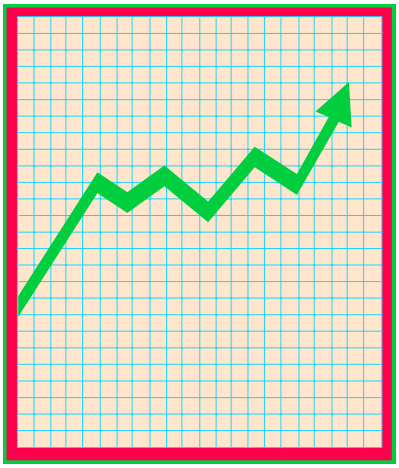
Forecasts for the Rock Hill/York County Airport (Bryant Field) are derived from analyses of aircraft and operational trends at the Airport, existing state and federal forecasts, general aviation industry trends, and professional judgment of the niche for Rock Hill/York County Airport (Bryant Field) within the aviation system. Forecasts are key elements in developing facility requirements for the Airport Master Plan. The forecasts are segmented into three periods.



- Phase I (2003-2007)
- Phase II (2008-2012)
- Phase III (2013-2022)

Forecasts evaluate historical aviation activity at the Airport and compare the results with past and current aviation planning studies. The following information sources were used to formulate the forecasts.

- FAA National Plan of Integrated Airports Study (NPIAS, 1998-2002)
- FAA Terminal Area Forecasts (FAA-TAF, 2001)
- SCDOA Airport System Plan (1992)
- Airport Master Plan Update (1994)

2.1 DESCRIPTION OF FORECAST ELEMENTS

This chapter is organized into four elements; each one is logically related to the next. When viewed together, the elements provide a comprehensive evaluation of future aviation demand at the airport. The four elements include:

2.1.1 Based Aircraft

Based aircraft are those aircraft that are considered to be *home located* at the Rock Hill/York County Airport (Bryant Field). For the purposes of this study, the categories of aircraft to be studied include the following:

- Single-engine piston
- Multi-engine piston

- Single-engine turbo
- Multi-engine turbo
- Jet
- Rotorcraft

2.1.2 Annual Aircraft Operations

Aviation operational activity is divided into seven categories for FAA reporting purposes.

- Air carrier itinerant
- Commuter itinerant
- Air taxi itinerant
- Military itinerant
- Military local
- General aviation itinerant
- General aviation local

Air carrier and commuter activity includes those aircraft that provide scheduled airline transportation between predetermined cities. The air taxi category can contain small commuter aircraft, such as 30-passenger Brasilia or 19-passenger Jetstream 31. The air taxi category can also contain small charter aircraft activity. Military activity refers to those aircraft activities generated by various military services. The remaining general aviation aircraft activity normally refers to small privately owned propeller or jet aircraft. This activity is subdivided into local and itinerant, with local identifying a 20-mile radius of activity and itinerant identifying travel to or from distant locations.

An aircraft operation is either an aircraft takeoff or landing. A single touch-and-go activity is counted as two operations. A single flight requires two operations.

2.1.3 Peak Period Activity

This forecast projects operations and flights for the peak hour of the average day in the peak month for each forecast phase. Peak forecasts are important both for examination of airport capacity and terminal facility utilization.

2.1.3.1 Peak Passengers

Peak passenger activity will examine the average types of aircraft that utilize Rock Hill/York County Airport (Bryant Field) and, from a selected aircraft load

factor, will project the number of passengers and pilots expected to utilize the terminal facility.

2.1.4 Critical Aircraft

A projection of critical aircraft expected to utilize Rock Hill/York County Airport (Bryant Field) was made in Section 1.3.3 (page 1-15). Attention will also be given to clearances required for Design Level C-II aircraft in specific airport facility areas.

2.2 AIRPORT HISTORY AND SETTING

2.2.1 Based Aircraft and Operations

Current FAA-based aircraft and operations for the Rock Hill/York County Airport (Bryant Field) are shown in Table 2.2.1-1.

Table 2.2.1-1
Airport Master Record
Rock Hill/York County Airport (Bryant Field)

	Based Aircraft				
Year	Single-Engine	Multi-Engine	Jet	Total	Total Operations
2000	64	12	–	76	43,350
2002	78	12	–	90	46,000
2003*	96	12	–	108	37,675

Note: * Submitted in 2002 to be published in 2003
Source: FAA Airport 5010 form

The FAA 5010 form for 2003 has not been published as of the date of this Master Plan Update. Given the year lag in data calculation versus publication, the future 5010 form 2003 data will be used as 2002 starting base in this study. It should be noted that based aircraft have significantly increased while aircraft operations have decreased. The decrease shown is a realistic representation of post-September 11, 2001, aircraft activity, general 2002 economic recession pressures, and overall evolution of reduced aviation operations per aircraft. A review of the previous *Indexed Fuel Sales* (refer to Table 1.6.2.10-2, page 1-30) indicates a beginning recovery from these lower operational levels for Rock Hill/York County Airport (Bryant Field).

Table 2.2.1-2 documents based aircraft and operations from the FAA 5010 forms and projections from the 1992 SCASP,[5] as well as projections from the 1994 Master Plan Update.[6] The forecasts for the 1994 Master Plan Update and the 1992 SCASP increase at annual rates of 1.5% and 2.08%, respectively. Aircraft operations per aircraft range from 952 to 1,176 per year. These projections of operations per based aircraft are in excess of most 2002 general aviation airports.

Table 2.2.1-2
Historical Based Aircraft/Operations and Forecasts
Rock Hill/York County Airport (Bryant Field)

	FAA 5010 Form			1994 Master Plan Update			1992 SCASP		
Year	Based AC	Operations	Ops/ AC	Based AC	Operations	Ops/ AC	Based AC	Operations	Ops/ AC
1980	53	52,950	999	53	52,950	999	53	52,950	999
1985	89	87,087	978	89	87,087	978	89	87,087	978
1990	67	72,800	1,087	67	72,800	1,087	67	72,800	1,087
1995	–	–	–	79	86,100	1,090	83	79,900	963
2000	76	43,350	570	81	95,000	1,173	83	83,000	1,000
2002	90	46,000	511	83	97,640	1,176	87	85,120	978
2003	108	37,675	349	85	98,960	1,164	88	86,180	979
2005	–	–	–	87	101,600	1,168	92	88,300	960
2010	–	–	–	94	106,000	1,128	103	98,055	952
2015	–	–	–	102	115,056	1,128	113	107,800	956

Note: Red numbers are interpolations
Source: FAA 5010 forms
1994 Airport Master Plan Update by W.K. Dickson & Company
1992 South Carolina Airport System Plan (SCASP)

2.2.2 Airport Regional Setting

Table 2.2.2-1 (page 2-5) depicts selected data for public airports within a 50-mile radius of the Rock Hill/York County Airport (Bryant Field). The information was derived from the FAA 5010 forms and thereby contains a lag factor. As shown on Table 2.2.2-1 (page 2-5), York, Cabarrus, Mecklenburg, and Union Counties are fast-growing population areas.

[5] W.K. Dickson & Company in association with L.W. Corley, P.E., Chao & Associates, and Aero-Dynamics Corp (1992). South Carolina Airport System Plan Stage 6 – Update. Prepared for South Carolina Aeronautics Commission.

[6] W.K. Dickson & Company, Inc. (April 1994). Rock Hill/York County Airport/Bryant Field (29J) Airport Master Plan Update. Prepared for Rock Hill/York County Airport Commission.

Table 2.2.2-1
Public Airports within a 50-Mile Radius
Rock Hill/York County Airport (Bryant Field)

Airport Name	County	County Population 2000	Population Change 1990/2000	Runway Length (Feet)	Service	2002 Based AC	2002 Based Jets	2002 AC Ops	2002 Ops/ AC
Rock Hill/York County (Bryant Field)	York (SC)	164,614	25.2%	5,500	S	90	0	46,000	511
Anson County	Anson (NC)	25,275	7.7%	3,463	S	18	0	10,000	556
Charlotte-Douglas International	Mecklenburg (NC)	695,494	36.0%	10,000	S	172	49	465,280	N.A.
Chester Municipal	Chester (SC)	34,068	5.9%	4,998	S'	23	0	20,000	870
Concord Regional	Cabarrus (NC)	131,063	32.5%	5,500	S	88	1	55,250	628
Fairfield County	Fairfield (SC)	23,454	5.2%	5,004	S	40	0	27,000	675
Gastonia Municipal	Gaston (NC)	190,365	8.7%	3,750	S'	87	3	50,040	575
Goose Creek	Union (NC)	123,677	46.9%	2,350	S	15	0	8050	537
Lake Norman Airpark	Iredell (NC)	122,660	32.0%	3,000	S	24	0	10,050	419
Lancaster County – McWhirter Field	Lancaster (SC)	61,351	12.5%	6,004	S	43	0	20,450	476
Lincolnton-Lincoln County Regional	Lincoln (NC)	63,780	26.8%	5,500	S	52	0	25,600	492
Monroe	Union (NC)	123,677	46.9%	5,500	S	82	0	55,000	671
Pageland	Chesterfield (SC)	42,768	10.9%	3,395	NS	5	0	2,250	450
Shelby (EHO) Municipal	Cleveland (NC)	96,287	13.7%	5,002	S	53	0	19,200	362
Spartanburg Downtown Memorial	Spartanburg (SC)	253,791	11.9%	5,202	S	114	7	68,300	599
Union County-Troy Shelton Field	Union (SC)	29,881	-1.5%	3,000	S	5	0	5,700	1,140
Wilgrove Air Park	Mecklenburg (NC)	695,494	36.0%	2,835	S'	53	0	14,600	275

Note: S' – Fuel Only
Source: FAA 5010 Forms

The increased basing of aircraft in this vicinity of Charlotte, North Carolina, is relevant to the planning for changes at the Rock Hill/York County Airport (Bryant Field). In essence, competition for based aircraft is strong within this region. Given a new ILS, 5,500′ runway, high level of FBO services, and relatively new hangar/terminal facilities, Rock Hill/York County Airport (Bryant Field) can, on these points, be very competitive in the future.

2.2.3 Aircraft Operations Surveys

Two limited aircraft operations surveys were conducted at Rock Hill/York County Airport (Bryant Field). Given the partial nature of the surveys and reduction in aircraft activity since September 11, 2001, the information collected is to give initial insights only.

2.2.3.1 Aircraft Operational Survey

During the month of September 2002, aircraft operations were counted on three days for a selected number of hours (refer to Table 2.2.3.1-1). The counts were on weekdays and indicated a range of approximately 4.2 to 8.4 aircraft operations per hour. This count level tends to validate the FAA 5010 form's lower annual operations of 37,675. During this survey time period, a heavy concentration of single-engine operational activity was documented.

Table 2.2.3.1-1
Aircraft Operational Survey
Rock Hill/York County Airport (Bryant Field)

Operational Time Period	Single-Engine	Turboprop Single-Engine	Twin-Engine	Jet	Touch-And-Go	Total Operations
9/5/02 (Thursday)	12	2	5	0	2	21
Weather – high ceiling, partly cloudy, light wind						
9:00 A.M. to 12:00 A.M.		5 Total Hours				
1:00 P.M. to 3:00 P.M.						
9/6/02 (Friday)	29	0	3	0	24	56
Weather – high ceiling, calm						
7:30 A.M. to 2:30 P.M.		7 Total Hours				
9/13/02 (Friday)	38	4	4	1	12	59
Weather – high stratus clouds morning, calm, partly cloudy late in day						
8:00 A.M. to 3:00 P.M.		7 Total Hours				

Source: Talbert & Bright, Inc. (September 2002)

2.2.3.2 Transient Aircraft Survey

At the Rock Hill/York County Airport (Bryant Field), the FBO requests that transient aircraft flights sign in at the reception desk. Table 2.2.3.2-1 documents estimated data from the time periods of May 1, 2002, to September 12, 2002. It is estimated that approximately 20% of transient aircraft owners do not sign in. This sign in omission is greater for high performance aircraft owners. Nevertheless, Table 2.2.3.2-1 does reveal an increased percentage of turboprop and jet aircraft operations.

Table 2.2.3.2-1
Transient Aircraft Survey
Rock Hill/York County Airport (Bryant Field)

	Piston		Turboprop			
Time Period	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Jet	Total
Month-Day						
9-2 to 9-12	6	1	1	11	0	19
8-15 to 8-27	5	2	1	8	5	21
8-1 to 8-14	13	1	1	6	5	26
7-15 to 7-28	9	3	1	2	3	18
7-1 to 7-14	19	1	2	5	3	30
6-15 to 6-27	7	0	0	5	0	12
6-2 to 6-14	16	0	2	5	2	25
5-15 to 5-31	22	3	5	3	10	43
5-1 to 5-4	7	1	3	4	3	18
Total	104	12	16	49	31	212
½ Month Average	11.6	1.3	1.8	5.4	3.4	23.5
½ Month %	49.4%	5.5%	7.6%	23%	14.5%	100%

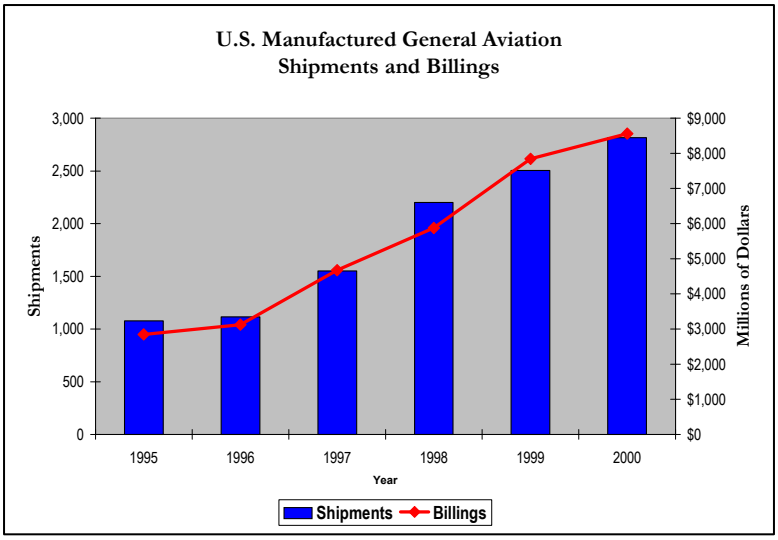
Source: SkyTech Sign In Sheets (May – September 2002)

2.3 GENERAL AVIATION INDUSTRY TRENDS

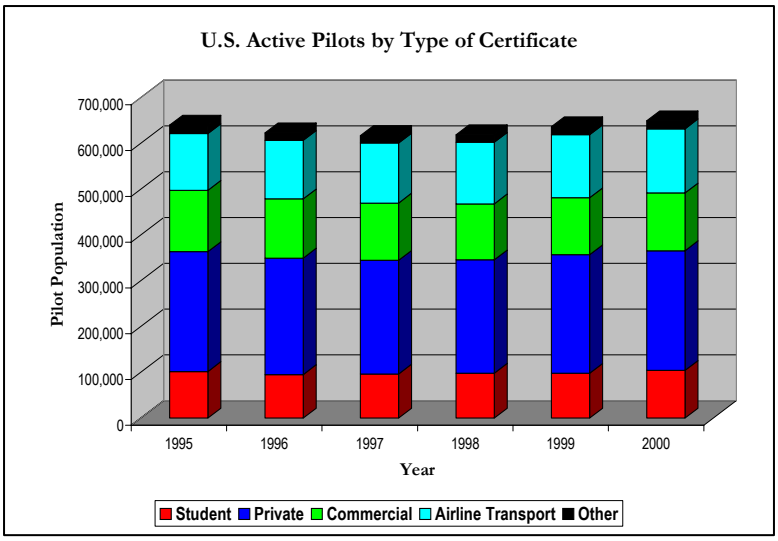
In the seven years since the *General Aviation Revitalization Act of 1994*, there has been a steady resurgence in the general aviation industry. This resurgence is marked by an increase in general aviation activity, a growing active general aviation fleet, and record shipments and billings of fixed-wing general aviation aircraft. The *FAA Aerospace Forecasts (2001-2012)*[7] includes some of the following statistics reflecting the growth of the general aviation industry. (Note: These statistics were created prior to September 11, 2001.)

[7] Federal Aviation Administration (March 2001). FAA Aerospace Forecasts Fiscal Years 2001-2012.

- In 2000, for the sixth consecutive year, shipments of piston and turbojet aircraft increased. Shipments of piston aircraft were up 9.4%, jet aircraft up 13.7%, and turboprop shipments up 31.7% from 1999.[8] This steady increase in general aviation aircraft deliveries were due to the strong U.S. economy, new aircraft product offerings, proliferation of fractional ownership companies, and growth in corporate use of general aviation aircraft.



- By the end of 2000, the total pilot population increased by 13,067 (2.1%) from the previous year. The strictly general aviation pilot groupings (student, private, and commercial) accounted for 75.8% (491,394 pilots) of all pilots. More promising is the increase in the number of student pilots, which is considered to be an essential indicator of the health of general aviation (an increase of 6,791, or 6.9%).

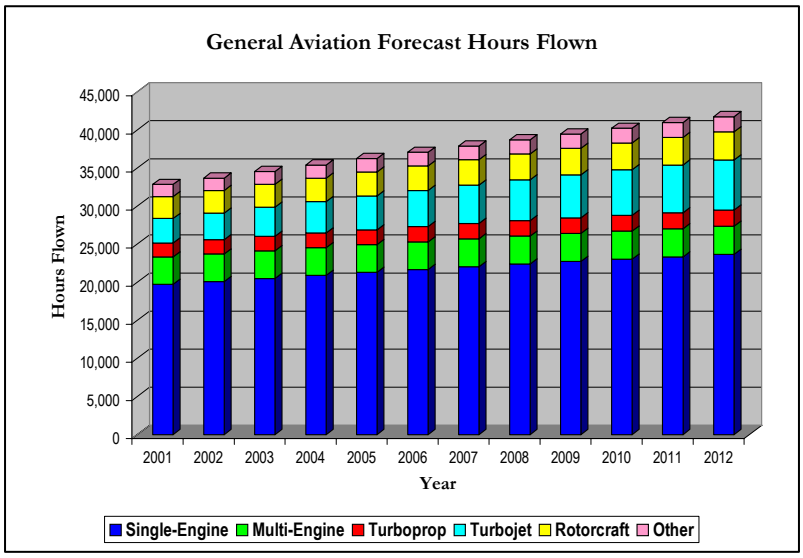


- In 2000, the number of hours flown by general aviation aircraft was up for the sixth consecutive year. Hours flown by general aviation aircraft increased 20.8% during this six-year period. From 1995 to 2000, the average annual rates of

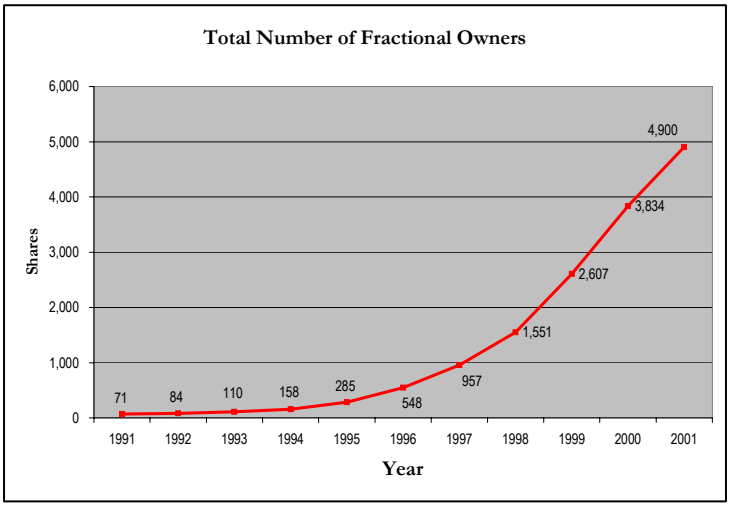
[8] General Aviation Manufacturers Association (2001). *2001 Statistical Databook*.

growth for hours flown were as follows: single-engine piston (1.5%), multi-engine piston (8.0%), turboprop (3.8%), and turbojet (17.0%).

- Based on the strong growth in general aviation aircraft shipments and hours flown, the FAA forecasts that the hours flown by the general aviation fleet will increase annually by 2.3% between 2001 and 2012. During this period, the annual growth rate for hours flown for each aircraft type is projected to increase as follows: single-engine piston (1.7%), multi-engine piston (0.3%), turboprop (1.2%), turbojet (8.4%), rotorcraft (2.4%), and other aircraft, such as gliders and ultra lights (1.9%).



- Fractional ownership has increased by 6,801%, from 71 shares in 1991 to 4,900 shares in 2001.[9]



- Business aircraft have access to over 5,300 airports in the United States, compared to 563 served by schedule air carriers. The ability to use smaller, less congested airports in proximity to a passenger's final destination is important in the use of general aviation aircraft.

[9] National Business Aircraft Association (2002). *NBAA Business Aviation Fact Book.*

- The number of companies operating business aircraft in the United States has increased approximately 50% since 1991 (6,584 companies operating 9,504 business aircraft in 1991 to 9,709 companies operating 14,837 business aircraft in 2001).

Trends, both industrywide and at Rock Hill/York County Airport (Bryant Field), will affect the final forecasts. FAA data indicated the following.

	Years	Growth Rate Estimate
Jet Fleet	2001-2012	4.3% P.A.
Turboprop Fleet	2001-2012	1.0% P.A.
Piston Fleet	2001-2012	0.5 % P.A.

Source: The National Air Transportation Association (2001). *Trends Affecting Aviation Service Providers*

Also shown in the FAA 2001 survey are the following average hours flown by type of aircraft (refer to Table 2.3-1).

Table 2.3-1
FAA 2001 General Aviation Trends
Rock Hill/York County Airport (Bryant Field)

Type of Aircraft	Aircraft Numbers (In Thousands)			Average Hours Flown (In Thousands)		
	1990	1993	1999	1990	1993	1999
PISTON						
Single-engine	154		150.9	142.1		128.1
Twin-Engine	21.1		20.9	184.7		169.7
TURBOPROP						
Single-engine		0.65	1.02		385.2	351.1
Twin-Engine	4.9		4.6	441.2		312.5
TURBOJET						
Twin-Engine	3.7		6.4	345.7		381.2
Other	0.4		0.7	293.3		414.4
ROTORCRAFT	6.9		7.4	320.1		368.5
TURBINE	3.7		4.8	403.6		448

Source: Federal Aviation Administration (March 2001). *General Aviation and Air Taxi Survey*.

While not an exact analogy for operations, the average hours flown has relevance to the operations per type of based aircraft. Indexing these hours to the single-engine piston hours, the following guide was developed.

	Piston		Turboprop			
	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Jet	Rotorcraft
Average Hours Flown	128.1	169.7	351.1	312.5	448	368.5
Index	1	1.32	2.74	2.44	3.5	2.88

Also evident from Table 2.3-1 (page 10) are the increase in turbine aircraft and decrease in piston aircraft.

Additional general aviation trends include the number of fractional owners of aircraft, which are expected to double in the next five years. This trend is expected to be important for reliever airports, given both aircraft congestion and security concerns at major hub airports. Also, new proposed navigation systems, e.g., SATNAV, are expected to be in place by 2011 and thereby increasing the functional capabilities of general aviation reliever airports.

2.4 AIRCRAFT FORECASTS

2.4.1 Based Aircraft Forecast

Table 2.4.1-1 (page 2-12) documents the previous forecasts of the 1992 SCASP and the 1994 Master Plan Update, as well as 2002 forecast of 52 based aircraft by NPIAS. Also shown are four projections generated by this Master Plan, i.e., Forecasts I, II, III, and IV. It is a judgment of this analysis that a strong increase in aircraft ownership will occur in the Rock Hill/Charlotte area during the 20-year planning time frame. The portion of this growth to be absorbed by the Rock Hill/York County Airport (Bryant Field) will be in large part dependant on hangar construction and relative personal property tax balances between South Carolina and North Carolina.

Table 2.4.1-1
Forecast of Based Aircraft
Rock Hill/York County Airport (Bryant Field)

Year	1994 Plan	1992 SCASP	Forecast I	II	III	IV	NPIAS
1995	79	83					
2000	81	83					
2002	83	87	108	108	108	108	52
2005	87	92					
2007			120	132	132	132	
2010	94	103					
2012			133	133	161	161	
2015	102	113					
2022			163	163	198	215	

Note: Red numbers are extrapolations and/or interpolations

Assumptions:

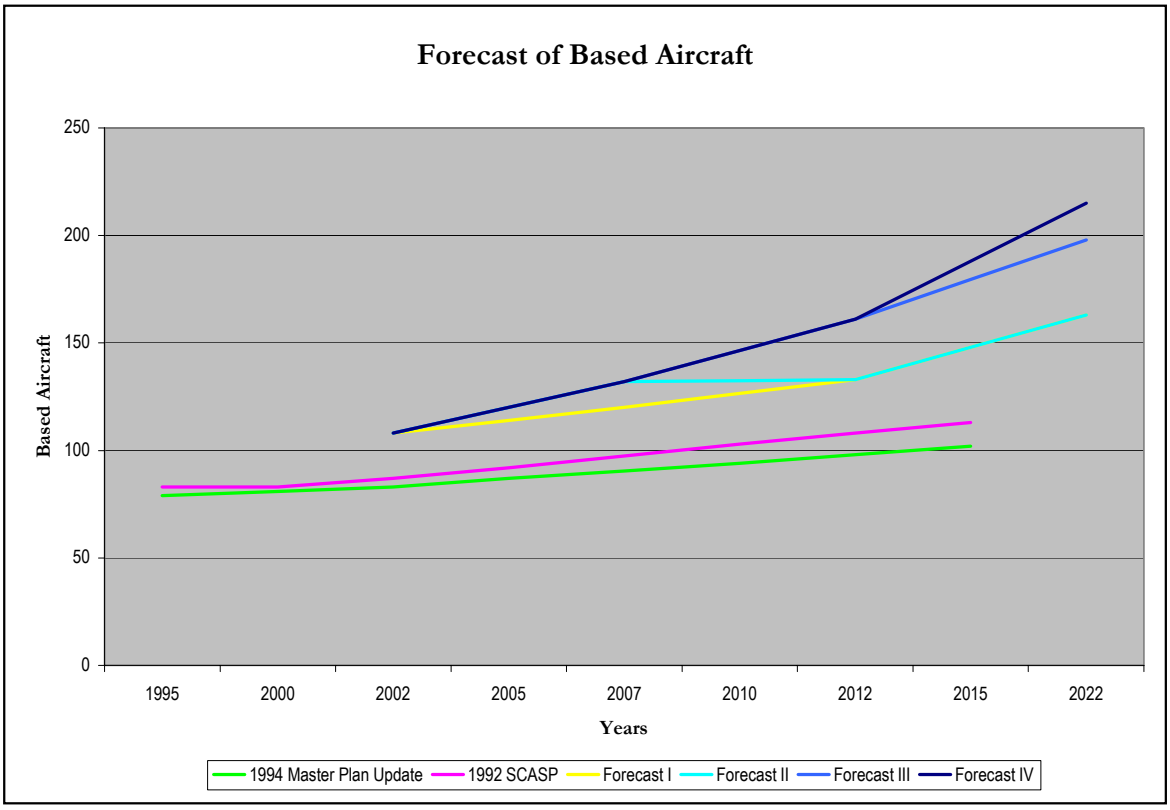
Forecast I (Slow Growth) – Phase I hangar construction delayed

Forecast II (Moderate Growth) – Phase I hangar construction on schedule/N.C. aircraft diversion moderate

Forecast III (High Growth) – Phase I hangar construction on schedule/N.C. aircraft diversion strong

Forecast IV (Very High Growth) – Phase I hangar construction on schedule/N.C. aircraft diversion strong/general aviation rebound/extra Charlotte Area growth

Sources: 1994 Airport Master Plan Update by W.K. Dickson & Company, Inc.
1992 South Carolina Airport System Plan (SCASP)
National Plan of Integrated Airport Systems (NPIAS)
Talbert & Bright, Inc. (October 2002) Forecasts I, II, III, and IV



The justification for each of the projections is as follows:

- **Forecast I (Slow Growth)** – assumes a delay in Phase I hangar construction, i.e., in both T-hangars and in gang-storage hangars. The annual rate of growth from 2003 to 2022 is approximately 2.08% per year. This rate of growth is consistent with previous forecast rates but starting from a higher based aircraft level (108).

- **Forecast II (Moderate Growth)** – assumes that Phase I hangar construction proceeds at a reasonable rate; however, personal property tax rates remain in favor of North Carolina aircraft ownership and registration.

- **Forecast III (High Growth)** – assumes that Phase I hangar construction proceeds at a reasonable rate with balanced personal property tax rates between North Carolina and South Carolina. On May 14, 2003, South Carolina's Governor signed into law Act No. 30, which amended the Code of Laws by adding Section 12-43-360 top allow the County by ordinance to reduce the assessment ratio to general aviation aircraft subject to property tax. On July 21, 2003, York County Council enacted Ordinance 2103, effective January 1, 2004 (refer to Appendix C).

- **Forecast IV (Very High Growth)** – assumes that Phase I hangar construction proceeds at a reasonable rate, balanced personal property tax rates, and diversions from Charlotte area airports given airport capacity build-out at selected airports other than the Rock Hill/York County Airport (Bryant Field).

For planning purposes in this Master Plan Update, Forecast II (Moderate Growth) and III (High Growth) have been selected. Forecast II (Moderate growth will be used for Phase I and Forecast III (High Growth) will be used for Phases II and III.

2.4.2 Based Aircraft Mix

Table 2.4.2-1 depicts the forecast mix of based aircraft at the Rock Hill/York County Airport (Bryant Field) using the Forecast III (High Growth) based aircraft scenario. As shown by the forecast, the combined percentage of turboprop and jet-based aircraft is projected to increase from 8.4% (2002) to 25.2% (2022). This expectation assumes reservation and promotion of hangar/apron space designed to accommodate Design Level II aircraft. It is expected that the excellent runway/taxiway provisions and ILS approach to Runway 2 will contribute to increased usage of the Airport by Design Level II aircraft. The Rock Hill/York County Airport (Bryant Field) will still support strong numbers of single-engine piston aircraft but at lower percentages.

Table 2.4.2-1
Mix of Based Aircraft Forecast
Rock Hill/York County Airport (Bryant Field)

	Based Aircraft						
	Piston		Turboprop				
Year	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Jet	Rotor-Craft	Total
2003	90	9	6	3	0	0	108
Percentage	83.3%	8.3%	5.6%	2.8%	0%	0%	100%
2008	104	10	11	5	2	0	132
Percentage	78.8%	7.6%	8.3%	3.8%	1.5%	0%	100%
2013	119	11	16	10	4	1	161
Percentage	73.9%	6.8%	10%	6.2%	2.5%	0.6%	100%
2022	133	13	24	18	8	2	198
Percentage	67.2%	6.6%	12.1%	9.1%	4%	1%	100%

Source: Talbert & Bright, Inc. (October 2002)

2.4.3 Operations Forecast

Table 2.4.3-1 documents the projected aircraft operations at the Rock Hill/York County Airport (Bryant Field). The total projected aircraft operations per based aircraft are as follows.

Table 2.4.3-1
Projected Aircraft Operations
Rock Hill/York County Airport (Bryant Field)

Year	Total Aircraft Operations	Aircraft Operations Per Based Aircraft
2003	37,675	349
2008	50,400	382
2013	65,500	407
2022	88,000	444

Source: Talbert & Bright, Inc. (October 2002)

Table 2.4.3-2 indicates an expected rise in general aviation itinerant activity, which implies an increasing corporate usage of the Airport through time. Air taxi activity is projected to increase significantly but at a small percentage of overall activity. General aviation local numbers assume a strong pilot training program, which is currently growing in strength.

Table 2.4.3-2
Aircraft Operations Forecast
Rock Hill/York County Airport (Bryant Field)

		General Aviation			
Year	Air Taxi	Local	Itinerant	Military	Total
2003	325	25,700	11,500	150	37,675
Percentage	0.86%	68.22%	30.52%	0.4%	100%
2008	500	32,000	17,700	200	50,400
Percentage	0.99%	63.49%	35.12%	0.4%	100%
2013	900	38,150	26,200	250	65,500
Percentage	1.37%	58.24%	40%	0.38%	100%
2022	1,700	46,400	39,600	300	88,000
Percentage	1.93%	52.73%	45%	0.34%	100%

Source: Talbert & Bright, Inc. (October 2002)

2.4.4 Operational Forecast Mix

Table 2.4.4-1 forecasts the expected mix of aircraft operations. As shown on the Table 2.4.4-1, the operations per type of aircraft will vary. For example, turboprop and jet aircraft utilization is anticipated to be at higher rates than piston aircraft. The development of the rates of aircraft usage per type of aircraft is, in large part, derived from recent research described in Section 2.3 – General Aviation Industry Trends (page 2-7). An index of hours flown by type of aircraft was derived from the aviation trend research and utilized as a guide to the operations per type of aircraft shown in Table 2.4.4-1.

Table 2.4.4-1
Forecast of Aircraft Operations by Aircraft Mix
Rock Hill/York County Airport (Bryant Field)

		Aircraft Operations						
		Piston		Turboprop				
Year		Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Jet	Rotor-Craft	Total
2003	Based AC	90	9	6	3	0.8	0.5	108+
	Ops/AC	290	380	800	700	1,000	840	348
	Operations	26,100	3,420	4,800	2,100	800	420	37,640
	Percentage	69.34%	9.09%	12.75%	5.58%	2.12%	1.12%	100%
2008	Based AC	104	10	11	5	2	0.5	132+
	Ops/AC	300	400	820	730	1050	860	382
	Operations	31,200	4,000	9,020	3,650	2,100	430	50,400
	Percentage	61.9%	7.94%	17.9%	7.24%	4.17%	0.85%	100%
2013	Based AC	119	11	16	10	4	1	161
	Ops/AC	300	400	820	730	1050	780	407
	Operations	35,700	4,400	13,120	7,300	4,200	780	65,500
	Percentage	54.5%	6.72%	20.03%	11.15%	6.41%	1.19%	100%
2022	Based AC	133	13	24	18	8	2	198
	Ops/AC	300	400	820	730	1050	840	444
	Operations	39,900	5,200	19,680	13,140	8,400	1,680	88,000
	Percentage	45.34%	5.91%	22.36%	14.93%	9.55%	1.91%	100%

Source: Talbert & Bright, Inc. (October 2002)

2.4.5 Peak Month Operations Forecast

Table 2.4.5-1 (page 2-17) documents the peak month and average daily operations forecast. Peak month operations are determined to be 11% of total yearly operations.

The 11% criteria were derived from local tower counts of general aviation.[10] To derive the number of peak month flights, peak month operations were divided by two. A flight consists of two operations, i.e., a takeoff and a landing. Dividing peak month flights by 31 days derives an estimate of peak month average day flights. The total average daily peak month flights, average daily peak month itinerant flights, and peak hour itinerant flights are shown in Table 2.4.5-2 (page 2-18). The standard estimate of itinerant peak hour flights is 20% of average day peak month total flights.

Table 2.4.5-1
Peak Day Operations/Flights Forecast
Rock Hill/York County Airport (Bryant Field)

		Operations/Flights				
			General Aviation			
Year	Category	Air Taxi	Local	Itinerant	Military	Total
2003	Annual Operations	325	25,700	11,500	150	37,675
	Peak Month Operations (11%)	35.7	2,827	1,265	16.5	4,144.20
	Peak Month Flights	17.9	1,413.50	632.5	8.3	2,072.20
	Peak Month Average Day Flights	0.58	45.6	20.4	0.27	66.85
2008	Annual Operations	500	32,000	17,700	200	50,400
	Peak Month Operations (11%)	55	3,520	1,947	22	5,544
	Peak Month Flights	27.5	1,760	973.5	11	2,772
	Peak Month Average Day Flights	0.89	56.8	31.4	0.36	89.45
2013	Annual Operations	900	38,150	26,200	250	65,500
	Peak Month Operations (11%)	99	4,196.50	2,882	27.5	7,205
	Peak Month Flights	49.5	2,098.25	1,441	13.75	3,602.50
	Peak Month Average Day Flights	1.6	67.69	46.48	0.44	116.21
2022	Annual Operations	1,700	46,400	39,600	300	88,000
	Peak Month Operations (11%)	187	5,104	4,356	33	9,680
	Peak Month Flights	93.5	2,552	2,178	16.5	4,840
	Peak Month Average Day Flights	3.02	82.32	70.26	0.53	156.13

Source: Talbert & Bright, Inc. (October 2002)

[10] Concord Regional Airport (1999-2001). Tower counts.

Table 2.4.5-2
Peak Period Forecasts
Rock Hill/York County Airport (Bryant Field)

Year	Total Average Day Peak Month Flights	Itinerant Average Day Peak Month Flights	Peak Hour Itinerant Flights
2003	66.85	21.25	4.25
2008	89.45	32.65	6.53
2013	116.21	48.52	9.7
2022	156.13	73.81	14.76

Source: Talbert & Bright, Inc. (October 2002)

2.4.6 Peak Hour Passenger Forecasts

For purposes of determining terminal size needs, peak hour itinerant passengers are estimated. Table 2.4.6-1 determines total peak hour itinerant passengers and utilizes an estimate of passengers by type of aircraft to arrive at peak hour passenger forecasts.

Table 2.4.6-1
Peak Hour Passenger Forecasts
Rock Hill/York County Airport (Bryant Field)

		Aircraft						
		Piston		Turboprop				
Year	Data	Single-Engine	Multi-Engine	Single-Engine	Multi-Engine	Jet	Rotor-Craft	Total
	Passengers Per Aircraft Type	2.8	2.8	4.2	11.2	8.4	2.1	
	% of Aircraft Operations	69.34	9.09	12.75	5.58	2.12	1.12	100
2003	Peak Hour Itinerant Flights	2.95	0.39	0.54	0.24	0.09	0.05	4.26
	Peak Hour Passengers	8.26	1.09	2.27	2.69	0.76	0.11	15.18
	% of Aircraft Operations	61.9	7.94	17.9	7.24	4.17	0.85	100
2008	Peak Hour Itinerant Flights	4.04	0.52	1.17	0.47	0.27	0.06	6.53
	Peak Hour Passengers	11.31	1.46	4.91	5.26	2.27	0.13	25.34
	% of Aircraft Operations	54.5	6.72	20.03	11.15	6.41	1.19	100
2013	Peak Hour Itinerant Flights	5.29	0.65	1.94	1.12	0.62	0.12	9.74
	Peak Hour Passengers	14.81	1.82	8.15	12.54	5.21	0.25	42.78
	% of Aircraft Operations	45.34	5.91	22.36	14.93	9.55	1.91	100
2022	Peak Hour Itinerant Flights	6.69	0.87	3.3	2.2	1.41	0.28	14.75
	Peak Hour Passengers	18.73	2.44	13.86	24.6	11.84	0.59	72.06

Source: Talbert & Bright, Inc. (October 2002)

2.5 FORECAST SUMMARY

Table 2.5-1 (page 2-19) summarizes the forecasts for the Rock Hill/York County Airport (Bryant Field).

Table 2.5-1
Forecast Summary
Rock Hill/York County Airport (Bryant Field)

Forecast Category		Year 2003	2008	2013	2022
Aircraft Operations:					
Itinerant					
Air Carrier		0	0	0	0
Air Taxi		325	500	900	1,700
General Aviation		11,500	17,700	26,200	39,600
Military		150	200	250	300
	Subtotal	11,975	18,400	27,350	41,600
Local					
Civil		25,600	31,900	38,050	46,300
Military		100	100	100	100
	Subtotal	25,700	32,000	38,150	46,400
Total		**37,675**	**50,400**	**65,500**	**88,000**
Aircraft Mix:					
Single-Engine Piston		90	104	119	133
Multi-Engine Piston		9	10	11	13
Single-Engine Turboprop		6	11	16	24
Multi-Engine Turboprop		3	5	10	18
Jet		0	2	4	8
Rotorcraft		0	0	1	2
Total		**108**	**132**	**161**	**198**
Peak Period:					
Peak Month Total Operations		4,144	5,544	7,205	9,680
Peak Month Itinerant Operations		1,317	2,024	3,009	4,576
Peak Month Itinerant Flights		659	1,012	1,505	2,288
Peak Hour Itinerant Flights		4.25	6.53	9.7	14.76
Peak Hour Passengers		15.18	25.34	42.78	72.06

Source: Talbert & Bright, Inc. (October 2002)