The Piedmont Atlantic Megaregion

The Piedmont Atlantic Megaregion is characterized by a chain of loosely spaced, fast-growing regions in the Southeastern United States, with auto-oriented development patterns. Atlanta, with nearly 4 million people in its 25-mile zone, is the Southeast's largest metropolitan area, home to the nation's busiest airport and some of the worst traffic congestion. Charlotte is the second largest city and the only other city in the megaregion with rail transit.

While freight rail plays an important role in the megaregion's economy, passenger rail improvements have been slow to get off the ground. The exception is North Carolina, which has been investing in its Amtrak service for years and was awarded $691 million in federal funds in 2010 to improve the corridor connecting Raleigh to Charlotte.

While the megaregion as a whole has not made passenger rail a priority, its mayors, business leaders, and several universities have focused on megaregion cooperation and formed an organization called the Piedmont Alliance for Quality Growth in 2009, started by then-Mayors Shirley Franklin of Atlanta and Pat McCrory of Charlotte.[33] This collaboration could provide a forum in the future for weighing investment decisions in a multi-state passenger rail corridor.

TABLE 45

Population Profile for Major Cities in the Piedmont Atlantic Megaregion

	2 mi.		10 mi.		25 mi.		Projected 2040
	Pop.	Rank	Pop.	Rank	Pop.	Rank	Growth
Atlanta	70,000	44	1,090,000	19	3,800,000	9	46%
Charlotte	50,000	114	670,000	39	1,600,000	38	63%
Raleigh	50,000	81	590,000	47	1,300,000	49	69%
Greensboro	50,000	109	350,000	84	1,000,000	68	27%
Birmingham	40,000	127	450,000	61	900,000	81	30%
Greenville	40,000	156	330,000	86	700,000	94	28%

Source: America 2050 analysis of 2000 U.S. Census and 2010 Woods and Poole Economics

TABLE 46

Employment Profile for Major Cities in the Piedmont Atlantic Megaregion

	2 mi.		10 mi.		25 mi.		Projected 2040
	Empl.	Rank	Empl.	Rank	Empl.	Rank	Growth
Birmingham	90,000	23	330,000	56	500,000	90	39%
Atlanta	80,000	28	800,000	15	1,900,000	15	46%
Charlotte	70,000	38	430,000	40	800,000	55	62%
Greensboro	60,000	43	510,000	25	1,000,000	44	27%
Raleigh	50,000	53	570,000	22	1,100,000	38	66%
Greenville	20,000	115	330,000	54	600,000	70	33%

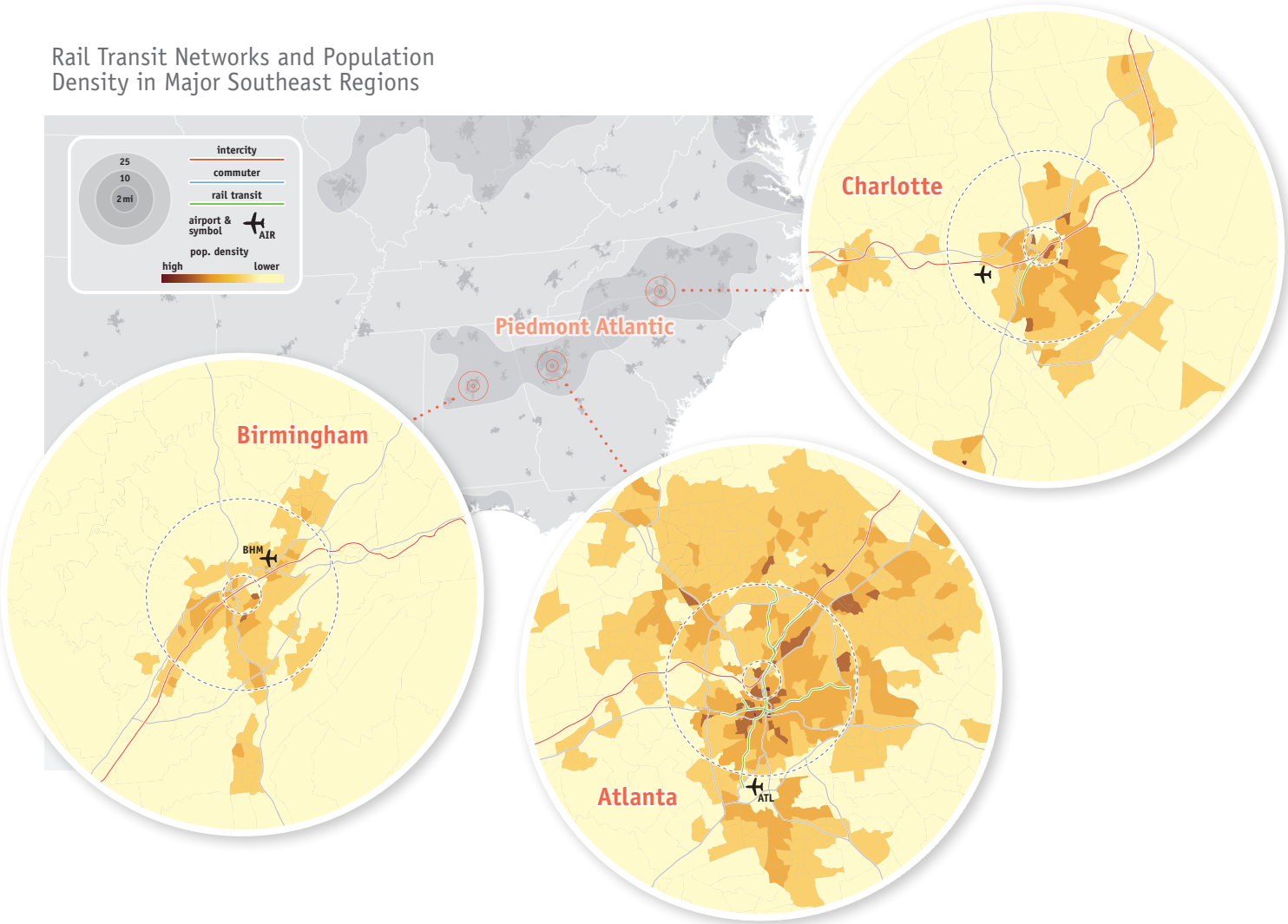
Source: America 2050 analysis of 2007 Bureau of Economic Analysis and 2010 Woods and Poole Economics

Population and Employment Profile

The Piedmont Atlantic megaregion has only two of its cities in the top 40 in the nation in population within 10 and 25 miles of the downtown – Atlanta and Charlotte (Table 45). Similar, although smaller than in Texas, cities in this megaregion also tend to be relatively low density and fast growing, all have relatively low populations in their urban core. Only Atlanta, with nearly 4 million people in its 25-mile zone, can be considered a major metropolitan area. Employment in almost all of these cities is more centralized than population.

33 More information on this alliance is housed on the Georgia Tech website at: http://www.cqgrd.gatech.edu/proceedings/paqg_2010/index.php

Rail Transit Networks and Population Density in Major Southeast Regions



Transit Connectivity

Atlanta is one of only eleven American cities with a heavy rail transit system and ranks number six in ridership with an annual volume of 80 million passengers. The only other city in the Piedmont Megaregion with rail transit is Charlotte with a new light rail system that is being expanded. Charlotte's system includes a single line of 10 miles with 15 stops. It carried four million passengers in only its third year of operation.

The MARTA system in Atlanta would provide moderate connectivity to an intercity rail system with a station in downtown Atlanta. The system already provides good connections to Atlanta Hartsfield airport and could provide vital links between the airport and a high-speed rail system. About one-quarter of Atlanta's regional employment is transit accessible – a sizeable portion for a city built at relatively low density (Table 47). While Charlotte's light rail system currently provides little connectivity, some expansion of the light rail system is underway, with more ambitious plans on hold until funding can be obtained.

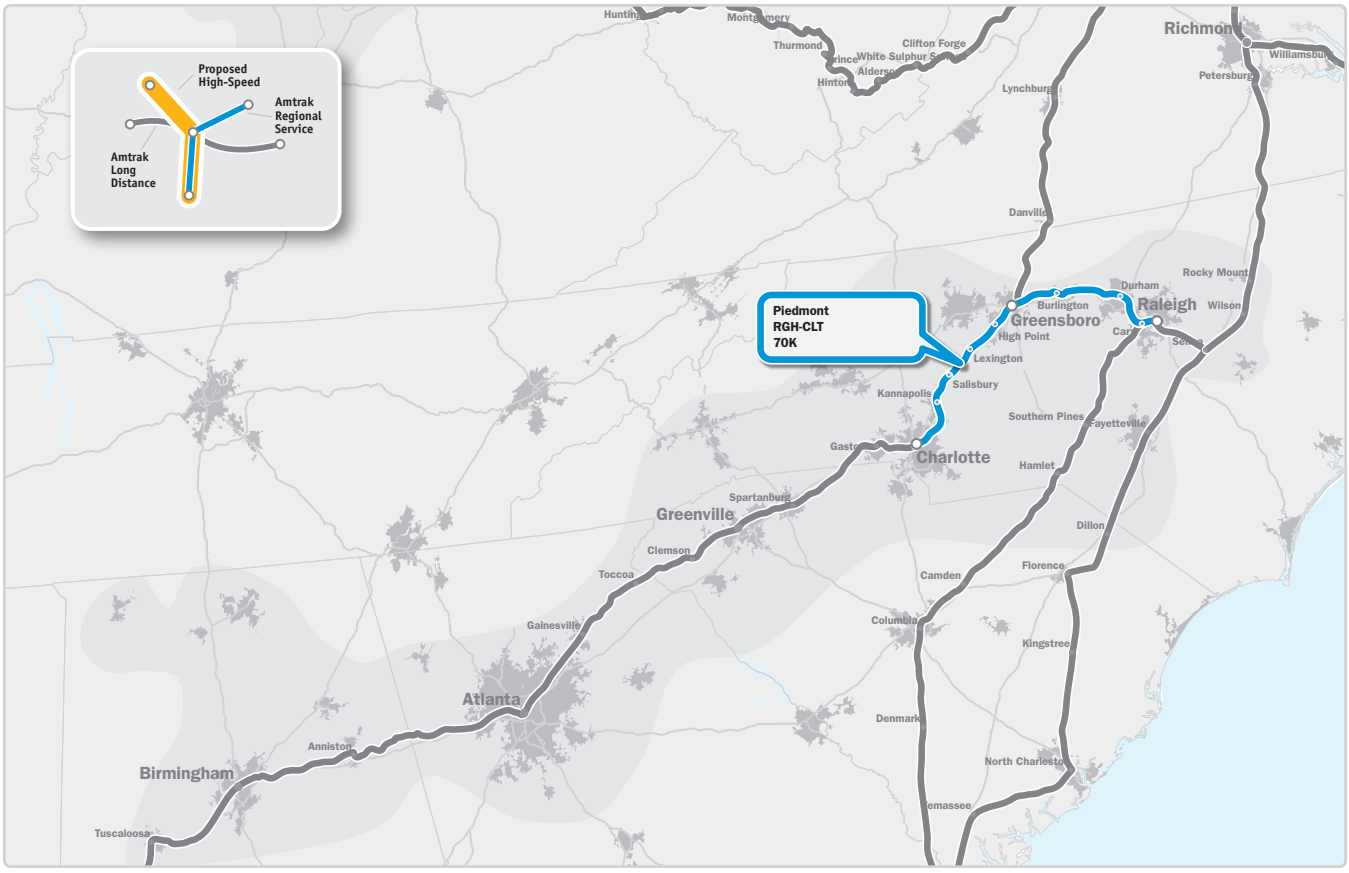
TABLE 47

Transit Accessibility and Ridership by Region

	Within Transit Accessible Zone				Avg. Weekday Ridership (Q4 2009)
	Population	%	Jobs	%	
Atlanta	500,000	13	470,000	24	247,233
Charlotte	80,000	5	150,000	18	19,467

Source: America 2050 analysis and APTA 2009 Fact Book

Passenger Rail Service in the Piedmont Atlantic Megaregion



Source: Amtrak ridership data FY 2009

Rail Service

Intercity rail service is extremely limited throughout the Piedmont Atlantic Megaregion. There is one train per day, which takes passengers from Charlotte to Atlanta, covering the 220-mile distance in 5 hours 30 minutes. The same distance can be travelled by private auto in about four hours. Yet, more than the trip time, the almost nonexistent rail market (3,600 passengers per year) can be attributed to the inconvenient schedule, which leaves Charlotte at 2:45 a.m. and arrives in Atlanta at 8:15 a.m. Intercity ridership is higher in the northeastern half of the corridor connecting Charlotte, Raleigh, and Richmond to Washington, DC.

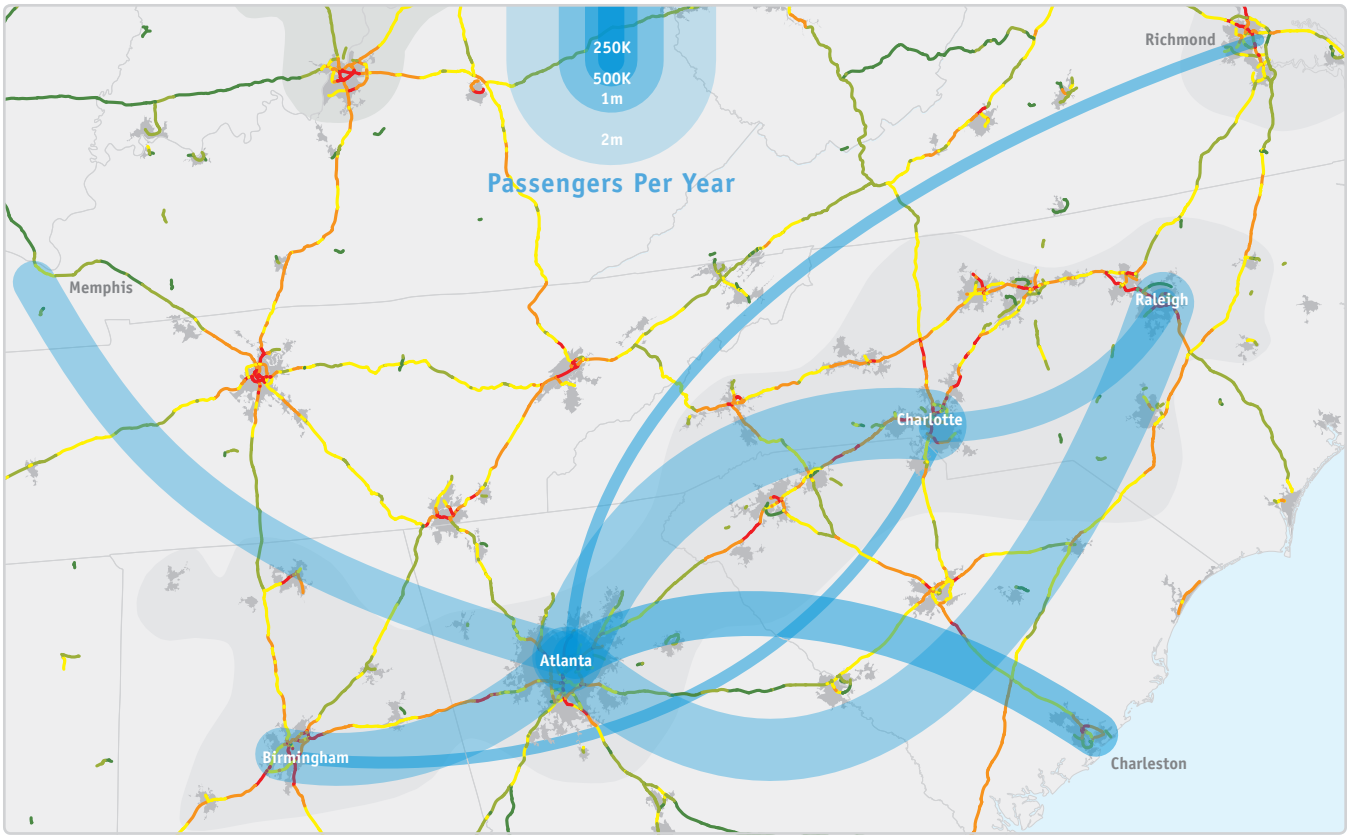
Plans for high-speed rail in the corridor are modest and currently more developed in the northeastern end of the corridor. Plans include increasing speeds to 90 miles per hour in the medium-term and 110 miles per hour in the longer-term northeast of Charlotte to Raleigh, Richmond, and connecting to the Northeast Corridor via Washington, DC.

Congestion and Travel Market

Despite being home to the busiest airport in the nation, Atlanta has a relatively small regional air market to destinations within the Piedmont Atlantic megaregion. In total, Atlanta has only 1.5 million annual total departures to Charlotte, Raleigh, and Birmingham, which represents a small fraction of its total annual volume. These numbers are significantly smaller than passenger volumes to destinations beyond the megaregion, but within 600 miles of Atlanta, such as the Florida markets. However, Atlanta to Washington, DC and Richmond are also major air markets, and when viewed cumulatively, the total annual air market on the corridor between Atlanta and Washington is 6 million passengers.

Four of the top five short-haul air markets originating in Raleigh are to destinations on the Northeast Corridor, as are two of the top three coming from Charlotte. There is at least as much demand from the cities in the northeastern portion of this megaregion to connect to Washington, DC and beyond as there is with Atlanta. This air data reinforces the decision to begin passenger rail investments in the northeastern end of the megaregion and create strong connections between the North Carolina cities and the Northeast Corridor.

Regional Air Market and Interstate Highway Congestion in the Piedmont Atlantic Megaregion



Source: Federal Aviation Administration 2009

Road congestion on the intercity corridors connecting the Piedmont Megaregion is about average for major metropolitan areas. In the Atlanta-Birmingham corridor, 46 percent of the highways operate at over 75 percent design capacity in the peak hour. The northern half of the corridor is more congested. This same figure is 54 percent in the Atlanta-Charlotte section or the corridor.

TABLE 48

Annual Passengers Originating in and Destined to Airports in the Piedmont Atlantic Megaregion

Atlanta	1,500,000
Charlotte	800,000
Birmingham	300,000
Raleigh	600,000

Source: America 2050 analysis of FAA 2009

TABLE 49

Regional Air Markets in Piedmont

	Annual Passengers
Atlanta to Charlotte	676,762
Atlanta to Raleigh	593,944
Atlanta to North Charleston	428,653
Atlanta to Richmond	419,754
Atlanta to Memphis	407,177
Raleigh to Charlotte	280,464
Birmingham to Charlotte	114,845

Source: America 2050 analysis of FAA 2009

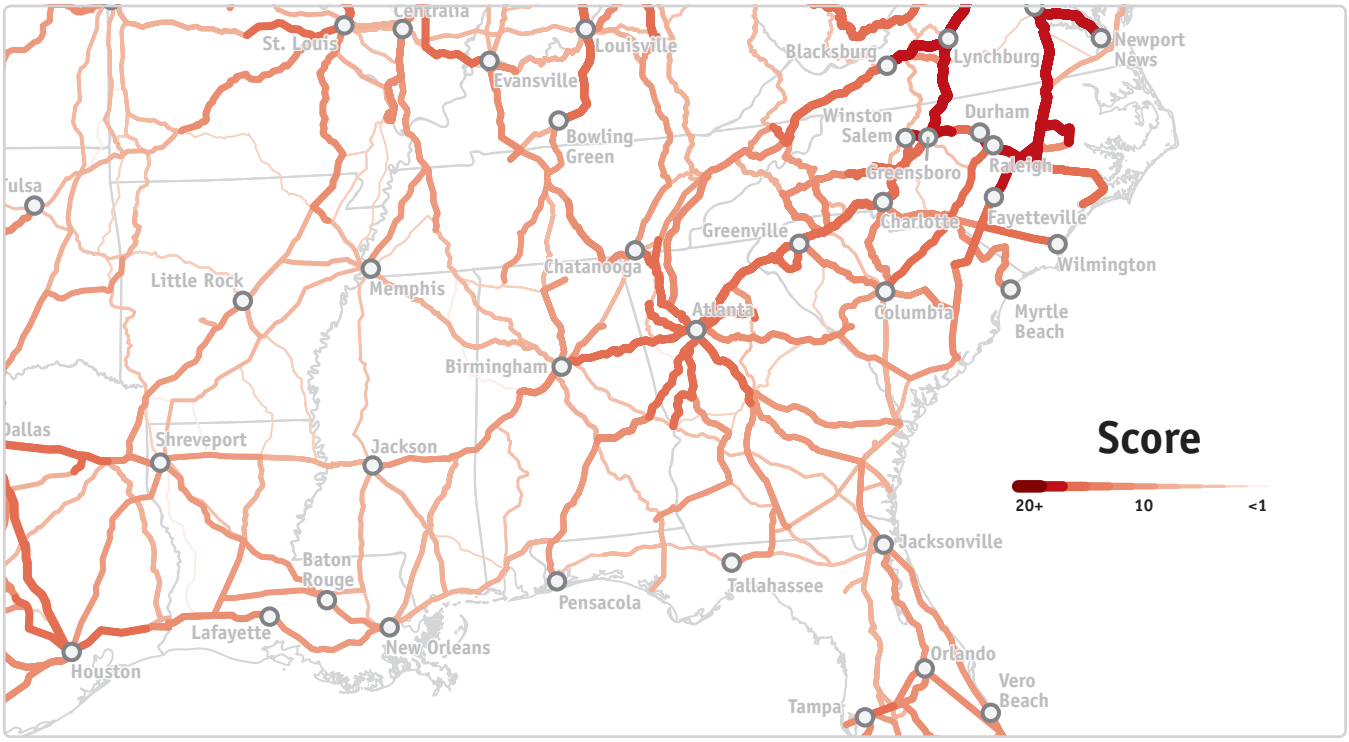
TABLE 50

Average Delay in Major Airports in Piedmont Atlantic Megaregion

Airport	Minutes	Rank
Atlanta	14.1	5
Charlotte	10.8	8

Source: FAA 2009

Scoring of Corridors in the Piedmont Atlantic Megaregion



Source: America 2050

TABLE 51

Scoring of Corridors in the Piedmont Atlantic Megaregion

Origin	Destinations	Length	Score	Total Employment Within 2 Miles of Major Nodes	Total Population within 25 Miles of Major Nodes	Cumulative Air Market	Total Transit Accessible Population in Major Nodes
Birmingham AL	**Atlanta GA**	164	15.93	180,000	4,800,000	250,000	500,000
Atlanta GA	**Charlotte NC**	257	15.68	200,000	7,100,000	890,000	580,000
Washington DC	**Charlotte NC**	376	15.16	440,000	7,700,000	810,000	1,220,000
Charlotte NC	**Raleigh NC**	172	14.84	220,000	4,100,000	460,000	80,000
Atlanta GA	**Raleigh NC**	429	14.71	350,000	9,600,000	2,110,000	580,000
Charlotte NC	**Richmond VA**	369	11.88	260,000	5,400,000	660,000	80,000
Savannah GA	**Atlanta GA**	263	11.67	110,000	4,500,000	400,000	500,000
Atlanta GA	**Cincinnati OH**	460	9.05	160,000	6,000,000	250,000	500,000
Birmingham AL	**Memphis TN**	252	5.09	110,000	2,000,000	50,000	-
Birmingham AL	**New Orleans LA**	354	4.95	200,000	2,100,000	60,000	-

*Includes annual flights among all airports located along the corridor.

Top Corridors

All three sections of the Piedmont Corridor, including Birmingham-Atlanta, Atlanta-Charlotte, and Charlotte-Washington, DC score have scores similar to the corridors in Texas but lower than corridors in the Northeast, Midwest, and California.

Passenger rail could become a viable option for intercity travel in this region, but only if it is matched by regional planning that focuses development in city centers and continues investing in rail transit networks in regions like Atlanta and Charlotte. Efforts to maintain and expand these transit systems have stalled recently due to the recession.