

10 Aviation Element

10.1 Introduction

10.1.1 Purpose of Chapter

This chapter provides the aviation element of the RFATS 2035 Long Range Transportation Plan. It describes the existing conditions and trends at the national level, at the statewide/regional level and within the RFATS Study Area. It then describes the current and future issues at the same set of levels. Stakeholder input is summarized, followed by a summary of key points and a list of recommendations.

10.1.2 Relevance to the Transportation System and the Plan

Both commercial and general aviation make distinct contributions to the transportation system, as well as having particular impacts on other aspects of the transportation system and the wider environment.



Commercial aviation allows citizens to travel to other states and internationally for business, personal business or leisure. Commercial freight operations, including the major parcel companies, provide a means of delivering commercial goods across the nation. Aviation is the fastest mode of transportation for traveling substantial distances.

General aviation supports business travel needs as well as providing for recreational flying. There are also important niche operations, such as medical helicopters.

Larger airports and their associated aviation-related businesses are significant generators of travel demand, not only for air travelers but also for commercial vehicles as well as the commuting needs of airport employees. They can act as intermodal nodes not only between air and surface transportation, but between modes of surface transportation for which the airport is simply a convenient meeting-place.

The RFATS Study Area is fortunate to have its own corporate/business airport, as well as access to a major international airport. The aviation challenge for the future is to maximize the benefits from having these two complementary facilities.

10.2 Existing Conditions and Trends

10.2.1 National Conditions and Trends

At the national level, air traffic is expected to more than double by 2025. The Federal Aviation Administration's (FAA's) recent report *Capacity Needs in the National Air Space System 2007–2025* identified airports that would require facility improvements or airspace management improvements in order to meet the forecast demand. The report noted that Charlotte Douglas International Airport would require additional air service capacity by the year 2015, and recommended that further regional air service studies be performed in the Charlotte metropolitan area.

10.2.2 Statewide and Regional Conditions and Trends

10.2.2.1 Charlotte Douglas International Airport

Charlotte Douglas International Airport, although beyond the State boundary, has a major impact on aviation within the RFATS Study Area:

- As the main commercial airport serving the study area, offering direct links to nationwide and international destinations.
- Its presence as a major commercial airport also restricts the market for airports within the RFATS Study Area to develop commercial operations.
- Its regional airspace includes the area surrounding Rock Hill / York County Airport, which means that operations at Rock Hill / York County Airport and other facilities may be affected by air traffic and regulatory decisions at Charlotte.

Charlotte is one of the metropolitan areas that the FAA study (described above) has identified as needing additional air service capacity by the year 2015. The FAA study recommended that further regional air service studies be performed in the Charlotte metropolitan area.

10.2.2.2 South Carolina Airports System Plan

The 2008 South Carolina Airports System Plan forecasts service demand at both the Charlotte Douglas International Airport and the Rock Hill/York County Airport to double by 2025, in line with the national trend.

The plan classifies South Carolina airports as:

- *Commercial Service Airports* (category SCI) – these are airports with scheduled services and at least 10,000 passenger boardings annually.
- *Corporate/Business Airports* (category SCII) – these are urban/multi jurisdictional airports with a runway of at least 5,000 feet and full services. They are seen as

- having a high economic impact, and 30 to 50 percent of their activity is in corporate aviation.
- *Business/Recreation Airports* (category SCIII) – these are rural airports with a runway of at least 3,600 feet and have a moderate economic impact.
 - *Recreational/Local Service Airports* (category SCIV) – these are low-activity airports with a runway of less than 3,600 feet and limited facilities. They have a low economic impact and may have constraints to expansion.

Rock Hill/York County Airport, in the municipality of Rock Hill, is one of the state's fourteen Corporate/Business (category SCII) airports. The State plan includes the following goals for this airport:

- Protect its airspace from being taken by Charlotte Douglas International Airport in connection with the latter's proposed third main runway.
- Protect the surrounding area from incompatible development (essentially residential development).
- Retain the ability to compete with Charlotte Douglas as part of the Charlotte market.
- A longer-term vision to extend the runway by 1,000 feet to accommodate larger aircraft and allow existing users to operate year-round; and to construct hangars.

10.2.3 Conditions and Trends in the RFATS Study Area

10.2.3.1 Summary of Aviation Facilities serving the RFATS Study Area

The RFATS Study Area includes one publicly-owned airport and one privately-owned heliport. The airport is Rock Hill/York County Airport (Bryant Field), and the heliport is at the Piedmont Medical Center in Rock Hill. In addition, the very small privately-owned Bethel-Lake Wylie airport is just beyond the western edge of the RFATS Study Area.

Rock Hill/York County Airport provides citizens and businesses in the RFATS Study Area with convenient access to general aviation facilities for both commercial and leisure purposes.

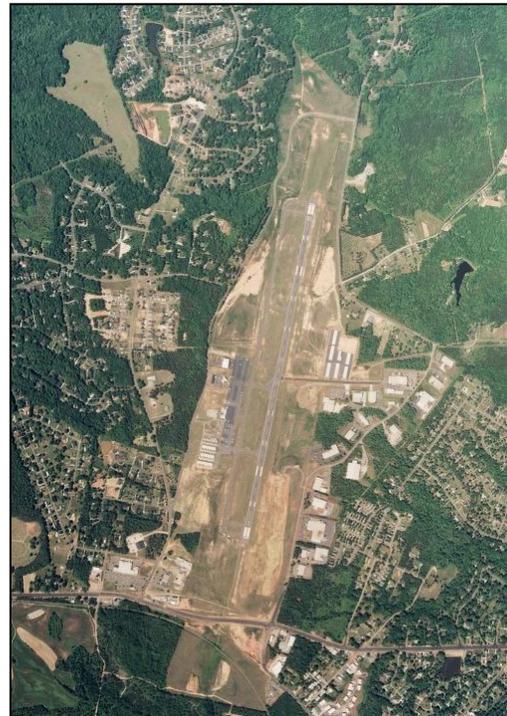
As described above, Charlotte Douglas International Airport, although outside the RFATS Study Area, gives citizens and businesses in the RFATS Study Area the benefit of a wide range of scheduled air services. It also has a major impact on both airspace management and the commercial prospects of airports within the RFATS Study Area. The FAA has designated Rock Hill/York County Airport as a reliever for Charlotte-Douglas International Airport.

10.2.3.2 Rock Hill/York County Airport

Rock Hill/York County Airport (Bryant Field) is a publicly-owned, general aviation SCII classified airport located approximately four miles north of the center of Rock Hill. Figure 10.1 highlights the airport's location.

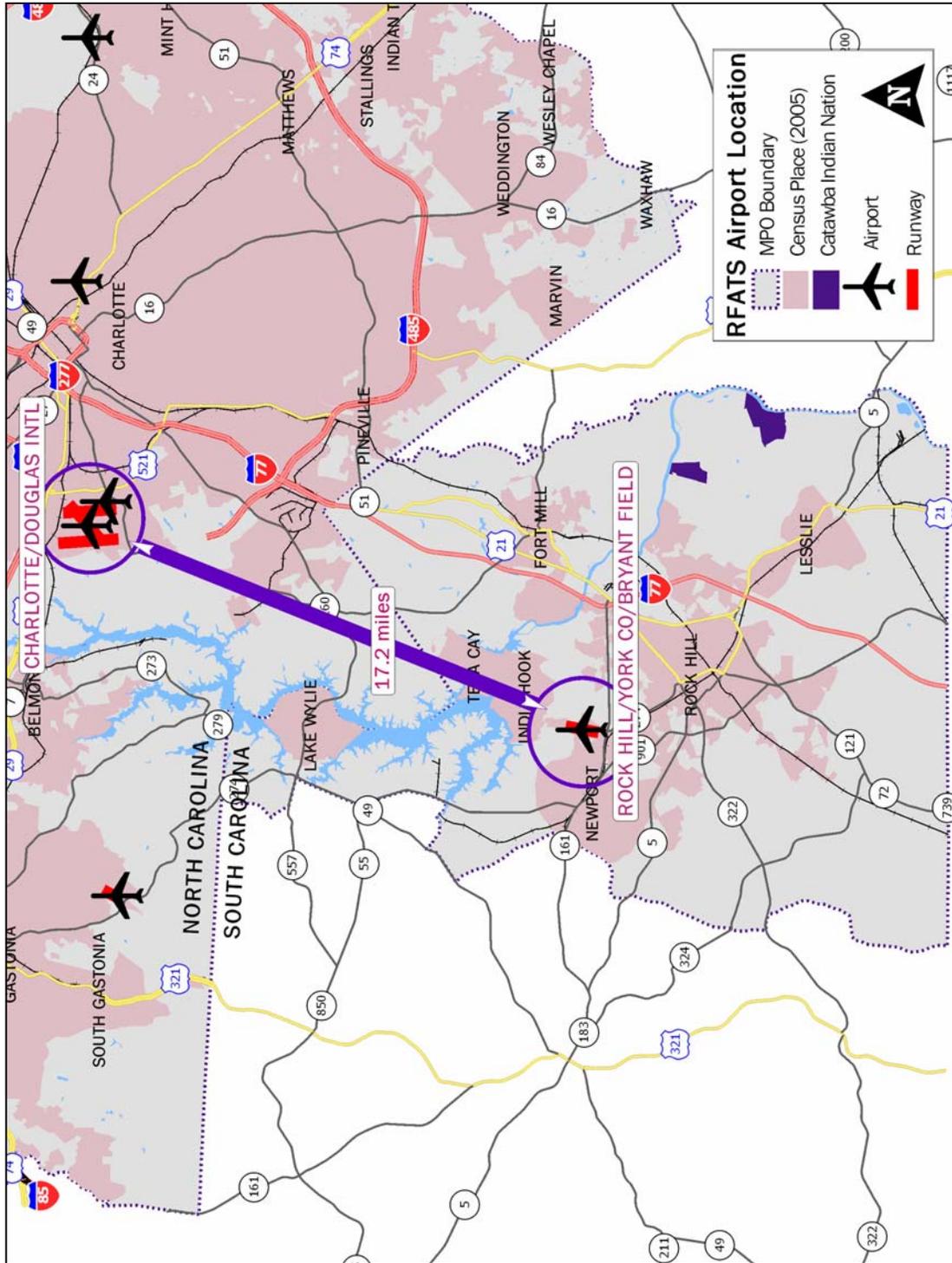
The airport, which is owned and operated by the City of Rock Hill, has a 5,500-foot runway. According to FAA statistics, it had over 100 based aircraft and 42,500 aircraft operations for the year ending August 10, 2007. The operations include general aviation local aircraft operations, general aviation itinerant operations, and a small number of military operations. Ground transportation includes rental car agencies and taxi service. It has a total employment of 87, with a payroll exceeding \$2 million, and a total economic output of almost \$7 million annually.

The airport's history began in 1956, when an Airport Commission was established to develop an airport to serve the Rock Hill area. Over the following decades, airport facilities expanded under the direction of a series of Master Plans, and with the help of a series of federal grants. During the 1970s and early 1980s in particular, the airport experienced rapid growth in operations and the number of aircraft based there. Subsequent Master Plans in 1983 and 1994 included further development of the airport infrastructure. The current Master Plan was completed in 2003 and is described in Section 10.3.2 below.



In 1992, the City of Rock Hill and York County entered into an agreement on the airport's management. Under this agreement, the City remains the official sponsor of the airport, but the City and County contribute equally in local funding. An airport commission makes recommendations to the City on the airport's policies and operations, as well as advising the City and County on planning matters and capital improvements. Day-to-day airport business is performed by SkyTech, which leases the facilities on the west side of the airport from the City.

Figure 10.1 Airport Location Map



10.3 Current and Future Issues

10.3.1 Regional Air Space

The air space around Rock Hill/York County Airport is expected to remain unchanged in the foreseeable future. There have recently been discussions about potential changes relating to Charlotte Douglas International Airport, but those changes have now been dropped.

10.3.2 Current Master Plan for Rock Hill/York County Airport

The current Airport Master Plan for Rock Hill/York County Airport was completed in 2003. It highlights the airport's role in the area's transportation system and presents plans for future improvements. Its goal is to provide guidelines for future airport development, which will satisfy aviation demand in a cost-effective, feasible manner, while resolving aviation, environmental, and socioeconomic issues raised by the community.

The plan calls for continued airport improvements in three phases to 2022 as follows:

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

The Master Plan recognizes that the airport's future growth depends on a range of factors: the extent of development of the airport facilities themselves; the effect of fiscal law and policy on the relative cost of aircraft ownership between North Carolina and South Carolina, and the potential for diversion of general aviation from other airports in the Charlotte area. Table 10.1 presents the Master Plan's forecast of operations at the airport.

Based on these forecast operations, the Master Plan called for a range of improvements. These included a 6,500 foot runway, over 12,000 square feet of terminal area, and 216 terminal area parking spaces by 2022, as well as a range of incremental improvements to apron area, the number of aircraft tie-downs, and navigation aids. Table 10.2 shows these in more detail. Figure 10.2 shows the main physical improvements.

10.3.3 Rock Hill/York County Airport Overlay District

The City of Rock Hill and York County have adopted an Airport Overlay District, aimed at protecting the interests of the airport and surrounding areas. This includes land use standards and restrictions for areas around the airport.

Table 10.1 Forecast Operations at Rock Hill / York County Airport

Forecast Category		Year			
		2003	2008	2013	2022
Forecast Summary					
Rock Hill/York County Airport (Bryant Field)					
Aircraft Operations:					
<u>Itinerant</u>					
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
<u>Local</u>					
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)					

Source: Airport Master Plan, 2003

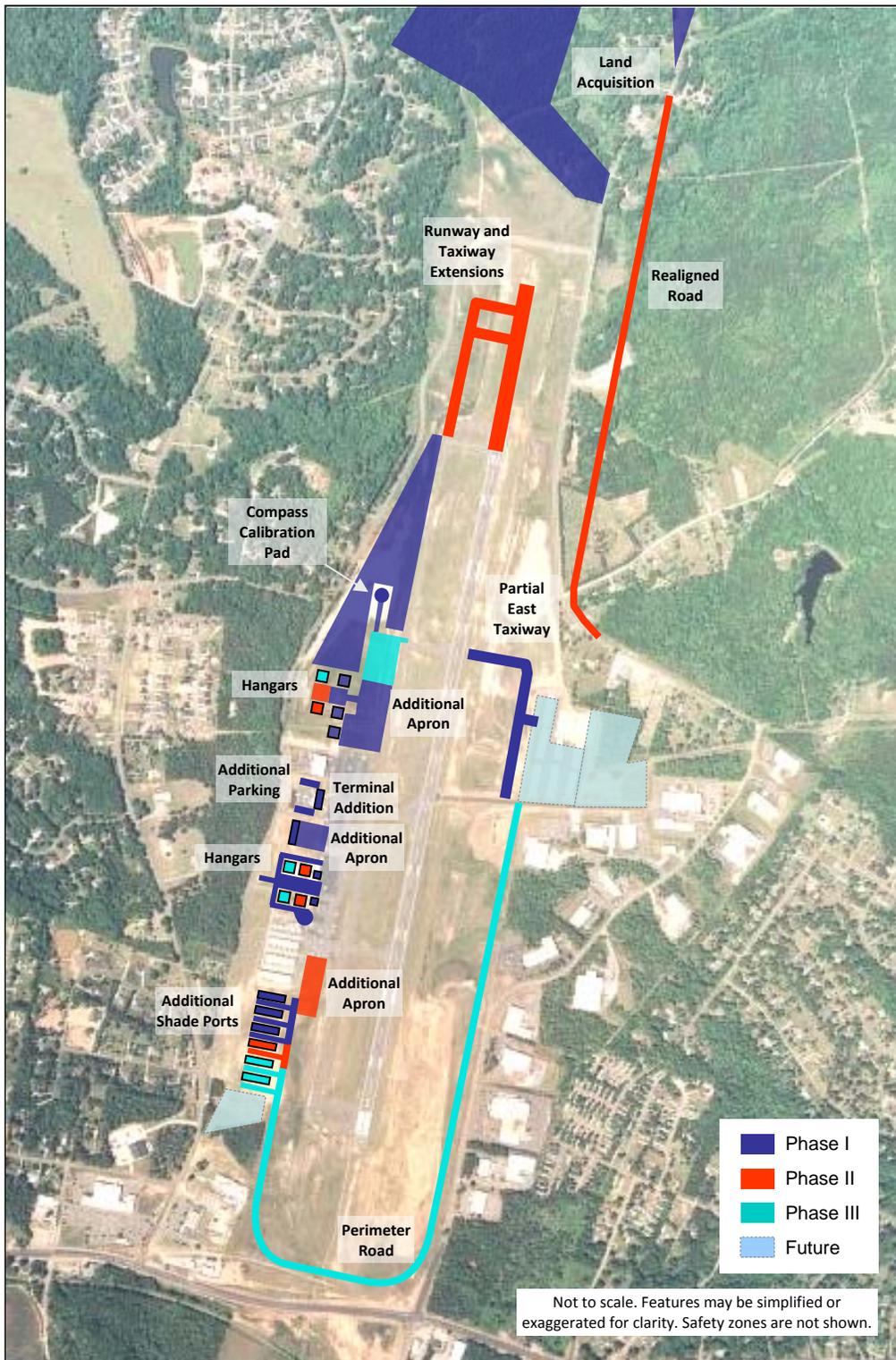
Table 10.2 Facility Requirements at Rock Hill / York County Airport

Summary of Facility Requirements Rock Hill/York County Airport (Bryant Field)						
Facility	Existing	Forecast Scenarios				
		Phase I II & III	Phase II		Phase III	
		II	III	II	III	
Runway						
Length	5,500'	5,500'	6,500'	6,500'	6,500'	6,500'
Width	100'	100'	100'	100'	100'	100'
Strength (pounds)	60,000-D	60,000-D	60,000-D	60,000-D	60,000-D	60,000-D
Taxiways						
Width	35'	35'	35'	35'	35'	35'
Parallel	west	west	west	west	west	west
Partial Parallel	-	-	-	east	east	east
Strength (pounds)	60,000-D	60,000-D	60,000-D	60,000-D	60,000-D	60,000-D
Apron (square yards)						
Based Aircraft Tie-Down Area	8,439.6	16,879.2	16,879.2	20,774.4	21,423.6	31,810.8
Itinerant Aircraft Tie-Down Area	8,769.2	12,755.2	19,132.8	19,132.8	23,916.0	29,496.4
Total	17,208.8	29,634.4	36,012.0	39,907.2	45,339.6	61,307.2
Aircraft Location						
Based Aircraft – Hangared	95	106	107	129	130	158
Based Aircraft – Tied Down	13	26	26	32	33	40
Itinerant Daily Tie-Downs	16	25	30	36	46	55
Total	124	157	163	197	209	263
Terminal Areas (square feet)						
Lobby	1,352	1,352	1,352		1,352	
Rental Car	-	100	150		150	
Coffee Shop	-	520	880		1,440	
Kitchen	237	237	237		237	
Manager's Office	135	135	135		135	
Conference Rooms	854	854	1,541		1,541	
Tenants	1,507	1,507	1,507		1,507	
Pilot Lounge	265	500	850		1,400	
Gift Shop	325	325	325		325	
Security Office	-	150	150		150	
Restrooms	496	500	840		840	
Other	2,195	2,499	3,297		3,752	
Total	7,366	8,679	11,264		12,829	
Terminal Automobile Parking Spaces						
Regular	61	61	106		183	
Rental Car	3	6	9		15	
Coffee Shop	0	6	10		18	
Total	64	73	125		216	
Navigation Aids						
Beacon	x	x	x		x	
Wind Cone and Segmented Circle	x	x	x		x	
ASOS	x	x	x		x	
VORTAC	x	x	x		x	
NDB (Runway 2)	x	x	x		x	
Localizer (Runway 2)	x	x	x		x	
MALSR (Runway 2)	x	x	x		x	
PAPI-2 (Runway 2/20)	x	x	x		x	
Glide Slope (Runway 2)	x	x	x		x	
Middle Marker (Runway 20)			x		x	
Localizer (Runway 20)			x		x	
MALSR (Runway 20)			x		x	
Glide Slope (Runway 20)			x		x	

Source: Talbert & Bright Inc. (July 2003)

Source: Airport Master Plan, 2003

Figure 10.2 Future Airport Developments



Source: Airport Master Plan, 2003. Only main physical improvements are shown.

10.4 Stakeholder Input

The Public involvement process generated no major issues relating to aviation. (It should be noted that the proposed Airport Overlay District has generated stakeholder input, but those issues are being addressed as part of the land-use planning process.)

10.5 Summary and Recommendations

10.5.1 Summary of Key Points

- The RFATS Study Area benefits from proximity to Charlotte Douglas International Airport (a major commercial hub for passengers and freight) as well as its own general aviation airport (Rock Hill/York County Airport).
- Rock Hill/York County Airport is expected to increase its level of operations, and has a Master Plan in place to guide the development of its facilities.
- Air traffic levels and other developments at Charlotte Douglas International Airport may have an impact on the long-term future of Rock Hill/York County Airport. The latter could develop a market niche as a relief valve for congestion at Charlotte Douglas. The RFATS Study Area stakeholders will need to remain involved in the planning of any expansion at Charlotte Douglas.
- The City and County have adopted an Airport Overlay District, to protect the interests of both Rock Hill/York County Airport and residents of surrounding areas.

10.5.2 Recommendations

- RFATS should study whether, and how, the forecast congestion at Charlotte Douglas International Airport will affect the likely demands on Rock Hill/York County Airport and its potential for growth.
- RFATS stakeholders should remain involved in the planning of any expansion at Charlotte Douglas.