



# motion NASHVILLE MTA/RTA STRATEGIC PLAN



## STATE OF THE MTA SYSTEM ASSESSMENT OF THE EXISTING SYSTEM





# ASSESSMENT OF THE EXISTING SYSTEM

## MAJOR ISSUES

As described in the Overview of Existing Services, there are a number of issues with MTA's existing services:

- **The expansion of Nashville MTA services has not kept pace with growth.** Nashville has grown from a small city to a medium-sized city. The area's population and employment, and associated travel levels, have grown much faster than MTA services.
- **Projected growth will continue to outstrip the MTA's ability to expand.** Nashville and the region will continue to grow rapidly—much more rapidly than MTA will be able to expand service based on current funding streams.
- **The MTA provides small city service for an area that is no longer small.** In many respects, the MTA provides small city services for a city that has grown much larger. This can be seen in the number of routes that are provided, and particularly in terms of services that operate infrequently, evening service that ends early, and limited weekend service.
- **Transit demand will grow faster than population growth.** Projected demographic changes will mean that transit demand will increase faster than population growth. Demand for transit is growing rapidly among many groups—among people who already live in the Nashville area as well as among those that are moving here. Key groups who desire better transit options include Baby Boomers, Millennials, and minorities.
- **Service is not attractive to most residents.** Because service coverage, service frequencies, and the hours and days of service are limited, transit is not convenient for residents and employees who have other options. In other words, a broad cross-section of the region's population does not find transit attractive enough to use when they have a choice about how to travel.

These issues mean that the Nashville MTA needs to both catch up with the growth that has already occurred and continue to grow much faster to keep pace with future growth.

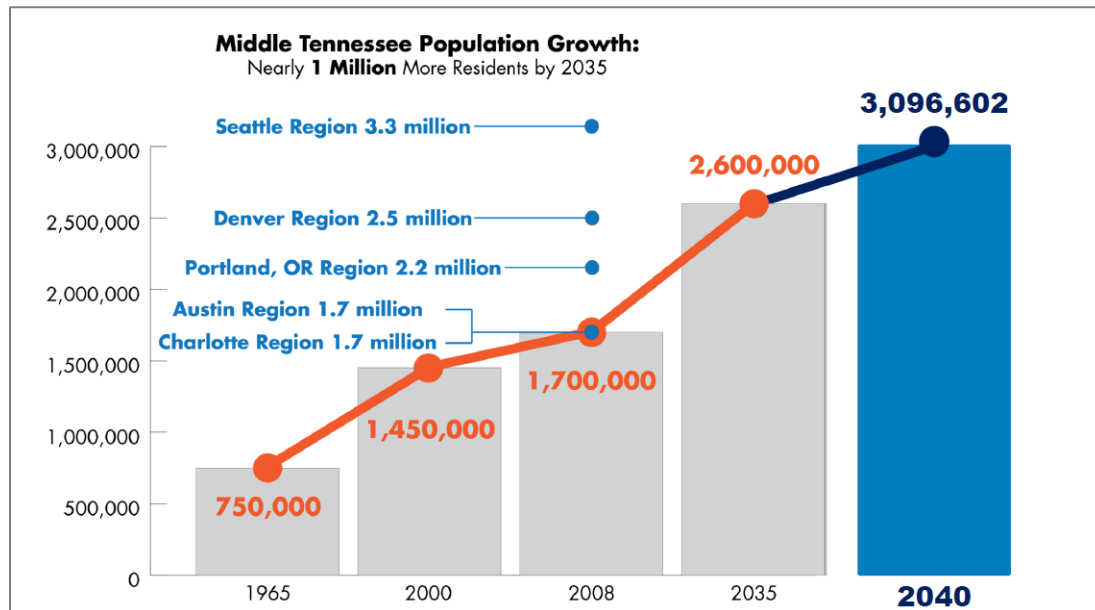
## SERVICE IMPROVEMENTS HAVE NOT KEPT PACE WITH GROWTH

Since 1965, the Nashville region has grown from approximately 750,000 residents to over 1.7 million (see Figure 55). Today, the Nashville area is approximately the same size as the Austin and Charlotte areas. However, the MTA provides only 34% to 46% of the service provided by its counterparts in those two cities.<sup>8</sup>

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<sup>8</sup> In terms of vehicle hours of service.

FIGURE 55 NASHVILLE AREA POPULATION GROWTH



Source: Nashville Area MPO

Looking forward, rapid growth will continue, and by 2035, the region is projected to have 2.6 million residents. This growth will mean that Nashville will become larger than either Portland or Denver are today and nearly as large as Seattle is today. These are all cities that have developed very robust transit systems over the past few decades—transit systems that have made those cities much more livable and competitive.

## CHANGING DEMOGRAPHICS ARE INCREASING TRANSIT DEMAND AT A FASTER RATE THAN POPULATION

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

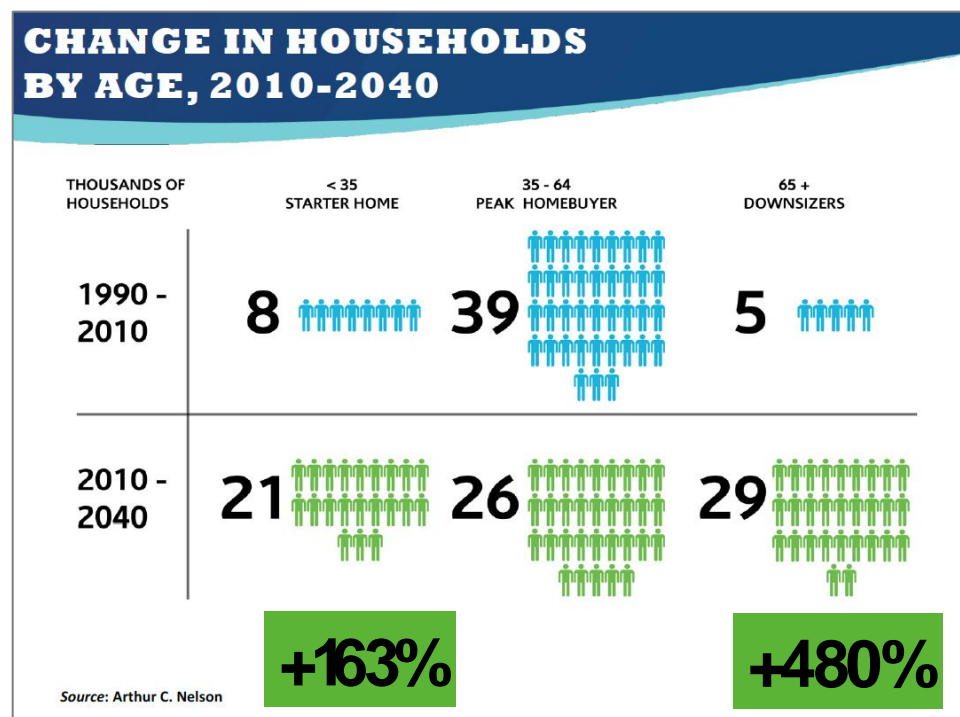
- Baby Boomers, who prefer to age in place and desire to drive less and use transit more.
- Millennials, who have a very strong desire to use the most convenient travel option for different types of trips rather than driving everywhere. In particular, Millennials want to use transit and other options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

Because demand is also increasing from within existing populations, demand has been growing and will continue to grow faster than underlying population growth.

### BABY BOOMERS

Baby Boomers are quickly becoming seniors. Many want to age in place, 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. Between 2010 and 2040, the number of households headed by persons 65 or older will increase by 480% (see Figure 56).

FIGURE 56 CHANGE IN 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; between 2010 and 2040, the number of households headed by Millennials is projected to grow by over 160%. 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>9</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 Millennial respondents 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

The survey included respondents in Nashville, and among Nashville's Millennials:

- 73% would prefer to live in a place where "most people have transportation options so they do not need to rely only on cars" versus "a place where most people rely on cars to get around"
- 64% say they expect to live in walkable places where they don't necessarily need a car, but only 6% say they currently live in such a place

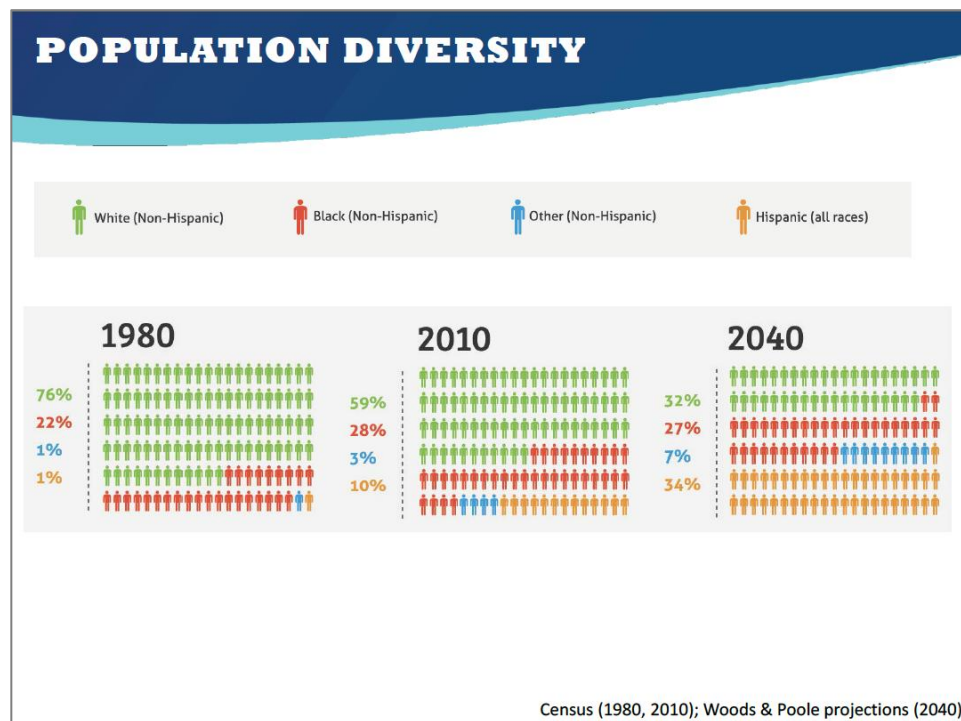
<sup>9</sup> Rockefeller Millennials Survey, April 2014

## 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 at least the 1980s when 76% of the population was white (see Figure 57). 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.

FIGURE 57 POPULATION DIVERSITY



Source: NashvilleNext

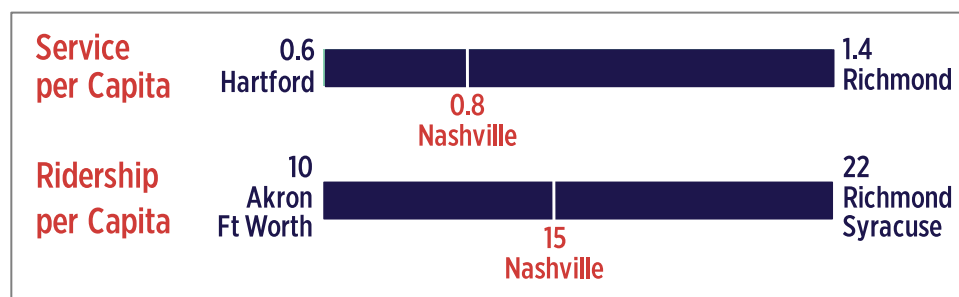
## NASHVILLE MTA PROVIDES SMALL CITY SERVICE FOR A CITY THAT ISN'T SMALL ANYMORE

As described above, Nashville MTA provides much less service than its counterparts in Austin and Charlotte. Even when looking at 14 smaller cities—Albuquerque, Cincinnati, Dayton, El Paso, Fort Worth, Hartford, Indianapolis, Jacksonville, Louisville, Memphis, Richmond, Springfield, MA, Syracuse, and Tampa—the amount of service that Nashville MTA provides is limited (see Figure 58). Compared to these cities, Nashville MTA ranks:

- 10th in the amount of hours of service provided
- 11th in ridership per capita



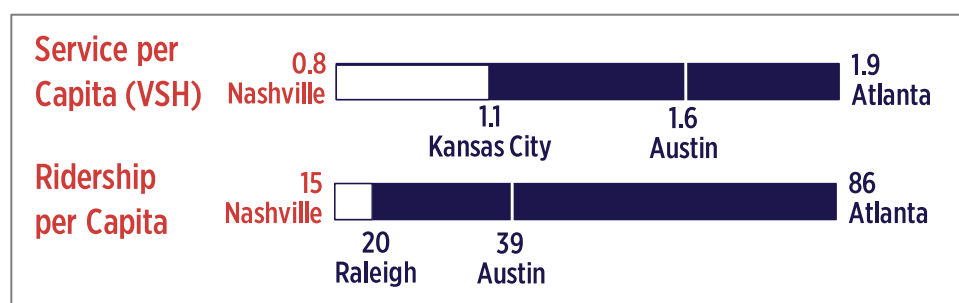
FIGURE 58 FIXED-ROUTE SERVICE AND RIDERSHIP COMPARED TO CURRENT PEER CITIES



Compared to six larger cities that are more comparable to how Nashville has already grown and is growing now—Atlanta, Austin, Charlotte, Denver, Kansas City, and Raleigh—the differences are even larger (see Figure 59). MTA ranks:

- Second to last in the amount of hours of service provided
- Lowest in ridership per capita

FIGURE 59 FIXED-ROUTE SERVICE AND RIDERSHIP COMPARED TO ASPIRATIONAL PEER CITIES



## TOO MUCH SERVICE ISN'T CONVENIENT

Service coverage, in terms of where routes operate, is generally comprehensive. However, a very large proportion of service operates for short hours and infrequently.

### SERVICE COVERAGE

With the exception of a few express routes, MTA service is limited to the city limits of Nashville. Service coverage is focused on the more developed areas, which is generally appropriate. The “preferred future” identified in NashvilleNext envisions that new development will be much more concentrated in “centers” and along major corridors, with a much greater emphasis on mixed-use development. This concentration of development will make it easier to serve more residents with transit.

FIGURE 60 2010 TRANSIT DEMAND

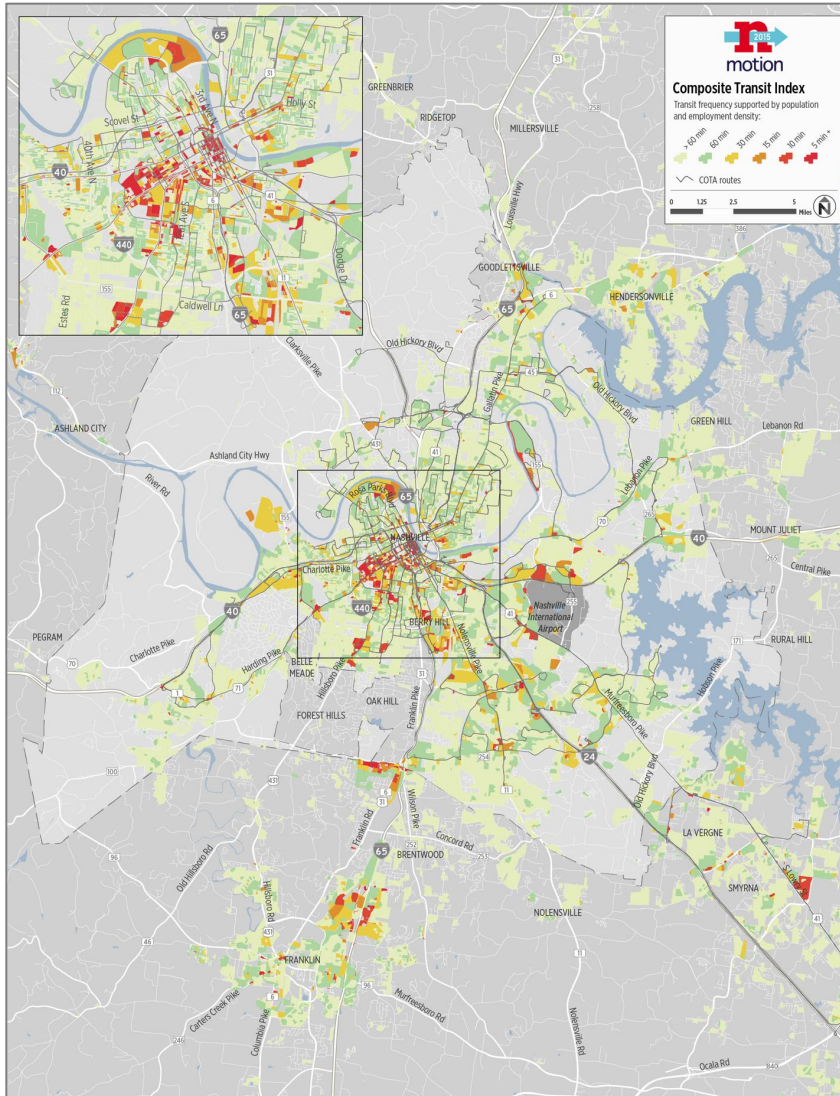
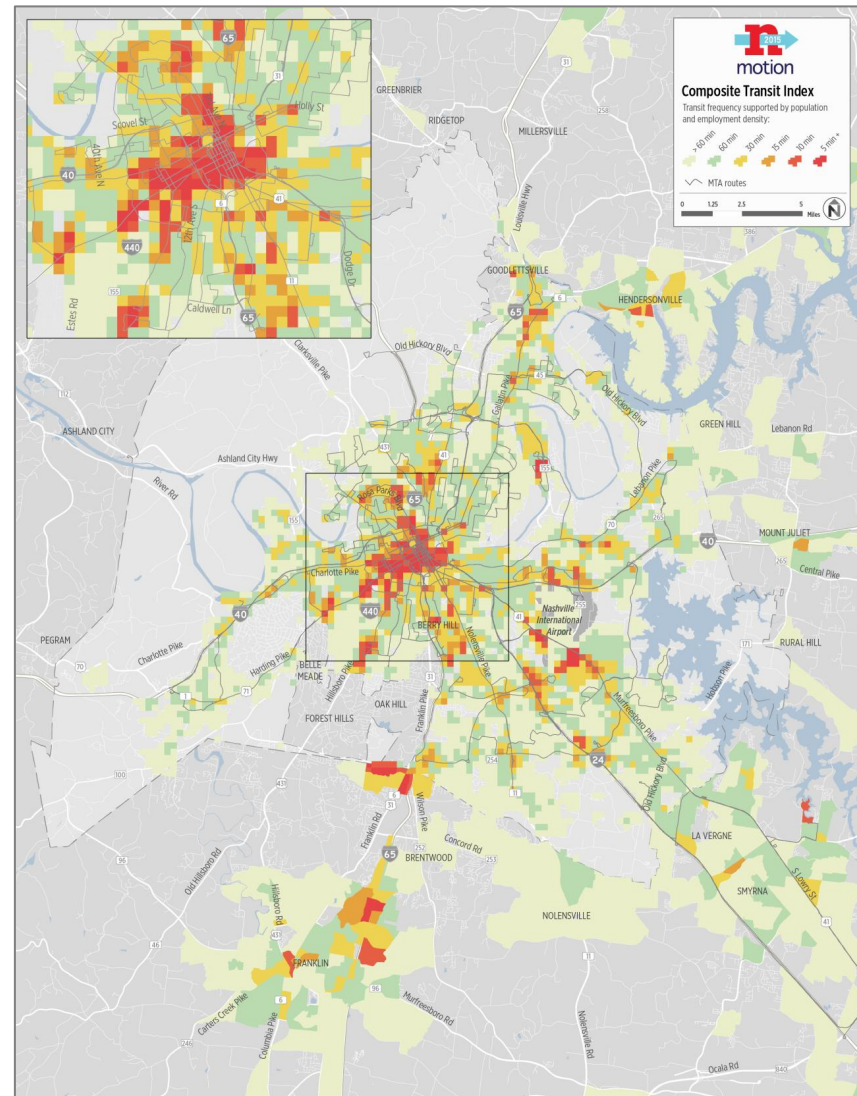


FIGURE 61 2040 TRANSIT DEMAND





Looking forward to 2040, and with expected changes to development patterns as a result of NashvilleNext, most new growth in Davidson County will occur within MTA's existing service area (see Figures 60 and 61). This indicates that higher service levels will be needed on existing routes, and that there will be demand for different types of High Capacity Transit in many corridors, including:

- Charlotte Pike
- Clarksville Pike/MetroCenter area
- Dickerson Pike
- Gallatin Pike
- Lebanon Pike
- Airport corridor
- Murfreesboro Pike
- Nolensville Pike
- 21<sup>st</sup> Avenue/Hillsboro Pike
- Broadway/West End Avenue

In addition, as the city has grown outward, a smaller proportion of trips are being made to and from downtown, and more trips are being made between outer areas. Through 2040, downtown Nashville will continue to be the focal point of the greatest number of trips, but trips between other areas will become more important.

At present, the MTA system is primarily a radial network where nearly all the routes operate to and from Music City Central in downtown Nashville. The MTA radial service design means that passengers who are traveling between outer areas must do so through downtown, which is inconvenient. To become more convenient, the MTA will need to develop more "cross-town" services.

NashvilleNext envisions a robust High Capacity Network that includes a large number of radial High Capacity Transit lines as well as a large number of cross-town or circumferential lines (see Figure 9). A comparison of projected travel patterns with the NashvilleNext conceptual plan indicates that some of those lines would likely go beyond areas of projected demand. Nonetheless, it is clear that more non-downtown-oriented services will be needed.

## DAYS OF SERVICE

The MTA operates 46 routes on weekdays, 29 on Saturdays, and 23 on Sundays (see Figure 62).<sup>10</sup> Of the 46 weekday routes, 33 are "Most Frequent" or "Frequent" routes (including BRT Lite) that provide all-day service; 11 are Limited routes, that, as the name indicates, provide only limited service; and three are Music City Circuit Routes that circulate through the downtown core.

The full service routes, through their all day nature, are designed to serve a wide range of trip types, and most operate seven days a week. However, the limited service routes, which comprise the largest number of routes, and provide most of the service to outer areas, are generally designed to serve commute trips and only operate during peak periods. As a result, they do not serve most trips types on any days. Thus, in terms of all day service that passengers can utilize for non-work trips, the MTA provides service on only 32 routes on weekdays, 28 on Saturdays, and 23 on Sundays.

## SERVICE FREQUENCIES

As indicated above, the MTA classifies its routes in the following ways:

- Most Frequent, meaning that they operate on weekdays at least every 30 minutes
- Frequent, meaning that they operate every 30 to 90 minutes

<sup>10</sup> Includes Music City Circuit routes and RTA regional routes.

- Limited, meaning that they only provide limited service (usually oriented toward commuters)

Using these classifications, 21 routes are Most Frequent, 14 are Frequent, 21 are Limited, and three are Music City Circuit routes.

Most riders consider service that operates every 10 minutes or less as very convenient and service that operates every 15 minutes or less as relatively convenient. Conversely, service that operates every 30 minutes or more becomes too infrequent for most travelers who have other ways to travel, such as driving. In terms of these more common definitions of frequency, on weekdays during the day (through the end of the PM peak) the following service is available (see Table 9):

- Only 3 routes provide service every 15 minutes or better throughout the day on weekdays
- 16 routes provide service every 16 to 30 minutes
- 11 routes provide service every 31 to 60 minutes
- 23 routes provide only limited service (the Limited routes and one Frequent route that operates only every 90 minutes)

On weekday evenings and on weekends, service is much less frequent. During these times only two Music City Circuit routes operate every 15 minutes, and only three Most Frequent routes operate every 30 minutes. All other routes operate less frequently; most operate every 60 minutes or worse.

The lack of frequent service is one of the major issues facing MTA. In spite of the official route classifications, relatively little service operates frequently enough for most potential riders to consider service to be convenient.

FIGURE 62 NUMBER OF ROUTES BY DAY

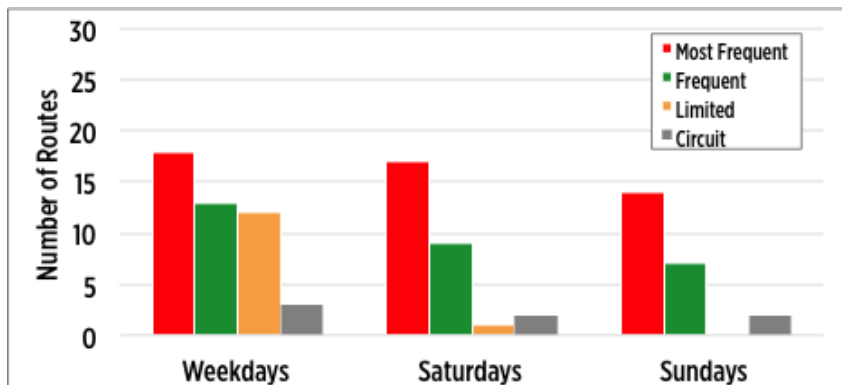
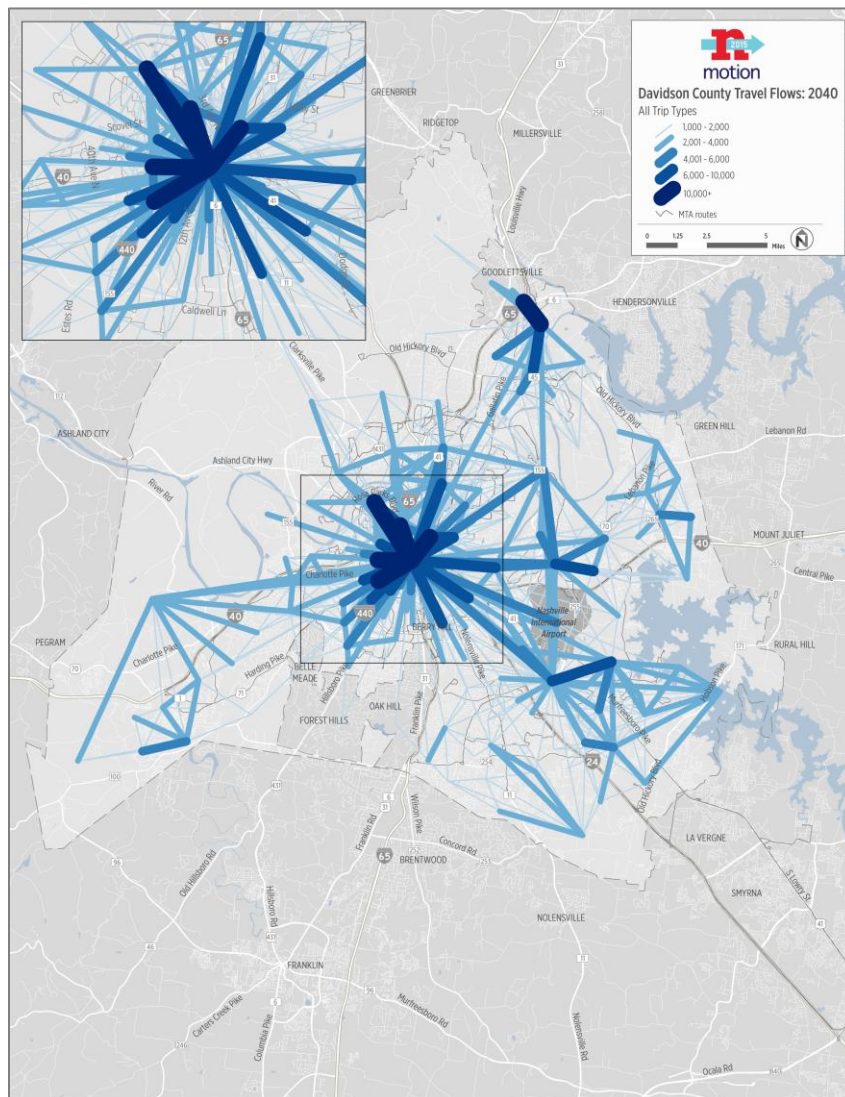
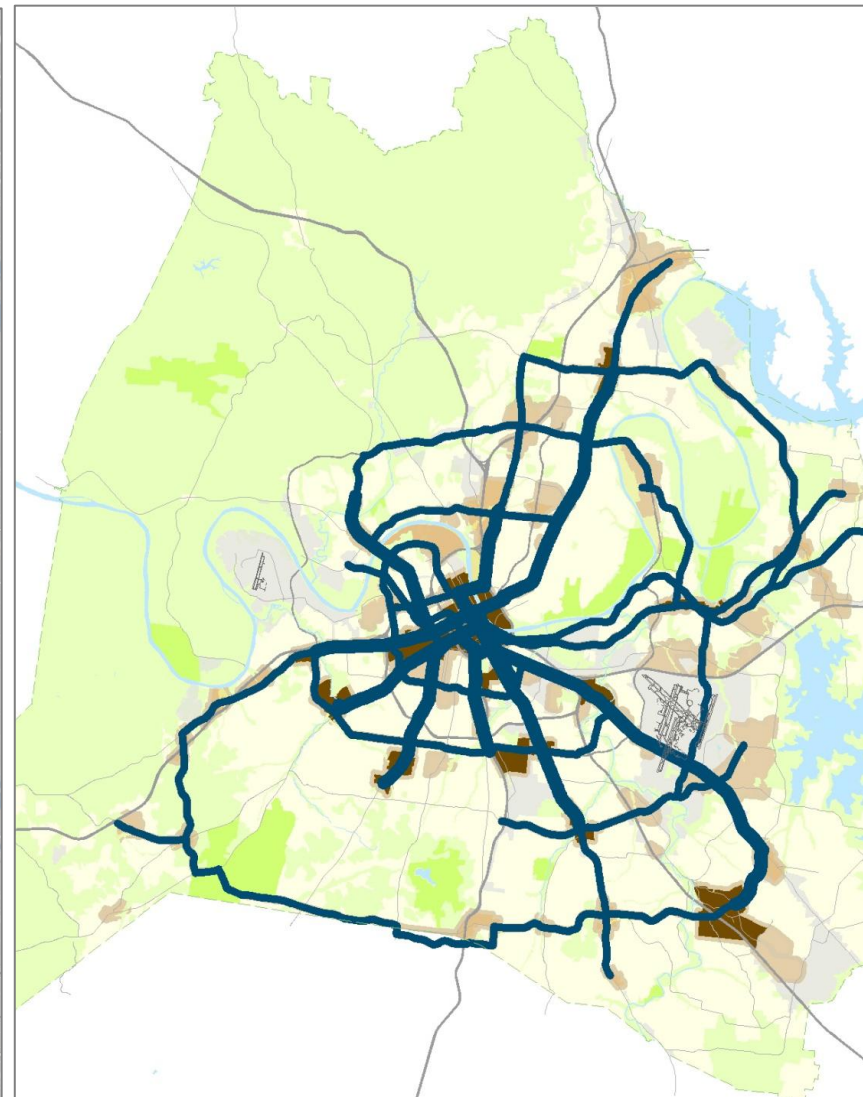


FIGURE 63 2040 PROJECTED TRIP PATTERNS (ALL TRIPS)



Data Source: Nashville Area MPO

FIGURE 64 NASHVILLE NEXT CONCEPTUAL HIGH CAPACITY TRANSIT NETWORK



Source: NashvilleNext

TABLE 9 MTA SERVICE FREQUENCIES BY HEADWAY RANGE

Classification	Weekdays			Saturdays	Sundays
	Peak	Midday	Evening		
<div></div> Most Frequent					
Every 15 minutes or better	4	3	0	0	0
Every 16 – 30 minutes	11	11	3	0	0
Every 31 – 60 minutes	3	4	14	17	14
No service	0	0	1	1	4
<div></div> Frequent					
Every 16 to 30 minutes	5	2	0	0	0
Every 31 – 60 minutes	8	8	9	8	7
Less than Hourly	1	3	1	1	1
No service	0	1	4	5	6
<div></div> Circuit					
Every 15 minutes or better	0	3	0	2	2
Every 16 – 30 minutes	0	0	2	0	0
Every 31 – 60 minutes	2	0	0	0	0
No service	1	0	1	0	0

## SPANS OF SERVICE

The span of service—meaning the hours that service operates during the day—is a second factor that strongly influences the convenience of the transit system. For a major urban transit system, the MTA’s spans of service are short:

- On weekdays, service starts early, with the first bus going into service at 4:40 a.m. and most routes beginning service around 5:00 a.m. However, of the 35 non-express/limited routes, 15 end service before 10:00 p.m. These include the three BRT Lite routes, which are MTA’s highest ridership routes, which end service at 9:15 p.m. (after which time local service continues to operate until 11:15 p.m.). All service ends by 11:15 p.m.
- On Saturdays, most service starts between 5:00 and 6:00 a.m., which is reasonably early. However, as with weekdays, service ends relatively early. Most service ends by 10:15 p.m., and only two routes operate until 11:00 p.m. (the Blue and Green Music City Circuit routes). These ending times are especially early considering the role nighttime entertainment plays in Nashville’s economy.
- On Sundays, as on Saturdays, most service begins between 5:00 and 6:00 a.m., which is relatively early for Sunday service. One route—Route 18 Airport/Downtown Hotels—operates until 10:40 p.m., but all other service ends before 10:00 p.m.

## TOO FEW HIGH QUALITY SERVICES ARE PROVIDED

Throughout the country, there has been an increased emphasis on the development of new types of higher quality transit services. These include commuter rail, rapid transit, light rail, Bus Rapid Transit, Rapid Bus/BRT Lite, streetcar, and more. As indicated by the development of the Music City Star and BRT Lite services and efforts to develop the AMP, the MTA has already started to develop premium services. However, with those exceptions, the majority of the MTA’s most important bus routes continue to provide regular local service.



To develop a great transit system, the MTA and the region will need to significantly expand efforts to develop high quality services. The development of a High Capacity Transit Network of BRT, BRT Lite, and other high quality services—as has been done in other cities—would make it convenient to travel throughout Davidson County. While the specific types of high quality services that could be included in this network have not yet been determined, a High Capacity Transit Network consisting of premium services will be a key element in developing more compelling transit service.

## SUMMARY

Since its inception, Nashville MTA has expanded and improved its services as resources have allowed. In recent years, those improvements have included Music City Central, the Music City Circuit routes, and BRT Lite service. However, MTA's resources have not grown nearly as fast as Davidson County or the demand for better transit. As a result, Nashville is a medium-sized city that is growing to become a large city, with a transit system designed to serve a small city.

Due to demographic and attitudinal changes, the demand for better transit is growing faster than just population or employment. Baby Boomers who are growing older want to drive less and take transit more, and Millennials who will determine Nashville's future want many more travel choices, particularly better transit. Minorities who traditionally use transit in very high numbers will comprise most of the county's population by 2040.

Long-time residents and businesses also desire better and more transit in increasing numbers. The *2014 Nashville Vital Signs Report*, which was produced by the Nashville Chamber of Commerce and the Nashville Area MPO, concluded that, "The ability of our residents to move around the region in their cars is quickly deteriorating and will continue to do so unless we provide better transit options." The stakeholder outreach process conducted for NashvilleNext showed that improving transit was the second highest priority for Nashville's residents, and the "preferred future" includes a much stronger transit system. In sum, the demand for better transit is being driven by growth itself and by long-time residents and businesses who understand that Nashville will need a much stronger transit system to sustain that growth and to prosper.

To achieve this, significant transit investments will be needed—both to address the issues described above and to develop a more robust system that will be attractive to a much broader cross-section of Davidson County's residents, workers, and visitors.