

## TRANSIT STRATEGIES

# SERVICE TO NEW AREAS

As Middle Tennessee continues to grow, the demand for service is growing outward to new areas, especially along the freeway corridors that radiate outward from Nashville. This demand is being driven by a number of factors:

- **Rapidly increasing population and employment** throughout Middle Tennessee, but especially in Williamson and Rutherford Counties.
- **Changing demographics** that are producing increases in the number of people who are more oriented toward using transit.
- **Increasing levels of travel to and from Nashville**, especially along I-24 and I-65 to the south.
- **Increasing levels of travel within the nine counties surrounding Davidson County**, especially to, from, and within regional centers.
- **Development patterns that are becoming more conducive to transit use.** In all cities, there is an extremely strong correlation between development patterns and transit ridership. In areas with denser development, mixed-use development, and a good pedestrian environment, transit can become very convenient, and thus attractive and well used. Nashville's "NashvilleNext" effort encourages denser development within the city, and the Nashville Area Metropolitan Planning Organization's (MPO) projections indicate that development will also become denser in many outlying areas.

DEVELOPMENT IN COOL SPRINGS



DOWNTOWN GALLATIN

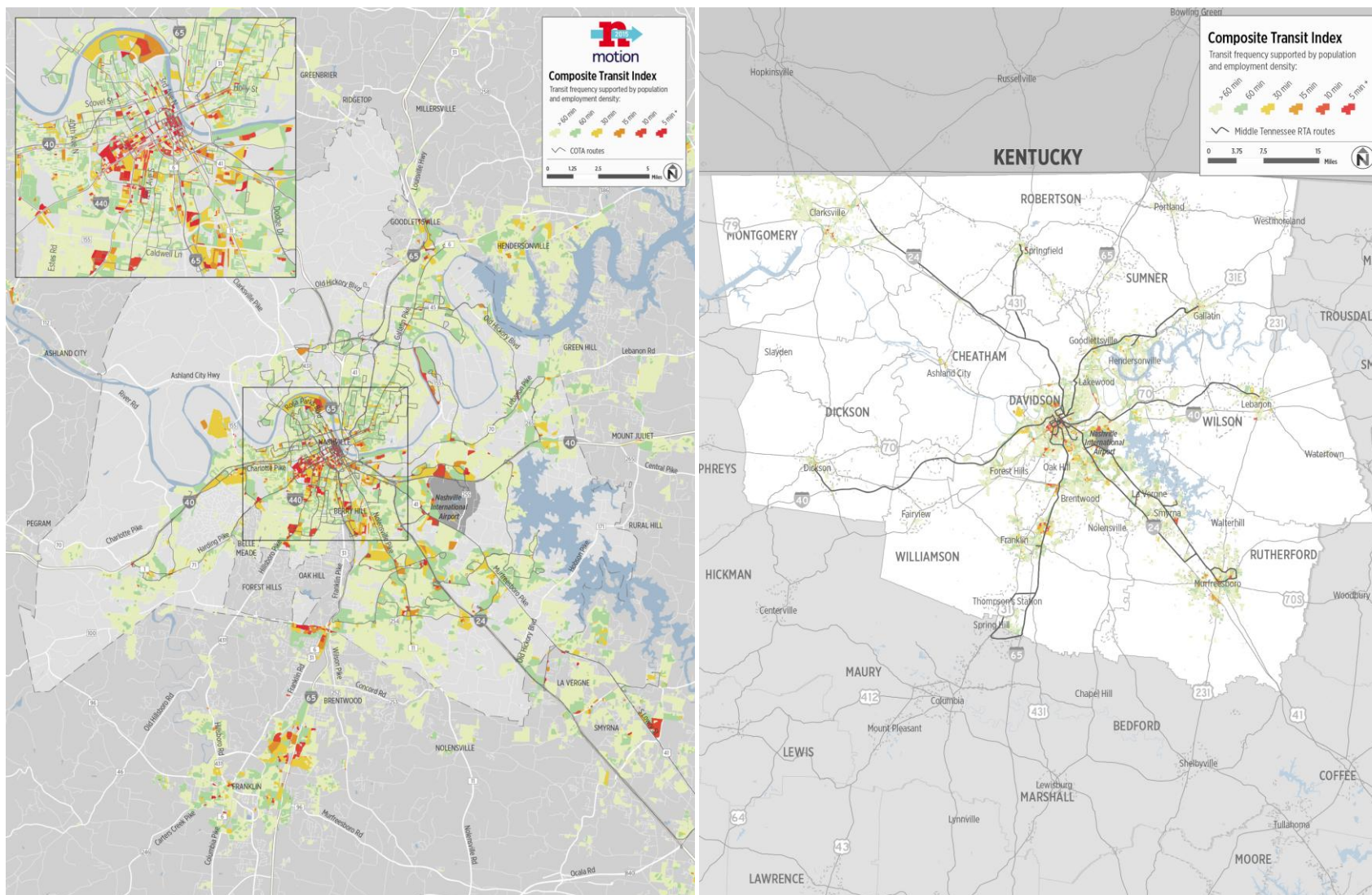


## CURRENT TRANSIT DEMAND

For transit to be successful, it must be frequent, fast, and easy to access. More than any other factor, population and employment density will determine whether this will be possible:

- Transit needs to serve sufficiently high volumes of travelers to be cost effective, and the density of development determines the overall size of the travel market. The reach of transit is generally limited to within one-quarter to one-half mile of the transit line or station, and thus the size of the travel market is directly related to the density of development in that area.
- Transit service frequencies, in turn, are closely related to market size. Bigger markets support more frequent service, while smaller markets can support only less frequent service.

## 2010 MIDDLE TENNESSEE UNDERLYING TRANSIT DEMAND (DAVIDSON COUNTY AND ENTIRE 10 COUNTY REGION)



Note: Darker colors indicate higher demand; lighter colors lower demand.

- To attract travelers who have other options, such as automobiles, transit must be relatively frequent—at least every 30 minutes, and preferably every 10 to 15 minutes. Below those frequencies, transit can be expected to serve only those who do not drive or cannot drive.
- Where there are high population and employment densities, there will be demand for higher levels of service that make service convenient, and in turn attract even more riders. Where population and employment densities are low, the demand for transit service will also be low, and can support only infrequent service. Low service frequencies, in turn, will suppress transit use among those with other options.

Based on a combination of population and employment densities, by far the highest levels of current transit demand are in Davidson County. If a diagonal line were drawn from the northeast to the southwest, passing through North Nashville, the large majority of transit demand is to the east and south of that line, with far less to the north and the west. Consistent with this demand, Nashville MTA service is more heavily concentrated in this “half” of the county.

Outside of Davidson County, there are currently only pockets of demand for local services. These include Clarksville, Franklin/Cool Springs, Brentwood, the Murfreesboro – Nashville corridor to the southeast, and, to a lesser extent, in the Northeast Corridor in Goodlettsville, Hendersonville, and Gallatin, and to the east in Lebanon.

## IMPACTS OF DEMOGRAPHIC CHANGES

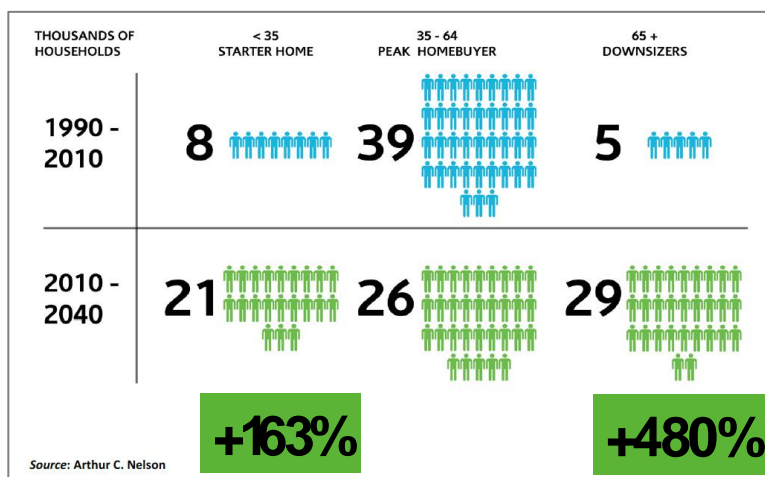
Changing demographics are also driving demand for more and better transit, in particular by three key groups:

- Baby Boomers, who prefer to age in place and desire to drive less and use transit more.
- Millennials, who have a very strong desire to use the most convenient travel option for different types of trips rather than driving everywhere. In particular, Millennials want to use transit more and to drive less.
- Minorities, including immigrants, who traditionally use transit to a much greater extent than others.

### Baby Boomers

Baby Boomers are quickly becoming seniors. Many want to age in place, meaning growing older in their own homes and communities without having to move to secure necessary support services, and most are remaining active for much longer. However, as with older adults before them, they have a greater desire and need to use transit than middle-aged residents. According to NashvilleNext, between 2010 and 2040, the number of households in Davidson County headed by persons 65 or older will increase by 480%.

#### CHANGE IN NASHVILLE HOUSEHOLDS, BY AGE



Source: NashvilleNext



## Millennials

Throughout the United States, Millennials are driving demand for better transit. To date, Nashville has been very successful in attracting Millennials, and Millennials now represent 30% of the city's population. The percentage of Millennials in the surrounding nine counties is nearly as high, at 29%.

However, there are also signs that better transit will be needed to ensure that this population stays in Nashville. A recent survey conducted on behalf of The Rockefeller Foundation and Transportation for America<sup>1</sup> reported that nearly two-thirds of Millennials nationwide view access to high quality transportation as one of the top three criteria when deciding where to live next. Key takeaways from the survey were:

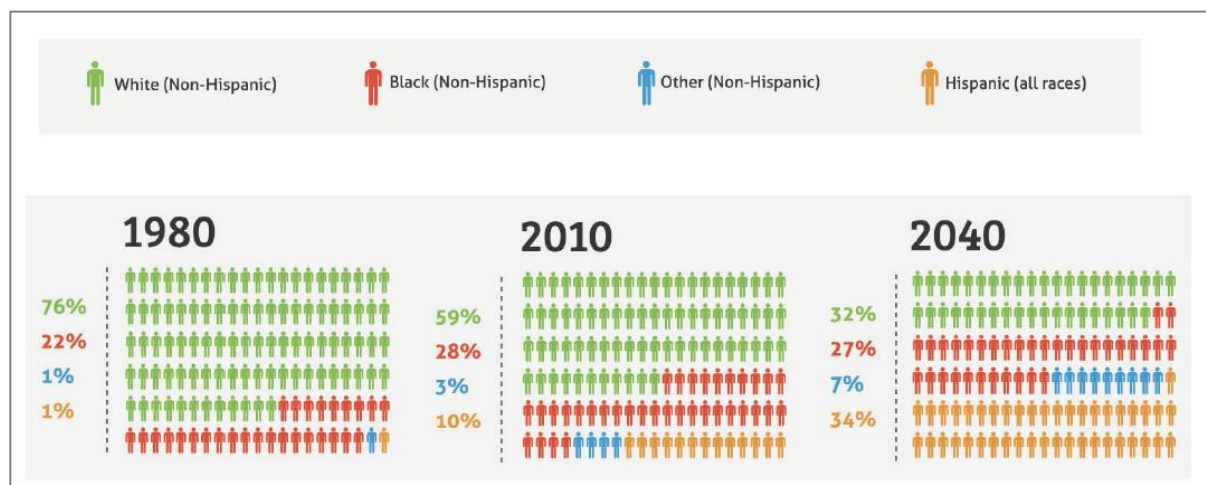
- 54% of Millennials would consider moving if another city had more and better transit options.
- 47% of Millennials would give up their cars if their city had robust public transportation.
- Cities that don't invest in effective transit solutions today stand to lose out in the long run.

## Minorities

Minority residents use transit to a greater extent than non-minority residents. One major reason for this is that minority residents, on average, have lower incomes, and transit provides a much more affordable travel option. Also, many minority residents are new immigrants and come from places where transit is much more commonly used.

Nashville's population has become more diverse since the 1980s when 76% of the population was white. By 2010, the percentage of white residents had declined to 59%. Between 2010 and 2040, the Hispanic population is projected to grow to 34%, and Hispanics will be the largest population group.

### POPULATION DIVERSITY



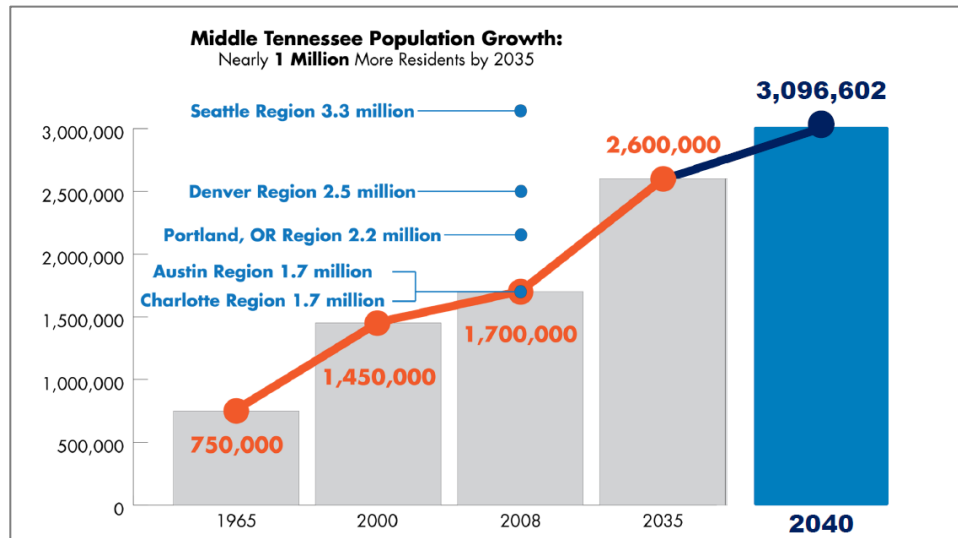
Source: NashvilleNext

## FUTURE TRANSIT DEMAND

Between 2010 and 2040, the population of the 10-county Middle Tennessee region will grow by 80% from 1.7 million to nearly 3.1 million. With this growth, the Nashville area will become larger than the Denver area is today, and nearly as large as the Seattle area is today.

<sup>1</sup> Rockefeller Millennials Survey, April 2014

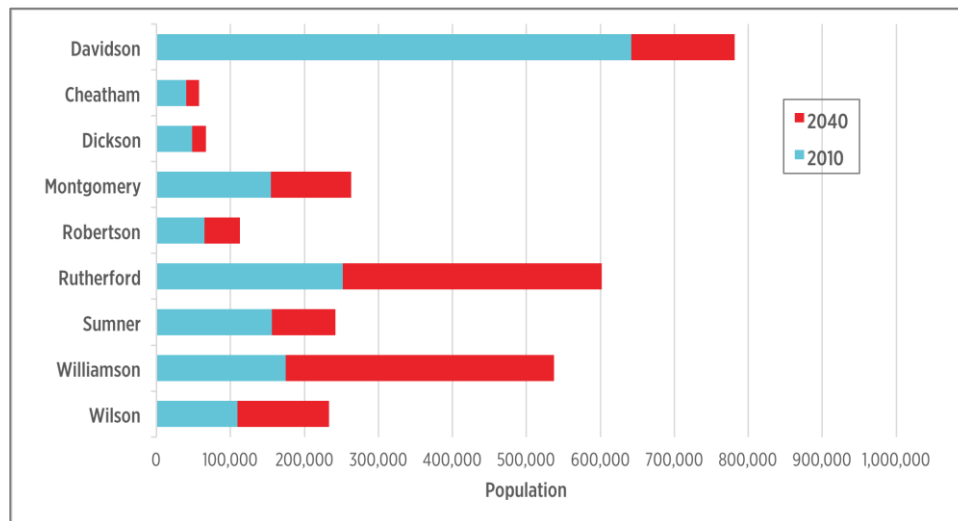
## NASHVILLE AREA POPULATION GROWTH



Source: Nashville Area MPO

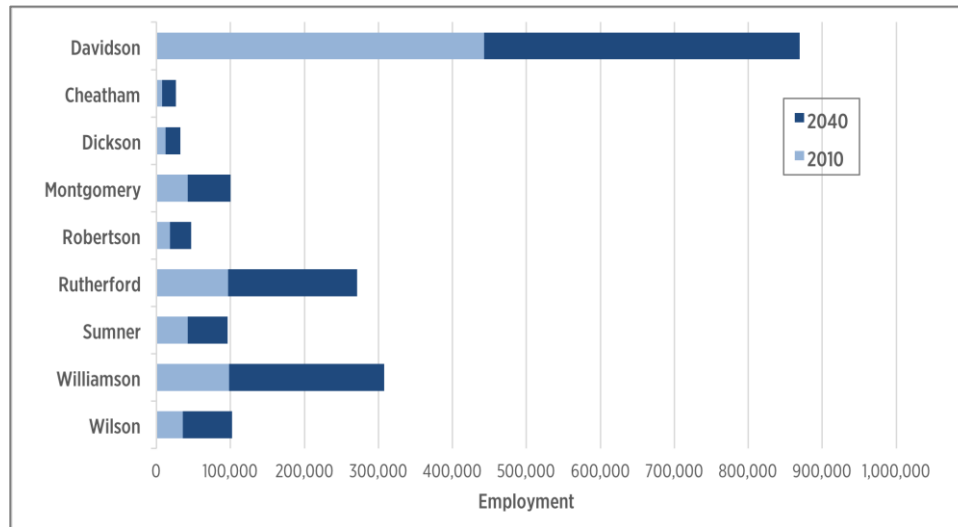
Most of this population growth will occur in the nine counties surrounding Davidson County. The largest amount of growth, in both percentage terms and absolute terms, will be in Williamson and Rutherford Counties. In Williamson County, population is projected to increase by 207%, and in Rutherford County, it is projected to increase by 135%. While Davidson County will remain the center of the region and its largest county, its population is projected to increase by only 22%.

FIGURE 1 MIDDLE TENNESSEE POPULATION GROWTH



Employment is projected to grow to an even greater extent than population, from 796,000 jobs in 2010 to over 1.8 million jobs in 2040, or by 133%. As with population growth, jobs will grow faster in the nine counties that surround Davidson County than in Davidson County. However, Nashville and Davidson County will remain the region's employment center, with over 47% of the region's jobs.

FIGURE 2 MIDDLE TENNESSEE EMPLOYMENT GROWTH



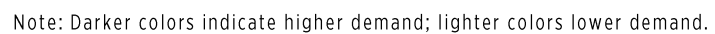
Much of the growth in residential population and employment between 2015 and 2040 will occur in and around established cities and towns, particularly along major regional corridors radiating out from Nashville. There will also be significant growth widely dispersed across currently undeveloped areas. The increase in more transit supportive development along the major corridors indicates potential demand for new or increased regional services to and from Nashville, especially all-day and reverse-commute services:

- **Southeast**, along I-24 and US 41, including the communities of Murfreesboro, La Vergne, and Smyrna. (This corridor is already served by RTA Routes 84X Murfreesboro Express and 86X Smyrna/La Vergne Express during peak hours, as well as by Route 96X Murfreesboro Relax & Ride, which operates trips in both directions throughout the day.)
- **South**, along I-65, connecting to Brentwood, Cool Springs, Franklin, and Spring Hill. (This corridor is currently served by Routes 91X Franklin Express and 95X Spring Hill Express.)
- **Northeast**, including Goodlettsville, Hendersonville, and Gallatin. (This corridor is currently served by Routes 87X Gallatin Express and 92X Hendersonville Express.)

## DEMAND FOR NEW SERVICE IN MIDDLE TENNESSEE

As described above, between 2010 and 2040, the population of the 10-county region will grow by 80% from 1.7 million to nearly 3.1 million, and the number of jobs will grow by 80% from 1.1 million to nearly 1.9 million. These increases will have profound impacts on travel within the region, including the demand for transit:

- The number of commuters to Nashville will increase significantly, as 111% of the region's population growth will be in the nine counties surrounding Davidson County, and 38% of the new jobs will be created within Davidson County. This will create significant new demands for commuter services to and from Nashville's core.
- By 2040, the number of jobs outside of Davidson County will increase from 534,000 to more than a million, and from 50% of the region's total to 55%. These increases in jobs will mean that many Davidson County residents will begin commuting to jobs outside of Davidson County, which will increase the demand for reverse commute service.
- Increases in both population and jobs will increase the demand for local services, both to serve local trips and connect with regional services. This will increase the demand for all day local and regional services (as has already occurred in the Murfreesboro – Nashville corridor).





Along all three corridors, higher levels of development will likely produce demand for more all-day and reverse-commute service, such as Route 96X Murfreesboro Relax & Ride, which serves Murfreesboro, Smyrna, and La Vergne throughout the day. There also will likely be demand for all-day regional services in the northeast, east, and south corridors.

## NEW AND EXPANDED LOCAL SERVICES

In some regional centers, increasing population and employment levels will create demand for new and expanded local services. At present, local transit service is provided in Clarksville, Franklin, and Murfreesboro. As these communities grow, the demand for more local service will grow. In addition, demand for local service will emerge in many communities that are not served currently:

### Northeast

- Goodlettsville
- Hendersonville
- Gallatin

### East

- Lebanon

### Southeast

- La Vergne
- Smyrna

### South

- Brentwood
- Cool Springs

MURFREESBORO ROVER



CLARKSVILLE TRANSIT SYSTEM



The Nashville Area MPO's 2035 Regional Transportation Plan stresses the need for improved local transit services:

- **Urban Fixed-Route Service:** "By far the most critical piece of the long-range vision, the region must continue to expand the existing urban fixed-route services in Nashville, Clarksville, Franklin, and Murfreesboro. Urban services are the backbone of any regional transit system and must be optimized in order to ensure the success of investments in regional rapid transit or commuter rail. The transit vision calls for continued investment in existing local bus systems, the eventual introduction of fixed-route service in Springfield, Gallatin, Lebanon, Columbia, and Dickson, and the return of the urban streetcar in downtown Nashville, which serves as the central hub for the region."
- **Suburban and Commuter Circulators:** "As the region begins to implement rapid transit, commuter rail, or express coach services in each of the regional corridors, the vision calls for the development of local circulators in markets where a full-fledged urban fixed-route system would not make sense. Such local circulation will be important to customers to access regional services from primary destinations within their community. Suburban circulators, which would operate throughout the day, are envisioned for places like Goodlettsville, Hendersonville, Smyrna, La Vergne, and Brentwood, while commuter circulators, which



would operate during peak commuting times, are envisioned for places like Portland, Spring Hill, Kingston Springs, and Ashland City.”

There are a number of different ways in which local services could be expanded. For example, services that already exist could expand outward:

- Nashville MTA could expand to Goodlettsville, Hendersonville, Gallatin, La Vergne, Smyrna, and Brentwood.
- Franklin Transit could expand north and south to Cool Springs and Spring Hill.
- Murfreesboro’s Rover could expand north to Smyrna and La Vergne.

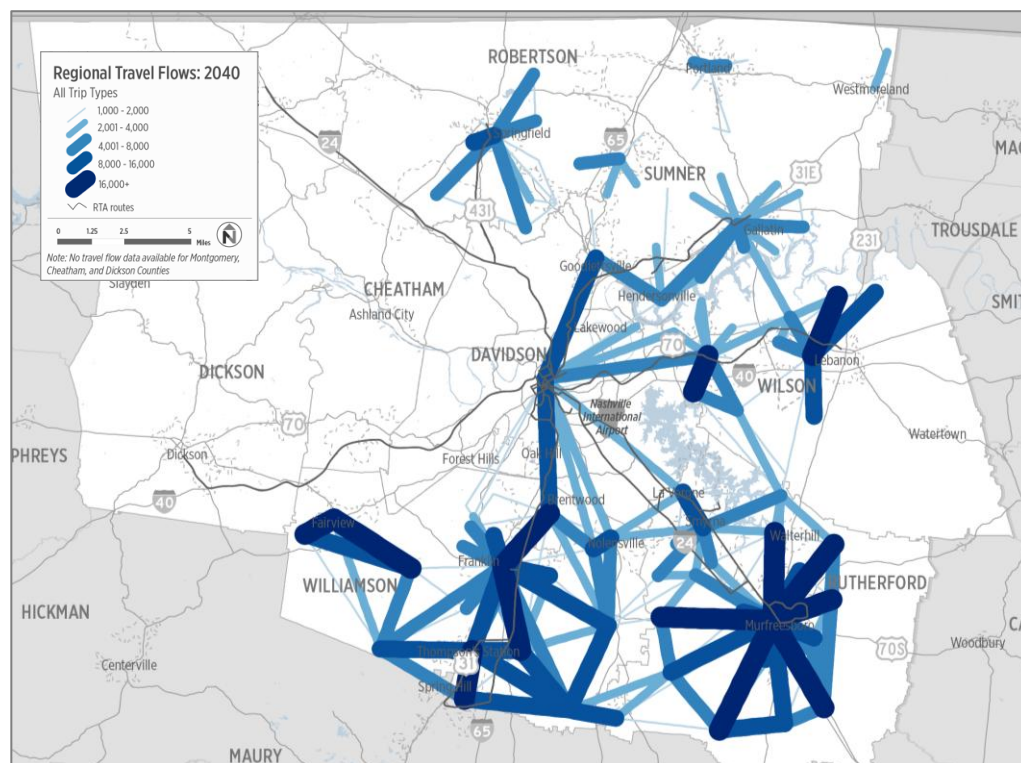
A second option would be that RTA could begin providing local services in emerging areas, including those listed above and others such as Lebanon. A third option would be that local communities could develop their own systems, similar to the approaches used in Clarksville, Franklin, and Murfreesboro.

## ALL-DAY REGIONAL SERVICE

Through 2040, demand for all-day transit service will grow between a number of regional centers and Nashville and to and from regional centers. As shown in the figure below, there will be high levels of transit demand along four regional corridors:

- **Northeast Corridor**, between Gallatin and Nashville, including Hendersonville and Goodlettsville
- **East Corridor**, between Lebanon and Nashville, which is served by the Music City Star
- **Southeast Corridor**, between Murfreesboro and Nashville, including Smyrna and La Vergne
- **South Corridor**, between Spring Hill and Nashville, including Franklin, Cool Springs, and Brentwood, and potentially between Cool Springs and Maury County

FIGURE 3 2040 REGIONAL TRAVEL FLOWS – ALL TRIP TYPES





#### East

- Lebanon

#### Southeast

- La Vergne
- Smyrna

#### South

- Brentwood
- Cool Springs

#### RTA EXPRESS SERVICE



The increases in jobs within these areas will create much more bi-directional demand than currently exists. Whereas these corridors are all currently served by express service, the services are designed to accommodate those who commute to Nashville and not those who commute from Nashville. Potential options for reverse commuter services include bi-directional service on the Music City Star and existing express routes and new reverse commute routes. In addition, the development of all-day regional services, as described above, could also serve reverse commute trips.