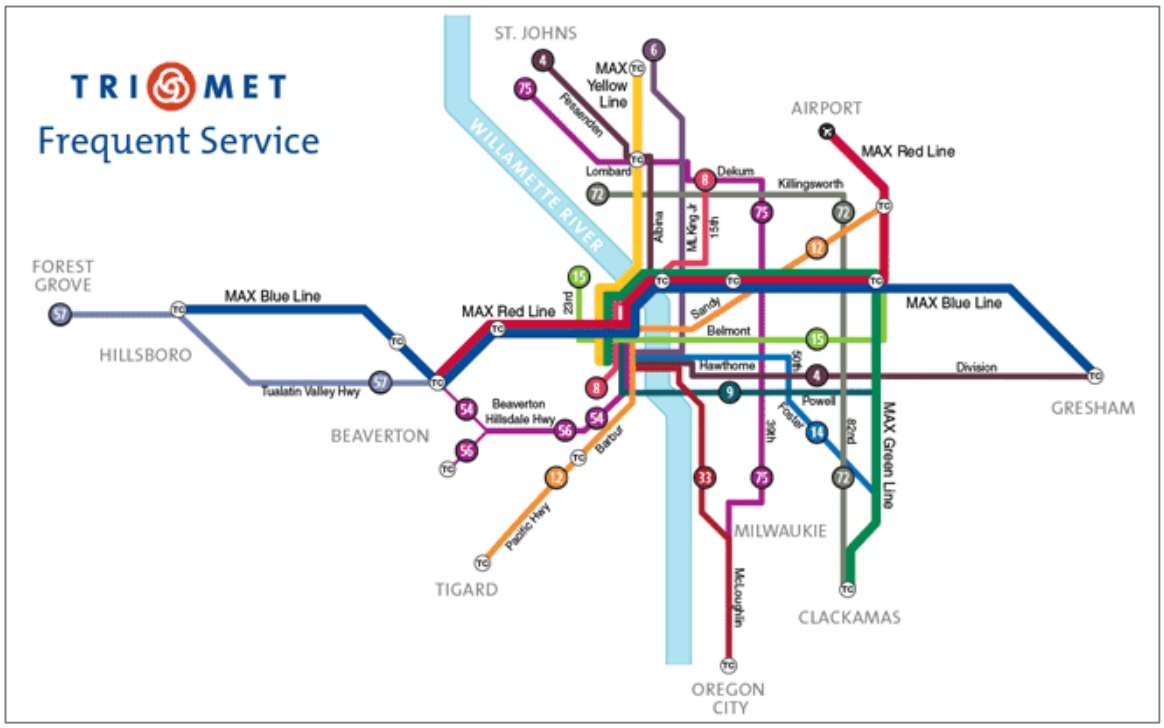
SCENARIOS DETAILS: DEVELOP A FREQUENT TRANSIT NETWORK

FREQUENT TRANSIT NETWORK

Transit is most attractive when it is frequent enough that people don't need to consult a timetable and can instead just go to a stop and know that the train or bus will arrive shortly. Nearly all major transit systems operate networks of frequent services. At very large transit systems, these are often comprised of rapid transit and light rail lines that are supplemented with frequent bus services (that are often bus rapid transit [BRT] and/or Rapid Bus lines). For transit systems that have either a limited number of rail lines only or that are bus only, Frequent Transit Networks or Frequent Service Networks are comprised largely or exclusively of bus services.

Over the past decade, there has been an increased emphasis on the development of Frequent Service Networks and, in particular, the branding of Frequent Service Networks to heighten public awareness of them. Furthermore, the development of Frequent Service Networks is a concept that is spreading to smaller systems.

FIGURE 1 | PORTLAND, OR FREQUENT TRANSIT NETWORK



WHAT ARE FREQUENT TRANSIT NETWORKS?

Frequent Transit Networks are designed to provide convenient service between an area's most important destinations and consist of a number of inter-related elements:

- **Frequent service**, typically every 10 to 15 minutes or less from the beginning of the morning peak to early evening or later
- **A sufficient number of routes to create a network** that serves all high-demand locations

- **Direct routes that operate along major arterials**, consisting of a combination of rapid transit, light rail, BRT, Rapid Bus, and local bus routes, and sometimes consisting entirely of local bus routes
- **Special branding and information** to make service visible and memorable

These elements are designed to make service more convenient, connected, and memorable. For additional information on Frequent Transit Networks, see nmotion2015.com/wp-content/uploads/2015/08/nMotion-Frequent-Transit-Network-150710_FINAL.pdf.

SUMMARY OF SCENARIO SERVICES

All three scenarios include the development of a Frequent Transit Network. The networks differ in terms of the types of services that would be provided, the number of routes, and service frequencies and spans of service. The types of services and the routes that are included in each scenario are presented in Table 1.

TABLE 1 | FREQUENT TRANSIT NETOWRK: SERVICE TYPES BY SCENARIO

Route/Corridor	Scenario 1 Comprehensive Regional System	Scenario 2 Bus-Focused Expansion	Scenario 3 Modest Improvements
3 West End	BRT	BRT	Rapid Bus
4 East Nashville	Rapid Bus	Rapid Bus	[Local Bus]
5 West End/Bellevue	Frequent Peak	[Local Bus]	[Local Bus]
6 Lebanon Pike	Frequent Peak	[Local Bus]	[Local Bus]
7 Hillsboro	BRT	Rapid Bus	Rapid Bus
9 MetroCenter	Rapid Bus	Rapid Bus	[Local Bus]
8 8th Avenue South	Frequent Peak	[Local Bus]	[Local Bus]
12 Nolensville Pike	LRT	BRT	Rapid Bus
14 Whites Creek	Frequent Peak	[Local Bus]	[Local Bus]
17 12th Avenue South	Rapid Bus	Rapid Bus	[Local Bus]
18 Elm Hill/Airport	Rapid Bus	[Local Bus]	[Local Bus]
19 Herman	Frequent Peak	Frequent Peak	Frequent Peak
22 Bordeaux	Rapid Bus	Rapid Bus	[Local Bus]
25 Edgehill	Rapid Bus	Rapid Bus	[Local Bus]
29 Jefferson/TSU	Rapid Bus	Rapid Bus	[Local Bus]
31 Hospitals	Rapid Bus	[Local Bus]	[Local Bus]
34 Opry Mills	Rapid Bus	Frequent Peak	Frequent Peak
43 Dickerson Pike	BRT	BRT	Rapid Bus
50 Charlotte Pike	LRT	BRT	Rapid Bus
55 Murfreesboro Pike	LRT	BRT	Rapid Bus
56 Gallatin Pike	LRT	BRT	Rapid Bus
East Nashville Streetcar	Streetcar	[Not Included]	[Not Included]
Germantown Streetcar	Streetcar	[Not Included]	[Not Included]
Northwest Corridor Commuter Rail	Commuter Rail	[Not Included]	[Not Included]

Note: On maps, the route numbers include a suffix if they are light rail (L), BRT (B), or Rapid Bus (R). For example, Route 12 Nolensville is light rail in Scenario 1 and labeled as Route 12L, BRT in Scenario 2 and labeled as 12B, and Rapid Bus in Scenario 3 and labeled as 12R.

SCENARIO 1: COMPREHENSIVE REGIONAL SYSTEM

Scenario 1 includes the development of an extensive Frequent Transit Network that would serve all densely developed areas of Davidson County (see Figure 2). The Frequent Transit Network would be largely comprised of premium services, including light rail, commuter rail, BRT, and Rapid Bus, plus Frequent Local routes:

Light Rail

- Route 12L Nolensville in the Nolensville Pike corridor
- Route 50L Charlotte in the Charlotte Pike corridor
- Route 55L Murfreesboro in the Murfreesboro Pike corridor
- Route 56L Gallatin in the Gallatin Pike Corridor

Streetcar

- West End – Downtown
- Germantown - Downtown

Commuter Rail

- Frequent service along the Northwest Corridor commuter rail line within Davidson County

BRT

- Route 3B West End BRT in the West End Avenue corridor
- Route 7B Hillsboro BRT in the 21st Avenue South/Hillsboro Pike corridor
- Route 43B Dickerson BRT in the Dickerson Road corridor

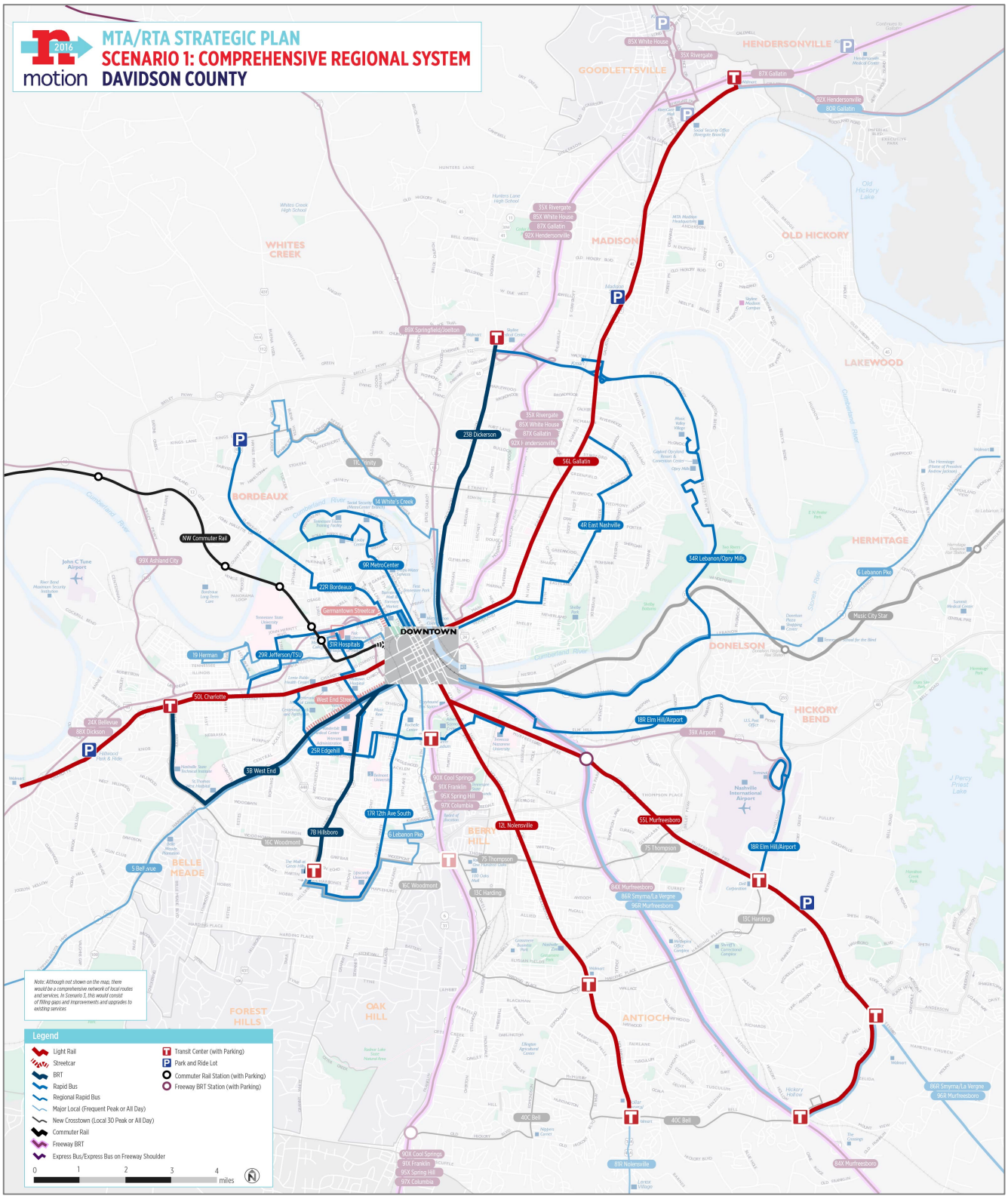
Rapid Bus

- Route 4R East Nashville Rapid between Gallatin Road at Ardee Avenue and downtown via areas east of Gallatin Pike
- Route 9R MetroCenter Rapid between MetroCenter and downtown
- Route 17R 12th Avenue South Rapid via 21st Avenue South and 12th Avenue South Pike
- Route 18R Elm Hill/Airport Rapid between Murfreesboro BRT and downtown Nashville via Nashville International Airport
- Route 22R Bordeaux Rapid between Bordeaux and downtown via Clarksville Pike
- Route 25R Edgehill Rapid between Charlotte Pike and Trevecca Nazarene University via Edgehill Avenue
- Route 29R Jefferson/TSU Rapid between Charlotte Pike and downtown via TSU and Jefferson Street
- Route 31R Hospitals Rapid between Jefferson Street and Blakemore Avenue via Metro General Hospital, Saint Thomas Midtown Hospital, and Vanderbilt Medical Center
- Route 34R Opry Mills Rapid, between Gallatin Pike and downtown Nashville via Opry Mills

Frequent Local

- Route 5 West End/Bellevue between Bellevue and downtown via Harding Road (Frequent Peak)
- Route 6 Lebanon Pike between the Hermitage Music City Star station and downtown via Lebanon Pike (Frequent Peak)
- Route 8 8th Avenue South between Lipscomb University and downtown via 8th Avenue South (Frequent Peak)
- Route 14 Whites Creek between Bordeaux and downtown via Whites Creek Pike (Frequent Peak)
- Route 19 Herman that would serve areas north of Charlotte Pike (Frequent Peak)

FIGURE 2 | SCENARIO 1 FREQUENT TRANSIT NETWORK



On weekdays, most services would operate every 10 minutes throughout most of the day and from 5 AM until midnight or 1 AM (see Table 2). Weekend service would operate every 10 to 15 minutes for similar or slightly shorter hours.

TABLE 2 | SCENARO 1 FREQUENT TRANSIT NETWORK: WEEKDAY SERVICE SPANS AND FREQUENCIES

Service Type	Span of Service	Service Frequencies (mins)			
		Peak Periods	Midday	Evening	Early/Late
Light Rail	5 am – 1 am	10	10	10	20
BRT	5 am – 1 am	10	10	10	20
Streetcar	5 am – 1 am	10	10	10	20
Rapid Bus	5 am – 1 am	10	10	10	20
Regional Rapid Bus	5 am – 11 pm	30	60	60	60
Frequent All Day	5 am – 12 am	15	15	15	30
Frequent Peak	5 am – 12 am	15	30	30	30
Davidson County Commuter Rail	5 am – 1 am	15	30	30	30

SCENARIO 2: BUS-FOCUSED EXPANSION

Scenario 2 also includes the development of an extensive Frequent Transit Network, albeit smaller than in Scenario 1 (see Figure 3). It would also be comprised entirely of bus services – primarily BRT and Rapid Bus, but also some local routes:

BRT

- Route 3B West End BRT in the West End Avenue corridor
- Route 12B Nolensville BRT in the Nolensville Pike corridor
- Route 43B Dickerson BRT in the Dickerson Road corridor
- Route 50B Charlotte BRT in the Charlotte Pike corridor
- Route 55B Murfreesboro BRT in the Murfreesboro Pike corridor
- Route 56B Gallatin BRT in the Gallatin Pike Corridor

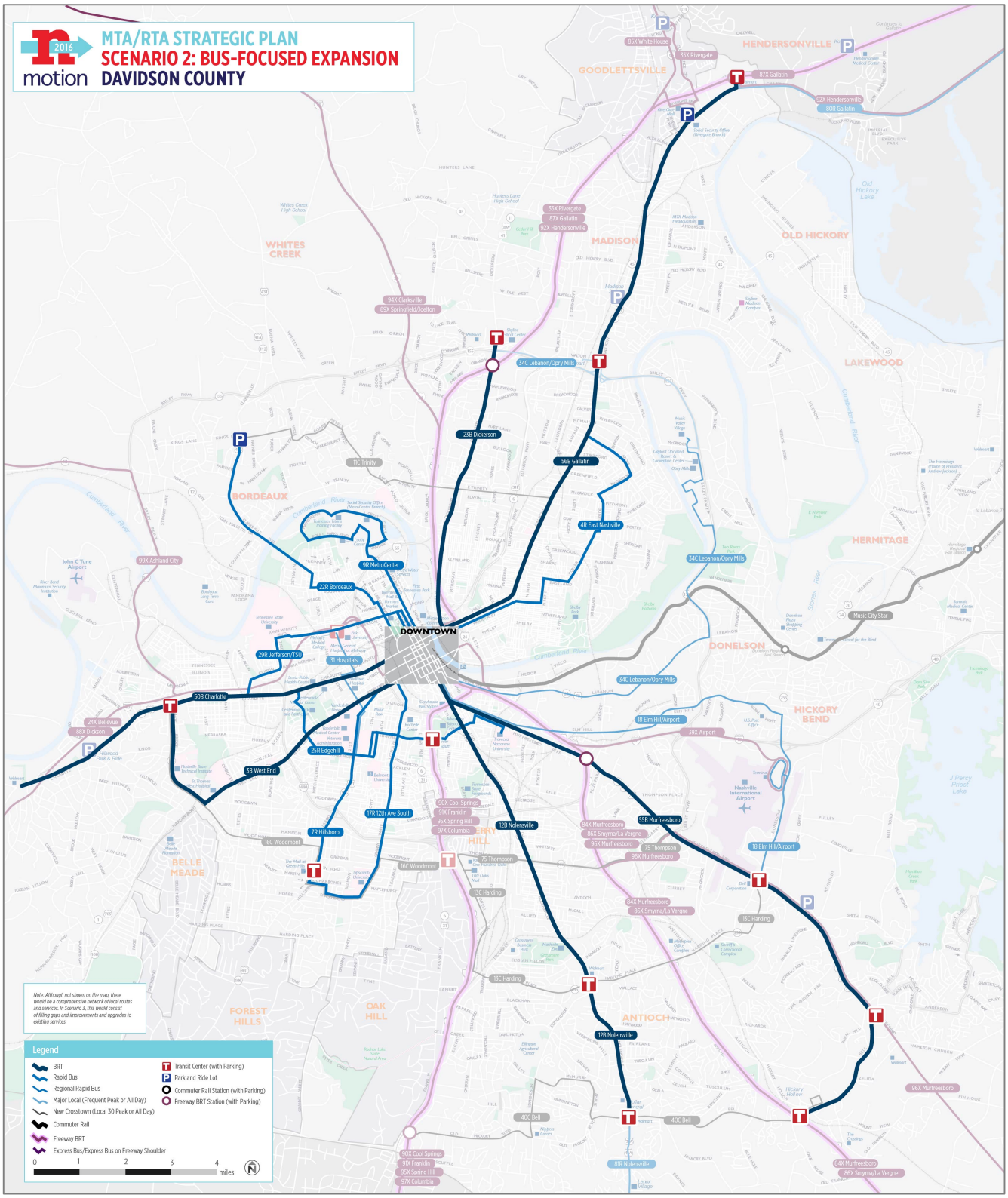
Rapid Bus

- Route 4R East Nashville Rapid between Gallatin Road at Ardee Avenue and downtown via areas east of Gallatin Pike
- Route 7R Hillsboro Rapid in the 21st Avenue South/Hillsboro Pike corridor
- Route 9R MetroCenter Rapid between MetroCenter and downtown
- Route 17R 12th Avenue South Rapid via 21st Avenue South and 12th Avenue South Pike
- Route 22R Bordeaux Rapid in Clarksville Pike corridor
- Route 25R Edgehill Rapid between Charlotte Pike and Trevecca Nazarene University via Edgehill Avenue
- Route 29R Jefferson/TSU Rapid between Charlotte Pike and downtown via TSU and Jefferson Street

Frequent Local

- Route 19 Herman that would serve areas north of Charlotte Pike (Frequent Peak)
- Route 34 Lebanon/Opry Mills, which would operate circumferentially between Dickerson Pike and downtown Nashville via Opry Mills (Frequent Peak)

FIGURE 3 | SCENARIO 2 FREQUENT TRANSIT NETWORK



On weekdays, most services would operate every 10 minutes throughout most of the day and from 5 AM until 11 PM to 1 AM (see Table 3). Weekend service would operate every 10 to 15 minutes for similar or slightly shorter hours.

TABLE 3 | SCENARO 2 FREQUENT TRANSIT NETWORK: WEEKDAY SERVICE SPANS AND FREQUENCIES

Service Type	Span of Service	Service Frequencies (mins)			
		Peak Periods	Midday	Evening	Early/Late
BRT	5 am – 12 am	10	10	10	20
Rapid Bus	5 am – 12 am	10	15	15	30
Regional Rapid Bus	5 am – 11 pm	30	60	60	60
Frequent All Day	5 am – 12 am	10	15	15	30
Frequent Peak	5 am – 12 am	15	30	30	30

SCENARIO 3: MODEST IMPROVEMENTS

Scenario 3 includes the development of a basic Frequent Transit Network that would consist of frequent service in nine corridors. This Frequent Transit Network would be significantly less extensive than in Scenarios 1 and 2:

Rapid Bus

- Route 3R West End Rapid in the West End Avenue corridor
- Route 7R Hillsboro Rapid in the 21st Avenue South/Hillsboro Pike corridor
- Route 12R Nolensville Rapid in the Nolensville Pike corridor
- Route 43R Dickerson Rapid in the Dickerson Road corridor
- Route 50R Charlotte Rapid in the Charlotte Pike corridor
- Route 55RMurfreesboro Rapid in the Murfreesboro Pike corridor
- Route 56R Gallatin Rapid in the Gallatin Pike Corridor

Frequent Local

- Route 19 Herman that would serve areas north of Charlotte Pike (Frequent Peak)
- Route 34 Lebanon/Opry Mills, which would operate circumferentially between Dickerson Pike and downtown Nashville via Opry Mills (Frequent Peak)

On weekdays, all services would operate at least every 15 minutes during peak periods, every 15 to 30 minutes during other times, and from 5 AM until 10 or 11 PM (see Table 4). Weekend service would operate every 15 to 30 minutes for similar hours.

TABLE 4 | SCENARO 3 FREQUENT TRANSIT NETWORK: WEEKDAY SERVICE SPANS AND FREQUENCIES

Service Type	Span of Service	Service Frequencies (mins)			
		Peak Periods	Midday	Evening	Early/Late
Rapid Bus	5 am – 11 pm	15	15	15	30
Frequent All Day	5 am – 10 pm	15	15	15	30
Frequent Peak	5 am – 10 pm	15	30	30	30

FIGURE 4 | SCENARIO 3 FREQUENT TRANSIT NETWORK