 daily to New York		1 daily to Miami
	3 daily to Cincinnati	Continental Express	3 daily to Newark
	1 daily to Boston		3 daily to Houston
	1 daily to Orlando		1 daily to Cleveland
Northwest Air Link	2 daily to Detroit	United Express	3 daily to Washington, DC
	2 daily to Memphis		4 daily to Chicago
U S Airways	2 daily to New York	U S Airways	2 daily to New York
	4 daily to Washington, DC		8 daily to Charlotte
	8 daily to Charlotte		1 daily to Philadelphia
	3 daily to Philadelphia	Delta Connection	4 daily to New York
United Express	4 daily to Washington DC		1 daily to Cincinnati
	3 daily to Chicago		1 daily to Boston
American Eagle	<u>3 daily to Dallas-Ft. Worth</u>		<u>4 daily to Atlanta</u>
Total	57 daily flights	Total	51 daily flights
MYR		CAE	
RUNWAY		RUNWAYS	
18/36	9,503' X 150'	11/29	8,601' x 150'
		05/23	8,001' x 150'
MINIMUMS		MINIMUMS	
ILS RWY 18 223/24	200	ILS RWY 05 428/24	200
ILS RWY 36 225/40	200	ILS RWY 11 436/18	200
		ILS RWY 11 (CAT II) 386/16	150
		ILS RWY 11 (CAT III) RVR 07	
		ILS RWY 29 433/24	200
FLIGHTS		FLIGHTS	
ASA	6 daily to Atlanta	American Eagle	3 daily to Dallas/Ft. Worth
U S Airways	10 daily to Charlotte	Delta	3 daily to Cincinnati
	1 daily to Hartford		2 daily to Orlando
	1 daily to Boston		7 daily to Atlanta



Table 7.4.2-1 (continued)
Airport Comparisons – Charleston International Airport
South Carolina Airports System Plan

	MYR		CAE
Chataqua	3 daily to Philadelphia	Continental Express	2 daily to New York
United	2 daily to Cincinnati 2 daily to Chicago		2 daily to Houston 2 daily to Newark
Spirit	3 daily to Washington, DC	Northwest	2 daily to Detroit
	5 daily to New York	United Express	2 daily to Memphis
	2 daily to Atlantic City		4 daily to Washington, DC
Continental	5 daily to Boston	US Airways Exp.	5 daily to Chicago
	2 daily to Ft. Lauderdale		8 daily to Charlotte
	2 daily to New York/Atlanta		3 daily to Philadelphia
	2 daily to Detroit		<u>3 daily to Washington, DC</u>
Direct Air	2 daily to Pittsburgh	Total	48 daily flights
Southern Skyways	3 daily to St. Petersburg Non-daily flights to multiple <u>northeast cities</u>		
Total	51 daily flights		

Note: The above flights were derived from several web site sources for MYR
 Source: Talbert & Bright, Inc. (January 2008)

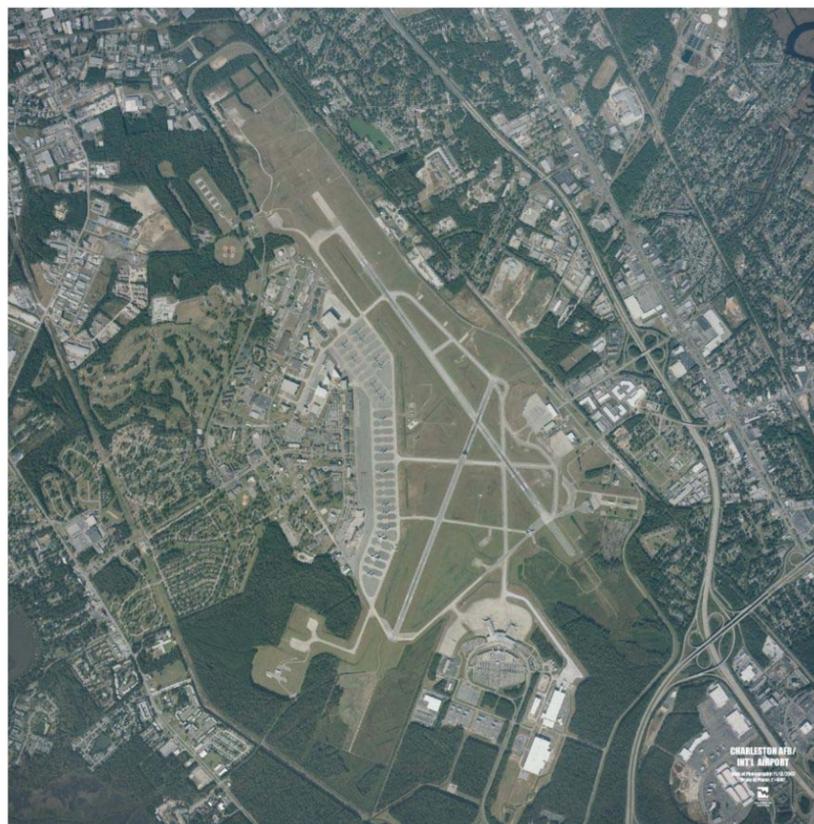


Table 7.4.2-2
Travel Price Comparisons – Charleston International Airport
South Carolina Airports System Plan

Airline			Total Time	Stops	Equipment	Destination	Price*
CHS							
Delta Connection	Departure	6:00 AM	1hr. 59 min.	None	CRJ 100	New York	\$529
	Arrival	7:59 AM					
US Airways	Departure	7:05 AM	1 hr. 54 min.	None	CRJ	New York	\$801
	Arrival	8:59AM					
Continental	Departure	11:45 AM	2 hr. 8 min.	None	Embraer RJ	New York	\$718
	Arrival	1:53 PM					
SAV							
Delta Connection	Departure	6:00 AM	2 hr. 25 min.	None	CRJ	New York	\$536
	Arrival	8:25 PM					
Delta Connection	Departure	12:14 PM	2 hr. 15 min.	None	CRJ	New York	\$827
	Arrival	2:01PM					
US Airways	Departure	12:49 PM	2 hr. 8 min.	None	Embraer RJ	New York	\$559
	Arrival	2:57PM					
MYR							
Spirit	Departure	9:25 AM	2 hr. 28 min.	None	Large Narrow B.	New York	\$158
	Arrival	11:03 AM					
US Airways	Departure	7:20 AM	6 hr. 22 min.	Charlotte	Boeing 737 Airbus A321	New York	\$354
	Arrival	1:42PM					
CAE							
Delta Connection	Departure	7:35 AM	1hr. 55 min.	None	CRJ	New York	\$694
	Arrival	9:30 AM					
Continental	Departure	11:55 AM	1 hr. 54 min.	None	Embraer RJ	New York	\$818
	Arrival	1:49PM					

* Prices are round trip without tax
 Source: Talbert & Bright, Inc. (January 2008)





**Figure 7.4.2-1
Charleston International
Airport Service Area**

Source:

From the above, it is estimated that the leakage percentages to competing airports could be as follows: 5 percent to 10 percent MYR, 1 percent to 6 percent SAV, and 1 percent to 2 percent CAE. Using these percentages, Table 7.4.2-3 illustrates the estimated passenger leakage from CHS for the most recent 12 consecutive months for which complete data is available.

**Table 7.4.2-3
Estimated Leakage – Charleston International Airport
South Carolina Airports System Plan
Passengers Enplaned**

Year	Month	CHS	MYR	SAV	CAE	Total
2006	November	81,395	9,044	5,195	1,661	97,295
2006	December	74,258	8,251	4,740	1,515	88,764
2007	January	62,527	6,947	3,991	1,276	74,742
2007	February	60,882	6,765	3,886	1,242	72,775
2007	March	84,833	9,426	5,415	1,731	101,405
2007	April	95,701	10,633	6,109	1,953	114,396
2007	May	100,312	11,146	6,403	2,047	119,908
2007	June	111,100	12,344	7,091	2,267	132,803
2007	July	113,902	12,656	7,270	2,325	136,153
2007	August	106,358	11,818	6,789	2,171	127,135
2007	September	98,036	10,893	6,258	2,001	117,187
2007	October	111,356	12,373	7,108	2,273	133,109
Total		1,100,660	122,296	70,255	22,462	1,315,673

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008.
Talbert & Bright, Inc. (February 2008)

7.4.3 Myrtle Beach International Airport (MYR)

The Myrtle Beach International Airport (MYR) analysis includes a review of Table 7.4.3-1 (page 45), Table 7.4.3-2 (page 45), and MYR service area (Figure 7.4.3-1, page 46). Comparing MYR to its competitors, it is observed that runway and flight provisions are basically equivalent to CHS and superior to Florence Regional Airport (FLO) and Wilmington International Airport (ILM). As previously discussed, MYR also provides some specific flight additions including St. Petersburg, FL; Fort Lauderdale, FL; Pittsburgh, PA; and additional northeast cities. Price comparisons to New York also indicate an advantage for MYR.



Table 7.4.3-1
Airport Comparisons – Myrtle Beach International Airport
South Carolina Airports System Plan

	MYR		CHS
	RUNWAY		RUNWAYS
18/36	9,503' X 150'	15/33	9,001' X 200'
		03-21	7,004' X150'
	MINIMUMS		MINIMUMS
ILS RWY 18 223/24	200	ILS CAT II RWY 15 143/12	100
ILS RWY 36 225/40	200	ILS or LOC RWY 33 245/24	200
	FLIGHTS		FLIGHTS
ASA	6 daily to Atlanta	Air Tran	3 daily to Atlanta
US Airways	10 daily to Charlotte	Continental	2 daily to Houston
	1 daily to Hartford		2 daily to Newark
	1 daily to Boston	Delta	10 daily to Atlanta
	3 daily to Philadelphia		4 daily to New York
Chatauqua	2 daily to Cincinnati		3 daily to Cincinnati
United	2 daily to Chicago		1 daily to Boston
	3 daily to Washington, DC		1 daily to Orlando
Spirit	5 daily to New York	Northwest Air Link	2 daily to Detroit
	2 daily to Atlantic City		2 daily to Memphis
	5 daily to Boston	US Airways	2 daily to New York
	2 daily to Ft. Lauderdale		4 daily to Washington, DC
Continental	2 daily to New York/Atlanta		8 daily to Charlotte
Northwest	2 daily to Detroit		3 daily to Philadelphia
Direct Air	2 daily to Pittsburgh	United Express	4 daily to Washington DC
	3 daily to St. Petersburg		3 daily to Chicago
Southern Skyways	Non-daily flights to Multiple Northeast cities	American Eagle	3 daily to Dallas-Ft. Worth
	Total		Total
	51 daily flights		57 daily flights

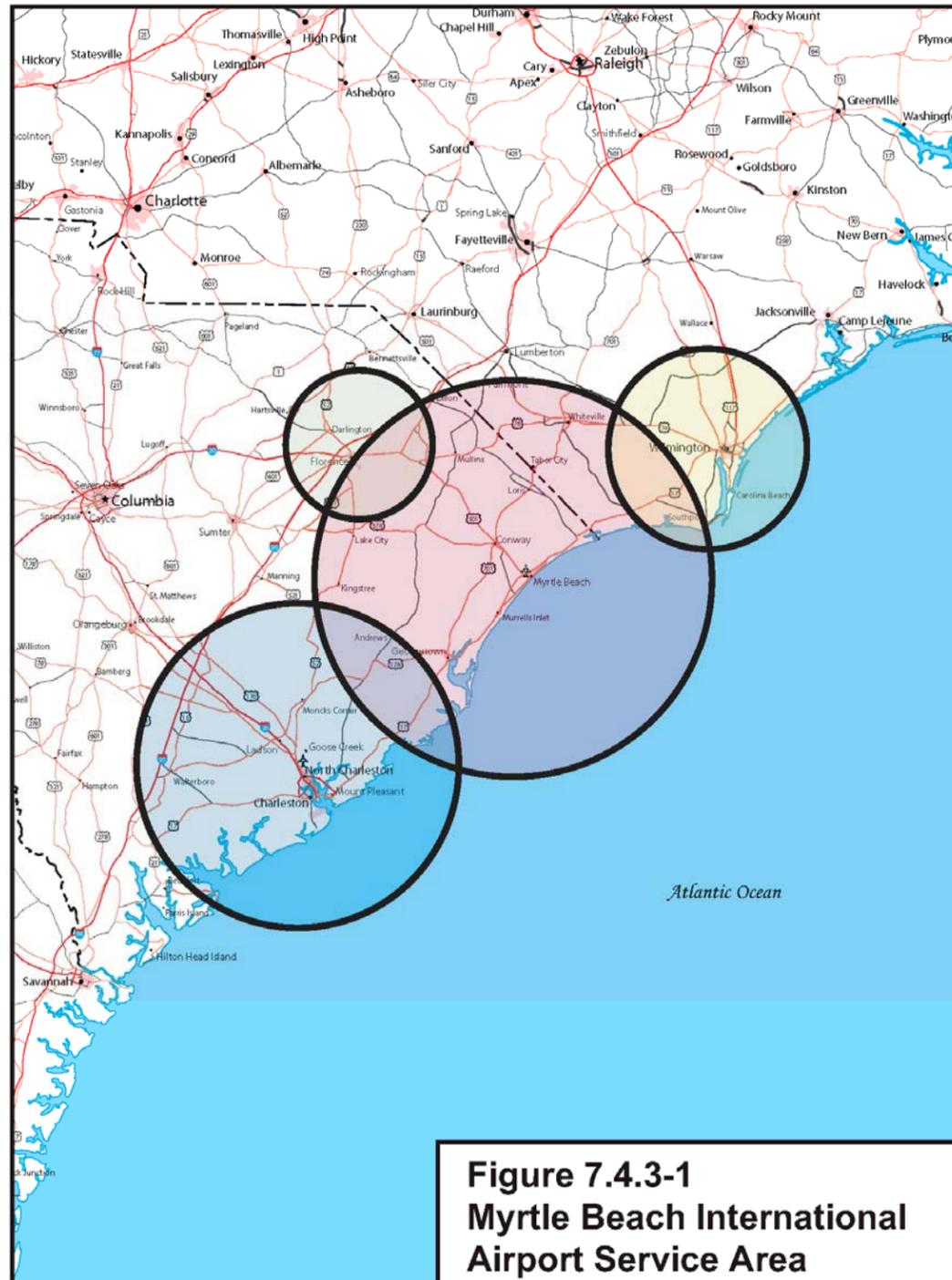
	FLO		ILM
	RUNWAYS		RUNWAYS
09/27	6,499' x 150'	06/24	8,016' x 200'
01/19	5,999' x 150'	17/35	7,004' x150'
	MINIMUMS		MINIMUMS
ILS RWY 19 347-1/2	200	ILS RWY 24 226/24	200
GPS RWY 01 480-1	345	ILS RWY 26 228/40	200
		ILS RWY 35 230/24	200
	FLIGHTS		FLIGHTS
Delta	2 daily to Atlanta	US Airways	9 daily to Charlotte
US Airways	5 daily to Charlotte		3 daily to New York
	Total		3 daily to Philadelphia
	7 daily flights	Delta	5 daily to Atlanta
			Total
			20 daily flights

Note: The above flights were derived from several web site sources for MYR
 Source: Talbert & Bright, Inc. (January 2008)

Table 7.4.3-2
Travel Price Comparisons – Myrtle Beach International Airport
South Carolina Airports System Plan

Airline			Total Time	Stops	Equipment	Destination	Price*
MYR							
Spirit	Departure	9:25 AM	2 hr. 28 min.	None	Large Narrow B.	New York	\$158
	Arrival	11:03 AM					
US Airways	Departure	7:20 AM	6 hr. 22 min.	Charlotte	Boeing 737 Airbus A321	New York	\$354
	Arrival	1:42 PM					
CHS							
Delta Connection	Departure	6:00 AM	1hr. 59 min.	None	CRJ 100	New York	\$529
	Arrival	7:59 AM					
US Airways	Departure	7:05 AM	1 hr. 54 min.	None	CRJ & Embraer RJ	New York	\$801
	Arrival	8:59 AM					
Continental	Departure	11:45 AM	2 hr. 8 min.	None	Embraer RJ	New York	\$718
	Arrival	1:53 PM					
FLO							
Delta Connection	Departure	7:00 AM	5hr. 59 min.	Atlanta	CRJ 100 Boeing 757	New York	\$429
	Arrival	12:59 AM					
US Airways	Departure	5:45 AM	4 hr. 9 min.	Charlotte	Dash 8 Boeing 737	New York	\$394
	Arrival	9:45 AM					
ILM							
Delta Connection	Departure	6:15 AM	4 hr. 46 min.	Atlanta	CRJ 100 Boeing 757	New York	\$556
	Arrival	11:01 AM					
Delta Connection	Departure	10:45 AM	6 hr. 21 min.	Atlanta	CRJ 100 Boeing 757	New York	\$499
	Arrival	5:06 PM					
US Airways	Departure	6:30 AM	1 hr. 37 min.	None	CRJ Embraer RJ	New York	\$779
	Arrival	8:07 AM					

* Prices are round trip without tax
 Source: Talbert & Bright, Inc. (January 2008)



Source:

From the above, it is estimated that the leakage percentages to competing airports could be as follows: 1 percent to 6 percent CHS, 1 percent to 3 percent ILM, and 1 percent to 2 percent FLO. Using these percentages, Table 7.4.3-3 illustrates the estimated passenger leakage from MYR for the most recent 12 consecutive months for which complete data is available.

**Table 7.4.3-3
Estimated Leakage – Myrtle Beach
International Airport
South Carolina Airports System Plan
Passengers Enplaned**

Year	Month	MYR	CHS	ILM	FLO	Total
2006	December	41,942	2,677	1,297	856	46,772
2007	January	36,352	2,320	1,124	742	40,539
2007	February	43,203	2,758	1,336	882	48,179
2007	March	68,446	4,369	2,117	1,397	76,329
2007	April	83,422	5,325	2,580	1,702	93,029
2007	May	80,784	5,156	2,498	1,649	90,088
2007	June	81,235	5,185	2,512	1,658	90,590
2007	July	92,106	5,879	2,849	1,880	102,713
2007	August	91,275	5,826	2,823	1,863	101,787
2007	September	77,366	4,938	2,393	1,579	86,276
2007	October	79,831	5,096	2,469	1,629	89,025
2007	November	61,584	3,931	1,905	1,257	68,676
	Total	837,546	53,460	25,903	17,093	934,003

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008
Talbert & Bright, Inc. (February 2008)

7.4.4 Florence Regional Airport (FLO)

The Florence Regional Airport (FLO) analysis includes review of Table 7.4.4-1 (page 47), Table 7.4.4-2 (page 47), and MYR service area drawing, which includes the FLO service area (Figure 7.4.3-1). In brief, runway and flight provisions at FLO are a distant second to MYR, CAE, and ILM. Table 7.4.4-2 (page 47) indicates some advantage over ILM and CAE but not over MYR.





Table 7.4.4-1
Airport Comparisons – Florence Regional Airport
South Carolina Airports System Plan

FLO		MYR	
RUNWAYS		RUNWAY	
09/27	6,499' x 150'	18/36	9,503' X 150'
01/19	5,999' x 150'		
MINIMUMS		MINIMUMS	
ILS RWY 09	347-1/2 200	ILS RWY 18	223/24 200
GPS RWY 01	480-1 345	ILS RWY 36	225/40 200
FLIGHTS		FLIGHTS	
Delta	2 daily to Atlanta	ASA	6 daily to Atlanta
US Airways	5 daily to Charlotte	US Airways	10 daily to Charlotte
Total	7 daily flights		1 daily to Hartford
			1 daily to Boston
			3 daily to Philadelphia
		Chatauqua	2 daily to Cincinnati
		United	2 daily to Chicago
			3 daily to Washington, DC
		Spirit	5 daily to New York
			2 daily to Atlantic City
			5 daily to Boston
		Continental	2 daily to Ft. Lauderdale
		Northwest	2 daily to New York/Atlanta
		Direct Air	2 daily to Detroit
			2 daily to Pittsburgh
			3 daily to St. Petersburg
		Southern Skyways	Non-daily flights to multiple northeast cities
		Total	51 daily flights
CAE		ILM	
RUNWAYS		RUNWAYS	
11/29	8,601' x 150'	06/24	8,016' x 200'
05/23	8,001' x 150'	17/35	7,004' x 150'
MINIMUMS		MINIMUMS	
ILS RWY 05	428/24 200	ILS RWY 24	226/24 200
ILS RWY 11	436/18 200	ILS RWY 26	228/40 200
ILS RWY 11 (CAT II)	386/16 150	ILS RWY 35	230/24 200
ILS RWY 11 (CAT III) RVR 07			
ILS RWY 29	433/24 200		
FLIGHTS		FLIGHTS	
American Eagle	3 daily to Dallas/Ft. Worth	US Airways	9 daily to Charlotte
Delta	3 daily to Cincinnati		3 daily to New York
	2 daily to Orlando		3 daily to Philadelphia
	7 daily to Atlanta	Delta	5 daily to Atlanta
	2 daily to New York	Total	20 daily flights
Continental Express	2 daily to Houston		
	2 daily to Newark		

Table 7.4.4-1 (continued)
Airport Comparisons – Florence Regional Airport
South Carolina Airports System Plan

CAE	
Northwest	2 daily to Detroit
	2 daily to Memphis
United Express	4 daily to Washington, DC
	5 daily to Chicago
U S Airways Exp.	8 daily to Charlotte
	3 daily to Philadelphia
	3 daily to Washington, DC
Total	48 daily flights

Note: The above flights were derived from several web site sources for MYR
 Source: Talbert & Bright, Inc. (January 2008)

Table 7.4.4-2
Travel Price Comparisons – Florence Regional Airport
South Carolina Airports System Plan

Airline			Total Time	Stops	Equipment	Destination	Price*
FLO							
Delta Connection	Departure	7:00 AM	5hr 59 min.	Atlanta	CRJ 100	New York	\$429
	Arrival	12:59 AM					
US Airways	Departure	5:45 AM	4 hr. 9 min.	Charlotte	Dash 8	New York	\$394
	Arrival	9:45 AM					
MYR							
Spirit	Departure	9:25 AM	2 hr. 28 min.	None	Large Narrow B.	New York	\$158
	Arrival	11:03 AM					
US Airways	Departure	7:20 AM	6 hr. 22 min.	Charlotte	Boeing 737	New York	\$354
	Arrival	1:42 PM					
CAE							
Delta Connection	Departure	7:35 AM	1hr. 55 min.	None	CRJ	New York	\$694
	Arrival	9:30 AM					
Continental	Departure	11:55 AM	1 hr. 54 min.	None	Embraer RJ	New York	\$818
	Arrival	1:49PM					
ILM							
Delta Connection	Departure	6:15 AM	4 hr. 46 min.	Atlanta	CRJ 100	New York	\$556
	Arrival	11:01 AM					
Delta Connection	Departure	10:45 AM	6 hr. 21 min.	Atlanta	CRJ 100	New York	\$499
	Arrival	5:06 PM					
US Airways	Departure	6:30 AM	1 hr. 37 min.	None	CRJ	New York	\$779
	Arrival	8:07 AM					

* Prices are round trip without tax
 Source: Talbert & Bright, Inc. (January 2008)





From the above, it is estimated that the leakage percentages to competing airports could be as follows: 50 percent to 60 percent MYR, 1 percent to 5 percent ILM, and 1 percent to 2 percent CAE. Using these percentages, Table 7.4.4-3 illustrates the estimated passenger leakage from FLO for the most recent 12 consecutive months for which complete data is available.

**Table 7.4.4-3
Estimated Leakage – Florence Regional Airport
South Carolina Airports System Plan**

Year	Month	Passengers Enplaned				Total
		FLO	MYR	ILM	CAE	
2006	December	3,590	5,385	189	73	9,237
2007	January	3,327	4,991	175	68	8,561
2007	February	3,437	5,156	181	70	8,844
2007	March	3,803	5,705	200	78	9,785
2007	April	4,382	6,573	231	89	11,275
2007	May	4,795	7,193	252	98	12,338
2007	June	4,370	6,555	230	89	11,244
2007	July	4,147	6,221	218	85	10,670
2007	August	4,009	6,014	211	82	10,315
2007	September	3,778	5,667	199	77	9,721
2007	October	4,071	6,107	214	83	10,475
2007	November	2,719	4,079	143	55	6,996
Total		46,428	69,642	2,444	948	119,461

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008.
Talbert & Bright, Inc. (February 2008)

7.4.5 Columbia Metropolitan Airport (CAE)

The Columbia Metropolitan Airport (CAE) analysis includes a review of Table 7.4.5-1, Table 7.4.5-2 (page 49), and CAE service area (Figure 7.4.5-1, page 50). Reviewing Table 7.4.5-1, the CAE runway and flight provisions are superior to Augusta Regional Airport (AGS) and FLO, equal to the Greenville-Spartanburg International Airport (GSP); but small compared to Charlotte-Douglas International Airport (CLT), which has 640 daily flights. GSP does have some advantage with specific flights to Florida. Reviewing Table 7.4.5-2, CAE has a price advantage over GSP and AGS but not over CHS or CLT.

**Table 7.4.5-1
Airport Comparisons – Columbia Metropolitan Airport
South Carolina Airports System Plan**

CAE		CLT	
RUNWAYS		RUNWAYS	
11/29	8,601' x 150'	18R/36L	10,000' x 150'
05/23	8,001' x 150'	18L/36R	8,676' x 150'
		05/23	7,502' x 150'
MINIMUMS		MINIMUMS	
ILS RWY 05 428/24	200	ILS RWY 05 916/24	200
ILS RWY 11 436/18	200	ILS RWY 18L 1022/40	274
ILS RWY 11 (CAT II) 386/16	150	ILS RWY 18R 942/24	200
ILS RWY 11 (CAT III) RVR 07		ILS RWY 36L 907/18	200
ILS RWY 29 433/24	200	ILS RWY 36R 927/18	200
		ILS RWY 23 948/40	200
		ILS RWY 36L (CAT II) 807/12	100
		ILS RWY 36R (CAT II) 827/12	100
		ILS RWY 36L (CAT III) RVR 07	
		ILS RWY 36R (CAT III) RVR 07	
FLIGHTS		AIRLINES	
American Eagle	3 daily to Dallas/Ft. Worth		
Delta	3 daily to Cincinnati		
	2 daily to Orlando		
	7 daily to Atlanta		
	2 daily to New York		
Continental Express	2 daily to Houston		
	2 daily to Newark		
Northwest	2 daily to Detroit		
	2 daily to Memphis		
United Express	4 daily to Washington, DC		
	5 daily to Chicago		
US Airways Exp.	8 daily to Charlotte		
	3 daily to Philadelphia		
	3 daily to Washington, DC		
	48 daily flights		
GSP		FLO	
RUNWAY		RUNWAYS	
04/22	11,000' x 150'	09/27	6,499' x 150'
		01/19	5,999' x 150'
MINIMUMS		MINIMUMS	
ILS RWY 4 1149/18	200	ILS RWY 9 347-1/2	200
ILS RWY 4 (CAT II) 1099/16	150	GPS RWY 1 480-1	345
ILS RWY 4 (CAT III) RVR 07			
ILS RWY 22 1164/24	200		
FLIGHTS		FLIGHTS	
Allegiant Air	1-3 days a week Tampa/St. Pete	Delta	2 daily to Atlanta
	1-3 days a week Ft. Lauderdale	U S Airways	5 daily to Charlotte
	1-4 days a week Orlando		7 daily flights
		Total	





Table 7.4.5-1 (continued)
Airport Comparisons – Columbia Metropolitan Airport
South Carolina Airports System Plan

GSP		AGS	
American Eagle	3 daily to Dallas/Ft. Worth		
	3 daily to Chicago		
Continental	3 daily to Newark		
	1 daily to Houston		
	1 daily to Cleveland		
Delta	5 daily to Atlanta		
	2 daily to New York		
	4 daily to Cincinnati	17/35	8,001' x 150'
Northwest	3 daily to Detroit	08/26	6,002' x 150'
	3 daily to Memphis		
United Express	4 daily to Washington/Dulles		
	3 daily to Chicago	ILS RWY 17 345/24 200	
US Airways	8 daily to Charlotte	ILS RWY 35 337/24 200	
	2 daily to Philadelphia		
	3 daily to Washington Nat.		
	2 daily to New York		
Total	50+ daily flights	Delta/ASA US Airways	5 daily to Atlanta 7 daily to Charlotte 12 daily flights

Source: Talbert & Bright, Inc. (January 2008)

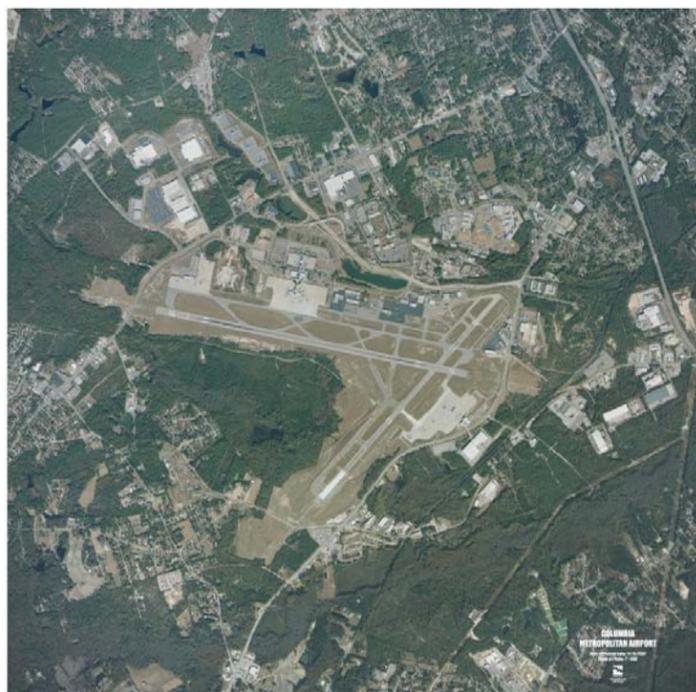
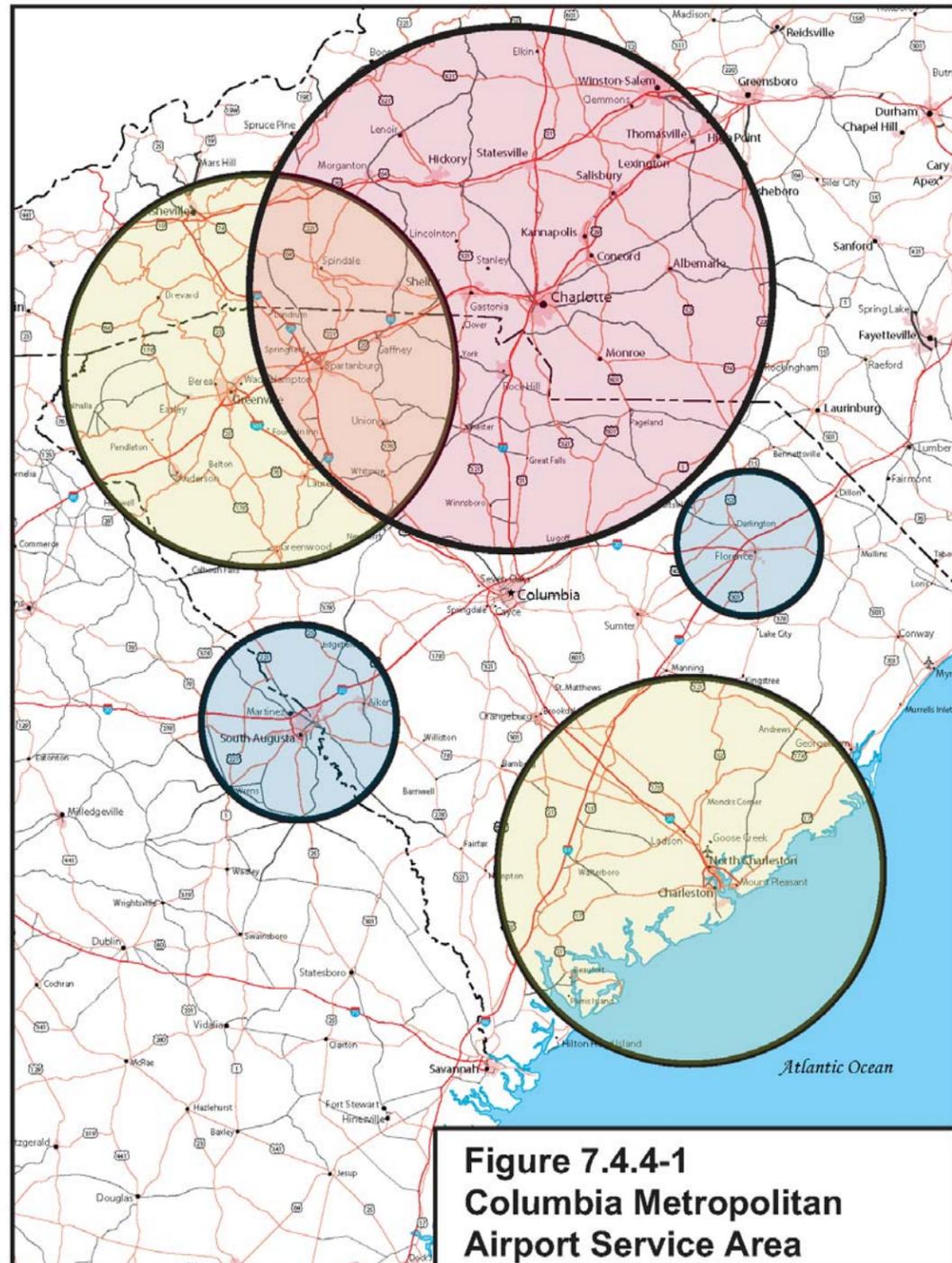


Table 7.4.5-2
Travel Price Comparisons – Columbia Metropolitan Airport
South Carolina Airports System Plan

Airline			Total Time	Stops	Equipment	Destination	Price*
CAE							
Delta Connection	Departure	7:35 AM	1hr. 55 min.	None	CRJ	New York	\$694
	Arrival	9:30 AM					
Continental	Departure	11:55 AM	1 hr. 54 min.	None	Embraer RJ	New York	\$818
	Arrival	1:49 PM					
CLT							
US Airways	Departure	6:22 AM	1 hr. 41 min.	None	CRJ	New York	\$355
	Arrival	8:03 AM					
US Airways	Departure	11:45 AM	1 hr. 57min.	None	Airbus A321	New York	\$355
	Arrival	1:42 PM					
GSP							
Delta Connection	Departure	6:35 AM	1 hr. 54 min.	None	CRJ	New York	\$1,338
	Arrival	8:31 AM					
US Airways	Departure	11:00 AM	1 hr. 52 min.	None	CRJ	New York	\$1,323
	Arrival	12:52 PM					
Continental	Departure	6:15 AM	1 hr. 50 min.	None	Embraer RJ	Newark	\$1,018
	Arrival	8:05 AM					
CHS							
Delta Connection	Departure	6:00 AM	1hr. 59 min.	None	CRJ 100	New York	\$529
	Arrival	7:59 AM					
US Airways	Departure	7:05 AM	1 hr. 54 min.	None	CRJ & Embraer RJ	New York	\$801
	Arrival	8:59 AM					
Continental	Departure	11:45 AM	2 hr. 8 min.	None	Embraer RJ	New York	\$718
	Arrival	1:53 PM					
AGS							
Delta Connection	Departure	6:00 AM	3 hr. 54 min.	Atlanta	CRJ	New York	\$840
	Arrival	9:54 AM					
US Airways	Departure	6:00 AM	3 hr. 54 min.	Charlotte	Dash 8 Airbus 319	New York	\$783
	Arrival	9:54 AM					

* Prices are round trip without tax
 Source: Talbert & Bright, Inc. (January 2008)



**Figure 7.4.4-1
Columbia Metropolitan
Airport Service Area**

Source:

From the above, it is estimated that the leakage percentages to competing airports could be as follows: 15 percent to 25 percent CLT, 3 percent to 8 percent GSP, 3 percent to 8 percent CHS and 1 percent to 2 percent AGS. Table 7.4.5-3 illustrates the estimated passenger leakage from CAE for the most recent 12 consecutive months for which complete data is available.

**Table 7.4.5-3
Estimated Leakage – Columbia Metropolitan Airport
South Carolina Airports System Plan
Passengers Enplaned**

Year	Month	CAE	CLT	GSP	CHS	AGS	Total
2006	November	54,823	18,274	4,767	4,767	1,119	83,751
2006	December	57,578	19,193	5,007	5,007	1,175	87,959
2007	January	45,499	15,166	3,956	3,956	929	69,507
2007	February	42,296	14,099	3,678	3,678	863	64,614
2007	March	52,339	17,446	4,551	4,551	1,068	79,956
2007	April	55,135	18,378	4,794	4,794	1,125	84,227
2007	May	54,339	18,113	4,725	4,725	1,109	83,011
2007	June	52,403	17,468	4,557	4,557	1,069	80,054
2007	July	54,779	18,260	4,763	4,763	1,118	83,683
2007	August	53,793	17,931	4,678	4,678	1,098	82,177
2007	September	49,235	16,412	4,281	4,281	1,005	75,214
2007	October	52,840	17,613	4,595	4,595	1,078	80,721
Total		625,059	208,353	54,353	54,353	12,756	954,874

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008
Talbert & Bright, Inc. (February 2008)

7.4.6 Greenville-Spartanburg International (GSP)

The Greenville-Spartanburg International Airport (GSP) analysis includes a review of Table 7.4.6-1 (page 51), Table 7.4.6-2 (page 52), and GSP service area (Figure 7.4.6-1, page 52). Reviewing Table 7.4.6-1 (page 51), runway and flight provisions are equivalent to CAE and superior to the Asheville Regional Airport (AVL). Most important, GSP is located between two major airport hubs, i.e., Hartsfield-Jackson Atlanta International Airport (ATL) with 2,600 daily flights and CLT with 640 daily flights. Review of Table 7.4.6-2 (page 52) indicates a strong price disadvantage for flights from GSP to New York compared to CLT, CAE, ATL, and AVL.



Table 7.4.6-1
Airport Comparisons – Greenville-Spartanburg International Airport
South Carolina Airports System Plan

Table 7.4.6-1 (continued)
Airport Comparisons – Greenville-Spartanburg International Airport
South Carolina Airports System Plan

GSP		ATL		
RUNWAY		RUNWAYS		
04/22	11,000' x 150'	08L/26R	9,000' x 150'	
		08R/26L	10,000' x 150'	
		09L/27R	11,890' x 150'	
		09R/27L	9,001' x 150'	
MINIMUMS		MINIMUMS		
ILS RWY 4 1149/18	200	ILS RWY 8R 1224/24	200	
ILS RWY 4 (CAT II) 1099/16	150			
ILS RWY 4 (CAT III) RVR 07				
ILS RWY 22 1164/24	200			
GSP		ATL		
FLIGHTS		FLIGHTS		
Allegiant Air	1-3 days a week Tampa/St. Pete	ILS RWY 9L 1219/24	200	
	1-3 days a week Ft. Lauderdale	ILS RWY 9R 1226/18	200	
	1-4 days a week Orlando	ILS RWY 26L 1195/24	200	
American Eagle	3 daily to Dallas/Ft. Worth	ILS RWY 26R 1190/18	200	
	3 daily to Chicago	ILS RWY 27L 1199/18	200	
Continental	3 daily to Newark	ILS RWY 27 R 1185/40	200	
	1 daily to Houston	ILS RWY 8L 1165/16	150	
	1 daily to Cleveland	ILS RWY 8R (CAT II) 1174/16	150	
Delta	5 daily to Atlanta	ILS RWY 9R (CAT II) 1176/16	150	
	2 daily to New York	ILS RWY 8L (CAT III) RVR 07		
	4 daily to Cincinnati	ILS RWY 9R (CAT III) RVR 07		
Northwest	3 daily to Detroit	AIRLINES		
	3 daily to Memphis	29 Airlines	FLIGHTS	
United Express	4 daily to Washington/Dulles		2,600 estimated daily flights	
	3 daily to Chicago	CLT		
US Airways	8 daily to Charlotte	RUNWAYS		
	2 daily to Philadelphia	18R/36L	10,000' x 150'	
	3 daily to Washington Nat.	18L/36R	8,676' x 150'	
	2 daily to New York	05/23	7,502' x 150'	
Total	50+ daily flights	MINIMUMS		
CAE		ILS RWY 05 916/24	200	
RUNWAYS		ILS RWY 18L 1022/40	274	
11/29	8,601' x 150'	ILS RWY 18R 942/24	200	
05/23	8,001' x 150'	ILS RWY 36L 907/18	200	
		ILS RWY 36R 927/18	200	
MINIMUMS		ILS RWY 23 948/40	200	
ILS RWY 05 428/24	200	ILS RWY 36L (CAT II) 807/12	100	
ILS RWY 11 436/18	200	ILS RWY 36R (CAT II) 827/12	100	
ILS RWY 11 (CAT II) 386/16	150	ILS RWY 36L (CAT III) RVR 07		
ILS RWY 11 (CAT III) RVR 07		ILS RWY 36R (CAT III) RVR 07		
ILS RWY 29 433/24	200			

CAE		CLT	
FLIGHTS		AIRLINES	
American Eagle	3 daily to Dallas/Ft. Worth	Air Tran	REGIONAL
Delta	3 daily to Cincinnati	American Airlines	American Eagle
	2 daily to Orlando	Continental Airlines	American Connect
	7 daily to Atlanta	Delta Airlines	Continental Express
	2 daily to New York	JetBlue Airways	Delta Connection
Continental Express	2 daily to Houston	Midwest Airlines	Northwest Jet Link
	2 daily to Newark	Northwest Airlines	United Express
Northwest	2 daily to Detroit	United Airlines	US Airways Express
	2 daily to Memphis	US Airways	
United Express	4 daily to Washington/Dulles	Air Canada Jazz	
	5 daily to Chicago	Lufthansa	
US Airways Exp.	8 daily to Charlotte		
	3 daily to Philadelphia		
	3 daily to Washington/Nat.		
	48 daily flights		
Total		Total	FLIGHTS
			640 daily flights
AVL		FLIGHTS	
RUNWAY		ILS RWY 16 2379/40	214
16/34	8,001' x 150'	ILS RWY 34 2340/24	200
MINIMUMS		FLIGHTS	
Delta	5 daily to Atlanta	US Airways	7 daily to Charlotte
	2 daily to Cincinnati	Northwest	2 daily to Detroit
	1 daily to Orlando		1 daily to Minneapolis
US Airways	7 daily to Charlotte	Continental	1 daily to Houston
Northwest	2 daily to Detroit		1 daily to Newark
	1 daily to Minneapolis		20 daily flights
Continental	1 daily to Houston		
	1 daily to Newark		
Total	20 daily flights		

Note: 5th Runway at ATL not included.
 Source: Talbert & Bright, Inc. (January 2008)

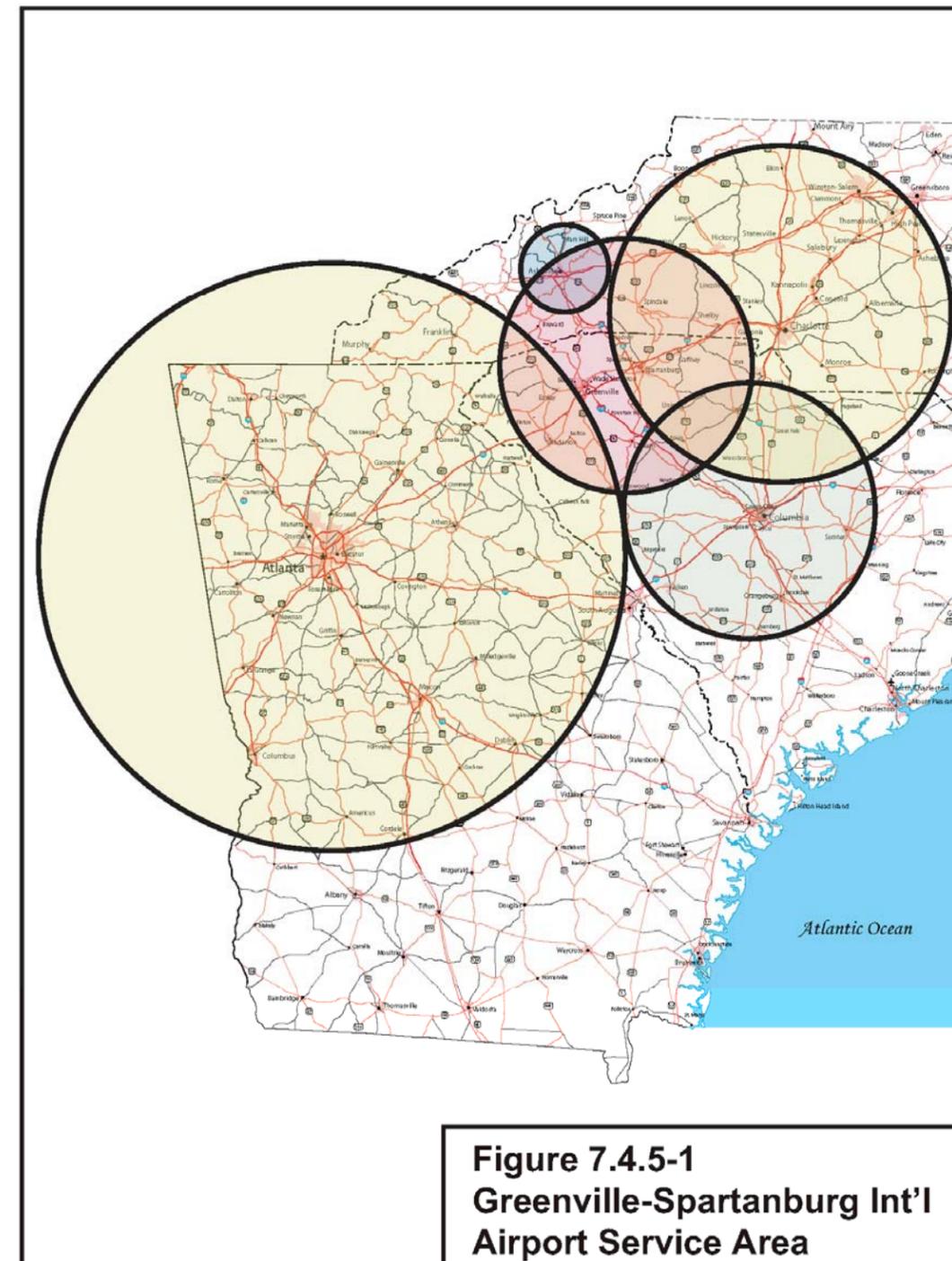




Table 7.4.6-2
Travel Price Comparisons – Greenville-Spartanburg International Airport
South Carolina Airports System Plan

Airline		Total Time	Stops	Equipment	Destination	Price*	
GSP							
Delta Connection	Departure	6:35 AM	1 hr. 54 min.	None	CRJ	New York	\$1,338
	Arrival	8:31 AM					
US Airways	Departure	11:00 AM	1 hr. 52 min.	None	CRJ	New York	\$1,323
	Arrival	12:52 PM			Embraer RJ		
Continental	Departure	6:15 AM	1 hr. 50 min.	None	Embraer RJ	Newark	\$1,018
	Arrival	8:05 AM					
ATL							
Delta	Departure	8:45 AM	2 hr. 16 min.	None	Boeing 757	New York	\$622
	Arrival	11:01 AM					
Air Tran	Departure	7:10 AM	2 hr. 5 min.	None	Large	New York	\$645
	Arrival	9:15 AM			Narrow B.		
US Airways	Departure	7:25 AM	4 hr. 29 min.	None	Airbus	New York	\$478
	Arrival	11:54 AM			Boeing 737		
CLT							
US Airways	Departure	6:22 AM	1 hr. 41 min.	None	CRJ	New York	\$355
	Arrival	8:03 AM			Airbus A321		
US Airways	Departure	11:45 AM	1 hr. 57 min.	None	Airbus A321	New York	\$355
	Arrival	1:42 PM					
CAE							
Delta Connection	Departure	7:35 AM	1hr. 55 min.	None	CRJ	New York	\$694
	Arrival	9:30 AM					
Continental	Departure	11:55 AM	1 hr. 54 min.	None	Embraer RJ	New York	\$818
	Arrival	13:49					
AVL							
Continental Express	Departure	3:40 PM	1 hr. 55 min.	None	Embraer RJ	Newark	\$1,018
	Arrival	8:31 AM					
US Airways	Departure	1:15 PM	4 hr. 44 min.	Charlotte	Dash 8	New York	\$843
	Arrival	5:59 PM			Airbus 320		
Delta	Departure	5:10 PM	4 hr. 36 min.	Cincinnati	Embraer RJ	New York	\$972
	Arrival	9:46PM			MD 88		

* Prices are round trip without tax
 Source: Talbert & Bright, Inc. (January 2008)



Source:



From the above, it is estimated that the leakage percentages to competing airports could be as follows: 12 percent to 20 percent ATL, 12 percent to 20 percent CLT, 3 percent to 6 percent CAE, and 1 percent to 2 percent AVL. Table 7.4.6-3 illustrates the estimated passenger leakage from GSP for the most recent 12 consecutive months for which complete data is available.

**Table 7.4.6-3
Estimated Leakage – Greenville-Spartanburg
International Airport
South Carolina Airports System Plan**

Year	Month	Passengers Enplaned					Total
		GSP	ATL	CLT	CAE	AVL	
2006	December	66,321	16,580	16,580	4,233	1,353	105,068
2007	January	55,802	13,951	13,951	3,562	1,139	88,404
2007	February	51,621	12,905	12,905	3,295	1,053	81,780
2007	March	64,653	16,163	16,163	4,127	1,319	102,426
2007	April	65,019	16,255	16,255	4,150	1,327	103,006
2007	May	70,732	17,683	17,683	4,515	1,444	112,056
2007	June	72,503	18,126	18,126	4,628	1,480	114,862
2007	July	69,596	17,399	17,399	4,442	1,420	110,257
2007	August	67,562	16,891	16,891	4,312	1,379	107,034
2007	September	64,321	16,080	16,080	4,106	1,313	101,900
2007	October	69,774	17,444	17,444	4,454	1,424	110,539
2007	November	68,111	17,028	17,028	4,348	1,390	107,904
	Total	786,015	196,504	196,504	50,171	16,041	1,245,235

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008.
Talbert & Bright, Inc. (February 2008)

It should be noted that GSP recently completed a passenger leakage study (January 2009), where it was determined that there is an estimated 59 percent leakage of passengers going to CLT and ATL.

7.4.7 Summary

The following table illustrates the estimated out-of-state leakage based on Tables 7.4.1-3 (page 42), 7.4.2-3 (page 44), 7.4.3-3 (page 46), 7.4.4-3 (page 48), 7.4.5-3 (page 50), and 7.4.6-3.

**Table 7.4.7-1
Summary of Estimated Leakage
South Carolina Airports System Plan**

Airport	Number of Passengers	Percentage of State
Total SC Passengers	4,971,056	100.0%
SAV	391,703	7.9%
ILM	28,347	0.6%
CLT	404,857	8.1%
ATL	196,504	4.0%
AGS	12,756	0.3%
AVL	16,041	0.3%
Total Leakage	1,050,208	21.1%

Source: South Carolina Division of Aeronautics, "Enplanements and Deplanements for Major Hub Airports," <http://www.scaeronautics.com/eds/tblplanements_list.asp>, accessed February 14, 2008
Talbert & Bright, Inc. (February 2008)

It is conceded that the preceding leakages are estimates and for general consideration only. Exact leakage quantification will require detailed passenger survey analysis.





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8.0 FINANCIAL PLAN

The financial plan is a key component of the SCASP. It takes into account the planning and policy determinations that have been reviewed and recommended by the SCASP Technical Advisory Committee and adopted by the SCAC. It also determines if current and projected state revenues are adequate to fund the state's share of the capital improvement; maintenance; and communications, navigation, and surveillance programs. The plan provides the SCDOA and SCAC with a 20-year needs assessment; divided into 0-5-year, 6-10-year, and 11-20-year periods. The basis for the plan is taken from the SCASP airports ACIPs and applying the funding criteria to determine the SCDOA share of the 20-year system cost.

In order to determine if the SCDOA can meet its share of the system cost, the Plan forecasts aviation-generated tax revenue over the 20-year planning period. With both the cost and revenue data for the 20-year period, the SCDOA and SCAC will be in a position to determine if the State of South Carolina is in a financial position to meet its share of those costs within the current aviation-generated revenue collection levels.

8.1 PROGRAM REVENUE SOURCES

One of the key components of the SCASP is projecting the anticipated aviation-generated revenue over the next 20-year period. These data will be used to determine the projected level of annual funding available for the financial-assistance-to-airports programs to support the state's share of planning, development, and maintenance of the South Carolina airports system.

Sources of aviation-generated revenue used for this forecast are those that are currently paid to the State of South Carolina by the commercial air carriers and general aviation fuel tax,¹⁷ and include the:

- Over-flight fees that are levied against the commercial air carriers and currently goes into the state's General Fund
- Five percent sales tax on general aviation fuel sales that comprises the State Aviation Fund and used for maintenance and other capital development
- \$0.5 million of Appropriated Funds as an annual budget item used to match federal (FAA) funding; however, because of the global economic downturn and state revenue shortfall, this funding source was eliminated in 2008 and is currently projected not to be available in the forthcoming years.

¹⁷ Note: In accordance with *South Carolina Code of Laws* Title 12 – Taxation, Chapter 36 – The South Carolina Sales and Use Tax Act, Section 12–36–2120 – Exemptions from sales tax... (9)... transportation companies for: ... (d) the generation of motive power for transportation; transportation companies are tax exempt. <<http://www.scstatehouse.net/code/tit12.htm>>, accessed September 3, 2008.

Independent forecasts were created for each of these revenue sources and then summed to determine the total estimated annual revenue over the 0-5-year (highlighted in red), 6-10-year (highlighted in green), and 11-20-year (highlighted in blue) periods.

8.1.1 Commercial Service Airline Revenues (Airline Property Tax)

Commercial service revenues are collected from the airline property tax. This tax is based on two ratios: the total time scheduled on the ground within the state and the total mileage scheduled within the state. The total revenue collected from these flights from 2003 to 2008 was used to develop a trend forecast, which compensated for the years where revenues were much higher or much lower than the average (Table 8.1.1-1).

**Table 8.1.1-1
Potential Commercial Service
Airline Revenue Generation
South Carolina Airports System
Plan**

Year	Commercial Service	
	Existing	Forecast
2003	\$3,101,209	
2004	\$7,275,841	
2005	\$6,769,653	
2006	\$3,469,901	
2007	\$7,998,308	
2008	\$7,216,123	
2009		\$6,878,731
2010		\$7,655,857
2011		\$8,819,484
2012		\$8,338,326
2013		\$9,037,252
2014		\$9,645,783
2015		\$9,958,627
2016		\$10,235,618
2017		\$10,857,909
2018		\$11,216,382
2019		\$11,595,007
2020		\$12,048,766
2021		\$12,499,755
2022		\$12,878,387
2023		\$13,316,286
2024		\$13,749,294
2025		\$14,163,774
2026		\$14,581,183
2027		\$15,013,708
2028		\$15,432,869

Source: South Carolina Department of Revenue (February 2009)
Talbert & Bright, Inc. (March 2009)





8.1.2 General Aviation Revenues (General Fund/Aviation Fuel Tax)

The past level of funding to support general aviation airport development and maintenance was comprised of two sources, a \$0.5 million annual contribution of Appropriated Funds and a five percent sales tax on all general aviation fuel sold. For the purpose of the forecast, only the sales tax was included over the 20-year period (Table 8.1.2-1). A regression forecast was used to tie the proposed annual general aviation operations to the proposed revenue for a given year. This forecast was then carried forward through the 20-year planning period. General aviation fuel tax revenue will increase at approximately the same rate as the total annual general aviation operations as long as the fuel tax rate remains unchanged.

**Table 8.1.2-1
Potential Revenue Generation from Aviation Fuel Tax and Appropriated Funds**

	Annual GA Fuel Revenue	General Appropriation Fund	Revenue Forecast	General Aviation Operations
2003	\$611,537	\$500,000		
2004	\$644,270	\$500,000		1,360,601
2005	\$820,508	\$500,000		1,335,075
2006	\$1,227,638	\$500,000		1,331,257
2007	\$2,196,258	\$500,000		1,324,883
2008	\$2,957,592	\$500,000		1,321,406
2009			\$2,988,681	1,335,296
2010			\$3,019,770	1,349,186
2011			\$3,050,859	1,363,076
2012			\$3,081,947	1,376,966
2013			\$3,113,041	1,390,858
2014			\$3,178,965	1,420,312
2015			\$3,244,890	1,449,766
2016			\$3,310,814	1,479,220
2017			\$3,376,738	1,508,674
2018			\$3,442,663	1,538,128
2019			\$3,510,984	1,568,653
2020			\$3,579,306	1,599,178
2021			\$3,647,627	1,629,703
2022			\$3,715,949	1,660,228
2023			\$3,784,270	1,690,753
2024			\$3,852,592	1,721,278
2025			\$3,920,914	1,751,803
2026			\$3,989,235	1,782,328
2027			\$4,057,557	1,812,853
2028			\$4,125,871	1,843,375

General Aviation Assumptions: Annual contribution of \$500,000 from general fund is not reinstated and \$0.05 per gallon tax rate remains constant
Source: South Carolina Division of Aeronautics (February 2009)
Talbert & Bright, Inc. (March 2009)

8.1.3 Revenue Forecast for 20-Year Planning Horizon

The total aviation revenue forecast for South Carolina was determined by summing the commercial service and general aviation revenues (Table 8.1.3-1). These forecast numbers represent an estimate of future potential revenues based on historical amounts and forecast aviation activity levels. The actual revenues may vary from the forecast revenues as the various factors, which influence them, change over time. While the historical levels of aviation funding between 2003 and 2008 have ranged between \$2.0 million and \$2.6 million, the only needs that are being met involve the general aviation airports. No state funding is made available to the four largest commercial service airports, which are tremendous economic generators for the state. As a result of this 2008 system plan update, it is the recommendation of the SCDOA and SCAC that the current revenues that are generated by aviation sources should be placed into the non-general, State Aviation Fund and appropriated to the SCDOA for allocation by the SCAC.

**Table 8.1.3-1
Potential Revenue Generation from Aviation Sources**

Year	South Carolina Airports System Plan		Total
	Commercial Service	General Aviation	
2009	\$6,878,731	\$2,988,681	\$9,867,412
2010	\$7,655,857	\$3,019,770	\$10,675,626
2011	\$8,819,484	\$3,050,859	\$11,870,343
2012	\$8,338,326	\$3,081,947	\$11,420,274
2013	\$9,037,252	\$3,113,041	\$12,150,293
2014	\$9,645,783	\$3,178,965	\$12,824,749
2015	\$9,958,627	\$3,244,890	\$13,203,517
2016	\$10,235,618	\$3,310,814	\$13,546,431
2017	\$10,857,909	\$3,376,738	\$14,234,647
2018	\$11,216,382	\$3,442,663	\$14,659,045
2019	\$11,595,007	\$3,510,984	\$15,105,991
2020	\$12,048,766	\$3,579,306	\$15,628,072
2021	\$12,499,755	\$3,647,627	\$16,147,382
2022	\$12,878,387	\$3,715,949	\$16,594,335
2023	\$13,316,286	\$3,784,270	\$17,100,557
2024	\$13,749,294	\$3,852,592	\$17,601,886
2025	\$14,163,774	\$3,920,914	\$18,084,687
2026	\$14,581,183	\$3,989,235	\$18,570,418
2027	\$15,013,708	\$4,057,557	\$19,071,265
2028	\$15,432,869	\$4,125,871	\$19,558,740

Source: Tables 8.1.1-1 and 8.1.2-1
Talbert & Bright, Inc. (March 2009)





8.2 ESTIMATED AVIATION SYSTEM NEED

One key component in the study was to visit each airport in the system and discuss the capital improvement and maintenance needs for that facility. That exchange provided the study team with the ACIP for each airport for the five-year period, 2009 through 2013. It is important to plan the system from the bottom up in order to be able to realistically estimate the cost of system development. As outlined in Tables 8.2-1 (page 58), 8.2-2 (page 59), 8.2-3 (page 60), 8.2-4 (page 61), and 8.2-5 (page 62), the total cost of the facility requirements for all sectors of the South Carolina airports system totals approximately \$2.05 billion for the years 2009 through 2028.

This update of the system plan has resulted in the design of an online system by which airport sponsors will update their capital improvement and maintenance needs. This real-time method of update will bring greater accuracy and a higher confidence level to the total system requirements and, therefore, the total requirement for federal, state, and local funds.

8.3 ESTIMATED FAA, SCDOA, AND LOCAL PARTICIPATION

Over the last six years, funds allocated to capital improvement projects by the FAA and the SCDOA have averaged \$33.9 million (Table 8.3-1).

**Table 8.3-1
Historic FAA and SCDOA Funding
South Carolina Airports System Plan**

Fiscal Year	FAA			SCDOA
	Entitlement	Discretionary	Total	
2003	\$20,039,581	\$5,367,902	\$25,407,483	\$975,052
2004	\$31,291,089	\$9,452,772	\$40,743,861	\$1,500,610
2005	\$25,848,082	\$7,633,391	\$33,481,473	\$1,356,819
2006	\$14,960,577	\$1,604,545	\$16,565,122	\$2,557,470
2007	\$26,468,683	\$7,539,840	\$34,008,523	\$2,628,727
2008	\$27,144,669	\$16,403,274	\$43,547,943	\$546,230

Source: Federal Aviation Administration (July 2008). Southern Regional, Atlanta Airports District Office, South Carolina Entire Program Detail Report by Fiscal Year (2003 through 2007) South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008) Talbert & Bright, Inc. (July 2008)

Tables 8.2-1 (page 58), 8.2-2 (page 59), 8.2-3 (page 60), 8.2-4 (page 61), and 8.2-5 (page 62) project the estimated funding requirements for federal, state, and local levels based upon the ACIP data provided by the airport sponsors and the revised capital improvement program funding criteria approved by the SCASP Technical Advisory Committee and SCAC. These tables represent an estimate of the respective shares of the 0-5-year (highlighted in red), 6-10-year (highlighted in green), and 11-20-year (highlighted

in blue) needs cost based upon the current FAA funding formulae without any reference to revenues to meet those needs.

Revenue levels need to respond to those needs discussed in Section 8.2. This needs assessment for the state system does include the future financial participation by SCDOA in the capital improvement projects at Columbia Metropolitan (CAE), Charleston International (CHS), Greenville-Spartanburg International (GSP), and Myrtle Beach International (MYR) as these airports are critical to the air travel needs of the citizens and also economic development and tourism in South Carolina.

8.4 STATE AVIATION PROGRAMS OF FINANCIAL ASSISTANCE

The financial-assistance-to-airports programs in South Carolina are based on the needs of the airports to provide safe and reliable service to the flying public. The programs are structured to address the major needs of those airports as follows:

- ➔ **Capital Improvement Program** – Funding is currently budgeted by the SCAC from the state aviation fund tax revenue.
- ➔ **Airfield Maintenance Services** – Funds are allocated to maintenance projects from the State Aviation Fund, which has averaged \$0.82 million over the last six years, 2003 through 2008 (Table 8.4-1).

**Table 8.4-1
SCDOA Maintenance Funding
South Carolina Airports System Plan**

Fiscal Year	Maintenance
2004	\$357,606
2005	\$217,715
2006	\$738,049
2007	\$1,126,799
2008	\$1,145,000
2009	\$1,350,000

Source: South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008) Talbert & Bright, Inc. (July 2008)

- ➔ **Communications, Navigation, and Surveillance Programs** – Communications, navigation, and surveillance programs involve the installation and maintenance of navigational aids, automated weather observations systems (AWOS), and other lighting and visual aids. These facilities and equipment are essential to general aviation airports to ensure that they are operational in most weather conditions. These funds are allocated to specific projects from the State Aviation Fund, which averaged \$0.39 million annually over the last three years (Table 8.4-2, page 63).





Table 8.2-1
20-Year Estimated Capital Improvement Needs Assessment
South Carolina Airports System Plan

Fiscal Year	Land Acquisition (including avigation easements, fee simple, relocations)	Pavement (including rehabilitation, strengthening, runway/taxiway extensions, apron, road relocations, maintenance)	Electrical (including NAV AIDs, runway/taxiway lighting)	Hangars (including ARFF facilities)	Terminals (including parking lots and rental car areas)	Planning (including master plans, ALP updates, environmental documentation, permitting, mitigation, feasibility studies, DBE plans)	Fuel Systems	Fencing/Security	Obstruction Removal	Total Need	Projected Participation			Projected Funding			Estimated Unmet Need
											Federal	State	Airport Sponsor	Federal	State	Airport Sponsor	
2009	\$6,406,454	\$49,470,654	\$765,505	\$4,912,891	\$20,355,128	\$3,991,995	\$1,805,632	\$1,763,285	\$5,234,394	\$94,705,937	\$89,179,234	\$2,846,658	\$2,680,046	\$33,669,384	\$2,116,587	\$2,110,098	\$56,809,868
2010	\$5,513,393	\$47,424,091	\$3,060,000	\$3,626,300	\$41,555,003	\$2,727,500	\$144,000	\$1,455,800	\$2,739,100	\$108,245,187	\$99,455,107	\$4,725,940	\$4,064,140	\$32,254,489	\$2,131,937	\$2,124,151	\$71,734,609
2011	\$4,246,788	\$41,842,650	\$1,675,618	\$3,879,158	\$41,386,780	\$1,065,500	\$875,000	\$758,000	\$628,495	\$96,357,989	\$89,834,745	\$3,441,132	\$3,082,112	\$32,009,092	\$2,224,965	\$2,218,872	\$59,905,059
2012	\$5,365,788	\$38,916,795	\$5,853,450	\$5,528,421	\$39,245,834	\$1,406,592	\$0	\$1,025,000	\$1,374,000	\$98,715,880	\$92,474,786	\$3,269,197	\$2,971,897	\$35,097,886	\$2,119,056	\$2,111,744	\$59,387,194
2013	\$2,712,894	\$32,985,888	\$8,037,800	\$5,240,263	\$15,207,433	\$4,068,473	\$0	\$1,192,581	\$580,000	\$70,025,332	\$64,920,085	\$2,806,363	\$2,298,883	\$35,315,759	\$1,947,709	\$1,942,173	\$30,819,692
2014	\$5,091,517	\$44,234,416	\$4,072,398	\$4,869,277	\$33,127,537	\$2,784,613	\$593,173	\$1,300,880	\$2,216,758	\$98,290,568	\$91,531,431	\$3,588,751	\$3,170,386	\$33,669,322	\$2,108,051	\$2,101,408	\$60,411,788
2015	\$4,815,380	\$43,134,806	\$4,766,846	\$4,860,118	\$35,809,743	\$2,531,062	\$338,556	\$1,203,775	\$1,583,054	\$99,043,341	\$92,025,392	\$3,744,590	\$3,273,358	\$33,669,310	\$2,106,344	\$2,099,670	\$61,168,018
2016	\$4,668,797	\$42,234,057	\$5,125,284	\$5,119,220	\$34,603,239	\$2,489,810	\$379,413	\$1,150,849	\$1,340,284	\$97,110,953	\$90,465,152	\$3,538,507	\$3,107,294	\$33,952,274	\$2,101,225	\$2,094,773	\$58,962,681
2017	\$4,757,419	\$42,316,252	\$5,849,713	\$5,379,633	\$33,178,695	\$2,788,916	\$275,340	\$1,233,348	\$1,489,760	\$97,269,076	\$90,597,538	\$3,558,956	\$3,112,582	\$34,340,910	\$2,076,477	\$2,069,953	\$58,781,735
2018	\$4,629,661	\$43,030,138	\$5,848,929	\$5,348,387	\$31,904,596	\$3,079,204	\$333,161	\$1,277,101	\$1,514,070	\$96,965,247	\$90,203,316	\$3,619,805	\$3,142,126	\$34,189,515	\$2,067,961	\$2,061,595	\$58,646,175
2019	\$5,032,182	\$45,139,431	\$5,389,266	\$5,371,093	\$35,411,000	\$2,871,457	\$403,125	\$1,294,850	\$1,710,225	\$102,622,629	\$95,512,794	\$3,790,628	\$3,319,207	\$33,964,266	\$2,092,011	\$2,085,480	\$64,480,871
2020	\$5,019,722	\$45,329,484	\$5,665,808	\$5,476,475	\$35,890,527	\$2,889,694	\$363,215	\$1,293,584	\$1,603,853	\$103,532,361	\$96,348,880	\$3,833,022	\$3,350,459	\$34,023,255	\$2,088,803	\$2,082,294	\$65,338,009
2021	\$5,062,634	\$45,790,366	\$5,854,590	\$5,605,910	\$35,907,492	\$2,965,007	\$368,393	\$1,312,444	\$1,608,220	\$104,475,056	\$97,256,813	\$3,851,593	\$3,366,650	\$34,094,044	\$2,085,295	\$2,078,819	\$66,216,897
2022	\$5,145,340	\$46,537,191	\$6,007,744	\$5,708,114	\$36,181,385	\$3,064,798	\$366,079	\$1,346,379	\$1,664,487	\$106,021,517	\$98,683,062	\$3,917,341	\$3,421,115	\$34,122,398	\$2,082,110	\$2,075,628	\$67,741,381
2023	\$5,226,803	\$47,423,588	\$6,040,931	\$5,777,096	\$36,811,950	\$3,122,734	\$385,135	\$1,370,115	\$1,701,179	\$107,859,530	\$100,381,022	\$3,992,602	\$3,485,907	\$34,078,696	\$2,083,236	\$2,076,763	\$69,620,835
2024	\$5,352,203	\$48,346,212	\$6,081,251	\$5,867,124	\$37,842,495	\$3,131,875	\$396,049	\$1,389,648	\$1,740,472	\$110,147,330	\$102,518,340	\$4,070,889	\$3,558,101	\$34,056,532	\$2,086,291	\$2,079,797	\$71,924,710
2025	\$5,419,408	\$49,019,637	\$6,226,568	\$5,971,291	\$38,353,108	\$3,186,563	\$394,563	\$1,409,556	\$1,746,824	\$111,727,517	\$103,989,504	\$4,129,744	\$3,608,269	\$34,074,985	\$2,085,147	\$2,078,660	\$73,488,724
2026	\$5,503,342	\$49,794,569	\$6,344,327	\$6,075,202	\$38,870,250	\$3,248,905	\$401,146	\$1,433,910	\$1,776,848	\$113,448,499	\$105,594,035	\$4,192,055	\$3,662,409	\$34,085,331	\$2,084,416	\$2,077,934	\$75,200,819
2027	\$5,595,890	\$50,635,451	\$6,447,172	\$6,173,754	\$39,492,430	\$3,308,524	\$408,024	\$1,459,417	\$1,812,260	\$115,332,923	\$107,344,852	\$4,263,552	\$3,724,518	\$34,083,588	\$2,084,240	\$2,077,757	\$77,087,338
2028	\$5,690,506	\$51,496,086	\$6,539,452	\$6,271,538	\$40,187,749	\$3,359,706	\$416,832	\$1,483,156	\$1,843,293	\$117,288,318	\$109,163,828	\$4,336,257	\$3,788,233	\$34,075,826	\$2,084,666	\$2,078,182	\$79,049,643

Source: Airport 2009-2013 Capital Improvement Programs
 Federal Aviation Administration (July 2008). Southern Regional, Atlanta Airports District Office, South Carolina Entire Program Detail Report by Fiscal Year (2003 through 2007)
 South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008)
 Talbert & Bright, Inc. (July 2008)





**Table 8.2-2
Commercial Service Airports (CAE, CHS, GSP, and MYR) 20-Year Estimated Capital Improvement Needs Assessment
South Carolina Airports System Plan**

Fiscal Year	Land Acquisition (including avigation easements, fee simple, relocations)	Pavement (including rehabilitation, strengthening, runway/taxiway extensions, apron, road relocations, maintenance)	Electrical (including NAVAIDS, runway/taxiway lighting)	Hangars (including ARFF facilities)	Terminals (including parking lots and rental car areas)	Planning (including master plans, ALP updates, environmental documentation, permitting, mitigation, feasibility studies, DBE plans)	Fuel Systems	Fencing/Security	Obstruction Removal	Total Need	Projected Participation			Projected Funding			Estimated Unmet Need
											Federal	State	Airport Sponsor	Federal	State	Airport Sponsor	
2009	\$1,000,000	\$23,395,957	\$80,000	\$190,000	\$11,000,000	\$2,393,500	\$0	\$0	\$150,000	\$38,209,457	\$36,298,984	\$955,236	\$955,236	\$15,147,387	\$398,615	\$398,615	\$22,264,839
2010	\$0	\$20,176,316	\$1,700,000	\$1,090,000	\$36,497,371	\$969,000	\$0	\$0	\$0	\$60,432,687	\$57,411,053	\$1,510,817	\$1,510,817	\$14,078,762	\$370,494	\$370,494	\$45,612,937
2011	\$0	\$5,250,000	\$0	\$563,158	\$39,595,690	\$89,500	\$125,000	\$0	\$0	\$45,623,348	\$43,342,181	\$1,140,584	\$1,140,584	\$14,538,685	\$382,597	\$382,597	\$30,319,469
2012	\$0	\$4,500,000	\$0	\$2,368,421	\$38,630,834	\$343,158	\$0	\$500,000	\$0	\$46,342,413	\$44,025,292	\$1,158,560	\$1,158,560	\$15,948,890	\$419,708	\$419,708	\$29,554,108
2013	\$0	\$3,000,000	\$0	\$2,105,263	\$12,875,433	\$3,879,973	\$0	\$0	\$0	\$21,860,669	\$20,767,636	\$546,517	\$546,517	\$16,500,986	\$434,236	\$434,236	\$ 4,491,211
2014	\$210,000	\$11,827,677	\$373,800	\$1,326,537	\$29,105,859	\$1,611,778	\$26,250	\$105,000	\$31,500	\$44,618,401	\$42,387,480	\$1,115,460	\$1,115,460	\$15,242,942	\$401,130	\$401,130	\$28,573,198
2015	\$44,100	\$9,398,339	\$435,498	\$1,565,210	\$32,908,089	\$1,447,616	\$31,763	\$127,050	\$6,615	\$45,964,279	\$43,666,065	\$1,149,107	\$1,149,107	\$15,262,053	\$401,633	\$401,633	\$29,898,960
2016	\$53,361	\$7,134,963	\$169,953	\$1,665,004	\$32,154,340	\$1,548,125	\$38,433	\$153,731	\$8,004	\$42,925,913	\$40,779,617	\$1,073,148	\$1,073,148	\$15,498,711	\$407,861	\$407,861	\$26,611,480
2017	\$64,567	\$7,530,806	\$205,643	\$1,896,391	\$30,591,657	\$1,854,436	\$20,253	\$186,014	\$9,685	\$42,359,452	\$40,241,479	\$1,058,986	\$1,058,986	\$15,690,716	\$412,914	\$412,914	\$25,842,908
2018	\$78,126	\$8,167,275	\$248,828	\$1,797,265	\$28,903,429	\$2,171,805	\$24,507	\$120,077	\$11,719	\$41,523,030	\$39,446,878	\$1,038,076	\$1,038,076	\$15,639,082	\$411,555	\$411,555	\$25,060,838
2019	\$94,532	\$9,252,403	\$301,081	\$1,732,585	\$32,269,309	\$1,813,090	\$29,653	\$145,293	\$14,180	\$45,652,125	\$43,369,519	\$1,141,303	\$1,141,303	\$15,466,701	\$407,018	\$407,018	\$29,371,388
2020	\$70,284	\$8,711,595	\$285,810	\$1,817,855	\$32,933,633	\$1,855,365	\$30,368	\$153,754	\$10,543	\$45,869,208	\$43,575,747	\$1,146,730	\$1,146,730	\$15,511,453	\$408,196	\$408,196	\$29,541,363
2021	\$75,783	\$8,567,379	\$254,376	\$1,870,911	\$32,938,997	\$1,940,992	\$30,075	\$159,362	\$11,367	\$45,849,243	\$43,556,781	\$1,146,231	\$1,146,231	\$15,561,333	\$409,509	\$409,509	\$29,468,893
2022	\$80,491	\$8,868,186	\$272,105	\$1,914,152	\$33,103,775	\$2,023,495	\$28,320	\$160,545	\$12,074	\$46,463,142	\$44,139,985	\$1,161,579	\$1,161,579	\$15,573,857	\$409,838	\$409,838	\$30,069,609
2023	\$83,835	\$9,149,036	\$286,062	\$1,917,881	\$33,631,320	\$2,058,997	\$30,014	\$155,197	\$12,575	\$47,324,917	\$44,958,671	\$1,183,123	\$1,183,123	\$15,550,485	\$409,223	\$409,223	\$30,955,986
2024	\$85,034	\$9,355,205	\$293,881	\$1,943,211	\$34,624,177	\$2,035,307	\$31,170	\$162,572	\$12,755	\$48,543,313	\$46,116,148	\$1,213,583	\$1,213,583	\$15,532,766	\$408,757	\$408,757	\$32,193,034
2025	\$83,040	\$9,376,794	\$292,369	\$1,987,442	\$35,118,700	\$2,081,973	\$31,489	\$166,200	\$12,456	\$49,150,463	\$46,692,940	\$1,228,762	\$1,228,762	\$15,545,978	\$409,105	\$409,105	\$32,786,275
2026	\$85,719	\$9,516,486	\$293,747	\$2,023,055	\$35,577,564	\$2,129,560	\$31,724	\$168,814	\$12,858	\$49,839,526	\$47,347,550	\$1,245,988	\$1,245,988	\$15,552,884	\$409,286	\$409,286	\$33,468,070
2027	\$87,805	\$9,715,798	\$302,015	\$2,055,006	\$36,131,662	\$2,169,160	\$32,070	\$170,799	\$13,171	\$50,677,486	\$48,143,612	\$1,266,937	\$1,266,937	\$15,551,194	\$409,242	\$409,242	\$34,307,808
2028	\$89,341	\$9,893,797	\$308,296	\$2,084,585	\$36,767,519	\$2,199,749	\$32,858	\$172,952	\$13,401	\$51,562,498	\$48,984,373	\$1,289,062	\$1,289,062	\$15,546,661	\$409,123	\$409,123	\$35,197,591

Source: Airport 2009-2013 Capital Improvement Programs
 Federal Aviation Administration (July 2008). Southern Regional, Atlanta Airports District Office, South Carolina Entire Program Detail Report by Fiscal Year (2003 through 2007)
 South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008)
 Talbert & Bright, Inc. (July 2008)





Table 8.2-3
Commercial Service Airports (FLO and HXD) 20-Year Estimated Capital Improvement Needs Assessment
South Carolina Airports System Plan

Fiscal Year	Land Acquisition (including aviation easements, fee simple, relocations)	Pavement (including rehabilitation, strengthening, runway/taxiway extensions, apron, road relocations, maintenance)	Electrical (including NAVAIDS, runway/taxiway lighting)	Hangars (including ARFF facilities)	Terminals (including parking lots and rental car areas)	Planning (including master plans, ALP updates, environmental documentation, permitting, mitigation, feasibility studies, DBE plans)	Fuel Systems	Fencing/Security	Obstruction Removal	Total Need	Projected Participation			Projected Funding			Estimated Unmet Need
											Federal	State	Airport Sponsor	Federal	State	Airport Sponsor	
2009	\$0	\$325,000	\$0	\$1,425,000	\$2,802,632	\$7,500	\$0	\$0	\$4,400,000	\$8,960,132	\$8,512,125	\$224,003	\$224,003	\$2,372,960	\$94,010	\$94,010	\$6,399,153
2010	\$0	\$660,000	\$0	\$0	\$2,577,632	\$8,000	\$0	\$0	\$2,175,000	\$5,420,632	\$5,149,600	\$135,516	\$135,516	\$1,866,140	\$112,812	\$112,812	\$3,328,868
2011	\$0	\$3,695,000	\$0	\$0	\$585,090	\$8,000	\$0	\$0	\$0	\$4,288,090	\$4,073,686	\$107,202	\$107,202	\$1,721,562	\$96,531	\$96,531	\$2,373,465
2012	\$0	\$0	\$3,001,750	\$0	\$0	\$538,500	\$0	\$0	\$0	\$3,540,250	\$3,363,238	\$88,506	\$88,506	\$2,004,746	\$74,456	\$74,456	\$1,386,591
2013	\$0	\$1,215,000	\$1,050,000	\$0	\$250,000	\$8,500	\$0	\$0	\$0	\$2,523,500	\$2,397,325	\$63,088	\$63,088	\$2,116,945	\$89,348	\$89,348	\$227,860
2014	\$0	\$1,237,950	\$850,868	\$299,250	\$1,305,224	\$119,805	\$0	\$0	\$1,380,750	\$5,193,847	\$4,934,154	\$129,846	\$129,846	\$2,016,470	\$93,431	\$93,431	\$2,990,514
2015	\$0	\$1,429,670	\$1,029,550	\$62,843	\$990,769	\$143,389	\$0	\$0	\$746,708	\$4,402,927	\$4,182,780	\$110,073	\$110,073	\$1,945,173	\$93,316	\$93,316	\$2,271,123
2016	\$0	\$1,591,300	\$1,245,755	\$76,039	\$657,527	\$171,821	\$0	\$0	\$446,766	\$4,189,209	\$3,979,748	\$104,730	\$104,730	\$1,960,979	\$89,416	\$89,416	\$2,049,397
2017	\$0	\$1,149,523	\$1,507,364	\$92,008	\$672,739	\$206,223	\$0	\$0	\$540,587	\$4,168,444	\$3,960,022	\$104,211	\$104,211	\$2,008,863	\$87,994	\$87,994	\$1,983,594
2018	\$0	\$1,390,923	\$1,193,543	\$111,329	\$814,014	\$136,445	\$0	\$0	\$654,110	\$4,300,364	\$4,085,346	\$107,509	\$107,509	\$2,009,686	\$90,701	\$90,701	\$2,109,277
2019	\$0	\$1,427,867	\$1,223,686	\$134,708	\$932,458	\$163,313	\$0	\$0	\$791,473	\$4,673,506	\$4,439,831	\$116,838	\$116,838	\$1,988,234	\$90,972	\$90,972	\$2,503,329
2020	\$0	\$1,467,749	\$1,301,978	\$100,155	\$854,177	\$172,450	\$0	\$0	\$667,725	\$4,564,234	\$4,336,023	\$114,106	\$114,106	\$1,982,587	\$90,480	\$90,480	\$2,400,688
2021	\$0	\$1,475,746	\$1,359,189	\$107,990	\$825,492	\$178,553	\$0	\$0	\$651,139	\$4,598,109	\$4,368,204	\$114,953	\$114,953	\$1,990,070	\$89,912	\$89,912	\$2,428,215
2022	\$0	\$1,451,480	\$1,383,010	\$114,700	\$860,765	\$179,967	\$0	\$0	\$694,057	\$4,683,978	\$4,449,779	\$117,099	\$117,099	\$1,995,888	\$90,012	\$90,012	\$2,508,067
2023	\$0	\$1,514,891	\$1,356,895	\$119,465	\$900,250	\$174,453	\$0	\$0	\$726,286	\$4,792,240	\$4,552,628	\$119,806	\$119,806	\$1,993,293	\$90,415	\$90,415	\$2,618,117
2024	\$0	\$1,540,924	\$1,391,199	\$121,174	\$918,360	\$182,435	\$0	\$0	\$741,443	\$4,895,534	\$4,650,758	\$122,388	\$122,388	\$1,990,014	\$90,358	\$90,358	\$2,724,804
2025	\$0	\$1,564,666	\$1,426,377	\$118,332	\$915,399	\$186,450	\$0	\$0	\$730,937	\$4,942,160	\$4,695,052	\$123,554	\$123,554	\$1,990,370	\$90,235	\$90,235	\$2,771,319
2026	\$0	\$1,585,018	\$1,452,501	\$122,149	\$928,256	\$189,390	\$0	\$0	\$744,211	\$5,021,525	\$4,770,448	\$125,538	\$125,538	\$1,991,927	\$90,187	\$90,187	\$2,849,225
2027	\$0	\$1,607,965	\$1,472,096	\$125,122	\$949,836	\$191,666	\$0	\$0	\$763,756	\$5,110,442	\$4,854,920	\$127,761	\$127,761	\$1,992,298	\$90,241	\$90,241	\$2,937,661
2028	\$0	\$1,640,827	\$1,490,804	\$127,311	\$968,541	\$194,123	\$0	\$0	\$778,393	\$5,199,999	\$4,939,999	\$130,000	\$130,000	\$1,991,581	\$90,287	\$90,287	\$3,027,844

Source: Airport 2009-2013 Capital Improvement Programs
 Federal Aviation Administration (July 2008). Southern Regional, Atlanta Airports District Office, South Carolina Entire Program Detail Report by Fiscal Year (2003 through 2007)
 South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008)
 Talbert & Bright, Inc. (July 2008)





Table 8.2-4
NPIAS General Aviation Airports 20-Year Estimated Capital Improvement Needs Assessment
South Carolina Airports System Plan

Fiscal Year	Land Acquisition (including aviation easements, fee simple, relocations)	Pavement (including rehabilitation, strengthening, runway/taxiway extensions, apron, road relocations, maintenance)	Electrical (including NAVAIDS, runway/taxiway lighting)	Hangars (including ARFF facilities)	Terminals (including parking lots and rental car areas)	Planning (including master plans, ALP updates, environmental documentation, permitting, mitigation, feasibility studies, DBE plans)	Fuel Systems	Fencing/Security	Obstruction Removal	Total Need	Projected Participation			Projected Funding			Estimated Unmet Need
											Federal	State	Airport Sponsor	Federal	State	Airport Sponsor	
2009	\$4,744,394	\$25,578,697	\$685,505	\$3,297,891	\$6,552,496	\$1,590,995	\$1,805,632	\$1,763,285	\$684,394	\$46,703,289	\$44,368,125	\$1,167,582	\$1,167,582	\$16,149,037	\$1,604,497	\$1,604,497	\$27,345,258
2010	\$4,063,393	\$24,787,775	\$1,360,000	\$2,536,300	\$2,480,000	\$1,750,500	\$50,000	\$1,455,800	\$352,500	\$38,836,268	\$36,894,455	\$970,907	\$970,907	\$16,309,587	\$1,625,274	\$1,625,274	\$19,276,133
2011	\$3,196,788	\$32,152,550	\$1,675,618	\$3,316,000	\$1,206,000	\$968,000	\$750,000	\$758,000	\$628,495	\$44,651,451	\$42,418,878	\$1,116,286	\$1,116,286	\$15,748,845	\$1,727,557	\$1,727,557	\$25,447,491
2012	\$4,615,788	\$34,016,795	\$2,702,700	\$3,160,000	\$615,000	\$524,934	\$0	\$525,000	\$1,299,000	\$47,459,217	\$45,086,256	\$1,186,480	\$1,186,480	\$17,144,251	\$1,602,956	\$1,602,956	\$27,109,054
2013	\$2,212,894	\$28,770,888	\$6,400,400	\$3,135,000	\$2,061,000	\$180,000	\$0	\$1,192,581	\$0	\$43,952,763	\$41,755,125	\$1,098,819	\$1,098,819	\$16,697,829	\$1,407,517	\$1,407,517	\$24,439,900
2014	\$3,954,984	\$30,514,408	\$2,693,087	\$3,243,490	\$2,712,044	\$1,053,030	\$547,183	\$1,195,880	\$622,522	\$46,536,627	\$44,209,796	\$1,163,416	\$1,163,416	\$16,409,910	\$1,593,560	\$1,593,560	\$26,939,597
2015	\$3,789,208	\$31,550,907	\$3,114,679	\$3,232,066	\$1,905,549	\$940,057	\$282,908	\$1,076,725	\$609,529	\$46,501,629	\$44,176,547	\$1,162,541	\$1,162,541	\$16,462,084	\$1,591,373	\$1,591,373	\$26,856,799
2016	\$3,731,629	\$32,971,165	\$3,483,162	\$3,378,177	\$1,784,915	\$769,865	\$331,819	\$997,119	\$663,504	\$48,111,354	\$45,705,787	\$1,202,784	\$1,202,784	\$16,492,584	\$1,584,593	\$1,584,593	\$28,449,585
2017	\$3,843,946	\$33,143,074	\$3,862,746	\$3,391,234	\$1,906,487	\$728,256	\$244,001	\$1,047,334	\$670,856	\$48,837,934	\$46,396,037	\$1,220,948	\$1,220,948	\$16,641,331	\$1,556,000	\$1,556,000	\$29,084,603
2018	\$3,681,859	\$32,959,593	\$4,106,355	\$3,439,793	\$2,177,699	\$770,954	\$295,241	\$1,157,024	\$538,946	\$49,127,465	\$46,671,091	\$1,228,187	\$1,228,187	\$16,540,748	\$1,546,609	\$1,546,609	\$29,493,500
2019	\$3,990,341	\$33,839,221	\$3,624,606	\$3,503,800	\$2,202,206	\$895,054	\$357,242	\$1,149,557	\$652,125	\$50,214,152	\$47,703,444	\$1,255,354	\$1,255,354	\$16,509,331	\$1,574,427	\$1,574,427	\$30,555,967
2020	\$3,997,766	\$34,537,432	\$3,820,225	\$3,558,465	\$2,095,140	\$861,879	\$317,355	\$1,139,829	\$658,342	\$50,986,432	\$48,437,110	\$1,274,661	\$1,274,661	\$16,529,216	\$1,570,600	\$1,570,600	\$31,316,016
2021	\$4,041,564	\$35,164,602	\$3,968,390	\$3,627,008	\$2,134,954	\$845,462	\$324,588	\$1,153,081	\$668,593	\$51,928,241	\$49,331,829	\$1,298,206	\$1,298,206	\$16,542,642	\$1,566,446	\$1,566,446	\$32,252,708
2022	\$4,106,650	\$35,625,224	\$4,070,288	\$3,679,263	\$2,208,462	\$861,337	\$323,070	\$1,185,833	\$669,661	\$52,729,787	\$50,093,297	\$1,318,245	\$1,318,245	\$16,552,654	\$1,562,816	\$1,562,816	\$33,051,501
2023	\$4,161,818	\$36,146,475	\$4,113,871	\$3,739,749	\$2,271,876	\$889,284	\$339,674	\$1,214,918	\$669,410	\$53,547,076	\$50,869,722	\$1,338,677	\$1,338,677	\$16,534,918	\$1,564,179	\$1,564,179	\$33,883,799
2024	\$4,262,609	\$36,815,720	\$4,115,450	\$3,802,740	\$2,291,654	\$914,133	\$349,005	\$1,227,076	\$696,807	\$54,475,194	\$51,751,435	\$1,361,880	\$1,361,880	\$16,533,752	\$1,567,694	\$1,567,694	\$34,806,055
2025	\$4,319,785	\$37,440,785	\$4,218,527	\$3,865,517	\$2,310,438	\$918,140	\$347,275	\$1,243,355	\$706,191	\$55,370,013	\$52,601,513	\$1,384,250	\$1,384,250	\$16,538,636	\$1,566,347	\$1,566,347	\$35,698,683
2026	\$4,387,409	\$38,050,489	\$4,302,170	\$3,929,998	\$2,355,651	\$929,955	\$353,559	\$1,265,096	\$716,239	\$56,290,565	\$53,476,037	\$1,407,264	\$1,407,264	\$16,540,520	\$1,565,496	\$1,565,496	\$36,619,052
2027	\$4,460,037	\$38,656,526	\$4,372,264	\$3,993,626	\$2,401,997	\$947,698	\$359,642	\$1,288,619	\$726,245	\$57,206,653	\$54,346,321	\$1,430,166	\$1,430,166	\$16,540,096	\$1,565,307	\$1,565,307	\$37,535,944
2028	\$4,534,248	\$39,293,099	\$4,435,679	\$4,059,642	\$2,442,639	\$965,834	\$367,323	\$1,310,203	\$738,127	\$58,146,795	\$55,239,456	\$1,453,670	\$1,453,670	\$16,537,585	\$1,565,805	\$1,565,805	\$38,477,602

Source: Airport 2009-2013 Capital Improvement Programs
 Federal Aviation Administration (July 2008). Southern Regional, Atlanta Airports District Office, South Carolina Entire Program Detail Report by Fiscal Year (2003 through 2007)
 South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008)
 Talbert & Bright, Inc. (July 2008)





**Table 8.2-5
Non-NPIAS General Aviation Airports 20-Year Estimated Capital Improvement Needs Assessment
South Carolina Airports System Plan**

Fiscal Year	Land Acquisition (including avigation easements, fee simple, relocations)	Pavement (including rehabilitation, strengthening, runway/taxiway extensions, apron, road relocations, maintenance)	Electrical (including NAVAIDS, runway/taxiway lighting)	Hangars (including ARFF facilities)	Terminals (including parking lots and rental car areas)	Planning (including master plans, ALP updates, environmental documentation, permitting, mitigation, feasibility studies, DBE plans)	Fuel Systems	Fencing/Security	Obstruction Removal	Total Need	Projected Participation			Projected Funding			Estimated Unmet Need
											Federal	State	Airport Sponsor	Federal	State	Airport Sponsor	
2009	\$662,060	\$171,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$833,060	\$0	\$499,836	\$333,224	\$0	\$19,465	\$12,977	\$800,618
2010	\$1,450,000	\$1,800,000	\$0	\$0	\$0	\$0	\$94,000	\$0	\$211,600	\$3,555,600	\$0	\$2,108,700	\$1,446,900	\$0	\$23,358	\$15,572	\$3,516,670
2011	\$1,050,000	\$745,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,795,100	\$0	\$1,077,060	\$718,040	\$0	\$18,280	\$12,186	\$1,764,634
2012	\$750,000	\$400,000	\$149,000	\$0	\$0	\$0	\$0	\$0	\$75,000	\$1,374,000	\$0	\$835,650	\$538,350	\$0	\$21,936	\$14,624	\$1,337,441
2013	\$500,000	\$0	\$587,400	\$0	\$21,000	\$0	\$0	\$0	\$580,000	\$1,688,400	\$0	\$1,097,940	\$590,460	\$0	\$16,608	\$11,072	\$1,660,721
2014	\$926,533	\$654,381	\$154,644	\$0	\$4,410	\$0	\$19,740	\$0	\$181,986	\$1,941,694	\$0	\$1,180,029	\$761,665	\$0	\$19,929	\$13,286	\$1,908,478
2015	\$982,072	\$755,891	\$187,119	\$0	\$5,336	\$0	\$23,885	\$0	\$220,203	\$2,174,507	\$0	\$1,322,870	\$851,637	\$0	\$20,022	\$13,348	\$2,141,137
2016	\$883,807	\$536,628	\$226,414	\$0	\$6,457	\$0	\$9,161	\$0	\$222,010	\$1,884,477	\$0	\$1,157,845	\$726,632	\$0	\$19,355	\$12,903	\$1,852,219
2017	\$848,906	\$492,849	\$273,961	\$0	\$7,813	\$0	\$11,085	\$0	\$268,632	\$1,903,246	\$0	\$1,174,810	\$728,436	\$0	\$19,570	\$13,047	\$1,870,630
2018	\$869,677	\$512,347	\$300,203	\$0	\$9,453	\$0	\$13,413	\$0	\$309,294	\$2,014,388	\$0	\$1,246,034	\$768,354	\$0	\$19,097	\$12,731	\$1,982,560
2019	\$947,309	\$619,940	\$239,892	\$0	\$7,028	\$0	\$16,230	\$0	\$252,446	\$2,082,845	\$0	\$1,277,133	\$805,712	\$0	\$19,594	\$13,063	\$2,050,188
2020	\$951,672	\$612,708	\$257,794	\$0	\$7,578	\$0	\$15,493	\$0	\$267,243	\$2,112,487	\$0	\$1,297,525	\$814,962	\$0	\$19,528	\$13,018	\$2,079,941
2021	\$945,288	\$582,639	\$272,636	\$0	\$8,049	\$0	\$13,730	\$0	\$277,121	\$2,099,463	\$0	\$1,292,203	\$807,260	\$0	\$19,429	\$12,952	\$2,067,082
2022	\$958,199	\$592,302	\$282,342	\$0	\$8,384	\$0	\$14,690	\$0	\$288,695	\$2,144,610	\$0	\$1,320,418	\$824,192	\$0	\$19,443	\$12,962	\$2,112,205
2023	\$981,150	\$613,187	\$284,102	\$0	\$8,503	\$0	\$15,447	\$0	\$292,908	\$2,195,297	\$0	\$1,350,996	\$844,301	\$0	\$19,418	\$12,945	\$2,162,933
2024	\$1,004,560	\$634,363	\$280,721	\$0	\$8,304	\$0	\$15,874	\$0	\$289,467	\$2,233,288	\$0	\$1,373,038	\$860,250	\$0	\$19,482	\$12,988	\$2,200,817
2025	\$1,016,582	\$637,392	\$289,295	\$0	\$8,572	\$0	\$15,799	\$0	\$297,241	\$2,264,881	\$0	\$1,393,178	\$871,703	\$0	\$19,460	\$12,973	\$2,232,447
2026	\$1,030,214	\$642,575	\$295,910	\$0	\$8,781	\$0	\$15,863	\$0	\$303,541	\$2,296,883	\$0	\$1,413,265	\$883,618	\$0	\$19,447	\$12,964	\$2,264,472
2027	\$1,048,048	\$655,162	\$300,798	\$0	\$8,934	\$0	\$16,311	\$0	\$309,089	\$2,338,341	\$0	\$1,438,688	\$899,653	\$0	\$19,450	\$12,967	\$2,305,924
2028	\$1,066,916	\$668,362	\$304,673	\$0	\$9,050	\$0	\$16,652	\$0	\$313,371	\$2,379,025	\$0	\$1,463,525	\$915,500	\$0	\$19,451	\$12,968	\$2,346,606

Source: Airport 2009-2013 Capital Improvement Programs
South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008)
Talbert & Bright, Inc. (July 2008)





Table 8.4-2
SCDOA NAVAID
Funding
South Carolina Airports
System Plan

Fiscal Year	F&E
2007	\$115,000
2008	\$684,061
2009	\$363,000

Source: South Carolina Division of Aeronautics (July 2008) Projects and Grant Totals (2003 through 2008) Talbert & Bright, Inc. (July 2008)

In evaluating the current program structure, it is recommended that these three programs be continued and administered separately due to the very specific objective of each program. As a result of these differences, neither a maintenance project nor a communications, navigation, and surveillance project would be appropriately ranked utilizing the ACIP priority system. Therefore, each of these programs should have its own project budget along with its own ranking system. This structure also provides some additional measure of budgetary control for the SCDOA and SCAC. While no revisions to the maintenance or communications, navigation, and surveillance programs are required to properly manage those components of airport needs in order to be more responsive to the needs of the South Carolina airports system, the SCASP Technical Advisory Committee and SCAC have adopted several recommendations for revisions to the existing capital improvement program, as outlined below:

- ➔ Revise the Code of Laws to detail the duties of the SCAC
- ➔ Revise the Airport Classifications
- ➔ Create a new Priority System for ranking projects by system importance for purposes of state funding
- ➔ Modify the Grant Agreement procedures
- ➔ Fund commercial service airports; contingent upon securing the over-flight fee revenues for the state aviation fund
- ➔ Increase non-AIP project funding for capital improvement projects from 60 percent state/40 percent local to 80 percent state/20 percent local (if additional revenue secured)
- ➔ Increase Maintenance funding from 75 percent state/25 percent local to 90 percent state/10 percent local (if additional revenue secured)
- ➔ Add minimum design standards by airport classification to the SCASP
- ➔ Public use airports must have an ALP approved by the SCDOA in order to be eligible for state funding

- ➔ Add land-in-fee as an eligible item for state funding (except at privately owned/public use airports)
- ➔ Remove Hangar Refurbishment as an eligible item for state funding.

The SCDOA and SCAC will continue to respond to the system requirements for each of the programs as discussed below.

8.4.1 Capital Improvement Program

The FAA capital improvement program was funded from the \$0.5 million Appropriated Funds and other aviation-related tax revenue. FAA capital improvement program funding is currently budgeted by the SCAC from the state aviation fund tax revenue. Funds will be budgeted utilizing each airport's five-year ACIP. As of this system plan update, each airport's ACIP will now be submitted and continuously updated in the database of an online system by which airport sponsors may request financial assistance from all programs. With some revisions to the *South Carolina Code of Laws*, Title 55, the capital improvement program will be placed under the authority of the SCAC to approve allocations to system airports based upon:

1. A request submitted by an airport sponsor
2. An evaluation of each request by the SCDOA staff utilizing the ACIP priority system
3. A formal recommendation from the SCDOA

The following participation rates for state funding are recommended:

- ➔ **Federally Funded Projects (Airport Improvement Program [AIP])** – will continue to be funded at the rate of 95 percent federal AIP funds, 2.5 percent State Appropriated Fund and State Aviation Fund, and 2.5 percent local funds, or as determined by the FAA.
- ➔ **Non-AIP Projects (State/Local)** – The rate of participation should be revised upward from 60 percent state funds and 40 percent local funds to 80 percent state funds and 20 percent local funds, if additional funds become available.
- ➔ **Non-AIP Terminal Building** – These projects should continue to be funded at the current rate of 50 percent of the public use/non-revenue-producing areas, within a cap of \$0.5 million.

8.4.2 Maintenance Program

Funded from the State Aviation Fund, the maintenance program should be administered by the SCDOA with oversight from the SCAC. Airport maintenance projects need to be identified and properly described as, but not limited to, those recurring needs on system airports for pavement repairs, crack sealing, painting and striping, surface treatments, and obstruction removal in order to preserve the airport and maintain a safe operating environment. Typically, to make this program understandable for sponsors, if it is eligible for ACIP funding, it should also be eligible for maintenance program funding. Items such as grass cutting and snow removal should be viewed as operational





responsibilities and not eligible for maintenance funding assistance. Table 8.4.2-1 (page 64) projects the estimated state funding participation for maintenance.

8.4.3 Communications, Navigation, and Surveillance (CNS) Program

The communications, navigation, and surveillance (CNS) program, formerly known as support services, is the source of funding to enhance the system capacity through the installation and maintenance of electronic navigation systems, airport visual aids, weather reporting systems, and surveillance systems, such as Automatic Dependent Surveillance – Broadcast (ADS-B). Nationally, the FAA is moving toward satellite navigation and surveillance (through the use of ADS-B) and away from ground-based navigational aids and surveillance. Their modernization program will take a number of years and will not be available to many general aviation airports that will also require these systems to support corporate operations and hence, economic development. Therefore, South Carolina needs to be in a position to provide financial support to the general aviation airports to supplement the federal program. The CNS program should be funded from the State Aviation Fund (Table 8.4.2-1, page 64).

**Table 8.4.2-1
20-Year Estimated Maintenance
and Communications, Navigation,
and Surveillance Program Need
South Carolina Airports System Plan**

Fiscal Year	Program	
	Maintenance	Communications, Navigation, and Surveillance
2009	\$1,350,000	\$363,000
2010	\$1,485,000	\$399,300
2011	\$1,633,500	\$439,230
2012	\$1,796,850	\$483,153
2013	\$1,976,535	\$531,468
2014	\$2,174,189	\$584,615
2015	\$2,391,607	\$643,077
2016	\$2,630,768	\$707,384
2017	\$2,893,845	\$778,123
2018	\$3,183,229	\$855,935
2019	\$3,501,552	\$941,529
2020	\$3,851,708	\$1,035,681
2021	\$4,236,878	\$1,139,250
2022	\$4,660,566	\$1,253,174
2023	\$5,126,623	\$1,378,492
2024	\$5,639,285	\$1,516,341
2025	\$6,203,214	\$1,667,975
2026	\$6,823,535	\$1,834,773
2027	\$7,505,888	\$2,018,250
2028	\$8,256,477	\$2,220,075

Source: South Carolina Division of Aeronautics (July 2008)
Budget Totals (2004 through 2009)
Talbert & Bright, Inc. (July 2008)

8.4.4 Estimated SCDOA Funding Participation Need

Based on evaluation of the three programs – capital improvement; maintenance; and communications, navigation, and surveillance, Table 8.4.4-1 illustrates the total annual funding participation need by the SCDOA. This estimate does include participation in development projects at CAE, CHS, GSP, and MYR.

**Table 8.4.4-1
Estimated SCDOA Funding Participation Need Without Over-Flight Fee Revenues
South Carolina Airports System Plan**

Fiscal Year	Programs						Program Total	Estimated General Aviation Revenue Forecast	Deficit
	Capital Improvement			Maintenance	CNS	Total			
	Commercial Service	NPIAS	Non-NPIAS						
2009	\$1,179,240	\$1,167,582	\$499,836	\$2,846,658	\$1,350,000	\$363,000	\$4,559,658	\$2,988,681	\$1,570,977
2010	\$1,646,333	\$970,907	\$2,108,700	\$4,725,940	\$1,485,000	\$399,300	\$6,610,240	\$3,019,770	\$3,590,470
2011	\$1,247,786	\$1,116,286	\$1,077,060	\$3,441,132	\$1,633,500	\$439,230	\$5,513,862	\$3,050,859	\$2,463,003
2012	\$1,247,067	\$1,186,480	\$835,650	\$3,269,197	\$1,796,850	\$483,153	\$5,549,200	\$3,081,947	\$2,467,253
2013	\$609,604	\$1,098,819	\$1,097,940	\$2,806,363	\$1,976,535	\$531,468	\$5,314,366	\$3,113,041	\$2,201,325
2014	\$1,245,306	\$1,163,416	\$1,180,029	\$3,588,751	\$2,174,189	\$584,615	\$6,347,555	\$3,178,965	\$3,168,590
2015	\$1,259,180	\$1,162,541	\$1,322,870	\$3,744,590	\$2,391,607	\$643,077	\$6,779,274	\$3,244,890	\$3,534,384
2016	\$1,177,878	\$1,202,784	\$1,157,845	\$3,538,507	\$2,630,768	\$707,384	\$6,876,659	\$3,310,814	\$3,565,845
2017	\$1,163,197	\$1,220,948	\$1,174,810	\$3,558,956	\$2,893,845	\$778,123	\$7,230,924	\$3,376,738	\$3,854,186
2018	\$1,145,585	\$1,228,187	\$1,246,034	\$3,619,805	\$3,183,229	\$855,935	\$7,658,969	\$3,442,663	\$4,216,306
2019	\$1,258,141	\$1,255,354	\$1,277,133	\$3,790,628	\$3,501,552	\$941,529	\$8,233,709	\$3,510,984	\$4,722,725
2020	\$1,260,836	\$1,274,661	\$1,297,525	\$3,833,022	\$3,851,708	\$1,035,681	\$8,720,411	\$3,579,306	\$5,141,105
2021	\$1,261,184	\$1,298,206	\$1,292,203	\$3,851,593	\$4,236,878	\$1,139,250	\$9,227,721	\$3,647,627	\$5,580,094
2022	\$1,278,678	\$1,318,245	\$1,320,418	\$3,917,341	\$4,660,566	\$1,253,174	\$9,831,081	\$3,715,949	\$6,115,132
2023	\$1,302,929	\$1,338,677	\$1,350,996	\$3,992,602	\$5,126,623	\$1,378,492	\$10,497,717	\$3,784,270	\$6,713,447
2024	\$1,335,971	\$1,361,880	\$1,373,038	\$4,070,889	\$5,639,285	\$1,516,341	\$11,226,515	\$3,852,592	\$7,373,923
2025	\$1,352,316	\$1,384,250	\$1,393,178	\$4,129,744	\$6,203,214	\$1,667,975	\$12,000,933	\$3,920,914	\$8,080,019
2026	\$1,371,526	\$1,407,264	\$1,413,265	\$4,192,055	\$6,823,535	\$1,834,773	\$12,850,363	\$3,989,235	\$8,861,128
2027	\$1,394,698	\$1,430,166	\$1,438,688	\$4,263,552	\$7,505,888	\$2,018,250	\$13,787,690	\$4,057,557	\$9,730,133
2028	\$1,419,062	\$1,453,670	\$1,463,525	\$4,336,257	\$8,256,477	\$2,220,075	\$14,812,809	\$4,125,871	\$10,686,938

General Aviation Assumption: \$0.05 per gallon tax rate remains constant

Source: Federal Aviation Administration (July 2008). Southern Region, Atlanta Airports District Office, South Carolina Entire Program Detail Report by Fiscal Year (2002 through 2008)

South Carolina Division of Aeronautics (July 2008). Projects and Grant Totals (2004 through 2008)

South Carolina Division of Aeronautics (July 2008). Budget Totals (2004 through 2009)

Talbert & Bright, Inc. (July 2008, March 2009)

8.4.5 SCDOA Funding Deficit

The estimated funding deficit based on current participation rates for South Carolina was determined by subtracting the general aviation revenues from the funding need (Table 8.4.4-1). These numbers represent an estimate of needs based on historical amounts and forecast aviation activity levels. The actual general aviation revenues will vary from the forecast revenues as the various factors, which influence them, change over time. Also, the capital improvement, maintenance, and facilities and





equipment needs would vary from the forecast estimate as the SCDOA implements the priority system and assists the system airports in the setting of development projects.

This estimate/deficit does not take into account the revenues generated from over-flight fees collected from commercial airlines. It has been recommended by the SCASP Technical Advisory Committee and agreed to by the SCAC that the State of South Carolina should participate in the funding of capital improvement projects at the all commercial service airports in the state. Also, the revenues generated through the over-flight fees should be utilized to meet the state's share of that cost. If the over-flight fee revenues would be provided to the SCDOA and SCAC through the State Aviation Fund instead of being placed in the General Fund, between \$5.0 million and \$8.0 million per year would be available to leverage additional FAA and local funding for participation in capital improvement projects.



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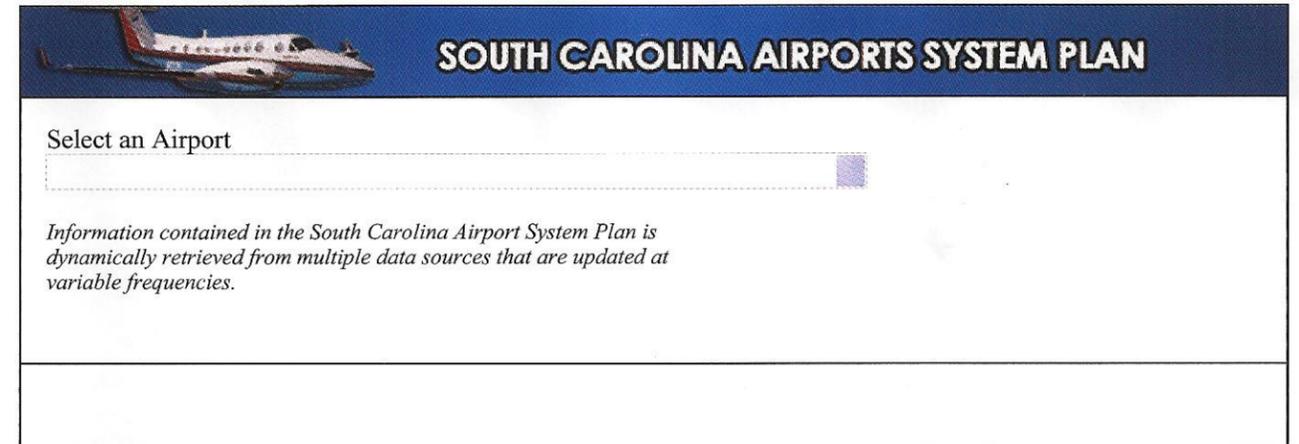
9.0 AIRPORTS SYSTEM PLAN WEB SITE

The SCASP will not be a formal document but an updateable web-access plan for each individual airport within the South Carolina airports system. Building on the SCCAIRS database, the SCASP will provide each individual airport with a multi-page data sheet that can be used as a marketing tool and general information for parties interested in locating at a particular airport and will be available on the SCDOA web site (<http://www.scaeronautics.com/>).

The data sets within the data sheet are updated either on a quarterly or annual basis and will include results of annual airport visits by the SCDOA staff and input from sponsors when changes occur. The purpose of the data sheets is to keep the SCASP as up to date as possible without having to prepare new documents on an annual basis.

In addition to the individual airport data sheets, copies of specific information will be available on the web site or by request of the SCDOA staff. This includes:

- Airport Classifications Statements and Minimum Design Standards
- Airport Priority System
- Managing the Future Airports System
- Special Use Airspace
- Instrument Flight Rules Operations





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10.0 AIRPORT SECURITY PLAN

As part of the SCDOA’s continuing charge to comply with new rules and regulations, effective July 1, 2009, all public use general aviation airports in the airports system will be required to have an airport security plan. In an effort to assist the airports with the preparation of this plan, the SCDOA is providing a draft airport security plan on the web site that can be downloaded and modified in accordance with the requirements of the individual airport. The security plans are to be considered an updateable document and should be kept current. The security plan is one of the sponsor responsibility requirements of the priority system scoring values for the state funded capital improvement program (page 19).

The airport security plan that follows has been developed in accordance with guidelines established by the Transportation Security Administration (TSA),¹⁸ FAA, and the SCDOA for the General Aviation Airport Security Program and will be available on the SCDOA web site (<http://www.scaeronautics.com/>).

DRAFT AIRPORT SECURITY PLAN

for

[REDACTED] AIRPORT (FAA ID)
[REDACTED], SOUTH CAROLINA

The release of this document and/or its contents shall be governed under the South Carolina Freedom of Information Act, Code of Laws, Title 30, Chapter 4.

Sponsor [REDACTED]
No. Street [REDACTED]
City/Town, Zip [REDACTED]

Copy # [REDACTED] of [REDACTED]

¹⁸Transportation Security Administration, “Security Guidelines for General Aviation Airports” (Information Publication A-001, dated May 2004), <http://www.aopa.org/whatsnew/newsitems/2004/04-2-087x_guidelines.pdf>.

