2015 motion

# MTA/RTA STRATEGIC PLAN


## APPENDIX 1

# STATE OF THE MTA SYSTEM

7/20/2015

Nashville MTA

RTA

NELSON NYGAARD

GRESHAM SMITH AND PARTNERS

CAMBRIDGE SYSTEMATICS

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# INTRODUCTION

The Nashville region is one of the fastest growing areas in Tennessee and in the United States. Davidson County is projected to grow by 14.2% by 2035, from 659,000 residents to over 750,000 residents. As the Nashville area continues to grow, transit must play an increasingly important role in providing an efficient and convenient travel option. Changing demographics and changing transportation preferences in the Nashville region call for a fresh look at how transit can serve residents, employees, and visitors.

The Nashville MTA Strategic Plan is the vision for transit in Nashville and Davidson County. The plan will determine what the region needs to create a great transit system over the next 20 years, with a particular focus on what can be accomplished over the next five years. The Strategic Plan will look at the transit service that exists today, identify the opportunities to expand transit service to meet the growing needs of the region, and determine how to make it all happen. Ultimately, the plan will provide a blueprint for transit projects and policies that will make the growing region a better place to live and do business.

The first step of the Strategic Plan process was to assess the state of the existing transit system. This State of the System Report provides an overview of existing transit services and an evaluation of how well these services match transit demand in Davidson County both today and 20 years in the future. Based on those findings, this report presents the key issues facing the Nashville MTA and serves as a starting point for the strategies and recommendations that will inform the final Strategic Plan.

This report is comprised of four chapters and an appendix:

- **Overview of Existing Services.** An overview of MTA's current services and operating characteristics. A careful review of the existing transit services is one piece of understanding where transit in Davidson County needs to change and will inform the vision for improving services.
- **Market Analysis.** An analysis of the underlying demand for transit throughout Davidson County, at present and in 2040. Developing an understanding of future growth patterns and changes to demographics helps to inform where transit service is needed both today and in the future.
- **Peer Review.** A comparison of the transit service, spending, ridership, and other characteristics of MTA compared to other similar and aspirational systems. The peer review helps to illustrate how transit is provided and performing in cities of similar size to Nashville and cities that are the size to which Nashville is growing.
- **Assessment of the Existing System.** An assessment of the MTA's existing system in light of current performance, transit demand, and feedback from stakeholders and members of the community. The assessment identifies key issues that the Nashville MTA Strategic Plan will need to directly address through specific strategies based on the local operating environment and national best practices.
- **Route Profiles.** A one-page summary of the performance of each MTA route. These profiles identify the strengths and weaknesses of individual routes to illustrate which are performing well and which have opportunities for improvement.

# OVERVIEW OF EXISTING SERVICES

## NASHVILLE MTA SERVICES

The Nashville Metropolitan Transit Authority (MTA) provides transit service throughout much of the Nashville metropolitan area. These services consist of fixed-route bus service for the general public and AccessRide paratransit service for those with special needs.

### FIXED-ROUTE TRANSIT SERVICE

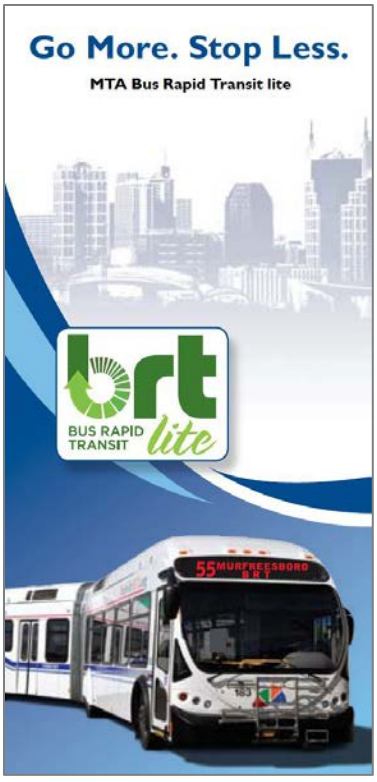
MTA operates 46 routes that are designed to provide service to the general public. Five different types of bus service are provided (see also Figure 1):

- **BRT Lite**: At the top of MTA's service hierarchy are "BRT Lite" routes that provide premium service. These routes provide fast service and a higher level of amenities than "regular" bus service. They are faster due to the use of transit signal priority that extends the green phase of signals to reduce delays due to red lights and because they serve fewer stops (that are spaced approximately three quarters of a mile apart). The routes also feature 60-foot articulated buses and premium stops with real-time passenger information. They provide service every 15 minutes during the day.

  At present, there are three BRT Lite routes:

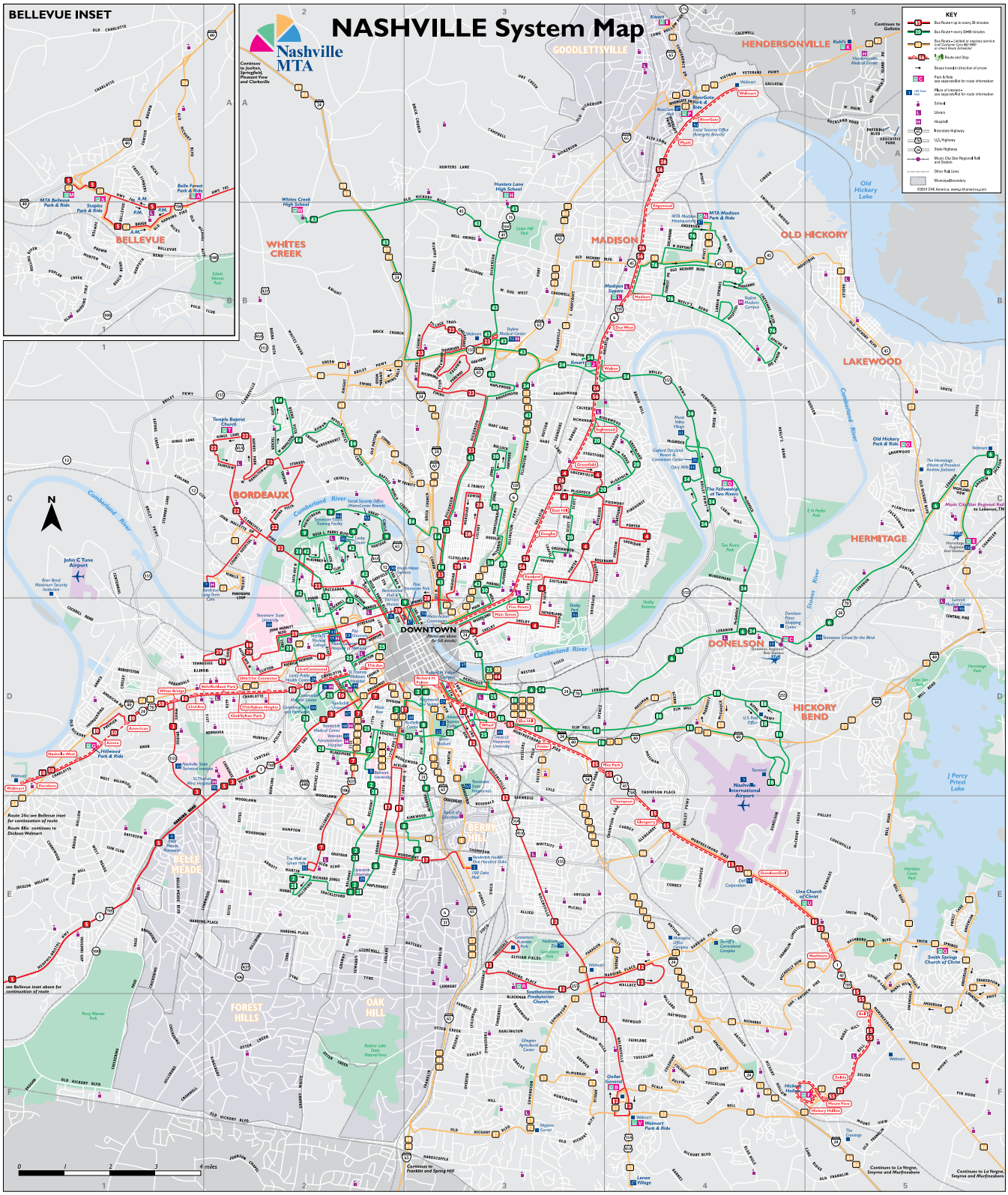
  – Route 50 Charlotte BRT, which operates between the Walmart at River Road and Music City Central largely along Charlotte Pike
  – Route 55 Murfreesboro Pike, which operates between the Global Mall at the Crossings and Music City Central largely along Murfreesboro Pike
  – Route 56 Gallatin Pike, which operates between the Walmart in Rivergate and Music City Central largely along Gallatin Pike

  BRT Lite service will soon be implemented in the Nolensville corridor.



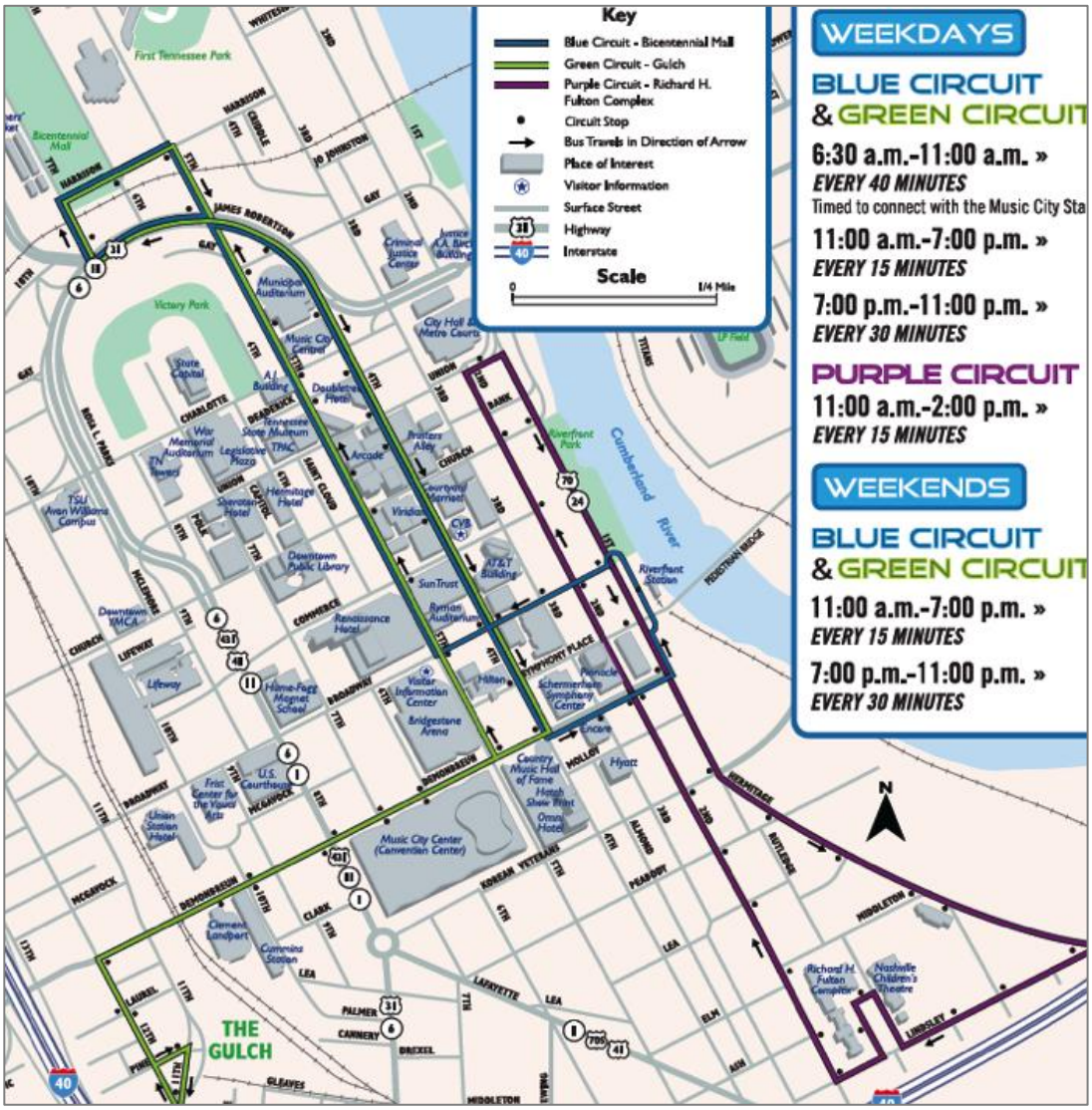

- **Most Frequent:** MTA's Most Frequent routes are those with daytime frequencies of 30 minutes or less. These routes serve most of the city's corridors and denser neighborhoods. Seventeen routes are designated as Most Frequent.
- **Frequent:** Routes classified as Frequent have daytime frequencies from 30 to 90 minutes. Many neighborhood routes fall into the Frequent category, while some corridor routes are also classified as Frequent. Fourteen routes are designated as Frequent.
- **Limited:** Limited routes provide, as the name implies, limited service. Most of these routes are express routes that only operate on weekdays during peak periods, but some are local routes that only operate for limited hours. In total, there are 22 Limited Routes, 18 of which are express routes. One of the express routes—Route 96X Nashville/Murfreesboro Relax and Ride—is operated by MTA but is marketed as an RTA route.

FIGURE 1 SYSTEM MAP



- **Music City Circuit:** Music City Circuit routes provide free service around downtown Nashville. There are three Music City Circuit routes (see Figure 2).

FIGURE 2 MUSIC CITY CIRCUIT SERVICES




It should be noted that there are inconsistencies between how MTA classifies its services and how the public perceives them. For example, the BRT Lite routes are the highest quality routes that MTA provides, but the "Lite" moniker implies something less. Conversely, "Most Frequent" routes can operate as infrequently as every 30 minutes, and "Frequent" routes can operate as infrequently as every 90 minutes. These are relative classifications that are very different from how passengers typically view frequency.

## Fares

MTA's adult cash fares are $1.70 for BRT Lite and other local bus services and $2.25 for express services. Seniors and people with disabilities are eligible for a discounted fare of 85¢ for local bus service, while children between the ages of 5 and 19 are eligible for a discounted fare of $1.00. MTA also offers all-day passes, 7-day passes, 20-ride local and express passes, and 31-day passes, which vary from $5.25 to $84.00. Seniors, people with disabilities, and youth are all eligible for discounted passes.

## Service Levels

For service to be attractive to a broad cross-section of an area's residents and workers, it must be convenient in terms of where it goes, when it operates, how frequently it operates, and how long trips take. The MTA does provide service to most areas where demand is moderate to high, yet there are still many areas that are not served and/or where service is "thin." However, and probably most important for this project, service is too infrequent on most routes to be convenient for most people. The hours that service operates is also often too limited to be considered convenient.

### *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. However, as described in the market analysis, development has grown outward faster than MTA services have.

The MTA system is also primarily a radial network where nearly all the routes operate to and from Music City Central station in downtown Nashville. As the city has grown and developed outward, a smaller proportion of trips are being made to and from downtown, and more are being made between outer areas. The MTA radial service design means that passengers who are traveling between outer areas must do so through downtown, which is inconvenient. The market analysis also assesses demand for crosstown services, which certainly exists.

### *Days of Service*

MTA operates 46 routes on weekdays, 26 on Saturdays, and 23 on Sundays (see Figure 3). Of the 46 weekday routes, 32 are "full service" routes (including BRT Lite), and 22 are Limited routes. Using the 32 local weekday routes as a primary basis for comparison, the large majority of these routes also operate on Saturdays and Sundays. This indicates that most of the core service structure is available seven days a week.

### *Service Frequencies*

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.

The lack of frequent service is a particular issue for MTA. On weekdays, during peak hours MTA routes offer the following service frequencies (see also Table 1 and Figure 4):

- Only nine routes provide service every 15 minute minutes or less (Routes 3 West End/White Bridge, 6 Lebanon Road, 12 Nolensville Pike, 22 Bordeaux, 50 Charlotte BRT Lite, 55 Murfreesboro BRT Lite, 56 Gallatin Pike BRT Lite, and the Blue and Green Music City Circuit routes)
- 19 provide service every 20 to 40 minutes
- 18 provide even less frequent service (and usually only peak period or limited service)

During the midday:

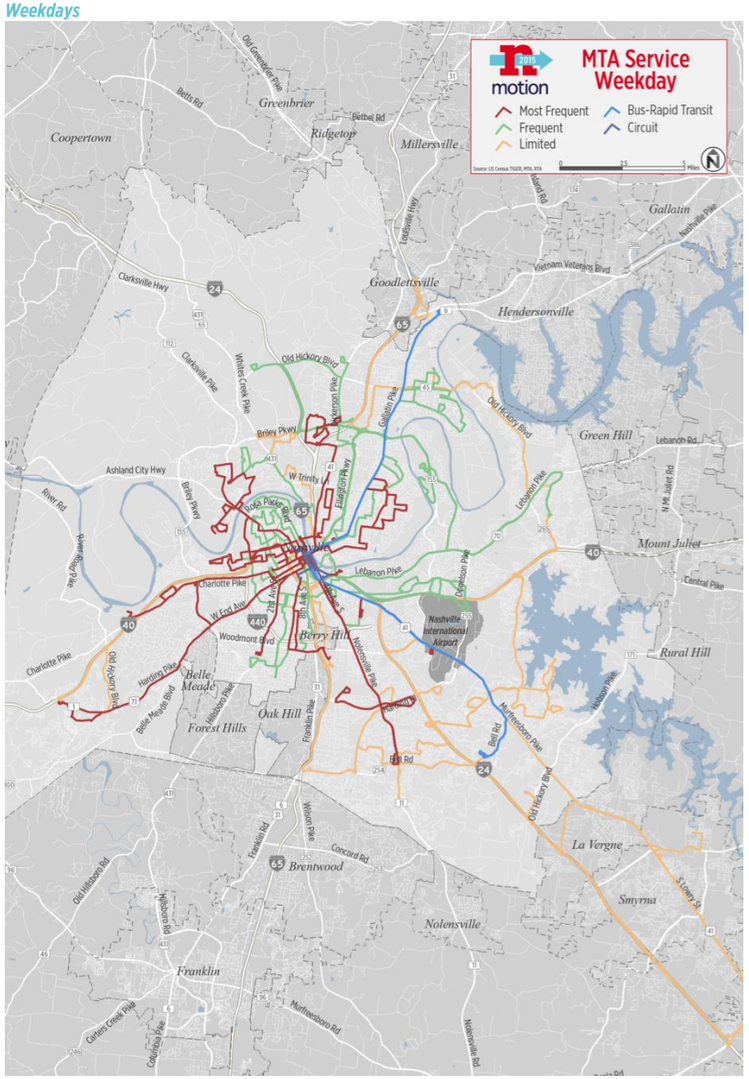
- Only seven routes provide service every 15 minutes or less (Routes 3 West End/White Bridge, 50 Charlotte BRT Lite, 55 Murfreesboro BRT Lite, 56 Gallatin Pike BRT Lite, and the three Music City Circuit routes)
- 12 provide service every 20 to 30 minutes
- 10 operate every 35 to 60 minutes
- 11 routes provide only limited service or operate less than every 60 minutes

In the evening, service is very limited:

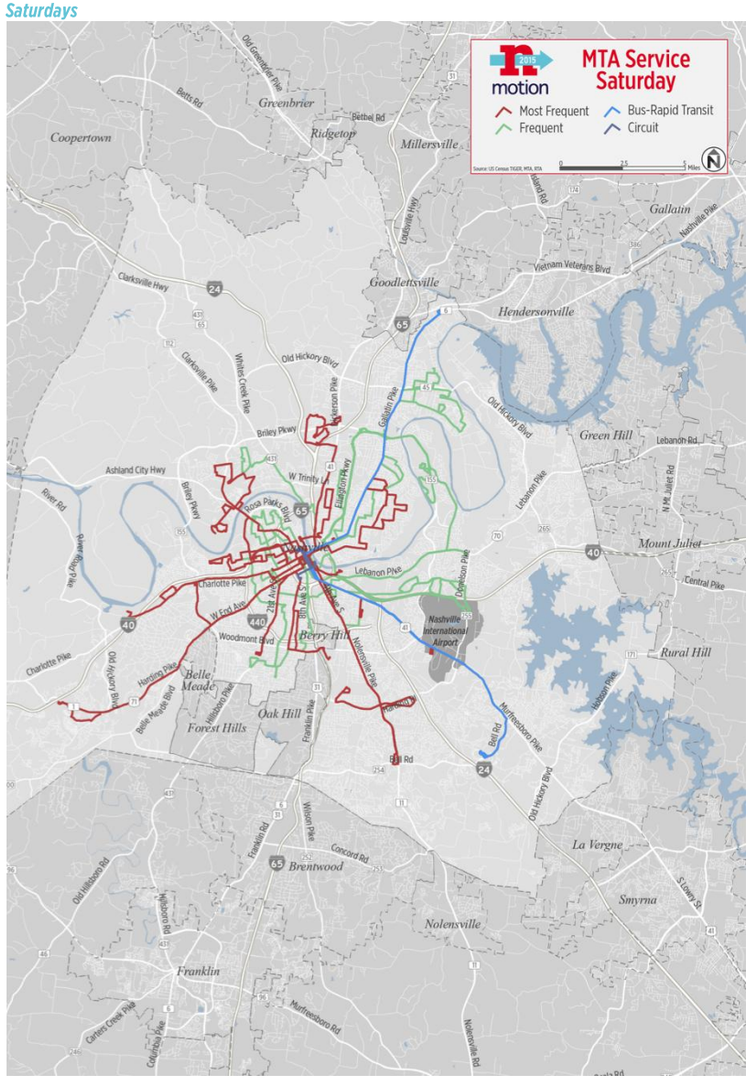
- Service is provided on only 29 routes
- Over 50% of those routes operate every 60 minutes or less
- Only the two downtown Circuit routes provide service that is more frequent than every 30 minutes

## FIGURE 3 MTA WEEKDAY, SATURDAY, AND SUNDAY SERVICE

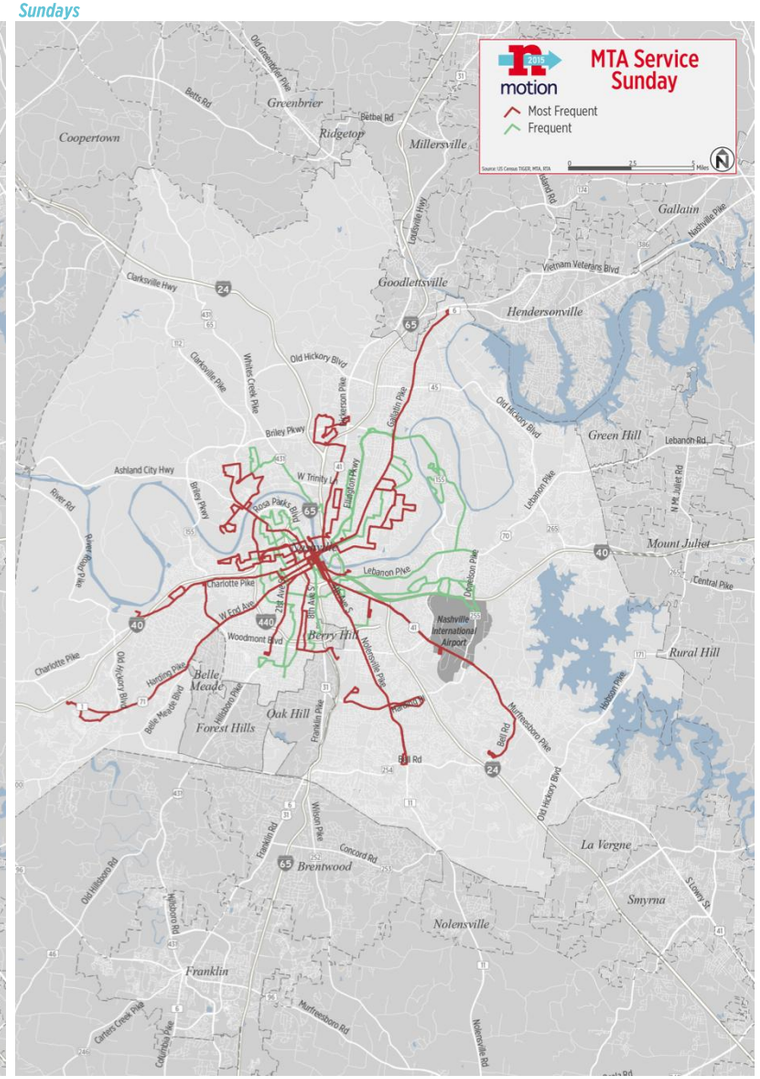
*Weekdays*




*Saturdays*




*Sundays*

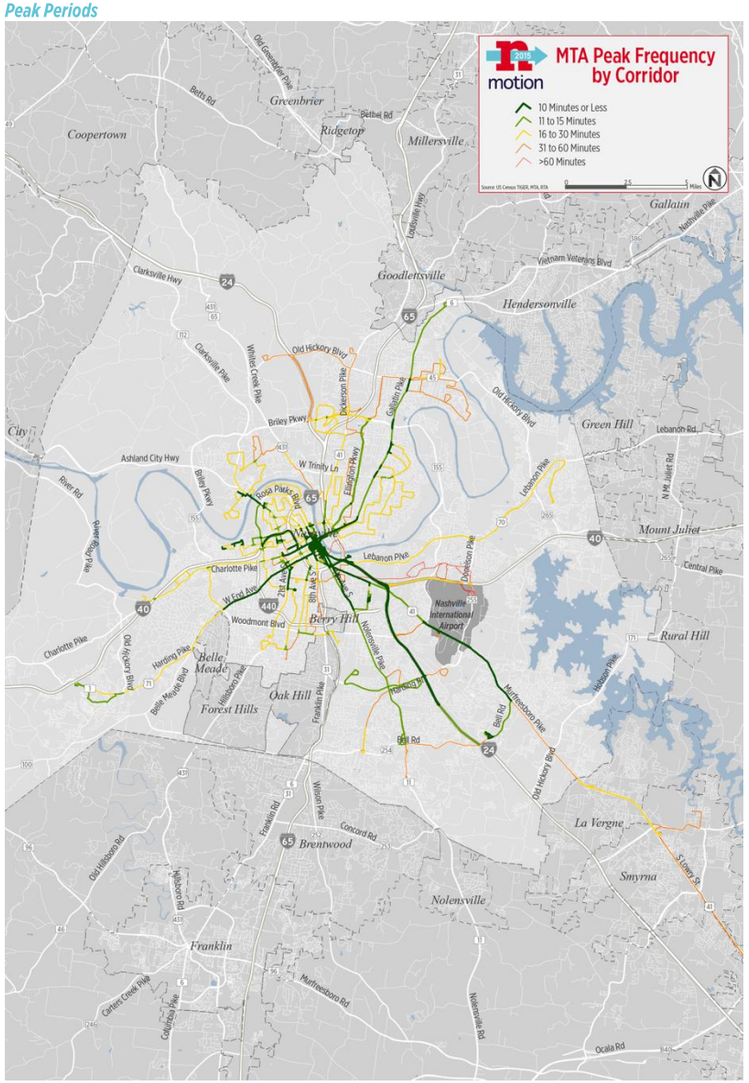


## TABLE 1 SERVICE SPAN AND FREQUENCY BY DAY OF WEEK

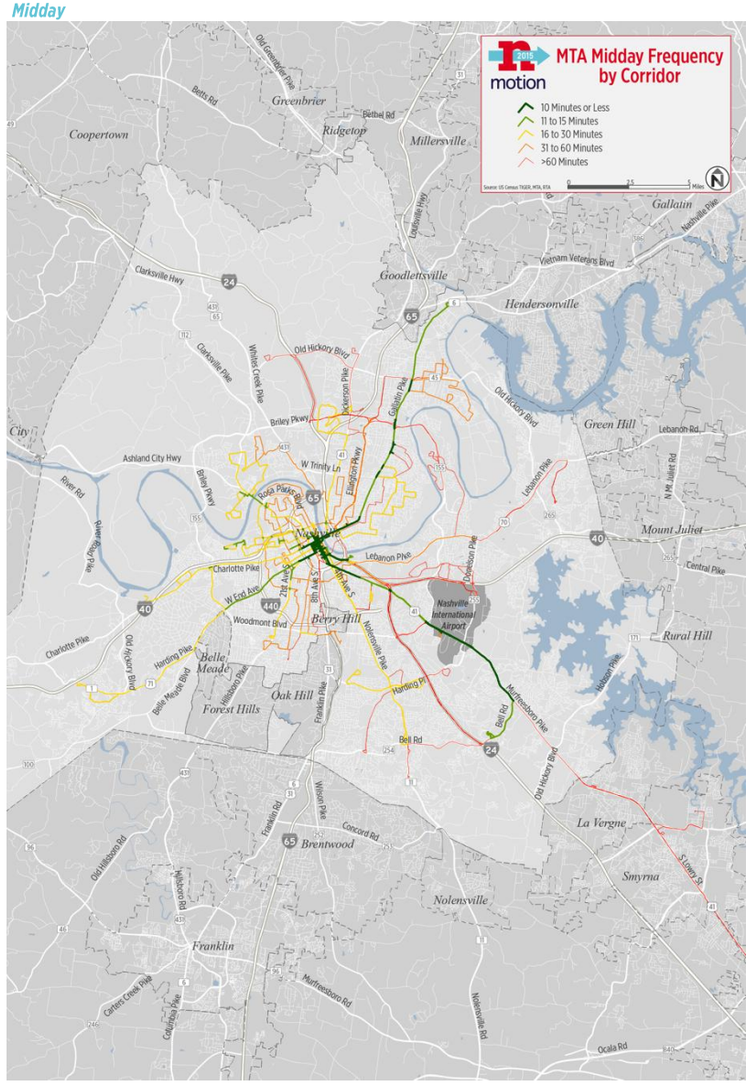
| | | | Weekdays | | | | Saturdays | | Sundays | |
|---|---|---|---|---|---|---|---|---|---|---|
| Route | Name | Service Type | Span of Service | Peak | Midday | Evening | Span of Service | Frequency All Day | Span of Service | Frequency All Day |
| 1 | 100 Oaks | Limited | 5:40A - 5:45P | 60 | — | — | — | — | | — |
| 2 | Belmont | Frequent | 5:34A - 6:15P | 40 | — | — | — | — | | — |
| 3 | West End/White Bridge | Most Frequent | | 20 | 30 | 40-60 | 5:42A - 10:40P | 40-60 | 5:42A - 9:40P | 40 |
| 4 | Shelby | Most Frequent | 4:45A - 11:42P | 20 | 30 | 40-60 | 5:21A - 10:40P | 40-60 | 5:21A - 9:40P | 40-60 |
| 5 | West End/Bellevue | Most Frequent | 5:08A - 9:45P | 20 | 30 | 40-60 | 5:47A - 8:00P | 40 | 5:47A - 7:15P | 40 |
| 6 | Lebanon Road | Frequent | 5:17A - 9:58P | 15-35 | 60 | 60 | — | — | — | — |
| 7 | Hillsboro | Most Frequent | 5:40A - 11:39P | 20 | 20 | 40 | 5:49A - 10:45P | 40-60 | 5:49A - 9:45P | 40-60 |
| 8 | 8th Avenue South | Frequent | 5:09A - 7:44P | 40 | 40 | 60 | 6:45A - 6:41P | 60 | 6:45A - 6:41P | 60 |
| 9 | MetroCenter | Frequent | 6:18A - 5:31P | 20 | 25 | — | — | — | — | — |
| 10 | Charlotte | Most Frequent | 4:52A - 11:15P | 40 | 40 | 60 | 5:33A - 10:15P | 60 | 5:33A - 9:15P | 40 |
| 12 | Nolensville Pike | Most Frequent | 4:59A - 11:15P | 10-15 | 30 | 60 | 5:10A - 10:15P | 60 | 5:10A - 9:15P | 60 |
| 14 | Whites Creek | Frequent | 5:34A - 11:15P | 30 | 60 | 60 | 6:18A - 10:15P | 60 | 6:18A - 9:15P | 60 |
| 15 | Murfreesboro Pike | Most Frequent | 4:54A - 11:15P | 40 | 40 | 60 | 5:36A - 9:30P | 60 | 5:21A - 9:15P | 40 |
| 17 | 12th Avenue South | Most Frequent | 5:10A - 11:15P | 25 | 30 | 60 | 5:44A - 10:15P | 60 | 5:46A - 7:39P | 60 |
| 18 | Airport/Downtown Hotels | Frequent | 5:07A - 11:40P | 60 | 60 | 60 | 6:02A - 10:40P | 60 | 6:02A - 10:40P | 60 |
| 19 | Herman | Most Frequent | 5:07A - 11:15P | 20 | 30 | 60 | 5:44A - 10:34P | 60 | 5:44A - 9:36P | 60 |
| 20 | Scott | Frequent | 5:21A - 11:15P | 40 | 70 | 60 | 5:37A - 10:15P | 60 | 5:37A - 10:15P | 60 |
| 21 | University Connector | Frequent | 5:52A - 9:25P | 30 | 60 | 60 | 6:22A - 8:25P | 60 | 6:22A - 8:25P | 60 |
| 22 | Bordeaux | Most Frequent | 5:10A - 11:15P | 15-20 | 22 | 60 | 5:42A - 10:15P | 60 | 5:49A - 9:39P | 60 |
| 23 | Dickerson Road | Most Frequent | 4:40A - 11:49P | 20 | 25 | 60 | 5:20A - 10:50P | 60 | 5:20A - 9:50P | 60 |
| 24X | Bellevue Express | Limited | 6:01A - 5:49P | 4 Trips | — | — | — | — | — | — |
| 25 | Midtown | Frequent | 5:15A - 9:15P | 35 | 60 | 60 | 5:51A - 7:15P | 60 | 5:51A - 6:15P | 60 |
| 26 | Gallatin Pike | Most Frequent | 4:37A - 11:15P | 40 | 40 | 60 | 5:49A - 9:30P | 60 | 5:30A - 9:15P | 40 |
| 27 | Old Hickory | Limited | 5:05A - 5:58P | 2 Trips | — | — | — | — | — | — |
| 28 | Meridian | Most Frequent | 5:13A - 11:15P | 25 | 50 | 50 | 5:46A - 10:15P | 50 | 5:46A - 9:15P | 50 |
| 29 | Jefferson | Most Frequent | 5:14A - 11:15P | 20 | 30 | 60 | 5:49A - 10:15P | 60 | 5:49A - 9:15P | 60 |
| 30 | McFerrin | Frequent | 5:46A - 11:15P | 60 | 60 | 60 | 5:44A - 10:15P | 60 | 5:44A - 9:15P | 60 |
| 33X | Hickory Hollow/Lenox Express | | 6:17A - 5:25P | 2 Trips | — | 3 Trips | — | — | — | — |
| 34 | Opry Mills | Frequent | 6:18A - 9:51P | 90 | 90 | 90 | 6:18A - 9:51P | 90 | 6:18A - 9:51P | 90 |
| 35X | Rivergate Express | Limited | 5:57A - 5:08P | 3 Trips | — | — | — | — | — | — |
| 36X | Madison Express | Limited | 5:30A - 5:40P | 3 Trips | 2 Trips | — | — | — | — | — |
| 37X | Tusculum/McMurray Express | Limited | 6:17A - 5:39P | 2 Trips | — | — | — | — | — | — |
| 38X | Antioch Express | Limited | 5:37A - 5:10P | 2 Trips | — | 3 Trips | — | — | — | — |
| 41 | Golden Valley | Limited | 5:41A - 5:15P | 60 | — | — | — | — | — | — |
| 42 | St. Cecilia/Cumberland | Limited | 5:00A - 9:15P | 30-55 | 50-65 | 60 | 6:28A - 7:35P | 60 | 6:28A - 6:42P | 60 |
| 43 | Hickory Hills | Frequent | 5:50A - 6:35P | 25-50 | 125-150 | — | — | — | — | — |
| 44 | MTA Shuttle | Most Frequent | 9:58A - 4:17P | 30 | 20-25 | — | — | — | — | — |
| 50 | Charlotte Pike BRT Lite | Most Frequent | 5:19A - 9:15P | 15 | 15 | 30 | 5:35A - 9:45P | 30 | — | — |
| 55 | Murfreesboro Pike BRT Lite | Most Frequent | 4:47A - 9:15P | 15 | 15 | 30 | 5:30A - 10:15P | 30 | — | — |
| 56 | Gallatin Pike BRT Lite | Most Frequent | 5:00A - 9:15P | 15 | 15 | 30 | 5:42A - 10:15P | 30 | — | — |
| 60 | Blue Circuit/Bicentennial Mall | Circuit | 6:30A - 11:00P | 40 | 15 | 30 | 11:00A - 11:00P | 15 | 11:00A - 11:00P | 30 |
| 61 | Green Circuit/Gulch | Circuit | 6:30A - 11:00P | 40 | 15 | 30 | 11:00A - 11:00P | 15 | 11:00A - 11:00P | 30 |
| 62 | Purple Circuit/Richard H Fulton Complex | Circuit | 11:00A - 2:00P | — | 15 | — | — | — | — | — |
| 72 | Edmondson Pike Connector | Limited | 5:55A - 6:46P | 60 | 60-180 | 60 | — | — | — | — |
| 76 | Madison Connector | Frequent | 4:50A - 7:30P | 60 | 60 | 60 | 9:35A - 5:05P | — | — | — |
| 93 | Music City Star West End Shuttle | Limited | 6:37A - 4:53P | 3 Trips | — | — | — | — | — | — |
| 3,5 | Core trips for routes 3, 5 | Most Frequent | 4:49A - 9:45P | 10 | 15 | 20 | 5:42A - 10:40P | 20 | 5:42A - 10:40P | 20 |
| 10,50 | Core trips for routes 10, 50 | Most Frequent | 4:52A - 11:15P | 10-15 | 10-15 | 20-30 | 5:33A - 10:15P | 10-30 | 5:33A - 10:15P | 40 |
| 15,55 | Core trips for Routes 15, 55 | Most Frequent | 4:47A - 11:15P | 10-15 | 10-15 | 20-30 | 5:30A - 10:15P | 10-30 | 5:30A - 10:15P | 40 |
| 26,56 | Core trips for Routes 26, 56 | Most Frequent | 4:37A - 11:15P | 10-15 | 10-15 | 20-30 | 5:42A - 10:15P | 10-30 | 5:42A - 10:15P | 40 |
| 60,61 | Core trips for Blue & Green Circuits | Circuit | 6:30A - 11:00P | 20 | 7-8 | 15 | 11:00A - 11:00P | 7-8 | 11:00A - 11:00P | 15 |

## FIGURE 4 MTA WEEKDAY SERVICE FREQUENCIES

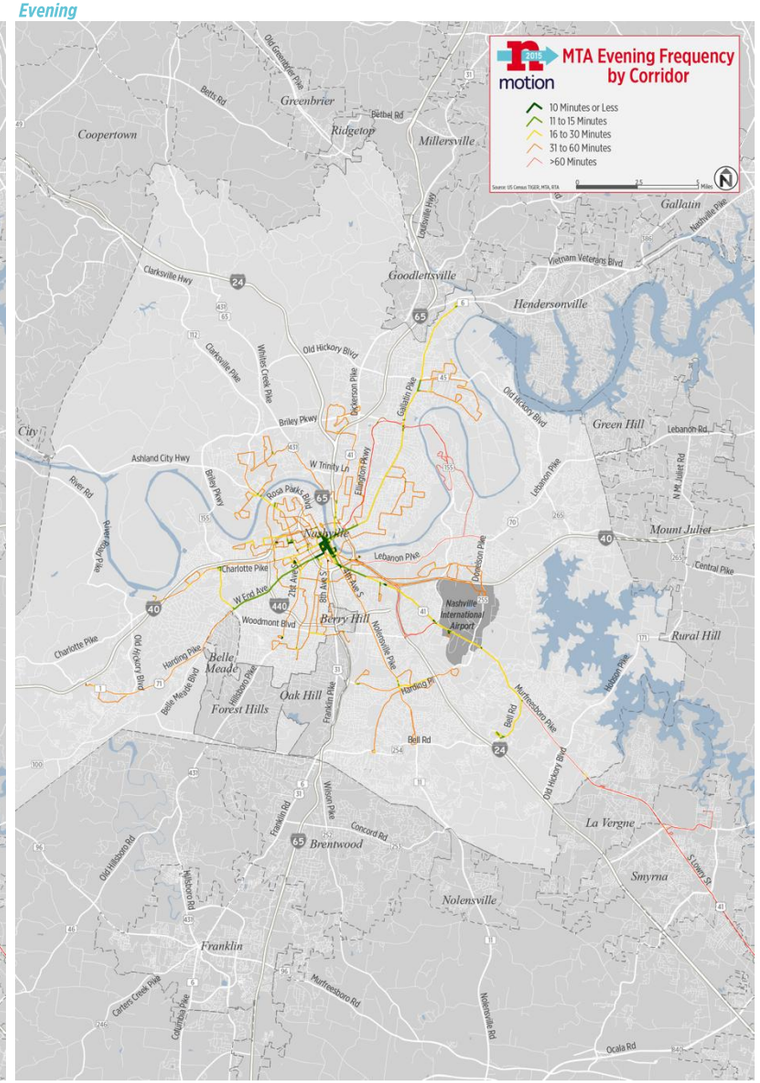
*Peak Periods*




*Midday*




*Evening*



On weekends, service levels are also very low. On Saturdays, only the Blue and Green Music City Circuit routes (Routes 60 and 61) operate every 15 to 30 minutes, nine routes operate at frequencies of 30 and 60 minutes, and 14 routes operate every 60 minutes or greater. On Sundays, over 75% of all routes operate only every 60 minutes or less.

#### *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, and 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 starting service around 5:00 a.m. (see Table 1). However, of the 33 non-express/limited routes, 15 end service before 10:00 p.m. These include the three BRT Lite routes, which are among MTA's highest ridership routes, and end service at 9:15 p.m. (after which time local service continues to operate until 11:15 p.m.). All service ends at 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 at 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 service 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.

### Fixed-Route Ridership

Nashville MTA carries approximately 33,000 passengers per weekday, 16,000 per Saturday, and 10,000 per Sunday. On a per route basis, two of the MTA's BRT Lite routes—55 Murfreesboro BRT and 56 Gallatin BRT—have the highest weekday ridership, at 3,000 and 2,300 passengers per weekday (see Figure 5).[1] Other high ridership routes include routes:

- 12 Nolensville Pike (2,200)
- 10 Charlotte (1,900)
- 23 Dickerson Road (1,700)
- 22 Bordeaux (1,600)
- 7 Hillsboro (1,600)

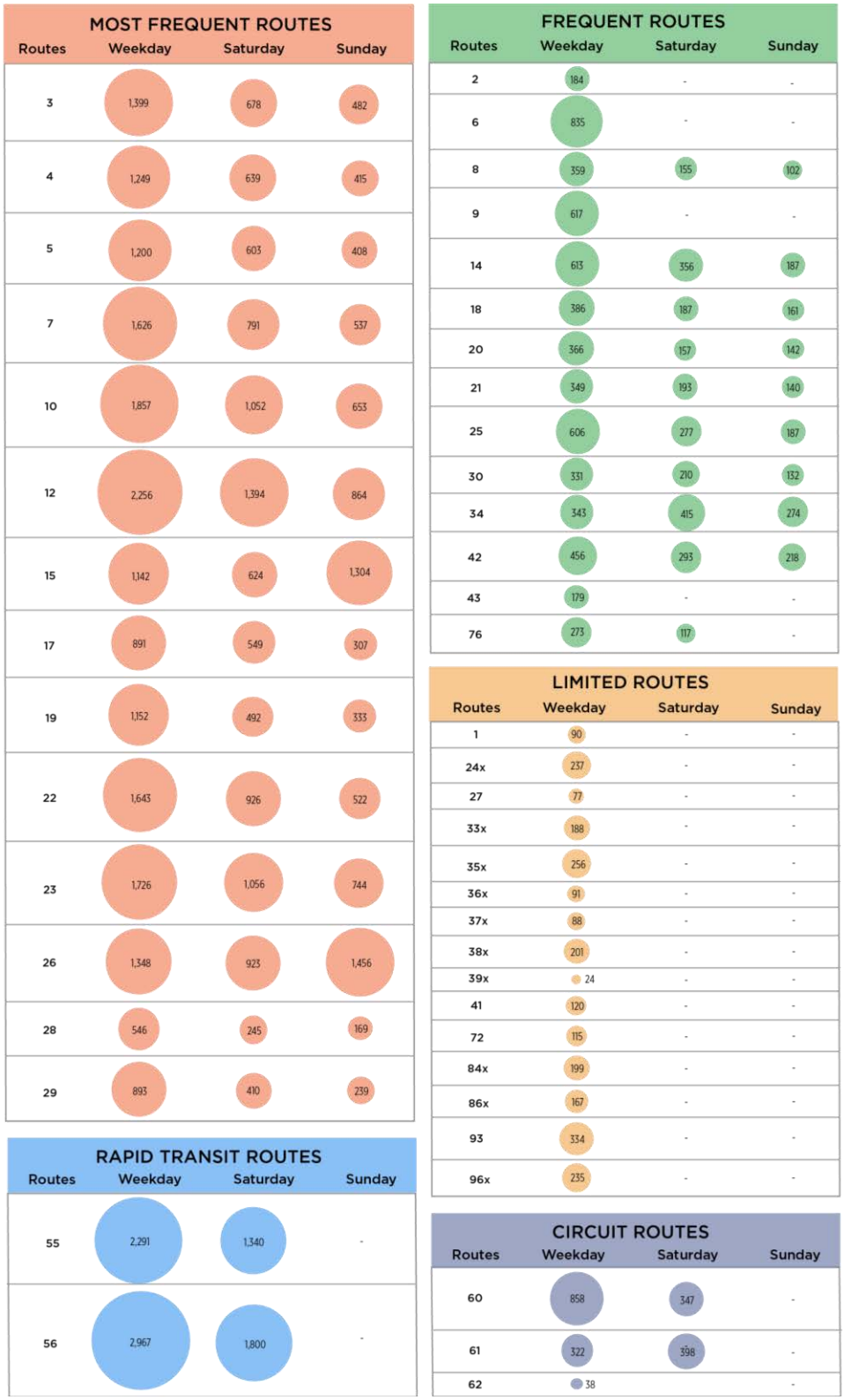
All other routes carry fewer than 1,500 passengers per weekday, and many carry fewer than 200. Most of the lower ridership routes are Limited routes.

#### *Ridership by Stop*

MTA ridership is heavily oriented around trips to and from downtown Nashville. Coupled with the MTA's radial service design, this means that the stops with the highest ridership are in downtown and along major arterial corridors (see Figure 6).

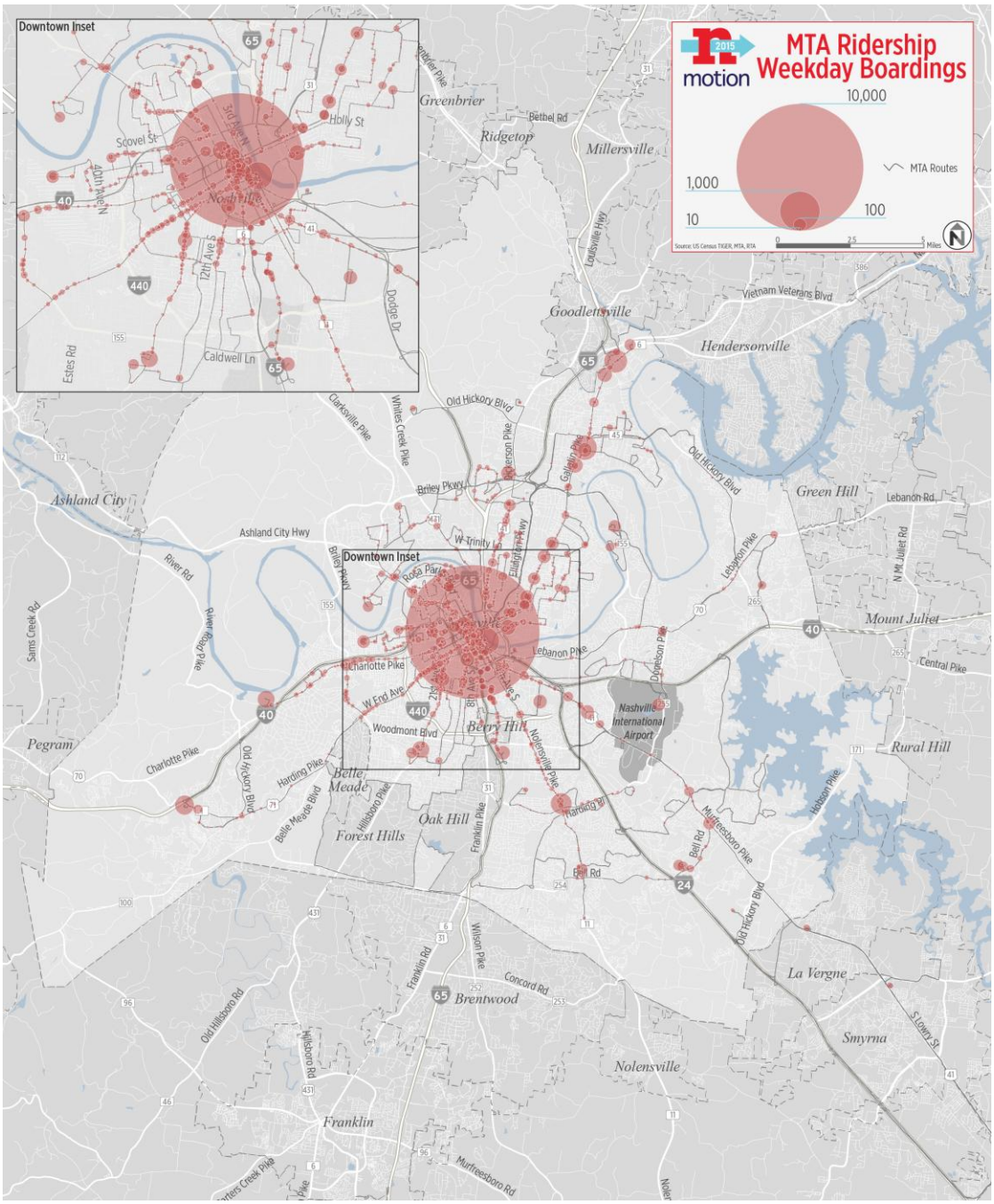
[1] The third BRT Lite route—50 Charlotte BRT Lite—began service in early 2015 and ridership data is not yet available.

FIGURE 5 RIDERSHIP BY ROUTE




Source: Nashville Performance Report and Database

FIGURE 6 WEEKDAY RIDERSHIP BY STOP




Corridors and areas with the highest ridership include:

- Gallatin Pike
- Murfreesboro Pike
- Nolensville Pike
- Hillsboro Pike
- West End Ave
- Charlotte Pike

- Clarksville Pike/Buchanan Street
- Rosa Parks Boulevard
- Dickerson Pike

High stop activity areas outside of downtown Nashville include the Walmart to the west along Charlotte Pike, the Bellevue Center Shopping Complex to the west on Harding Pike, the Walmart on Nolensville Pike, the Walmart on Gallatin Pike, and the Shoppes at Rivergate northeast of downtown. Crosstown ridership patterns are much less significant, in part due to the lack of crosstown services.

In terms of productivity, and as would be expected, BRT Lite and Very Frequent routes perform best, followed by Frequent routes (see Figure 7). Limited routes have very mixed performance. In summary:

- Routes that serve major radial corridors generally are very productive. Virtually all carry over 25 passengers per vehicle hour, and a few carry over 30 passengers per vehicle hour:
  - 10 Charlotte
  - 12 Nolensville Pike
  - 25 Dickerson Road
  - 56 Gallatin BRT Lite
- Routes that serve more local markets generally carry between 10 and 25 passengers per hour. However, a few of these routes—9 Metrocenter, 19 Herman, and 22 Bordeaux—carry more than 30 passengers per revenue vehicle hour, and the Music City Circuit Blue route carries over 40 passengers per vehicle hour. At the other end of the spectrum, Routes 21 University Connector and 43 Hickory Hills carry fewer than 10 passengers per vehicle hour.
- Limited routes have very mixed productivity. Route 93 Music City Star West End Shuttle, which provides connections between the Music City Star and the West End, carries the highest number of weekday passengers per trip of any route, at 41.8 per trip. It also serves the highest number of passengers per vehicle hour, at nearly 60. Most other Limited routes carry more than 20 passengers per vehicle hour. However, some, such as 27 Old Hickory, 36X Madison Express, 39X Cane Ridge Express, and 96X Nashville/Murfreesboro Relax and Ride, carry fewer than 10 passengers per hour.

## ACCESSRIDE


MTA's AccessRide program provides van service for persons with disabilities who are unable to use regular fixed-route buses. Service operates from 4:30 a.m. to 11:30 p.m. on weekdays, from 4:30 a.m. to 10:30 p.m. on Saturdays, and from 4:45 a.m. to 9:30 p.m. on Sundays. The standard fare for AccessRide is $3.40 per one-way trip.

The AccessRide service that MTA provides is much more expansive that that provided by most transit systems. Most transit systems provide paratransit services as required by the Americans with Disabilities Act (ADA), which requires that complementary paratransit service be provided within three quarters of a mile of fixed-route bus services (excluding commuter routes) during the same times that fixed-route service operates. MTA's AccessRide service is much more expansive, and provides service between all locations in Davidson County, whether there is nearby fixed-route service or not. AccessRide serves approximately 385,000 passengers per year.

FIGURE 7 WEEKDAY PASSENGERS PER TRIP

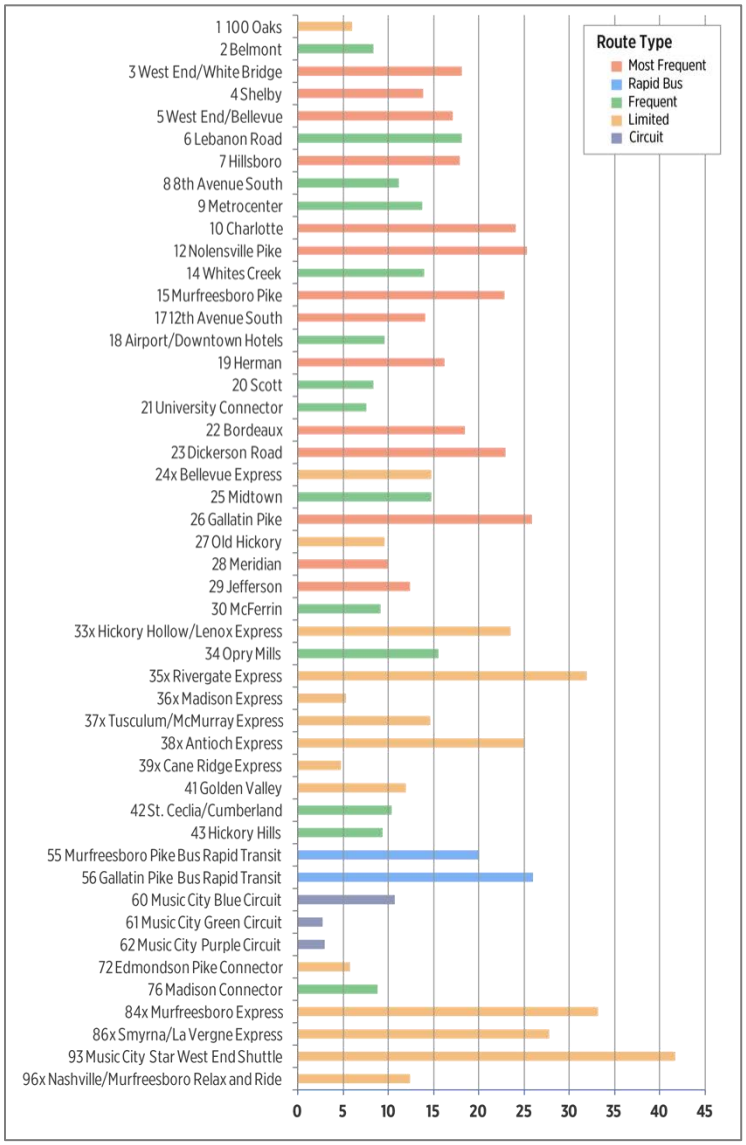
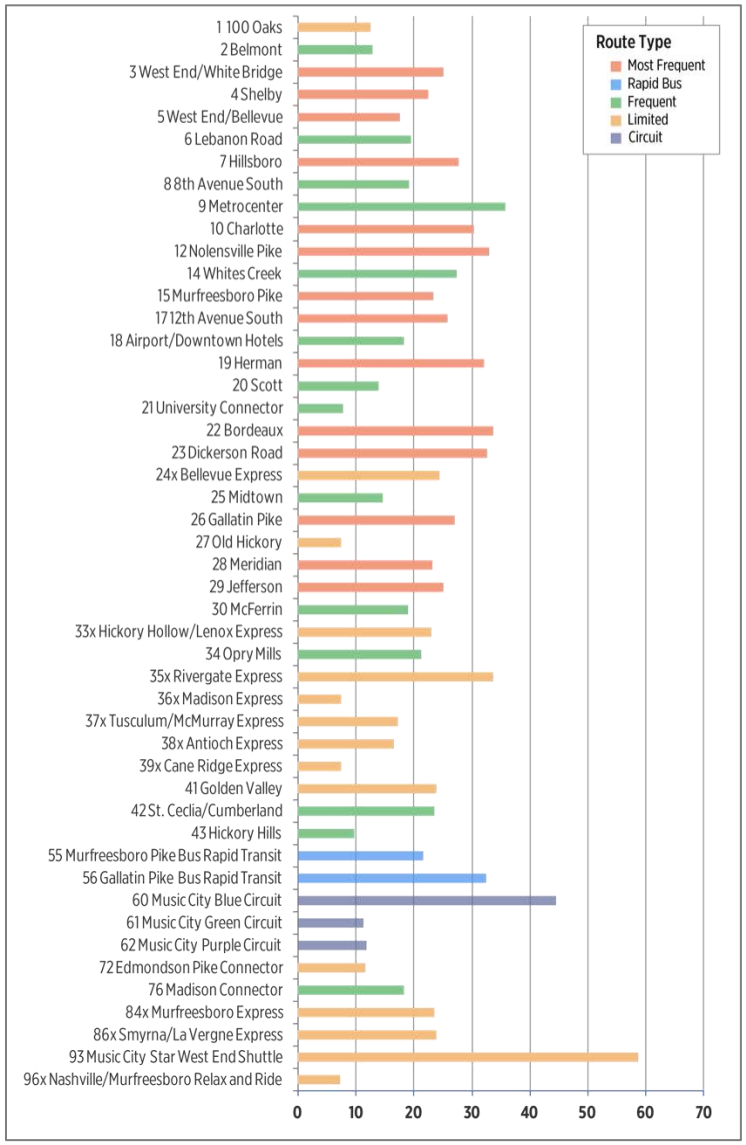



FIGURE 8 WEEKDAY PASSENGERS PER REVENUE VEHICLE HOUR




Source: Nashville Performance Report and Database

# MTA TRANSIT FACILITIES

MTA provides a range of passenger facilities associated with its transit services. These include Music City Central, which is the downtown Nashville hub of most bus service, other transit centers and stations, and bus stops throughout Nashville.

## MUSIC CITY CENTRAL

Music City Central, which is located in downtown Nashville, is the hub of the MTA system (see Figure 9). It has two levels of bus berths; a wide range of passenger facilities, including a staffed information and ticket sales area, climate-controlled waiting rooms, and restrooms; small retail businesses; and MTA offices. It also has public parking located above the bus levels. Nearly all MTA routes operate to and from Music City Central, and, besides serving downtown, Music City Central is MTA's largest transfer location, with approximately 60% of passengers transferring between routes.

FIGURE 9 MUSIC CITY CENTRAL

## RIVERFRONT REGIONAL RAIL STATION

Riverfront Regional Rail Station, which is located on 1st Avenue South in downtown Nashville, is the downtown terminal for Music City Star Commuter Rail service (see Figure 10). Six MTA routes serve the station, including Route 93 Music City Star West End Shuttle, which provides connecting service between there and West End Avenue.

FIGURE 10 RIVERFRONT REGIONAL STATION

## CLEMENT LANDPORT

The Clement Landport is located on Demonbruen Street just east of the CSX tracks in the South of Broadway area (see Figure 11). It was originally conceived as a multimodal terminal that would be served by commuter rail and bus service, and potentially other modes. It was designed to provide bus berths and passenger waiting facilities on the street level, with public parking on lower levels. However, commuter rail has not been implemented on the CSX line, and to date, there has been no use for Clement Landport as a bus-only facility. Looking forward, as MTA grows, this site could potentially serve as a second downtown bus terminal.

FIGURE 11 CLEMENT LANDPORT STATION

## PARK-AND-RIDE LOTS

MTA provides commuter parking at 23 locations, most of which is at shopping centers and churches through partnerships with those parties (see Table 2). These lots range in capacity from 20 to 200 spaces. Based on the most recent data available, all lots have sufficient capacity.

TABLE 2 MTA PARK-AND-RIDE FACILITIES CAPACITY AND ROUTES

| Park-and-Ride | Location | Capacity | Routes |
|---|---|---|---|
| Belleview Plaza | Nashville | 40 | 5, 24X |
| Bellevue Staples | Nashville | 60 | 5, 24X |
| Cane Ridge High School | Nashville | Shared | 39X |
| Coley Davis | Nashville | Shared | 5, 24X |
| Donelson Station | Nashville | 200 | 6, 34 Music City Star |
| Goodlettsville Kmart | Goodlettsville | Shared | 35X |
| Fellowship at Two Rivers | Nashville | Shared | 34 |
| Hermitage Station | Nashville | 250 | 6, Music City Star |
| Hickory Hollow Mall | Nashville | 100 | 15, 33X |
| Hickory Plaza/Dollar General | Nashville | 40 | 12, 37X |
| Hillwood Plaza (MTA owned) | Nashville | 30 | 10 |
| Joelton | Joelton | Shared | 89X |
| Madison Kmart | Madison | 100 | 26, 36, 56 |
| Madison/Myatt Drive | Madison | Shared | 27, 36, 76 |
| Madison Square Shopping Center | Madison | 75 | 26 |
| Nolensville Pike Walmart | Nashville | Shared | 33X |
| Old Hickory Blvd Priceless IGA | Nashville | Shared | 27 |
| Old Hickory Blvd Rite Aid | Nashville | Shared | 5, 24X |
| Rivergate Mall | Goodlettsville | 100 | 35X |
| Smith Springs Church of Christ | Nashville | 60 | 38X |
| Southminster Presbyterian Church | Nashville | 20 | 12 |
| Temple Baptist Church e | Nashville | 80 | 22 |
| Una Church of Christ | Nashville | 80 | 15 |
| Woodbine United Methodist Church | Nashville | Shared | 12 |

Source: Capacity and route data from the 2009 MTA Strategic Plan and MTA website

## BUS STOPS

Bus stops are a key element of the transit experience, as most riders spend time waiting at them. MTA provides high quality stop facilities on its BRT Lite routes with shelters, real-time information, and an alert button that passengers can use to activate a flashing light at the top of the kiosk to alert drivers that they are waiting. Elsewhere, there are many stops with shelters in and around downtown, but as the distance from downtown increases, the number of shelters generally decreases (see Figure 12). This is also the case with benches. Overall, there is not a strong relationship between ridership levels and the stop facilities that are provided. However, to partially address this situation, MTA is currently installing shelters at an additional 100 stops.

FIGURE 12 MTA BUS STOP AMENITIES

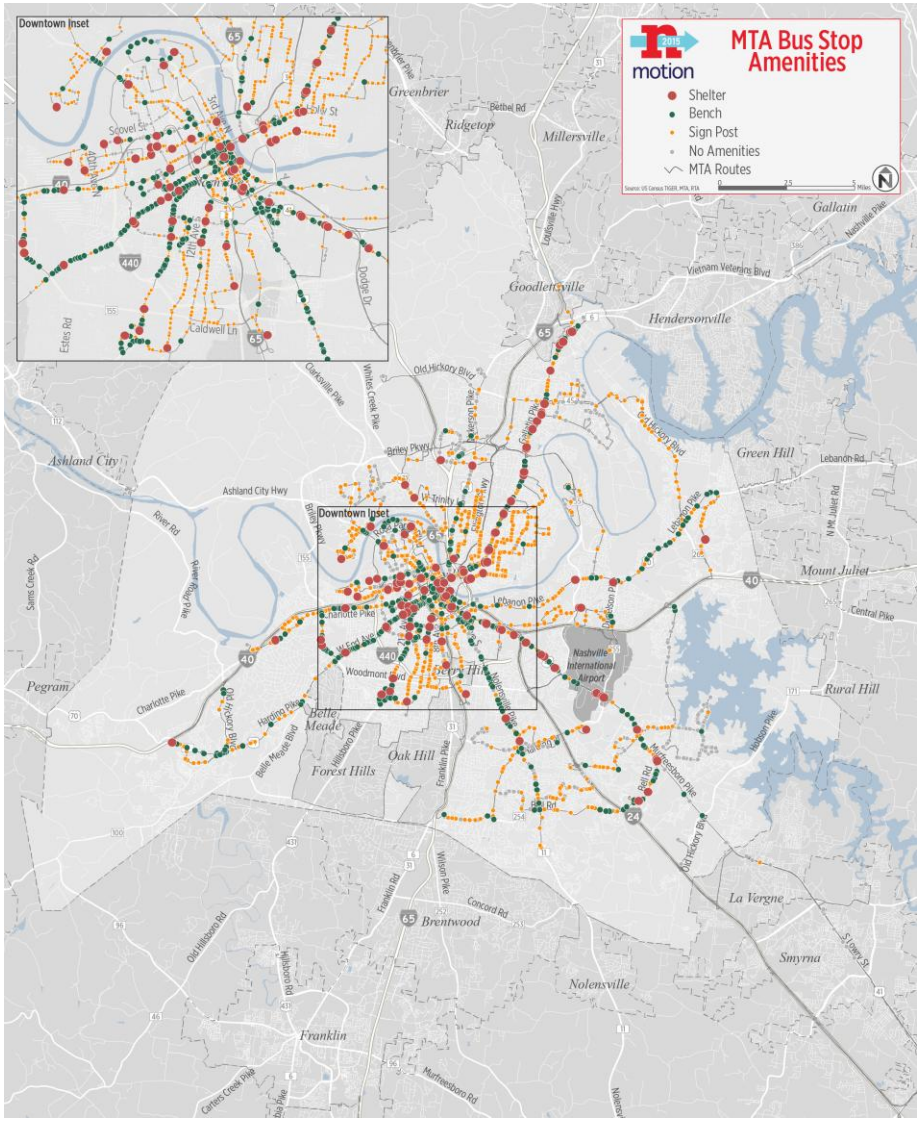
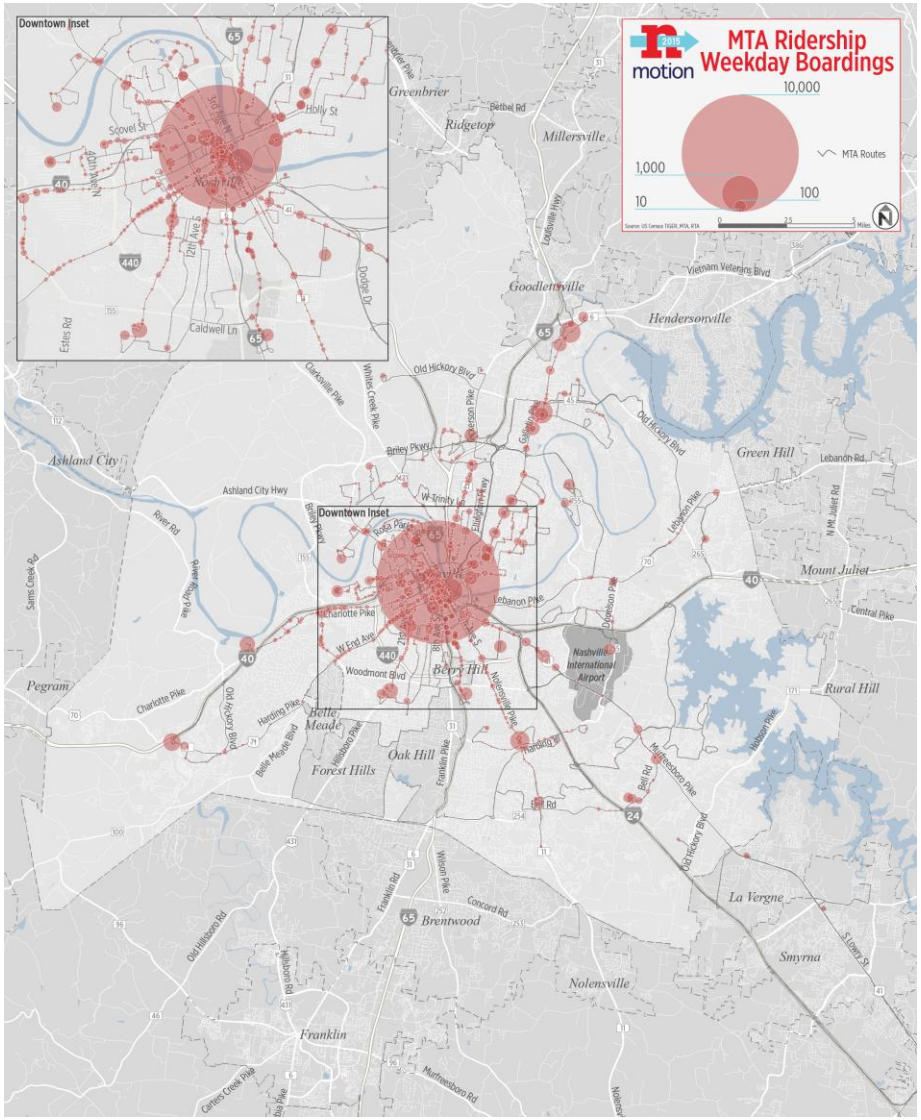



FIGURE 13 WEEKDAY BOARDINGS PER STOP



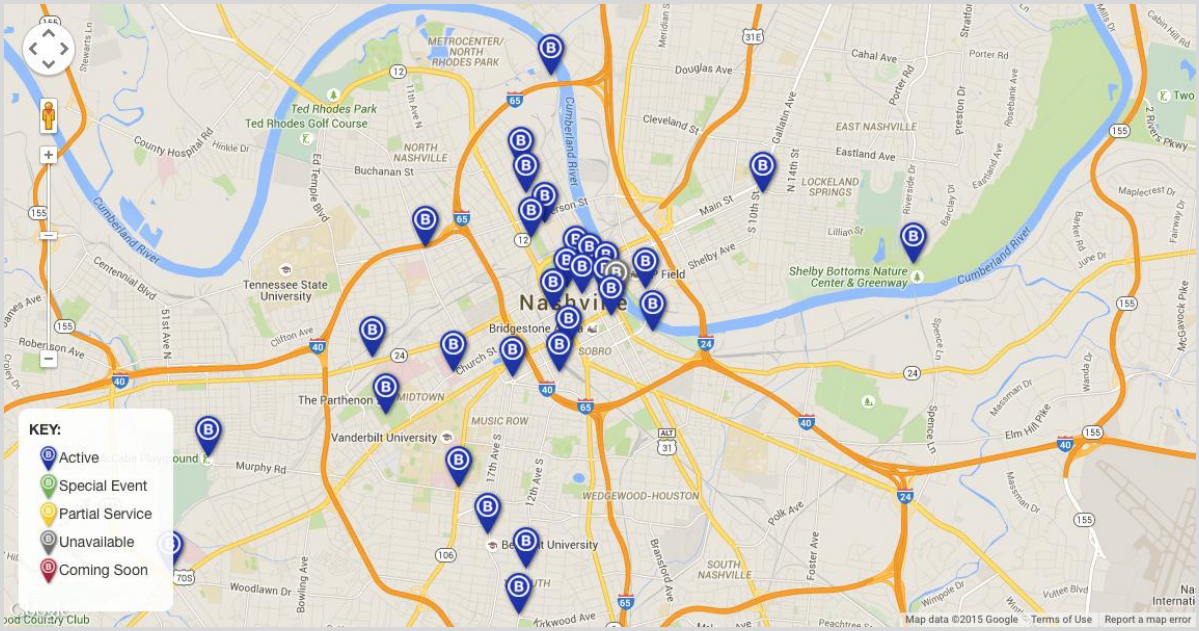
## TRANSIT/BIKE INTEGRATION

MTA encourages multimodal trips, including trips that combine the use of a bicycle and transit. All MTA buses are equipped with bike racks, which can accommodate two bikes at a time. These racks are available on a first-come, first-serve basis. Nashville is also home to B-Cycle bike share (see boxed text). Bike share stations are located strategically throughout the city to provide connections to transit service.

### Nashville B-Cycle

In December 2012, Nashville's B-Cycle bike share program was launched with 21 stations and 200 bikes. A nonprofit management association called the Nashville Downtown Partnership operates the program, and the Mayor's Office and the Metro Nashville Health Department co-sponsor the program. Nashville has 50 miles of off-street trails and has designated 133 miles of road as bikeways, though many of these bikeways lack dedicated on-street bike infrastructure.

The program's goals include improving public health outcomes, reducing vehicle emissions, promoting vibrant central city neighborhoods, and offering a new mobility choice.




# MTA PARTNERSHIPS

Nashville MTA has two partnership programs: one that provides free fares for Metro Nashville Public Schools students in grades 9 through 12, and a second with local businesses and universities.

## STRIDE

In partnership with the Mayor's Office and Metro Nashville Public Schools (MNPS), the MTA provides the StrIDe program, which helps students get to and from school and other extracurricular activities via MTA buses. MNPS

students and MNPS charter school students enrolled in grades 9 through 12 are eligible and service is provided at no cost to the students. This transit partnership works in tandem with regular MNPS bus transportation.

High school students' MNPS identification cards serve as their school ID card, library card, and MTA bus pass. The cards are programmed to work on the fare boxes on all MTA buses.

### BUSINESS AND UNIVERSITY PARTNERSHIPS

MTA's EasyRide program partners with employers and universities to increase the number of people with access to a transit pass. MTA works with employers to help them pay for their employees' transit commutes to and from work and school. Current program participants include Belmont University, the State of Tennessee, the U.S. Army Corps of Engineers, and area hotels, such as Renaissance Hotel and Holiday Inn Select Vanderbilt.

MTA has also established a partnership with Vanderbilt University. Vanderbilt manages a "Ride to Work" program that fully subsidizes the cost of MTA bus rides for all Vanderbilt employees and graduate, professional, and medical students. The program was launched in 2004, and ridership rates have risen steadily since. When boarding the bus, Vanderbilt employees swipe their Vanderbilt University ID card, and the university is then charged for the ride.

## MIDDLE TENNESSEE RTA SERVICES AND PROGRAMS

The Regional Transportation Authority of Middle Tennessee (RTA) provides transit service to the Middle Tennessee region and administers carpool/rideshare, vanpool, and emergency ride home programs. More detailed information about the RTA's services will be available in the RTA Strategic Plan State of the System Report (August 2015).

### REGIONAL BUS SERVICE

The RTA provides nine regional bus routes that connect the cities of Clarksville, Franklin, Gallatin, Hendersonville, Joliet, La Vergne, Murfreesboro, Pleasant View, Smyrna, Springfield, and Spring Hill with Nashville (see Figure 14). All of these routes operate to and from Music City Central in downtown Nashville, where connections can be made with MTA routes. Park-and-ride lots are also located along most of these routes.

### MUSIC CITY STAR COMMUTER RAIL

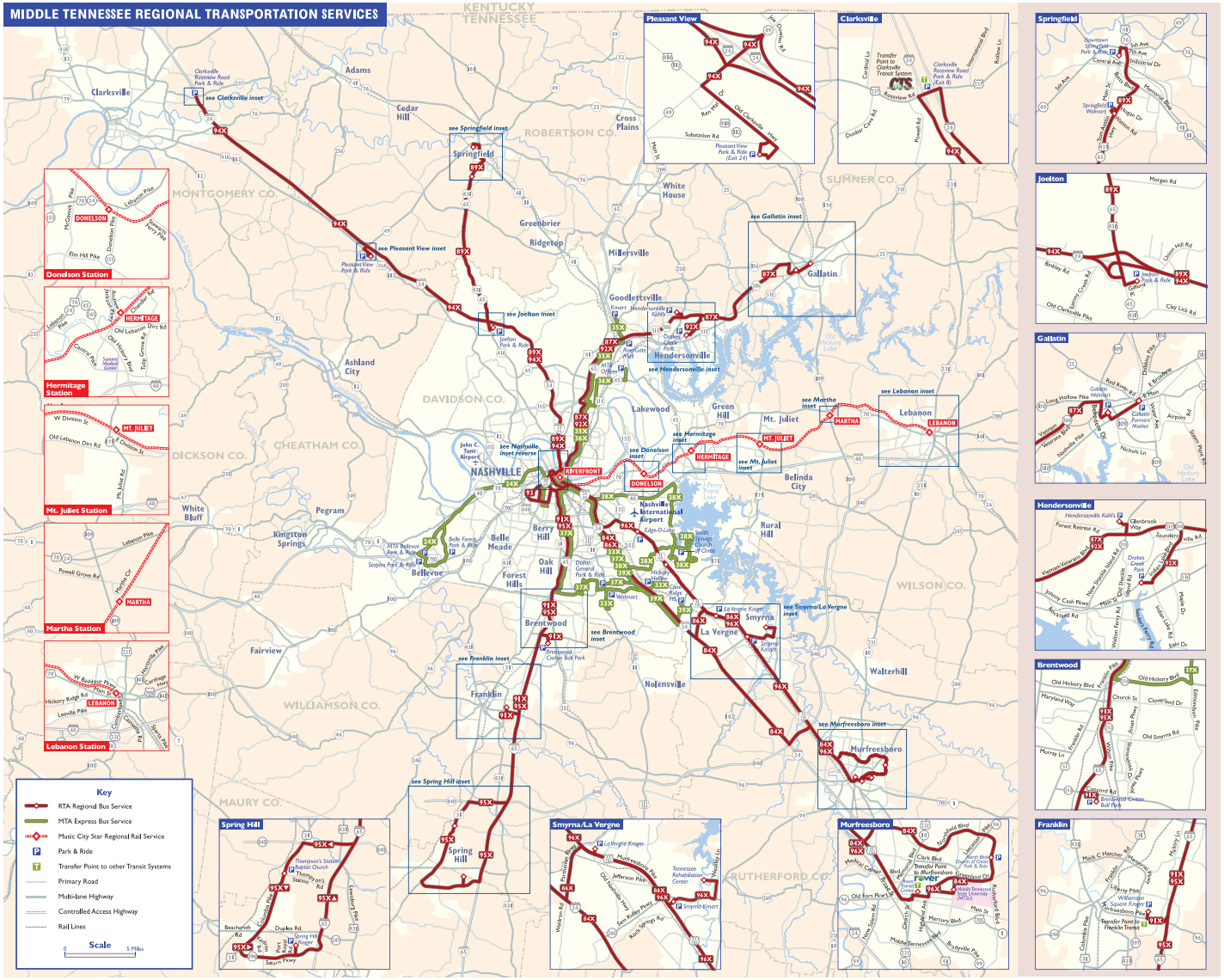
Music City Star regional rail operates between Lebanon and downtown Nashville. The 32-mile route has six stations, including Riverfront (downtown Nashville), Donelson, Hermitage, Mt. Joelton, Martha, and Lebanon. Service to Nashville operates along the entirety of the corridor only during morning and afternoon peak periods on weekdays.

The MTA's Route 93 Music City Star West End Shuttle acts as an extension of Music City Star service and provides timed connections between Riverfront Station and the West End. The MTA's Blue Circuit downtown circulator also provides timed connections to the Riverfront Station from downtown and the Gulch neighborhood.

### CARPOOL AND RIDESHARE PROGRAM

The RTA manages a ridematching database of over 3,000 people to coordinate carpools and rideshares based on route and commute time details. Commuters are able to rotate drivers, host a carpool, or pay one driver a monthly fee based on how many other riders use the same carpool. Rides are typically built around park-and-ride lots throughout the region. Carpoolers are also allowed to use HOV lanes throughout Middle Tennessee. Regular carpoolers qualify for the Emergency Ride Home program described below.

FIGURE 14 RTA SYSTEM MAP




Note: Since publication of the map, alignment changes have been made to Route 95X in Spring Hill, and service to Brentwood has been discontinued

## RTA PARK-AND-RIDE LOTS

The RTA also has a number of park-and-ride lots located throughout the region. These park-and-ride lots are free to use and connect to buses, the Music City Star, vanpools, and carpools (Table 3).

TABLE 3 RTA PARK-AND-RIDE LOTS

| Park-and-Ride | Location |
|---|---|
| Brentwood Civitan Ball Park | Brentwood |
| Clarksville Rossview Road Park & Ride | Clarksville |
| Donelson Station | Nashville |
| Downtown Springfield Park & Ride | Springfield |
| Drakes Creek Park | Hendersonville |
| Edge-O-Lake | Nashville |
| Gallatin Farmers' Market | Gallatin |
| Gallatin Walmart | Gallatin |
| Hendersonville Kohl's | Hendersonville |
| Hermitage Station | Hermitage |
| Joelton Park & Ride | Joelton |
| La Vergne Kroger | La Vergne |
| Lebanon Station | Lebanon |
| Martha Station | Lebanon |
| Mt. Juliet Station | Mount Juliet |
| North Boulevard Church of Christ | Murfreesboro |
| Pleasant View Park & Ride | Pleasant View |
| Smyrna Kmart | Smyrna |
| Springfield Walmart | Springfield |
| Spring Hill Kroger | Spring Hill |
| Thompson's Station Baptist Church | Thompson's Station |
| Williamson Square Kroger | Franklin |

## VANPOOL

The RTA and regional partners provide a fleet of over 110 commuter vans that hold up to 15 passengers. Riders pay a monthly fare, and van drivers commute for free as long as they keep records of trips performed. The RTA coordinates rides that depart from park-and-ride lots throughout the Middle Tennessee region. Vanpoolers qualify for the Emergency Ride Home program. The vanpool program serves approximately 178,000 trips per year.

## EMERGENCY RIDE HOME

The Emergency Ride Home program is available to commuters who regularly use carpools, vanpools, Music City Star, or express bus service in Davidson, Cheatham, Dickson, Maury, Montgomery, Robertson, Rutherford, Sumner, Williamson, or Wilson counties. To qualify for the program, commuters must use these services at least three times a week or 15 times a month. The service provides six taxi trips a year for people who have a sickness in their immediate family, are asked to work late by a supervisor, or cannot make their regular rideshare due to extenuating circumstances.

# MARKET ANALYSIS

A large number of factors impact the demand for transit and its actual use, and these include:

- **Development Patterns:** There is an extremely strong correlation between development patterns and transit ridership. In areas with mixed-use and denser development and a good pedestrian environment, transit can become very convenient, and thus attractive and well used. In most cases, these "external" factors outweigh those directly controlled by the service provider.
- **Population and Employment Densities:** Put simply, where larger numbers of people live and/or work in close proximity, transit demand is higher.
- **Socio-Economic Characteristics:** Some populations use transit to a greater degree than others, and socio-economic characteristics such as age, disability status, income, and minority status provide indications of demand among populations that have a high propensity toward transit use.
- **Existing and Projected Travel Flows:** Travel flows provide information on the places between which people travel.

These factors are primary drivers of transit demand and, as such, provide strong indications of underlying transit demand. However, it should also be noted that other factors influence transit demand, and these include:

- **Walking Conditions:** Nearly all transit riders are also pedestrians, and thus walking environments strongly impact ridership. A common rule of thumb is that transit riders will walk one-quarter of a mile to access transit. However, in comfortable pedestrian environments, many transit riders will walk longer distances, while in uncomfortable environments, many will not walk even one-quarter of a mile.
- **Service Design:** Slow circuitous routes that take people closer to their destinations are preferred by some riders, such as many older adults and persons with disabilities. However, circuitous routes are viewed as very inconvenient by most others. Thus, no matter the inherent demand for transit, service must be designed appropriately to appeal to local markets.
- **Travel Times Relative to Other Options, Primarily Driving:** Most people accept that trips by transit take longer than trips by car, and the time differences can be offset by other differences. However, when the differences are smaller, ridership will be higher, and when the differences are larger, ridership will be lower.
- **Costs:** The cost of using transit is almost always lower than the cost of driving. Similar to travel time differences, when the costs of driving are higher (for example, due to high gasoline prices, tolls, and/or parking costs) transit ridership will be higher and when they are lower, transit ridership will be lower.

This market analysis examines the primary factors described above, and subsequent development of the Strategic Plan will address the secondary factors.

## DEVELOPMENT PATTERNS AND TRANSIT DEMAND

Transit demand is strongly related to development patterns and, in particular, development density. In areas with denser development and more people and employees, transit can be provided in close proximity to many people. Combined with a good pedestrian environment, transit can become very convenient and thus attractive and well used.

As is the case with many American cities that have developed rapidly since the 1940s, Nashville and Davidson County have developed around the automobile, with much of the more recent development in business parks and single-use subdivisions. As this has occurred, development has grown outward from the core, and continues to do so. In 2001, *USA Today* ranked Nashville as the nation's most sprawling metro area.[2] Thirteen years later, in 2014, Smart Growth America ranked the Nashville area as the second most sprawling in the country (after Atlanta).[3] Nashville has been

[2] "A Comprehensive Look at Sprawl in America," *USA Today,* February 22, 2001.
[3] *Measuring Sprawl 2014*, Smart Growth America, April 2014.

sprawling for many years, and this sprawl has made the provision of convenient and effective transit service much more challenging.

## FACTORS INFLUENCING TRANSIT DEMAND

As the MTA improves its transit service over the next 20 years, service and capital investments must be made in support of and response to current and future land use patterns. Population and employment density, land use diversity, design, regional destinations, and distance to quality transit are key factors that influence transit demand. Demand management (pricing, incentives, and other information-based programs) is also considered an important factor. Referred to as the "6Ds," these are major factors that will influence the demand for and success of transit in Nashville (see Figure 15).

### Destinations

People are more likely to choose transit when it can conveniently take them where they want to go. At present, the MTA serves most major destinations in the core area, but development is growing outward. In addition, as described in the Overview of Existing Services, service frequencies on many routes are low, which makes service inconvenient. Looking forward, more frequent service will be needed to make service more convenient to major destinations, and service will need to expand to serve emerging destinations.

### Distance

Both street connectivity and block length strongly influence people's likelihood of walking or biking to transit. Interconnected streets in a grid pattern tend to shorten distances between transit stops and destinations. Neighborhoods where all roads are designed to connect to arterials or collector streets allow transit customers to reach bus stops without walking out of their way and provide more efficient routing options that can support high frequency service (see Figure 16). In addition to being important indicators of effective distance to transit, block length and street network connectivity are often used in transportation research to represent design quality. This is because short blocks and well-connected streets contribute to a higher-quality pedestrian experience and pedestrian realm, and they often occur in places where other elements of good design, such as adequate sidewalks, are also in place.

FIGURE 15 OVERVIEW OF FACTORS INFLUENCING TRANSIT DEMAND - THE "6 DS"

| 6D Factor | Principle |
|---|---|
| **Destinations** | Align major destinations along reasonably direct corridors served by frequent transit |
| **Distance** | Provide an interconnected system of pedestrian routes so that people can conveniently access transit |
| **Density** | Concentrate higher densities close to frequent transit stops and stations and multimodal nodes |
| **Diversity** | Provide a rich mix of pedestrian-friendly uses to support street-level activity throughout the day and night |
| **Design** | Design high-quality pedestrian-friendly spaces that connect people seamlessly to transit |
| **Demand Management** | Provide attractive alternatives to driving by managing parking, providing incentives not to drive, and/or providing programs to help educate people about driving alternatives |

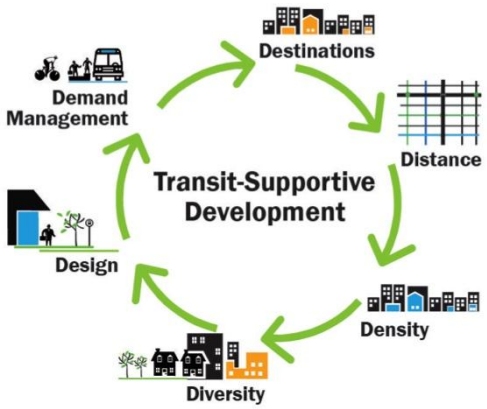
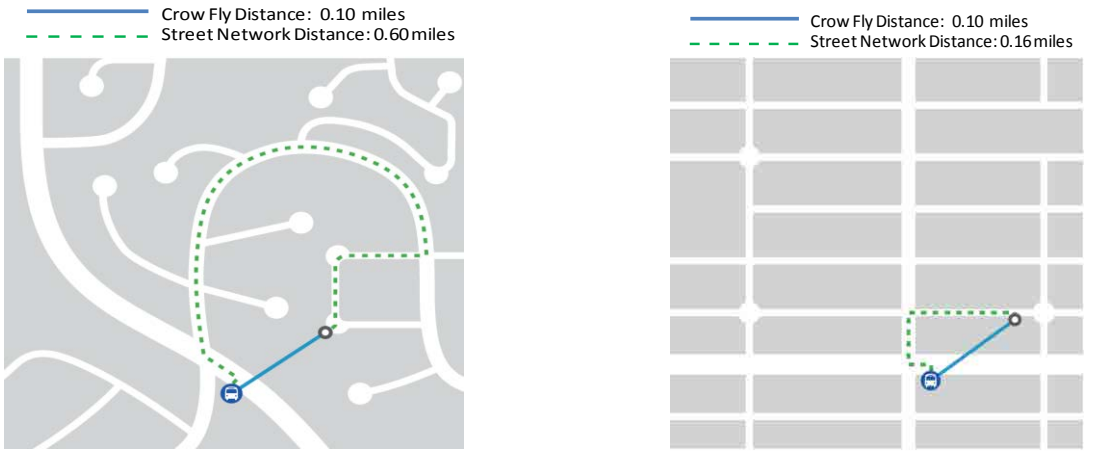


FIGURE 16 STREET NETWORK DESIGN AND WALK DISTANCES TO TRANSIT




A disconnected street network (shown at left) with long blocks and indirect streets results in long walking distances and less efficient transit operations. A well-connected street network (shown at right) enables shorter, more direct walking connections and is easier to serve cost effectively with transit.

Source: TransLink Transit Oriented Communities (2011)

The grid-like street pattern in most of older Nashville—for example, East Nashville—supports easy and comfortable access to transit (see Figure 17). However, in many newer areas—for example Parkwood Estates—pedestrian connections to streets that are suitable for attractive transit are very limited (see Figure 18).

FIGURE 17 CONNECTED STREET NETWORK IN EAST NASHVILLE

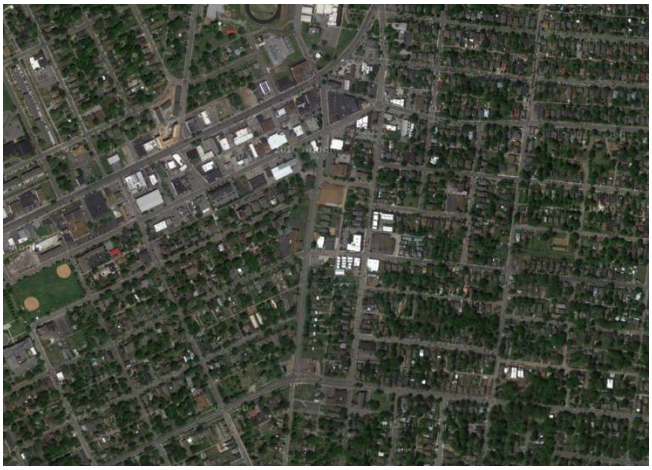
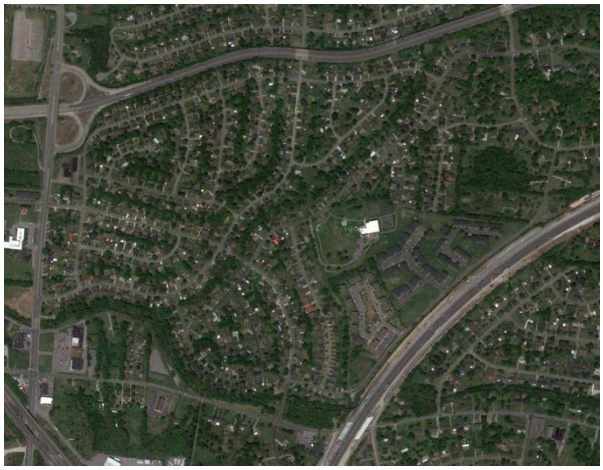


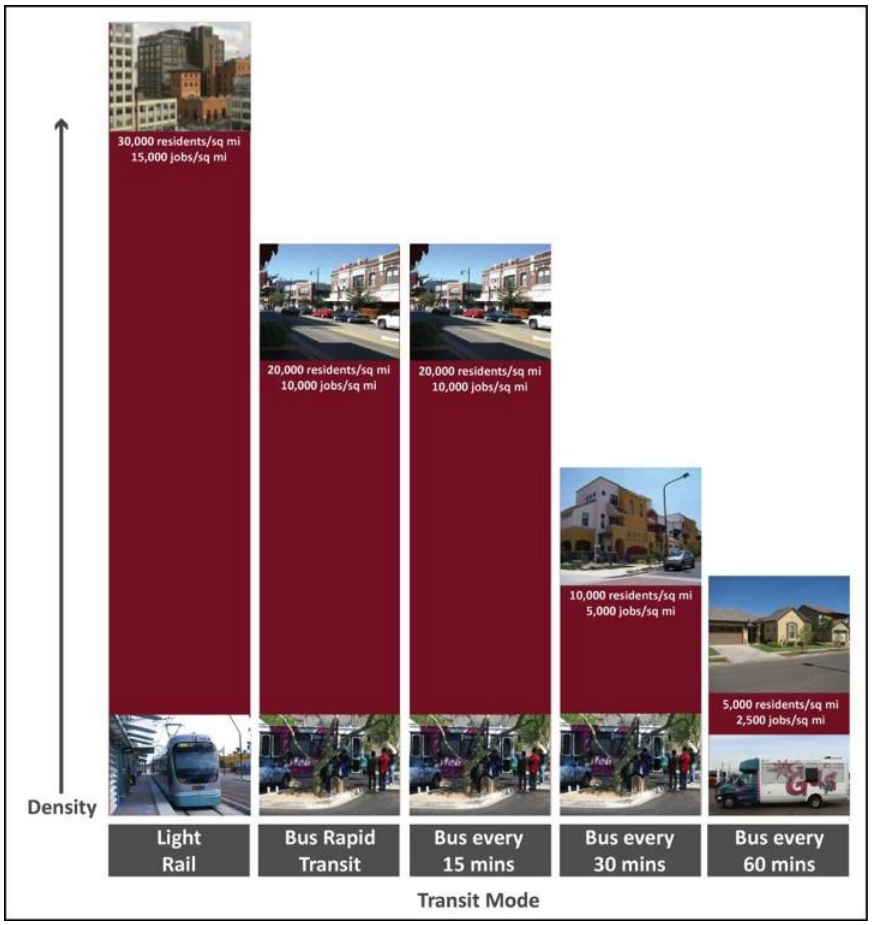
FIGURE 18 LIMITED CONNECTIONS TO ARTERIALS IN PARKVILLE ESTATES



## Density

Population and employment densities determine how many people will be able to access transit. By extension, they also strongly influence the amount of service that will be required (see Figure 19) and, in turn, the types of riders who will use transit. Infrequent service is inconvenient, and thus will largely serve residents and workers who, for one reason or another, cannot drive. Frequent service, conversely, is convenient, and thus will attract many who choose to take transit rather than use other options. Frequent service is clearly desirable, but because of the operating costs involved, and to avoid running empty buses, transit service levels must be matched to demand.

FIGURE 19 RELATIONSHIP BETWEEN POPULATION AND EMPLOYMENT DENSITIES AND TRANSIT DEMAND




Source: Composite data compiled by Nelson\Nygaard from various sources

## Diversity

Traditional zoning separates land uses, sets maximum densities and minimum lot sizes, and usually contains explicit regulations such as bulk and height limits and minimum parking requirements. This type of zoning generally encourages automobile use and discourages transit use (see Figure 20). Mixed-use development, which reverses this approach, is becoming more popular as it creates a more interesting environment. It also encourages transit, walking, and bicycling and focuses much less on automobiles and parking.

In the Nashville area, good examples of mixed-use development include the West End/Midtown and East Nashville. Both of these areas have a wide variety of uses including residential, commercial and other businesses, and institutional uses. In Midtown, the institutional uses include Vanderbilt and other universities. This type of development creates all-day activity in walkable environments that can be well served by transit. As further described below, the preferred future that the city has adopted as part of NashvilleNext envisions much more mixed-use development. That change will both increase transit demand and enable the provision of much more effective transit service.

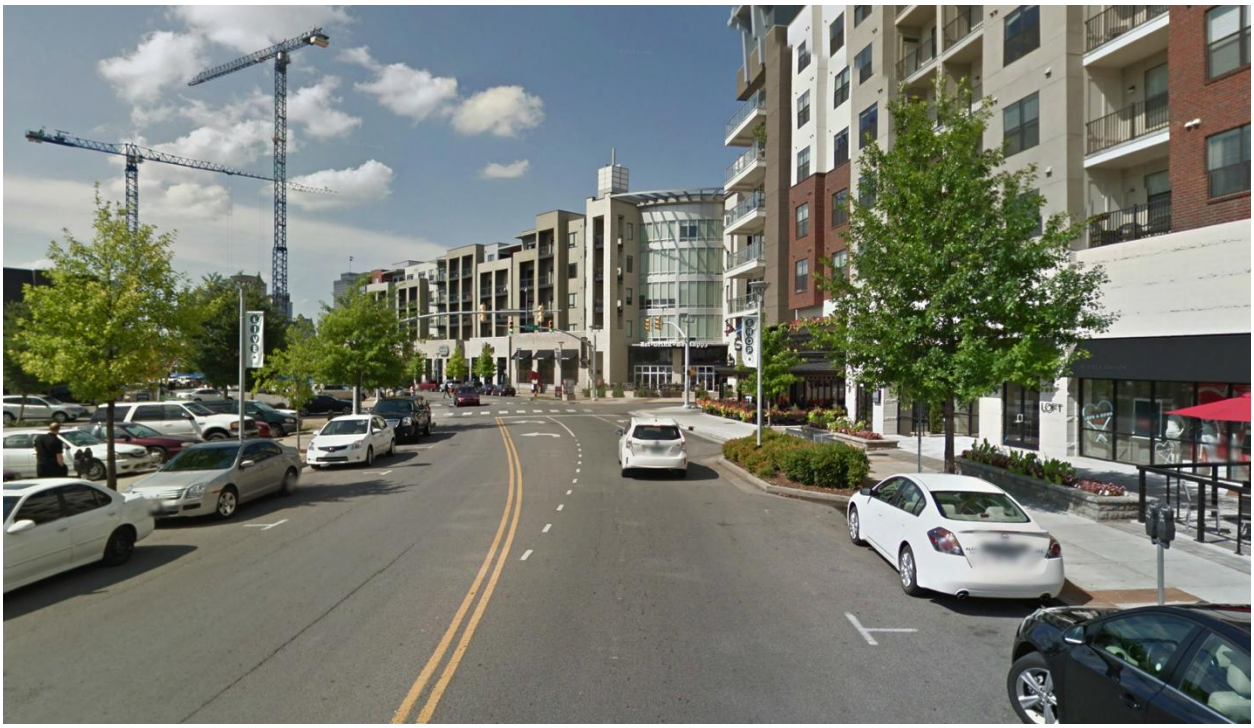
FIGURE 20 TRADITIONAL ZONING AND SPRAWLING DEVELOPMENT ALONG GALLATIN PIKE

Source: Google Maps

## Design

People will not use transit if it is difficult to use or dangerous to access. Thus, safe and accessible streets are essential to ensure that people will be able to reach transit easily and feel safe doing so. Transit stops and stations must also be attractive and clean and include amenities like benches, trash cans, and schedule information. As MTA plans for future investments in transit, coordination with the City of Nashville to prioritize safe bicycle and pedestrian access to transit will be required. A framework to invest in transit station amenities at high demand stops—as along BRT Lite routes—will also be important to build demand for transit.

FIGURE 21 NEW MIXED-USE DEVELOPMENT IN THE GULCH



### Demand Management

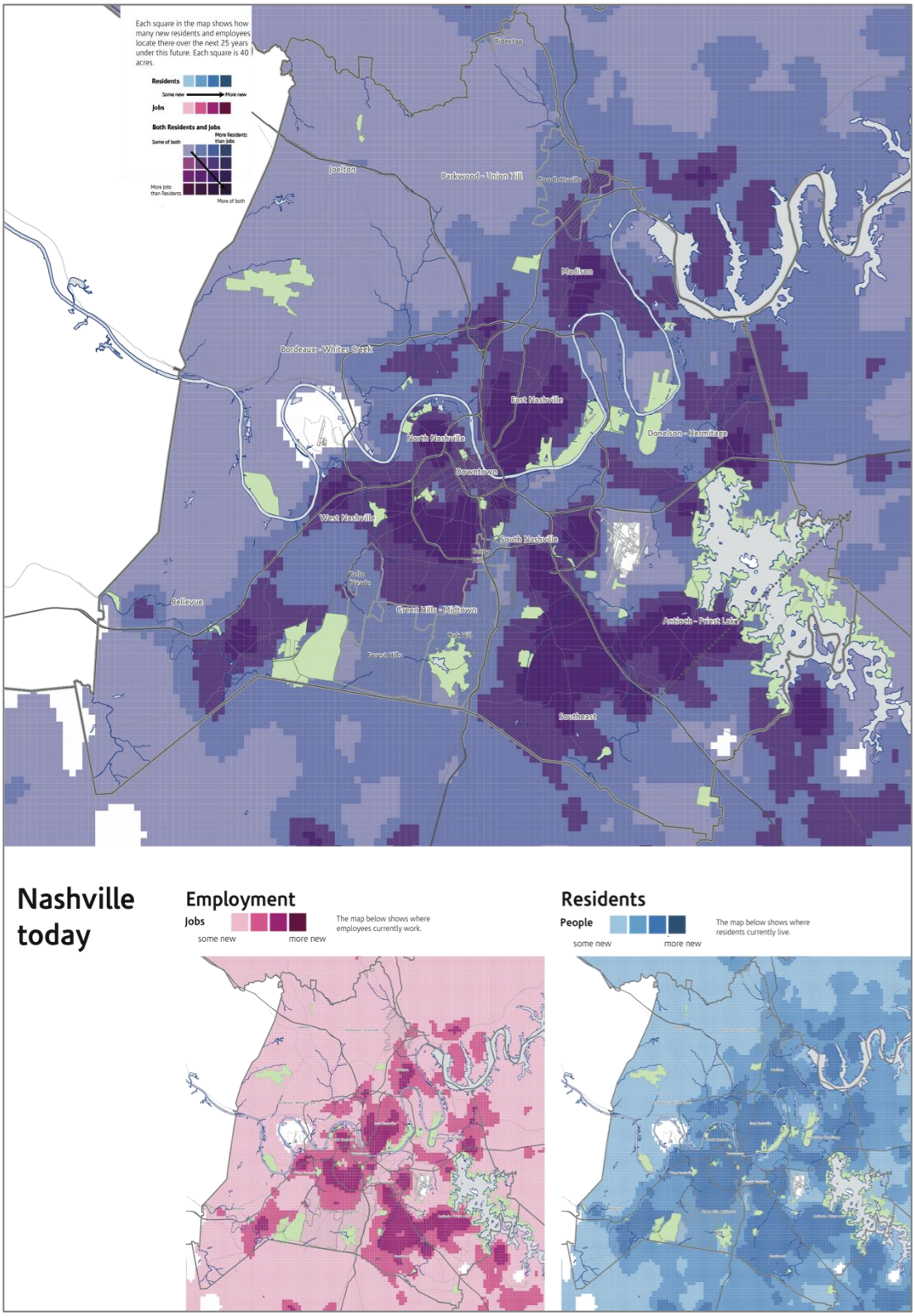
Demand management measures can be used to encourage transit use and discourage automobile use. The MTA already provides the University Pass Program to encourage more university students to ride transit. However, a comprehensive transportation demand management program that works with employers and residents to provide information and incentives for taking transit is needed to increase transit ridership.

## CURRENT LAND USE

In most major metropolitan areas, population, employment, and development densities are generally greatest in and around the downtown core, and then thin with distance from the core. However, this is only partially the case in the Nashville area (see Figure 22). Overall densities are the highest in downtown and immediately surrounding areas such as Midtown and East Nashville. However, beyond the immediate core, population densities drop quickly and low density residential development expands outward to and beyond Nashville's city limits along major highways such as I-24, I-40, I-65, Gallatin Pike, and Nolensville Pike.

Employment is clustered most heavily within the inner highway loop, including downtown and Midtown. It then thins out quickly except for pockets of high employment in North Nashville and Berry Hills, and around Nashville International Airport. Elsewhere, and similar to population, employment is largely focused along major highways, in this case along I-24 and Murfreesboro Pike and Nolensville Pike to the south and I-40 to the east.

FIGURE 22 CURRENT LAND USE



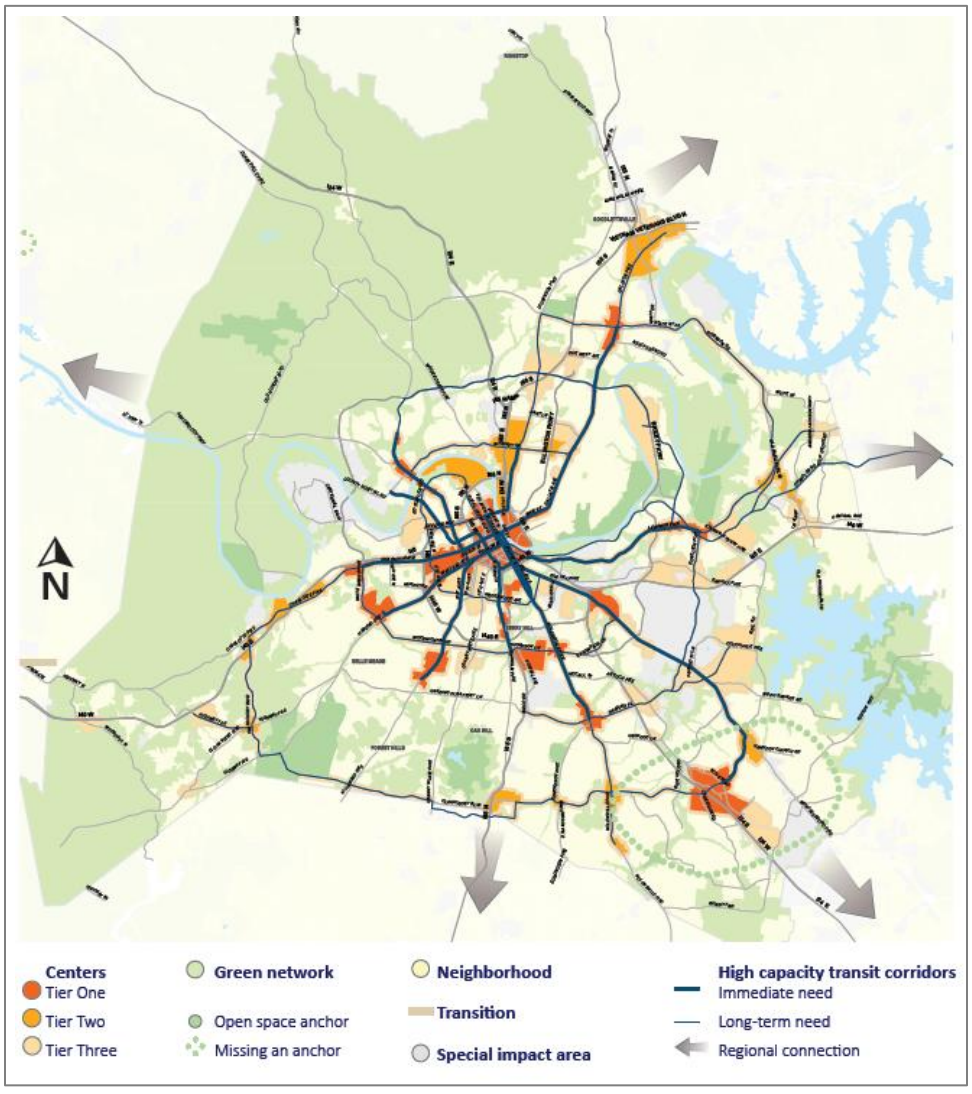

Source: NashvilleNext

## FUTURE LAND USE

Over the past three years, in response to dissatisfaction with the way Nashville has been sprawling, the City of Nashville undertook a comprehensive effort to determine how its residents, businesses, and other stakeholders desire the city to grow in the future and the actions that will be needed to achieve those desires. This effort, NashvilleNext, was based on extensive stakeholder outreach to develop a shared community vision and examined three different growth strategies. The "preferred future" envisions that new development will be much more concentrated in "centers" and along major corridors, with a much greater emphasis on mixed-use development (see Figure 23).

The changes envisioned as part of NashvilleNext's preferred future will provide improvements in many areas, but particularly in terms of the ability to provide much more effective and more attractive transit service. As described above, three of the most important factors that drive both transit demand and the ability to provide transit service that can serve large volumes of people are population and employment densities and mixed-use development. These changes will both increase the demand for transit and enable the provision of much more effective transit service.

FIGURE 23 NASHVILLENEXT'S PREFERRED FUTURE




Source: NashvilleNext

# CURRENT TRANSIT DEMAND

## 2010 POPULATION AND EMPLOYMENT

For transit to be successful, it must be frequent, fast, and easy to get to and from. 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.
- 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.

In addition, population and employment levels and densities provide an indication of the types of riders that transit will serve. In general terms, there are two types of transit riders:

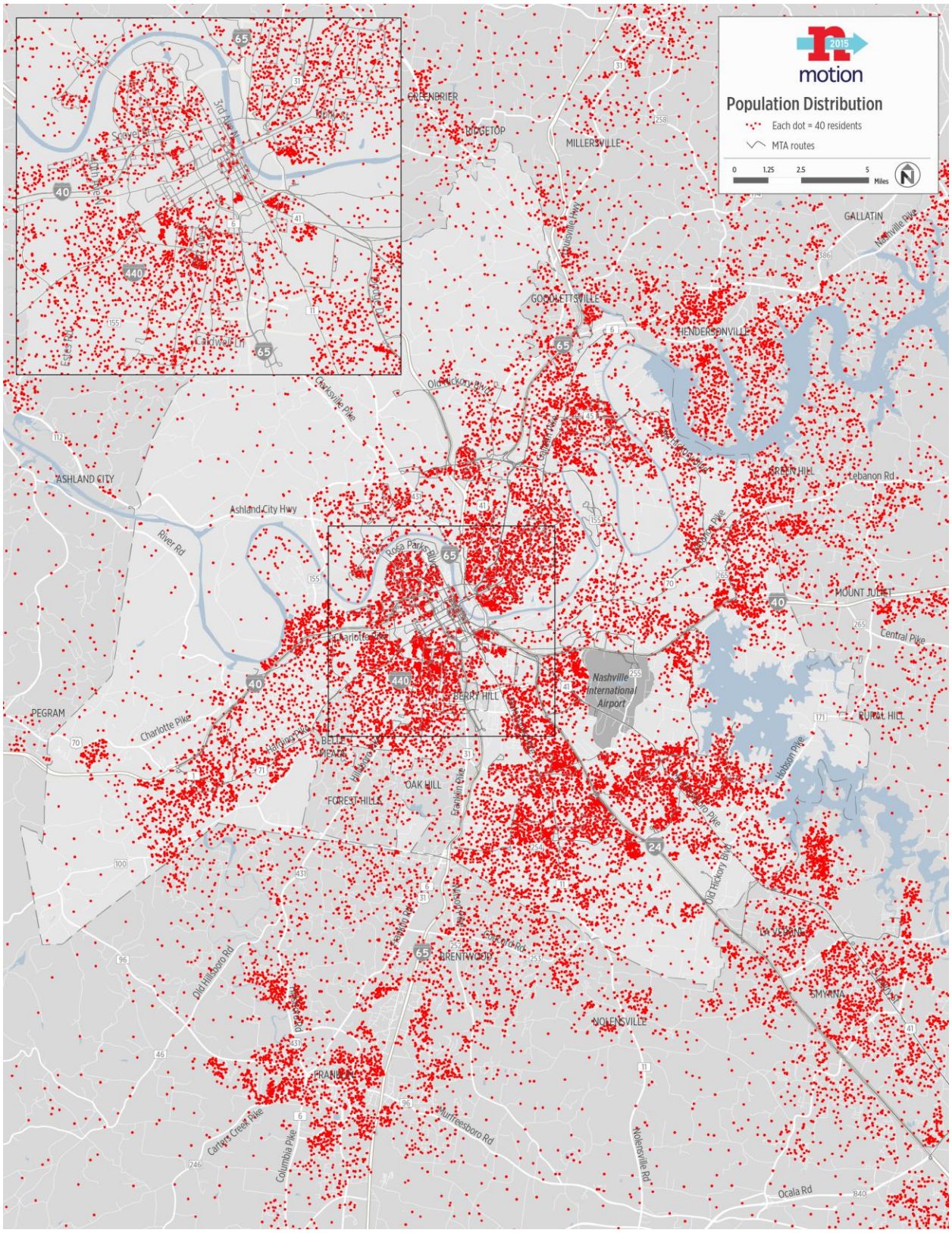
- **Riders with Many Choices**, who have sufficient resources and the ability to operate private vehicles but choose to use transit for some or all trips. These riders may choose transit to avoid congestion, the high cost of long commutes, and/or high parking charges, among other reasons.
- **Riders with Limited Choices,** who are often referred to as "transit dependent riders," use transit services because they don't have an automobile available for their trip or are unable to operate a private vehicle. Because they have less choice for travel, they rely more on transit than riders with many choices. Riders with fewer choices are also more likely to use transit to get to appointments, shop, and visit friends and family.

Transit dependent riders often live in densely populated areas, and the combination of discretionary and transit-dependent riders produces demand for even more frequent service that increases the attractiveness of transit for discretionary riders. However, in less densely developed areas, because there are fewer people, the overall demand is lower, and consequently service levels are lower. As a result, transit dependent riders often comprise a large majority of riders in less developed areas.

### 2010 Population Distribution

As shown in Figure 24, if a diagonal line were drawn from the northeast of Nashville to the southwest, passing through North Nashville, the large majority of residents lives to the east and south of that line, and far fewer live to the north and the west. This is the case both within the city of Nashville as well as in outlying communities. Consistent with these population patterns, MTA service is more heavily concentrated in this "half" of the service area:

FIGURE 24 POPULATION DISTRIBUTION



- Midtown/Vanderbilt, Belmont/Hillsboro Village, and Antioch have the highest total populations. Each of these areas is served by multiple MTA routes, and service coverage is good.[4]
- The area just west of Nashville International Airport and Green Hills just outside of I-440 also have large populations. These areas are served by multiple routes, but service is more limited.
- East Nashville and Madison also have large populations. East Nashville is well served by many MTA routes; Madison less so.
- The northwestern portion of the county has significantly fewer residents. In general, this area has very limited or no fixed-route service.

Overall, MTA serves approximately half of Davidson County residents. The 2010 Census indicates that 49% of Davidson County residents live within a quarter-mile of an MTA bus stop.

### 2010 Population Density

As described above, population and employment densities are two of the strongest indicators of both where the demand for transit will be highest and where transit will work best. As such, with respect to population, population densities provide an indication of the underlying population-based demand for transit in terms of the type and frequency of service that would be most appropriate.

As shown in Table 4, there must be eight to 12 residents per acre to produce demand for hourly service, which is the lowest level of service that is generally considered to be acceptable. As densities grow, the demands for transit grow, particularly with respect to more frequent service. Population densities higher than 31 residents per acre produce demand for frequent services (every 15 minutes or less) and premium services.

**TABLE 4 TRANSIT-SUPPORTIVE POPULATION DENSITIES**

| TRANSIT SERVICE LEVEL | POPULATION/ACRE |
|---|---|
| Flex Bus | 0.5 |
| Community Circulator | 2 |
| Local Bus | |
| 60-minute frequency | 8–16 |
| 30-minute frequency | 16–31 |
| 15-minute frequency | 31–47 |
| 10-minute frequency | 47–92 |
| 5-minute frequency | >92 |

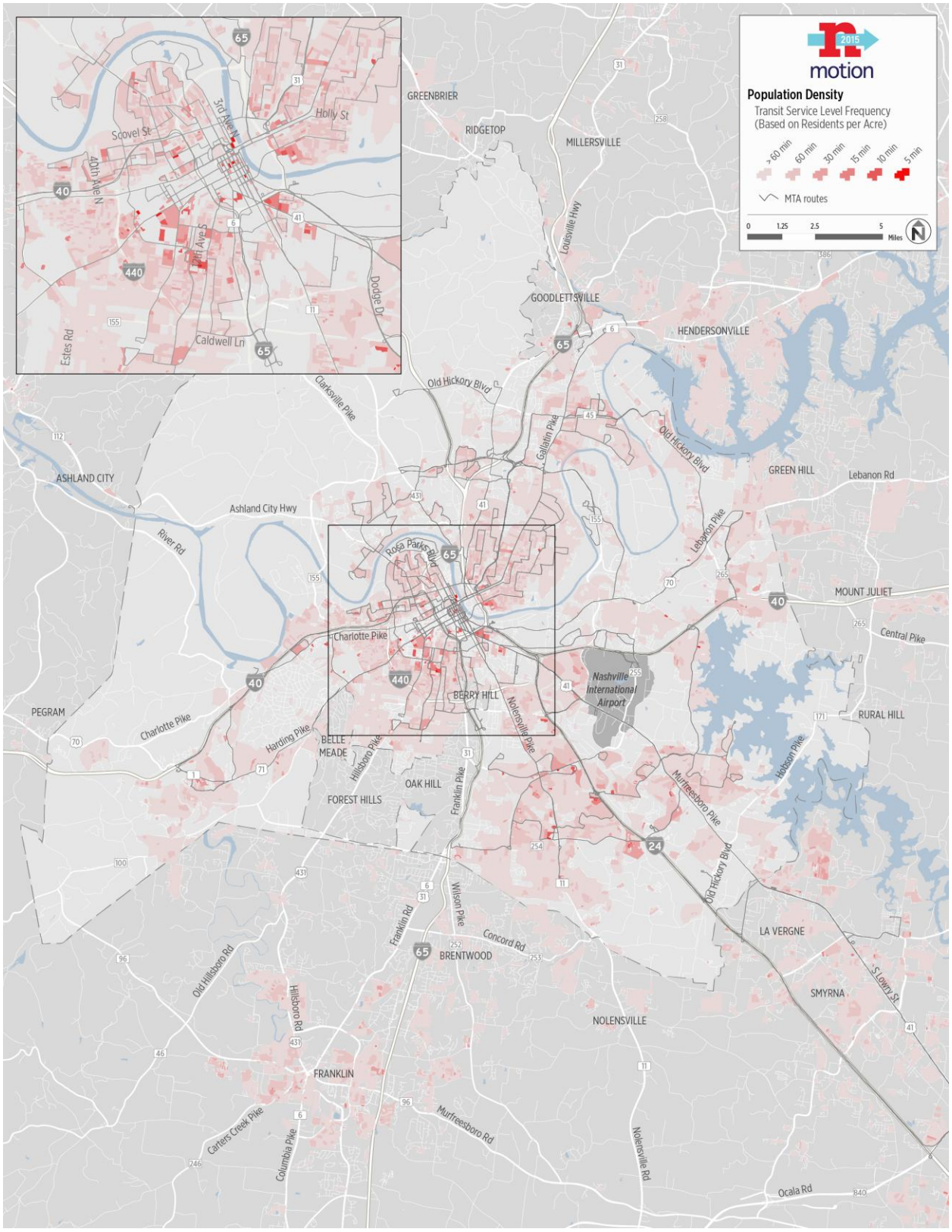
Source: Nelson\Nygaard compiled from various national sources

Based on population density alone, there are relatively few pockets of dense residential development that, by themselves, can support very high levels of transit service (every 5 to 10 minutes). These include:

- Neighborhoods adjacent to downtown, including the Gulch, Midtown/Vanderbilt, and Belmont/Hillsboro Village (see Figure 25)
- The area around Trevecca Nazarene University, southeast of downtown
- Much of East Nashville, particularly along Main Street and Shelby Avenue

[4] This section focuses on service coverage or, put more simply, whether an area is served or not. However, as described in the Overview of Existing Services, the hours that many routes operate are short, and service frequencies are long. Thus, the fact that service exists does not necessarily mean that it is convenient. As a result, while this section presents important information on how service coverage relates to demand, this information must also be used in conjunction with the data presented in the Overview of Existing Services and the analysis included in the Assessment of the Existing System.

FIGURE 25 POPULATION DENSITY



Most other residential areas, by themselves, have underlying demand for service every 30 to 60 minutes. These are largely neighborhoods located along major highways, such as I-24, I-40, I-65, Gallatin Pike, and Nolensville Pike. It should be noted, however, that while individual neighborhoods may only have underlying demand for 30 to 60 minute service, much of that demand is for service to and from downtown Nashville. As a result, that demand "accumulates" along a route, and does ultimately support the more frequent services that are provided in most major corridors.

Beyond Briley Parkway, areas to the north, northwest, and west have very little population-based transit demand. Correspondingly, there is also very little transit services—a single local route and two express routes.

### 2010 Employment Distribution

The location and number of jobs is a second strong indicator of transit demand, as traveling to and from work often accounts for the most frequent type of transit trip. Compared to population, employment in Nashville and Davidson County is much more concentrated (see Figure 26) and can support higher levels of transit service.

The largest concentrations of jobs are located in downtown Nashville and west of downtown in the Gulch and Midtown. There are also high concentrations of jobs in Berry Hill, along Hillsboro Pike at and around the Mall at Green Hills, near the intersection of I-440 and I-65, and north of Nashville International Airport. These areas all have underlying demand for frequent transit service. With the exception of jobs at and near the airport, all of these areas are well served or fairly well served currently.

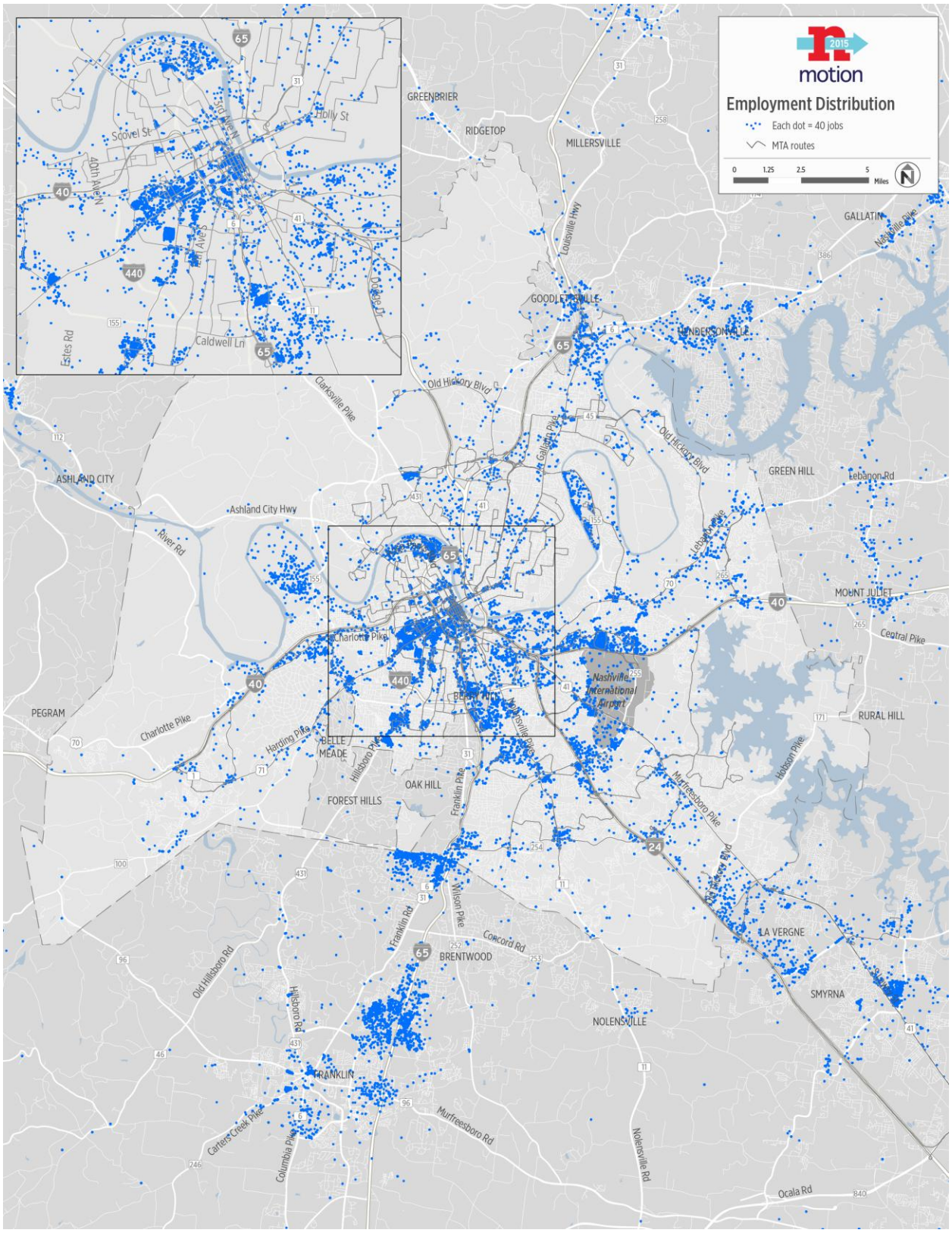
There are smaller, but still noteworthy, concentrations of jobs the intersection of Harding Pike and White Bridge Pike (Nashville State Community College and the Target shopping center), along Old Hickory Boulevard in the northern portion of Brentwood, and in northeast Franklin around I-65. Harding Pike and White Bridge Road are served by frequent service, but the other areas are outside of MTA's current service area.

In addition to these areas:

- Buena Vista Heights, the area between Briley Parkway and the Cumberland River, and just south of John C. Tune Airport have moderate job clusters. Buena Vista Heights and the Briley Parkway areas are each served by one MTA route, while the John C. Tune Airport area is not served.
- Many jobs are also located along some of the region's major corridors, most of which are well or fairly well served:
  - East toward Mount Juliet along I-40
  - East and northeast along Route 80
  - South along Nolensville Pike
  - Southeast along I-24
  - West along I-40
  - North along Gallatin Pike

As with population, there are relatively few jobs in the northern, northwestern, and west parts of the city and county, and also very little transit service. Overall, the MTA serves a greater proportion of jobs (74%) than population (49%).

FIGURE 26 EMPLOYMENT DISTRIBUTION



## 2010 Employment Density

In the same manner as population densities, employment densities provide a strong indication of underlying employment-based transit demand. As shown in Table 5, four to six jobs per acre typically produce demand for hourly bus service. As densities grow, the demands for transit grow, particularly with respect to more frequent service. Employment densities higher than 16 jobs per acre produce demand for frequent services (every 15 minutes or less) and premium services.

TABLE 5 TRANSIT-SUPPORTIVE EMPLOYMENT DENSITIES

| TRANSIT SERVICE LEVEL | JOBS/ACRE |
|---|---|
| Flex Bus | – |
| Community Circulator | – |
| Local Bus | |
| 60-minute frequency | 4–8 |
| 30-minute frequency | 8–16 |
| 15-minute frequency | 16–24 |
| 10-minute frequency | 24–48 |
| 5-minute frequency | >48 |

Source: Nelson\Nygaard compiled from various national sources

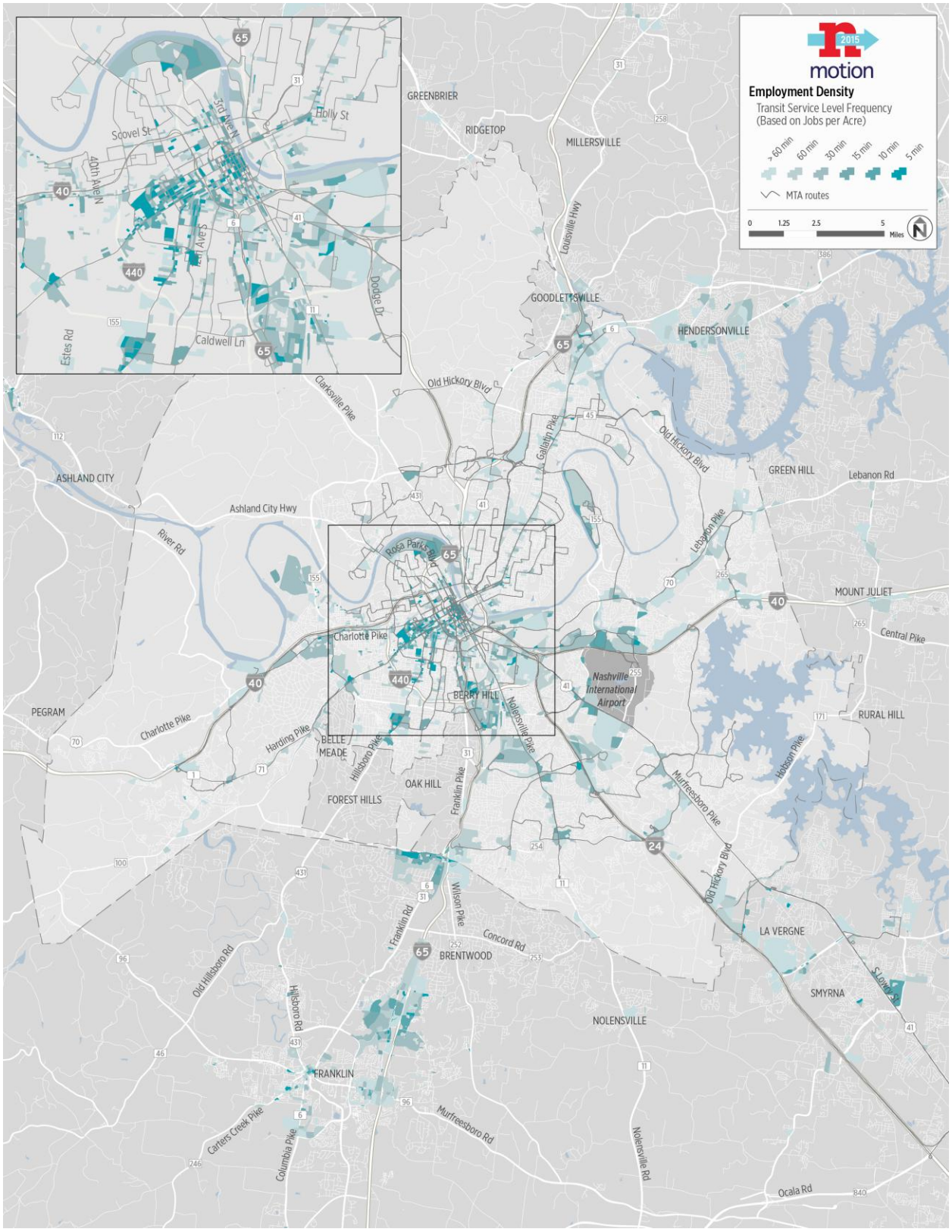
In Davidson County, employment density is highest within the inner highway loop, including downtown and Midtown (see Figure 27). It then thins out quickly except for pockets of high employment in MetroCenter/North Nashville and Berry Hills, and around Nashville International Airport. Elsewhere, and similar to population, employment is largely focused along major highways, in this case along I-24 and Murfreesboro Pike and Nolensville Pike to the south, and I-40 to the east.

In more detail, the areas with the highest employment densities, and those with the highest underlying employment-based demand for transit service are:

- Downtown Nashville and Midtown. Downtown is the focal point of the MTA system; there is also a high emphasis on service to Midtown.
- The MetroCenter area of North Nashville just south of the Cumberland River. This area is served by Route 9 MetroCenter, which provides links to downtown.
- Berry Hill, which has a number of high-density employment blocks, some of which can support service every five minutes and the majority of which can support service every 15 minutes. Berry Hill is served somewhat peripherally by Route 12 South, which provides service to and from Midtown and downtown via Granny White Pike and 12th Avenue South, and by Route 1 100 Oaks that provides peak period-only service.
- There are also transit-supportive employment densities along many major roadways, including Hillsboro Pike, I-24 extending southeast from downtown, I-40 and Lebanon Pike extending east from downtown, and Gallatin Pike extending northeast from downtown. These areas have underlying demand for service that operates every 15 to 30 minutes. The MTA serves most of these areas, but some service is limited, especially in the vicinity of the airport.

Similar to population density, beyond Briley Parkway, areas to the north, northwest, and west have very little employment-based transit demand.

FIGURE 27 EMPLOYMENT DENSITY



### 2010 Composite Transit Demand

The previous sections present population and employment-based demand separately, but particularly in mixed-use areas where there are both large numbers of residents and jobs, transit demand will be significantly higher than indicated by the individual measures. When the two measures are viewed together, the number of areas with strong underlying transit demand increases (see Figure 28):

- Downtown and Midtown Nashville are by far the most transit-supportive areas in Davidson County. In these neighborhoods, many blocks have sufficient population and employment density to support a very high level of transit service, potentially as high as every 5 minutes during peak periods.
- Several of the local corridors east and south of downtown have densities that are sufficient to support high and moderate levels of service. Hillsboro Pike to the southwest, Nolensville Pike to the southeast, and Lebanon Pike to the east all have strong transit markets.
- There are several corridors that have residential and employment densities that, viewed simply by themselves, have demand for only moderate levels of service. These include Gallatin Pike, Nolensville Pike, and Charlotte Pike. However, as discussed below in the Travel Patterns sections, a large proportion of this demand is to and from Nashville's core areas. As such, the cumulative demand between outer areas and downtown can support high levels of service. Furthermore, these corridors have also been designated as high capacity transit corridors by NashvilleNext and, as discussed in the Future Demand chapter, future demand will be much higher.

In areas north, northwest, and west of Briley Parkway, even when population and employment densities are considered together, there is still only very low underlying demand for transit service.

## SOCIO-ECONOMIC CHARACTERISTICS

Many population groups have a higher propensity for transit use than the overall population. These include:

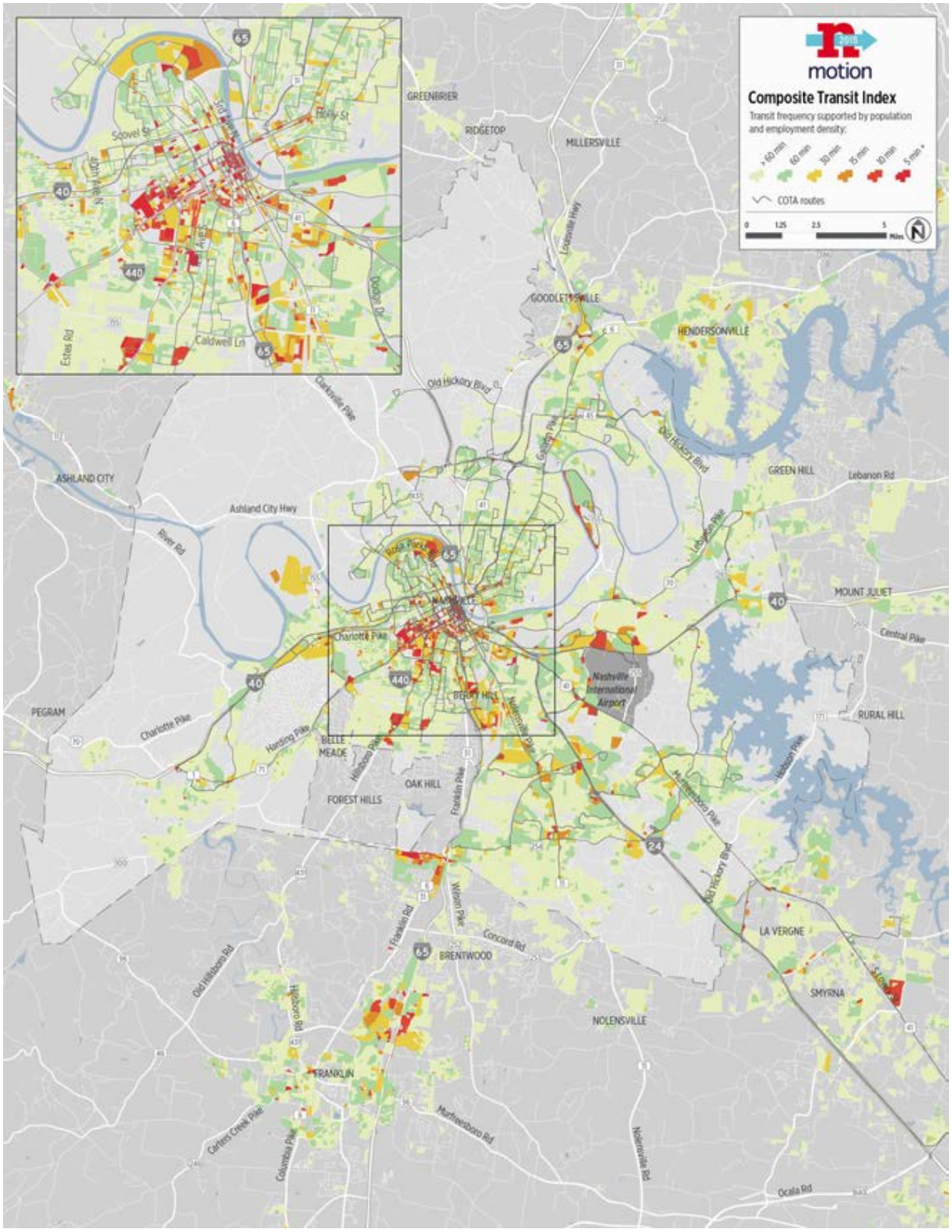
- **Millennials,** who in general have a significantly higher interest in using many transportation options such as transit, walking, and biking and a lower interest in driving. In many cases, the availability of good transit is an important factor in where they will live.
- **Seniors,** who as they age often become less comfortable or less able to operate a vehicle. Transit offers older adults the freedom to stay in their homes as they transition away from their vehicles and "age in place."
- **Persons with Disabilities,** many of whom cannot drive or have difficulty driving.
- **Low Income Residents,** often use transit because it is much less expensive than owning and operating a car.
- **Minorities,** have lower incomes and use transit because it is much less expensive than owning a car.

**Transit-Oriented Populations**

| | Percent |
|---|---|
| Millennials | 30% |
| Seniors | 11% |
| Persons with Disabilities | 7% |
| Low Income Households | 15% |
| Minorities | 36% |

(as a % of Davidson County's population)

FIGURE 28 COMPOSITE TRANSIT DEMAND



Another population that uses transit to a much greater extent than the general population is residents without automobiles. In larger cities, many residents do not have an automobile by choice because transit is more attractive, car ownership is a hassle, and there are plentiful options such as taxis, car sharing, and car rentals for the times when a car is desired or needed. However, in urban areas such as Nashville that are oriented toward automobile travel and where transit options are limited, persons without automobiles largely consist of those with lower incomes or people who do not drive.

There is a large amount of overlap between these groups. For example, many elderly residents have low incomes and also have a disability; a large proportion of individuals without access to an automobile are also low income households; and minority populations typically use transit to a greater extent because of low incomes and not specifically due to ethnic background. Still, the presence of each population group is an important indicator of increased demand for public transit, and thus is presented individually.

At the present time, lower income individuals and those who do not drive comprise a large proportion of the MTA's ridership. This reflects both the current development patterns of Nashville and Davidson County and the design of the system. Going forward, service to disadvantaged populations will remain important, but to fulfill a more meaningful role in the area's transportation system, MTA will need to develop services that are attractive to a much broader cross-section of the county's population.

### Millennials

Like all ambitious cities, Nashville desires to attract a young, talented workforce and their families, and this will be critical to ensuring the area's continued success. A recent survey of Millennials by Transportation for America and the Rockefeller Foundation reported that more than half of Millennials would prefer to live in a place where they do not have to rely on cars to get around. Two-thirds also say that access to high-quality transportation will be one of the top three criteria in considering where they decide to live next. In Nashville, the same report indicates that 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," and 64% say they expect to live in walkable places where they don't necessarily need a car. However, only 6% say they that where they currently live in Nashville is such a place.

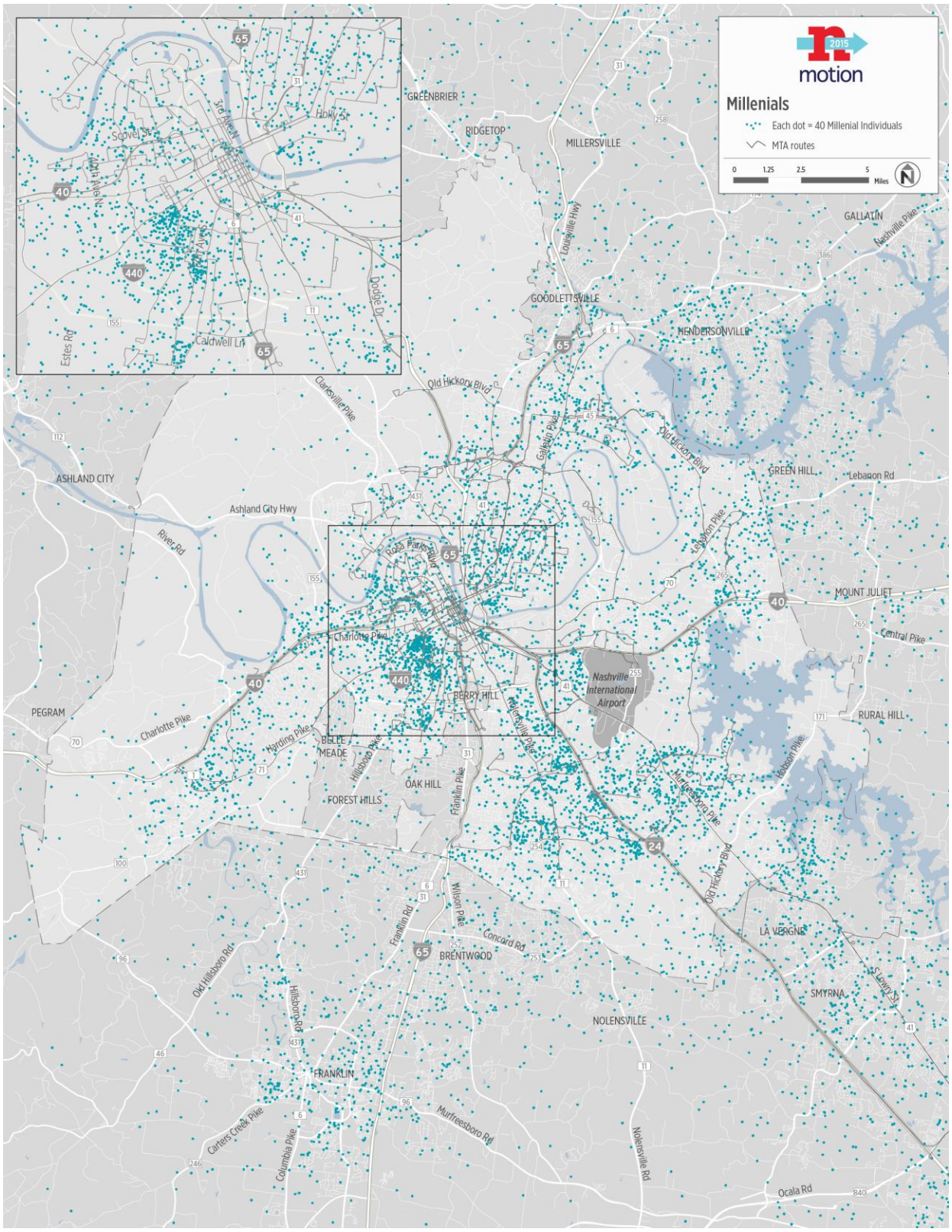
There are currently over 188,000 Millennials, defined as individuals born between 1980 and 2000, in Davidson County; Millennials represent 30% of Davidson County's population. Millennials live throughout the county, but with the highest populations in areas around Nashville's major universities—in Midtown around Vanderbilt University, in Belmont/Hillsboro Village around Belmont University, and around Tennessee State University (see Figure 29). There are also large populations of Millennials along Nolensville Pike, extending south from downtown, and in East Nashville.

### Older Adults

Baby Boomers, and those before them, increasingly desire to remain as active and independent as possible and to age in place. One important way for them to remain independent is through the availability of transit.

In Davidson County, approximately 65,000 residents, or nearly 11% of the county's population, are 65 or over. Older adults live throughout the county, but in general, more live in suburban areas than in the city core (see Figure 30). This is most evident in downtown Nashville, which has a lower proportion of older adults in relation to the area's total population. Elsewhere, however, the distribution of older adults generally matches the distribution of the general population. Exceptions are clusters of older adult populations located north and northeast of Belle Meade, in Belleview south of the Memphis-Bristol Highway, and along Gallatin Pike in Madison. Some of these clusters, particularly those near Belle Meade, have relatively limited access to transit service.

FIGURE 29 DISTRIBUTION OF MILLENNIALS



### Persons with Disabilities

While many people with disabilities are able to drive, many cannot. As a result, public transportation, including both regular fixed route bus service and specialized paratransit services, are an essential resource to ensure people with disabilities can have active and independent lives.

In Davidson County, 44,074 people, or 7% of the population, have a disability. The distribution of these individuals generally matches the distribution of the general population (see Figure 31). It also generally matches the distribution of older adults, since older adults are more likely to have a disability. Larger populations of individuals with a disability are located in and adjacent to downtown Nashville, in Germantown and MetroCenter, north of downtown Nashville along Gallatin Pike, and south of downtown between Nolensville Pike and I-24. There are also relatively large clusters of individuals with disabilities located in Pasquo and Hermitage.

Most areas with a large number of residents with disabilities are well served by transit. However, residents with disabilities live throughout Davidson County, including many areas where the provision of transit is not practical.

### Low-Income Households

People with low incomes tend to use transit to a greater extent than higher income residents because transit provides significant cost savings over automobile ownership and use. In 2013, 39,659 households, or more than 15% of the county's households, were in poverty. This rate is high, above the national average of 13.5%.

Poverty is most concentrated around downtown Nashville, particularly in the West End, Midtown, Belmont/Hillsboro Village, and East Nashville (see Figure 32). Other concentrations of households living in poverty are in North Nashville, southwest of Nashville International Airport in Antioch, and extending northeast from downtown along Gallatin Pike, particularly in Madison.

Most areas with high numbers of low income households—those near downtown and Midtown—receive among the highest levels of transit in the service area. Antioch and the Gallatin Pike corridor are also well served by existing MTA service. Service in many other areas—such as west of Nashville International Airport, between Nolensville Pike and I-24 south of downtown, in the southwestern portion of East Nashville, and south of the John C. June Airport—are not as well served.

### Minorities

Minority populations use transit to a much greater extent than non-minority populations, largely because they tend to have lower incomes than non-minorities. This means that there is a large amount of overlap between minority populations and low-income households; however, the presence of high numbers of minority residents still provides a strong additional indicator of transit demand. The provision of effective transit service to minority populations is also particularly important to the Federal Transit Administration and is a requirement under Title VI of the Civil Rights Act of 1964.

Minority populations in Davidson County are most concentrated in the Germantown/MetroCenter neighborhoods and in East Nashville adjacent to downtown (see Figure 33). Other large clusters of minority residents are located in Belmont/Hillsboro Village and along I-24 southwest of Nashville International Airport. Since minority residents tend to live closer to downtown Nashville or in the southeastern portion of Davidson County, most areas with a large number of minority residents receive among the highest levels of transit in Davidson County.

FIGURE 30 DISTRIBUTION OF OLDER ADULTS (65 AND OLDER)

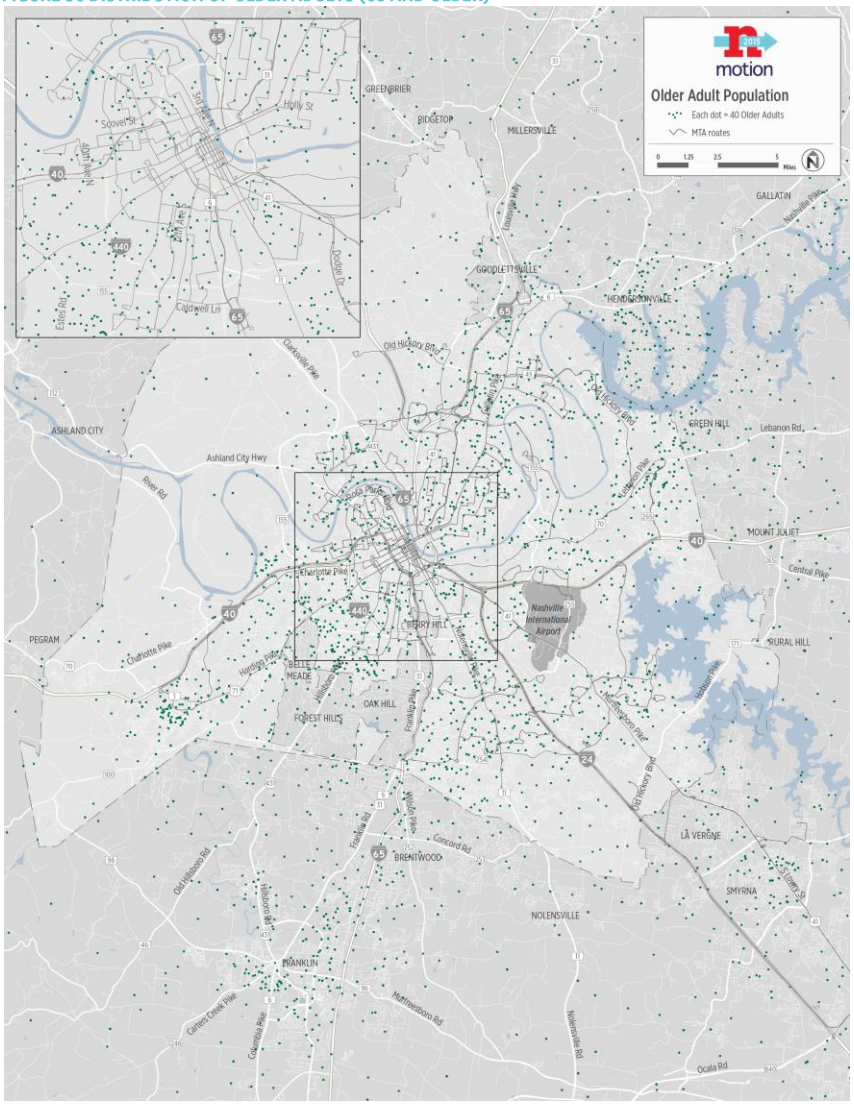



FIGURE 31 DISTRIBUTION OF PERSONS WITH DISABILITIES

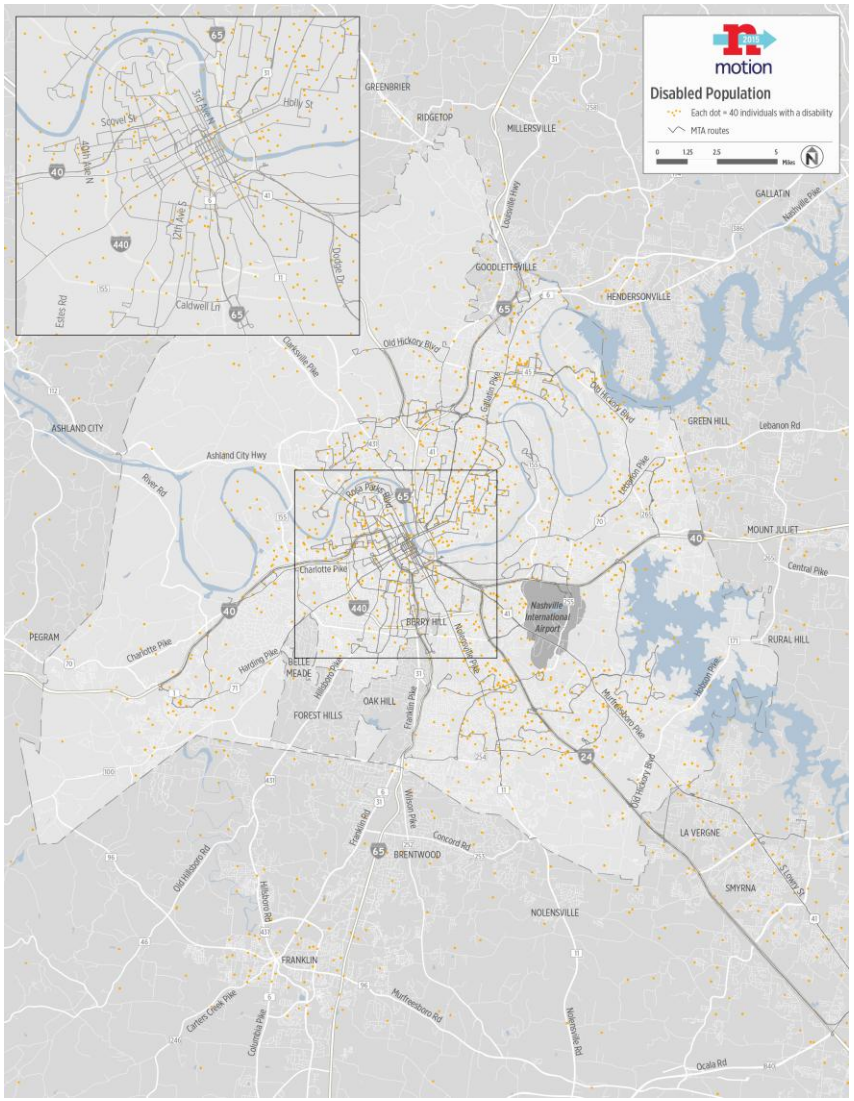


FIGURE 32 DISTRIBUTION OF LOW-INCOME HOUSEHOLDS

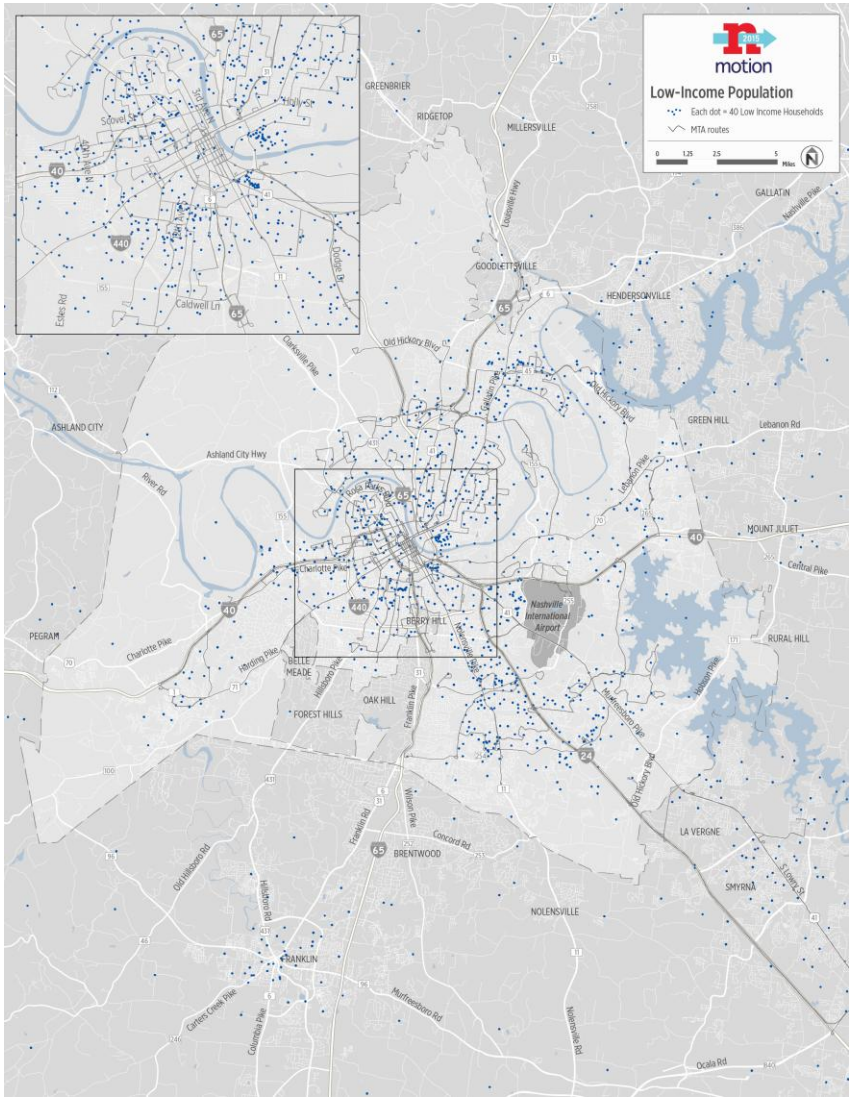
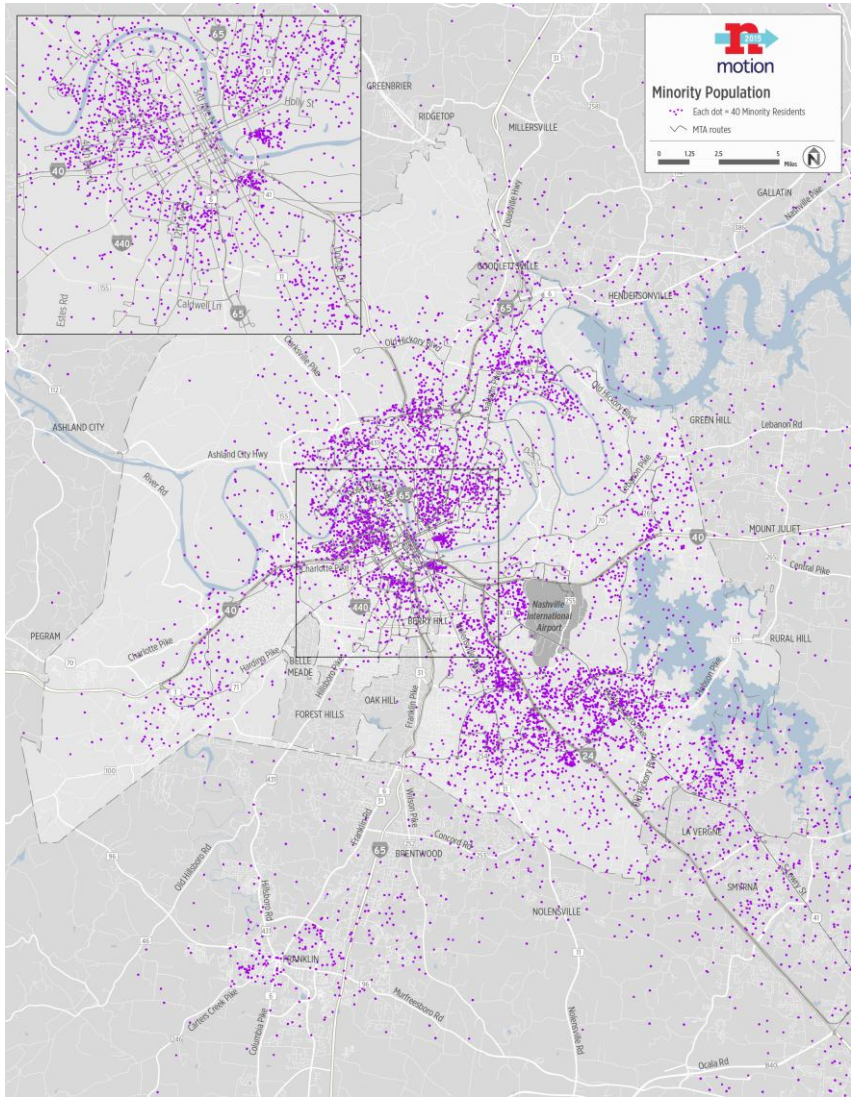



FIGURE 33 DISTRIBUTION OF MINORITY POPULATIONS



# FUTURE TRANSIT DEMAND

Future transit demand in Davidson County will be driven by a number of factors. The most important will be Davidson County's population and employment growth and the new growth patterns envisioned by NashvilleNext.

## 2040 POPULATION DISTRIBUTION

Davidson County is projected to grow by more than 20% from 2010 to 2040. As is the case with current population distribution, if a diagonal line that passed through North Nashville were drawn from the northeast of Nashville to the southwest, based on projections developed as part of NashvilleNext, the large majority of residents will continue to live to the east and south of that line. Not surprisingly, downtown and Midtown will continue to have the largest concentration of residences, but there will also be a continued outward growth of population, particularly northeast and west of downtown (see Figure 34):

- Midtown/Vanderbilt, Belmont/Hillsboro Village, and Antioch are projected to continue to have the highest populations. Though all of these areas are served by multiple MTA routes and service coverage is good, by 2040 these areas will likely require more frequent service and longer service spans due to their significant population increase.
- East Nashville and Madison will also experience significant population growth and will continue to have large populations. While East Nashville is well served by many MTA routes, Madison has more limited service; both areas will likely need more frequent service according to 2040 population projections.
- Despite the population growth projected to occur in most of Davidson County, the northwestern half of the county is projected to see much less growth and continue to have significantly fewer residents.

The number of Davidson County residents located within a quarter mile of an MTA bus stop is projected to increase to approximately 382,000, a 23% increase from 2010. At the same time, if MTA service remains the same, 50% of Davidson County residents are projected to live within a quarter mile of a MTA bus stop, which is similar to the present. Though the percentage of county residents served will remain similar, the 20% increase in population conveniently served by MTA routes will require more frequent service and longer service spans in order to satisfy the increase in demand caused by this population increase. Additionally, in order to provide convenient service to a greater percentage of residents, MTA will likely need to expand its service to better serve the slight outward population growth, particularly northeast and west of downtown.

## 2040 POPULATION DENSITY

With the projected population growth, and as shown in Figure 35, population densities will increase slightly in areas with less demand for transit today. Despite these increases, there will still be relatively few pockets of dense residential development that, by themselves, can support very high levels of transit service (every 5 to 10 minutes). The majority of the county's density increases will occur in area that can currently only support limited frequency service; thus these density increases mean that more areas within the county will be able support transit service every 30 to 60 minutes.

FIGURE 34 2040 POPULATION DISTRIBUTION

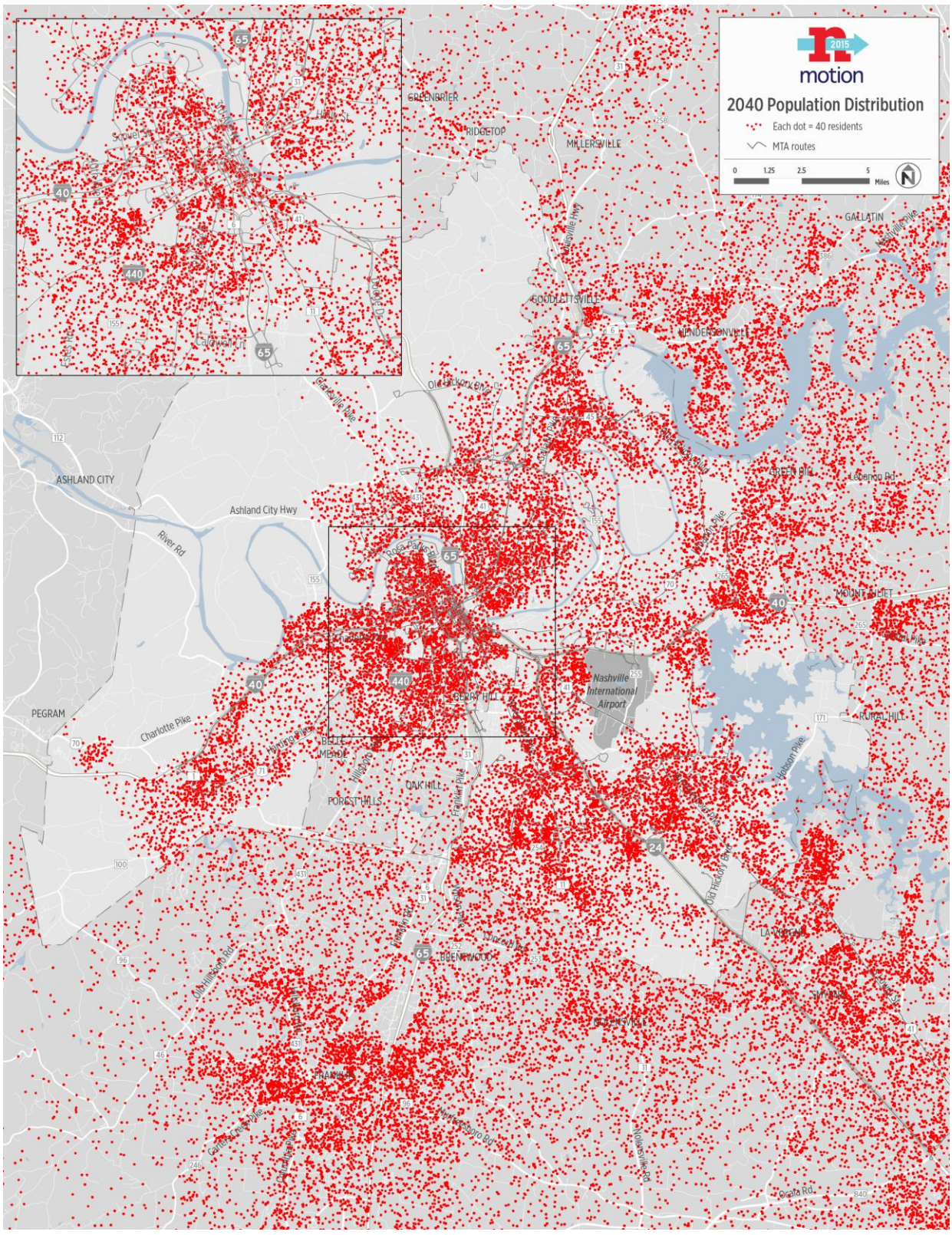
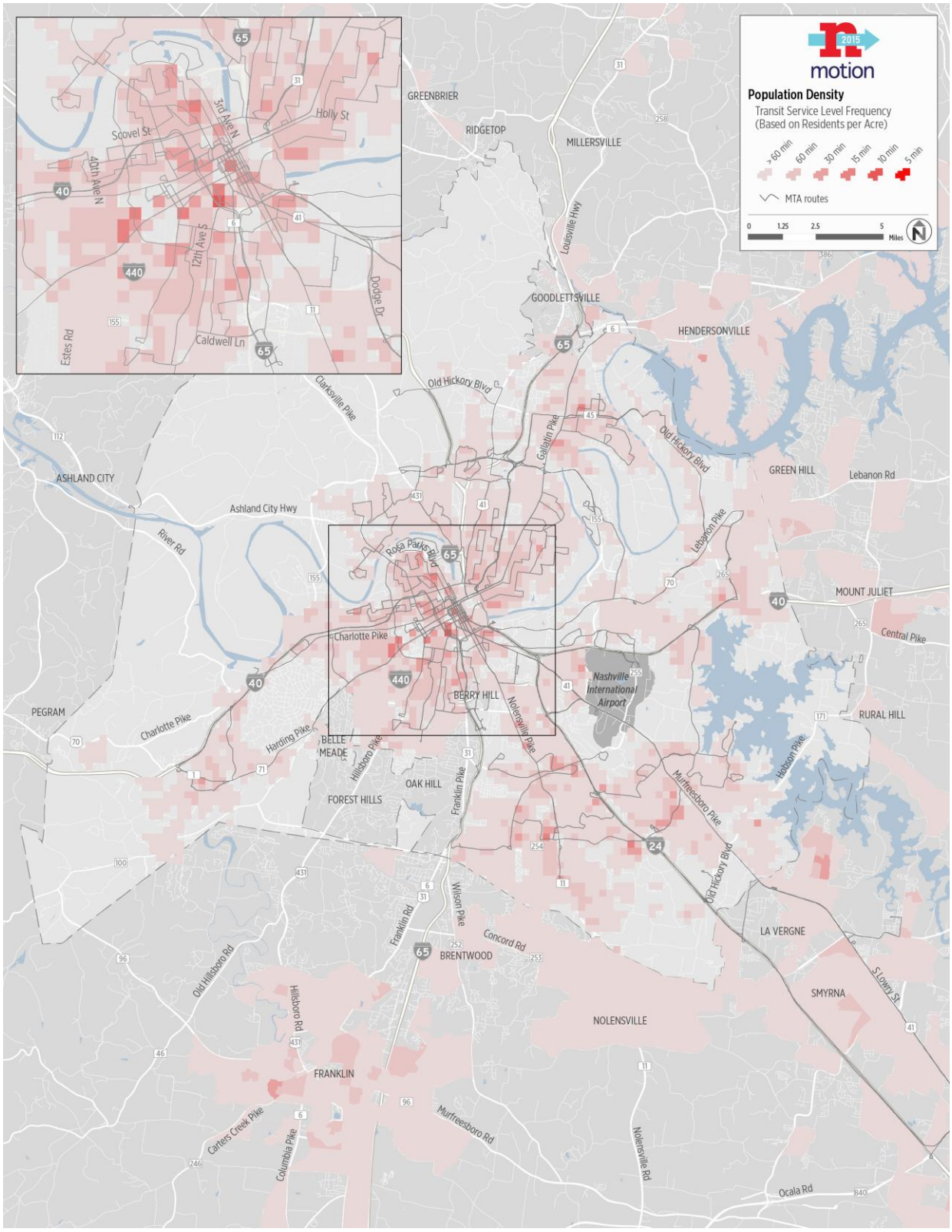


FIGURE 35 2040 POPULATION DENSITY



The highest population densities will be in downtown Nashville, areas adjacent to downtown, and a few areas to the northeast and southeast:

- Belmont/Hillsboro Village
- Jefferson Street/MetroCenter
- Midtown
- West End/Elliston Place
- East Nashville
- Antioch
- Belleview
- Madison

The MTA's existing services will largely meet the needs of new growth in the Nashville core. However, there may be increasing demands for more frequent service and longer spans of service.

## 2040 EMPLOYMENT DISTRIBUTION

Between 2010 and 2040, Davidson County's employment is projected to almost double. This growth is projected to occur along various corridors within Davidson County, with particularly high growth in the downtown core and in midtown (see Figure 36). Other significant growth areas include:

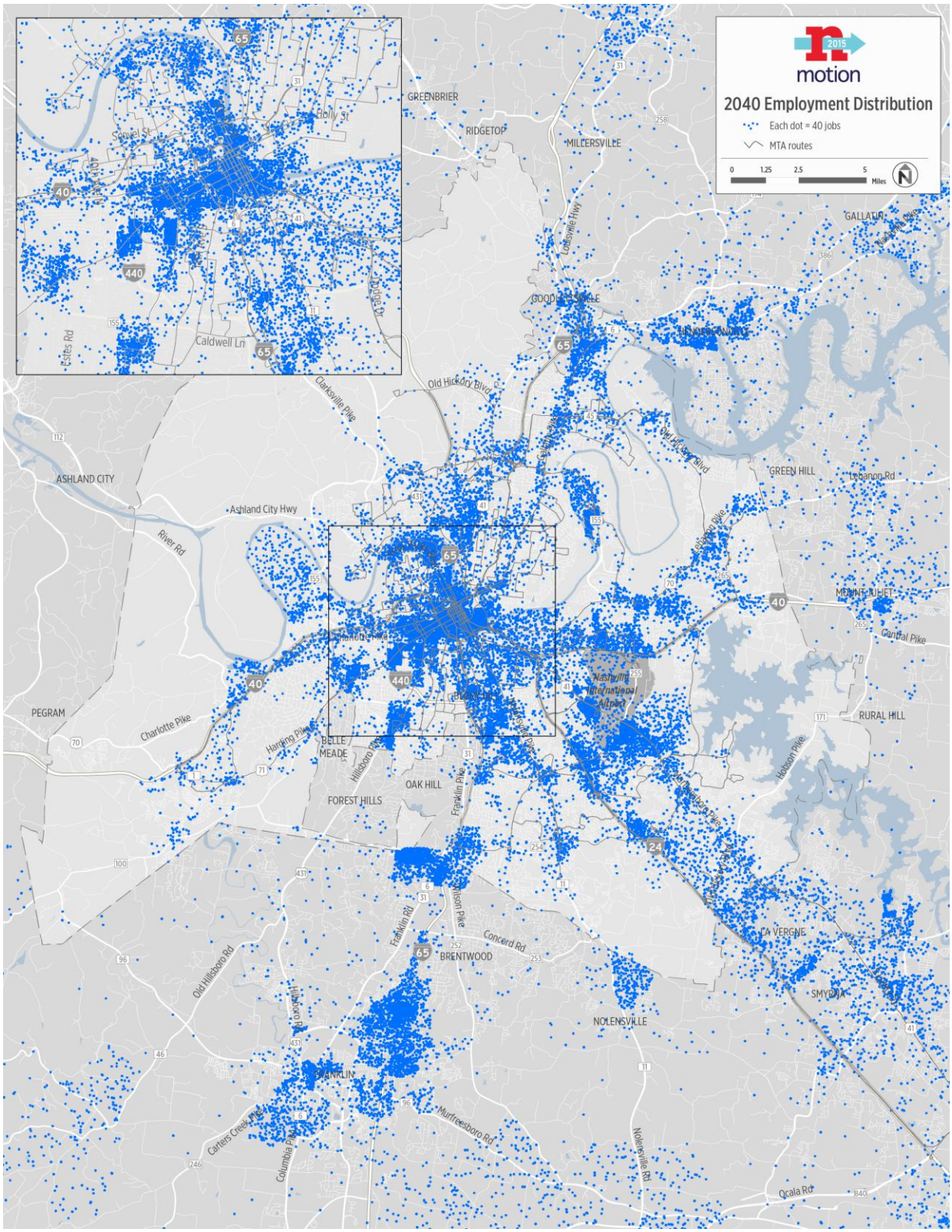
- North of downtown in the Jefferson Street/MetroCenter neighborhood
- Southeast of Nashville International Airport
- Along Gallatin Pike in Madison and Goodlettsville
- In Brentwood near the intersection of Franklin Road and Old Hickory Boulevard

While much of this new employment will occur in areas that are currently served by transit, the frequency and span of service will need to increase to serve employment growth in downtown and midtown Nashville and along these corridors.

There is also a significant amount of growth projected in areas between corridors currently served by MTA, for example between Nolensville Pike and I-65 in Berry Hill and between Murfreesboro Pike and I-24 south of Nashville International Airport. Since the growth is projected to occur between corridors currently served by existing MTA service rather than directly along these corridors, the addition of new routes to serve these areas will need to be planned in order to provide service to these employment locations.

The number of jobs located within a quarter mile of an MTA bus stop is projected to increase to nearly 582,000, a 76% increase from 2010. At the same time, if MTA service remains the same, 67% of Davidson County residents would work within a quarter mile of an MTA bus stop. Though the percentage of county jobs served will decrease slightly from 2010, the doubling of jobs conveniently served by MTA routes will require more frequent service and longer service spans.

FIGURE 36 2040 EMPLOYMENT DISTRIBUTION



## 2040 EMPLOYMENT DENSITY

The county's projected employment growth will increase demand in areas where there is already significant underlying demand and create new demand in additional areas (see Figure 37). The county's highest employment densities will be able to support more frequent service than its residential densities. Areas with high employment density are more concentrated in downtown and along major corridors than areas with high residential densities, which means that areas with high employment density can be more efficiently served by MTA fixed-route services.

Areas where there will be much higher or new significant demand for transit include:

- Downtown Nashville
- Midtown Nashville
- South of Nashville International Airport, particularly along Murfreesboro Pike and I-24 extending southeast from downtown
- Berry Hill
- Along Hillsboro Pike extending southwest from downtown

With the exception of portions of Antioch, most of these areas are currently served by MTA. However, many of these areas have transit service that operates with only moderate frequency, even during morning and evening peak travel periods.

## 2040 COMPOSITE TRANSIT DEMAND

When considering both population and employment-based future demand, it becomes clear there will be significant underlying transit demand throughout much of Davidson County (see Figure 38). While much of this demand will be located in or adjacent to downtown, some of this demand will emerge in areas that currently have limited service:

- Downtown and midtown Nashville are projected to have combined population and employment levels that would support very frequent service of every 5 minutes during peak periods.
- A number of neighborhoods adjacent to downtown and midtown, including East Nashville, the Germantown/MetroCenter neighborhood, and Belmont/Hillsboro Village, will also have a relatively high transit demand.
- There will be high underlying demand for transit in Antioch, with demand for frequent service near Nashville International Airport along Murfreesboro Pike.
- Demand for transit will develop and/or significantly grow in:
  - Areas to the east and south of midtown, including Belmont/Hillsboro Village extending southeast from midtown along Hillsboro Pike and the Sylvan Park neighborhood
  - East Nashville
  - Along I-40 extending east from downtown

FIGURE 37 2040 EMPLOYMENT DENSITY

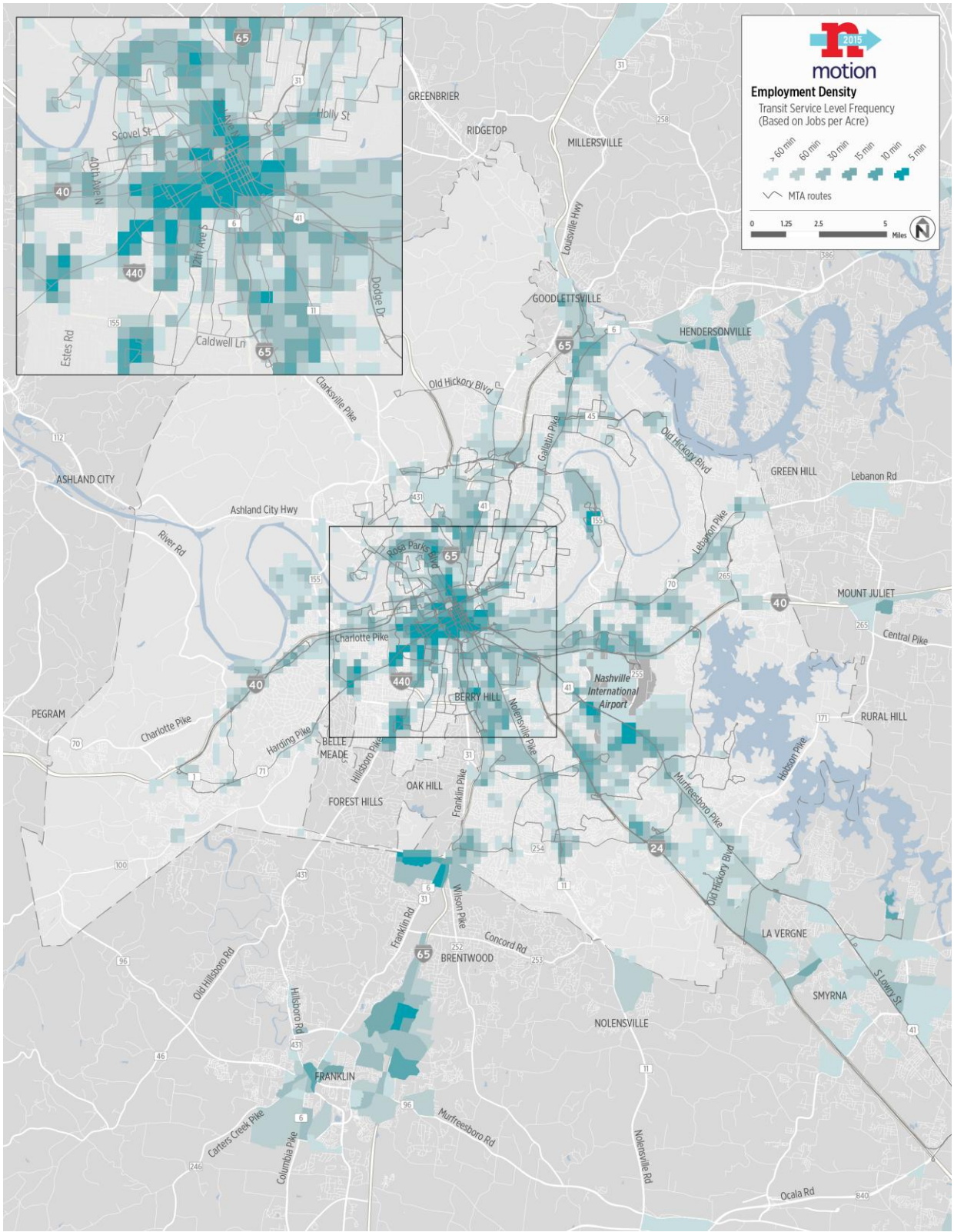
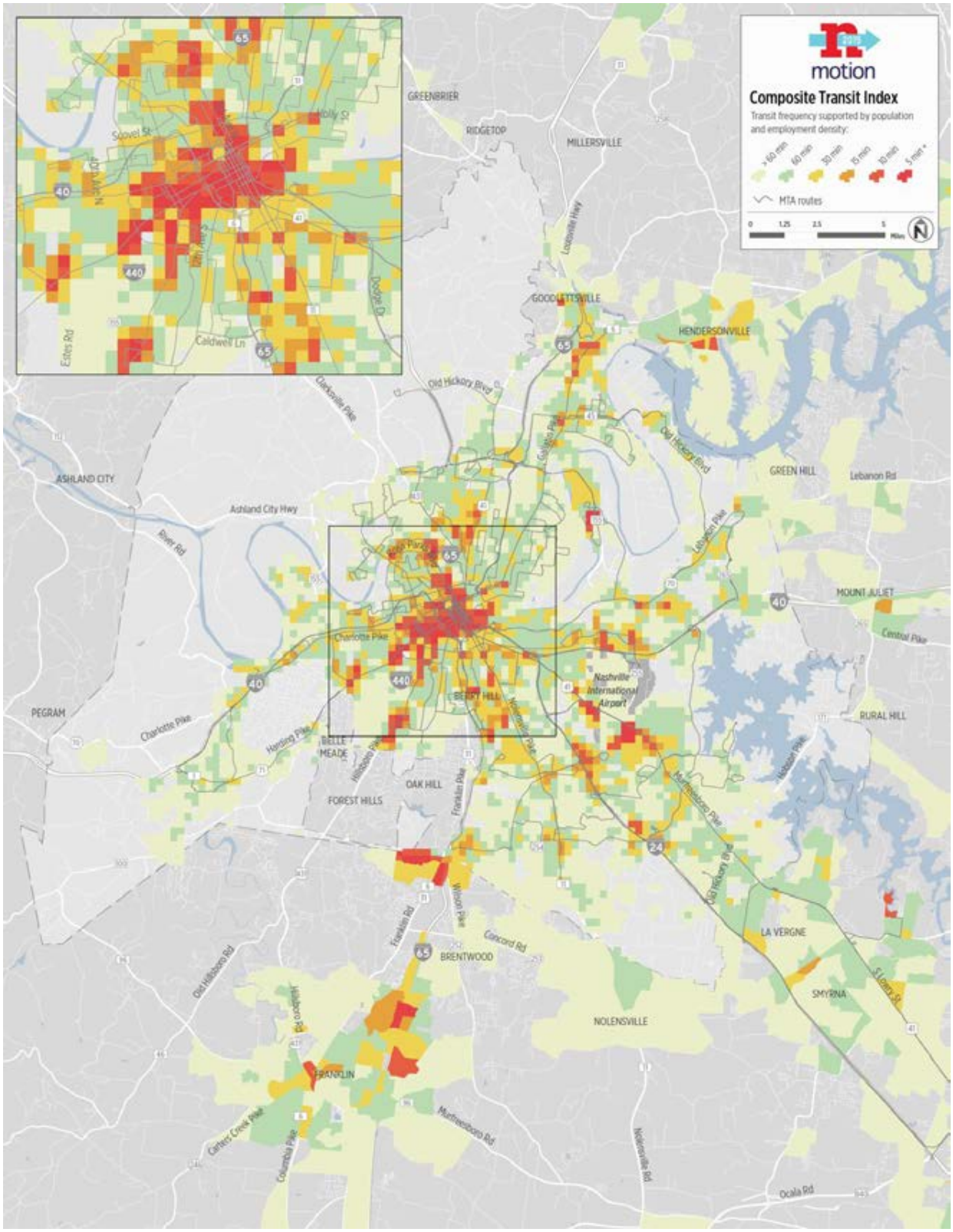


FIGURE 38 2040 COMPOSITE TRANSIT INDEX



# CURRENT AND FUTURE TRAVEL PATTERNS

For transit to be effective, it must take people from where they are to where they want to go. In Davidson County, the largest volumes of trips have historically been to and from downtown Nashville, and this continues to be the case today. However, recent growth has been outward, and thus there is increasing demand for service to other places.

People also travel for many reasons, including to and from work and school and for shopping, medical, recreation, social, and other purposes. Transit serves all types of trips, but for all transit systems, work trips are particularly important. This is the case for a number of reasons, including public policy and because many work trips are concentrated around times and to places that can be very effectively served by transit (for example, peak period trips to and from downtown Nashville). Transit serves work trips throughout the day, but the highest numbers of trips are made during morning and late afternoon peak periods. Trips for other purposes typically comprise much lower volumes than work trips, occur between more dispersed locations, and are often more oriented toward midday and evening.

## 2010 TRAVEL PATTERNS

As population and jobs have grown outward, trip patterns have become very dispersed. However, downtown Nashville and Midtown remain the focal point of the largest volumes of trips.

### All Trip Types

As of 2010, for all types of trips, the heaviest travel flows in Davidson County are centered on downtown Nashville and Midtown (see Figure 39). They are also generally to and from locations adjacent or close to the downtown core rather than to and from outer areas:

- The highest travel flows are between Midtown and downtown, with nearly 17,000 trips per day.
- There are also large travel volumes between Germantown/MetroCenter, East Nashville, Belmont, and Nashville International Airport and downtown.
- Other areas with smaller, but still high, volumes include between Belmont/Hillsboro Village and Green Hills and downtown.

There are also a number of non-downtown travel flows that are significant. These include:

- Between neighborhoods along Gallatin Pike, the Hermitage, and Donelson and the Nashville International Airport
- Between neighborhoods along Gallatin Pike and East Nashville
- In and around Gallatin, Bellevue, Lebanon, and locations along Murfreesboro Pike

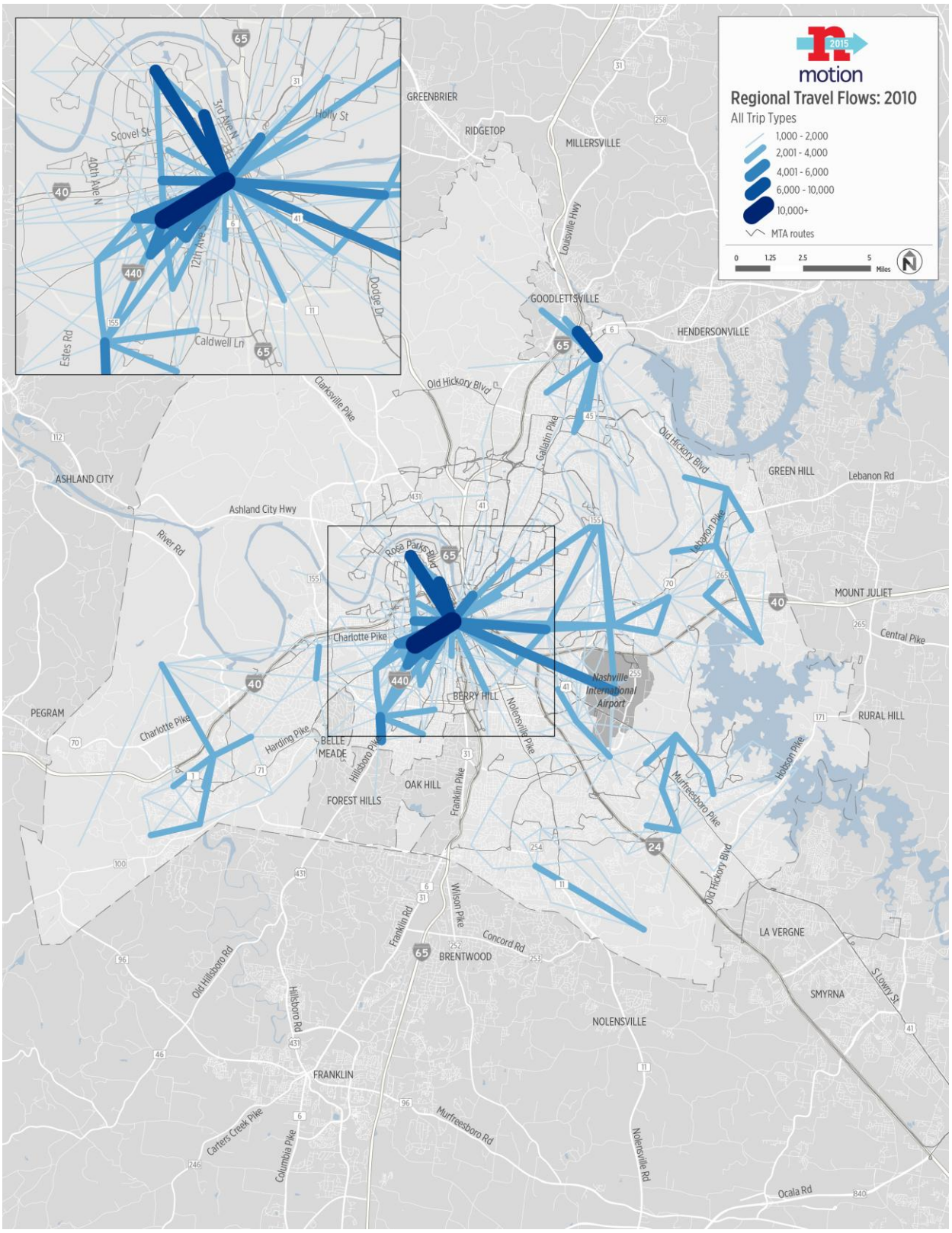
The MTA provides service to all of the major travel flows to and from downtown and Midtown, either directly or via connections to Midtown in downtown. However, as discussed previously, while service coverage exists, many routes operate relatively infrequently and with limited days and hours of service. For trips that are not to or from downtown, service is either not provided or is very limited.

### Work Trips

Home-based work trips, which are a major component of transit trips, are only a relatively small portion of the travel made by automobile but are a large proportion of trips made via transit. When only work trips are considered, and as shown in Figure 40, the highest travel volumes are between:

- Midtown and downtown

FIGURE 39 2010 TRAVEL FLOWS– ALL TRIP TYPES



- North Nashville, and particularly Germantown and MetroCenter, and downtown
- Belmont, Hillsboro, and the West End and Midtown

The MTA provides service to each of these markets, either directly or via connections to Midtown in downtown, and usually with relatively frequent service.

## 2040 TRAVEL PATTERNS

With continuing increases in population and employment, the amount of travel in Davidson County will increase significantly. Changes envisioned in NashvilleNext will also better focus travel patterns in ways that will enable transit to become more effective.

### All Trip Types

In 2040, there will be very large increases in travel volumes to and from downtown Nashville and Midtown. Total volumes will be highest in the urban core and particularly high inside of I-440 (see Figure 41). However, they will also be much higher from nearly all inner area neighborhoods:

- The highest travel volumes will be between Midtown, Germantown/MetroCenter, and East Nashville and downtown, with 19,000 to 25,000 trips per weekday.
- Other areas with high volumes will be to and from downtown and Midtown, including neighborhoods along Gallatin Pike, South Nashville, Nashville International Airport, Donelson, and Green Hills.

Outside of the core, the largest increases in travel volumes will be to and from Gallatin, Antioch, Bellevue, and locations around Briley Parkway to the north.

Nearly all of the travel flows to and from downtown Nashville are currently served by transit in some fashion. However, high travel volumes indicate that more service will be needed. Of the major non-downtown travel, most are served with either limited or no transit.

### Work Trips

By 2040, there will also be very large increases in the volumes of work trips. As in 2010, and in spite of continued outward growth, nearly all of the highest volumes will continue to be to and from downtown (see Figure 42). The number of long distance commutes will also increase significantly:

- The highest work trip travel volumes will be between North Nashville, the West End, Midtown, East Nashville, and the Gallatin Pike Corridor and downtown. These corridors will be able to support very high levels of transit service.
- There will also be a large number of trips between La Vergne, Smyrna, and downtown and Antioch.[5] La Vergne and Smyrna are currently beyond the limits of MTA service and are now served with RTA express routes. Increasing travel volumes in these areas indicate that it may be warranted to extend MTA services to these areas and to implement local services.
- Most other major corridors to and from downtown will have moderate work trip travel volumes. Nearly all of these corridors currently are served by the MTA, and service will need to be increased and improved as travel volumes grow.

With the exception of the Antioch area, downtown work trip flows will remain very dispersed. Thus, while demand for transit service will grow, this demand will remain much lower than for downtown-oriented service.

[5] Note that the zone used for the La Vergne area is relatively large and, as a result, encompasses more trips that many other zones. As a result, trips would be more dispersed than implied in Figure 27.

FIGURE 40 2010 TRAVEL FLOWS– WORK TRIPS

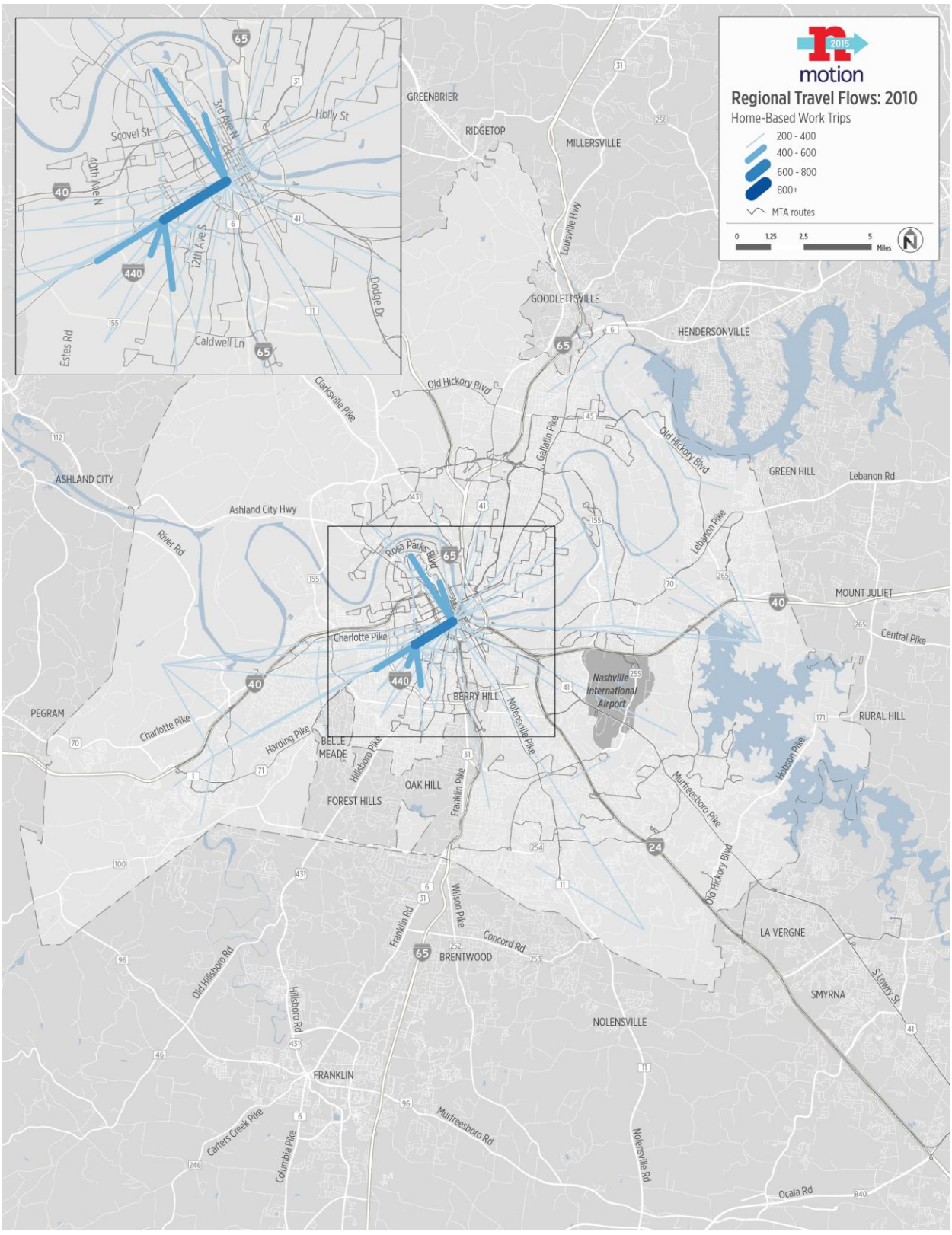


FIGURE 41 2040 TRAVEL FLOWS– ALL TRIP TYPES

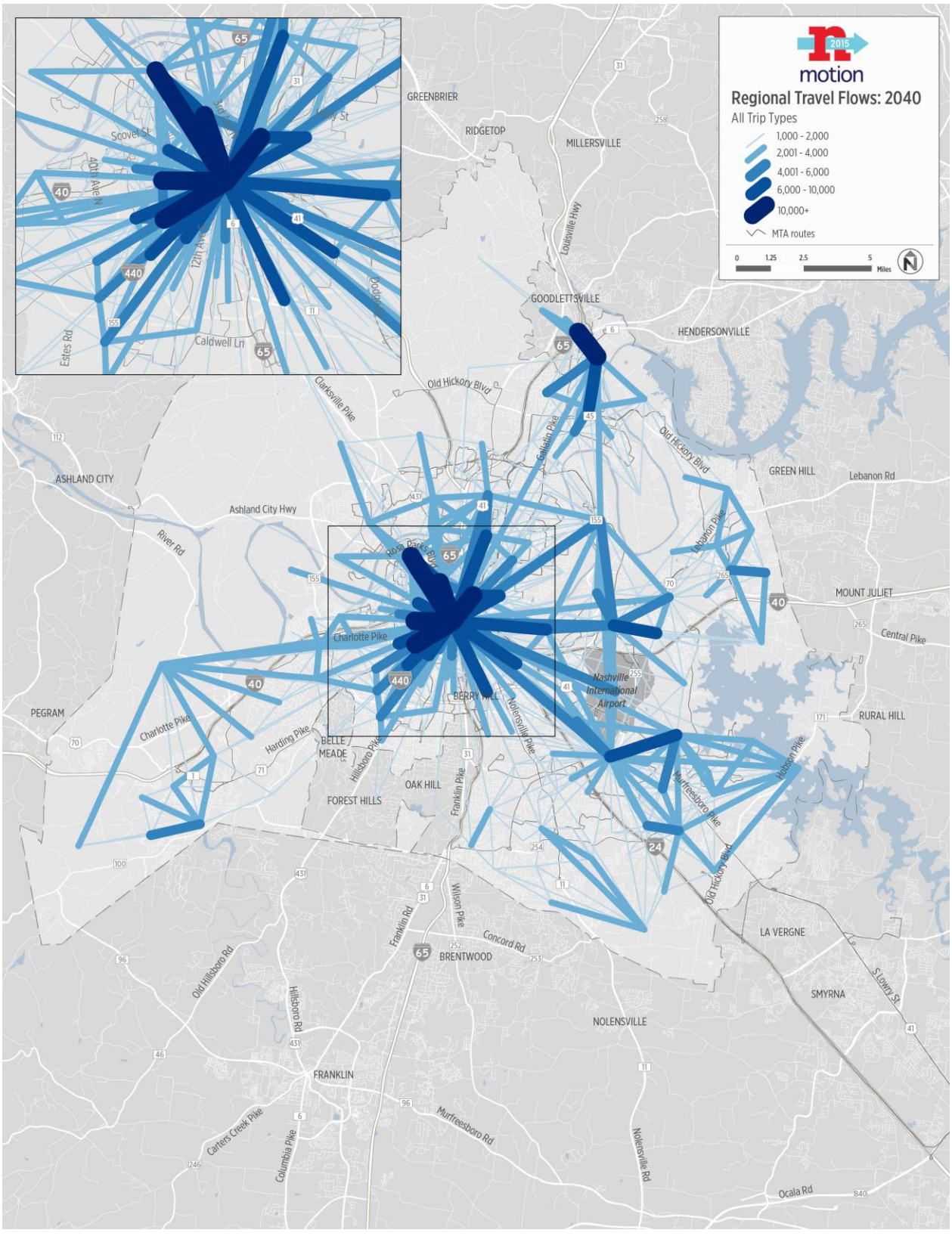
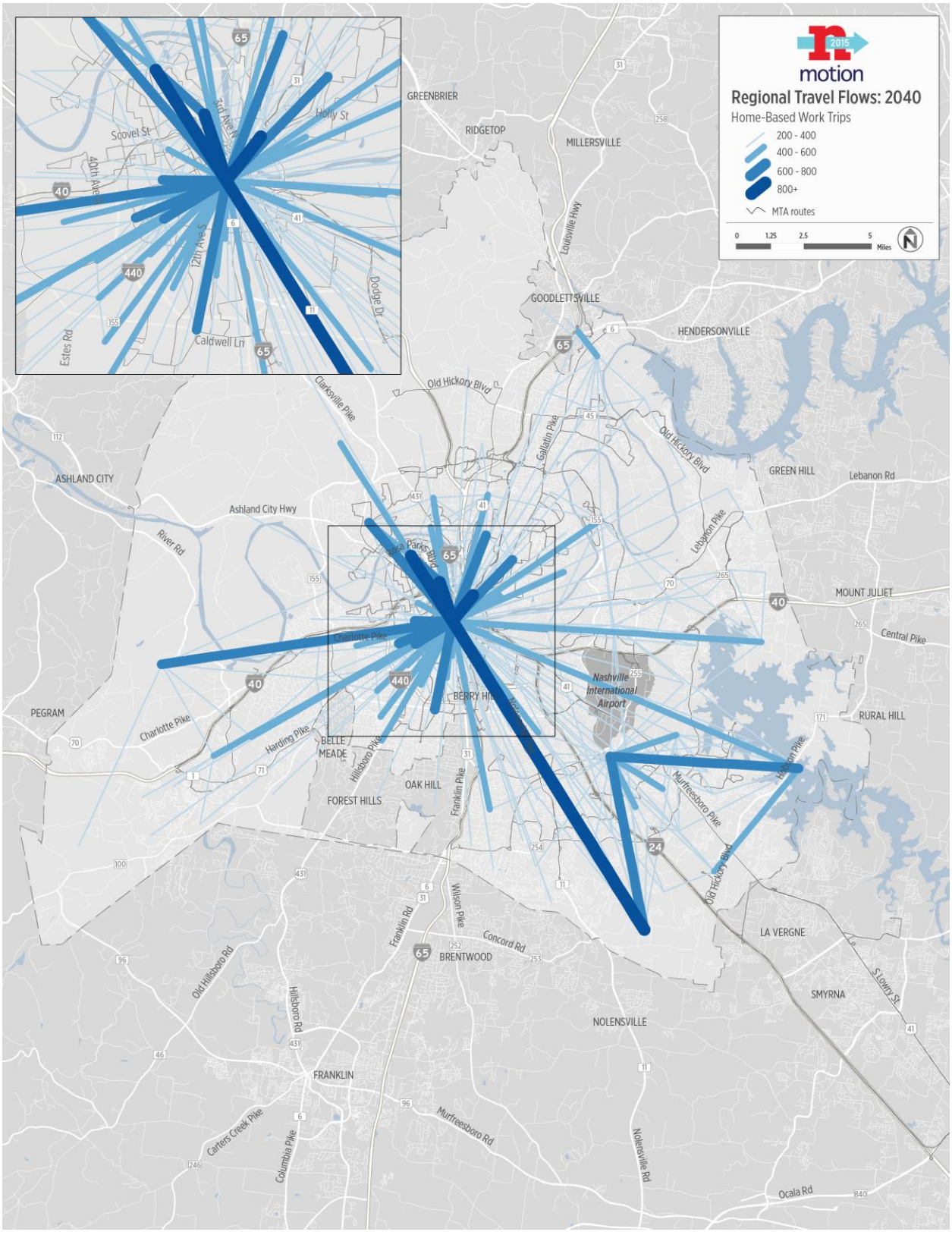


FIGURE 42 2040 TRAVEL FLOWS– WORK TRIPS



# PEER REVIEW

Over the past two years, the City of Nashville has developed its "preferred future" through NashvilleNext. The project began with a comprehensive outreach program to determine the values and desires of Nashville residents, employees, businesses, and other stakeholders, which were then transformed into the preferred future. That future, which was recently adopted, will better focus development, reduce sprawl, and greatly expand transit service and options. This is the future that those who live, work, and play in Nashville desire.

Concurrently, the Nashville Region Chamber of Commerce and the Nashville Area Metropolitan Planning Organization (MPO) worked to "identify key issues that impact the region's economic well-being and activate community-driven solutions."[6] This effort identified better transit as one of the region's most pressing needs.

While the Nashville MTA has worked continuously to improve and expand transit service, these improvements have not kept pace with the region's growth, and much better transit will be needed to deliver the future that the area desires. This peer review compares the current state of transit in Nashville today with that in other cities to provide an indication of the magnitude of change that will be required to develop great transit for Nashville and Davidson County.

This peer review does this in two ways, by comparing Nashville area with:

1. Current peer cities, or cities that are similar to what Nashville is today. These comparisons provide indications of how MTA's service compares in its current context.
2. "Aspirational" peer cities, or cities that are already like what Nashville is growing to become. These comparisons indicate how transit in Nashville will need to grow to match the growth of the city and county.

## CURRENT PEER CITIES

Current peer cities were selected based on a number of considerations that included the peers used in earlier efforts, suggestions from MTA staff, and a review of systems in the National Transit Database (NTD) with similar size and service characteristics. These included:

### Transit System Size

- Peak buses
- Annual passenger trips

### Service Area Characteristics

- Service area size in square miles
- Service area population
- Service area population density
- Principal city population
- Range of peers

[6] *2014 Nashville Region's Vital Signs Report,* Nashville Region Chamber of Commerce and Nashville Area Metropolitan Planning Organization, 2014.

On this basis, 15 cities and their urban areas were selected as current peers:

- Akron, OH
- Albuquerque, NM
- Cincinnati, OH
- Dayton, OH
- El Paso, TX
- Forth Worth, TX
- Hartford, CT
- Indianapolis, IN
- Jacksonville, FL
- Louisville, KY
- Memphis, TN
- Richmond, VA
- Springfield, MA
- Syracuse, NY
- Tampa, FL

While none of these urban areas are identical to Nashville, they are still similar in many respects. One key difference, however, is that the total population of Nashville MTA's service area is in the middle of the current peer group while its population density is near the bottom (see Table 6). Since transit demand and transit effectiveness is closely linked to density, this means that MTA has a more challenging area to serve than most of its peers.

In terms of similarities, Nashville is most similar to:

- Louisville and Akron in terms of its service area size
- Albuquerque and Dayton in terms of service area population
- Akron and Charlotte in terms of population density
- Louisville and Memphis in terms of principal city population
- Albuquerque and Syracuse in terms of peak buses
- Memphis and Richmond in terms of annual transit ridership

## ASPIRATIONAL PEER CITIES

For the aspirational peers, the Nashville Chamber of Commerce and the Nashville Area MPO recently produced the *2014 Nashville Region's Vital Signs Report,* which compared Nashville to current and aspirational peers on a wide range of issues, including transit. For consistency with that report, this peer review uses the same aspirational peers, which are:

**Atlanta.** Atlanta has a service area population nearly three times that of Nashville MTA and nearly 500 peak vehicles; however, its service area size is similar to Nashville MTA. Atlanta represents the high end of what Nashville could grow to be.

**Austin.** Austin's service area size is similar to Nashville's. However, its central city has 31% more residents, its service area has 46% more residents, and transit ridership is 3.6 times as high.

**Charlotte.** Charlotte is another southern city that is growing rapidly and that has a central city that is similar to Nashville with a larger service area population. It has been expanding service rapidly and carries more than twice as many passengers as the Nashville MTA.

**Denver.** Denver's RTD serves an area with similar population density as Nashville MTA, though the service area population is much greater. RTD is in the midst of intense investment in a variety of premium transit modes including rail and BRT, which can be illustrative for Nashville MTA as it invests in premium transit.

**Kansas City.** Kansas City's KCATA has a service area with only about 20% more residents than Nashville MTA, but KCATA provides 72% more annual passenger trips. Kansas City is currently constructing its first streetcar line and its third BRT line and is working toward the development of a stronger regional system.

**Raleigh.** Similar to Nashville's MTA, Raleigh's CAT serves a capital city, though one that is much more densely developed. While CAT's service area population is roughly half that of MTA's, it is effective in serving over 6 million annual passenger trips. MTA can look to this smaller peer agency as it considers the influence of density on transit effectiveness.

TABLE 6 CHARACTERISTICS OF NASHVILLE AND SELECTED PEER CITIES

| | Transit Provider | Principal City Population | Service Area Population | Service Area Size (Sq. Mi.) | Service Area Population Density | Peak Buses | Annual Passenger Trips |
|---|---|---|---|---|---|---|---|
| **Nashville** | **Metropolitan Transit Authority** | **601,222** | **626,681** | **484** | **1,295** | **128** | **9,273,784** |
| **Current Peers** | | | | | | | |
| **Akron** | METRO Regional Transit Authority | 199,110 | 542,899 | 420 | 1,293 | 103 | 5,140,419 |
| **Albuquerque** | City of Albuquerque Transit Department | 545,852 | 661,629 | 235 | 2,815 | 128 | 12,821,051 |
| **Cincinnati** | Southwest Ohio Regional Transit Authority | 296,943 | 845,303 | 262 | 3,226 | 289 | 17,390,349 |
| **Dayton** | Greater Dayton Regional Transit Authority | 141,527 | 559,062 | 274 | 2,040 | 87 | 7,358,398 |
| **El Paso** | City of El Paso Mass Transit Department | 649,121 | 803,086 | 251 | 3,200 | 122 | 16,390,603 |
| **Fort Worth** | Fort Worth Transportation Authority | 741,206 | 824,984 | 350 | 2,357 | 126 | 7,439,290 |
| **Hartford** | CT Transit | 124,775 | 851,535 | 664 | 1,282 | 196 | 14,698,648 |
| **Indianapolis** | Indianapolis and Marion County Public Transportation | 820,445 | 911,296 | 396 | 2,301 | 123 | 9,981,918 |
| **Jacksonville** | Jacksonville Transportation Authority | 821,784 | 874,673 | 277 | 3,158 | 138 | 11,500,899 |
| **Louisville** | Transit Authority of River City | 597,337 | 972,546 | 477 | 2,039 | 181 | 20,320,506 |
| **Memphis** | Memphis Area Transit Authority | 646,889 | 732,710 | 311 | 2,356 | 123 | 8,404,564 |
| **Richmond** | Greater Richmond Transit Company | 204,214 | 449,572 | 227 | 1,980 | 135 | 9,352,988 |
| **Springfield** | Pioneer Valley Transit Authority | 153,060 | 551,543 | 302 | 1,826 | 133 | 11,171,748 |
| **Syracuse** | Central New York Regional Transportation Authority | 145,170 | 467,025 | 248 | 1,883 | 128 | 10,226,862 |
| **Tampa** | Hillsborough Area Regional Transit Authority | 335,709 | 822,404 | 243 | 3,384 | 153 | 14,314,610 |
| **Peer Average** | | 428,209 | 724,684 | 329 | 2,343 | 144 | 11,767,524 |
| **Peer Median** | | 335,709 | 803,086 | 277 | 2,301 | 128 | 11,171,748 |
| **Aspirational Peers** | | | | | | | |
| ***Atlanta*** | *Metropolitan Atlanta Rapid Transit Authority* | *420,003* | *1,574,600* | *498* | *3,162* | *443* | *61,596,700* |
| ***Austin*** | *Capital Metropolitan Transportation Authority* | *790,390* | *915,694* | *522* | *1,754* | *481* | *33,548,378* |
| ***Charlotte*** | *Charlotte Area Transit System* | *731,424* | *758,927* | *445* | *1,705* | *258* | *22,870,411* |
| ***Denver*** | *Regional Transportation District* | *600,158* | *2,619,000* | *2326* | *1,126* | *822* | *76,716,999* |
| ***Kansas City*** | *Kansas City Area Transportation Authority* | *459,787* | *748,415* | *332* | *2,254* | *195* | *15,988,034* |
| ***Raleigh*** | *Capital Area Transit* | *403,892* | *347,729* | *125* | *2,782* | *65* | *6,441,622* |
| **Peer Average** | | 567,609 | 1,160,728 | 708 | 2,131 | 377 | 36,193,691 |
| **Peer Median** | | 529,973 | 837,311 | 472 | 2,004 | 351 | 28,209,395 |

Source: National Transit Database RY 2011 Service Area Size, Service Area Population; NTD RY 2012 Vehicles Operating at Maximum Service (Motorbus only), Annual Unlinked Passenger Trips; US Census 2010.

# PEER REVIEW MEASURES

Eleven different measures were examined that address transit ridership levels, the amount of transit service provided, productivity, cost efficiency, subsidies and funding, and resource allocation:

### Transit Ridership

- **Total Annual Transit Ridership:** Total ridership on all modes, which is an indication of a combination of the size of the transit system and the size of the area served.
- **Transit Ridership per Capita:** The extent to which the service area population utilizes transit services on all modes.

### Amount of Transit Service

- **Vehicle Revenue Hours per Capita:** The quantity of service on all transit modes provided to the people living in the service area.

### Service Productivity

- **Passenger Trips per Bus Hour:** Total ridership divided by the number of service hours provided, quantifying utilization of the provided fixed route bus service.

### Cost Efficiency

- **Total Operating Cost per Bus Hour:** How much it costs to provide an hour of bus service.
- **Total Operating Cost per Bus Passenger:** How much it costs the transit agency to provide bus service per passenger.

### Subsidy

- **Bus Farebox Recovery:** The share of operating costs that are covered by fare revenues for the bus mode. The higher the fare recovery rate, the lower the net cost of service (or subsidy) required.
- **Net Operating Cost per Bus Passenger:** How much it costs the transit agency to provide bus service to each bus passenger, after subtracting the fare revenue. This is the cost that must be paid for each passenger trip by other funding sources, such as local, state, and federal sources.

### Resource Allocation

- **Operating Expenditures by Mode:** How much it costs to operate the different modes offered, including bus, rail, and demand response service. This information is useful to see the range of modes offered in each peer system and the relative share of expenditures associated with each.

### Funding

- **Operating Funds by Source:** How much funding on a relative basis comes from fare revenues and local, state, federal, and other sources.
- **Total Operating Funding per Capita:** The amount of operating funding for transit operation per year per service area resident for the transit system.

Note that some of the above measures are presented for the entire transit system while others focus specifically on bus service. Measures that relate to the service provision and funding are for the system as a whole and, in large part, reflect the level of importance placed on transit service. Other measures, such as costs per passenger and unit of service, are for bus service only; as some of the peer systems provide significant amounts of rail service, the inclusion of those services could skew overall totals. Since all of the peer systems provide bus service, the use of bus-only figures provides a better comparison.

# TRANSIT RIDERSHIP

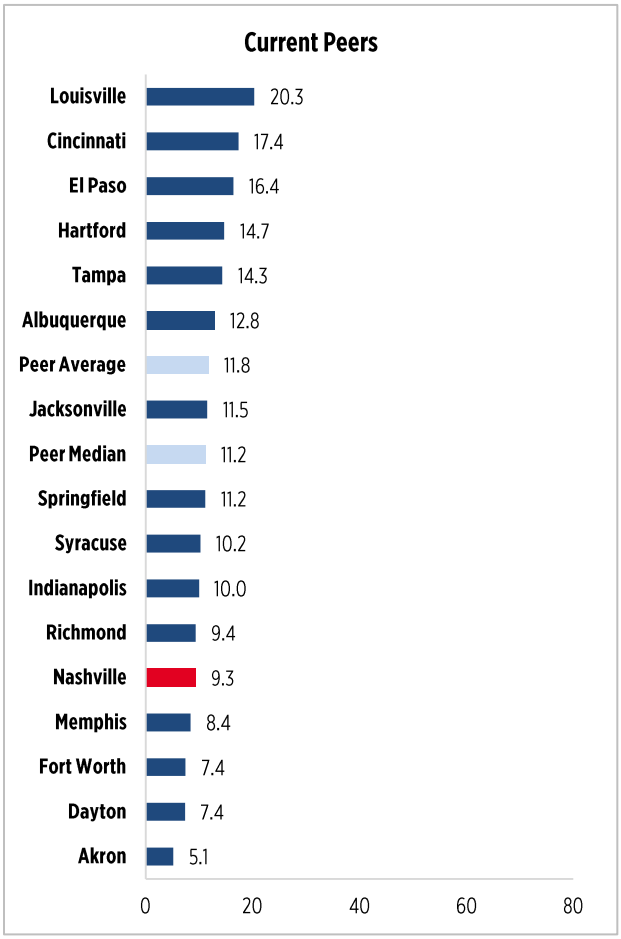
## TOTAL RIDERSHIP

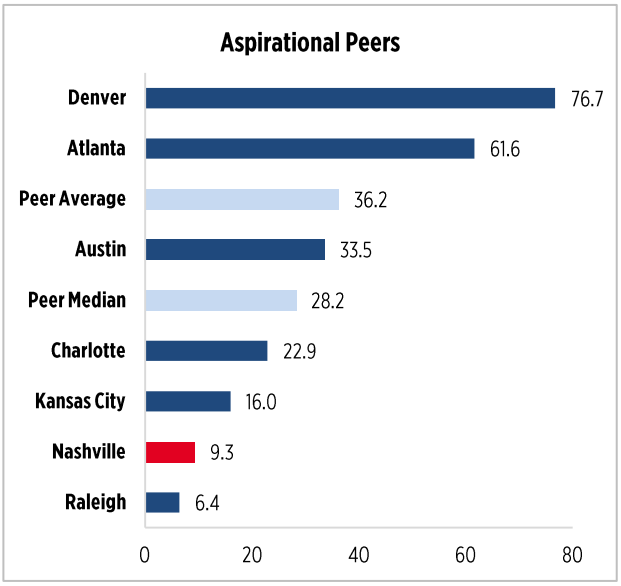
One of the most common measures of effectiveness for transit systems is total ridership, and in 2012, Nashville MTA carried 9.3 million riders.

**KEY TAKEAWAY**: *Total transit ridership in Nashville is low. This is true compared to current peer cities, and even more so compared to the aspirational peer cities.*

- Among current peers, Nashville's ridership ranks 12th out of 16. It is also well below the levels achieved by the top ranking cities, with Louisville at 20.3 million passengers, Cincinnati at 17.4, and El Paso at 16.4.
- Compared to the aspirational peers, the differences are even larger. Denver, which has been expanding and improving transit service very aggressively, carried 76.7 million passengers in 2012, even higher than Atlanta's 61.6 million. The only aspirational peer that had lower transit ridership was Raleigh, at 6.4 million passengers.

FIGURE 43 TOTAL ANNUAL RIDERSHIP




Source: National Transit Database FY 2012. Systemwide Unlinked Passenger Trips

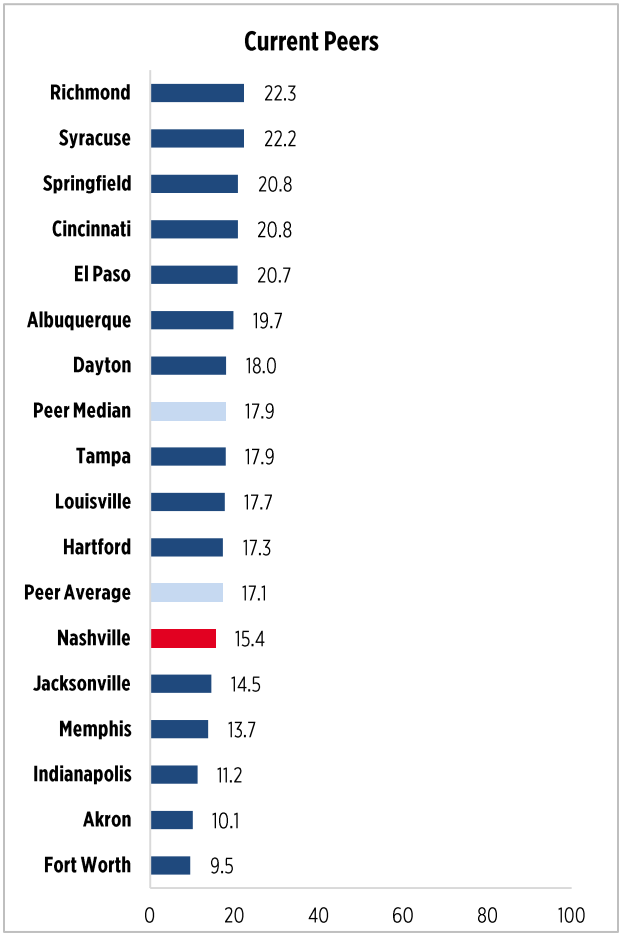
## RIDERSHIP PER CAPITA

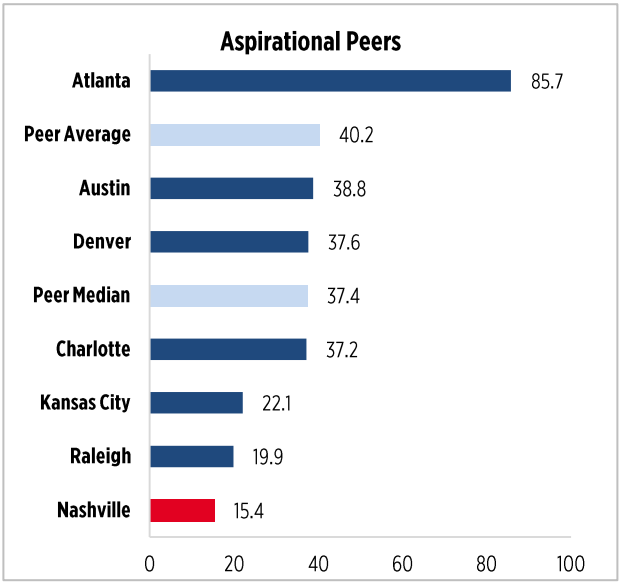
In most cases, higher total ridership in one area versus another is due to market size. When service area sizes are considered, Nashville's ridership is still low compared to both its current and aspirational peers:

**KEY TAKEAWAY**: *Even after accounting for difference in city size, Nashville's transit ridership is still low compared to other areas.*

- Nashville area residents make 15.4 trips per capita, which ranks 12th out of 16 and is 14% below the peer median of 17.9 trips per capita.
- Among aspirational peers, ridership per capita is significantly higher in all areas, with a range of 19.9 in Raleigh to 85.7 in Atlanta. Discounting Atlanta, which is an outlier, the aspirational peers carry 29% to 161% more passengers than MTA.

FIGURE 44 PASSENGER TRIPS PER CAPITA




Source: National Transit Database FY 2012. Systemwide Unlinked Passenger Trips per Service Area Population.

# AMOUNT OF TRANSIT SERVICE PROVIDED

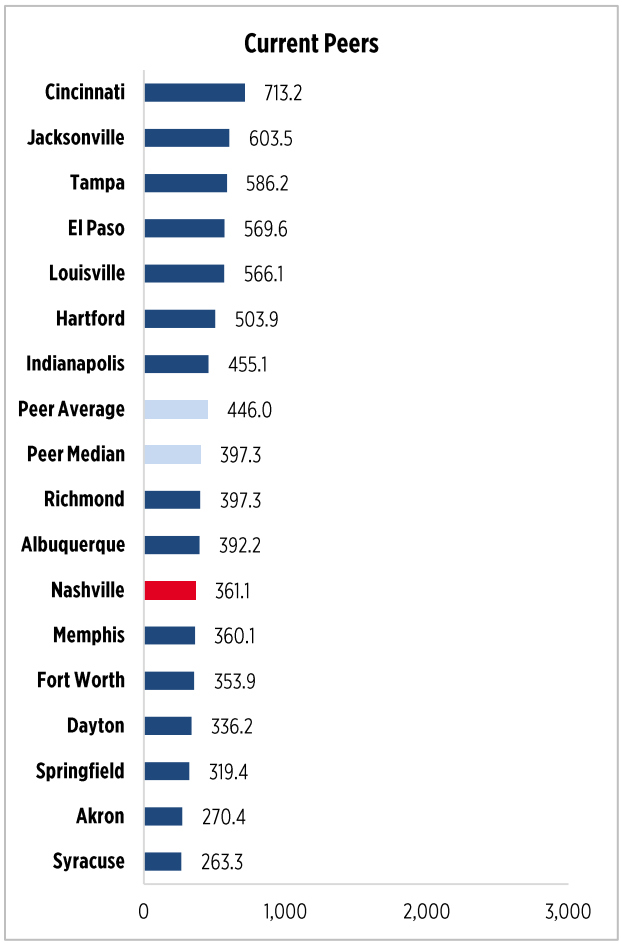
## TOTAL ANNUAL SERVICE HOURS (ALL MODES)

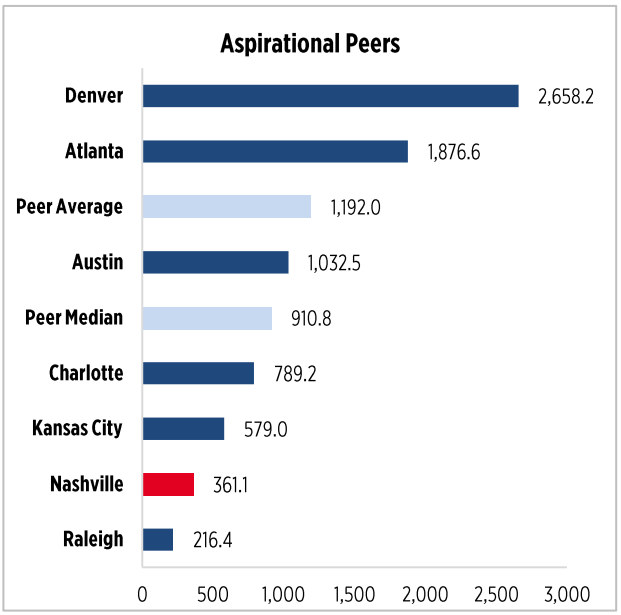
One major reason that transit ridership is lower in the Nashville area is that less service is provided:

**KEY TAKEAWAY:** *Much of the reason that Nashville's ridership is lower is because less service is available.*

- Nashville's current peers provide between 263,300 annual hours of service (Syracuse) and 713,200 hours (Cincinnati). Nashville MTA provides 361,100 hours, which ranks 10th overall, and is 9% below the peer median.
- Compared to the aspirational peers, Nashville MTA provides much less service than all but Raleigh (which is also the only aspirational peer to carry fewer total riders than Nashville). The aspirational peer that provides the most service is Denver, with over six times as much service as Nashville; as discussed previously, Denver has been aggressively improving its transit service. Kansas City, which provides the second lowest amount of service among the peers, provides 60% more service than MTA.

FIGURE 45 ANNUAL VEHICLE SERVICE HOURS (THOUSANDS)




Source: National Transit Database RY 2012 Systemwide Vehicle Revenue Hours per Service Area Population.

## ANNUAL SERVICE HOURS PER CAPITA (ALL MODES)

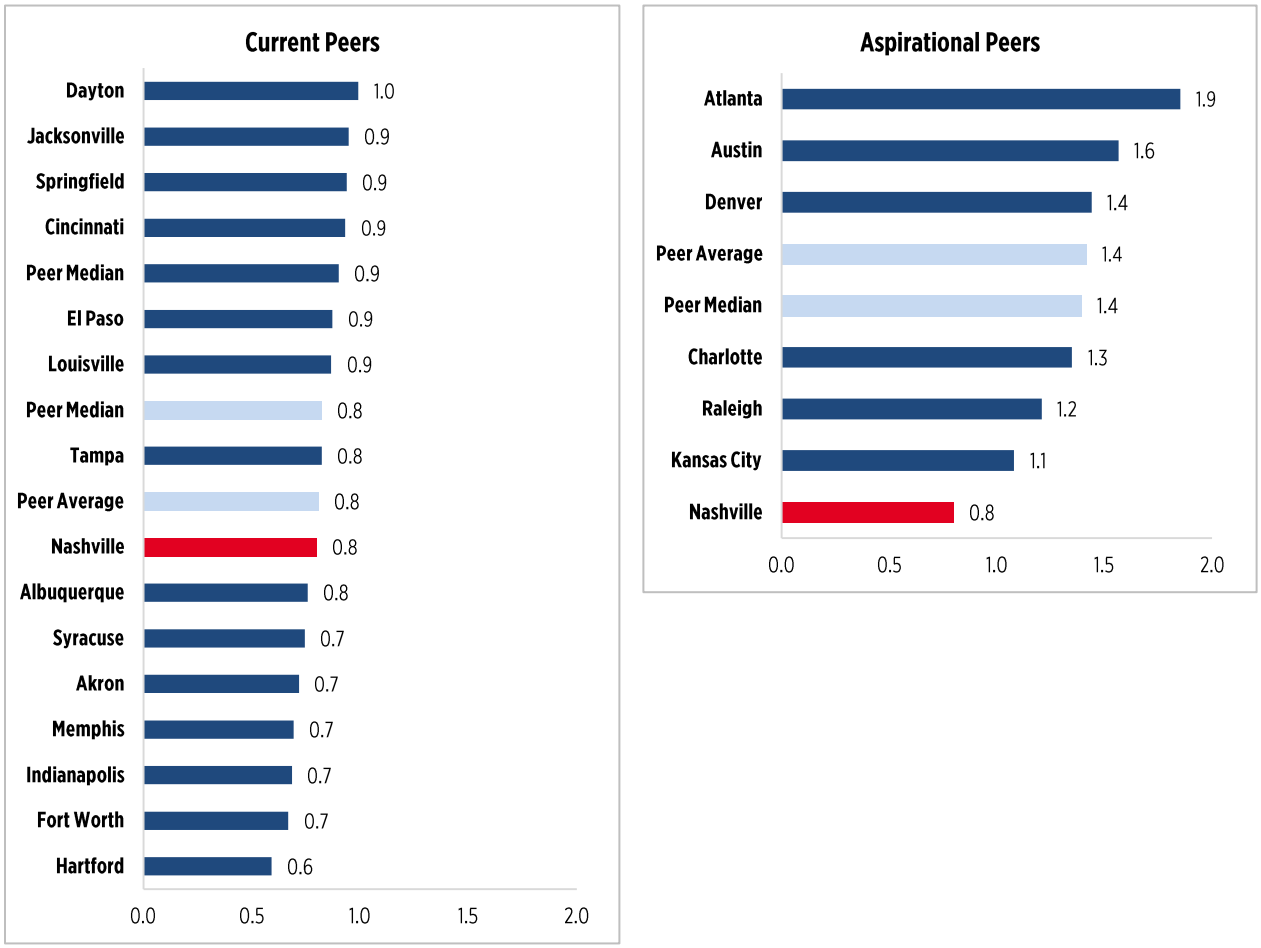
The amount of service that transit systems provide is related to market size. When the amount of service that the peer systems provide is considered relative to their respective populations, Nashville MTA still lags, but to a lesser extent.

**KEY TAKEAWAY:** *Even after accounting for city size, Nashville provides less service.*

- Among the current peer group, the amount of service provided falls in a relatively narrow range of 0.7 to 1.0 annual hours of service per resident. Nashville MTA provides 0.8 hours, which is equivalent to the current peer average and median of 0.8 hours.
- However, when compared to the aspirational peers, Nashville falls to the bottom of the list. Kansas City, which provides the least amount of service at 1.1 hours of service per resident, still provides 38% more than Nashville. Atlanta, which provides the most service per capita, provides 138% more service; Austin, which is second, provides 88% more.

These figures indicate that, while the amount of service that Nashville provides is average compared to its current peers, it provides significantly less service per capita than all of its aspirational peers.

FIGURE 46 ANNUAL VEHICLE SERVICE HOURS PER CAPITA




Source: National Transit Database RY 2012. Systemwide Vehicle Revenue Hours per Service Area Population.

# SERVICE PRODUCTIVITY

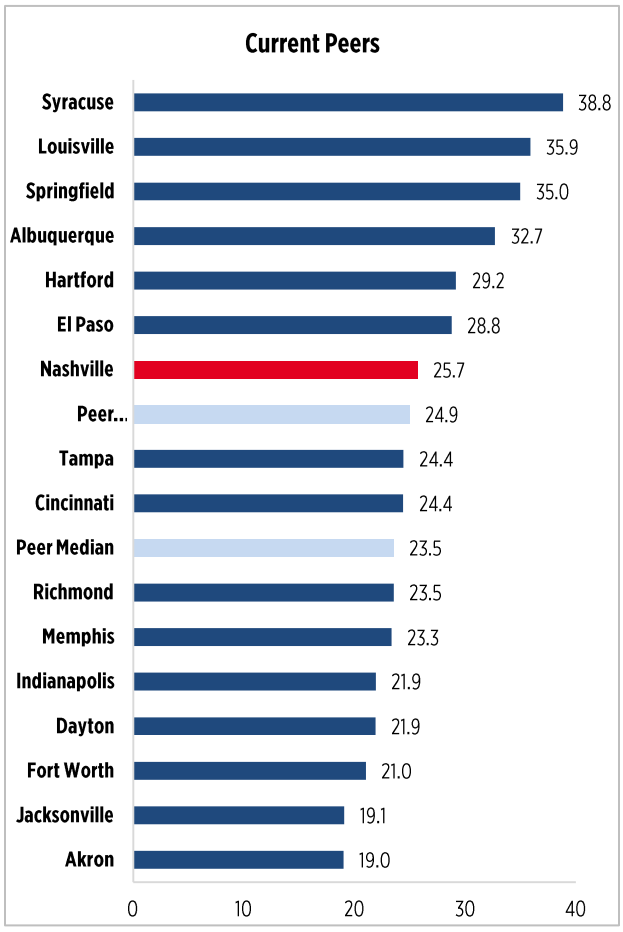
## PASSENGERS PER BUS SERVICE HOUR

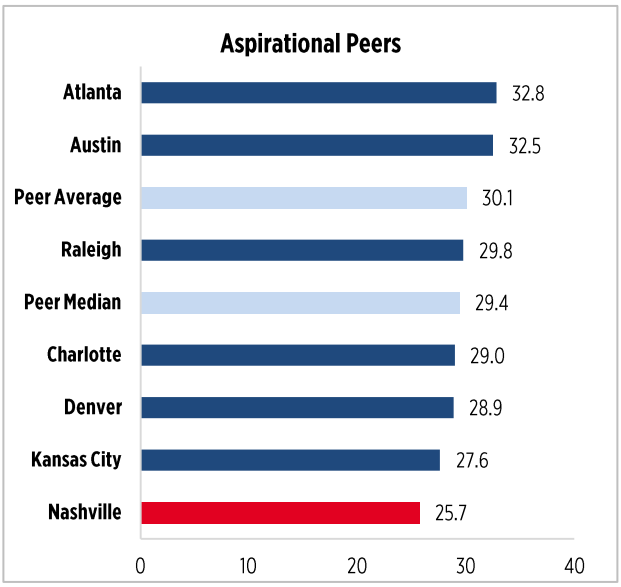
The number of passenger trips that are carried per bus service hour provides a measure of productivity in terms of how well existing service is utilized and, in many respects, how well it is designed. This measure is also influenced by market characteristics, and as described previously, the Nashville area has a more challenging market to serve due to sprawl.

**KEY TAKEAWAY**: *The service that MTA provides is productive, but could still be more productive.*

- In spite of this, compared to its current peers, Nashville MTA performs above average and above the median, carrying 25.7 passengers per vehicle service hour.
- Productivity is lower than all of the aspirational peers. However, this is to be expected because as urban areas grow, they typically become more densely developed; with more people in close proximity to transit, both ridership and productivity increase. This is not always the case, and the top performing current peers have higher productivity than the many of the aspirational peers.

FIGURE 47 PASSENGER TRIPS PER BUS SERVICE HOUR




Source: National Transit Database RY 2012. Bus Unlinked Passenger Trips per Bus Vehicle Revenue Hour.

# COST EFFICIENCY

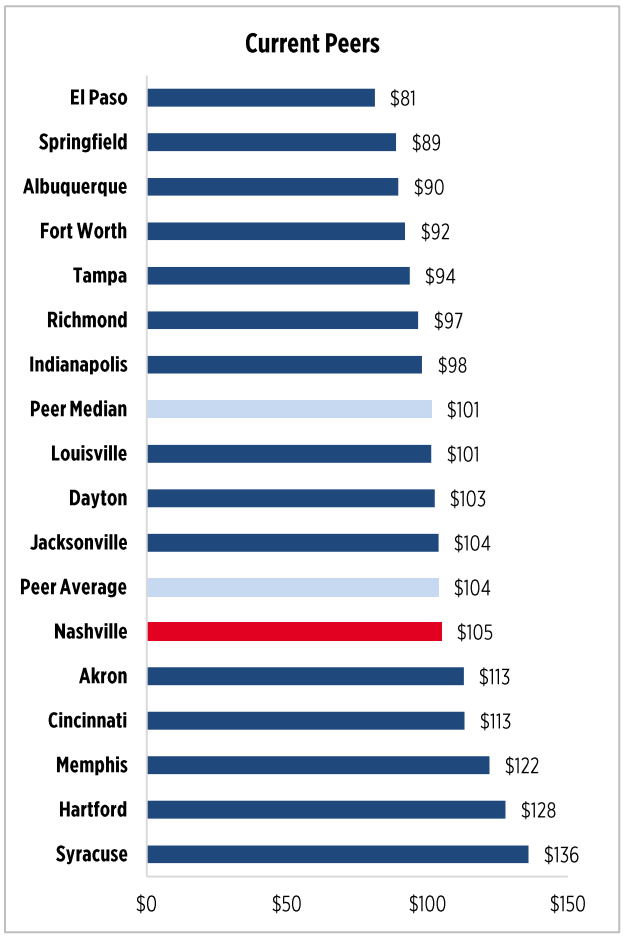
## OPERATING COST PER BUS SERVICE HOUR

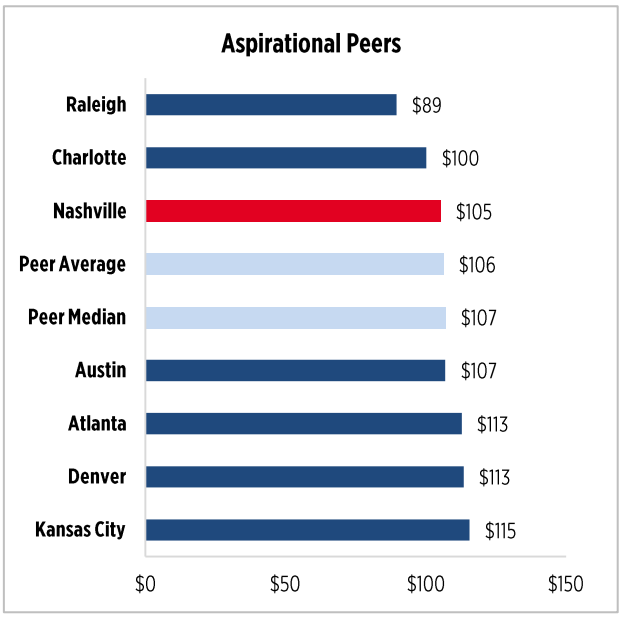
Nashville MTA's operating cost per bus service hour of $105 is slightly below the average costs of its current peers and is at the low end of its aspirational peers:

- For the current peers, the costs range from a low of $81 in El Paso to a high of $136 in Syracuse.
- For the aspirational peers, the range is from $89 to $115.

These costs are heavily influenced by local labor costs, which tend to be higher in northern cities and in larger cities. In general, the highest costs per revenue vehicle hour are in the northeastern cities, and the lower costs are in southern and Sunbelt cities including El Paso, Albuquerque, Fort Worth, Tampa, and Raleigh. Another factor is the use of contractors to provide service. Several of the low cost systems purchase bus service from contractors, including Springfield, Fort Worth, Indianapolis, and Louisville.

FIGURE 48 TOTAL OPERATING COST PER BUS SERVICE HOUR




Source: National Transit Database RY 2012. Bus Total Operating Expenses per Bus Vehicle Revenue Hour.

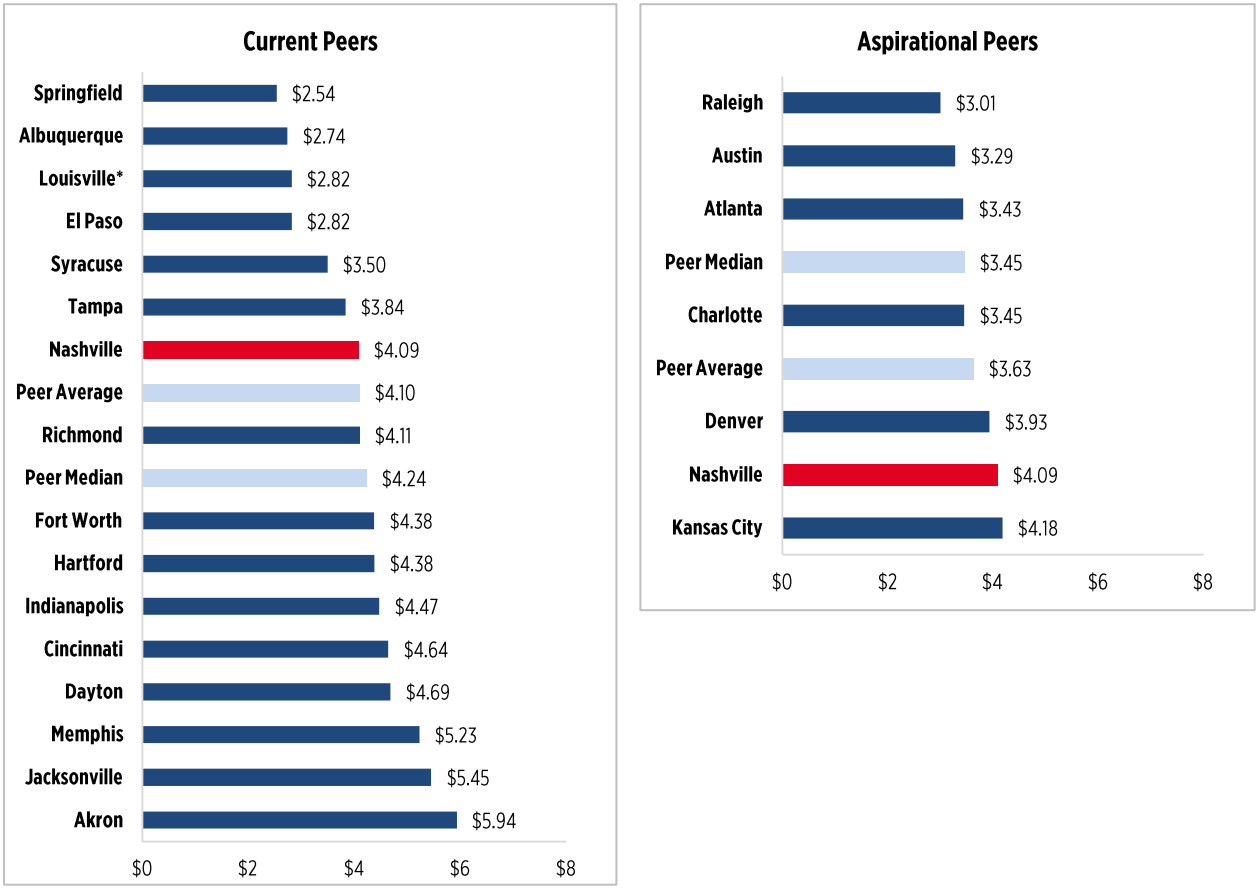
## OPERATING COST PER BUS PASSENGER

Nashville MTA's current operating cost per bus passenger is $4.09 (see Figure 49):

**KEY TAKEAWAY:** *As MTA grows its cost per passenger will likely decline.*

- Among current peers, this is better than both the peer median and peer average, and the figure reflects that Nashville MTA's slightly higher than average productivity offsets its slightly higher than average operating cost per bus service hour. Consequently, MTA delivers slightly lower costs per passengers than most of its current peers. However, it is significantly higher than some of its peers—for example, El Paso, Louisville, and Albuquerque—with the major reason that those systems carry both more passengers per vehicle hour and have lower cost structures.
- When compared to its aspirational peers, Nashville's costs are the second highest, after Kansas City. For the most part, this is because larger systems carry more passengers per vehicle, to the extent that their higher productivity more than offsets their generally higher cost structures. As the Nashville area and Nashville MTA grows, it is likely that its operating cost per bus passenger will decline.

FIGURE 49 OPERATING COST PER BUS PASSENGER




Source: National Transit Database RY 2012. Bus Total Operating Expenses per Bus Unlinked Passenger Trip.

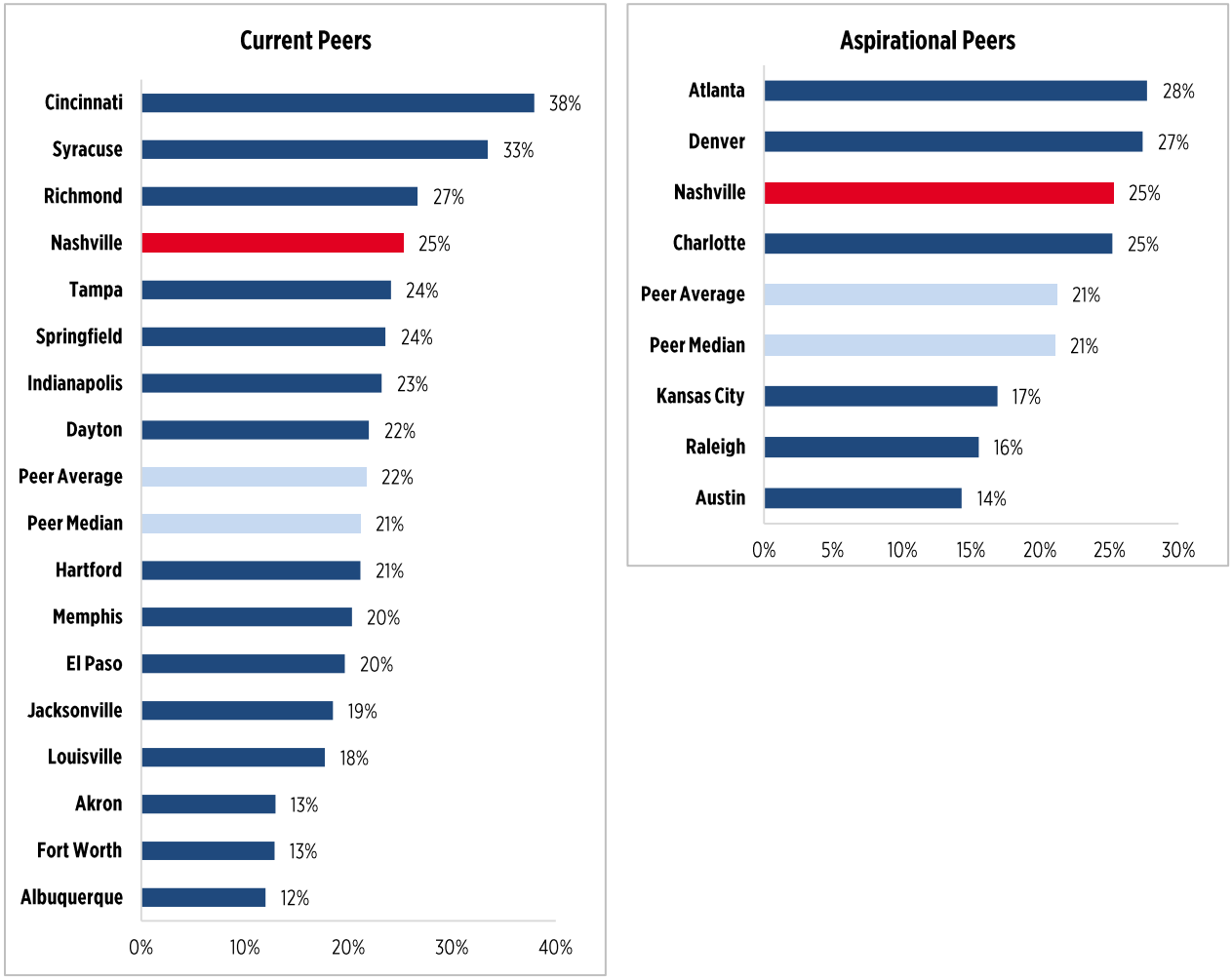
## BUS FAREBOX RECOVERY RATE

As is the case with transit systems in all developed countries, fare revenue covers only a small proportion of operating costs. Nashville MTA covers 24% of its bus operating cost through fares.

**KEY TAKEAWAY:** *MTA's farebox recovery rate is better than most of its current and aspirational peers.*

- Among its current peers, this is fourth best, and within a range of 12% (Albuquerque) to 38% (Cincinnati).
- It is also very good—and third best—among aspirational peers, where farebox return ranges from 14% (Austin) to 28% (Atlanta).

FIGURE 50 FARE RECOVERY RATE (BUS ONLY)




Source: National Transit Database RY 2012. Bus Fare Revenues Earned per Bus Total Operating Expenses.

Farebox return is related to a number of factors, which include (1) the transit system's overall cost structure, (2) productivity levels, and (3) fare levels. As described previously, Nashville MTA's cost structure is slightly higher than average, but so is its productivity. Its adult cash fare ($1.70) ranks at the median (aspirational peers) or just below it (current peers) (see Table 7). This implies that Nashville MTA would rank similarly with respect to bus farebox return to its rank in terms of operating cost per passenger. However, many passengers pay discounted fares (for example, monthly pass riders, seniors, and individuals with disabilities), and Nashville MTA's better than average performance implies that its discount levels may be lower than many of the peer systems.

TABLE 7 REGULAR ADULT CASH FARE

**Current Peers**

| City | Fare |
|---|---|
| Albuquerque | $1.00 |
| Akron | $1.25 |
| Springfield | $1.25 |
| El Paso | $1.50 |
| Hartford | $1.50 |
| Jacksonville | $1.50 |
| Richmond | $1.50 |
| **Nashville** | **$1.70** |
| Cincinnati | $1.75 |
| Dayton | $1.75 |
| Fort Worth | $1.75 |
| Indianapolis | $1.75 |
| Louisville | $1.75 |
| Memphis | $1.75 |
| Syracuse | $2.00 |
| Tampa | $2.00 |

**Aspirational Peers**

| City | Fare |
|---|---|
| Austin | $1.00 |
| Raleigh | $1.25 |
| Kansas City | $1.50 |
| **Nashville** | **$1.70** |
| Charlotte | $2.00 |
| Denver | $2.25 |
| Atlanta | $2.50 |

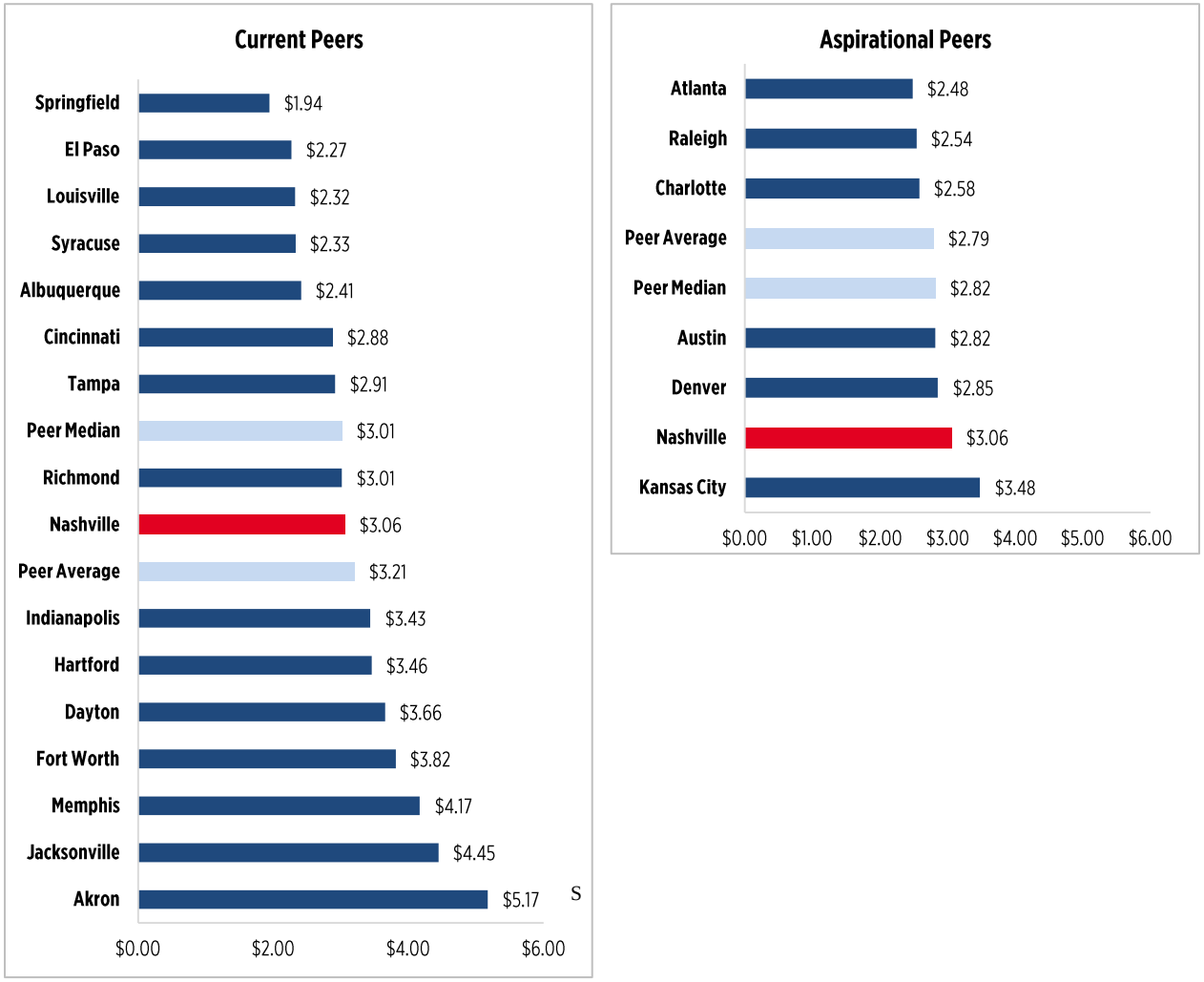
## NET OPERATING COST PER BUS PASSENGER

After accounting for fare revenue, Nashville MTA's net operating cost per bus passenger is $3.06 (see Figure 51):

- This is slightly below average for its current peers.
- However, it is higher than both the median and the average for the aspirational peers. This is largely because as ridership grows, net costs per passenger decrease.

**KEY TAKEAWAY:** *MTA's net operating cost per passenger will also likely decline as the system grows.*

FIGURE 51 NET OPERATING COST PER BUS PASSENGER




Source: National Transit Database RY 2012.Net Bus Operating Expenses (Total Expenses less Fare Revenue) per Bus Unlinked Passenger Trip.

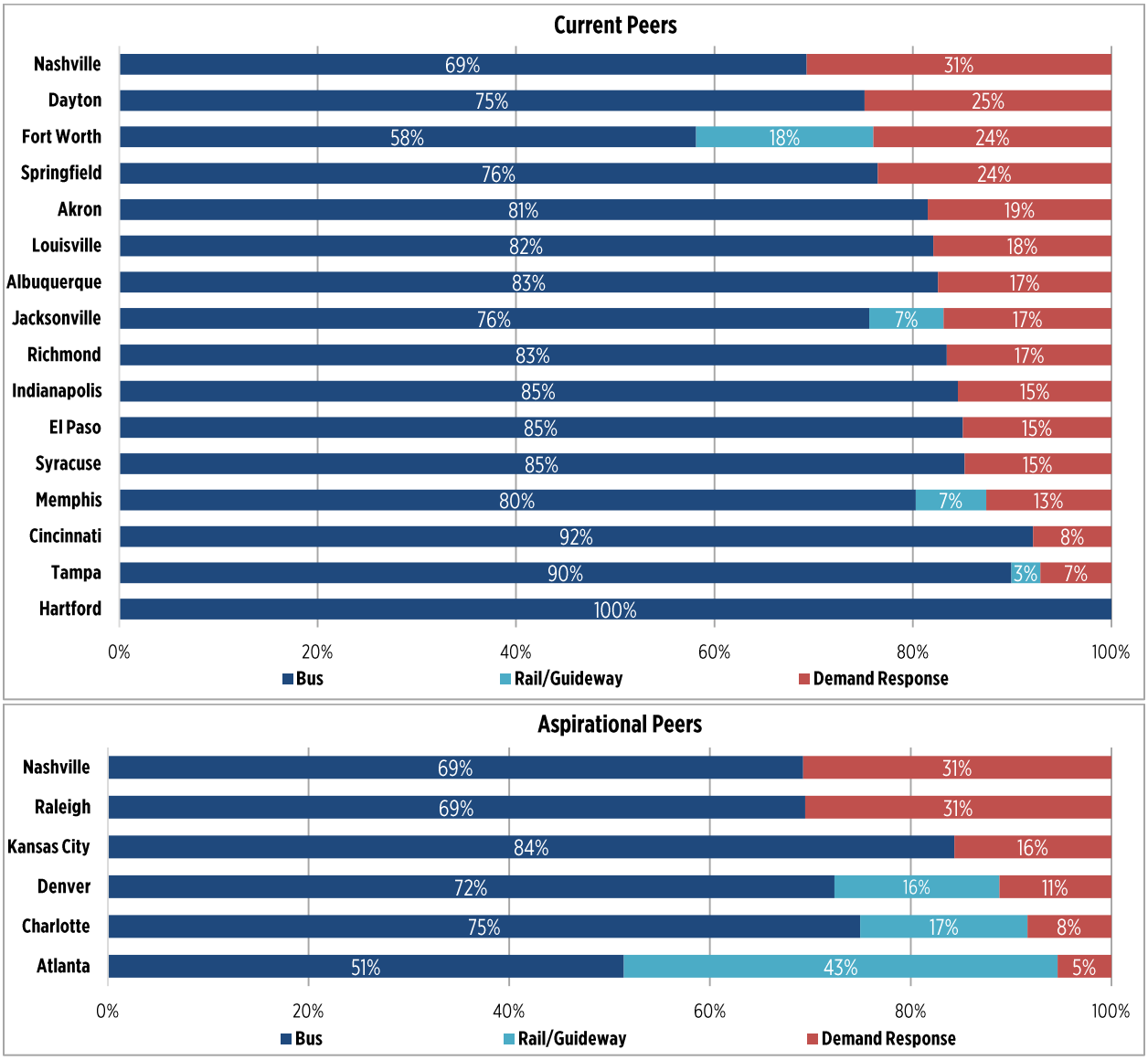
# RESOURCE ALLOCATION

## OPERATING EXPENDITURES BY MODE

Nashville MTA spends proportionally less on general public service (bus only or bus and rail) and more on paratransit service than its peers. This is the case in comparison to both its current and aspirational peers—Nashville MTA spends 31% of its operating budget on paratransit service, while most other agencies spend less than 20% (see Figure 52).

**KEY TAKEAWAY:** *Spends proportionally less on service for the general public and more on transportation for those with special needs.*

FIGURE 52 OPERATING COSTS BY MODE




Source: National Transit Database RY 2012. Total Operating Expenses by Mode.

MTA's high level of expenditures on paratransit is due to the fact that MTA provides more expansive service than most other agencies. Federal law requires that transit systems provide complementary paratransit within three-quarters of a mile of fixed-route service during the times those services operate. Nashville MTA, in contrast, provides paratransit to all residents of Davidson County whether they are within three-quarters of a mile of fixed route service or not. Paratransit service is also provided for longer hours than fixed-route services in many cases. While MTA's AccessRide program clearly provides important benefits to many residents, it also comes at a cost to service to the general public. Looking forward, to better balance expenditures between general public and paratransit service, it may be desirable to allocate future service increases more heavily toward general public transit.

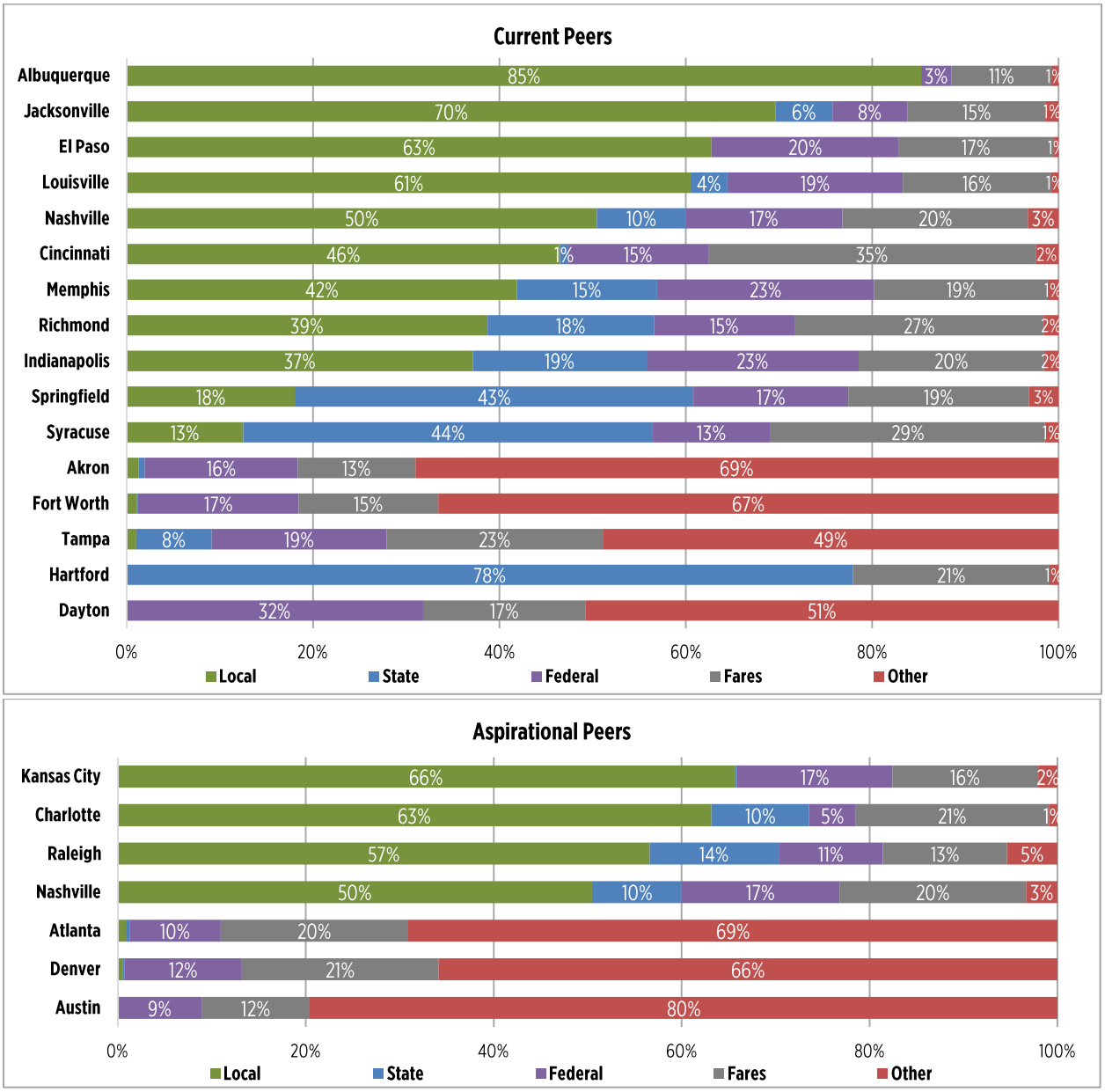
# FUNDING

## OPERATING FUNDS BY SOURCE

Most transit systems rely heavily on local funding, either provided directly by the communities that they serve or via local or regional sources such as sales taxes (indicated as "Other" in Figure 53). Nashville MTA receives 50% of its funding from local sources, primarily from the city of Nashville.

**KEY TAKEAWAY:** *As MTA grows, more local funding will be needed.*

FIGURE 53 OPERATING FUNDS BY SOURCE




Source: National Transit Database RY 2012. Operating Funds Applied from Local Sources per Service Area.

- Compared to its current peers, MTA's funding falls within a range of 85% for Albuquerque to 13% for Syracuse. Current peers that do not receive "local" funding receive 49% to 69% from "Other" funding, which is usually a local sales tax. Cities that do not receive large amounts of local or other funding—for example, Springfield, Syracuse, and Hartford—typically receive most of their funding from the state, and the availability of state funding usually means that relatively low amounts of local or other funding are available.
- Of the aspirational peers, all receive the largest proportion of their funding from either local or other funds. None receive a large proportion from the state.

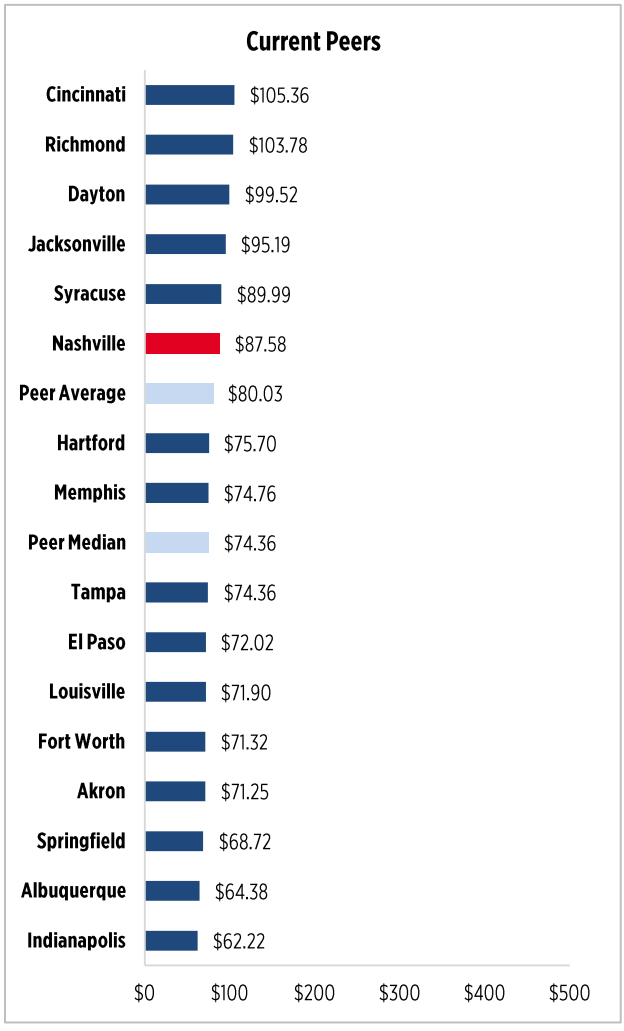
## OPERATING FUNDING PER CAPITA

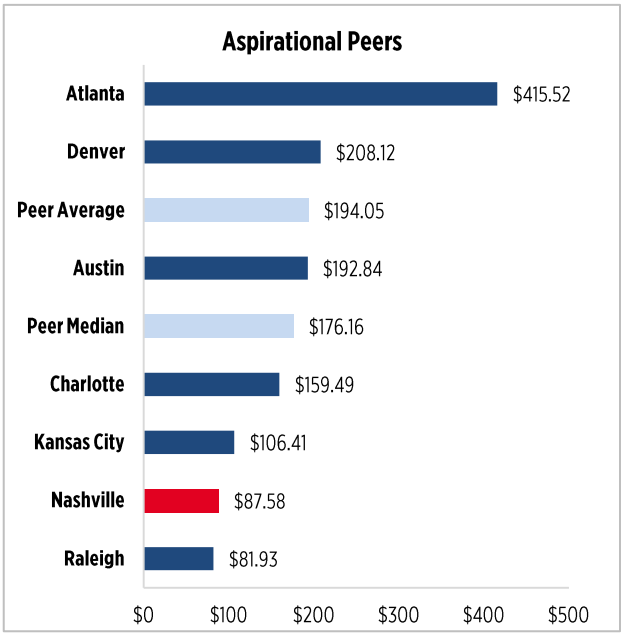
From all sources, Nashville MTA receives $88 in operating funding per capita per year, compared to an average of $80 among its current peers and a median of $74 (see Figure 54). This figure is within an overall range from $105 for Cincinnati to $62 for Indianapolis. These figures indicate that MTA is reasonably well funded compared to its current peers.

**KEY TAKEAWAY:** *To develop a great transit system, significantly more local funding will be needed.*

Compared to its aspirational peers, however, MTA ranks very low. Five of the aspirational peers receive much higher levels of funding, ranging from a high of $416 for Atlanta to $106 for Kansas City. The aspirational peer group average is $194 and the median is $176. Only Raleigh, which receives $82 per capita, receives less than Nashville MTA. These figures indicate that funding for Nashville MTA will need to significantly increase if MTA is to begin providing services more similar to the aspirational peer cities.

FIGURE 54 OPERATING FUNDING PER CAPITA




Source: National Transit Database RY 2012. Operating Funds per Service Area Population.

## SUMMARY OF FINDINGS

As stated in the recent *2014 Nashville Region's Vital Signs Report,*[7]

> "**If we don't do something about transportation, we're all in trouble.** Our ability to move around in the region is deteriorating and will continue to do so unless we take action. A history of sprawling development has made commuting to work vulnerable to traffic congestion and rising fuel prices, and a lack of dedicated funding to expand and modernize our regional transit system threatens the future prosperity of the region as a whole. Declining mobility doesn't just inconvenience us; it is a barrier to economic development and has a significant impact on our quality of life."

This peer review confirms that transit investment in the Nashville area is lower than in most current peer cities. Consequently, transit ridership is also lower. Even more importantly, Nashville is growing rapidly and is becoming a larger city that will have significantly greater transit needs. In comparison to cities that are already like what Nashville is growing to become, transit investment lags even more significantly.

**KEY TAKEAWAY**: *Transit service and funding in Davidson County will need to be significantly increased for the city and region to become what it wants to be.*

## NASHVILLE COMPARED TO CURRENT PEERS

Compared to its current peers, the performance of Nashville MTA service is slightly below average (see Table 8). Among the 16 transit systems in the current peer areas, Nashville MTA ranks:

- 12th in terms of total transit ridership
- 11th in terms of transit ridership per capita
- 10th in terms of the total amount of service provided
- 9th in terms of the amount of service provided per capita

Its productivity and cost efficiency, however, ranks very close to average among the current peers:

- 7th in terms of passengers per bus service hour
- 11th in terms of total operating cost per bus service hour
- 7th in terms of operating cost per passenger
- 4th in terms of farebox recovery ratio
- 9th in terms of net operating cost per passenger

One area where Nashville MTA is an outlier from its current peers is its balance between general public and paratransit service, where it spends 69% of its operating budget on general public service and 31% on paratransit service. This compares to an average split of 79%/21% for the peer group as a whole.

Finally, the amount of local and regional funding that Nashville MTA receives is close to average, and among the current peer group, Nashville MTA ranks:

- 8th in terms of the proportion of total operating funding
- 6th in terms of local and regional funding per capita

[7] Nashville Area Chamber of Commerce and Nashville Area MPO, 2014.

TABLE 8 SUMMARY OF NASHVILLE RANK FOR PERFORMANCE MEASURES

| Performance Measure | Peer Range | Peer Average | Peer Median | Nashville | Nashville Rank |
|---|---|---|---|---|---|
| Current Peers | | | | | |
| **Transit Ridership** | | | | | |
| Total Transit Ridership (millions) | 5.1 – 20.3 | 11.8 | 11.2 | 9.3 | 12 of 16 |
| Ridership per Capita | 9.5 – 22.3 | 17.9 | 17.1 | 15.4 | 11 of 16 |
| **Service Provided** | | | | | |
| Total Annual Vehicle Hours (000s) | 263 – 713 | 446 | 397 | 361 | 10 of 16 |
| Annual Vehicle Hours per Capita | 0.6 – 1.0 | 0.8 | 0.8 | 0.8 | 9 of 16 |
| **Productivity** | | | | | |
| Passengers per Vehicle Hour | 19.4 – 38.8 | 24.9 | 23.5 | 25.7 | 7 of 16 |
| **Cost Efficiency** | | | | | |
| Operating Cost per Vehicle Hour | $81 - $136 | $104 | $101 | $105 | 11 of 16 |
| Operating Cost per Passenger | $2.54 - $5.94 | $4.10 | $4.38 | $4.08 | 7 of 16 |
| **Subsidy** | | | | | |
| Bus Farebox Recovery Rate | 12% - 38% | 22% | 21% | 25% | 4 of 16 |
| Net Operating Cost per Passenger | $1.94 - $5.17 | $3.21 | $3.01 | $3.06 | 9 of 16 |
| **Expenditure by Mode** | | | | | |
| General Public | 69% - 100% | 79% | 83% | 69% | 16 of 16 |
| Paratransit | 0% - 31% | 21% | 17% | 31% | 1 of 16 |
| **Funding** | | | | | |
| % Local/Regional Funding | 0% - 85% | 47% | 51% | 50% | 8 of 16 |
| Operating Funding per Capita | $62 - $105 | $80 | $74 | $88 | 6 of 16 |
| Aspirational Peers | | | | | |
| **Transit Ridership** | | | | | |
| Total Transit Ridership (millions) | 6.4 – 76.7 | 36.2 | 28.2 | 9.3 | 6 of 7 |
| Ridership per Capita | 19.9 – 85.7 | 40.2 | 37.4 | 15.4 | 7 of 7 |
| **Service Provided** | | | | | |
| Total Annual Vehicle Hours (000s) | 216 – 2,658 | 1,192 | 911 | 361 | 6 of 7 |
| Annual Vehicle Hours per Capita | 1.1 – 1.9 | 1.4 | 1.4 | 0.8 | 7 of 7 |
| **Productivity** | | | | | |
| Passengers per Bus Service Hour | 27.6 – 32.8 | 30.1 | 29.4 | 25.7 | 7 of 7 |
| **Cost Efficiency** | | | | | |
| Operating Cost per Vehicle Hour | $89 - $115 | $105 | $110 | $105 | 3 of 7 |
| Operating Cost per Passenger | $3.01 - $4.18 | $3.46 | $3.45 | $4.09 | 5 of 7 |
| **Subsidy** | | | | | |
| Bus Farebox Recovery Rate | 14% - 28% | 21% | 21% | 25% | 3 of 7 |
| Net Operating Cost per Passenger | $2.48 - $3.48 | $2.79 | $2.82 | $3.06 | 5 of 7 |
| **Expenditure by Mode** | | | | | |
| For General Public | 69% - 95% | 86% | 89% | 69% | 6 of 6 |
| Paratransit | 5% - 31% | 14% | 11% | 31% | 1 of 6 |
| **Funding** | | | | | |
| % Local/Regional Funding | 57% - 80% | 67% | 69% | 50% | 7 of 7 |
| Operating Funding per Capita | $82 - $416 | $194 | $176 | $88 | 6 of 7 |

# NASHVILLE COMPARED TO ASPIRATIONAL PEERS

Compared to the aspirational peers, Nashville MTA falls behind in most respects. This indicates that as part of the process of the Nashville area's growth, transit service will need to be expanded significantly. Compared to the six aspirational peers in terms of ridership and the amount of service provided, Nashville MTA ranks:

- 6th in terms of total ridership, with only Raleigh carrying fewer total riders, and with total ridership only 33% of the peer median
- 7th in terms of ridership per capita, and at only 41% of the peer median
- 6th in term of the total amount of service provided (again, ahead of only Raleigh), and at 40% of the peer median
- 7th in terms of the amount of service provided per capita, and at 57% of the peer median

In terms of passengers per bus service hour, Nashville MTA ranks 7th, but still close to the peer median (at 87% of the median). Nashville MTA's cost effectiveness compares favorably, however:

- 3rd in terms of total operating cost per bus service hour, and 5% better than the peer median
- 5th in terms of operating cost per passenger, and 19% higher than the peer median
- 3rd in terms of farebox recovery ratio, and 19% better than the peer median
- 5th in terms of net operating cost per passenger, and 19% higher than the peer median

As is the case compared to its current peers, Nashville MTA also spends proportionally less than its aspirational peers on general public transit service and more on paratransit service, with a split of 69%/31% versus the aspirational peer median of 89%/11%.

Finally, the amount of local and regional funding that Nashville MTA receives is significantly less than for the aspirational peers:

- 7th in terms of the proportion of total operating funding, and 28% below the peer median
- 6th in terms of local and regional funding per capita (once again, above only Raleigh), and 50% below the peer median

# 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 that 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.

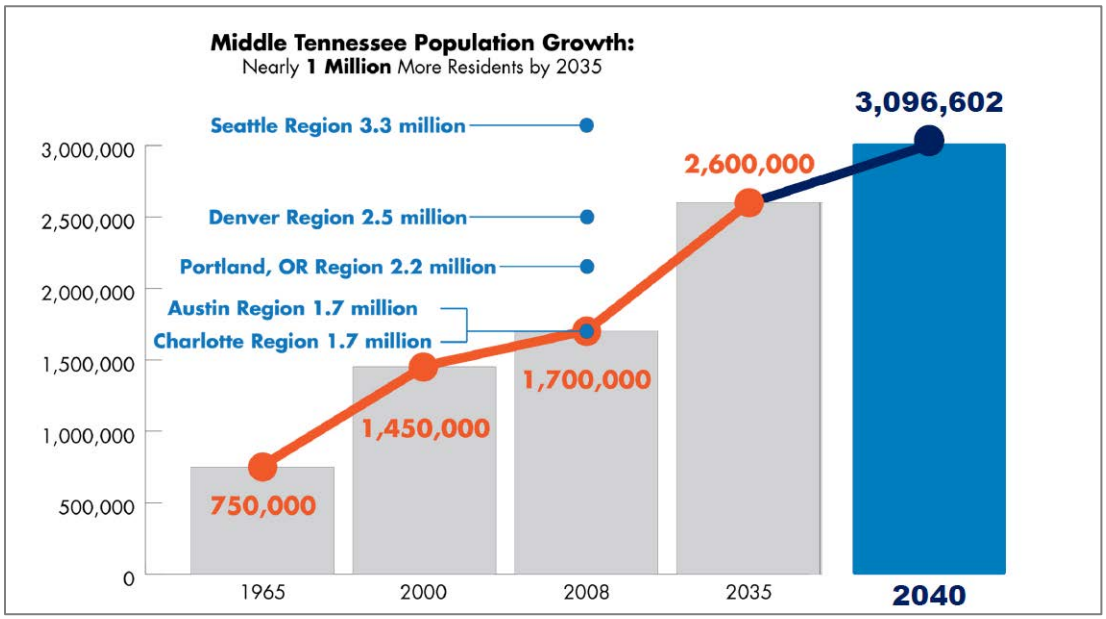
These issues mean that the Nashville MTA needs to both catch up with the growth that has already occurred and continue to grow much faster to keep pace with future growth.

## 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.[8]

[8] 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:

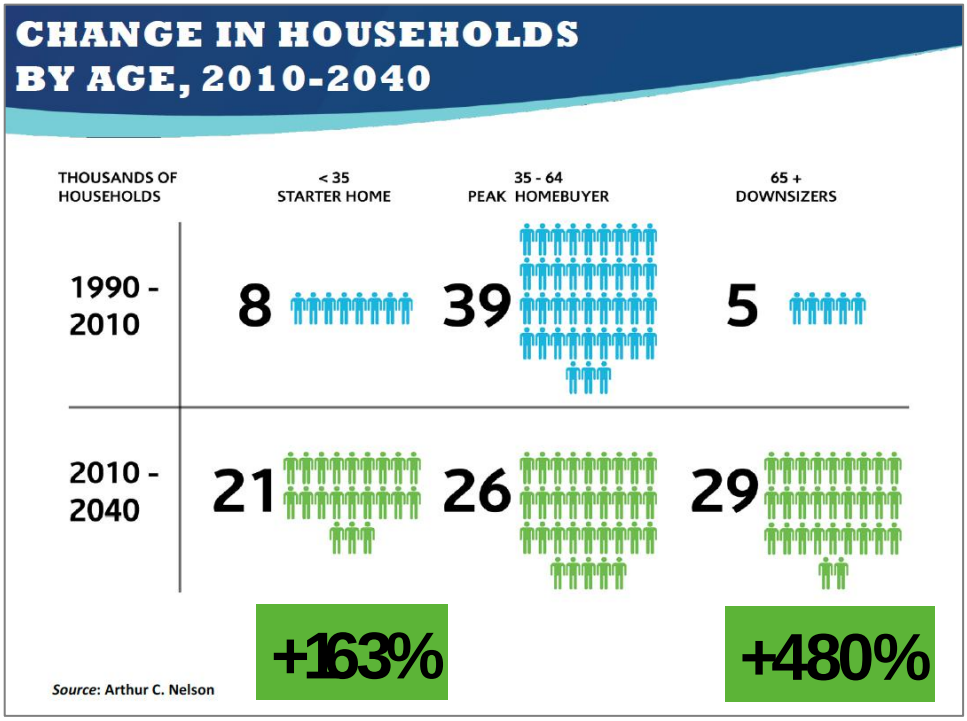
- Baby Boomers, who prefer to age in place and desire to drive less and use transit more.
- Millennials, who have a very strong desire to use the most convenient travel option for different types of trips rather than driving everywhere. In particular, Millennials want to use transit and other options 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[9] 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

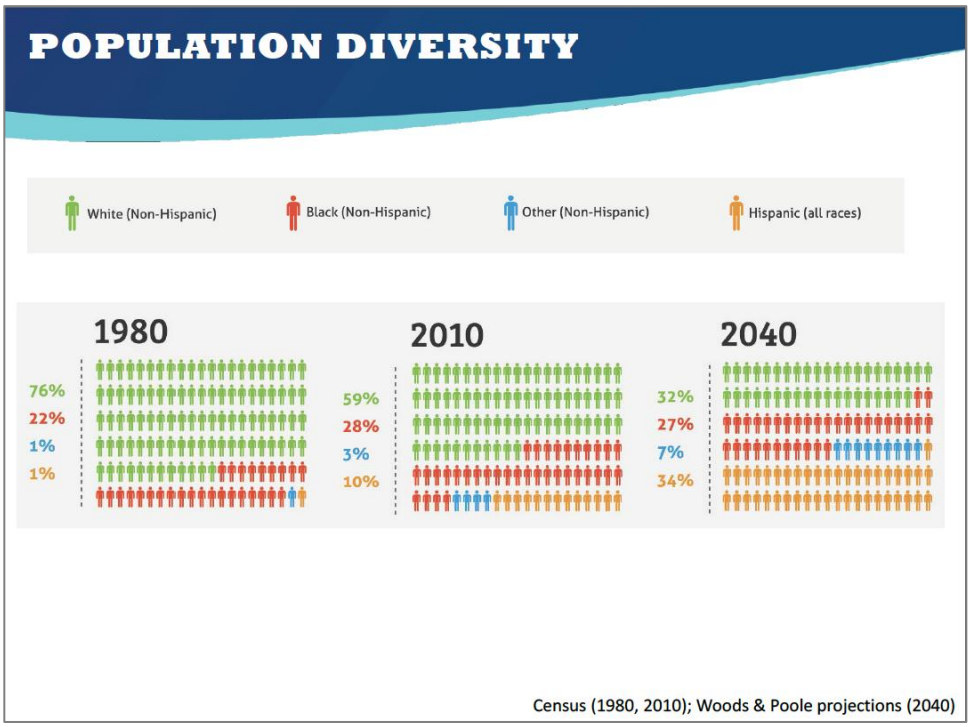
[9] *Rockefeller Millennials Survey,* April 2014

## 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



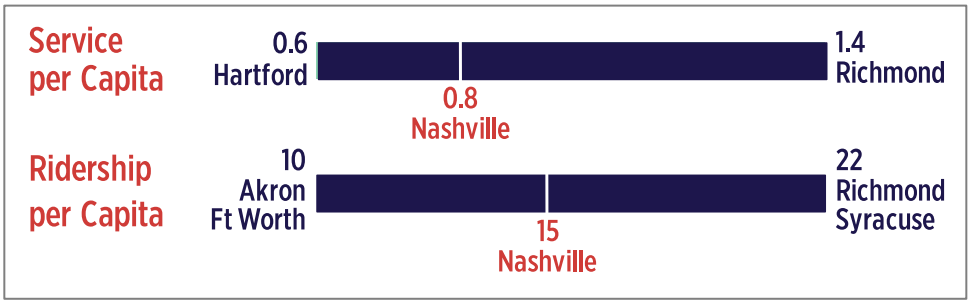

Source: NashvilleNext

# 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

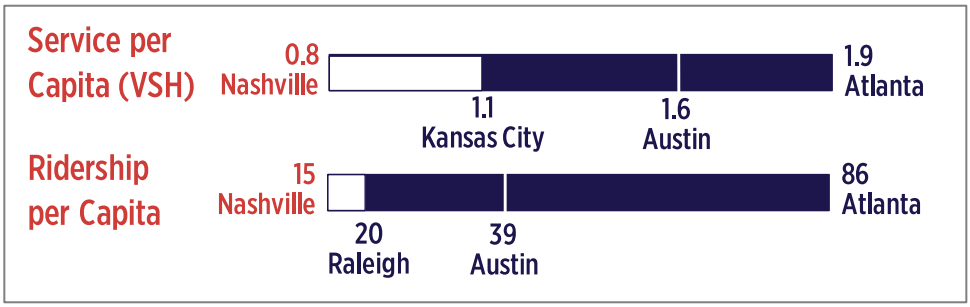
FIGURE 58 FIXED-ROUTE SERVICE AND RIDERSHIP COMPARED TO CURRENT PEER CITIES




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

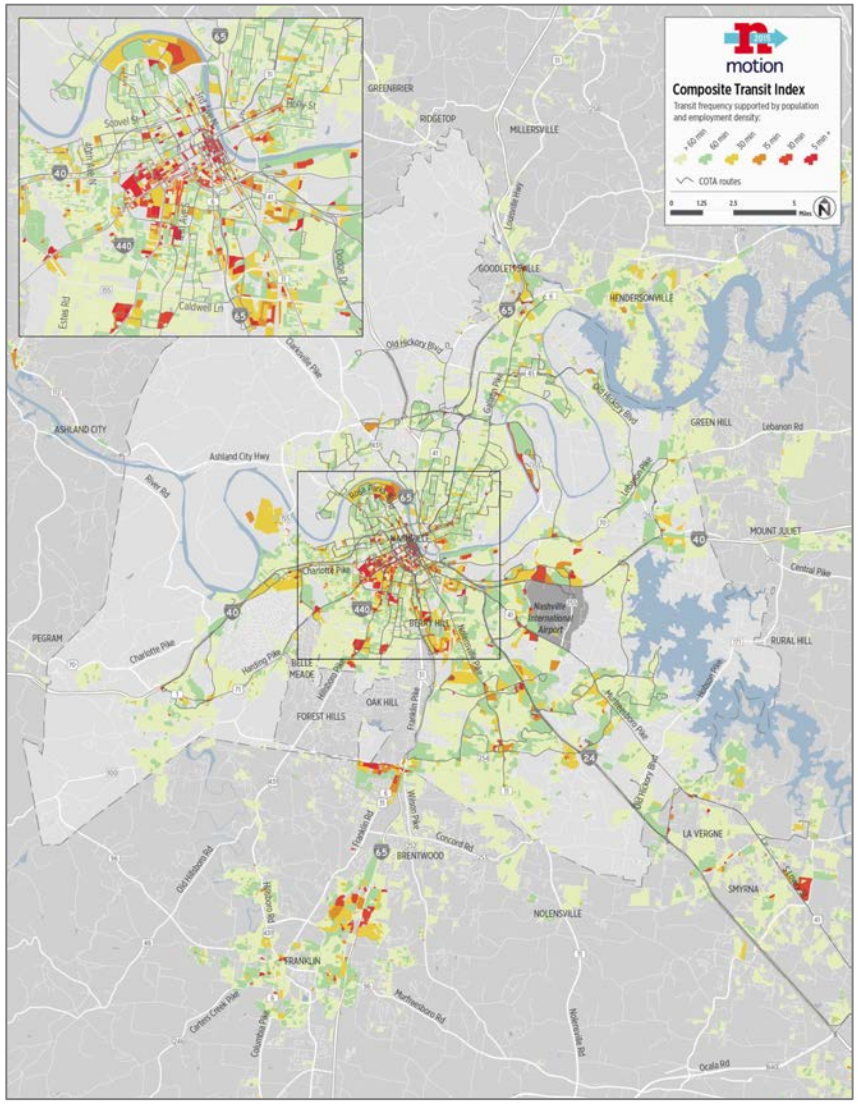
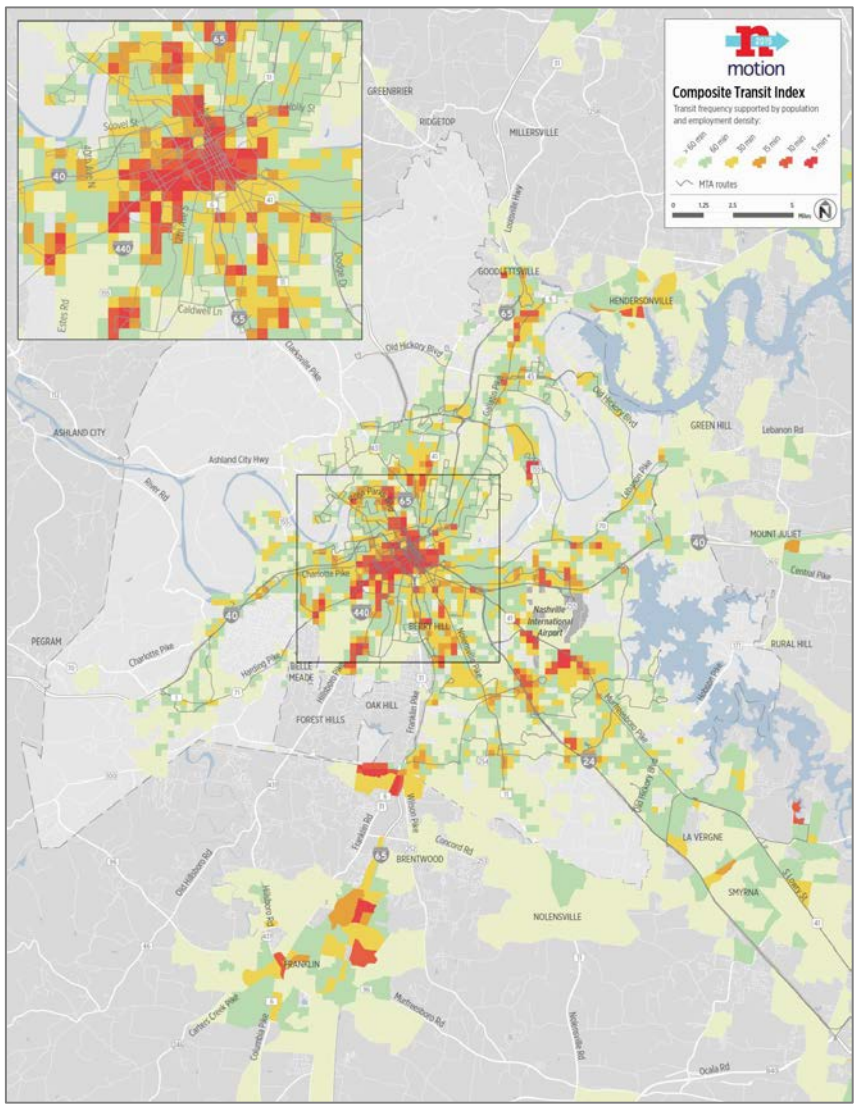



FIGURE 61 2040 TRANSIT DEMAND



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
- 21st 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).[10] 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

[10] 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

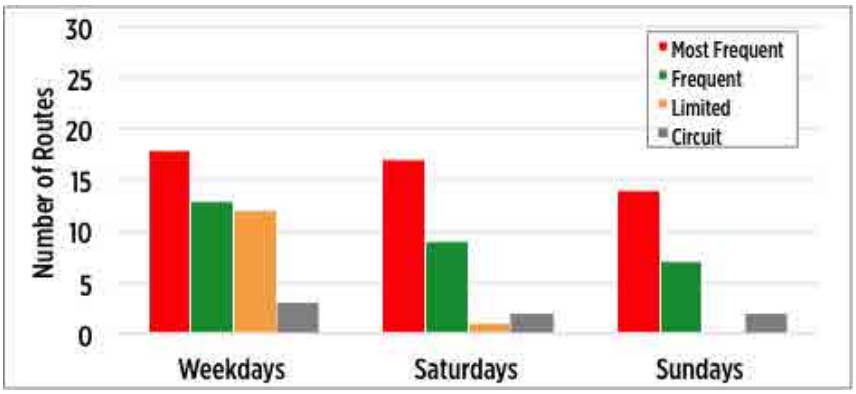
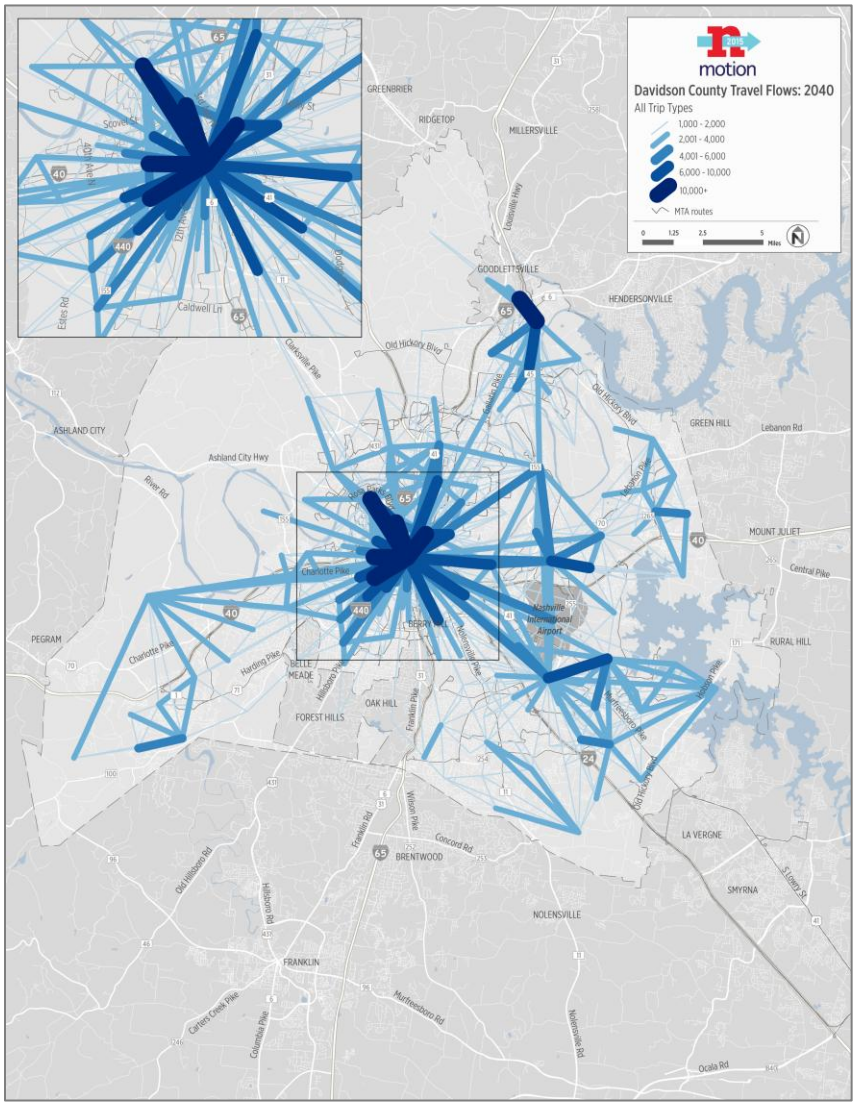
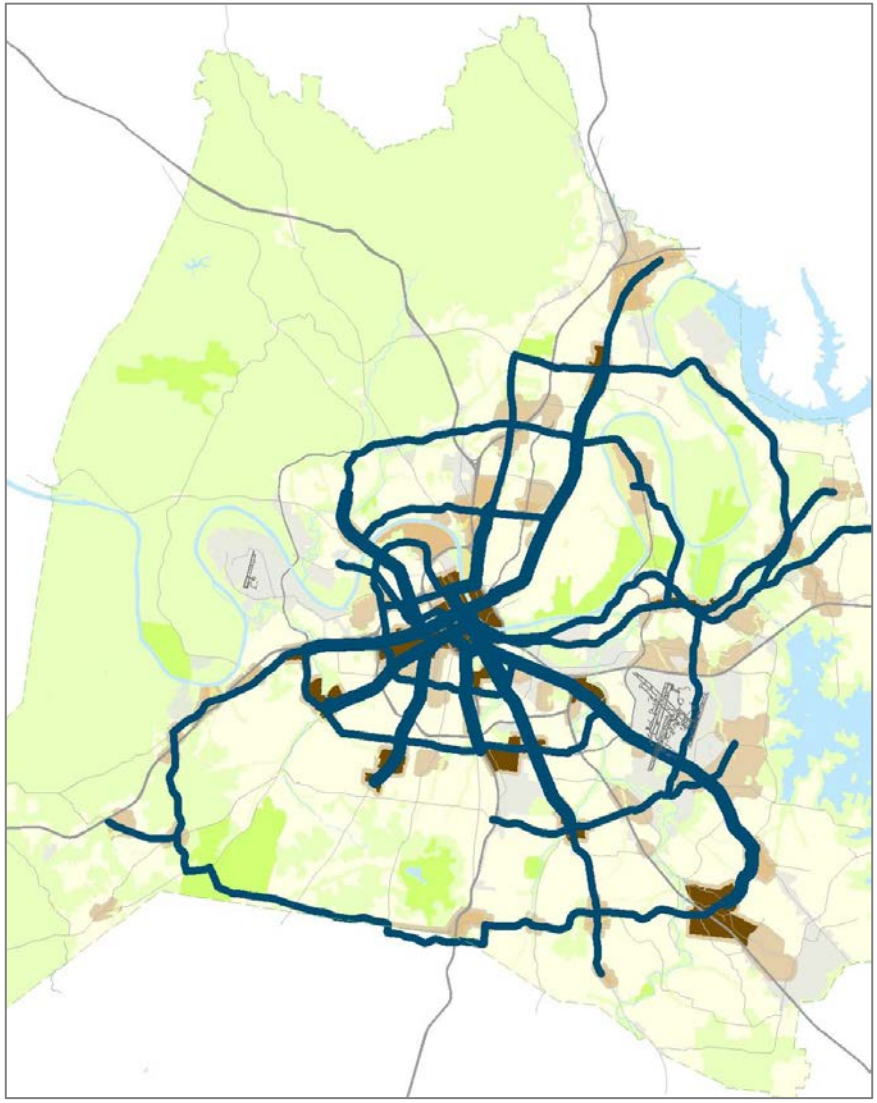


FIGURE 63 2040 PROJECTED TRIP PATTERNS (ALL TRIPS)




Data Source: Nashville Area MPO

FIGURE 64 NASHVILLENEXT CONCEPTUAL HIGH CAPACITY TRANSIT NETWORK



Source: NashvilleNext

TABLE 9 MTA SERVICE FREQUENCIES BY HEADWAY RANGE

| Classification | Weekdays | | | Saturdays | Sundays |
|---|---|---|---|---|---|
| | Peak | Midday | Evening | | |
| **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 |
| **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 |
| **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.

# APPENDIX: ROUTE PROFILES

To determine how well existing service performs and serves demands identified in the Market Analysis, this appendix presents an evaluation of the effectiveness of all Nashville MTA fixed-route services.

For each route, there is a summary of how well it serves its intended markets, how well it works within the overall system, and what changes could be made to improve route performance and responsiveness to community needs. The profile includes the route's operating characteristics, how it compares to other Nashville MTA routes, and identifies opportunities for possible redesign, elimination, or enhancement.

The route profiles are based on a number of factors, including service characteristics, ridership volumes and patterns, productivity, and service issues. Most importantly, each route evaluation concludes with service improvement opportunities that will provide much of the basis for the development of alternative service scenarios. The following are included in the route profiles:

- A description of the route, the service type, and major markets served
- A description of the route's alignment and service patterns
- A description of other routes that also serve the same areas
- Ridership characteristics
- Productivity and performance characteristics
- An overall assessment of the strengths and weaknesses of the route

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- A description of other routes that also serve the same areas
- Ridership characteristics
- Productivity and performance characteristics
- An overall assessment of the strengths and weaknesses of the route

# 1 100 Oaks

**Route 1 is a radial route that operates between 100 Oaks Mall at Powell/Armory and downtown via I-65 or Bransford and Hamilton.**

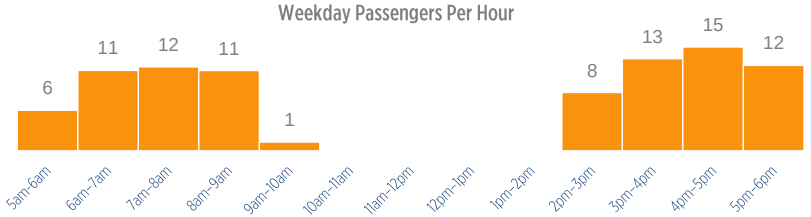
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 1 is a limited service route that is advertised as providing a combination of local and express service between 100 Oaks Mall and Music City Central. However, as a practical matter, Route 1 provides local service to areas east of I-65 inbound in the AM and outbound in the PM, and the express trips are deadhead trips that cycle buses more quickly for the local service.

**SCHEDULE:** Route 1 provides a mix of local and express service operates only on weekdays.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:40 AM – 9:05 AM | | 7 |
| | 2:15 AM – 6:05 PM | | 8 |
| Early AM | before 6:15 AM | 60 | 1 |
| AM Peak | 6:15 AM-8:15AM | 59 | 4 |
| Midday | 8:15 AM – 3:15 PM | 60 | 4 |
| PM Peak | 3:15 PM – 6:15 PM | 60 | 6 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 1 carries 90 passengers per weekday, and is MTA's 3rd lowest ridership route.



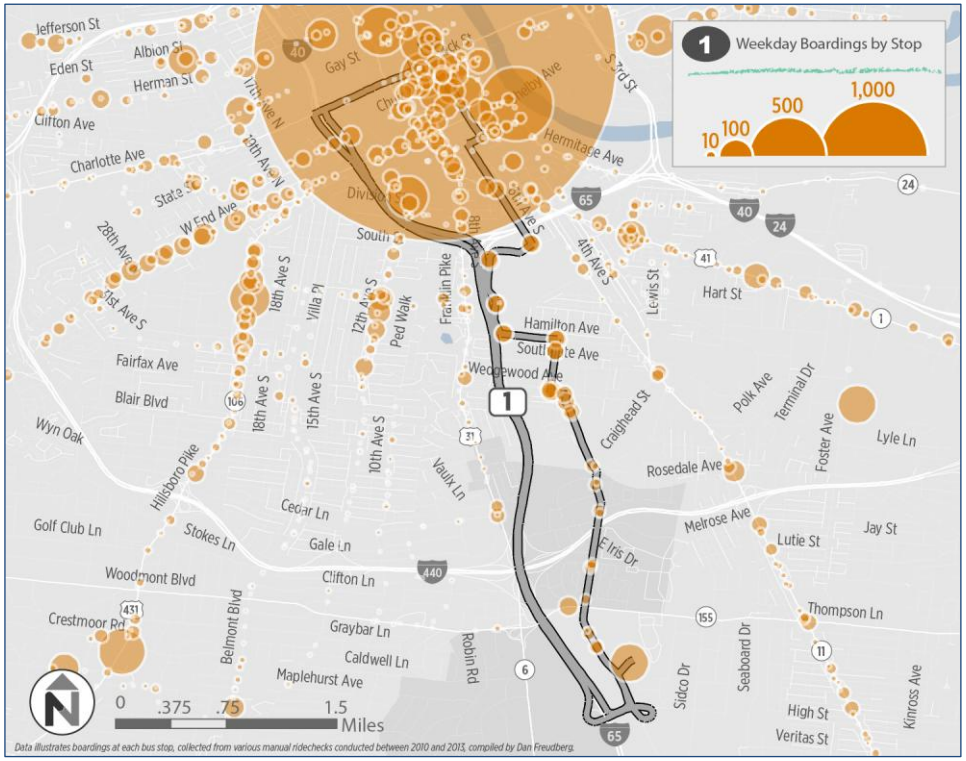

**PERFORMANCE:** Route 1 ranks very low in terms of total ridership, ridership per trip, and productivity

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 90 | 44 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 12.5 | 40 | - | - | - | - |
| Riders/Trip | 6.0 | 44 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.2 | Good | *Express service is very direct* |
| Average Speed (mph) | 11.8 | Below Average | |
| Stop Spacing (stops per mile) | 5.3 | Good | |
| Typical Peak Headway (mins) | 60 | Inconvenient | *Peak hour service only* |
| Schedule Regularity | Fairly Regular | Good | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides service to areas that would otherwise be unserved

### WEAKNESSES:

- Very low ridership and productivity
- Infrequent service (every 60 minutes)
- Confusing schedule (local and express service both denoted with same route number)

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Provide more frequent service over a shorter span
- Provide bi-directional service every 60 minutes throughout the day as "lifeline" service (which would require straightening the route to reduce one-way travel times by a few minutes).
- Designate local and express routes with different numbers and names to make service easier to understand (for example, Route 1 100 Oaks Local and Route 1X 100 Oaks Express

# 2 Belmont

**Route 2 is a radial route that operates between the Kroger at Abbott Martin and Music City Central via Lipscomb University, Belmont University, and Green Hills. It is one of two routes that serves Belmont Avenue (along with Route 21 University Connector).**

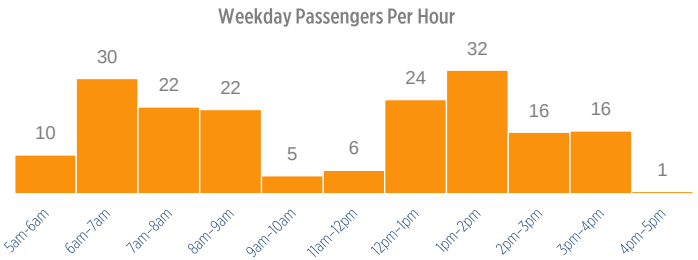
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** All service operates the full length of the route. Between Abbott Martin & Hillsboro Circle and Wedgewood Avenue, Route 2 operates along the same alignment as Route 21 University Connector between the outer end of the route and just north of Belmont University. From there, Route 2 operates to downtown, while Route 21 operates circumferentially to the North End via Vanderbilt University and Tennessee State University.

**SCHEDULE:** Service operates only during the day on weekdays, typically every 40 minutes. Schedules are not coordinated with Route 21 University Connector, which operates every 60 minutes.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:34 AM – 6:47 PM | | 22 |
| Early AM | before 6:15 AM | 40 | 1 |
| AM Peak | 6:15 AM-8:15AM | 40 | 6 |
| Midday | 8:15 AM – 3:15 PM | 40 | 6 |
| PM Peak | 3:15 PM – 6:15 PM | 40 | 8 |
| Evening/Night | 6:15 PM and later | - | 1 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 2 is one of MTA's lower ridership routes, with 184 passengers per weekday. Ridership is highest between 6 AM and 9 AM and between 12 PM and 2 PM, which are typical school periods.




**PERFORMANCE:** Route 2 ranks low in terms of total ridership, riders per revenue vehicle hour, and riders per trip.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 184 | 38 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 12.8 | 39 | - | - | - | - |
| Riders/Trip | 8.4 | 41 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.3 | Average | *Very direct besides tail and loop* |
| Average Speed (mph) | 11.4 | Below Average | |
| Stop Spacing (stops per mile) | 6.6 | Average | |
| Typical Peak Headway (mins) | 40 | Poor | *Also not coordinated with Route 21* |
| Schedule Regularity | Mostly Regular | Very Good | |


**STRENGTHS AND WEAKNESSES AND OPPORTUNITIES**

**STRENGTHS:**

- Provides only link between Lipscomb University, Belmont University, and areas along Belmont Blvd and downtown.

**WEAKNESSES:**

- Is one of two routes (along with Route 21 University Connector) that serves an area with relatively low demand–the two routes likely compete with each other more than they complement each other.
- Does not directly serve Mall at Green Hills, which is a major activity center just off of the route.
- Low ridership and productivity

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Operate entire schedule on clockface headways
- Consolidate service with Route 21 and operate all service to and from downtown every 30 minutes
- Interline with Route 21 to provide same service frequencies on both routes
- Reconfigure to serve Mall at Green Hills

# 3 White Bridge

**Route 3 is a radial route that operates between White Bridge Road at Charlotte Pike and downtown via White Bridge Road, West End Avenue, and Broadway. Its service is closely tied with that of Route 5 Bellevue, which also operates along West End Avenue and Broadway.**

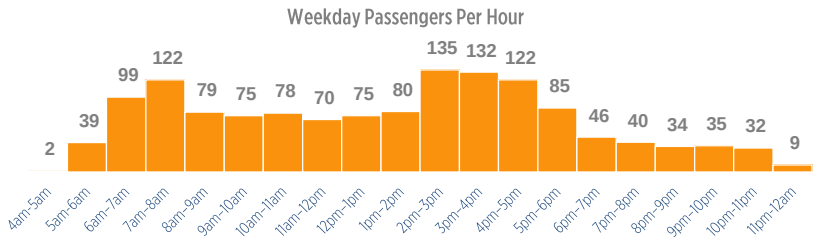
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** Route 3 operates between White Bridge & Charlotte to Music City Central and all service operates the full length of the route. Between White Bridge & West End and downtown, Route 3 operates along the same alignment as Route 5 Bellevue. Transfer points include Route 10 at the western terminus and for Route 21 at Blakemore Ave.

**SCHEDULE:** Service operates on weekdays, Saturday and Sunday. Schedules are coordinated with Route 5 so that the two routes alternate trips. Thus frequencies on the trunk between White Bridge/West End and downtown are twice as frequent.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:49 AM – 11:40 PM | | 77 |
| Early AM | before 6:15 AM | 20 | 8 |
| AM Peak | 6:15 AM – 8:15AM | 20 | 12 |
| Midday | 8:15 AM – 3:15 PM | 30 | 28 |
| PM Peak | 3:15 PM – 6:15 PM | 20 | 16 |
| Evening/Night | 6:15 PM and later | 40-60 | 13 |
| **Saturdays** | 5:42 AM –11:08 PM | 40 | 50 |
| **Sundays** | 5:42 AM – 10:08 PM | 40 | 46 |

**RIDERSHIP:** Route 3 is MTA's 8th highest ridership route, with 1,399 passengers per weekday. Ridership is highest during the late midday and early PM peak hours from 2 PM to 5 PM with a somewhat smaller peak in the AM.




**PERFORMANCE:** Route 3 ranks 11th in terms of weekday riders per revenue vehicle hour and 9th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,399 | 10 | 678 | 10 | 482 | 9 |
| Riders per Revenue Vehicle Hour | 25.1 | 16 | 21.4 | 16 | 16.4 | 13 |
| Riders/Trip | 18.2 | 17 | 13.6 | 14 | 10.5 | 11 |

*Ranking based on Most Frequent routes; Weekday rank is of 16 routes, Saturday of 16 routes, and Sunday of 14 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.6 | Good | *Very direct except for tail* |
| Average Speed (mph) | 10.1 | Poor | |
| Stop Spacing (stops per mile) | 7.0 | Average | |
| Typical Peak Headway (mins) | 20 | Good | *Excellent on trunk with Rt 5 (10 mins)* |
| Schedule Regularity | Very Regular | Excellent | *Regular frequencies throughout day* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Serves one of Nashville's highest ridership corridors–Routes 3 and 5 together serve 2,600 passengers per weekday
- Serves large number of activity centers, including schools and hospitals
- Frequent and very regular service

### WEAKNESSES:

- Premium service would provide more attractive service between St Thomas Hospital and downtown, which is currently Route 3's core market; following startup, ridership will decline significantly

### SERVICE IMPROVEMENT OPPORTUNITIES:

- If premium service is developed, maintain Route 3, but reduce service frequencies based on reduced demand
- If premium service is developed, reconfigure Route 3 to operate between St Thomas Hospital and downtown via White Bear and Charlotte, and coordinate with Route 10 Charlotte in the same manner as it is now coordinated with Route 5

# 4 Shelby

**Route 4 is a radial route that serves the Shelby area.**

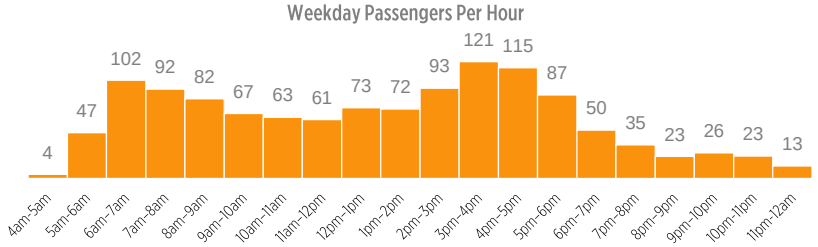
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** Route 4 is a circuitous route with a complicated operating configuration. All service operates between Gallatin Pike and Music City Central. However, daytime service alternates between two alignments along what used to be the end of the route, plus an outer loop that is a recent extension to provide connections with Gallatin Pike BRT. All evening service operates along the more direct of the two outer alignments along Porter and Greenwood.

**SCHEDULE:** Service operates seven days a week. Service is fairly frequent along trunk portions of the route (every 20 to 25 minutes) during the day, but less frequent along the alternating segments and at night (every 40 minutes).

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:45 AM – 11:56 PM | | 90 |
| Early AM | before 6:15 AM | 20 | 10 |
| AM Peak | 6:15 AM – 8:15AM | 20 | 11 |
| Midday | 8:15 AM – 3:15 PM | 25 | 37 |
| PM Peak | 3:15 PM – 6:15 PM | 20 | 18 |
| Evening/Night | 6:15 PM and later | 40-60 | 14 |
| **Saturdays** | 5:21 AM – 10:53 PM | 40 Day/60 Evening | 52 |
| **Sundays** | 5:21 AM – 10:06 PM | 40 Day/60 Evening | 50 |

**RIDERSHIP:** Route 4 carries 1,249 passengers per weekday, and is MTA's 12th highest ridership route. Ridership is high throughout most of the day, but significantly lower in the very early morning and after 8 PM.




**PERFORMANCE:** Route 4 ranks well in terms of total ridership, but middling in terms of riders per vehicle hour and per trip

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,249 | 12 | 639 | 11 | 415 | 10 |
| Riders per Revenue Vehicle Hour | 22.6 | 25 | 19.9 | 18 | 13.3 | 16 |
| Riders/Trip | 13.9 | 27 | 12.3 | 15 | 8.3 | 15 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.9 | Poor | *Variants are indirect* |
| Average Speed (mph) | 13.5 | Good | |
| Stop Spacing (stops per mile) | 7.4 | Close | |
| Typical Peak Headway (min) | 20 | Good | |
| Schedule Regularity | Fairly Regular | Good | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Frequent service
- Long service span

### WEAKNESSES:

- Circuitous, and out of direction segments do not serve many riders
- Alternating mid-route alignments are somewhat confusing and dilute frequency
- Serves similar areas as Route 20 Scott

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Make service more direct
- Operate all mid-route service along a single alignment (which would require some riders to walk further but could provide more compelling service to most)
- Shorten loop at northern terminus, again to make service more direct
- End service earlier
- Consolidate with Route 20 Scott to provide more frequent service with a single route

# 5 West End / Bellevue

**Route 3 is a 13-mile long radial route that operates between the Bellevue Park and Ride Lot and downtown via Memphis Bristol Highway, Harding Road, West End Avenue, and Broadway. Its service is closely tied with that of Route 3 White Bridge, which also operates along West End Avenue and Broadway.**

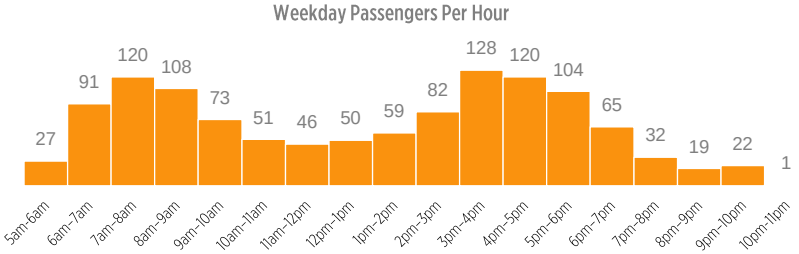
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates the full length of the route. Along the outer end of the route, in the AM, service operates inbound along Baugh Road, and outbound along Memphis-Bristol Highway, and in the PM it operates outbound along Baugh Road and inbound along Memphis Bristol Highway.

**SCHEDULE:** Service operates on weekdays, Saturday and Sunday. Schedules are coordinated with Route 3 so that the two routes alternative trips. Thus, frequencies on the trunk between White Bridge/West End and downtown are twice as frequent.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:08 AM – 10:27 PM | | 70 |
| Early AM | before 6:15 AM | 20 | 5 |
| AM Peak | 6:15 AM – 8:15AM | 20-30 | 11 |
| Midday | 8:15 AM – 3:15 PM | 30 | 29 |
| PM Peak | 3:15 PM – 6:15 PM | 20-30 | 16 |
| Evening/Night | 6:15 PM and later | 40-60 | 9 |
| **Saturdays** | 5:47 AM – 8:38 PM | 40 | 42 |
| **Sundays** | 5:47 AM – 7:58 PM | 40 | 41 |

**RIDERSHIP:** Route 5 carries 1,200 passengers per weekday, and is MTA's 13th highest ridership route. Ridership is heavily peak oriented, with ridership significantly higher in the peaks than during the midday and evening. Ridership is strong at the outer and inner ends of the route, but weak in many areas in between.




**PERFORMANCE:** Route 5 ranks 13th in terms of weekday ridership but only 33rd in terms of ridership per vehicle hour, which indicates that more service is provided than warranted by demand.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,200 | 13 | 603 | 13 | 408 | 11 |
| Riders per Revenue Vehicle Hour | 17.6 | 33 | 14.9 | 21 | 10.3 | 19 |
| Riders/Trip | 17.1 | 20 | 14.4 | 12 | 10.0 | 13 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | |
| Average Speed (mph) | 13.6 | Good | |
| Stop Spacing (stops per mile) | 5.4 | Good | |
| Typical Peak Headway (min) | 20 | Good | *Excellent on trunk with Rt 3 (10 mins)* |
| Schedule Regularity | Very Regular | Excellent | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- High ridership – 1,200 per weekday and 11th highest in system
- Service is frequent, direct, and regular

### WEAKNESSES:

- Low ridership along much of outer end, including AM inbound and PM outbound deviation via Baugh Road (nine total riders)
- Low productivity – 32nd out of 42 weekday routes and lowest among Most Frequent routes, which indicates that more service is provided than warranted by demand
- Premium service would provide more attractive service between St. Thomas Hospital and downtown, which is currently Route 3's core market; following startup, ridership will decline significantly.
- Fairly low evening ridership

### SERVICE IMPROVEMENT OPPORTUNITIES:

- If premium service is developed, maintain route, but reduce service frequencies based on reduced demand, and use as local service compliment to the premium service
- To simplify and speed service for outer end riders, operate all outer end service via Memphis-Bristol Highway

# 6 Lebanon Pike

**Route 6 is a radial route that operates between Hermitage Regional Rail Station and downtown via Lebanon Pike, Hermitage Ave, Lebanon Rd, and Andrew Jackson Parkway. Route 6 provides similar service as Route 34 Opry Mills between McGavock Pike and downtown.**

**SERVICE TYPE:** Frequent

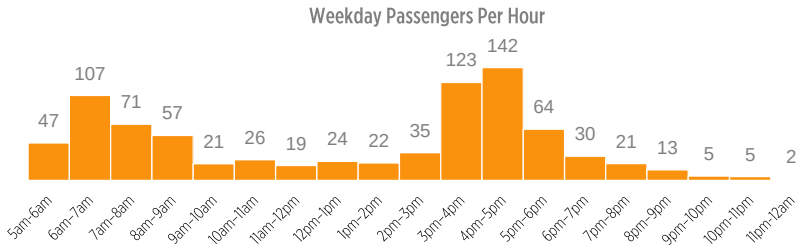
**SERVICE PATTERNS:** Nearly all service operates from end-to-end. The one exception is a single outbound trip that begins service at Head Middle Magnet School and then travels to MCC to begin its regular route.

**SCHEDULE:** Service operates only on weekdays., with very irregular headways and very infrequent midday service:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:17 AM – 10:30 PM | | 46 |
| Early AM | before 6:15 AM | 25 | 4 |
| AM Peak | 6:15 AM-8:15AM | 30-35 | 9 |
| Midday | 8:15 AM – 3:15 PM | 15-100 | 14 |
| PM Peak | 3:15 PM – 6:15 PM | 15-17 | 14 |
| Evening/Night | 6:15 PM and later | 30 | 5 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

Route 6's public schedule also displays many Route 34 Opry Mills trips. On weekdays, the portion of Route 34 that overlaps with Route 6 is shown. On weekends, when Route 6 does not operate, the entire Route 34 schedule is shown, even though much of it provides very different service.

**RIDERSHIP:** Route 6 carries 835 passengers per weekday, and is MTA's 16th highest ridership route. Ridership is very heavily peak oriented. The highest ridership stops are Heritage Station, Walmart, Donelson Station, and stops in downtown.



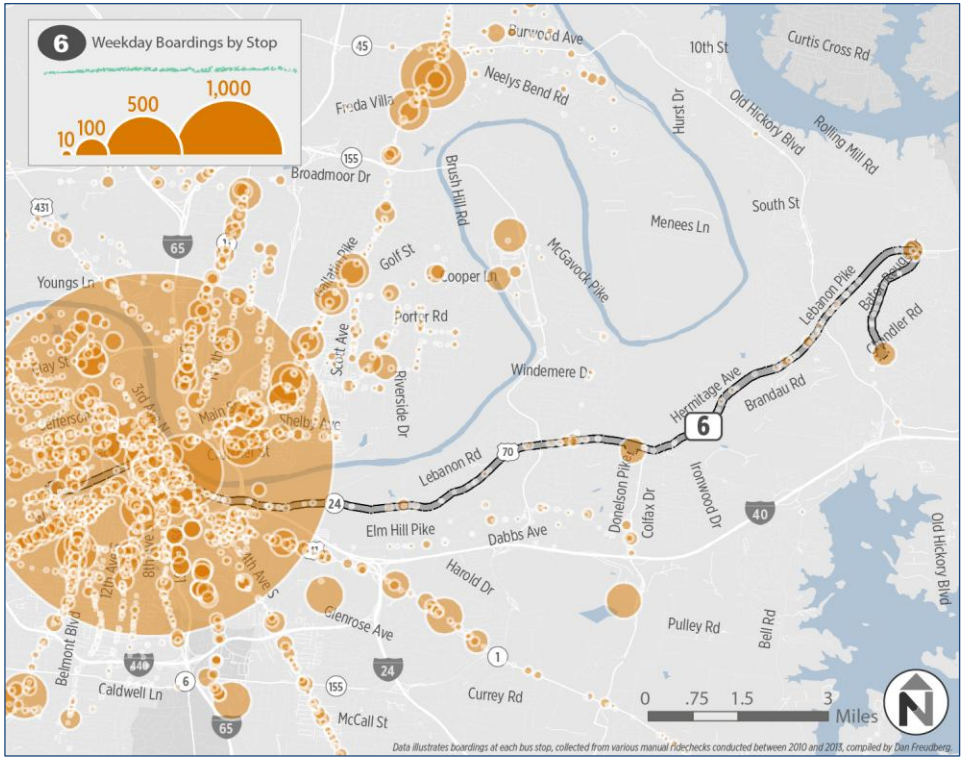

**PERFORMANCE:** Route 19 ranks 16th in terms of weekday ridership but only 29th in terms of passengers per vehicle hour, which indicates a mismatch between service levels and demand.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 835 | 16 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 19.5 | 27 | - | - | - | - |
| Riders/Trip | 18.2 | 18 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.3 | Average | *Very direct except tail* |
| Average Speed (mph) | 16.7 | Very Good | |
| Stop Spacing (stops per mile) | 4.5 | Very Good | |
| Typical Peak Headway | 15-35 | Fair | *Much service is infrequent* |
| Schedule Regularity | Very Irregular | Poor | *Some regularity during peak* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Strong peak period ridership
- Fairly frequent peak service
- Straight and direct alignment

**WEAKNESSES:**

- Very low off-peak ridership, particularly at night
- Limited and Irregular off-peak service
- Poor schedule coordination with Route 34 Opry Mills

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Provide service with more regular headways
- Improve schedule coordination with Route 34 Opry Mills
- Shift off-peak service to Route 34 Opry Mills

# 7 Hillsboro

**Route 7 is a radial route that operates between the Mall at Green Hills and Music City Central, largely along Broadway and Hillsboro Pike.**

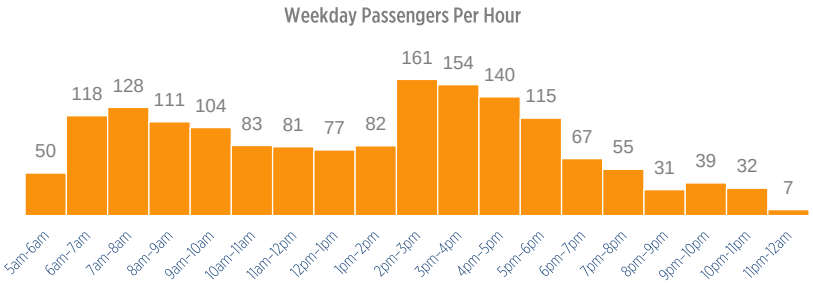
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates from Music City Central to the Mall at Green Hills.

**SCHEDULE:** Service operates on weekdays, Saturday and Sunday. Schedules are largely regular, but often vary slightly from a regular pattern

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:40 AM – 11:59 PM | | 91 |
| Early AM | before 6:15 AM | 20 | 5 |
| AM Peak | 6:15 AM – 8:15AM | 20 | 12 |
| Midday | 8:15 AM – 3:15 PM | 20 | 41 |
| PM Peak | 3:15 PM – 6:15 PM | 20 | 17 |
| Evening/Night | 6:15 PM and later | 40-60 | 16 |
| **Saturdays** | 5:49 AM – 11:03 PM | 40 Day/60 Night | 49 |
| **Sundays** | 5:49 AM – 10:08 PM | 40 Day/60 Night | 47 |

**RIDERSHIP:** Route 7 carries 1,626 passengers per weekday and is MTA's 9th highest ridership route. Ridership is highest during the late midday and PM peak hours from 2 PM to 6 PM with a somewhat smaller peak in the AM. Ridership declines significantly after 8 PM. Ridership is high at the Mall at Green Hills and many intermediate stops.




**PERFORMANCE:** Route 7 ranks 10th in terms of weekday riders per revenue vehicle hour and 18th for riders per trip. Productivity, in terms of ridership per revenue vehicle hour, is also high, and ranks 10th.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,626 | 9 | 791 | 9 | 537 | 7 |
| Riders per Revenue Vehicle Hour | 27.8 | 10 | 25.7 | 10 | 17.9 | 10 |
| Riders/Trip | 17.9 | 19 | 16.1 | 11 | 11.4 | 9 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | |
| Average Speed (mph) | 8.0 | Poor | *Frequent stop spacing slows trips* |
| Stop Spacing (stops per mile) | 8.1 | Close | |
| Typical Peak Headway (mins) | 20 | Good | *Excellent on trunk with Rt 91 during peak* |
| Schedule Regularity | Very Regular | Excellent | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Overall, very strong route–high ridership; very direct service
- Major anchor at outer end, and many strong intermediate stops

**WEAKNESSES:**

- Very closely spaced stops that contribute to slow service

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Operate entire schedule on clockface headways
- Begin service earlier

# 8 8th Avenue South

**Route 8 is a radial route that operates between Lipscomb University and downtown primarily via Franklin, Kirkwood, Woodmont, and Granny White Pike.**

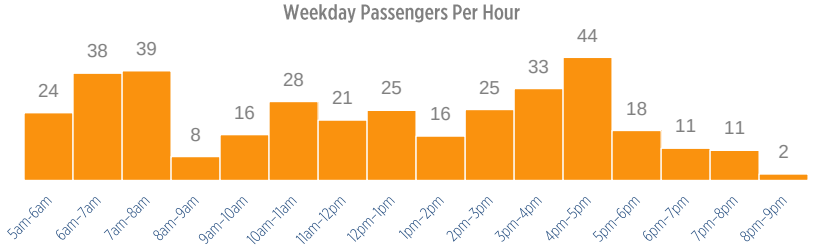
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** All trips operate along the full length of the route. In addition, two trips (one inbound; one outbound, extend south to J.T. Moore Middle School.

**SCHEDULE:** Service operates seven days a week, generally every 35 to 75 minutes on weekdays and every 70 minutes on weekends.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:09 AM – 8:13 PM | | 32 |
| Early AM | before 6:15 AM | 35 | 4 |
| AM Peak | 6:15 AM-8:15AM | 35 | 6 |
| Midday | 8:15 AM – 3:15 PM | 75 | 11 |
| PM Peak | 3:15 PM – 6:15 PM | 25-60 | 7 |
| Evening/Night | 6:15 PM and later | 60 | 4 |
| **Saturdays** | 6:45 AM – 7:09 PM | 60 | 19 |
| **Sundays** | 6:45 AM – 7:09 PM | 60 | 19 |

**RIDERSHIP:** Route 8 carries only 359 passengers per weekday, and ranks 27 out of 46 routes. Ridership is highest during peak periods, but still relatively low even during those times. By stop, ridership is highest at Lispcomb University and along 8th Avenue South.




**PERFORMANCE:** Route 8 ranks 27th in terms of weekday riders per revenue vehicle hour and 17th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 359 | 27 | 155 | 26 | 102 | 24 |
| Riders per Revenue Vehicle Hour | 19.1 | 29 | 16.6 | 19 | 10.9 | 17 |
| Riders/Trip | 11.2 | 33 | 8.2 | 21 | 5.4 | 24 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.3 | Average | *Direct route already served by Rt 17* |
| Average Speed (mph) | 11.6 | Average | |
| Stop Spacing (stops per mile) | 5.9 | Average | |
| Typical Peak Headway | 35 | Fair | *Midday poor at 75 minutes* |
| Schedule Regularity | Largely Irregular | Poor | *Inconsistent headways all day* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides service to a corridor that would otherwise be unserved
- Serves Lipscomb University

### WEAKNESSES:

- Low ridership
- Irregular headways

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Shift southern terminus to 100 Oaks Mall, which could be a stronger southern anchor
- Operate schedule on clockface headways
- Consolidate outer ends of Routes 8, 17 xxx, and 21 xxx into a new crosstown route between 100 Oaks Mall and the Mall at Green Hills via Lipscomb University

# 9 Metrocenter

**Route 9 is a radial route that operates between and outer loop in Metrocenter and Music City Central via Germantown and 4th Avenue North. Major destinations include Watkins College of Dart, Design, & Film, the Social Security office, and the Tennessee Career Center.**

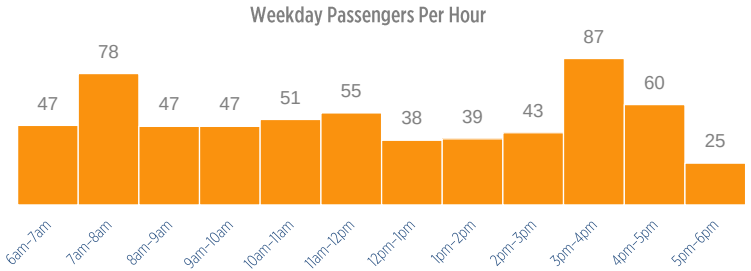
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** All service operates the full length of the route. During school days, one outbound trip begins service at East Nashville Magnet School before departing from MCC.

**SCHEDULE:** Service operates only on weekdays with irregular headways that are mostly 20 to 25 minutes during peak periods and 45 minutes during the midday:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:18 AM – 6:04 PM | | 45 |
| Early AM | before 6:15 AM | - | 0 |
| AM Peak | 6:15 AM-8:15AM | 7-21 | 10 |
| Midday | 8:15 AM – 3:15 PM | 10-45 | 25 |
| PM Peak | 3:15 PM – 6:15 PM | 22 | 10 |
| Evening/Night | 6:15 PM and later | - | 0 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 9 carries 617 passengers per weekday, which makes it MTA's 19th highest ridership route. Ridership is highest during PM peak hours from 3 PM to 5 PM with a somewhat smaller peak in the AM. By stop, ridership is highest along the eastern half of the Metrocenter loop and on 3rd Street North just north of I-65.



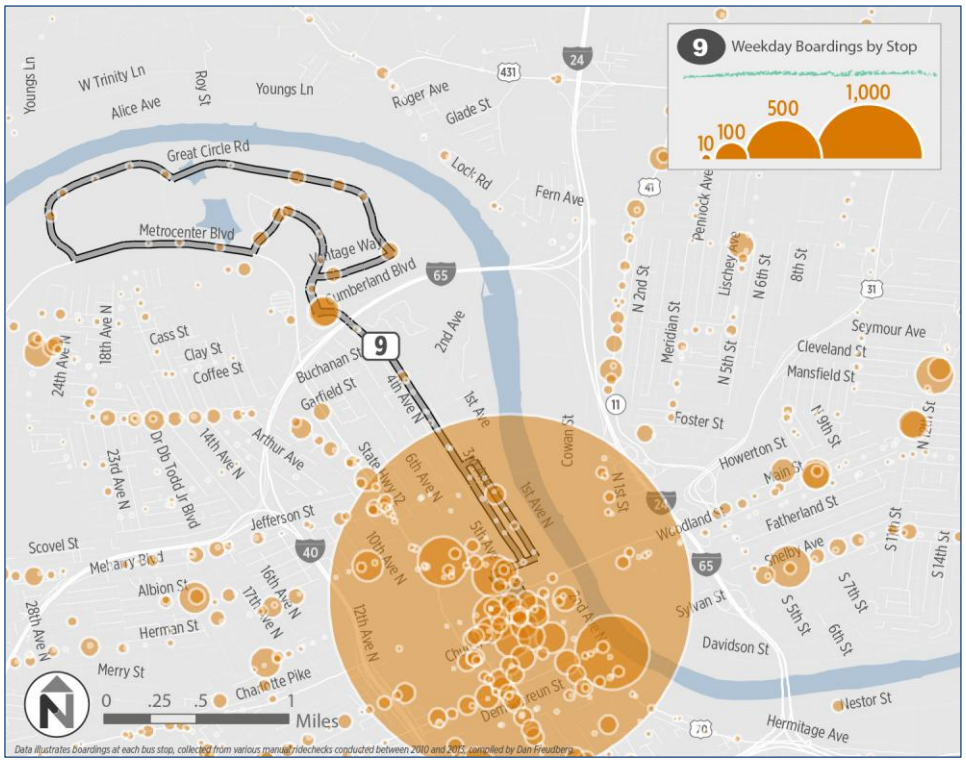

**PERFORMANCE:** Route 9 ranks 19th in terms of weekday ridership, but 2nd best in terms of weekday ridership per vehicle service hour, indicating demand for more frequent service.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 617 | 19 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 35.8 | 2 | - | - | - | - |
| Riders/Trip | 13.7 | 28 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.6 | Below Average | *Northern loop service is indirect* |
| Average Speed (mph) | 11.5 | Below Average | |
| Stop Spacing (stops per mile) | 7.5 | Relatively Close | |
| Typical Peak Headway | 20 | Good | *But midday only 45 minutes* |
| Schedule Regularity | Very Irregular | Poor | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides unique service to an area that would otherwise be underserved
- Serves several important activity centers
- Very strong ridership relative to service levels; high productivity

### WEAKNESSES:

- Very irregular headways

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Reschedule with regular headways
- Begin service earlier and improve off-peak service frequencies

# 10 Charlotte

**Route 10 is a nine mile long radial route that serves the Charlotte Pike corridor between the Walmart at River Road and Music City Central. It is MTA's sixth highest ridership routes.**

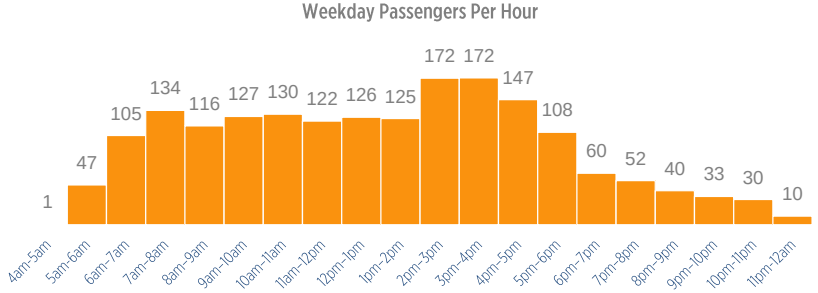
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates the full length of the route. In Hillwood, peak direction service (AM inbound and PM outbound) deviates off of Charlotte Pike to Premier Drive between Annex Ave and American Rd which non-peak direction service remains on Charlotte Pike. Between Midtown and Downtown, service operates via Church Street rather than Charlotte Pike.

**SCHEDULE:** Service operates on seven days a week with headways that range from 25 to 45 minutes:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:52 AM – 11:49 PM | | 77 |
| Early AM | before 6:15 AM | 35 | 6 |
| AM Peak | 6:15 AM – 8:15AM | 25 | 8 |
| Midday | 8:15 AM – 3:15 PM | 25 | 35 |
| PM Peak | 3:15 PM – 6:15 PM | 25 | 14 |
| Evening/Night | 6:15 PM and later | 40 | 14 |
| **Saturdays** | 5:33 AM – 10:46 PM | 45 | 44 |
| **Sundays** | 5:33 AM – 9:47 PM | 45 | 42 |

**RIDERSHIP:** Route 10 is MTA's 6th highest ridership route, with 1,857 passengers per weekday. Ridership is highest during the late midday and PM peak hours from 2 PM to 5 PM with strong steady ridership in the AM and early Midday.




**PERFORMANCE:** Route 10 is one of MTA's top performing routes:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,857 | 6 | 1,052 | 6 | 653 | 6 |
| Riders per Revenue Vehicle Hour | 30.3 | 9 | 32.1 | 3 | 21.0 | 8 |
| Riders/Trip | 24.1 | 8 | 23.9 | 4 | 15.5 | 6 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Good | *Very direct except for deviation* |
| Average Speed (mph) | 11.3 | Average | |
| Stop Spacing (stops per mile) | 6.2 | Good | |
| Typical Peak Headway | 25 | Fair | *Especially for a high ridership route* |
| Schedule Regularity | Very Regular | Excellent | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- High ridership and productive
- Strong ridership between 6 am and 6 pm
- Route generally very direct and reasonably fast

### WEAKNESSES:

- Low service frequencies for a high ridership route that serves an important corridor.
- Peak/non-peak direction service via either Premier Drive or Charlotte Pike somewhat confusing.

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Upgrade service–develop as part of a frequent service network and increase service frequencies
- Upgrade to BRT/Rapid Bus service
- Simplify Premier/Charlotte service–operate all service via one of the two alignments rather than both
- Shorten late night span of service by one hour

# 12 Nolensville Pike

**Route 12 is an approximately 12 mile long radial route that serves the Nolensville Pike corridor with three outer branches, all of which funnel into Nolensville Pike at Harding Pike and then operate between there and Music City Central largely along Nolensville Pike. It is MTA's 5rd highest ridership route.**

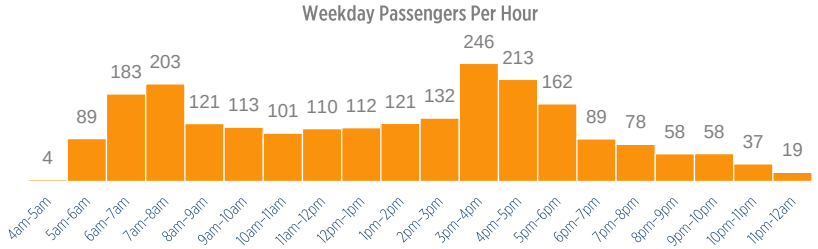
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates between downtown and Nolan Place, where three variants diverge to either Hickory Hollow Plaza, Grassmere Business Park, the Wallace Loop, or to all three late night and on weekends. On weekdays, when specific trips operate to one of the three branches, there are no clear patterns as to which branch is served.

**SCHEDULE:** Service operates seven days a week, frequently during peak periods and less frequently at other times. Service frequencies are mostly irregular.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:59 AM – 12:14 AM | | 89 |
| Early AM | before 6:15 AM | 35 | 7 |
| AM Peak | 6:15 AM – 8:15AM | 10-20 | 15 |
| Midday | 8:15 AM – 3:15 PM | 30 | 33 |
| PM Peak | 3:15 PM – 6:15 PM | 10-20 | 23 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 5:10 AM –11:16 PM | 40 Day/60 Evening | 47 |
| **Sundays** | 5:09 AM – 10:14 PM | 60 | 33 |

**RIDERSHIP:** Route 12 is MTA's 5th highest ridership route, with 2,256 passengers per weekday. Weekday ridership is much stronger during the peaks than at other times, and tapers off sharply at night.



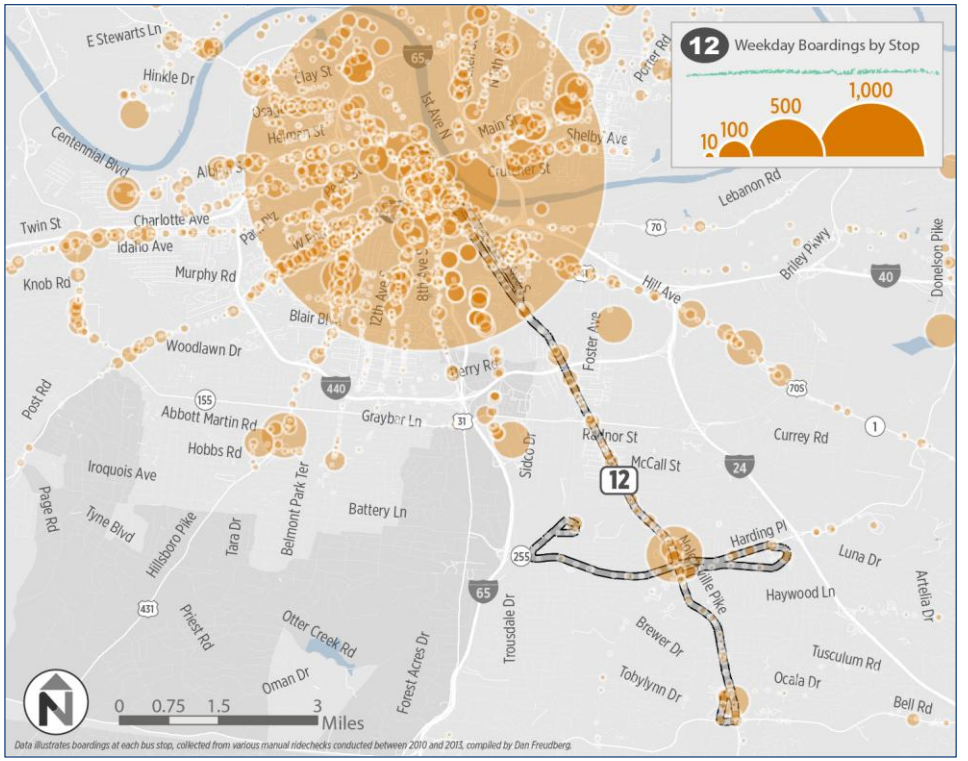

**PERFORMANCE:** Route 12 ranks 5th in terms of weekday riders and riders per revenue vehicle hour:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 2,256 | 5 | 1,394 | 3 | 864 | 4 |
| Riders per Revenue Vehicle Hour | 33.1 | 5 | 29.5 | 6 | 26.5 | 4 |
| Riders/Trip | 25.3 | 7 | 29.7 | 1 | 26.2 | 3 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Good | *Very direct except deviations from trunk* |
| Average Speed (mph) | 13.0 | Good | |
| Stop Spacing (stops per mile) | 10.0 | Too close | |
| Typical Peak Headway | 10-15 | Excellent | |
| Schedule Regularity | Fairly Irregular | Poor | *Irregular in early AM and PM Peak* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- High total ridership and productive
- Route very direct as far south as Nolan Place

### WEAKNESSES:

- Irregular headways
- Irregular service to three outer branches

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Upgrade service–develop as part of a frequent service network and increase service frequencies
- Upgrade to BRT/Rapid Bus service
- Operate to/from hub in vicinity of Nolensville Pike and Harding Place, and convert outer branches/loops to connecting local service
- Extend to Global Mall at the Crossings
- Operate on clockface headways
- Consolidate stops

# 14 Whites Creek

**Route 14 is a radial designed to connect residential neighborhoods in the Haynes area with downtown Nashville. It operates around a northern end loop and then inbound via Rowan Drive, Whites Creek Pike, Dickernson Pike, and North First Street.**

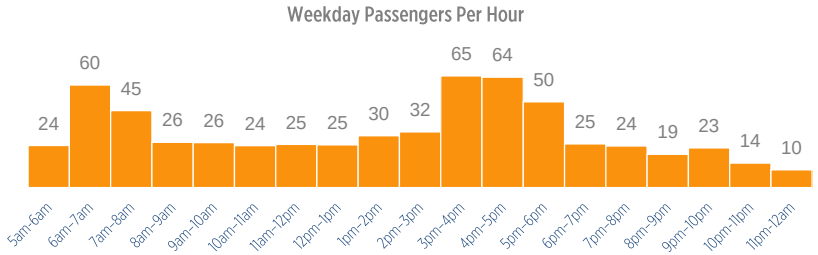
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** All service operates the full length of the route, and there are no variants.

**SCHEDULE:** Service operates on weekdays, Saturday and Sunday.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:34 AM – 11:41 PM | | 44 |
| Early AM | before 6:15 AM | 30 | 2 |
| AM Peak | 6:15 AM-8:15AM | 30 | 6 |
| Midday | 8:15 AM – 3:15 PM | 60 | 14 |
| PM Peak | 3:15 PM – 6:15 PM | 25 | 11 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 6:18 AM – 10:41 PM | 60 | 33 |
| **Sundays** | 6:18 AM – 7:07 PM | 60 | 26 |

**RIDERSHIP:** Route 14 carries 613 passengers per weekday and is MTA's 20th highest ridership route. Ridership is peak oriented with ridership two to three times higher in the peak than during midday. High ridership stops are at the Haynes Garden estates on Whites Creek Pike, and along Dickerson Pike and North 1st Street.




**PERFORMANCE:** Route 14 ranks 11th in terms of weekday riders per revenue vehicle hour and 25th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 613 | 20 | 356 | 18 | 187 | 17 |
| Riders per Revenue Vehicle Hour | 27.3 | 11 | 21.7 | 15 | 14.6 | 15 |
| Riders/Trip | 13.9 | 26 | 10.8 | 18 | 7.2 | 17 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Good | *Very direct except northern loop* |
| Average Speed (mph) | 15.7 | Good | |
| Stop Spacing (stops per mile) | 6.4 | Good | |
| Typical Peak Headway (mins) | 30 | Fair | |
| Schedule Regularity | Fairly Regular | Good | *Inbound trips less regular* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Provides unique service to residential areas in North Nashville

**WEAKNESSES:**

- Low late night ridership.

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Operate all service at clockface headways
- Reduce late night span of service an hour

# 15/55 Murfreesboro Corridor

**The Murfreesboro Corridor, which extends about 10 miles southeast of downtown along Murfreesboro Pike and then about 3 miles west along Bell Road is served by two routes: Routes 55 Murfreesboro BRT Lite and Route 15 Murfreesboro Pike. Route 55 provides the predominant service, and Route 15 provides a local service complement.**

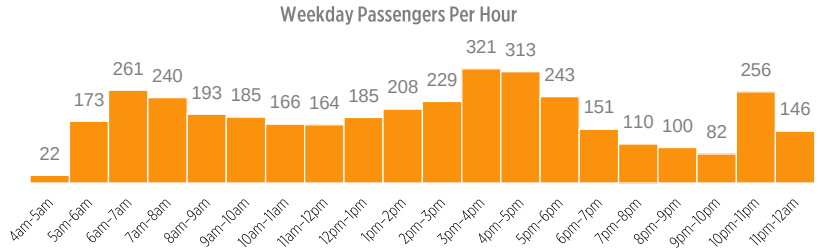
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** Route 55 operates end to end from Hickory Hollow to Music City Central making only BRT stops and makes no deviations. Route 15 also operates end to end, makes all local stops, and deviates on some trips to Metro Southeast and to Tennessee Department of Safety and Nashville School of the Arts.

**SCHEDULE:** Route 55 operates on weekdays and Saturdays, and Route 15 operates seven days a week. Route 15 service operates later than Route 55 on weekdays, but ends earlier on Saturdays (see individual route sheets).

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:54 am - 11:57 PM | | 86 BRT/50 local |
| Early AM | before 6:15 AM | 15 BRT/40 local | 10 BRT/4 local |
| AM Peak | 6:15 AM-8:15AM | 10-15 BRT/40 local | 13 BRT /9 local |
| Midday | 8:15 AM – 3:15 PM | 10-15 BRT/40 local | 26 BRT/21 local |
| PM Peak | 3:15 PM – 6:15 PM | 10-15 BRT/40 local | 22 BRT/8 local |
| Evening/Night | 6:15 PM and later | 20-30 BRT/60 local | 12 BRT/21 local |
| **Saturdays** | 5:30 am - 10:55 PM | 20 BRT/60 local | 66 BRT/32 local |
| **Sundays** | 5:21 am - 9:58 PM | No BRT/40-60 local | 0 BRT/44 local |

**RIDERSHIP:** Combined, Routes 15 and 55 serve 3,433 passengers per weekday. As shown below, weekday ridership is highest during the PM peak hours followed by late night and AM peak. Ridership is strong throughout most of the day.



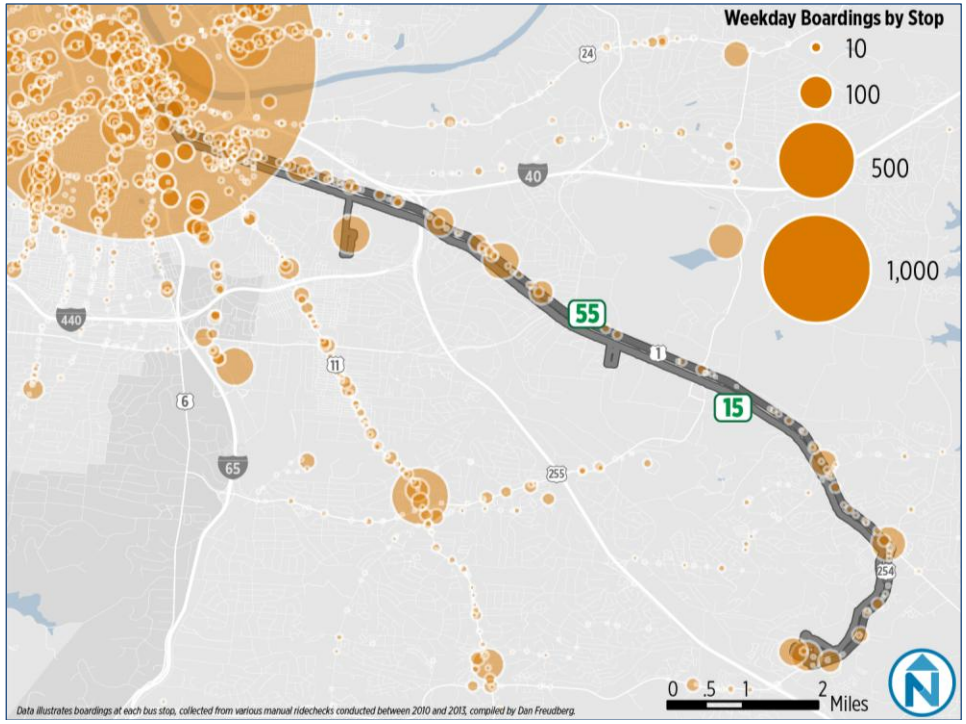

**PERFORMANCE:** Although ridership is high, productivity is middling.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | | |
| Ridership | 3,433 | na | 1,964 | na | 1,304 | na |
| Riders per Revenue Vehicle Hour | 22.1 | na | 21.6 | na | 30.1 | na |
| Riders/Trip | 20.9 | na | 20.0 | na | 29.6 | na |

*Weekday rank is of 46 routes; Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating |
|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0-1.1 | Excellent |
| Average Speed (mph) | 14.3 | Slightly above Average |
| Stop Spacing (stops per mile) | 1.3 BRT | BRT may be long |
| Typical Peak Headway (mins) | 15 on Rt 55 | Good |
| Schedule Regularity | Fairly Regular | Good |




**STRENGTHS AND WEAKNESSES:**

**STRENGTHS:**

- Route 55 provides fast and frequent high quality service; Route 15 serves stops in between.
- High corridor ridership

**WEAKNESSES:**

- Weekday productivity, in terms of passengers per revenue vehicle hour, is low given the high corridor ridership. There are a number of potential reasons for this.
  - Route 55's average stop spacing, at 1.3 miles, may not provide enough access to BRT service
  - Based on the current Route 15/55 service design, the total amount of service provided by Routes 15 and 55 is higher than the corridor warrants.
- Highest ridership on Route 15 is after 10 PM, which indicates that Route 55 service ends too early.

**OPPORTUNITIES:**

- Revise BRT Lite/local service strategy to serve corridor exclusively with BRT Lite service to provide more attractive service to most riders and better balance service levels with demand.
- Provide later weekday Route 55 BRT service.

# 15 Murfreesboro Pike

**Route 15 is a radial route that serves the southeast corridor along Murfreesboro Road extending approximately 10 miles to Bell Road and then west to Hickory Hollow. It provides a local service compliment to Route 55 Murfreesboro Bus Rapid Transit, which provides BRT Lite service in the same corridor.**

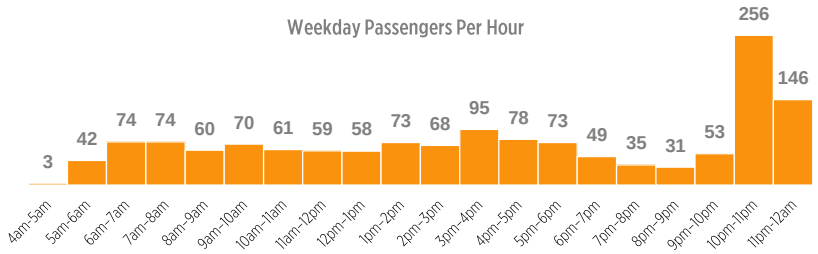
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates end to end from Hickory Hollow to Music City Central making all local stops. The route alignment follows Murfreesboro Pike from the intersection at Bell and Murphreesboro into Downtown Nashville. The route makes a deviation to Metro Southeast on 14 inbound and 13 outbound weekday trips. The route also deviates to Tennessee Department of Safety and Nashville School of the Arts on three trips per day in each direction.

**SCHEDULE:** Route 15 operates seven days a week, but provides only infrequent service (as most weekday and Saturday service is provided with Route 55 Murfreesboro Bus Rapid Transit).

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:54 AM - 11:57 PM | | 50 |
| Early AM | before 6:15 AM | 40 | 4 |
| AM Peak | 6:15 AM-8:15AM | 40 | 6 |
| Midday | 8:15 AM – 3:15 PM | 40 | 21 |
| PM Peak | 3:15 PM – 6:15 PM | 40 | 8 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 5:36 AM - 10:13 PM | 60 | 32 |
| **Sundays** | 5:21 AM - 9:58 PM | 40-60 | 44 |

**RIDERSHIP:** Route 15 carries 1,142 passengers per weekday and is MTA's 13th highest ridership route. However, ridership per hour is relatively low, except after 10 pm after Route 55 ends service.



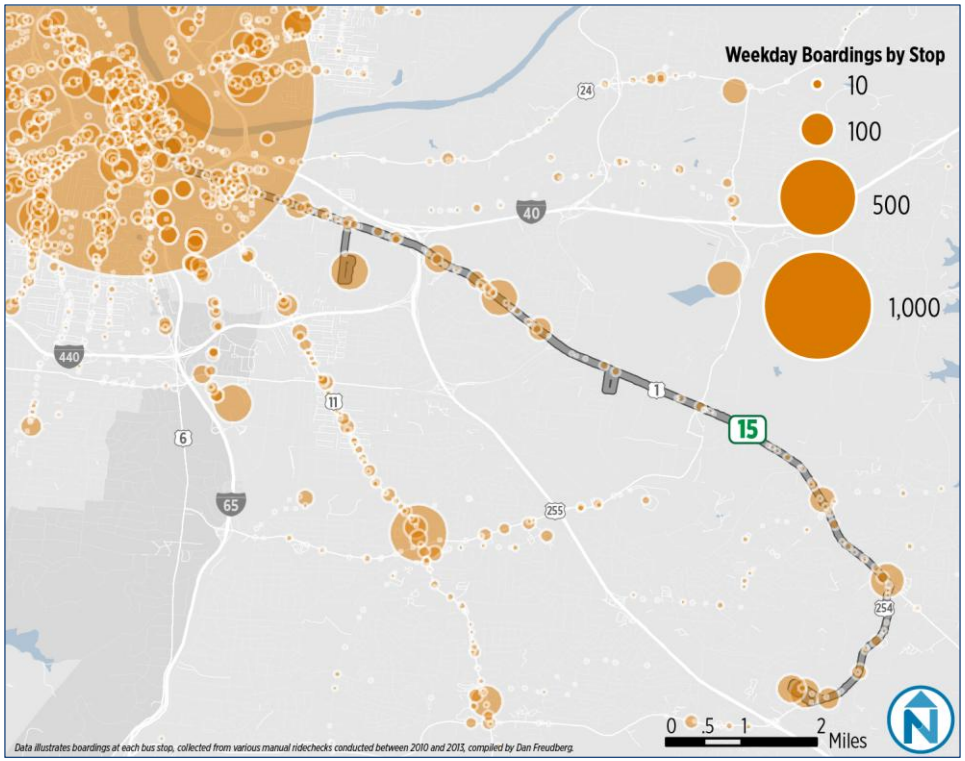

**PERFORMANCE:** Route 15 is ranked 15th of 46 routes in terms of weekday riders and 22nd in terms of riders per revenue vehicle hour. Ridership and productivity is highest on Sundays, when Route 55 does not operate.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | | |
| Ridership | 1,142 | 13 | 624 | 11 | 1,304 | 2 |
| Riders per Revenue Vehicle Hour | 23.3 | 22 | 20.0 | 16 | 30.1 | 3 |
| Riders/Trip | 22.8 | 11 | 19.5 | 7 | 29.6 | 2 |

*Weekday rank is of 46 routes; Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Excellent | |
| Average Speed (mph) | 14.0 | Good | |
| Stop Spacing (stops per mile) | 5.4 | Good | |
| Typical Peak Headway (mins) | 40 | Poor | |
| Schedule Regularity | Fairly Regular | Good | |




**STRENGTHS AND WEAKNESSES:**

**STRENGTHS:**

- Provides easy to understand service in a high demand corridor
- Provides service to local stops in between corridor BRT stops
- Relatively strong ridership and productivity for such infrequent service
- Above median productivity in terms of passengers per revenue vehicle hour

**WEAKNESSES:**

- Provides infrequent service at inconvenient service frequencies for much of the time on weekdays and Saturdays (every 40 minutes).
- Although Route 15's productivity is slightly above median, it is lower than what would be expected for a major corridor; in total, Routes 15 and 55 provide more service than is warranted by demand.
- While Route 15 compliments Route 55 in many respects, it also competes with it.

**OPPORTUNITIES**

- Revise BRT Lite/local service strategy to serve corridor exclusively with BRT Lite service to provide more attractive service to most riders and better balance service levels with demand.

# 17 12th Avenue South

**Route 17 is a radial route that operates between 100 Oaks Mall and Music City Central, generally along Woodmont Boulevard and 10th and/or 12th Streets.**

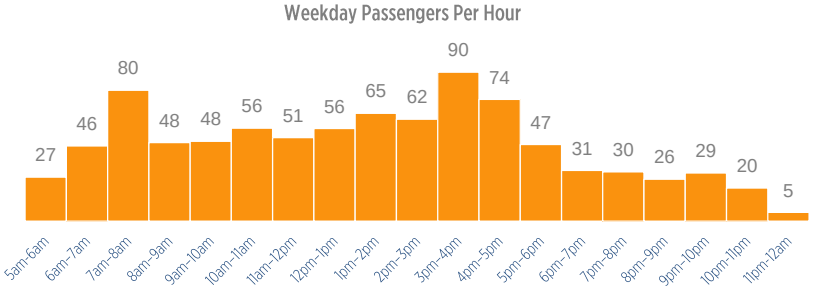
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates between 100 Oaks Mall and downtown. During the day on weekdays and on weekends, between Woodmont Boulevard and Acklen Avenue, most trips alternate between 10th and 12th Streets.. At night on weekdays, all trips operate via 10th Street.

**SCHEDULE:** Service operates seven days a week, with irregular headways throughout most of the day on weedkays, and 60 minute service on weekday evenings and on weekends.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:10 AM – 11:38 PM | | 63 |
| Early AM | before 6:15 AM | 25-35 | 5 |
| AM Peak | 6:15 AM-8:15AM | 17-25 | 10 |
| Midday | 8:15 AM – 3:15 PM | 33 | 24 |
| PM Peak | 3:15 PM – 6:15 PM | 15-25 | 14 |
| Evening/Night | 6:15 PM and later | 60 | 10 |
| **Saturdays** | 5:44 AM – 10:40 PM | 60 | 49 |
| **Sundays** | 5:46 AM – 8:04 PM | 60 | 29 |

**RIDERSHIP:** Route 17 carries 891 passengers per weekday, and ranks as MTA's 17th highest ridership route. Ridership is modest throughout most of the day on weekdays. By stop, ridership is strong at the 100 Oaks Mall and between Acklen Avenue and downtown, but very weak between Acklen Avenue and 100 Oaks Mall.




**PERFORMANCE:** Route 17 ranks 13th in terms of weekday riders per revenue vehicle hour and 24th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 891 | 17 | 549 | 14 | 307 | 13 |
| Riders per Revenue Vehicle Hour | 25.8 | 14 | 22.5 | 12 | 21.5 | 7 |
| Riders/Trip | 14.1 | 25 | 11.2 | 17 | 10.6 | 10 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.4 | Average | *Very direct except for tail* |
| Average Speed (mph) | 11.6 | Average | |
| Stop Spacing (stops per mile) | 8.0 | Close | |
| Typical Peak Headway (mins) | 20-35 | Fair | |
| Schedule Regularity | Very Irregular | Poor | *Irregular in midday and PM peak* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Relatively strong ridership at 100 Oaks Mall and north of Acklen Avenue
- Good productivity

### WEAKNESSES:

- Very low ridership between 100 Oaks Mall and Acklen Avenue, and especially along alternating legs
- Very irregular scheduled headways

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Eliminate alternating service between 10th and 12th Streets, and operate all service along 12th Street–to simplify service and because ridership along 10th Street is so low
- Operate service with clockface headways
- Consolidate stops
- Change southern terminus from 100 Oaks Mall to Lipscomb University, with 100 Oaks Mall service being accommodated by increased service on Route 1

# 18 Airport / Downtown Hotels

**Route 18 provides a combination of express and local service between Nashville International Airport and downtown via Lafayette and Elm Hill or I-40.**

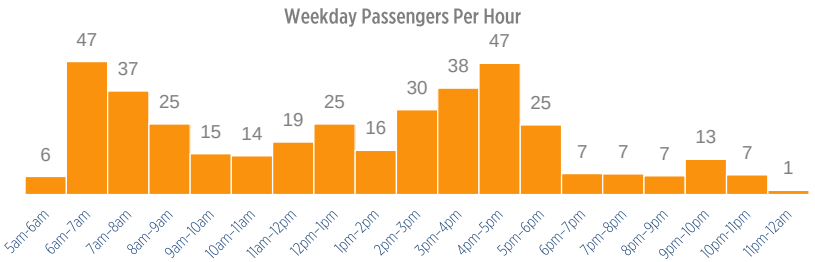
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** Route 18 has three variants, with twelve inbound and twelve outbound trips with express service between downtown hotels and the airport. Eight trips operate two deviations from Elm Hill to serve the Airport Marriott Hotel and Massman Drive Loop. Four trips operate between downtown and the airport only along Elm Hill Pike. Riders on express service are allowed to ride back on local service for free. The schedule is generally designed so that AM outbound and PM inbound service until 5:30 pm provides local service, and other service, including all evening service operates express between the airport and downtown.

**SCHEDULE:** Service operates on seven days a week, with most service operating approximately every 60 minutes:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:07 AM – 12:03 AM | | 40 |
| Early AM | before 6:15 AM | 53 | 4 |
| AM Peak | 6:15 AM-8:15AM | 60 | 4 |
| Midday | 8:15 AM – 3:15 PM | 60-80 | 15 |
| PM Peak | 3:15 PM – 6:15 PM | 60 | 6 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 6:02 AM – 11:03 PM | 60 | 35 |
| **Sundays** | 6:02 AM – 11:03 PM | 60 | 35 |

**RIDERSHIP:** Route 18 carries 386 passengers per weekday, and is MTA's 24nd highest ridership route. Ridership is heavily peak oriented, and the highest ridership stops are the airport and in downtown.



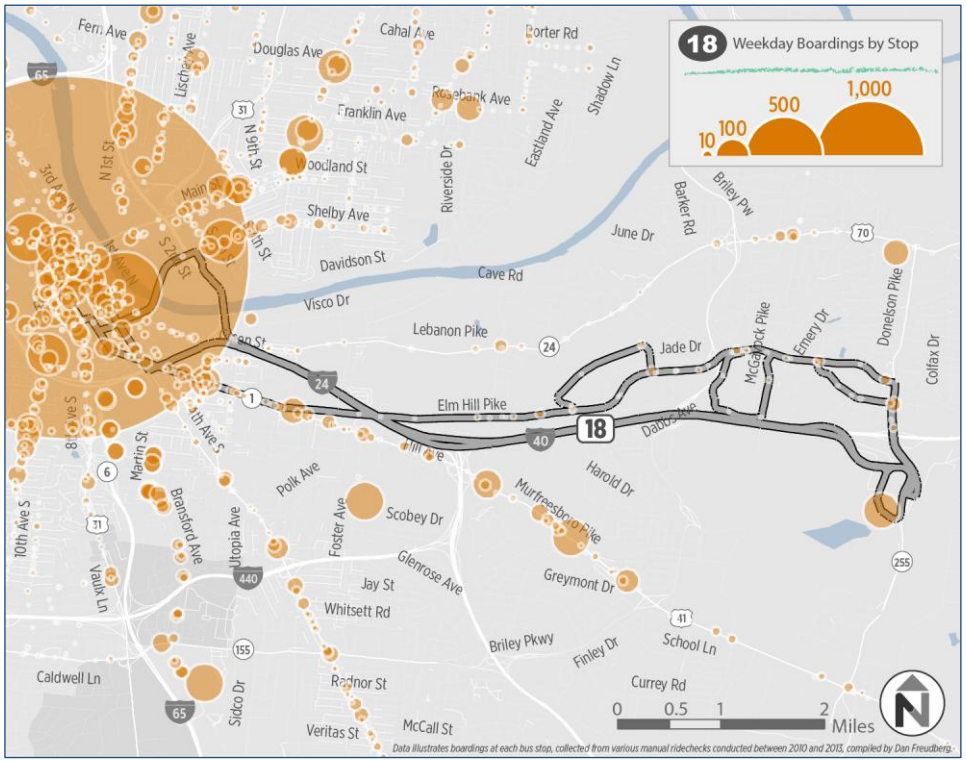

**PERFORMANCE:** Route 18 ranks low in terms of passengers per hour and per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 386 | 24 | 187 | 24 | 161 | 20 |
| Riders per Revenue Vehicle Hour | 18.3 | 32 | 11.0 | 24 | 9.5 | 20 |
| Riders/Trip | 9.7 | 36 | 5.3 | 26 | 4.6 | 20 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | *Local service w/ deviations less direct* |
| Average Speed (mph) | 16.4 | Above Average | |
| Stop Spacing (stops per mile) | 5.8 | Average | |
| Typical Peak Headway (mins) | 60 | Poor | |
| Schedule Regularity | Fairly Irregular | Poor | *Midday trips are very irregular* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides important service for riders between the airport, hotels, and downtown Nashville
- Fast and direct service on express trips

### WEAKNESSES:

- Route tries to provide both express and local service, and provides neither in an attractive fashion
- Infrequent service; not frequent enough to attract significant numbers of air passengers
- Low evening and late night ridership (all express trips)

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Split into two routes: an express route and a local route
- Provide service at least every 30 minutes all day on express route
- Provide service at least every 30 minutes during peak periods and every 60 minutes midday on the local route

# 19 Herman

**Route 19 is a radial route that operates along a meandering alignment west of downtown through Fisk/Meharry and Hadley Park via a number of major institutions, including Metro General Hospital, Meharry Medical College, Pearl-Cohn Entertainment Magnet High School, and Tennessee State University**

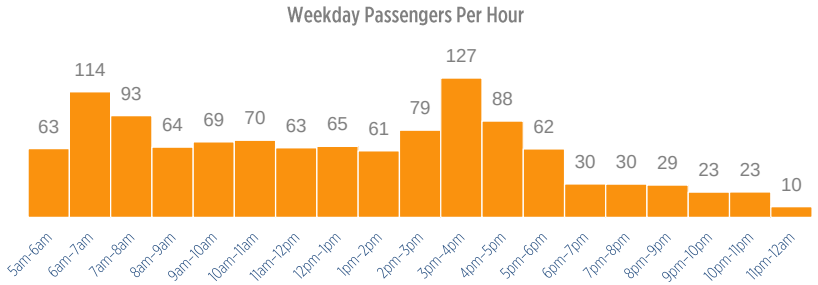
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** all service operates from end-to-end, On weekdays, trips at school start and end times deviate to the Pearl-Cohn Entertainment Magnet High School.

**SCHEDULE:** Service operates seven days a week, with headways that range from 20 to 60 minutes.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:07 AM – 12:04 AM | | 71 |
| Early AM | before 6:15 AM | 35 | 5 |
| AM Peak | 6:15 AM-8:15AM | 20 | 11 |
| Midday | 8:15 AM – 3:15 PM | 30 | 28 |
| PM Peak | 3:15 PM – 6:15 PM | 20 | 16 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 5:44 AM –11:02 PM | 60 | 35 |
| **Sundays** | 5:44 AM – 10:06 PM | 60 | 33 |

**RIDERSHIP:** Route 19 caries 1,152 passengers per weekday and is MTA's 12th highest ridership route. Ridership is highest during peak periods, moderate during the midday, and significantly lower in the evening. By stop, ridership is highest at the outer end of the line, where transfers are available with Route 29 Jefferson, at Metro General Hospital, and in downtown.



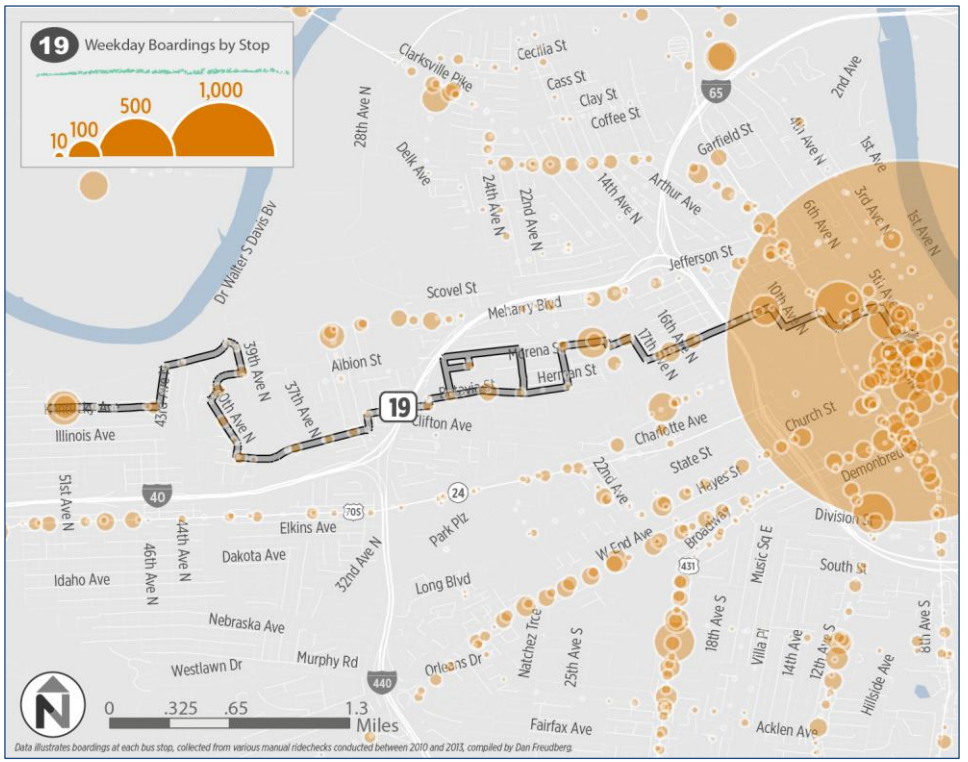

**PERFORMANCE:** Route 19 ranks 8th in terms of weekday riders per revenue vehicle hour and 20th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,152 | 12 | 492 | 17 | 333 | 12 |
| Riders per Revenue Vehicle Hour | 32.0 | 9 | 26.6 | 7 | 19.1 | 9 |
| Riders/Trip | 16.2 | 12 | 14.1 | 13 | 10.1 | 12 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.2 | Average | *Relatively direct in spite of meandering* |
| Average Speed (mph) | 11.2 | Average | |
| Stop Spacing (stops per mile) | 7.0 | Good | |
| Typical Peak Headway (mins) | 20 | Good | |
| Schedule Regularity | Very Regular | Excellent | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Consistent and relatively frequent headways
- Serves several major activity centers.
- Relatively strong productivity

### WEAKNESSES:

- Meandering route (although much necessitated by street network)
- Relatively low evening and late night ridership

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Make service more direct where possible (for example, between Metro General Hospital and Pearl-Cohn Entertainment Magnet High School, and between 40th and 44th Streets.
- Begin weekday service earlier, but also end service earlier

# 20 Scott

**Route 20 is one of two radial routes that operate between Eastwood and East Nashville through neighborhoods to the east of Gallitan Pike (the other being Route 4 Shelby).**

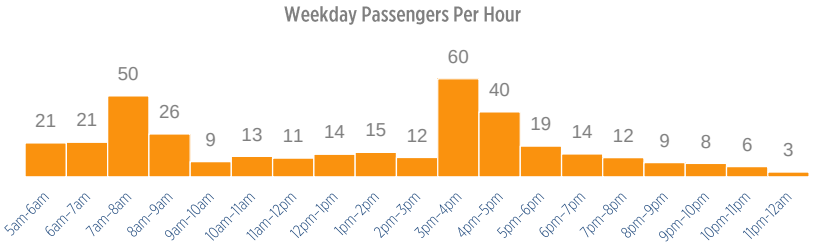
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** Route 20 operates between the intersection of Gallatin Pike and Riverwood Drive and Music City Central. All service operates the full length of the route. The route operates in close proximity to Routes 26 Gallatin Pike and 56 Gallatin Pike BRT, which operate ¼ to ½ milet o the west, and Route 4 Shelby, which operates ¼ to 1/3 miles to the east.

**SCHEDULE:** Service operates seven days a week, with irregular headways on weekdays that range from 22 to 70 minutes, and consistent 60 minute headways on weekends..

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:21 AM – 11:45 PM | | 44 |
| Early AM | before 6:15 AM | 22 | 4 |
| AM Peak | 6:15 AM-8:15AM | 24-44 | 8 |
| Midday | 8:15 AM – 3:15 PM | 60-70 | 13 |
| PM Peak | 3:15 PM – 6:15 PM | 28-34 | 8 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 5:37 AM – 10:47 PM | 60 | 34 |
| **Sundays** | 5:37 AM – 9:47 PM | 60 | 32 |

**RIDERSHIP:** Route 20 carries 366 passengers per weekday, which makes it MTA's 23rd highest ridership route. Ridership is highly concentrated in the peaks, with low ridership at all other times. Ridership is low at most stops.




**PERFORMANCE:** Route 20's weekday productivity is very low, and ranks 38 out of 45 in terms of passengers per revenue vehicle hour, and 42 in terms of passengers per trip.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 366 | 22 | 157 | 25 | 142 | 21 |
| Riders per Revenue Vehicle Hour | 14.0 | 38 | 8.5 | 24 | 8.2 | 22 |
| Riders/Trip | 8.3 | 42 | 4.6 | 26 | 4.4 | 22 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.5 | Below Average | *But reasonable for area served* |
| Average Speed (mph) | 13.5 | Average | |
| Stop Spacing (stops per mile) | 6.9 | Average | |
| Typical Peak Headway | 25-30 | Fair | |
| Schedule Regularity | Fairly Irregular | Poor | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Fairly good peak period ridership

**WEAKNESSES:**

- Operates close to Routes 26 Gallatin Pike and 56Gallatin Pike BRT, which provide more compelling service
- Service area overlaps with Route 4 Selby
- Irregular headways
- Low off-peak ridership
- Poor productivity

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Reschedule with clockface headways
- Reduce late night span of service an hour
- Consolidate with Route 4 Shelby to reduce duplication and provide more frequent service with a single route

# 21 University Connector

**Route 12 is a crosstown route that operates between North Nashville and the Mall at Green Hills via Fisk University, Metro General Hospital, Meharry Medical College, Tennessee State University, Vanderbilt University, Belmont University, and Lipscomb University**

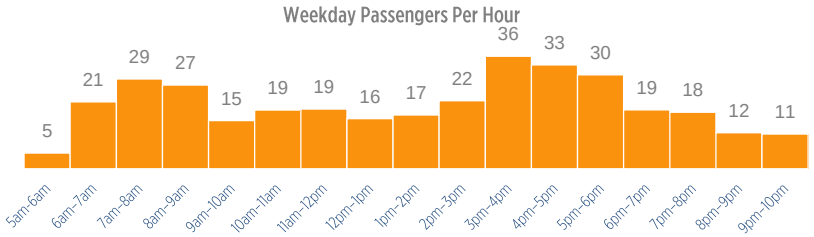
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** All service operates the full length of the route.

**SCHEDULE:** Service operates seven days a week, with service that operates generally every 30 to 60 minutes on weekdays and every 60 minutes on weekends.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:52 AM – 10:11 PM | | 46 |
| Early AM | before 6:15 AM | 26-32 | 2 |
| AM Peak | 6:15 AM-8:15AM | 30 | 8 |
| Midday | 8:15 AM – 3:15 PM | 60 | 16 |
| PM Peak | 3:15 PM – 6:15 PM | 30 | 12 |
| Evening/Night | 6:15 PM and later | 60 | 8 |
| **Saturdays** | 6:22 AM – 9:11 PM | 60 | 30 |
| **Sundays** | 6:22 AM – 9:11 PM | 60 | 30 |

**RIDERSHIP:** Route 21 carries 349 passengers per weekday, making it MTA's 27th highest ridership route. Ridership is highest during peak periods, with a PM peak that starts earlier than most routes, likely reflecting school ridership. Highest ridership stops are at its northern end, at Tennessee State University, and the Mall at Green Hills.



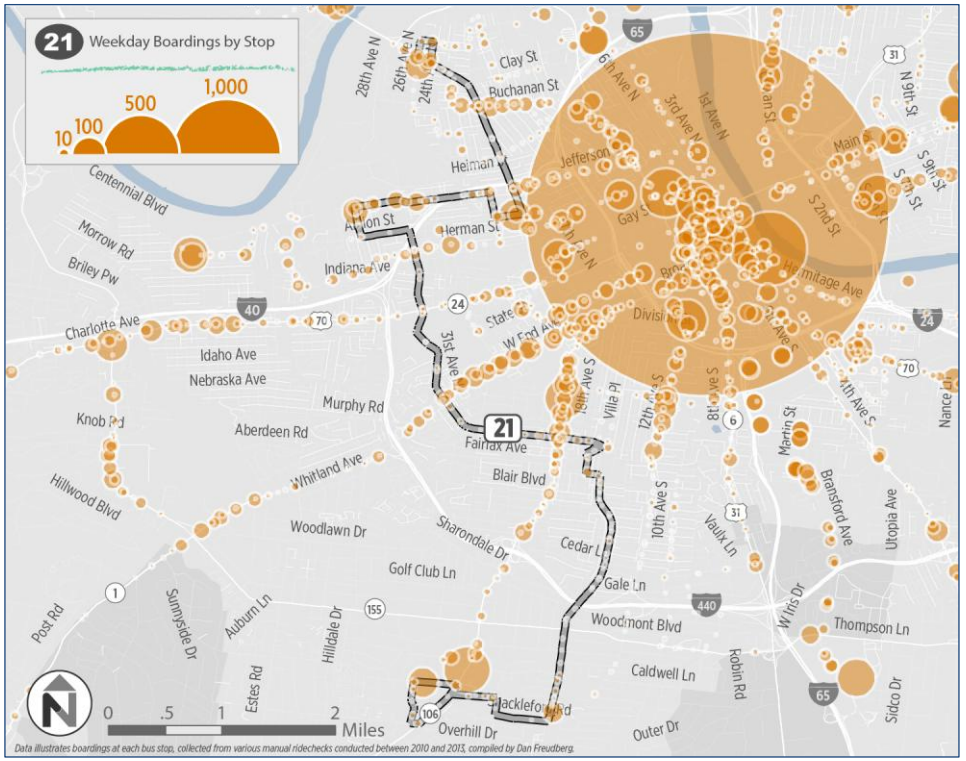

**PERFORMANCE:** Route 21's productivity is low::

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 349 | 27 | 193 | 23 | 140 | 22 |
| Riders per Revenue Vehicle Hour | 7.7 | 43 | 6.5 | 27 | 4.7 | 24 |
| Riders/Trip | 7.6 | 43 | 6.4 | 23 | 4.7 | 19 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.7 | Poor | *But reasonable considering area* |
| Average Speed (mph) | 11.1 | Below Average | |
| Stop Spacing (stops per mile) | 6.0 | Good | |
| Typical Peak Headway | 30 | Fair | |
| Schedule Regularity | Fairly Regular | Good | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides unique crosstown service
- Serves several major destinations including multiple hospitals and universities

### WEAKNESSES:

- Low total ridership, and along most of southern end of route
- Indirect alignment
- Southern end duplicates much of Route 2 Belmont
- Low late night ridership

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Operate entire schedule on clockface headways
- Discontinue service south of Belmont University and increase service frequencies on Route 2 Belmont

# 22 Bordeaux

**Route 22 is a radial route that operates between Bordeaux and Music City Central, with a very complicated outer alignment within Bordeaux, and then direct service between there and downtown.**

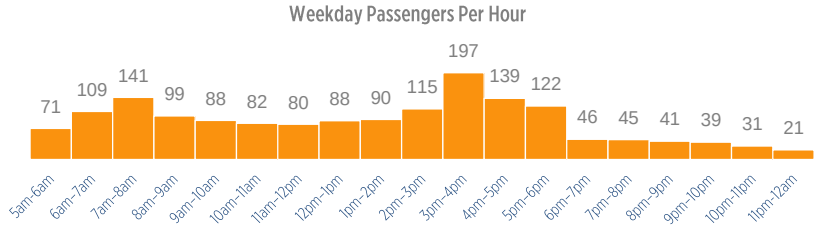
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** At its outer end, Route 22 operates via two primary variants, one of which is a loop via the Temple Baptist Church Park and Ride Lot on Kings Lane, and the other which is to and from Bordeaux Long Term Care. There are also two limited service variants on the Bordeaux Long-Term Care variant. On weekdays and Saturdays, trips generally alternate between the outer variants during the day and all operate to the long term care facility at night. On Sundays, all service operates to Bordeaux Long Term Care.

**SCHEDULE:** Service operates seven days a week. On weekdays, service on the trunk operates every 17 to 22 minutes and every 60 minutes at night. On weekends, service operates every 30 to 60 minutes.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:10 AM – 11:37 PM | | 89 |
| Early AM | before 6:15 AM | 35 | 7 |
| AM Peak | 6:15 AM – 8:15AM | 17-20 | 15 |
| Midday | 8:15 AM – 3:15 PM | 22 | 39 |
| PM Peak | 3:15 PM – 6:15 PM | 17-21 | 18 |
| Evening/Night | 6:15 PM and later | 60 | 10 |
| **Saturdays** | 5:42 AM – 10:39 PM | 30 Day/60 Evening | 49 |
| **Sundays** | 5:49 AM – 10:01 PM | 60 | 33 |

**RIDERSHIP:** Route 22 carries 1,643 passengers per weekday, making it MTA's 6th highest ridership route. Ridership is high to moderately high for most of the day. Outer end ridership is highest at Bordeaux Long Term Care, Creswell Arts Magnet School, and along Clarksville Pike.




**PERFORMANCE:** Route 22 is one of MTA's most productive routes.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,643 | 8 | 926 | 7 | 522 | 8 |
| Riders per Revenue Vehicle Hour | 33.6 | 4 | 37.6 | 1 | 32.2 | 2 |
| Riders/Trip | 18.5 | 16 | 18.9 | 8 | 15.8 | 5 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.2 | Good | *Except for outer ends* |
| Average Speed (mph) | 12.2 | Average | |
| Stop Spacing (stops per mile) | 10.1 | Too close | |
| Typical Peak Headway | 17-20 | Good | *But longer on outer ends* |
| Schedule Regularity | Very Irregular | Poor | *Variants make service irregular and confusing* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- High ridership
- High productivity

**WEAKNESSES:**

- Complicated schedule and route with two primary variants and two additional secondary variants
- Low late night ridership

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Operate with consistent patterns for outer end service
- Operate on clockface headways
- Begin service earlier to serve apparent demand for earlier service
- Consolidate stops to speed service
- Simplify outer end service

# 23 Dickerson Road

**Route 23 is a radial route that operates between residential neighborhoods in the Parkwood Estates area near the intersections of I-24, I-65, and Briley Parkway and Music City Central, largely via Dickerson Road. Outer end service is very circuitous, but then very direct along Dickerson Road.**

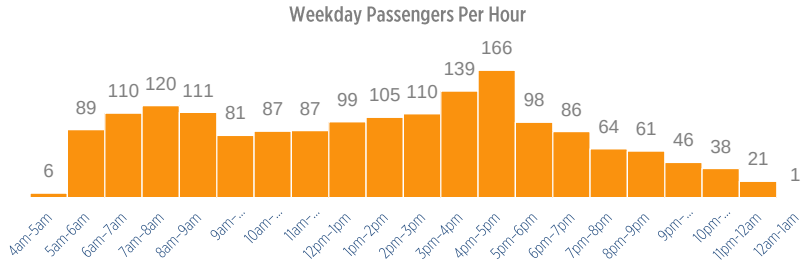
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** Route 23 has two unique outer end variants, with every other trip serving either Brick Church Pike or Knoll Crest Apartments in Parkwood for both inbound and outbound service. The route also shares much of its alignment with Route 43 Hickory Hills along Dickerson Road.

**SCHEDULE:** Service operates seven days a week, generally every 20 to 40 minutes on weekdays and every 45 minutes on weekends:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:40 AM – 12:23 AM | | 75 |
| Early AM | before 6:15 AM | 31 | 7 |
| AM Peak | 6:15 AM – 8:15AM | 20-25 | 12 |
| Midday | 8:15 AM – 3:15 PM | 30 | 28 |
| PM Peak | 3:15 PM – 6:15 PM | 25 | 12 |
| Evening/Night | 6:15 PM and later | 40 | 16 |
| **Saturdays** | 5:20 AM – 11:24 PM | 45 | 48 |
| **Sundays** | 5:20 AM – 10:22 PM | 45 | 46 |

**RIDERSHIP:** Route 4 carries 1.725 passengers per weekday, making it MTA's 5th highest ridership route,. Ridership is strong throughout most of the day, except for early morning and late night. Ridership is highest at Walmart and along Dickerson Pike.




**PERFORMANCE:** Route 23 is one of MTA's most productive routes:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,726 | 7 | 1,056 | 5 | 744 | 5 |
| Riders per Revenue Vehicle Hour | 32.6 | 6 | 30.6 | 4 | 22.6 | 5 |
| Riders/Trip | 23.0 | 11 | 22.0 | 5 | 16.2 | 4 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.4 | Poor | *Very direct except northern loop* |
| Average Speed (mph) | 12.9 | Average | |
| Stop Spacing (stops per mile) | 7.1 | Average | |
| Typical Peak Headway | 20 | Good | |
| Schedule Regularity | Fairly Regular | Good | *Irregular for inbound trips* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- High ridership
- High productivity

### WEAKNESSES:

- Outer end service is circuitous and confusing
- Overlap with Route 43 Hickory Hills

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Re-orient area service around transit center near intersection of Dickerson Road and Briley Parkway with Route 23 developed as a frequent service route between there and downtown.
- Simplify outer end service
- Provide more frequent service.

# 24X Bellevue Express

**Route 24X provides peak period express service between Bellevue and downtown Nashville.**

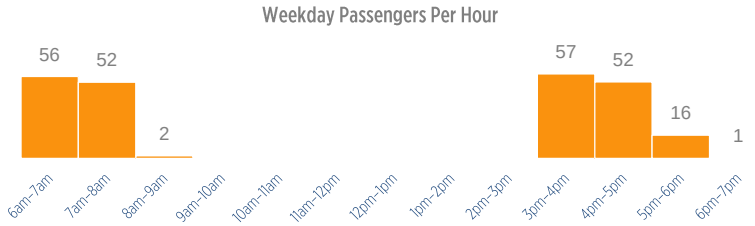
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 24X operates via a loop in Bellevue that primarily consists of Old Hickory Blvd and Old Harding xxx, and then between Bellevue and downtown via I-40. The loop serves three park and ride lots, which are Belle Forest, at Staples, and Bellvue. AM service operates clockwise around the loop, and PM service operates counterclockwise.

**SCHEDULE:** Service operates only on weekdays during peak hours, with four AM and four PM round trips:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:01 AM – 6:05 PM | | 16 |
| Early AM | before 6:15 AM | 24 | 1 |
| AM Peak | 6:15 AM-8:15AM | 20-45 | 7 |
| Midday | 8:15 AM – 3:15 PM | - | - |
| PM Peak | 3:15 PM – 6:15 PM | 25-39 | 8 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 24X carries 237 passengers per weekday, all of which is during peak periods or the fringes of the peaks: Most ridership is to and from the Bellevue Park and Ride Lot.




**PERFORMANCE:** Route 24X carries 24.4 passengers per vehicle revenue hour, which is relatively good for an express route. It carries 14.8 passengers per trip, with nearly all ridership in the peak direction, which means those trips are mostly full.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 237 | 31 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 24.4 | 16 | - | - | - | - |
| Riders/Trip | 14.8 | 22 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | *Express via I-40* |
| Average Speed (mph) | 20.6 | Excellent | |
| Stop Spacing (stops per mile) | 2.1 | Good | |
| Typical Peak Headways (mins) | 25-30 | Good | |
| Schedule Regularity | Fairly Irregular | Poor | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Simple, understandable route design
- Direct and fast for most riders
- Strong ridership on peak direction trips
- Good productivity

### WEAKNESSES:

- Low ridership on most of outer loop
- Very low reverse commute ridership

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Operate on clockface headways (some trips are slightly off)
- Provide earlier service in both AM and PM peaks

# 25 Midtown

**Route 25 is a large bi-directional loop that serves downtown, North Nashville, Midtown, Edgehill, and Chestnut Hill, and operates via a large number of major activity centers including Riverfront Station, Vanderbilt University, St. Thomas Hospital, Centennial Medical Center, McHarry Medical College, Metro General Hospital, and Fisk College.**

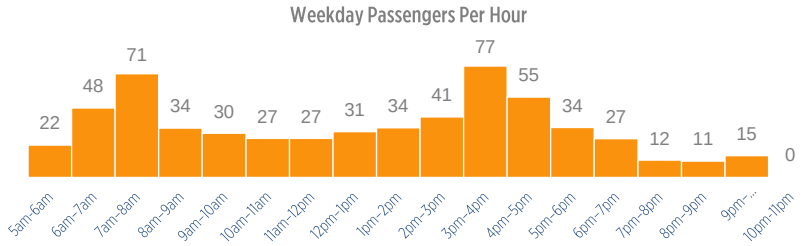
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** Route 25 operates as a large bi-directional loop that begins and ends at Music City Central.. All service operates the full length of the loop except for the first two weekday trips (in each direction) and the first weekend trips that begin service midway along the route (1st & Chestnut for counterclockwise trips and Metro General Hospital for clockwise trips). Due to its loop configuration, service is very indirect, and there area also a number of out and back deviations.

**SCHEDULE:** Service operates seven days a week.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:17 AM – 10:03 PM | | 41 |
| Early AM | before 6:15 AM | 45 | 6 |
| AM Peak | 6:15 AM-8:15AM | 17-28 | 8 |
| Midday | 8:15 AM – 3:15 PM | 50-63 | 14 |
| PM Peak | 3:15 PM – 6:15 PM | 35 | 8 |
| Evening/Night | 6:15 PM and later | 60 | 5 |
| **Saturdays** | 5:51 AM – 8:08 PM | 60 | 29 |
| **Sundays** | 5:51 AM – 7:10 PM | 60 | 28 |

**RIDERSHIP:** Route 25 carries 606 passengers per weekday. Ridership is heavily peak oriented, with moderate midday ridership and low evening ridership. Ridership is spread throughout the route, which higher ridership stops at Metro General Hospital.




**PERFORMANCE:** Route 25 ranks 21st in terms of weekday ridership, but very low in terms of passengers per revenue vehicle hour on all days.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 606 | 19 | 277 | 19 | 187 | 16 |
| Riders per Revenue Vehicle Hour | 14.5 | 35 | 10.1 | 24 | 7.1 | 22 |
| Riders/Trip | 14.8 | 23 | 9.6 | 19 | 6.7 | 17 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 3.0 | Poor | *Loop design plus multiple deviations* |
| Average Speed (mph) | 11.4 | Average | |
| Stop Spacing (stops per mile) | 6.7 | Fairly Close | |
| Typical Peak Headway (mins) | No pattern | Poor | *No typical pattern; too irregular* |
| Schedule Regularity | Very Irregular | Poor | *Little to no consistency all day* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Serves large number of major destinations, including Vanderbilt University, Fisk University, and Metro General Hospital

**WEAKNESSES:**

- Very irregular schedule
- Many deviations
- Low productivity
- Infrequent evening/night service
- Very low late night ridership
- Infrequent weekend service

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Completely redesign route to provide more compelling service
- Reschedule with regular headways
- Provide more frequent weekday evening and weekend service

# 26/56 Gallatin Corridor

**The Gallatin Corridor, which extends about 12 miles northeast of downtown along Gallatin Pike to the RiverGate Mall in Goodlettsville is served by two routes: Routes 56 Gallatin Pike BRT-Lite and Route 26 Gallatin Pike. Route 56 provides the predominant service, and Route 26 provides a local service complement.**

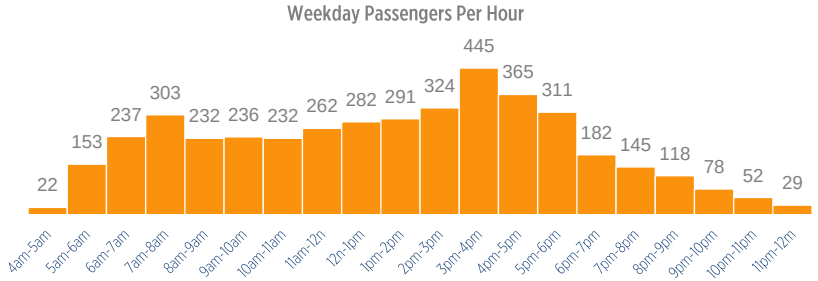
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates end to end from RiverGate Mall to Music City Central , with Route 26 serving all stops and Route 56 serving only BRT stops.

**SCHEDULE:** Route 56 operates on weekdays and Saturdays, and Route 25 operates seven days a week. Route 26 begins service earlier and ends later than Route 56 on weekdays, but Route 56 operates slightly longer on Saturdays.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:36 AM – 11:59 PM | | 114 BRT/52 local |
| Early AM | before 6:15 AM | 15-20BRT/40 local | 8 BRT/6 local |
| AM Peak | 6:15 AM – 8:15AM | 15 BRT/40 local | 16 BRT /16 local |
| Midday | 8:15 AM – 3:15 PM | 15 BRT/40 local | 55/ BRT/21 local |
| PM Peak | 3:15 PM – 6:15 PM | 15 BRT/40 local | 24 BRT/8vlocal |
| Evening/Night | 6:15 PM and later | 30 BRT/60 local | 11 BRT/11 local |
| **Saturdays** | 5:43 AM – 10:12 PM | 30 BRT/60 local | 66 BRT/32 local |
| **Sundays** | 5:30 AM – 10:01 PM | 40 Day/60 Night (Rt 26 only) | 0 BRT/44 local |

**RIDERSHIP:** Combined, Routes 26 and 56 serve 4,299 passengers per weekday. As shown below, weekday ridership is highest during the PM peak hours followed by late night and AM peak, but strong throughout most of the day. Ridership is highest at BRT stops.




**PERFORMANCE:** Route 26 ranks 12th in terms of weekday riders per revenue vehicle hour and 6th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 4,299 | na | 2,360 | na | 1,456 | 1 |
| Riders per Revenue Vehicle Hour | 30.5 | na | 34.3 | na | 34.3 | 1 |
| Riders/Trip | 26.0 | na | 27.8 | na | 33.1 | 1 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating |
|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent |
| Average Speed (mph) | 15.0 (BRT) | Excellent |
| Stop Spacing (stops per mile) | 1.2 BRT/5.3 local | BRT may be long |
| Typical Peak Headway (mins) | 15 (BRT) | Good |
| Schedule Regularity | Mostly Regular | Good |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Route 56 provides very high quality corridor service
- Straight and direct
- High corridor ridership

### WEAKNESSES:

- Route 26 and 56 schedules are not coordinated.
- BRT stations may be spaced too far apart

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Revise BRT-Lite/local service strategy to serve corridor exclusively with BRT-Lite service to provide more attractive service to most riders and better balance service levels with demand.
- Add BRT stations
- Add BRT stations; operate all service as BRT
- Provide more frequent Sunday service

# 26 Gallatin Pike

**Route 26 operates between the RiverGate Mall in Goodlettsville and downtown Nashville primarily via Gallatin Pike. It serves as a local counterpart to Route 56 Gallatin BRT.**

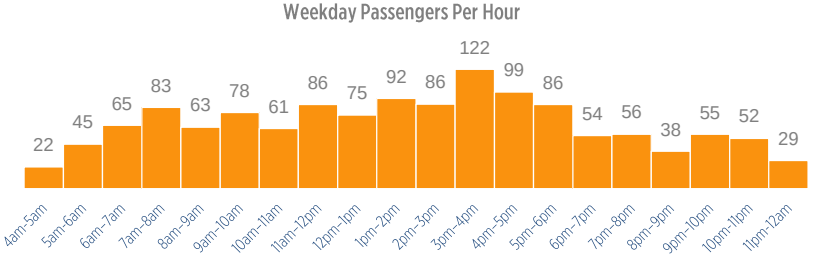
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates end to end from RiverGate Mall to Music City Central making all local stops.

**SCHEDULE:** Service operates on weekdays, Saturday and Sunday. Although classified as a "Most Frequent" route, service operates only every 40 to 60 minutes.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:36 AM – 11:59 PM | | 52 |
| Early AM | before 6:15 AM | 40 | 6 |
| AM Peak | 6:15 AM – 8:15AM | 40 | 6 |
| Midday | 8:15 AM – 3:15 PM | 40 | 21 |
| PM Peak | 3:15 PM – 6:15 PM | 40 | 8 |
| Evening/Night | 6:15 PM and later | 60 | 11 |
| **Saturdays** | 5:48 AM – 10:12 PM | 60 | 32 |
| **Sundays** | 5:30 AM – 10:01 PM | 40 Day/60 Night | 44 |

**RIDERSHIP:** Route 26 carries 1,348 passengers per weekday, and is MTA's 9th highest ridership route. This ridership is very strong considering the limited service that is provided. Ridership is highest during the PM peak, but strong throughout most of the day and evening. On a per trip basis, Route 26 performs similarly to Route 56 Gallatin Pike BRT.




**PERFORMANCE:** Although Route 26 does not perform as well as Route 56, it is still one of MTA's best performing routes.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 1,348 | 9 | 923 | 7 | 1,456 | 1 |
| Riders per Revenue Vehicle Hour | 27.0 | 12 | 29.8 | 5 | 34.3 | 1 |
| Riders/Trip | 25.9 | 6 | 28.8 | 2 | 33.1 | 1 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | |
| Average Speed (mph) | 12.5 | Good | |
| Stop Spacing (stops per mile) | 5.3 | Good | |
| Typical Peak Headway (mins) | 40 | Poor | *And uncoordinated with Route 56* |
| Schedule Regularity | Fairly Regular | Good | *Inbound trips slightly irregular* |


**STRENGTHS AND WEAKNESSES AND OPPORTUNITIES**

**STRENGTHS:**

- High ridership
- High productivity
- Very direct service
- Very strong Sunday ridership (in large part because Route 56 BRT service does not operate)

**WEAKNESSES:**

- Infrequent service

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Consolidate service into Route 56 BRT Lite
- Operate entire schedule on clockface headways

# 27 Old Hickory

**Route 27 is an express commuter route that operates between the MTA Madison Park & Ride and downtown via Old Hickory, Lakewood, Heritage, the Hermitage Regional Rail Station primarily via Old Hickory Blvd and I-40.**

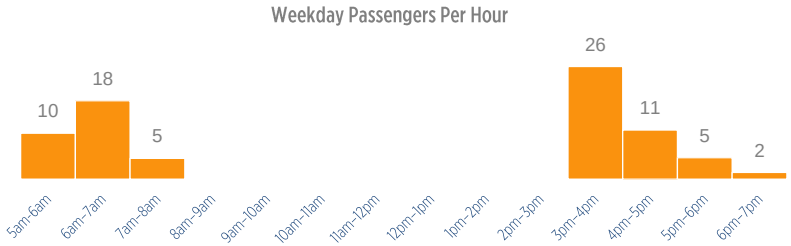
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 27 provides peak period express service. As shown in the map to the right, its routing is circuitous, and because of this, end-to-end travel times are long, at 55 minutes. All trips operate along the same alignment from end-to-end.

**SCHEDULE:** Service operates only on weekdays during peak hours, with two round trip in the AM peak and two in the PM peak:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:05 AM – 6:58 PM | | 8 |
| Early AM | before 6:15 AM | 57 | 2 |
| AM Peak | 6:15 AM-8:15AM | 46 | 2 |
| Midday | 8:15 AM – 3:15 PM | - | - |
| PM Peak | 3:15 PM – 6:15 PM | 63-68 | 4 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 27 carries 77 passengers per weekday. Its highest ridership stop is the Hermitage Rail Station, where Music City Star commuter rail service is also available.



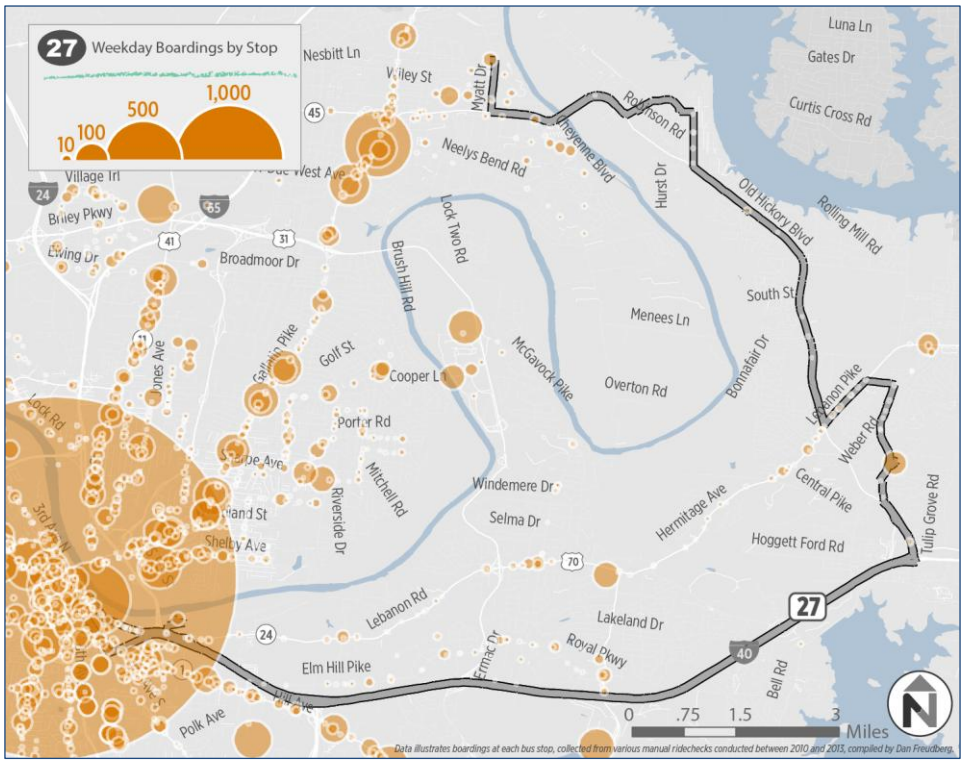

**PERFORMANCE:** Route 27's productivity is low:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 77 | 44 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 7.5 | 42 | - | - | - | - |
| Riders/Trip | 9.6 | 35 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 2.9 | Poor | *Long tail is very indirect* |
| Average Speed (mph) | 20.9 | Excellent | |
| Stop Spacing (stops per mile) | 2.6 | Average | |
| Schedule Convenience (best headway) | 46 | Poor | *Commuter service only* |
| Schedule Regularity | Fairly Irregular | Poor | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provide unique service along Old Hickory Boulevard

### WEAKNESSES:

- Low ridership, particularly along Old Hickory Boulevard
- In many respects, duplicates Route 36X Madison Express, which provides much faster service
- Also duplicates Music City Star

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Operate with more regular schedule
- Discontinue service

# 28 Meridian

**Route 28 operates between the Cleveland Park area in northeast Nashville and downtown Nashville primarily along Meridian St and Lischey Ave. It serves residential areas between Dickerson Pike and Ellington Parkway.**

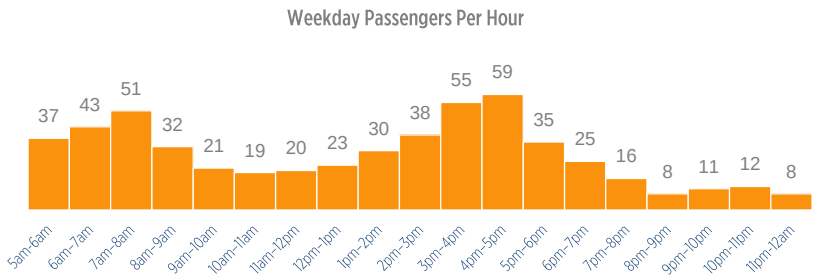
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates the full length of the route.

**SCHEDULE:** Service operates seven days a week, with service that operates approximately very 25 minutes during weekday peak periods and every 50 minutes at all other times:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:13 AM – 11:40 PM | | 55 |
| Early AM | before 6:15 AM | 25-26 | 5 |
| AM Peak | 6:15 AM – 8:15AM | 26 | 8 |
| Midday | 8:15 AM – 3:15 PM | 50 | 18 |
| PM Peak | 3:15 PM – 6:15 PM | 23-26 | 12 |
| Evening/Night | 6:15 PM and later | 50 | 12 |
| **Saturdays** | 5:45 AM – 10:40 PM | 50 | 40 |
| **Sundays** | 5:45 AM – 9:40 PM | 50 | 38 |

**RIDERSHIP:** Route 28 carries 546 passengers per weekday. Ridership is heavily peak oriented, with relatively low midday ridership and very low evening ridership. Ridership is moderate at most stops along the outer end of the route.




**PERFORMANCE:** Route 28's productivity, in terms of passengers per vehicle service hour, is about average on weekdays, and below average on weekends:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 546 | 20 | 245 | 20 | 169 | 18 |
| Riders per Revenue Vehicle Hour | 23.2 | 22 | 14.5 | 21 | 10.6 | 17 |
| Riders/Trip | 9.9 | 33 | 6.1 | 24 | 4.4 | 21 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.2 | Good | *Very direct except northern loop* |
| Average Speed (mph) | 10.6 | Below Average | |
| Stop Spacing (stops per mile) | 6.0 | Good | |
| Typical Peak Headway (mins) | 25 | Fair | |
| Schedule Regularity | Mostly regular | Good | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Relatively good peak period ridership

### WEAKNESSES:

- Infrequent weekday midday and evening service, and weekend service
- Low off-peak weekday ridership

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Operate with 30 and 60 minute headways to make schedules easier to remember
- Reduce late night span of service due to very low ridership
- Consolidate with Route 30 McFerrin, which serves similar areas, and increase service frequencies

# 29 Jefferson

**Route 29 operates between 51st Street at Tennessee Avenue and Music City Central, largely along Centennial Boulevard, via Tennessee State University, and along Jefferson Street.**

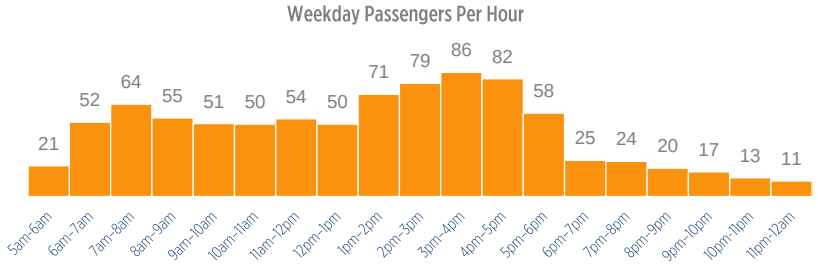
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service except for one trip operates the full length of the route along the alignment shown on the map to the right. The one exception is a single outbound afternoon trip that deviates to serve Nashville Prep.

**SCHEDULE:** Service operates on weekdays, Saturday and Sunday.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:14 AM – 11:35 PM | | 72 |
| Early AM | before 6:15 AM | 35 | 5 |
| AM Peak | 6:15 AM – 8:15AM | 20 | 12 |
| Midday | 8:15 AM – 3:15 PM | 30 | 29 |
| PM Peak | 3:15 PM – 6:15 PM | 20 | 16 |
| Evening/Night | 6:15 PM and later | 60 | 10 |
| **Saturdays** | 5:49 AM – 10:33 PM | 60 | 34 |
| **Sundays** | 5:49 AM – 9:36 PM | 60 | 32 |

**RIDERSHIP:** Route 29 carries 893 passengers per weekday, and is MTA's 14th highest ridership route. Ridership is highest during the midday and PM peak hours from 1 PM to 5 PM, and low in the evening when service operates only hourly.



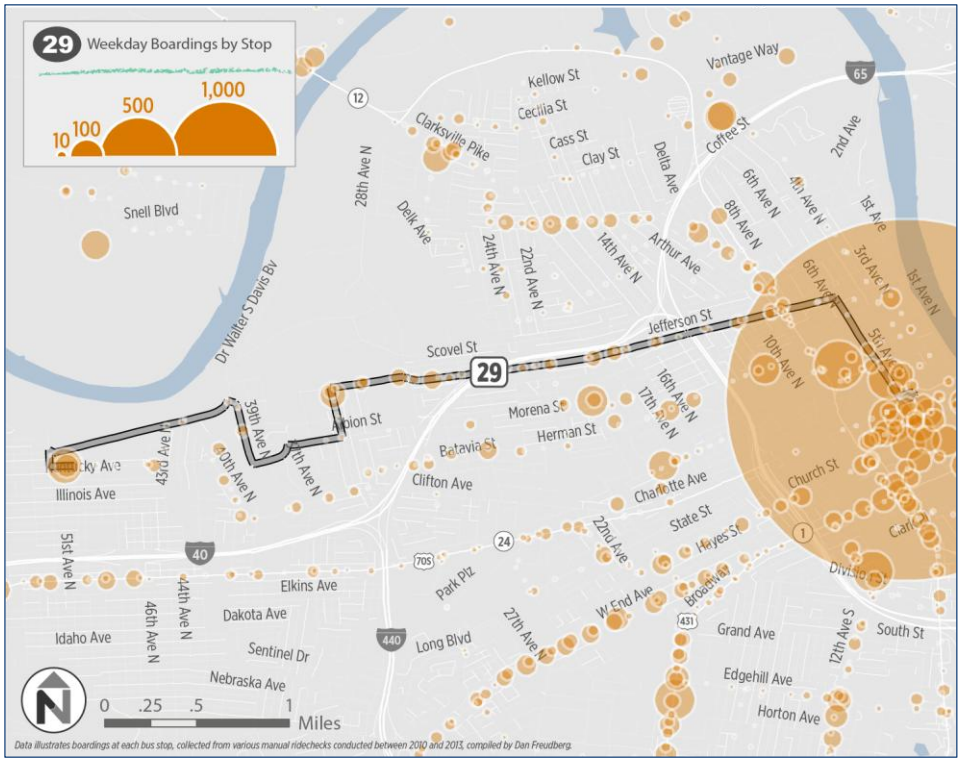

**PERFORMANCE:** Route 29's productivity is good, especially in terms of passengers per vehicle hour:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 893 | 14 | 410 | 16 | 239 | 14 |
| Riders per Revenue Vehicle Hour | 25.1 | 14 | 26.2 | 8 | 16.3 | 13 |
| Riders/Trip | 12.4 | 28 | 12.1 | 15 | 7.5 | 15 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Good | *Very direct except service around TSU* |
| Average Speed (mph) | 10.4 | Below Average | |
| Stop Spacing (stops per mile) | 5.2 | Good | |
| Typical Peak Headways (mins) | 20 | Good | |
| Schedule Regularity | Very Regular | Excellent | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Simple, straightforward service design and schedule
- Route generally direct
- Serves large number of important activity centers

### WEAKNESSES:

- Infrequent evening service (only every 60 minutes)
- Low weekday evening and late night ridership
- Infrequent weekend service

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Provide more frequent weekday evening and weekend service

# 30 McFerrin

**Route 30 operates between the Cleveland Park area in northeast Nashville and downtown Nashville primarily along James Robertson Pkwy, McFerrin Ave, Montgomery Ave, Chickasaw Ave, and Jones Ave.. It serves residential areas to the east and west of Ellington Parkway.**

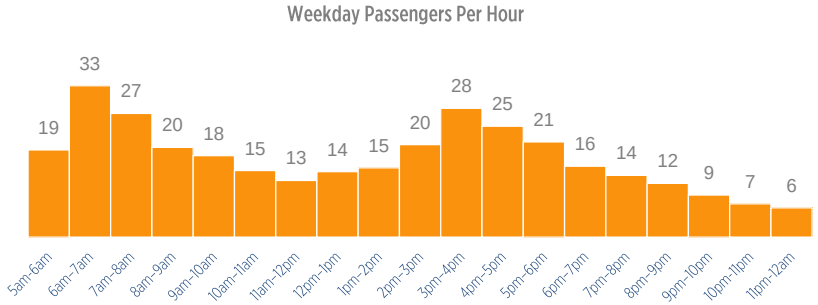
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** All trips operates the full length of the route, with the only difference being the location of the AM and PM layovers at the route's outer end. In the AM, trips layover at Slaydon & Oakwood and in the PM at Oakwood & Bullock.

**SCHEDULE:** Service operates seven days a week, every 60 minutes during all times that service operates.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:46 AM – 11:37 PM | | 36 |
| Early AM | before 6:15 AM | 60 | 1 |
| AM Peak | 6:15 AM-8:15AM | 60 | 4 |
| Midday | 8:15 AM – 3:15 PM | 60 | 14 |
| PM Peak | 3:15 PM – 6:15 PM | 60 | 7 |
| Evening/Night | 6:15 PM and later | 60 | 10 |
| **Saturdays** | 5:44 AM – 10:32 PM | 60 | 34 |
| **Sundays** | 5:44 AM – 9:32 PM | 60 | 32 |

**RIDERSHIP:** Route 30 carries 331 passengers per weekday. Ridership is generally low throughout the day, but highest during peak periods.




**PERFORMANCE:** Route 30's productivity is below average on all days:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 331 | 28 | 210 | 21 | 132 | 22 |
| Riders per Revenue Vehicle Hour | 18.9 | 29 | 13.5 | 22 | 9.1 | 20 |
| Riders/Trip | 9.2 | 37 | 6.2 | 23 | 4.1 | 23 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.2 | Very Good | |
| Average Speed (mph) | 10.7 | Below Average | |
| Stop Spacing (stops per mile) | 6.7 | Good | |
| Typical Peak Headway | 60 | Poor | |
| Schedule Regularity | Very Regular | Very Good | *Only a few trips are slightly off* |


**STRENGTHS AND WEAKNESSES AND OPPORTUNITIES**

**STRENGTHS:**

- Provides some unique service; shortens walks from many riders

**WEAKNESSES:**

- Infrequent service
- Provides service in close proximity to other routes that provide more frequent service

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Consolidate with Route 28 Meriden, which serves similar areas, and provide more frequent service on consolidated route

# 33X Hickory Hollow / Lenox Express

**Route 33X is an express route that operates between the Lennox Village and downtown primarily via I-24 and Bell Rd. It functions as an express service extension and alternative to Routes 12 Nolensville Pike and 15/55 Murfreesboro Pike respectively.**

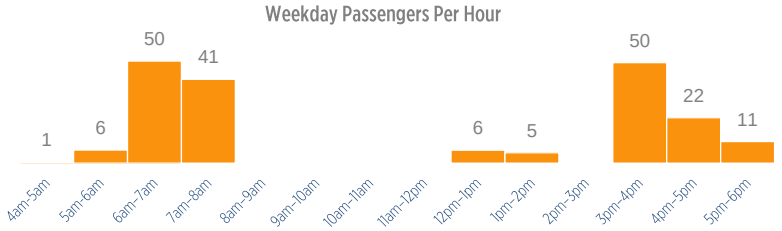
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 33X is designed to primarily to provide peak period, peak direction service plus one midday round trip. It also provides one PM peak inbound trip that is used to cycle the bus for the final PM inbound trip. Most trips operate to and from Music City Central. Exceptions are the first AM inbound trip, which extends to the MLK Jr Middle School, and the midday outbound trip which begins there on early school dismissal days, and the PM peak outbound trip that begins there on all other school days.

**SCHEDULE:** Service operates only on weekdays.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:17 AM – 6:21 PM | | 8 |
| Early AM | before 6:15 AM | - | - |
| AM Peak | 6:15 AM-8:15AM | 2 inbound | 2 |
| Midday | 8:15 AM – 3:15 PM | 1 round trip | 2 |
| PM Peak | 3:15 PM – 6:15 PM | 1 inbound/3 outbound | 4 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 33X carries 188 passengers per weekday, with nearly all ridership during peak periods; the midday trip carries very few riders. Based on available data, it appears that the highest ridership top is the park and ride lot at Global Mall at the Crossings.

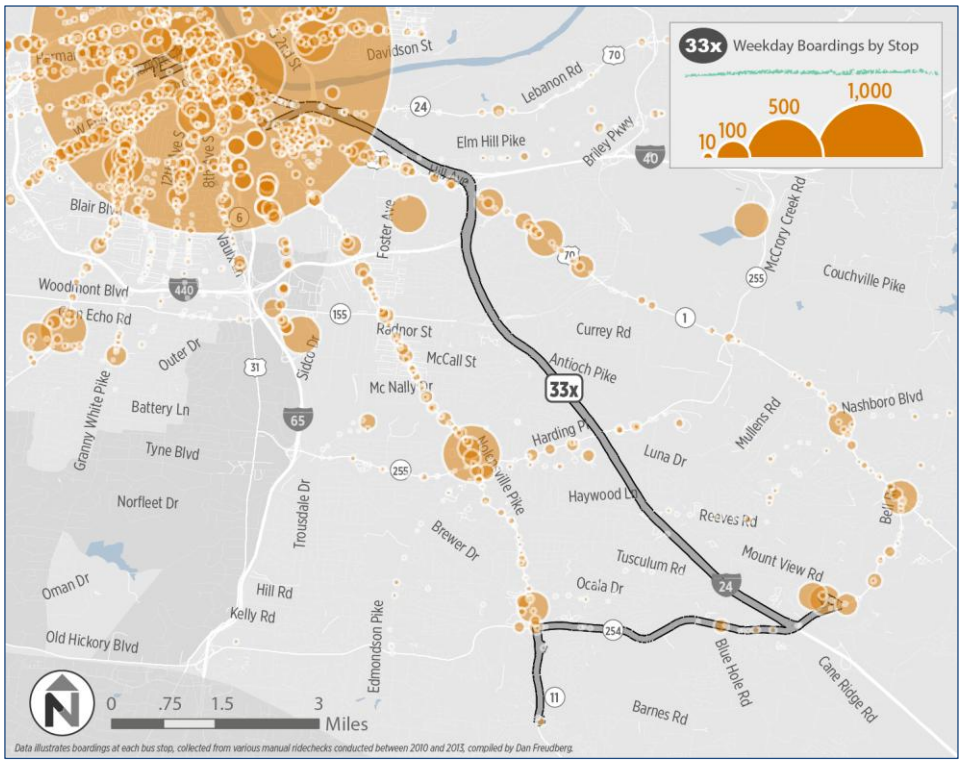



**PERFORMANCE:** Route 33X's productivity is good, even though it is depressed somewhat by very low ridership on the midday round trip.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 188 | 35 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 22.9 | 23 | - | - | - | - |
| Riders/Trip | 23.5 | 9 | - | - | - | - |

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.6 | Below Average | *But reasonable to get to I-24* |
| Average Speed (mph) | 18.5 | Very Good | |
| Stop Spacing (stops per mile) | 1.9 | Excellent | *In large part due to service on I-24* |
| Typical Peak Headway (mins) | 20-60 | Fair | *Only limited number of trips* |
| Schedule Regularity | Very Irregular | Poor | *Close spacing in AM; long in PM* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Strong peak ridership
- Fast service

**WEAKNESSES:**

- Schedule likely too inconvenient for may potential ridership (only two AM inbound trips spaced close together (20 minutes), coupled with three PM outbound trips spaced 45 to 60 minutes apart)
- Very low midday ridership

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Reschedule to improve convenience, with minimum of three AM inbound and three PM outbound trips
- Operate midday trip only on early school dismissal days

# 34 Opry Mills

**Route 34 is a bidirectional loop that provides a combination of express and local service. It operates largely along Ellington Parkway, Briley Parkway, McGavock Pike, and Lebanon Pike. Major stops along the route include the Kmart park and ride lot, the Opry Mills area, and Donelson Station.**

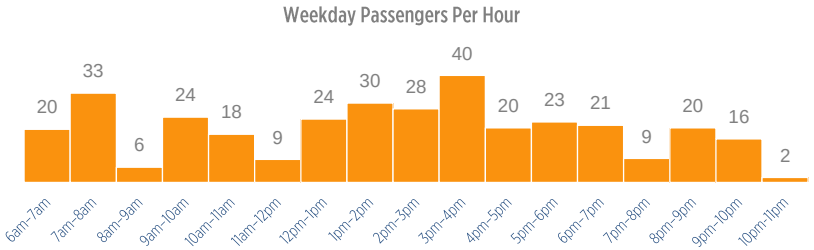
**SERVICE TYPE:** In spite of the infrequent service that is provided, Route 34 is classified as a "Frequent" route.

**SERVICE PATTERNS:** All trips operate around the complete loop and alternate directions. Service operates as local on the eastern half of the loop (Briley Parkway, McGavock Pike, and Lebanon Pike) and as express on the western half of the loop (Ellington Parkway).

**SCHEDULE:** Service operates seven days a week, and provides very infrequent service on all days:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:18 AM – 10:30 PM | | 22 |
| Early AM | before 6:15 AM | - | - |
| AM Peak | 6:15 AM-8:15AM | 90 | 3 |
| Midday | 8:15 AM – 3:15 PM | 90 | 10 |
| PM Peak | 3:15 PM – 6:15 PM | 95 | 3 |
| Evening/Night | 6:15 PM and later | 90 | 6 |
| **Saturdays** | 6:18 AM – 10:30 PM | 90 | 22 |
| **Sundays** | 6:18 AM – 10:30 PM | 90 | 22 |

**RIDERSHIP:** Route 34 carries 343 passengers per weekday, with ridership highest during the afternoon and PM peak. The highest ridership stops are the Kmart Park and Ride Lots, in the Opry Mills area and Donelson Station.




**PERFORMANCE:** Route 34 ranks about average in terms of productivity:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 343 | 26 | 415 | 15 | 274 | 13 |
| Riders per Revenue Vehicle Hour | 21.2 | 26 | 25.4 | 10 | 16.7 | 11 |
| Riders/Trip | 15.6 | 21 | 18.9 | 9 | 12.5 | 7 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 2.1 | NA | *Loop service* |
| Average Speed (mph) | 19.0 | Excellent | |
| Stop Spacing (stops per mile) | 4.0 | NA | *Infrequent stops due to express service* |
| Schedule Convenience (best headway) | 90 | Poor | *Double when considering each direction* |
| Schedule Regularity | Fairly Regular | Good | |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides only service to Opry Mills area, which is a major activity center
- Fast service

### WEAKNESSES:

- Complicated service design
- Very infrequent service
- Express trips operate outside of peak periods

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Split into separate local and express routes
- Operate local service much more frequently
- Operate express service only during peak periods.

# 35X Rivergate Express

**Route 35Xprovides peak period express service between Goodlettsville and Midtown Nashville via downtown primarily along I-65 and Conference Drive. It serves park and ride lots at Kmart in Goodlettsville and the RiverGate Malll in Rivergate.**

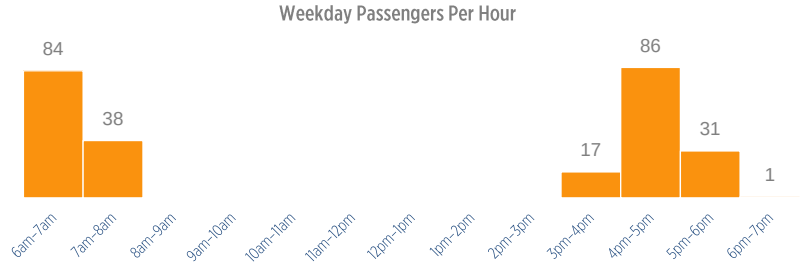
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** All service except the single AM outbound trip operates the full length of the route between the KMart Park and Ride in Goodlettsville and Wedgewood Avenue at 17th Avenue near Belmont University in Midtown. Service operates via I-65, Ellington Parkway, MCC, via Charlotte and Church Streets, and Vanderbilt University.

**SCHEDULE:** Service operates only on weekdays during peak periods, in the AM with three inbound trips and one outbound trip and in the PM with four outbound trips:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:57 AM – 6:00 PM | | 8 |
| Early AM | before 6:15 AM | 27 | 2 |
| AM Peak | 6:15 AM-8:15AM | 20 | 2 |
| Midday | 8:15 AM – 3:15 PM | - | - |
| PM Peak | 3:15 PM – 6:15 PM | 10-44 | 4 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 35X carries 256 passengers per weekday. Ridership is highest between 6 am and 7 am and between 4 pm and 5 pm.



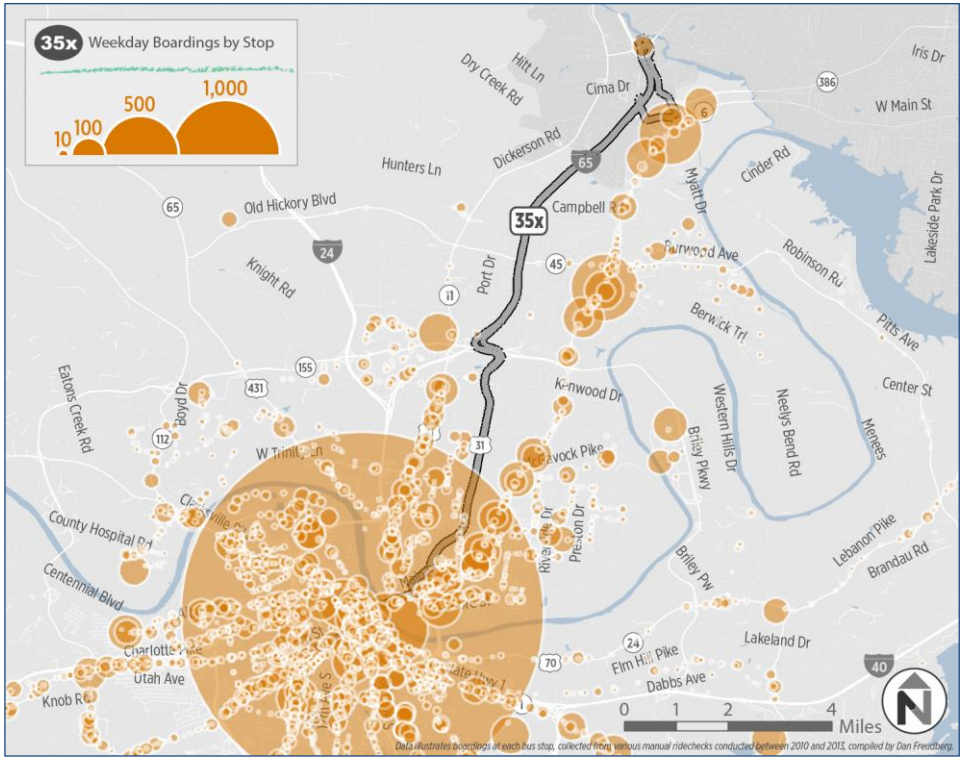

**PERFORMANCE:** Route 35X ranks 30th in total ridership, but 3rd in terms of weekday riders per revenue vehicle hour and riders per trip. This is largely because the route only provides peak period peak direction service.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 256 | 30 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 33.7 | 3 | - | - | - | - |
| Riders/Trip | 32.0 | 3 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Excellent | *Minor tail at northern terminus* |
| Average Speed (mph) | 18.9 | Very Good | |
| Stop Spacing (stops per mile) | 1.7 | Excellent | |
| Typical Headway (mins) | 20-44 | Good | *Mostly 20* |
| Schedule Regularity | Mostly regular | Very good | *Exceptions for first and last trips* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Strong route with high ridership per trip

**WEAKNESSES:**

- No significant weaknesses

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- High early AM Peak ridership suggests that earlier service may be warranted

# 36X Madison Express

**Route 36X is an express route that operates between Madison and downtown primarily via the Ellington Pkwy and Old Hickory Boulevard.**

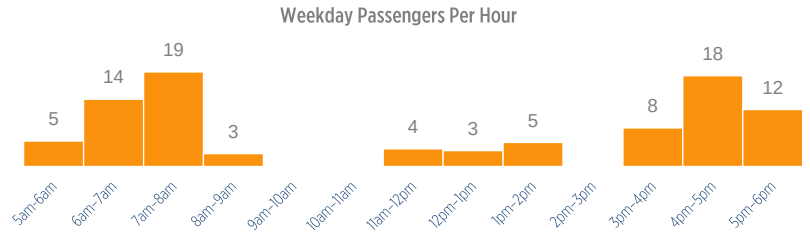
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 36X provides limited all day express service between the Madison Park and Ride Lot adjacent to MTA's offices and Music City Central or Riverfront Station in downtown Nashville. From Madison, it operates primarily along Old Hickory Boulevard, Greycroft Avenue, and Ellington Parkway.

**SCHEDULE:** Service operates only on weekdays.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:30 AM – 6:04 PM | | 17 |
| Early AM | before 6:15 AM | 52 | 1 |
| AM Peak | 6:15 AM-8:15AM | 17-50 | 6 |
| Midday | 8:15 AM – 3:15 PM | 55 | 5 |
| PM Peak | 3:15 PM – 6:15 PM | 45-95 | 5 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 36X carries 91 passengers per weekday. Ridership is highest between 6 am and 8 am and between 4 pm and 6 pm. Midday ridership is very low.




**PERFORMANCE:** Route 36x is one of MTA's lowest performing routes, and ranks 41st in terms of ridership and 44th in terms of weekday riders per revenue vehicle hour and riders per trip.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 91 | 41 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 7.4 | 44 | - | - | - | - |
| Riders/Trip | 5.4 | 44 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Excellent | *Gallatin more direct, but not as fast* |
| Average Speed (mph) | 19.0 | Very Good | *Fast along US-31* |
| Stop Spacing (stops per mile) | 2.3 | Average | |
| Typical Peak Headway (mins) | None | Poor | *No pattern* |
| Schedule Regularity | Very Irregular | Poor | *No pattern* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides fastest service between Madison and downtown Nashville

### WEAKNESSES:

- Low ridership and productivity
- Extremely low midday ridership
- Service too infrequent to be useful or attractive to most potential riders

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Provide more consistent and frequent peak period service
- Discontinue very poorly utilized midday service.

# 37X Tusculum / McMurray Express

**Route 37X is an express route that operates between areas along and north of Old Hickory Boulevard between I-65 and I-24 and downtown Nashville via I-24.**

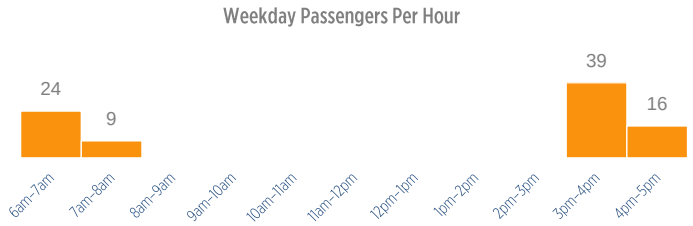
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Although the route map for Route 37X implies that it operates as a long loop, the service that is used by nearly all passengers begins inbound at the Four Points by Sheraton near the intersection of I-65 and Old Hickory Boulevard, operates circuitously through areas of Brentwood to I-24 and then via I-24 to downtown Nashville, and with outbound service operating in the reverse. The service shown on the route map along I-65 is largely deadhead service (two PM peak inbound trips) operated primarily to cycle buses).

**SCHEDULE:** Service operates only on weekdays during peak hours. In the AM, the route provides two inbound trips via I-24 and in the PM it provides two outbound trips via I-24 and two inbound trips along I-65.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:17 AM – 6:07 PM | | 6 |
| Early AM | before 6:15 AM | - | - |
| AM Peak | 6:15 AM-8:15AM | 21 | 2 |
| Midday | 8:15 AM – 3:15 PM | - | 1 |
| PM Peak | 3:15 PM – 6:15 PM | NA | 3 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 37X carries 88 passengers per weekday. Most ridership appears to be to and from the Dollar General Park and Ride on Nolensville Pike.



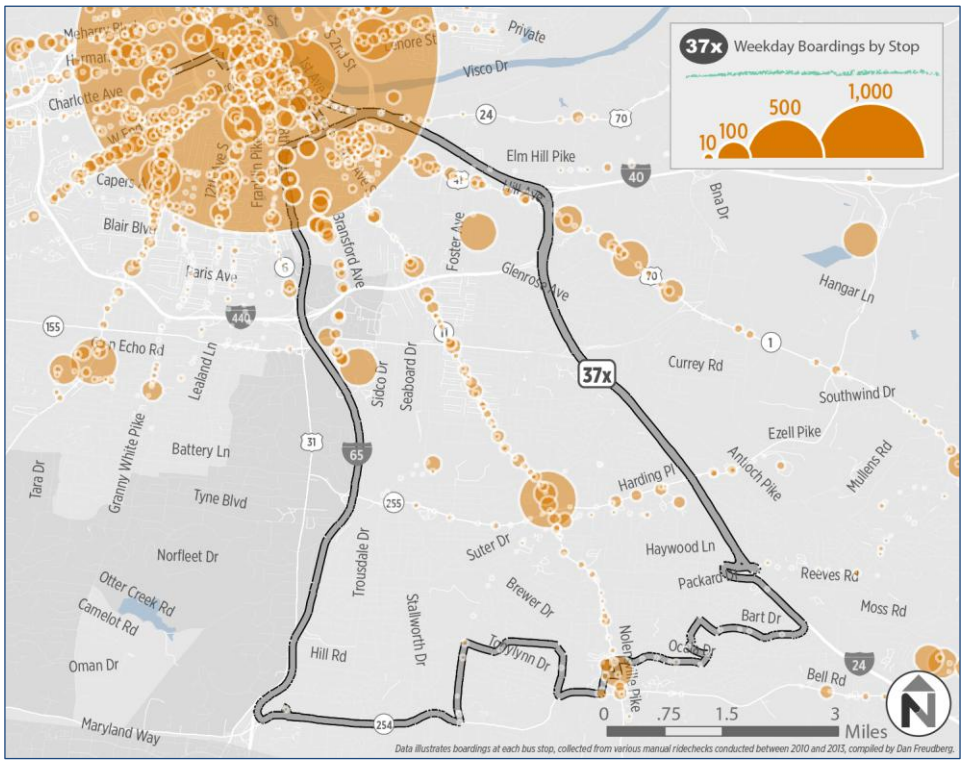

**PERFORMANCE:** Route 37X ranks 43rd in terms of total ridership, 33rd in terms of weekday riders per revenue vehicle hour and 23th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 88 | 43 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 17.2 | 33 | - | - | - | - |
| Riders/Trip | 22.0 | 23 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.9 | Poor | *Outer end very circuitous* |
| Average Speed (mph) | 18.3 | Good | *Due to service on I-25* |
| Stop Spacing (stops per mile) | 3.6 | Average | *Stops fairly close on outer end* |
| Typical Peak Headway (mins) | 23-58 | NA | *Very limited service* |
| Schedule Regularity | Very Irregular | Poor | *Trip times may not match work times* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides unique service
- Good ridership per trip, especially considering minimal ridership on deadhead trips

### WEAKNESSES:

- Very circuitous outer end with low ridership except at the Dollar General Park and Ride.
- Schedule may not match work schedules as well as it could
- Only two AM inbound and two PM outbound trips limits rider flexibility

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Convert to express route operating more directly between Dollar General Park and Ride and downtown Nashville (for example, via Nolensville Pike, Harding Place, and I-65
- Revise schedules to better match work start and end times
- Increase service to three AM inbound and three PM outbound trips

# 38X Antioch Express

**Route 38X is a long complex route that operates between areas east of I-24 and west of J Percy Priest Lake in the vicinity of Nashboro Boulevard, Una Antioch Pike, and Richards Road and downtown Nashville.**

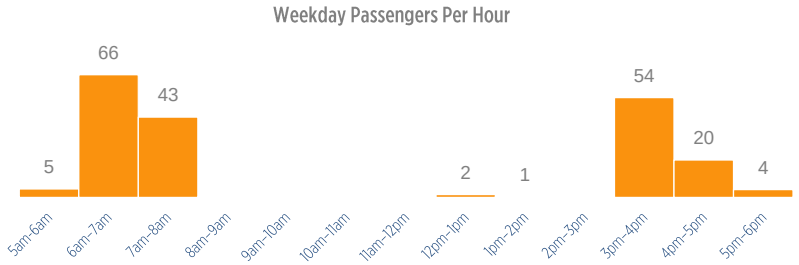
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 38X operates along the alignment shown to the right, clockwise in the AM and counterclockwise in the PM, except that service along the outer loops east of Bell Road always run clockwise.

**SCHEDULE:** Service operates only on weekdays; primarily during peak periods but with one midday round trip:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:37 AM – 6:40 PM | | 8 |
| Early AM | before 6:15 AM | 22 | 3 |
| AM Peak | 6:15 AM-8:15AM | - | - |
| Midday | 8:15 AM – 3:15 PM | NA | 2 |
| PM Peak | 3:15 PM – 6:15 PM | 25-65 | 3 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 38X carries 201 passengers per weekday, nearly all on the peak period trips. Ridership is highest from 6 am to 8 am and from 3 pm to 4 pm.



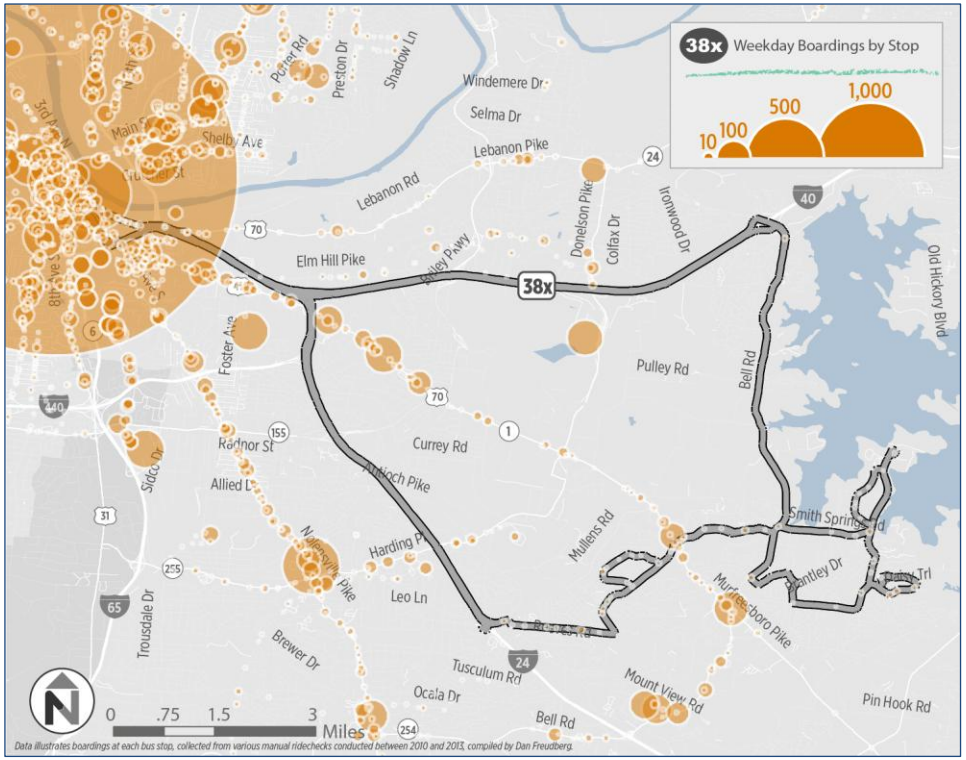

**PERFORMANCE:** Route 38X ranks 33rd in terms of ridership, 34th in terms of weekday riders per revenue vehicle hour but 8th for riders per trip. High ridership per trip is a function of the route's long length.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 201 | 33 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 16.5 | 34 | - | - | - | - |
| Riders/Trip | 25.1 | 8 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 2.3 | Poor | *Extremely circuitous* |
| Average Speed (mph) | 18.0 | Good | |
| Stop Spacing (stops per mile) | 4.2 | Good | *But partially due to express legs* |
| Typical Peak Headway (mins) | 22-25 | NA | *Only two peaks in AM and PM* |
| Schedule Regularity | Very Irregular | Poor | *Trip times may not match work times* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- High ridership per trip (although in part due to long length of route)

**WEAKNESSES:**

- Very circuitous and complicated
- Long travel times
- Very low midday ridership

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Simplify route; make more direct
- Revise schedules to better match work start and end times
- Increase peak service to three AM inbound and three PM outbound trips
- Discontinue barely utilized midday service (and most of area would still be served by Bus Link)

# 39X Cane Ridge Express

**Route 39X is an express route that operates between the Cane Ridge High School Park and Ride and downtown primarily via I-24 and Old Hickory Blvd. The route serves both commuter and high school students.**

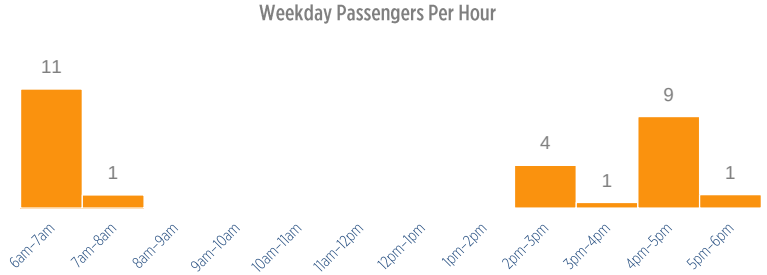
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** All service operates between Cane Ridge High School and downtown

**SCHEDULE:** Service operates on weekdays during peak hours and school dismissal times:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:20 AM – 5:55 PM | | 5 |
| Early AM | before 6:15 AM | - | - |
| AM Peak | 6:15 AM-8:15AM | NA | 2 |
| Midday | 8:15 AM – 3:15 PM | 165 | 1 |
| PM Peak | 3:15 PM – 6:15 PM | NA | 2 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 39X carries only 24 passengers per weekday, all of whom travel between Cane Ridge High School and downtown Nashville.



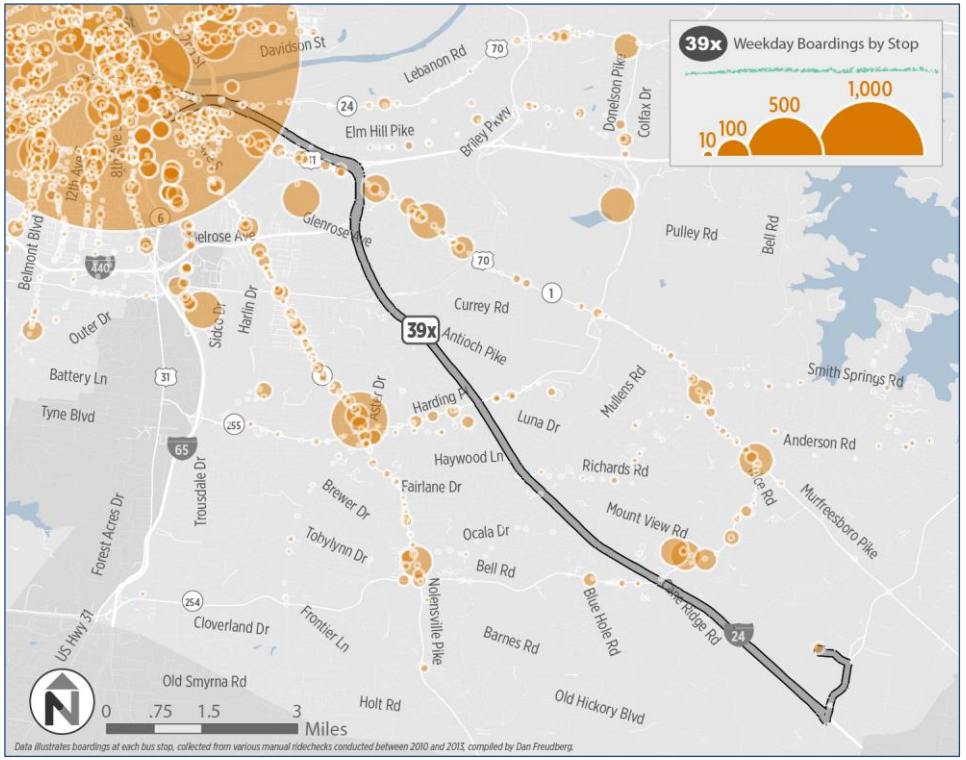

**PERFORMANCE:** Route 39X is MTA's lowest ridership routes, and ranks 43rd in terms of weekday riders per revenue vehicle hour and lowest in terms of riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 24 | 45 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 7.5 | 43 | - | - | - | - |
| Riders/Trip | 4.8 | 45 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Excellent | |
| Average Speed (mph) | 25.8 | Excellent | |
| Stop Spacing (stops per mile) | 1.0 | Far | *Maybe too few stops on outer end* |
| Typical Peak Headway (mins) | NA | Poor | *Very limited service* |
| Schedule Regularity | NA | Poor | *Very limited service* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Provides only service to Cane Ridge High School

**WEAKNESSES:**

- Extremely low ridership and productivity
- Very limited service – too little to provide riders with any flexibility

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Consolidate with other I-24 express routes
- Add additional outer end stops and increase service to provide riders with more flexibiliy

# 41 Golden Valley

**Route 41 is a commuter route that operates between Ewing Drive and Gwynnwood Drive near the intersection of Briley Parkway and I-24 and downtown Nashville primarily through residential areas between Whites Creek Pike/Baptist World Center Drive and I-24.**

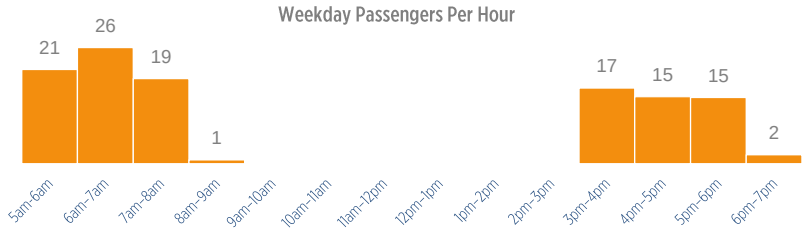
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** As presented to the public, Route 41 operates as a large loop. However, the route's major role is to provide service between the Ewing Drive and downtown via the left side of the loop (AM inbound and PM outbound), with service on the right side of the loop via Ellington Parkway and Briley Parkway to cycle buses for peak direction trips.

**SCHEDULE:** Service operates only on weekdays during peak periods, in the AM with three inbound trips and two outbound trips, and in the PM with three outbound trips and two inbound trips.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:41 AM – 5:47 PM | | 10 |
| Early AM | before 6:15 AM | 57 | 1 |
| AM Peak | 6:15 AM-8:15AM | 60 | 4 |
| Midday | 8:15 AM – 3:15 PM | - | - |
| PM Peak | 3:15 PM – 6:15 PM | 63 | 5 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 41 carries 120 passengers per weekday. Ridership is low at nearly all stops.




**PERFORMANCE:** Route 41 ranks 39th in terms of weekday ridership, 18th in terms of weekday riders per revenue vehicle hour and 30th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 120 | 39 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 23.9 | 18 | - | - | - | - |
| Riders/Trip | 12.0 | 30 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.7 | Fair | *Peak direction service indirect* |
| Average Speed (mph) | 21.2 | Good | *Peak direction service much slower* |
| Stop Spacing (stops per mile) | 2.0 | Good | *More on peak direction trips* |
| Schedule Convenience (best headway) | 60 | Poor | *Peak service only* |
| Schedule Regularity | Fairly Regular | Good | |


Data collected by Dan Freudberg at each bus stop, collected from various manual ridechecks conducted between 2010 and 2015, compiled by Dan Freudberg.

## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Fair AM and AM peak ridership
- Good ridership near Brick Church Business Park

**WEAKNESSES:**

- Presentation of route as loop is very confusing
- Peak direction service is fairly indirect and slow
- Service is infrequent (approximately every 60 minutes)

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Present primary function of route (service along left side of loop) more clearly

# 42 St. Cecilia / Cumberland

**Route 42 is a large clockwise loop that operates between North Nashville and downtown Nashville.**

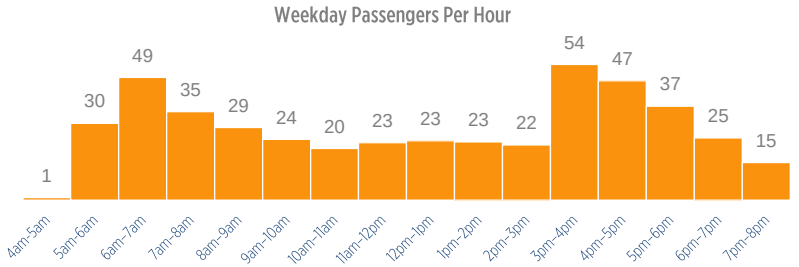
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** Route 42 operates clockwise around the loop shown in the map to the right, with service primarily via Rosa Parks Boulevard, Arthur Avenue, Cockrill Street, 26th Ave North, Dowlan Street, Clay Street, and 5th Avenue North. Service operates along the same route for all trips.

**SCHEDULE:** Service operates seven days a week, every 30 to 60 minutes on weekdays, and every 60 minutes on weekends:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:54 AM – 8:00 PM | | 44 |
| Early AM | before 6:15 AM | 36-41 | 5 |
| AM Peak | 6:15 AM-8:15AM | 30 | 7 |
| Midday | 8:15 AM – 3:15 PM | 45-55 | 17 |
| PM Peak | 3:15 PM – 6:15 PM | 28 | 11 |
| Evening/Night | 6:15 PM and later | 60 | 4 |
| **Saturdays** | 6:28 AM – 7:53 PM | 60 | 28 |
| **Sundays** | 6:28 AM – 7:05 PM | 60 | 26 |

**RIDERSHIP:** Route 42 carries 456 passengers per weekday. Ridership is highest during PM peak hours from 3 PM to 5 PM with a somewhat smaller peak in the AM.



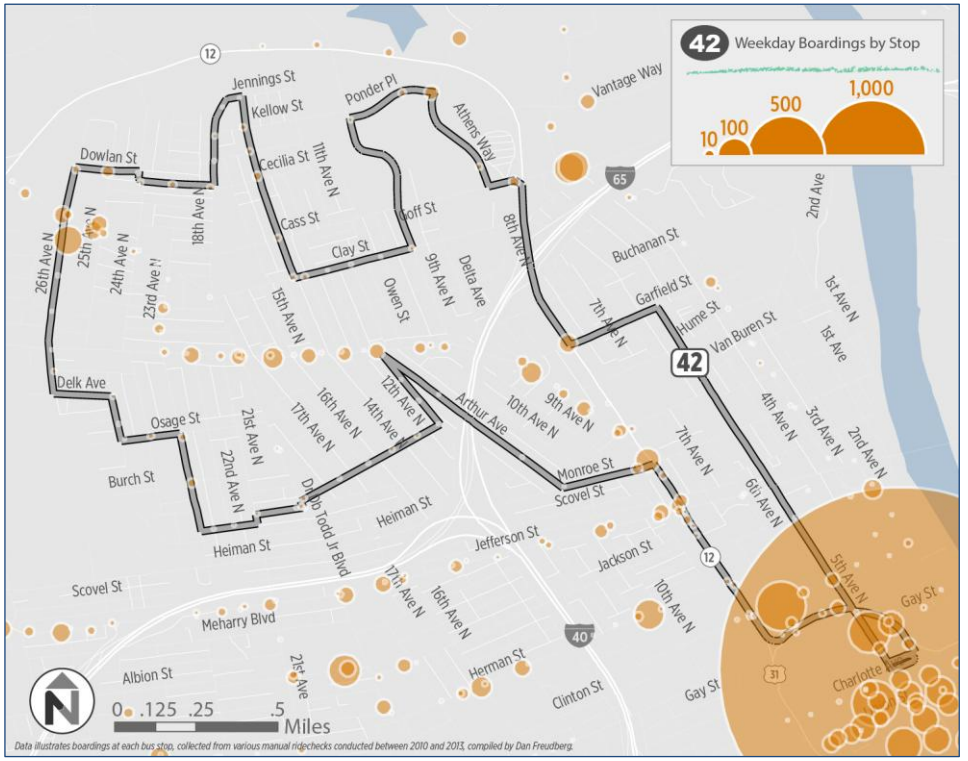

**PERFORMANCE:** Route 42 ranks 21st in terms of weekday ridership, 20th in terms of weekday riders per revenue vehicle hour and 32nd in terms of riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 456 | 21 | 293 | 18 | 218 | 15 |
| Riders per Revenue Vehicle Hour | 23.5 | 20 | 22.1 | 13 | 17.5 | 10 |
| Riders/Trip | 10.4 | 32 | 10.5 | 18 | 8.4 | 13 |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.6 | Poor | *Loop service* |
| Average Speed (mph) | 10.3 | Below Average | |
| Stop Spacing (stops per mile) | 6.1 | Average | |
| Typical Peak Headway (mins) | 25 | Fairly Good | |
| Schedule Regularity | Fairly Irregular | Poor | *Some regularity during peak hours* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Extensive service coverage
- Fairly good ridership

### WEAKNESSES:

- Loop service is inconvenient and results in long travel times
- Irregular schedule

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Reconfigure area service to serve area with radial routes rather than a large loop.
- Operate service with clockface headways

# 43 Hickory Hills

**Route 43 operates between Whites Creek White Creek High School and downtown Nashville largely along Old Hickory Boulevard and Dickerson Rd, with deviations to Hunters Lane High School, Skyline Medical Center, Walmart, and Maplewood High School. Route 43's service is closely tied with that of Route 23 Dickerson Road, which operates along Dickerson Road south of Broadmoar Drive and provides much more frequent service.**

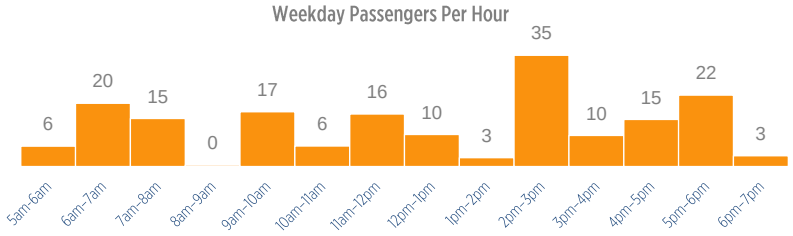
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** Route 43 operates with a somewhat complicated mix of local and express trips. AM inbound and two PM outbound trips operate express between the White Creek High School Park and Ride and downtown, one AM outbound trip operates express from MCC to Maplewood High School and then to the end of the route, and most trips provide local service to all stops.

**SCHEDULE:** Service operates only on weekdays, with irregular headways and infrequent service:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:50 AM – 7:00 PM | | 19 |
| Early AM | before 6:15 AM | NA | 1 |
| AM Peak | 6:15 AM-8:15AM | 70-100 | 4 |
| Midday | 8:15 AM – 3:15 PM | 75-145 | 7 |
| PM Peak | 3:15 PM – 6:15 PM | 45-60 | 6 |
| Evening/Night | 6:15 PM and later | 75 | 1 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 43 carries 179 passengers per weekday. Ridership is highest during the late Midday hours from 2 PM to 3 PM with somewhat smaller peaks in the AM and PM Peak. The highest riders stop outside of downtown is at Walmart. Other high ridership stops are along Dickerson Road in areas also served by Route 23 Dickerson Road.



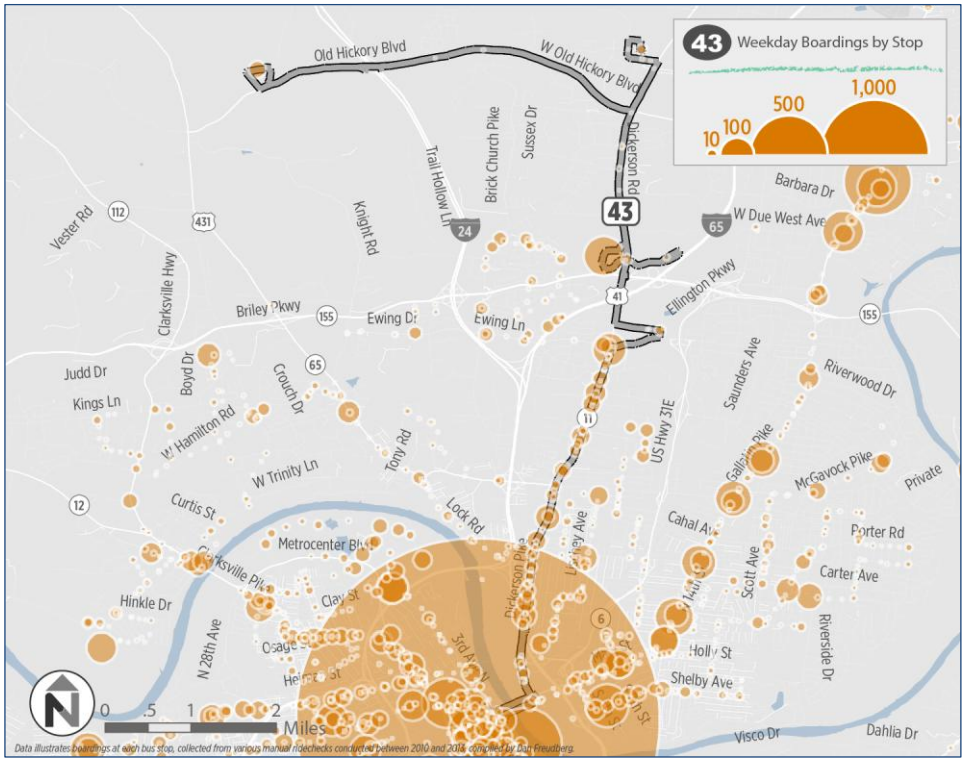

**PERFORMANCE:** Route 43 ranks 37th in terms of total ridership, 40th in terms of weekday riders per revenue vehicle hour and 36th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 179 | 37 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 9.7 | 40 | - | - | - | - |
| Riders/Trip | 9.4 | 36 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.4 | Average | *Express trips are direct* |
| Average Speed (mph) | 16.7 | Above Average | |
| Stop Spacing (stops per mile) | 3.4 | Good | |
| Typical Peak Headway (mins) | 45-6100 | Inconvenient | *Most are 60+* |
| Schedule Regularity | Mostly Irregular | Poor | |




Data illustrates boardings at each bus stop, collected from various manual ridechecks conducted between 2010 and 2016, compiled by Jarrett Walker.

**STRENGTHS AND WEAKNESSES AND OPPORTUNITIES**

**STRENGTHS:**

- Strong ridership to/from Walmart
- Good ridership to/from high schools

**WEAKNESSES:**

- Duplication with Route 23 Dickerson Road
- No schedule coordination with Route 23 Dickerson Pike
- Infrequent service
- Irregular headways
- Poor productivity

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Develop transit center at or near Walmart
- Reconfigure area service around transit center
- Consolidate with Route 23 Dickerson Road, or coordinate schedules
- Provide more frequent and regular service

# 55 Murfreesboro Bus Rapid Transit

**Route 55 is a BRT Lite route that serves the Murfreesboro Corridor and extends about 10 miles southeast of downtown to Bell Road and then west along Bell Road to Hickory Hollow. This operates in conjunction with Route 15 Murfreesboro Road, which provides local service along the same alignment. Route 55 was the second BRT lite service to be introduced at MTA.**

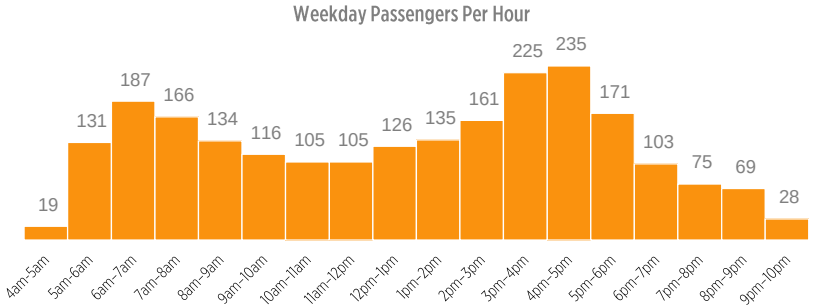
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates end to end from Hickory Hollow to Music City Central and stops only at BRT stops. The route operates largely via Murfreesboro Pike with no deviations.

**SCHEDULE:** Service operates on weekdays and Saturdays (on Sundays, only Route 15 service is provided.)

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| Weekdays | 4:47 AM - 9:55 PM | | 86 |
| Early AM | before 6:15 AM | 15-20 | 10 |
| AM Peak | 6:15 AM-8:15AM | 15 | 16 |
| Midday | 8;15 AM – 3:15 PM | 15 | 26 |
| PM Peak | 3:15 PM – 6:15 PM | 15 | 22 |
| Evening/Night | 6:15 PM and later | 30 | 12 |
| Saturdays | 5:30 AM - 10:55 PM | 30 | 66 |
| Sundays* | NA | NA | NA |

**RIDERSHIP:** Route 55 carries 2.291 passengers per weekday and is MTA's s 4th highest ridership route. As shown below, ridership is highest during the PM peak hour from 4 PM to 6 PM with a somewhat smaller peak in the AM.



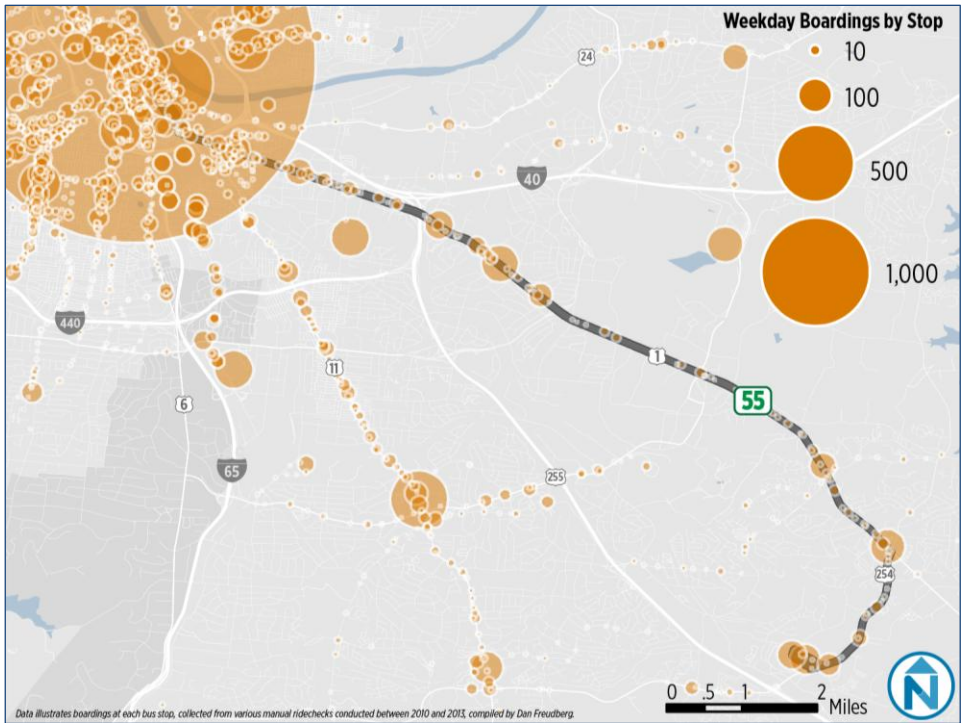

**PERFORMANCE:** Route 55 is MTA's 25th best performing route in terms of weekday productivity (riders per revenue vehicle hour):

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | | |
| Ridership | 2,291 | 4 | 1,340 | 4 | - | - |
| Riders per Revenue Vehicle Hour | 21.6 | 26 | 22.4 | 13 | - | - |
| Riders/Trip | 20.1 | 14 | 20.3 | 6 | - | - |

*Weekday rank is of 46 routes; Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | |
| Average Speed (mph) | 14.3 | Good | |
| Stop Spacing (stops per mile) | 1.3 | May be long | |
| Typical Peak Headway (mins) | 15 | Good | |
| Schedule Regularity | Very Regular | Excellent | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides fast and frequent high quality service
- Second highest ridership route in the system.

### WEAKNESSES:

- Weekday productivity, in terms of passengers per revenue vehicle hour, ranks in the bottom 50%. There are a number of possible reasons for this:
  - Route 55's average stop spacing, at 1.3 miles, may not provide enough access to the route.
  - Route 15, which provides local service, may compete with Route 55 more than it complements it.
  - Based on the current Route 15/55 service design, the total amount of service provided by Routes 15 and 55 is higher than the corridor warrants.
- Highest ridership on Route 15 is after 10 PM, which indicates that Route 55 service ends too early.

### OPPORTUNITIES:

- Revise BRT Lite/local service strategy to serve corridor exclusively with BRT Lite service to provide more attractive service to most riders and better balance service levels with demand.
- Provide later weekday service.

# 56 Gallatin Pike Bus Rapid Transit

**Route 56 is a BRT Lite route that serves the Gallatin Pike which extends about 12 miles northeast of downtown to RiverGate. This operates in conjunction with Route 26 Gallatin Pike, which provides local service along the same alignment. Route 56 was the first BRT Lite service to be introduced at MTA.**

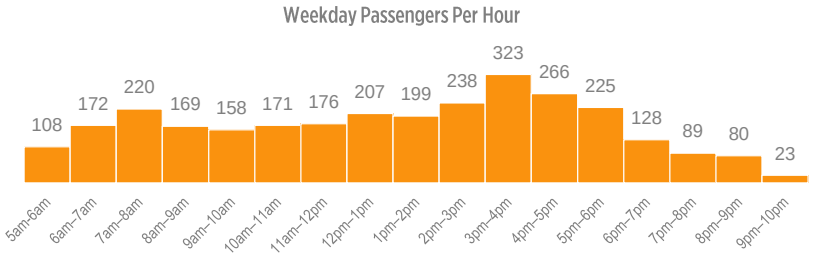
**SERVICE TYPE:** Most Frequent

**SERVICE PATTERNS:** All service operates end to end from RiverGate to Music City Central making only limited BRT stops. The route alignment follows Gallatin Pike into Downtown Nashville with no deviations.

**SCHEDULE:** Service operates on weekdays and Saturdays (on Sundays, only Route 26 service is provided.)

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:02 AM – 9:50 PM | | 114 |
| Early AM | before 6:15 AM | 15-20 | 8 |
| AM Peak | 6:15 AM – 8:15AM | 15 | 16 |
| Midday | 8:15 AM – 3:15 PM | 15 | 55 |
| PM Peak | 3:15 PM – 6:15 PM | 15 | 24 |
| Evening/Night | 6:15 PM and later | 30 | 11 |
| **Saturdays** | 5:43 AM – 10:50 PM | 30 | 66 |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 56 is MTA's highest ridership route, with 2,967 passengers per weekday. Ridership is highest during the late midday and PM peak hours from 2 PM to 6 PM with a somewhat smaller peak in the AM.




**PERFORMANCE:** Route 56 ranks 7th in terms of weekday riders per revenue vehicle hour and 5th for riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 2,967 | 1 | 1,800 | 2 | - | - |
| Riders per Revenue Vehicle Hour | 32.4 | 7 | 37.1 | 2 | - | - |
| Riders/Trip | 26.0 | 5 | 27.3 | 3 | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | |
| Average Speed (mph) | 15.0 | Excellent | |
| Stop Spacing (stops per mile) | 1.2 | May be Long | |
| Schedule Convenience (best headway) | 15 | Good | *Even more frequent with Rt 26 overlay* |
| Schedule Regularity | Fairly Regular | Good | *Irregular for inbound trips* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Provides fast and frequent high quality service
- Highest ridership route in the system.

### WEAKNESSES:

- No Sunday service, even through it is MTA's highest ridership route
- Stop spacing may be too long, which means that many use Route 26 in spite of its infrequent service

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Provide earlier weekday service
- Provide Sunday service
- Revise BRT Lite/local service strategy to serve corridor exclusively with BRT Lite service to provide more attractive service to most riders and better balance service levels with demand.
  - Increase number of stops
  - Extend late night span of service

# 60 Music City Circuit Blue

**Route 60 is a free downtown circulator route that operates between the Riverfront Station and the Bicentennial Mall largely via 4th and 5th Avenues. Major destinations include Music City Central, Municipal Auditorium, Schermerhorn Symphony Center, and several downtown hotels.**

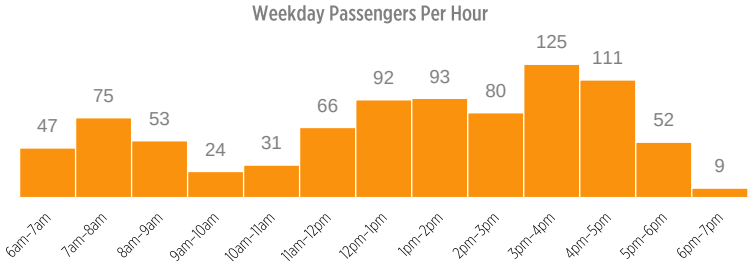
**SERVICE TYPE:** Circuit

**SERVICE PATTERNS:** All service operates the full length of the route. Northbound service travels from Broadway to 5th Ave through downtown, while southbound service travels one block parallel along 4th Ave to Demonbreun.

**SCHEDULE:** Service operates on weekdays and Saturdays with fairly regular headways that are mostly 15 minutes during peak periods and 30 to 40 minutes during the morning and evening:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:35 AM – 11:00 PM | | 80 |
| Early AM | before 6:15 AM | - | 0 |
| AM Peak | 6:15 AM-8:15AM | 40 | 4 |
| Midday | 8:15 AM – 3:15 PM | 15-40 | 32 |
| PM Peak | 3:15 PM – 6:15 PM | 15 | 23 |
| Evening/Night | 6:15 PM and later | 30 | 21 |
| **Saturdays** | 10:52 AM – 11:00 PM | 15-30 | 60 |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 60 carries 858 passengers per weekday, which makes it MTA's highest ridership Circuit route. Ridership is highest during PM peak hours from 3 PM to 5 PM with a smaller peak in the AM. Ridership by stop is highest at the Music City Central Transit Center, with moderate ridership along 4th Ave and 5th Ave between each terminus.

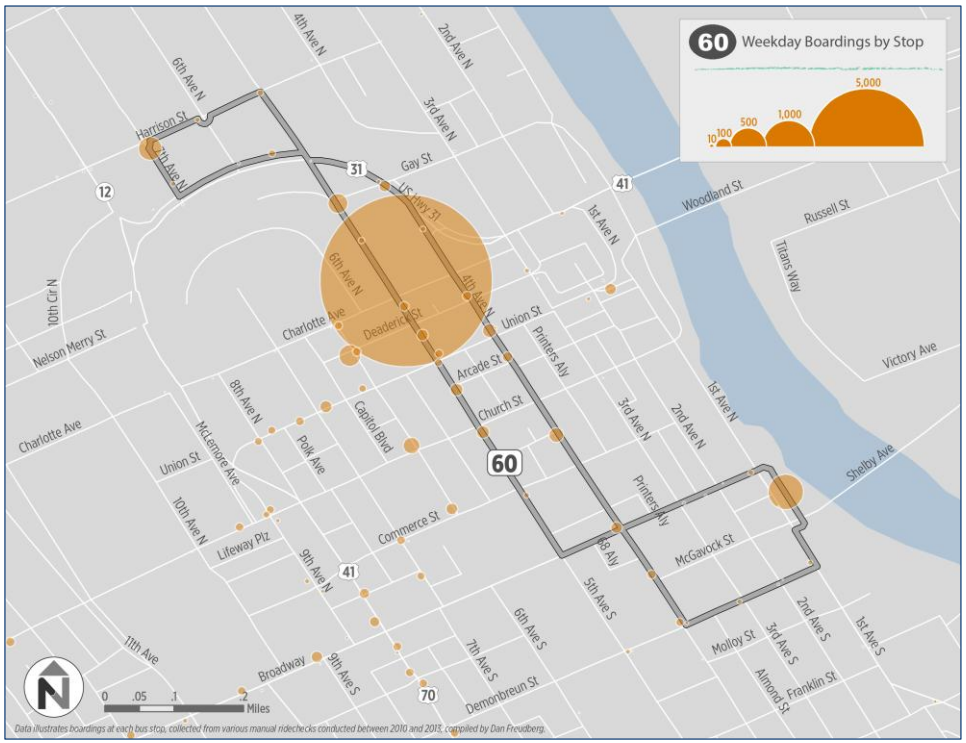



**PERFORMANCE:** Route 60 has the highest weekday ridership among Circuit routes, as well ranking near the top in ridership per vehicle service hour across all routes in the system, indicating demand for more frequent service.

| | Weekday | Saturday | Sunday |
|---|---|---|---|
| | Value | Value | Value |
| Ridership | 858 | 347 | - |
| Riders per Revenue Vehicle Hour | 44.6 | 23.7 | - |
| Riders/Trip | 10.7 | 5.8 | - |

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.3 | Average | *Parallel directional service* |
| Average Speed (mph) | 6.2 | Poor | *Frequent stops slow service down* |
| Stop Spacing (stops per mile) | 10.1 | Very Close | |
| Typical Peak Headway (mins) | 15 | Very Good | *30-40 in morning and evening* |
| Schedule Regularity | Fairly Regular | Good | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- For much of the day, provides frequent service to the major north-south axis of downtown Nashville and Riverfront Station
- Very strong ridership relative to service levels; high productivity
- Frequent service in the midday and PM peak

### WEAKNESSES:

- Much less service in AM peak than during midday and PM peak
- Service is somewhat circuitous
- No Sunday service

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Operate bi-directionally along 4th Ave from Demonbreun St and the Bicentennial Mall
- Provide AM peak service every 15 minutes.
- Provide Sunday service

# 61 Music City Green Circuit

**Route 61 is a free downtown circulator route that operates between the Gulch southwest of downtown and the Bicentennial Mall. Major destinations include Music City Center, Bridgestone Arena, the Country Music Hall of Fame, Music City Central, and several downtown hotels.**

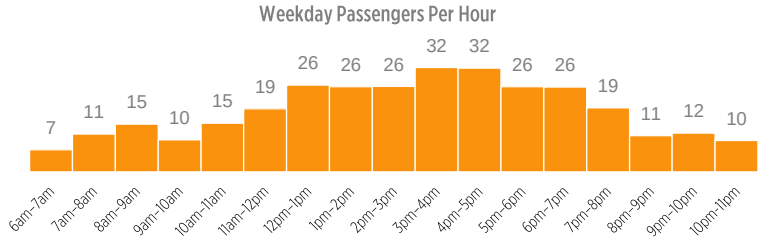
**SERVICE TYPE:** Circuit

**SERVICE PATTERNS:** All service operates the full length of the route. Northbound service travels along 5th Avenue through downtown, while southbound service travels one block parallel along 4th Avenue.

**SCHEDULE:** Service operates on weekdays and Saturday with fairly regular headways that are mostly 40 minutes in the AM peak, 15 minutes during the midday and PM peak, and 30 minutes in the evening.

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:35 AM – 11:00 PM | | 80 |
| Early AM | before 6:15 AM | - | 0 |
| AM Peak | 6:15 AM-8:15AM | 40 | 4 |
| Midday | 8:15 AM – 3:15 PM | 15-40 | 32 |
| PM Peak | 3:15 PM – 6:15 PM | 15 | 23 |
| Evening/Night | 6:15 PM and later | 30 | 21 |
| **Saturdays** | 11:00AM – 11:09 PM | 15-30 | 60 |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 61 carries 322 passengers per weekday, or less than half of the number of riders on the Blue Circuit, which shares the same trunk along 4th and 5th Avenues but operates to Riverfront Station rather than the Gulch. Ridership is highest during PM peak hours from 3 PM to 5 PM. By stop, ridership is highest along 4th Ave and 5th Ave near the Music City Central Transit Station, and to a lesser degree at the Bicentennial Mall and Gulch neighborhood on Pine St.

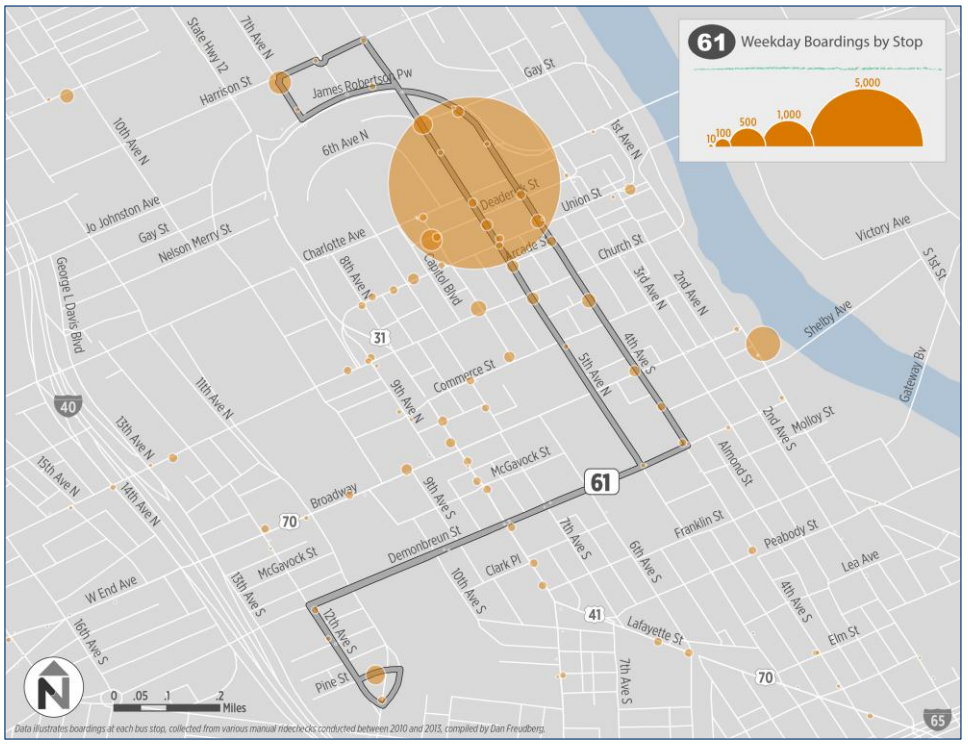



**PERFORMANCE:** Route 61 ranks 2nd in terms of weekday ridership among Circuit routes, but last in terms of weekday ridership per vehicle service hour, indicating there may be more service than is needed. Saturday ridership, at 398, is higher than Route 60, but lower in ridership per vehicle service hour at 16.4.

| | Weekday | Saturday | Sunday |
|---|---|---|---|
| | Value | Value | Value |
| Ridership | 322 | 398 | - |
| Riders per Revenue Vehicle Hour | 11.2 | 16.4 | - |
| Riders/Trip | 2.8 | 4.1 | - |

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.0 | Excellent | *Consistent bi-directional pattern* |
| Average Speed (mph) | 5.1 | Poor | *Frequent stops slow service down* |
| Stop Spacing (stops per mile) | 14.3 | Very Close | |
| Typical Peak Headway (mins) | 40 AM/15 PM | Mixed | |
| Schedule Regularity | Fairly Regular | Good | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- For much of the day, provides frequent service to the major north-south axis of downtown Nashville and the Gulch
- Good Saturday ridership (higher than weekdays)

**WEAKNESSES:**

- Low ridership per trip and low weekday productivity
- No Sunday service

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Operate bi-directionally along 4th Ave from Demonbreun St and the Bicentennial Mall
- Extend service further west through the Gulch via Demonbreun Street
- Provide AM peak service every 15 minutes.
- Provide Sunday service

# 62 Music City Purple Circuit

**Route 62 is a free downtown circulator route that operates between City Hall & Metro Courts and the Richard H. Fulton Complex to the southeast. Major destinations include the Nashville Children's Theatre, Pinnacle, and Riverfront Park.**

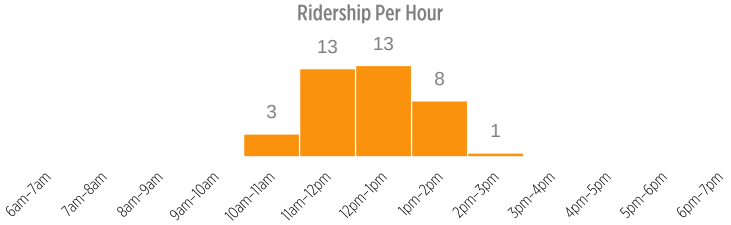
**SERVICE TYPE:** Circuit

**SERVICE PATTERNS:** All service operates the full length of the route. Southbound service travels along 1st Ave to Hermitage Ave and Lindsley Ave, while northbound service travels one block parallel along 2nd Ave to Union Street. It largely functions as a lunch time shuttle.

**SCHEDULE:** Service operates only weekdays from 11:00 AM to 2:00 PM with service every 15 minutes:

| | Span of Service | Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 11:00 AM – 2:00 PM | | 13 |
| Early AM | before 6:15 AM | - | 0 |
| AM Peak | 6:15 AM-8:15AM | - | 0 |
| Midday | 8:15 AM – 3:15 PM | 15 | 13 |
| PM Peak | 3:15 PM – 6:15 PM | - | 0 |
| Evening/Night | 6:15 PM and later | - | 0 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 62 carries only 38 passengers per weekday, which makes it MTA's lowest ridership Circuit route and second lowest ridership route overall. By stop, ridership is highest at the Riverfront Station, with very little activity along the southern half of the route and along 2nd Ave.

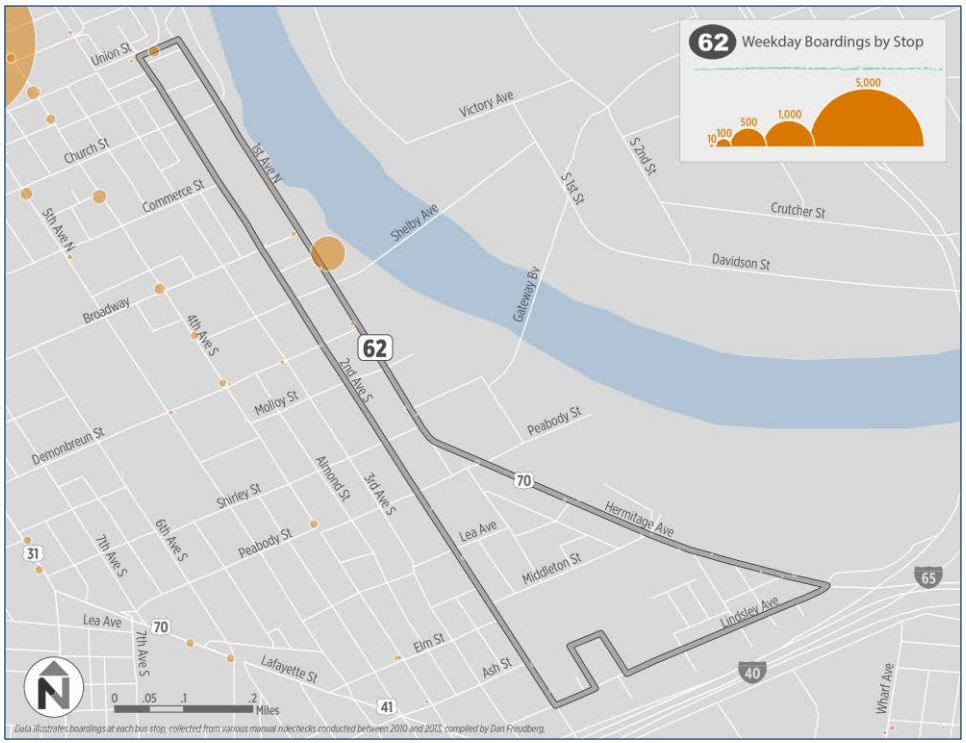



**PERFORMANCE:** Route 62's ridership and productivity are very low:

| | Weekday | Saturday | Sunday |
|---|---|---|---|
| | Value | Value | Value |
| Ridership | 38 | - | - |
| Riders per Revenue Vehicle Hour | 11.8 | - | - |
| Riders/Trip | 2.9 | - | - |

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.7 | NA | *Loop route* |
| Average Speed (mph) | 11.2 | Below Average | *Due to slow speeds downtown* |
| Stop Spacing (stops per mile) | 4.9 | Good | |
| Typical Peak Headway (mins) | 15 | Very Good | |
| Schedule Regularity | Very Regular | Very Good | *No weekend service* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Free lunchtime service that connects the Richard H. Fulton Complex with downtown Nashvill
- Service is frequent and consistent during the hours that it operates

### WEAKNESSES:

- Very low ridership and productivity
- Loop operation less convenient than bi-directional service

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Operate bi-directional service along 1st Ave, Hermitage Ave, and Lindsley Ave, eliminating service along 2nd Ave that currently experiences very low ridership
- Consolidate Route 44 MTA Shuttle with Music City Purple Circuit to provide more compelling service with a single route and with a longer span of service.

# 72 Edmondson Pike Connector

**Route 72 is a crosstown route that operates between the Sheriff's Correctional Complex near Ezell Park and the Walmart at the intersection on Edmondson Pike and Old Hickory Boulevard, largely via Harding Place, Jonquil Drive. Paragon Mills Road, Nolensville Pike, and Edmondson Pike.**

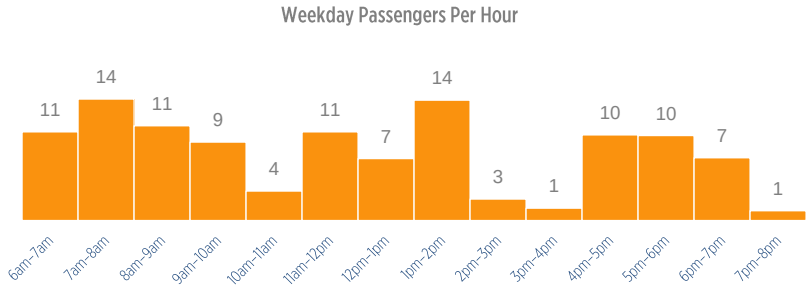
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Very confusingly, Route 72's schedule presents all trips as starting from the middle of the route and then operating out to one end and back. Most trips do operate from end-to-end, but some trips go out of service at the Walmart in the middle of the route on Nolensville Pike.

**SCHEDULE:** Service operates only on weekdays, every 60 to 70 minutes:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:55 AM – 7:08 PM | | 20 |
| Early AM | before 6:15 AM | 60 | 2 |
| AM Peak | 6:15 AM-8:15AM | 60 | 4 |
| Midday | 8:15 AM – 3:15 PM | 65 | 8 |
| PM Peak | 3:15 PM – 6:15 PM | 70 | 4 |
| Evening/Night | 6:15 PM and later | 60 | 2 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 72 carries 115 passengers per weekday. Ridership is highest during the AM Peak from 6 AM to 9 AM with a somewhat smaller peak in the Midday. Ridership is low at all stops.



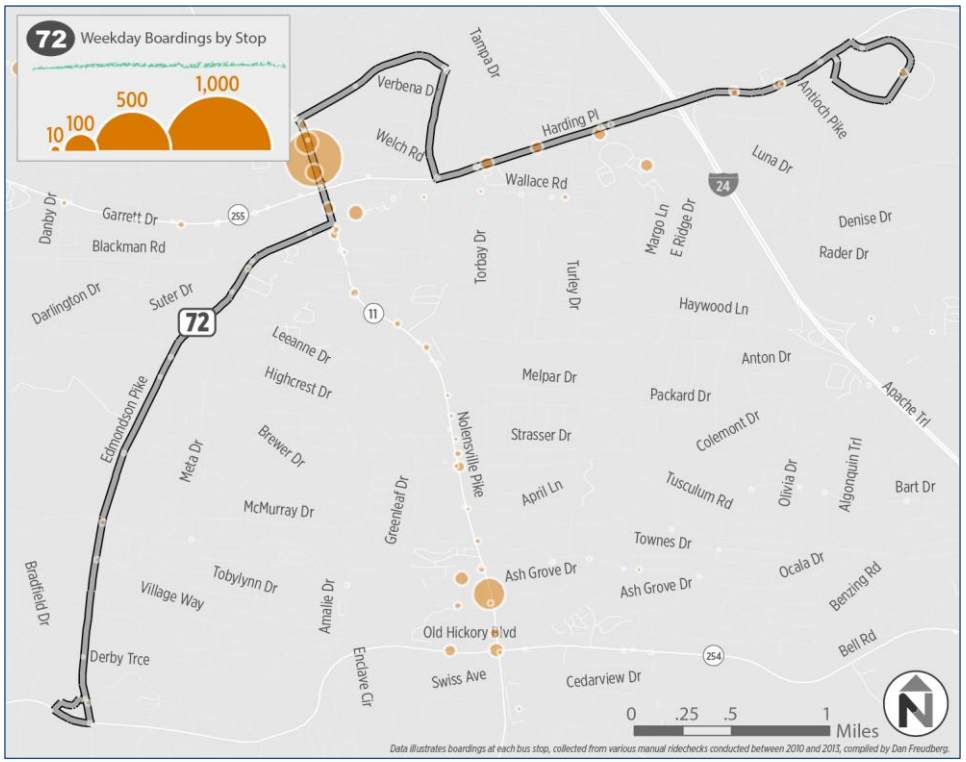

**PERFORMANCE:** Route 72 ranks 40th in terms of weekday ridership, 39th in terms of weekday riders per revenue vehicle hour and 43rd in terms of riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 115 | 40 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 11.7 | 39 | - | - | - | - |
| Riders/Trip | 5.8 | 43 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Good | *Deviates off Harding to Paragon Mills* |
| Average Speed (mph) | 14.1 | Average | |
| Stop Spacing (stops per mile) | 3.1 | Average | |
| Typical Peak Headway (mins) | 60 | Poor | |
| Schedule Regularity | Somewhat | Fair | *Many shifts in pattern* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Provides coverage to areas that would otherwise be unserved

**WEAKNESSES:**

- Very confusing schedule presentation
- Low ridership and productivity

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Revise schedule to present as end-to-end service
- Develop transit center at or near intersection of Harding Place and Nolensville Pike, and convert Route 72 and outer branches/loops of Route 12 Nolensville Pike to more compelling connecting local service
- Provide service with clockface headways
- Eliminate deviation to Paragon Mills and continue service along Harding Place to Nolensville Pike

# 76 Madison Connector

**Route 76 is a complex multi-loop route that operates in Madison east of Gallatin Pike and in the vicinity of Neely's Bend Road and Old Hickory Boulevard.**

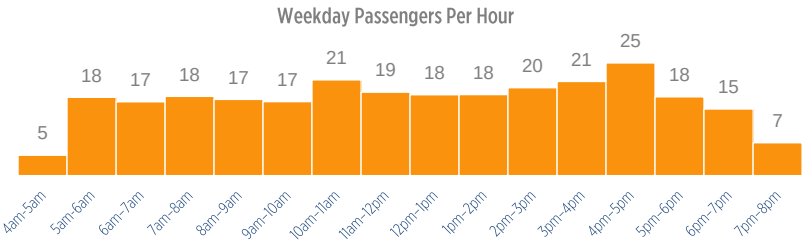
**SERVICE TYPE:** Frequent

**SERVICE PATTERNS:** Route 76 operates two unique counter-clockwise loops through Madison to connect riders to Routes 26/56 Gallatin Pike. The northern loop serves multiple residential towers on Dupont Ave and the Madison Park & Ride, with transfers to Routes 27 and 36x. The southern loop operates primarily along Neely's Bend, Cheyenne Blvd, and Old Hickory, serving several schools and medical facilities. All trips except the last trip on the northern loop operate the full length of the route.

**SCHEDULE:** Service operates on weekdays and Saturday.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 4:50 AM – 7:44 PM | | 31 |
| Early AM | before 6:15 AM | 60 | 4 |
| AM Peak | 6:15 AM-8:15AM | 60 | 5 |
| Midday | 8:15 AM – 3:15 PM | 60 | 13 |
| PM Peak | 3:15 PM – 6:15 PM | 60 | 6 |
| Evening/Night | 6:15 PM and later | 60 | 3 |
| **Saturdays** | 9:35 AM – 5:24 PM | 60 | 16 |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 76 carries 273 passengers per weekday. Ridership is fairly consistent throughout the day. Most riders travel to and from Gallatin Pike, where connections can be made with Route 56 Gallatin BRT-Lite and Route 26 Gallatin Pike.



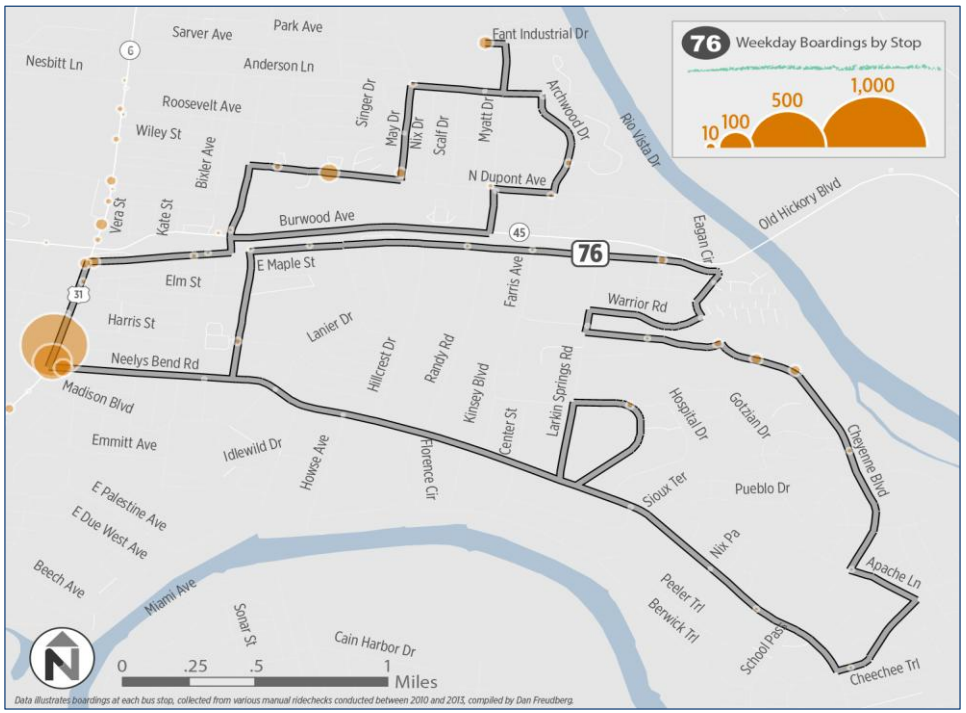

**PERFORMANCE:** Route 76 ranks 29thth in terms of weekday ridership, 30th in terms of weekday riders per revenue vehicle hour and 38th in terms of weekday riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 273 | 29 | 117 | 26 | - | - |
| Riders per Revenue Vehicle Hour | 18.3 | 30 | 15.0 | 19 | - | - |
| Riders/Trip | 8.8 | 38 | 7.3 | 21 | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 2.7 | Very Poor | *Multiple loops* |
| Average Speed (mph) | 14.9 | Good | |
| Stop Spacing (stops per mile) | 3.0 | Wide | |
| Typical Peak Headway (mins) | 60 | Poor | |
| Schedule Regularity | Very Regular | Excellent | |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Consistent ridership throughout the day
- Clockface headways

### WEAKNESSES:

- Very circuitous
- In many respects, two separate loop routes, but presented as one even more complicated route
- Significant portions of the service have very low riership, particularly along Neely's Bend Road

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Develop transit center near intersection of Gallatin Pike and Neelys Bend Road, and configure Routes 27 Old Hickory, 37X Tusculum/McMurray Express, and Route 76 to provide more direct service and better connections
- Realign Route 76 to be more direct
- Split into two routes to improve legibility

# 84X Murfreesboro Express

**Route 84X is a long express route that operates between Middle Tennessee State University (MTSU) and downtown Nashville primarily via Murfreesboro Pike and I-24. Route 84X also has a local service counterpart – Route 94X Nashville/Murfreesboro Relax and Ride, which operates locally along Murfreesboro Pike.**

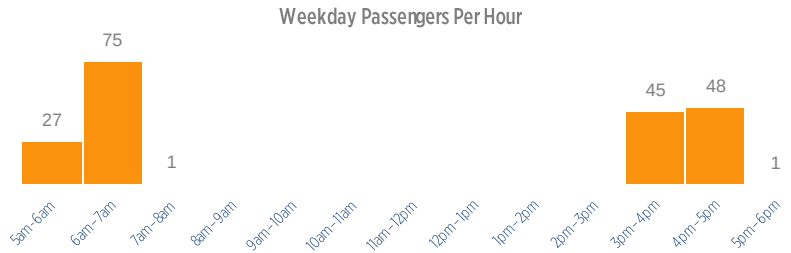
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** All service operates along the full length of the route as shown on the map to the right.

**SCHEDULE:** Service operates only on weekdays during peak periods, with three AM inbound and three PM outbound trips

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:41 AM – 6:05 PM | | 6 |
| Early AM | before 6:15 AM | 14-19 | 3 |
| AM Peak | 6:15 AM-8:15AM | - | - |
| Midday | 8:15 AM – 3:15 PM | - | - |
| PM Peak | 3:15 PM – 6:15 PM | 26-34 | 3 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 84X carries 199 passengers per weekday. Most riders travel between either MTSU or the North Boulevard Church of Christ Park & Ride and downtown Nashville.




**PERFORMANCE:** Route 84x ranks 34th in terms of total weekday ridership, 19th in terms of weekday riders per revenue vehicle hour and 2nd in terms of riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 199 | 34 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 23.6 | 19 | - | - | - | - |
| Riders/Trip | 33.2 | 2 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.2 | Good | *Indirect tail serves strong market* |
| Average Speed (mph) | 28.8 | Excellent | *Large portion of trip along I-24* |
| Stop Spacing (stops per mile) | 0.7 | Far | |
| Typical Peak Headway | 14-34 | Good | |
| Schedule Regularity | Fairly Irregular | Poor | *Peak commute direction only* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**
- Very high ridership per trip

**WEAKNESSES:**
- Irregular headways that may not be optimally matched with work schedules

**SERVICE IMPROVEMENT OPPORTUNITIES:**
- Examine schedule to determine whether adjustments are warranted

# 86x Smyrna / La Vergne Express

**Route 86x is an express route that operates between Smyrna and La Vergne and downtown Nashville primarily via Murfreesboro Pike and I-24.**

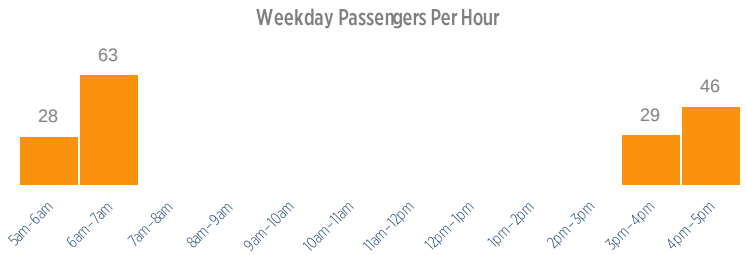
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** All service operates along the full length of the route as shown on the map to the right.

**SCHEDULE:** Service operates only on weekdays during peak periods.

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:52 AM – 5:47 PM | | 6 |
| Early AM | before 6:15 AM | 28 | 1 |
| AM Peak | 6:15 AM-8:15AM | 6 | 2 |
| Midday | 8:15 AM – 3:15 PM | - | - |
| PM Peak | 3:15 PM – 6:15 PM | 25-35 | 3 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 86x carries 167 passengers per weekday. Most passengers ride between either the Smyrna KMart Park & Ride or the La Vergne Kroger Park & Ride and downtown Nashville.



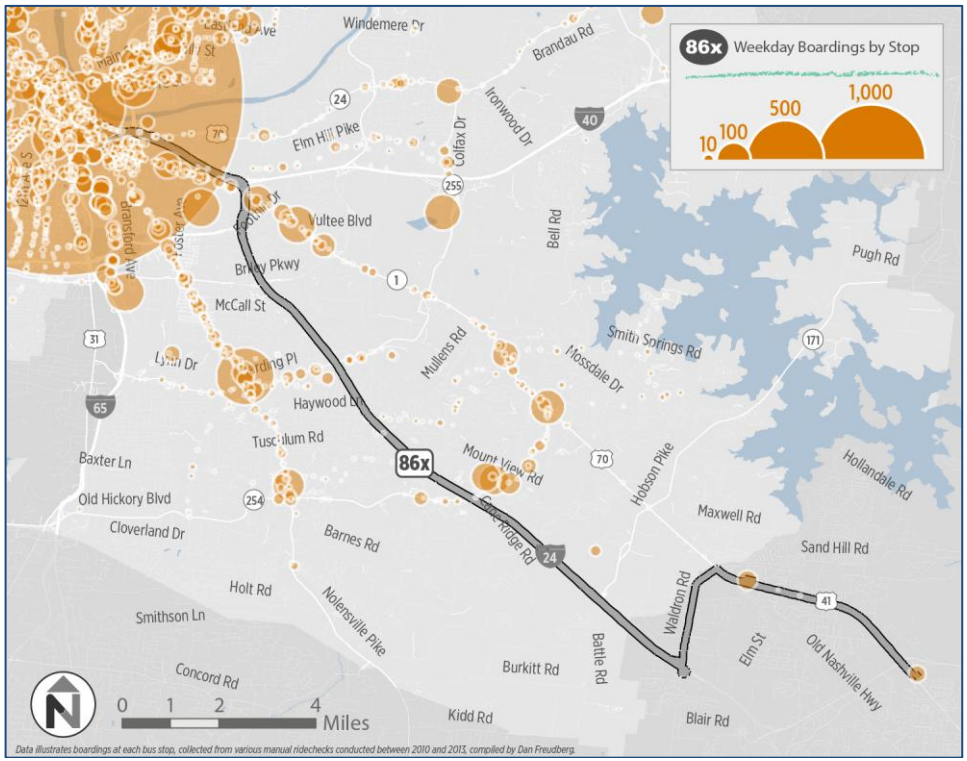

**PERFORMANCE:** Route 86x ranks 38th in terms of weekday ridership, but 17th in terms of weekday riders per revenue vehicle hour and 4th in terms of weekday riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 167 | 38 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 23.9 | 17 | - | - | - | - |
| Riders/Trip | 27.8 | 4 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.3 | Good | *Somewhat indirect but fast along I-24* |
| Average Speed (mph) | 21.3 | Excellent | |
| Stop Spacing (stops per mile) | 0.9 | Far | *But closer on Murfreesboro Pike* |
| Typical Peak Headway (mins) | 26-35 | Good | *Good for express route* |
| Schedule Regularity | Mostly regular | Fair | *Close to 30 minutes* |




**STRENGTHS AND WEAKNESSES AND OPPORTUNITIES**

**STRENGTHS:**
- Very high ridership per trip

**WEAKNESSES:**
- Slightly irregular headways

**SERVICE IMPROVEMENT OPPORTUNITIES:**
- Operate on clockface 30 minute headways
- Ridership suggests potential demand for earlier and later service

# 93 Music City Star West End Shuttle

**Route 93 is a loop route that provides connections between Music City Star commuter rail service at Riverfront Regional Rail Station in downtown Nashville and the West End. Service is timed for connections with Music City Star service, is free for Music City Star riders, and provides connections to and from the Gulch, Vanderbilt University, Belmont University, and other locations in the West End.**

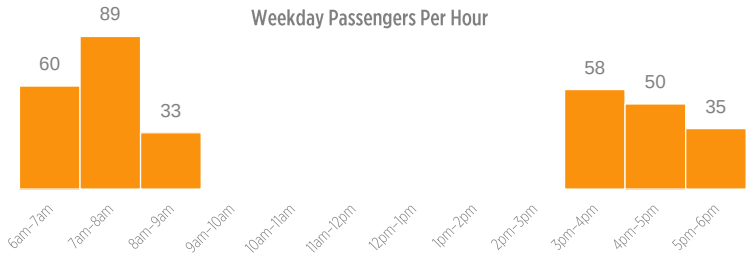
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 93 operates counterclockwise along the alignment shown in the map to the right.

**SCHEDULE:** Service operates only on weekdays, with three AM trips timed to meet commuter rail arrivals and three PM trips timed to meet commuter rail departures

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 6:37 AM – 5:35 PM | | 6 |
| Early AM | before 6:15 AM | - | - |
| AM Peak | 6:15 AM-8:15AM | 45-59 | 2 |
| Midday | 8:15 AM – 3:15 PM | NA | 2 |
| PM Peak | 3:15 PM – 6:15 PM | 40-45 | 2 |
| Evening/Night | 6:15 PM and later | - | - |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 93 carries 334 passengers per weekday. Riders travel to most locations along the route, but with the largest numbers to Vanderbilt University and Belmont University.




**PERFORMANCE:** Route 93 ranks 27 in terms of total ridership, but 1st in terms of weekday riders per revenue vehicle hour and 1st in terms of riders per trip:

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 334 | 27 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 58.7 | 1 | - | - | - | - |
| Riders/Trip | 55.7 | 1 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 2.8 | Poor | *Loop service is indirect* |
| Average Speed (mph) | 7.5 | Very slow | *Due primarily to slow traffic* |
| Stop Spacing (stops per mile) | 2.4 | Good | |
| Typical Peak Frequency | NA | Excellent | *Timed to rail arrivals and departures* |
| Schedule Regularity | NA | Poor | *Timed to rail arrivals and departures* |


## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

### STRENGTHS:

- Excellent connections between commuter rail and West End
- High ridership per trip; excellent productivity

### WEAKNESSES:

- Loop operation produces long travel times for some riders

### SERVICE IMPROVEMENT OPPORTUNITIES:

- Given very high ridership per trip, split into two routes that could provide more direct service
- Operate PM service clockwise to provide better service to Vanderbilt

# 96X Nashville / Murfreesboro Relax and Ride

**Route 96X is long radial route that operates between Middle Tennessee State University (MTSU) and downtown primarily via Murfreesboro Pike. It has an express service counterpart, which is Route 84X Murfreesboro Express, which provides peak period service along I-24.**

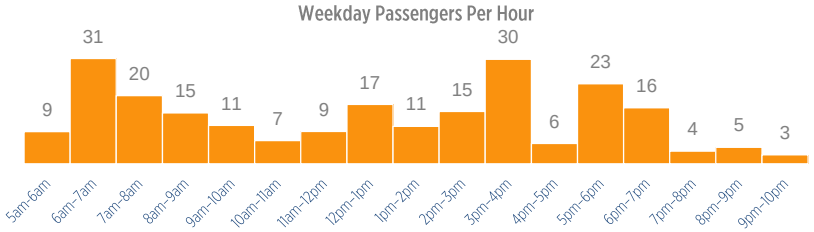
**SERVICE TYPE:** Limited

**SERVICE PATTERNS:** Route 96X operates between MTSU and Music City Central., largely along Murfreesboro Pike. All service operates from end to end. Some trips also serve the Edge-O-Lake Park and Ride, and one inbound and one outbound trip serve the Tennessee Rehabilitation Center.

**SCHEDULE:** Service operates throughout the day on weekdays, with headways that range from 60 to 180 minutes:

| | Span of Service | Typical Headway (mins) | One-Way Trips |
|---|---|---|---|
| **Weekdays** | 5:23 AM – 10:08 PM | | 19 |
| Early AM | before 6:15 AM | 180 | 1 |
| AM Peak | 6:15 AM-8:15AM | 60 | 3 |
| Midday | 8:15 AM – 3:15 PM | 60-90 | 8 |
| PM Peak | 3:15 PM – 6:15 PM | 100 | 4 |
| Evening/Night | 6:15 PM and later | 100 | 3 |
| **Saturdays** | - | - | - |
| **Sundays** | - | - | - |

**RIDERSHIP:** Route 96x carries 235 passengers per weekday. Ridership is highest during the AM Peak from 6 AM to 8 AM with a somewhat smaller peak in the PM, and lowest during the evening. By stop, ridership is highest at MTSU and the North Boulevard Church of Christ Park & Ride.



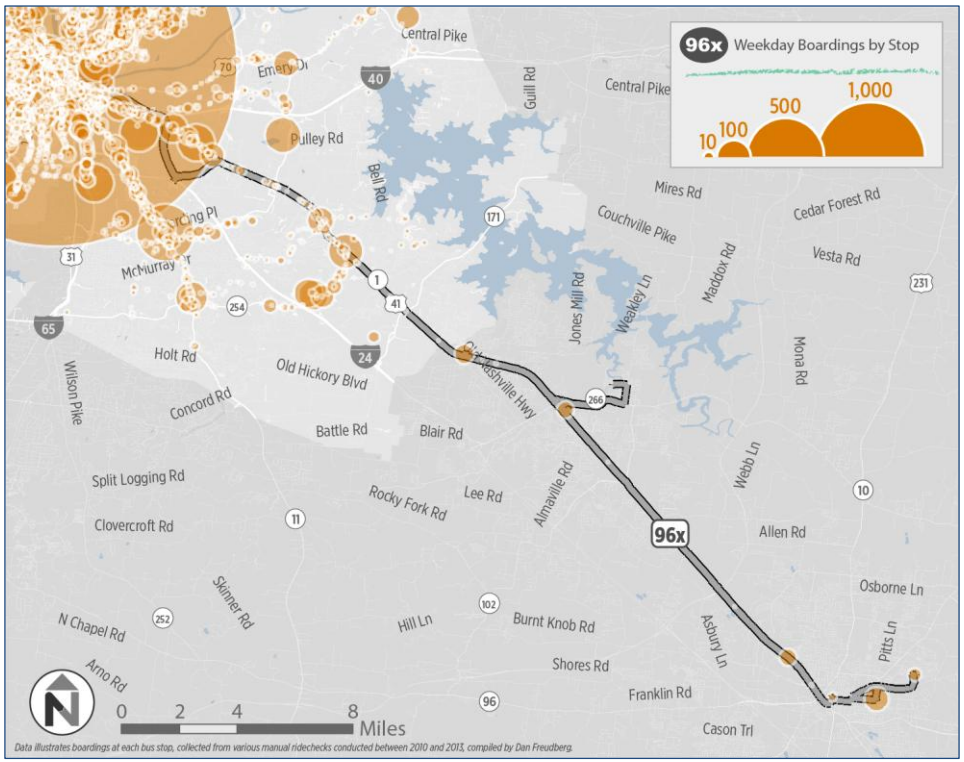

**PERFORMANCE:** Route 96x ranks 32nd in terms of riders per trip, 45th in terms of weekday riders per revenue vehicle hour, and 29th in terms of riders per trip: The very low ranking for riders per vehicle hour is primarily due to the route's long length.

| | Weekday | | Saturday | | Sunday | |
|---|---|---|---|---|---|---|
| | Value | Rank | Value | Rank | Value | Rank |
| Ridership | 235 | 32 | - | - | - | - |
| Riders per Revenue Vehicle Hour | 7.2 | 45 | - | - | - | - |
| Riders/Trip | 12.4 | 29 | - | - | - | - |

*Weekday rank is of 45 routes, Saturday of 26 routes, and Sunday of 23 routes*

**SERVICE DESIGN:**

| | Value | Rating | Comment |
|---|---|---|---|
| Directness (end-to-end; vs most direct route) | 1.1 | Excellent | *Trips w/ no deviations are very direct* |
| Average Speed (mph) | 22.3 | Excellent | |
| Stop Spacing (stops per mile) | 1.6 | Good | |
| Typical Peak Headway (mins) | 60 | Poor | |
| Schedule Regularity | Fairly Irregular | Poor | *Somewhat regular during peak* |




## STRENGTHS AND WEAKNESSES AND OPPORTUNITIES

**STRENGTHS:**

- Provides important regional link
- Fairly high boardings at Middle Tennessee State University and North Boulevard Church of Christ Park & Ride

**WEAKNESSES:**

- Irregular headways
- Very low evening ridership
- Route's long length produces lows productivity in terms of passengers per vehicle hour

**SERVICE IMPROVEMENT OPPORTUNITIES:**

- Operate regularly every 60 minutes
- Coordinate schedules with Route 15 Murfreesboro Pike (alternate trips to provide 30 minute local service), or
- Operate as BRT-Lite north of Bell Road