



4. AVIATION

This section summarizes the aviation system in South Carolina. As is typical throughout the U.S., South Carolina’s airport system is owned by both public and private entities located throughout the state. The system consists primarily of commercial and general aviation facilities, with two reliever airports, and supports all types of aviation needs. The six Primary Commercial Service airports include Hilton Head, Charleston AFB/International, Myrtle Beach International, Florence Regional, Columbia Metro, and Greenville Spartanburg International, which provide passenger air transportation vital to the economy of South Carolina.

4.1 STATE AVIATION AGENCY RESPONSIBILITIES

Aviation in South Carolina is overseen by the South Carolina Aeronautics Division whose mission is *“Fostering air commerce by overseeing the safety and development of the state’s public use airports and providing safe, reliable air transportation for state government and business prospects”*.

4.2 AIRPORTS

South Carolina has 53 airports included in the National Plan of Integrated Airport Systems (NPIAS). The NPIAS identifies 3,380 existing and proposed airports that have been deemed “significant to national air transportation” and thus are eligible to receive Federal grants under the Federal Aviation Administration (FAA) Airport Improvement Program (AIP). Of the 53 airports, 6 are Primary Commercial Service airports, 45 are general aviation facilities, and 2 are reliever airports, defined by the FAA as high-capacity general aviation airports in major metropolitan areas that provide pilots with attractive alternatives to using congested hub airports.

4.3 PASSENGER SERVICE

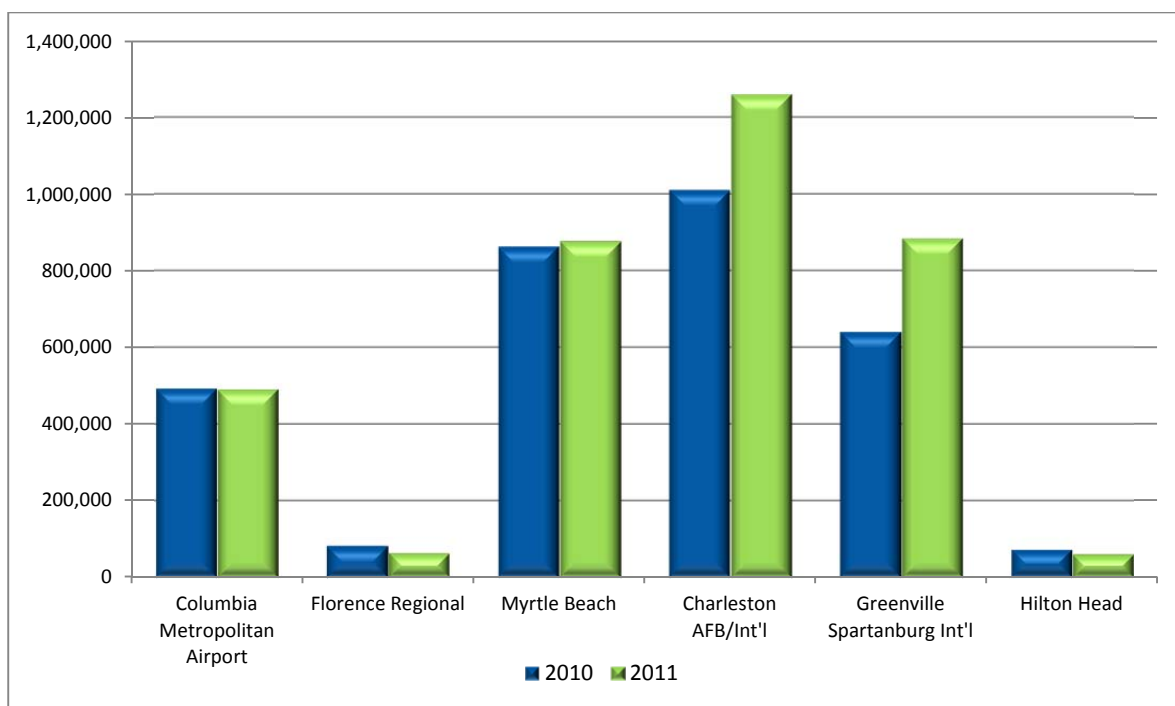
It is important to note that many forecasts and expectations have changed significantly in the last few years due to the economic downturn and the aviation industry was not immune. Some notable caveats that need to be mentioned include the following:

- Southwest Airlines started service in Charleston and Greenville-Spartanburg in early 2011. The addition of this service has had noticeable impacts at these airports.
- According to South Carolina Division of Aeronautics, there is a general trend of reductions in the use of smaller regional jets seating 50 passengers or less in favor of larger jets that carry more passengers per flight and thus do not require as many flights per day to serve the need – where it is economically feasible, of course. There is some concern that if this trend continues service may be lost in some locations where smaller regional jet service is cut and it isn’t deemed economically feasible to provide larger jet service.

- It is important to note that the economy took a significant turn in 2008 and there has been an impact on the aviation industry since then. The data taken from the SC Airports System Plan of 2008⁷ was based on assumptions developed prior to the economic downturn and therefore may be more optimistic than current trends and general consensus.

In 2011 the commercial service airports accommodated almost 3.65 million enplanements, up from almost 3.2 million in 2010, though as shown in the chart below there were some significant changes in enplanements from 2010 to 2011 at four of the six airports. **Figure 4-1** details the 2010 and 2011 enplanements at the six primary commercial airports in South Carolina. Airport locations throughout the state are shown in **Figure 4-2**.

Figure 4-1: Enplanements at the Six Commercial Airports in South Carolina



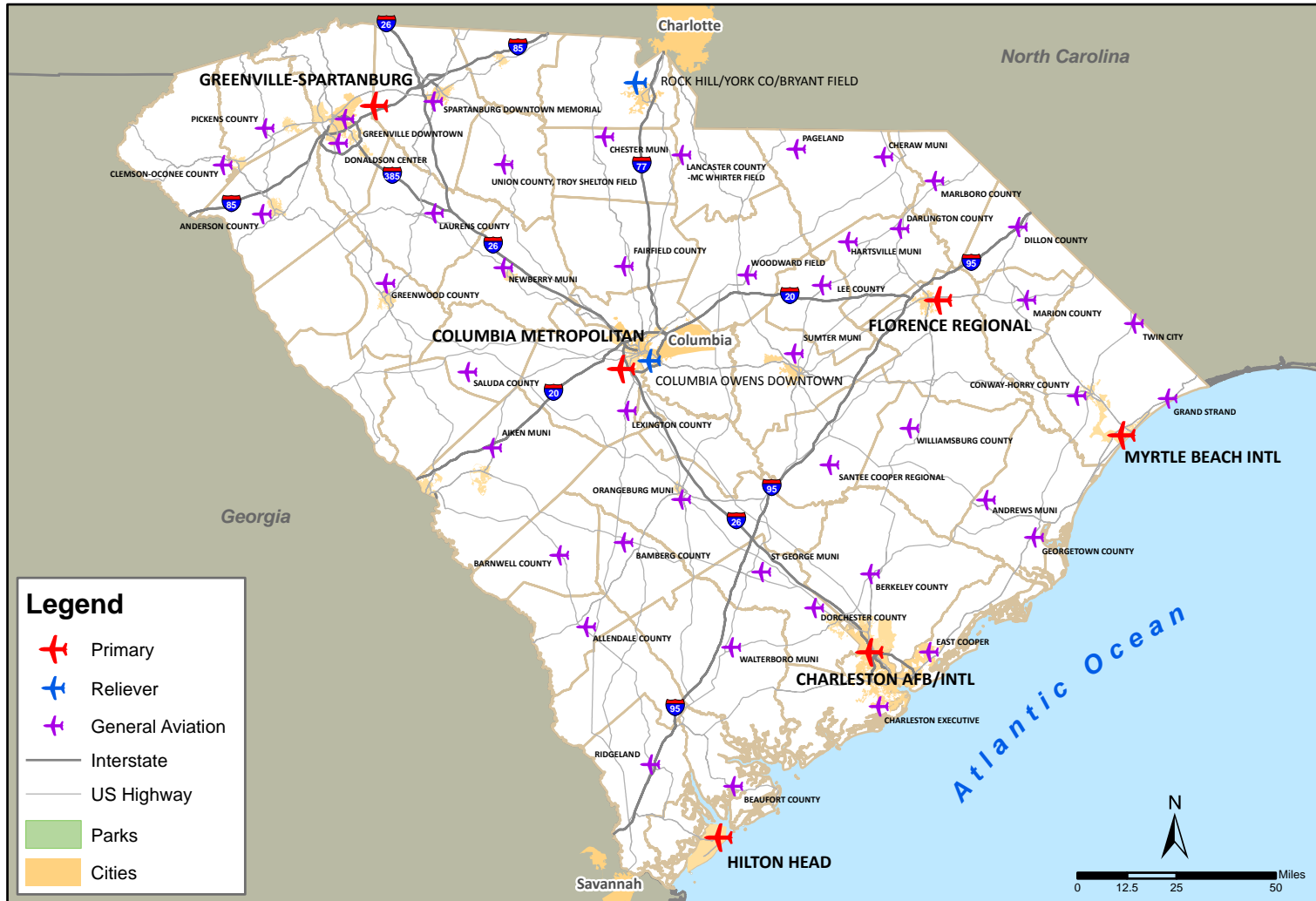
Source: South Carolina Aeronautics Commission Website – Airport Data

Table 4-1 provides an inventory of all passenger airlines operating at each airport. These airlines provide direct flights to major cities, as shown in **Table 4-2**, including hub airports where connections can be made to multiple destinations.

The six primary commercial service airports provide business and leisure travelers with a quick means of access to many of the large east coast and mid-west cities, as well as dozens of other destinations in the U.S., which provide access to most other markets both domestic and international.

⁷ South Carolina Airports System Plan, prepared for the South Carolina Department of Commerce, Division of Aeronautics by Talbert & Bright, Inc., 2008.

Figure 4-2: Map of Airports in South Carolina



Source: SCDOT

Table 4-1: Passenger Carrier Inventory

| Passenger Airline | Columbia Metropolitan Airport | Florence Regional Airport | Myrtle Beach International Airport | Charleston AFB/ International | Greenville Spartanburg International | Hilton Head Island Airport |
|---------------------------|-------------------------------|---------------------------|------------------------------------|-------------------------------|--------------------------------------|----------------------------|
| American Eagle | x | | | | x | x |
| Delta | x | | x | x | x | x |
| United Express | x | | | | | |
| Piedmont/US Airways | x | | | | | |
| Continental | x | | | | | |
| Allegiant ⁽¹⁾ | x | | x | | x | |
| Vision Air ⁽²⁾ | x | | | | | |
| US Airways | | x | x | x | x | x |
| Porter Airlines | | | x | | | |
| Spirit | | | x | | | |
| United Airlines | | | x | x | x | x |
| American Airlines | | | | x | | |
| Southwest Airlines | | | | x | x | |

Source: Airport websites.

Notes: (1) Allegiant Air suspended service in 2008-2009 (2) Vision Air does not fly into the state anymore

Table 4-2: Destinations

| Destination | Columbia Metropolitan Airport | Florence Regional Airport | Myrtle Beach International Airport | Charleston AFB/ International | Greenville Spartanburg International | Hilton Head Island Airport |
|-----------------------------|-------------------------------|---------------------------|------------------------------------|-------------------------------|--------------------------------------|----------------------------|
| Allentown (PA) | | | x | | | |
| Atlanta | x | | x | x | x | x |
| Atlantic City | | | x | | | |
| Baltimore | | | | | x | |
| Boston | | | x | | | |
| Charleston (WV) | | | x | | | |
| Charlotte | x | x | x | x | x | x |
| Chicago O'Hare Midway | x | | x | x x | x x | x |
| Cincinnati | | | | | x | |
| Cleveland | | | | | x | |
| Dallas/Ft. Worth | x | | | x | x | x |
| Detroit | x | | x | x | x | x |
| Ft. Lauderdale | | | x | | x | |
| Ft. Wayne | | | x | | | |
| Houston | x | | | x | x | x |
| Huntington (WV) | | | x | | | |
| Knoxville | | | x | | | |
| Latrobe (PA) | | | x | | | |
| Miami | | | | x | | |
| New York LGA | x | | x | x | x | x |
| Newark | | | x | x | x | x |

| Destination | Columbia Metropolitan Airport | Florence Regional Airport | Myrtle Beach International Airport | Charleston AFB/ International | Greenville Spartanburg International | Hilton Head Island Airport |
|---------------------------|-------------------------------|---------------------------|------------------------------------|-------------------------------|--------------------------------------|----------------------------|
| Niagara Falls | | | x | | | |
| Orlando | | | | | x | |
| Philadelphia | x | | x | x | x | |
| Plattsburgh (NY) | | | x | | | |
| Punta Gorda | | | | | x | |
| Tampa | | | | | x | |
| Toronto | | | x | | | |
| Washington D.C. Dulles | x | | x | x | x | x |
| National | x | | | x | | x |
| Youngstown | | | x | | | |

Source: Individual Airport websites (with verification, as needed, from airline websites)

Table 4-3 details the airline enplanement history since the late 90's as well as forecast enplanements for the next 20 years. Again, it is important to note that the forecast from the SCASP was developed prior to the economic downturn so forecasts are generally higher than they would be anticipated to be if calculated today. That being said, it is also important to note that the planning horizon for this plan is 12 years further out than that of the 2008 statewide aviation plan (2028 vs. 2040). There are no plans to revise the aviation plan projections for this plan and a revised statewide aviation plan is not currently programmed.

Table 4-3: Commercial Service Airport Enplanements

| FAA ID | Airport | 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 Airport | 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 Airport | 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 Airport | 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 Airport | 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: SCASP (South Carolina Airports System Plan – 2008)



5. RAIL

5.1 STATE RAIL AGENCY RESPONSIBILITIES

There are three state agencies in South Carolina that have a direct involvement with the railroads:

- Department of Transportation
 - Traffic Engineering manages federal funds for highway-rail grade crossing improvements
 - Preconstruction is responsible for crossings involved in construction projects, at-grade or grade-separated
 - The Office of Railroads of the Intermodal and Freight Programs Division is responsible for preservation of railroad rights-of-way, coordination of high speed and intercity rail passenger planning and development, associated funding, and submittal of plans (including a comprehensive passenger and freight state rail plan with coordination of infrastructure services with other modes of transportation every five years) and annual legislative reports as required.
 - The Office of Public Transit of the same division is charged with development and coordination of a general mass transit program and policy for the implementation, operation, evaluation, and monitoring of public transit systems, funding of same and preparation of plans. The responsibility for commuter rail is held jointly with the Office of Railroads.
- Department of Commerce
 - Works with all the state’s rail carriers to attract new business to the state
 - Home to the Division of Public Railways (SCPR)
 - Operates three common carrier railroads in the Charleston area
 - Provides technical assistance and consulting services to South Carolina’s governmental bodies
- Office of Regulatory Staff (ORS) is responsible for railroad and natural gas pipeline safety oversight. Railroad safety falls under the Transportation Division of the ORS

5.2 RAILROADS

The freight rail system is operated by 11 different rail carriers. Two are Class I carriers, CSX Transportation and Norfolk Southern Railway, and account for 2,044 miles or 84 percent of the state rail system, while Class III carriers or terminal companies make up the remaining 16 percent of the system.

The South Carolina rail system is depicted in **Figure 5-1**. The carriers range in size from fairly small intrastate railroads to members of large rail systems serving the entire eastern U.S. Of the line-haul railroads, two are Class I carriers⁸ and the remainder are Class III carriers or terminal companies. As seen in **Table 5-1**, these railroads comprise a state rail system of 2,378 miles. CSX Transportation's (CSXT) 1,261 South Carolina route miles represent 53 percent of the statewide rail system. The Norfolk Southern Railway (NS), with 783 route miles, is the second largest carrier in terms of South Carolina mileage accounting for 32 percent of the state rail system.

Table 5-1: South Carolina Freight Railroads

| Railroad ⁽¹⁾ | Route Miles of Railroad | | | Percent of Rail System Operated ⁽²⁾ |
|--|-------------------------|-----------------|--------------------|--|
| | Owned/Leased | Trackage Rights | Owned/Not Operated | |
| Aiken Railway | 19 | | | 0.8 |
| Carolina Piedmont Railroad (CPDR) | 34 | | | 1.5 |
| Carolina Southern Railroad (CALA) | 51 | | | 2.2 |
| CSX Transportation (CSXT) | 1,269 | 17 | 12 | 55.7 |
| East Cooper & Berkeley Railroad (ECBR) | 17 | | | 0.8 |
| Greenville & Western Railway (GRLW) | 13 | | | 0.6 |
| Hampton & Branchville Railroad (HB) | 40 | | | 1.8 |
| Lancaster & Chester (LC) | 60 | | | 2.7 |
| Norfolk Southern Railway (NS) | 679 | 104 | 85 | 28.5 |
| Pee Dee River Railway (PDRR) | 25 | | | 1.1 |
| Pickens Railway (PICK and PKHP) | 37 | | | 1.6 |
| Port Terminal Railroad (PTR) | 1 | | | 0.0 |
| Port Utilities Commission of Charleston (PUCC) | 4 | | | 0.2 |
| South Carolina Central Railway (SCRF) | 56 | | | 2.5 |
| Totals | 2,305 | 121 | 97 | 100.0 |

Notes:

⁽¹⁾Amtrak also operates over 549 route miles in SC but does not own any mainline trackage in the state. It operates over CSXT main tracks, one through Florence and another through Columbia, from North Carolina to Georgia. Norfolk southern also hosts Amtrak trains in the upstate running between North Carolina and Georgia.

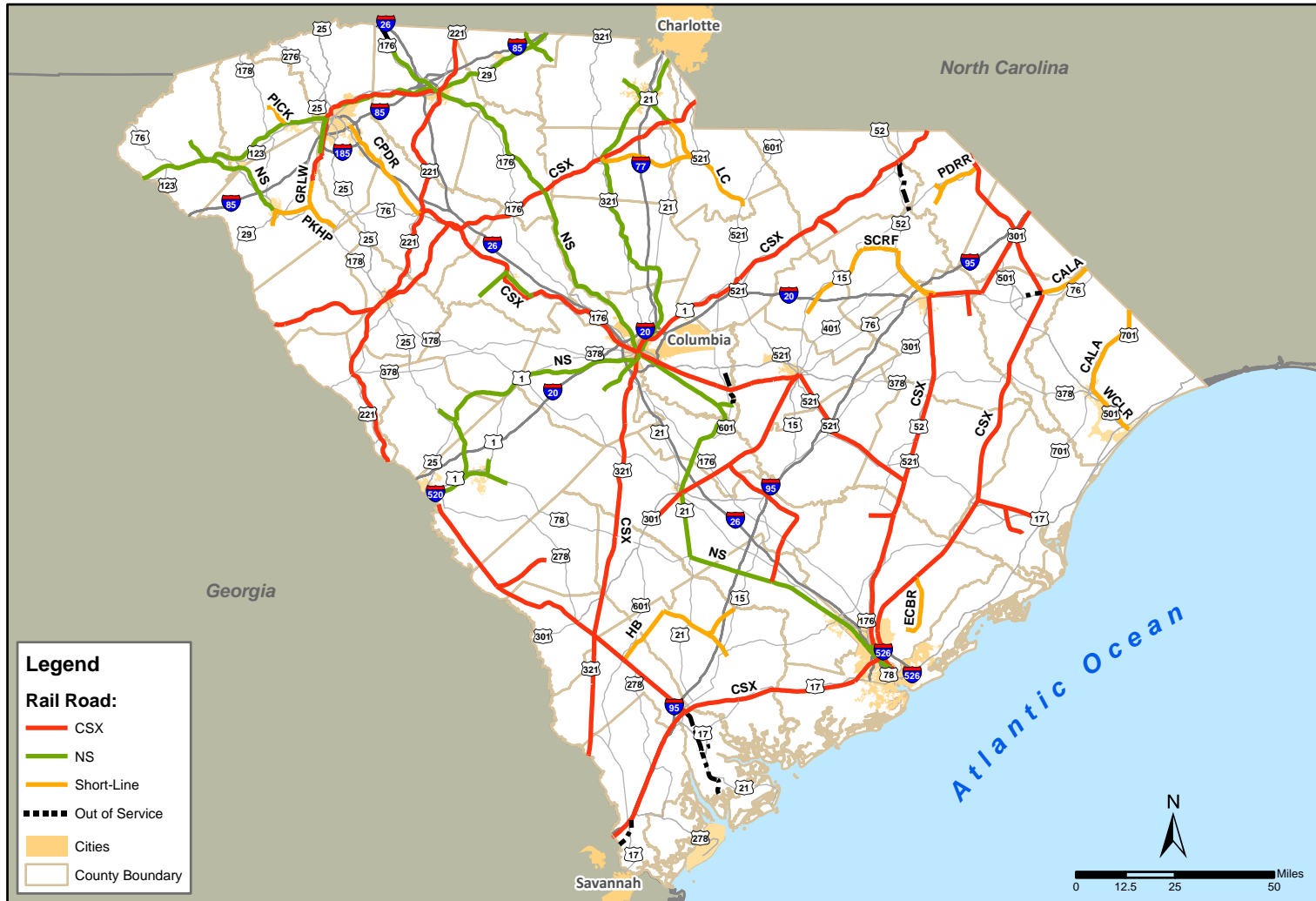
⁽²⁾Owned/Leased lines less Owned/Not Operated and exclusive of trackage rights to prohibit double counting.

⁽³⁾As of December 2010, Class I railroads have annual gross revenues of \$398.7 million or more. These limits are updated annually to reflect inflation

Sources: 2011 Class I Railroad Annual Reports to Surface Transportation Board
Association of SC Railroads
Association of American Railroads

⁸As of December 2011, Class I railroads have annual gross revenues of \$433.2 million or more. Class III carriers have annual gross revenues less than \$34.7 million. These limits are updated annually to reflect inflation by the Surface Transportation Board (STB).

Figure 5-1: State Rail Map



Source: 2008 South Carolina Rail Plan

5.3 RAIL PASSENGER SERVICE

South Carolina is fortunate when compared to some states in that it has four trains (actually eight when trains in both north and south bound directions are counted) operating over three routes all owned by freight railroads (one NS, two CSXT) all of which connect the South with the Northeast. **Figure 5-2** illustrates the locations of the three routes as well as Amtrak stops in the state. The four daily trains that travel through the state are:

- Silver Star – New York/Tampa/Miami via Columbia,
- Silver Meteor – New York/Miami via Charleston,
- Palmetto – New York/Savannah via Charleston, and
- Crescent – New York/New Orleans via Greenville.



Amtrak Station in Upstate South Carolina

With the exception of the Palmetto, Amtrak trains pass through the state in evening or early morning hours, which tends to discourage riders. In addition, Amtrak on-time performance suffers from running over privately owned freight railroads with the ever present operating conflicts. Current South Carolina schedules are shown in **Table 5-2**.

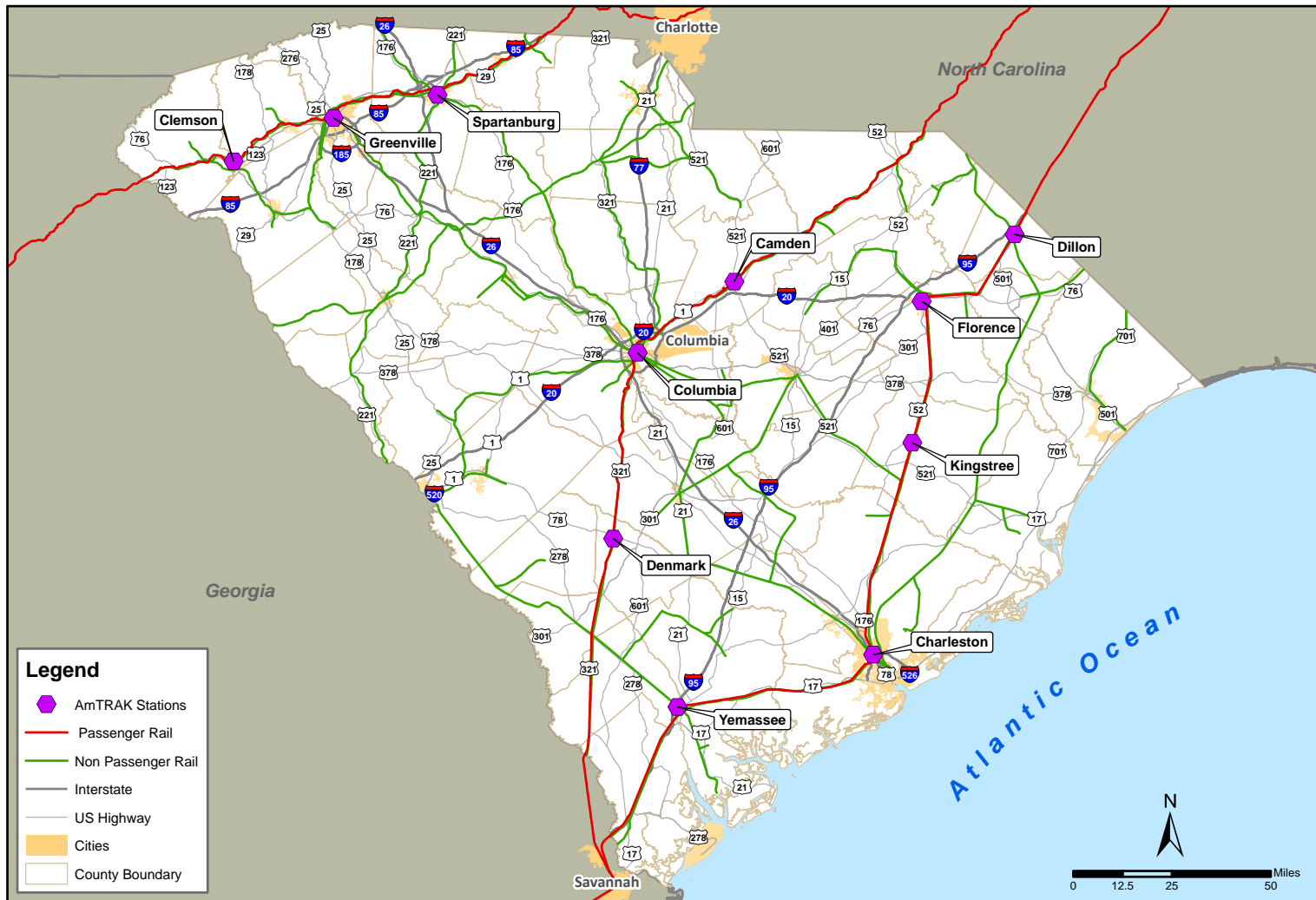
In addition, Amtrak’s *Auto Train* also passes through the state on the easternmost route, but does not stop in South Carolina. The only stops it makes are at its two end points, Lorton, Virginia and Sanford, Florida.

Table 5-2: Amtrak South Carolina Schedule

| Train Service | Operating Between | SC Stops | Schedule | |
|---------------|--------------------------------------|-------------|----------|--------|
| | | | SB | NB |
| Crescent | New York- Atlanta- New Orleans | Spartanburg | 4:14A | 11:39P |
| | | Greenville | 4:54A | 10:53P |
| | | Clemson | 5:39A | 10:16P |
| Silver Star | New York- Washington- Miami | Camden | 12:50A | 4:49A |
| | | Columbia | 1:44A | 4:08A |
| | | Denmark | 2:41A | 2:53A |
| Silver Meteor | New York- Washington- Miami | Florence | 3:20A | 11:20P |
| | | Kingstree | 4:05A | 10:17P |
| | | Charleston | 5:06A | 9:23P |
| | | Yemassee | 5:56A | 8:27P |
| Palmetto | New York- Washington- Savannah | Dillon | 4:35P | 12:13P |
| | | Florence | 5:23P | 11:39A |
| | | Kingstree | 6:06P | 10:55A |
| | | Charleston | 7:15P | 10:00A |
| | | Yemassee | 8:04P | 9:08A |

Source: Amtrak, effective October 10, 2012.

Figure 5-2: South Carolina Rail Passenger Routes and Stops



Source: 2008 South Carolina Rail Plan

5.3.1 Amtrak Ridership in South Carolina

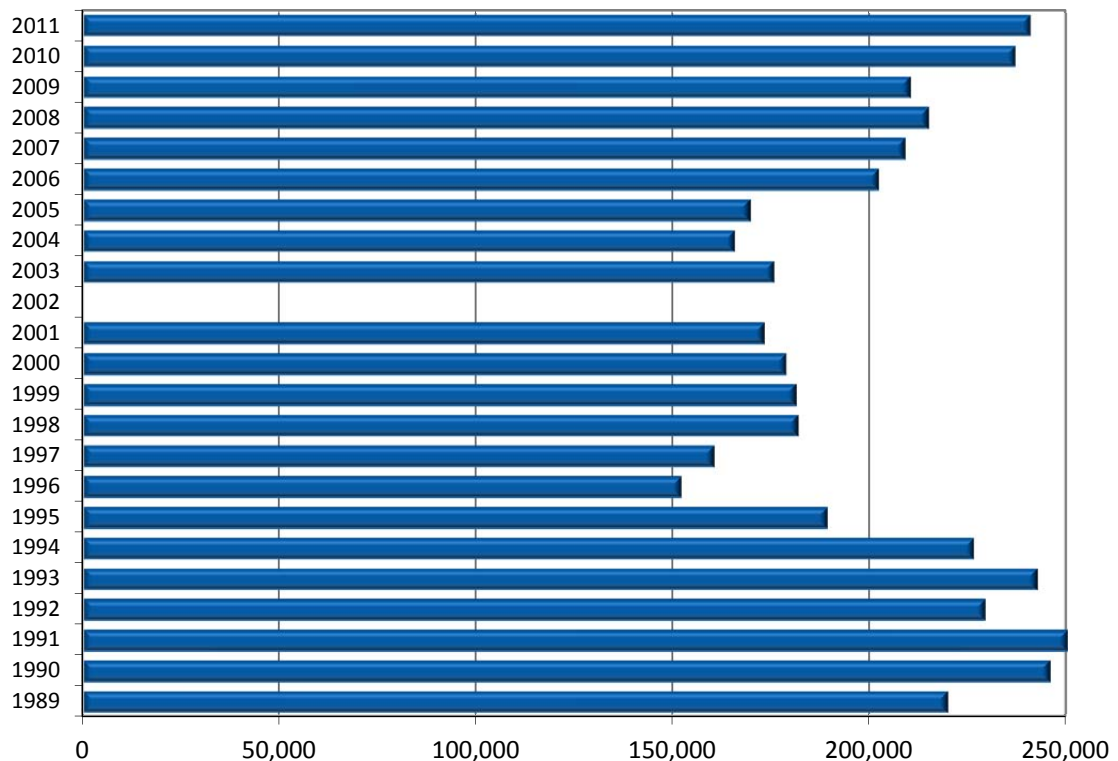
Amtrak ridership in South Carolina has risen and fallen over the last two decades from a high of almost 250,000 in 1990 to a low of 151,985 in 1996, as shown in **Figure 5-3**. The number of current (FY2011) passengers is 240,880, which is within 4 percent of the 1990 high.

Ridership by station for the last six years of record is shown in **Table 5-3**. In 2011, Charleston attracted the most riders, followed by Florence, Columbia, and Greenville. The three largest Amtrak stations in the state each experienced an increase in passenger traffic with Charleston (22%), Florence (19%), and Columbia (7%). The Dillon and Greenville stations saw the largest increase in ridership with 48 percent and 43 percent growth respectively since 2006. All of the stations saw an increase in ridership since 2006, except for the Denmark station, which saw a reduction of 6 percent.



Amtrak Station in Columbia, South Carolina

Figure 5-3: Amtrak Ridership in South Carolina



Note: Total passengers boarding or alighting at stations. Data are not available for 2002. Data for 2008 and 2009 are from National Association of Railroad Passengers.

Source: Amtrak

Table 5-3: South Carolina Amtrak Patronage (FY2006-2011)

| City | Boardings + Alightings | | | | | |
|--------------|------------------------|----------------|----------------|----------------|----------------|----------------|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
| Camden | 3,582 | 3,702 | 3,809 | 3,940 | 3,588 | 3,923 |
| Charleston | 66,272 | 66,655 | 67,049 | 66,867 | 79,806 | 81,180 |
| Clemson | 5,065 | 5,416 | 5,841 | 5,988 | 6,941 | 6,466 |
| Columbia | 34,431 | 34,613 | 37,412 | 36,441 | 36,297 | 36,786 |
| Denmark | 4,643 | 4,680 | 4,903 | 4,617 | 4,485 | 4,344 |
| Dillon | 6,393 | 7,461 | 7,693 | 7,126 | 8,463 | 9,490 |
| Florence | 41,643 | 44,828 | 45,992 | 44,384 | 47,344 | 49,569 |
| Greenville | 12,136 | 11,700 | 12,897 | 11,874 | 17,490 | 17,366 |
| Kingstree | 12,996 | 13,888 | 12,991 | 12,682 | 14,153 | 13,539 |
| Spartanburg | 4,252 | 4,245 | 4,238 | 4,102 | 4,955 | 4,469 |
| Yemassee | 10,790 | 11,762 | 11,599 | 12,064 | 13,516 | 13,748 |
| Total | 202,203 | 208,914 | 202,825 | 198,021 | 237,038 | 240,880 |

Source: Amtrak

All stations are served by two daily trains with the exception of Columbia, which has only one. Station patronage has remained relatively the same proportionally over the years, although Kingstree and Greenville have exchanged fourth and fifth place a number of times. The maximum number of riders at any one station for the period of record was 81,180 in Charleston in FY2011. This level now surpasses the 73,700 in Charleston in 1991, which stood as the record for many years.