



## **Metropolitan Atlanta Rapid Transit Authority**

### **EXHIBIT A**

---

#### **Clayton Extension Report**

**Summarizing the Comprehensive Transit Plan for  
Extension of Transit Services into Clayton County,  
including Rail Transit and Surface Bus Transportation**

---

Prepared By:

Metropolitan Atlanta Rapid Transit Authority  
2424 Piedmont Road, Atlanta, Georgia 30324-3324

June 2014

## TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1-1</b>
1.1	Purpose .....	1-1
1.2	Scope .....	1-1
<b>2</b>	<b>SYSTEM PLAN.....</b>	<b>2-1</b>
2.1	Bus System Components.....	2-1
2.1.1	Planned Local Route Descriptions .....	2-1
2.1.2	Planned Bus Transit Hubs and Stops .....	2-4
2.1.3	Flex Route Description .....	2-4
2.2	ADA Complementary Paratransit .....	2-7
2.1	Rail Line Components .....	2-8
2.1.1	Planned Rail Route Description.....	2-9
2.1.2	Planned Rail Station Locations.....	2-9
2.1.3	Infrastructure/ROW Requirements .....	2-9
2.1.4	Rail Service Plans .....	2-9
2.2	Other System Components.....	2-10
2.2.1	Safety and Security .....	2-10
2.2.2	Transit Amenities .....	2-10
2.2.3	MARTA Maintenance/Dispatch/Security Center .....	2-10
2.2.4	Park and Ride Facilities .....	2-10
<b>3</b>	<b>SYSTEM IMPLEMENTATION PLAN .....</b>	<b>3-1</b>
3.1	FY 2016.....	3-1
3.1.1	Planned Revenue Bus Service.....	3-1
3.1.2	Rail Project Development and Engineering.....	3-6
3.1.2.1	Environmental/Engineering Studies – Rail System.....	3-6
3.1.2.2	Environmental/Site Development Plans–Maintenance/DispatchSecurity Center.....	3-6
3.1.2.3	Construction of Park & Ride Lot(s).....	3-6
3.2	FY 2020.....	3-7
3.2.1	Planned Revenue Bus Service.....	3-7
3.2.2	Rail Services.....	3-8
3.2.2.1	Planned Revenue Rail Services.....	3-8
3.2.2.2	Planned Rail Infrastructure.....	3-9
3.2.3	Construction of MARTA Maintenance/Dispatch Security Center .....	3-9
3.3	FY 2025.....	3-11
3.3.1	Planned Revenue Bus Service.....	3-11
3.3.2	Rail Services.....	3-12
3.3.2.1	Planned Revenue Rail Services.....	3-12

<b>4</b>	<b>PATRONAGE ESTIMATES .....</b>	<b>4-1</b>
<b>5</b>	<b>COST AND FINANCING PLAN .....</b>	<b>5-1</b>
5.1	System Costs .....	5-1
5.1.1	Bus.....	5-1
5.1.1.1	Bus Capital Costs.....	5-1
5.1.1.2	Bus Operating Costs .....	5-1
5.1.2	Rail Costs .....	5-2
5.1.2.1	Rail Capital Costs.....	5-2
5.1.2.2	Rail Operating Costs .....	5-4
5.1.3	MARTA Clayton Operations Center .....	5-5
5.2	Sources of Funds .....	5-5
5.2.1	Projected Sales Tax Generation .....	5-6
5.2.2	Farebox Revenues .....	5-6
5.2.3	Other Sources.....	5-6
5.3	Financing Plan.....	5-6

## LIST OF TABLES

Table 2-1: General Characteristics for Local Bus Service by Route .....	2-3
Table 2-2: 2025 General Characteristics for Flex Bus/Circulator Service by Route .....	2-5
Table 3-1: FY 2016 Service Characteristics by Route .....	3-2
Table 3-2: FY 2016 Service Characteristics by Flex Area.....	3-3
Table 3-3: FY 2016 Estimated Operating Statistics for Bus-Related Services .....	3-4
Table 3-4: 2020 New Service Characteristics .....	3-7
Table 3-5: FY 2020 Service Characteristics by Flex Route .....	3-8
Table 3-6: 2020 Estimated Revenue and Platform Hours for Bus-Related Services.....	3-8
Table 3-7: FY 2022 Rail Service Characteristics.....	3-9
Table 3-8: FY 2025 Service Characteristics by New Flex Route .....	3-11
Table 3-9: FY 2025 Estimated Revenue and Platform Hours for Bus-Related Services .....	3-12
Table 4-1: Patronage Estimates .....	4-2
Table 5-1: Estimated Operations and Maintenance Costs.....	5-2
Table 5-2: Exclusive Track Rail Capital Costs .....	5-3
Table 5-3: Shared Use Rail Capital Costs.....	5-4
Table 5-4: Exclusive Track Annual Operating and Maintenance Costs .....	5-5
Table 5-5: Shared Track Annual Operating and Maintenance Costs.....	5-5
Table 5-6: MARTA Clayton Operations Center Building Estimated Costs.....	5-5
Table 5-7: Shared Track Option Cash Flow .....	5-7
Table 5-8: Exclusive Track Option Cash Flow .....	5-8

## LIST OF FIGURES

Figure 2-1: FY 2025 Built Out Clayton Transit System .....	2-6
Figure 2-2: FY 2025 Clayton County Paratransit Coverage Area .....	2-8
Figure 2-3: Rail Transit Plan.....	2-11
Figure 3-1: Clayton County Transit Implementation Timeline .....	3-1
Figure 3-2: FY 2016 Clayton County Bus Service.....	3-5
Figure 3-3: FY 2022 Clayton County Transit Service.....	3-10
Figure 3-4: FY 2025 Clayton County Transit Service.....	3-13

# 1 INTRODUCTION

The Metropolitan Atlanta Rapid Transit Authority (MARTA) is the transit agency for Fulton County, DeKalb County and the City of Atlanta, providing bus, paratransit, and heavy rail service pursuant to the MARTA Act of 1965 and the Rapid Transit Contract and Assistance Agreement (RTCAA) that stipulate the provision of transit services provided in these jurisdictions. Additionally, these jurisdictions impose a 1% sales tax to provide funding for MARTA service.

To the south of these two counties is Clayton County, the location of the Hartsfield-Jackson International Airport and the southernmost MARTA Airport heavy rail station. From 2001-2010 Clayton County operated its own bus system, C-Tran, to provide connectivity for the many residents who work at the airport and travel to Fulton and DeKalb Counties on a daily basis. However, due to lack of funds, the C-Tran system dissolved in 2010. Clayton County is presently not a party to the RTCAA.

Today, Clayton County's demographics and commute patterns are compelling arguments for transit services that serve the county and connect to the broader Atlanta metropolitan region. In January 2014, the Clayton County Board of Commissioners authorized a transit feasibility study to determine feasibility, define transit needs, and to identify potential revenue sources. Completed in June 2014, the results of the study indicate a significant need for transit services, strong public support for joining MARTA, and a willingness to support a sales tax to fund transit service.

Based on the feasibility study results, Clayton County has expressed a desire to enter into a Rapid Transit Contract with MARTA, whereby both bus service and rail transit will be extended into Clayton County. MARTA has completed a comprehensive 10-year plan for the application of transit service in Clayton County. This report summarizes the technical aspects and defines key facts and statistics pertaining to the plan.

Furthermore, it should be noted that this Clayton Extension Report and provisions described herein is intended to serve as an illustrative proposal for extension of transit services into Clayton County. It is expected that adjustments and/or refinements to the service plan will be required, either as the result of further engineering/environmental studies, customer trials/acceptance of service, to address changes in demand over time, or due to inclement weather, special occurrences/events such as emergency/disaster response and recovery, etc.

## 1.1 Purpose

The purpose of this report is to exhibit the details of the comprehensive transit service plan for Clayton County. Thus, the report serves as a reference document to the Rapid Transit Contract, the contract under which Clayton County and MARTA mutually pledge certain actions and monies toward implementation of the plan. This report is the "Clayton Extension Report" which is referred to throughout the said Rapid Transit Contract.

## 1.2 Scope

This report includes an illustrative 10-year system plan, implementation plan, patronage estimates, and a financing plan for Clayton County transit service. The system plan describes general physical aspects such as routes, service plans, and necessary

acquisitions for both bus service and rail transit. The implementation plan is broken into 5-year increments based on MARTA's Fiscal Year (FY) schedule, which begins July 1<sup>st</sup> and ends June 30<sup>th</sup> each year. The implementation of the bus component is scheduled for the beginning of FY 2016, and the bus and rail components in FY2022.

To support capacity planning and scheduling as well as anticipated revenues due to patronage, the number of daily riders has been estimated. Finally, the financing plan includes anticipated capital costs for bus and rail extension options into Clayton County, and a year-by-year examination of revenues and expenditures.

DRAFT

## 2 SYSTEM PLAN

This chapter describes the generalized planned routes by mode, anticipated service plans, and infrastructure needs to expand MARTA service into Clayton County. The Bus System Components, Rail Line Components, and Other Considerations are presented. As previously noted, the system plan is illustrative and it is expected that adjustments and/or refinements will be required.

### 2.1 Bus System Components

The MARTA bus component proposed in Clayton County consists of three bus-related services that will be implemented in phases between early FY 2016 and the FY 2025 plan horizon. The three include local bus, flex bus, and ADA complementary paratransit. Each of the three options are introduced and described further below. The service characteristics are included in Chapter 3: Implementation Plan by implementation year.

It should also be noted that pending the successful passage of the 1% sales tax in November 2014, it is anticipated that MARTA could potentially extend adjacent existing MARTA bus routes into Clayton County with revenue service by March 2015.

#### 2.1.1 Planned Local Route Descriptions

##### **Local Bus Service**

Local bus is the primary surface public transportation option available throughout the majority of the Atlanta metropolitan region today. Local bus service uses rubber-tired motorbus vehicles and operates with traditional bus stops, makes frequent stops, and travels at lower speeds. It operates in regular traffic and can have service frequencies that range from low to high depending on application and demand.

The planned local bus service in the Clayton County network includes eight fixed routes. For the purposes of this report, the routes have been designated as Routes 1-8. Six of these routes are expected to be in place by beginning of FY 2016, and the seventh and eighth routes are planned to start service by FY 2020. In addition, two of these routes (Routes 2 and 5) are proposed to be extended and/or modified in FY 2020.

It is important to recognize that these routes are based on the overarching philosophy of providing Clayton County with as much of a grid-based network that the roadway configuration will allow. This, in turn, will provide convenient access and connectivity throughout much of the County's core. In this regard, Routes 2 and 6 are designed to be the key north-south and east-west line-haul "spines" of the network, respectively, which is reflected in their frequencies of service. Routes 1 & 1A, 3, and 4 are intended to provide other north-south alternatives across the core, with Routes 5, and 7 and 8 serving as additional east-west connectors. It should be noted that the implementation of local bus service requires flexibility in implementation to respond to ever-changing corridor conditions and route structure requirements.

Following are general descriptions of the alignments proposed for each of the seven routes.

- *Route 1 & 1A, State Road (SR) 85/Riverdale/SR 138* – This route starts in the north at the Mountain View Hub and heads south on Old Dixie Highway to Forest Parkway, where it then heads west to SR 85. At SR 85, the route proceeds south to connect to the Riverdale Hub. The route then operates south on SR 85 to Flint River Road via

Pointe South Parkway. The route heads east on Flint River Road to Tara Boulevard, then goes south on Tara to connect to its southern terminus at the Justice Center Hub OR from the Riverdale Hub, the route proceeds south to SR 138 then east to Tara Blvd then south to the Justice Center Hub. (Note: when Route 8 is introduced this route will return to Flint River Rd. for all trips; Route 1A will be eliminated).

- *Route 2, Old Dixie/Tara* – This route starts in southern Fulton County at the East Point MARTA Station and goes southeast on Central Avenue/Porsche Avenue/Old Dixie Highway (through connection via Main Street and Irene Kidd Parkway from the station) to the Mountain View Hub. From this hub, the route heads south on Old Dixie Highway until it connects with Tara Boulevard just south of the I-75 interchange. Once on Tara, the route proceeds south to its southern terminus at the Justice Center Hub. The alignment is maintained from that point south to the Justice Center Hub, which becomes an intermediate layover point on the way farther south along Tara to the Lovejoy Hub, which then becomes the route's southern terminus.
- *Route 3, SR 54/Jonesboro* – This route starts in southern Fulton County on Jonesboro Road between I-285 and Conley Road SE, where it connects with MARTA Route 55. The route then heads south on Jonesboro Road (SR 54), with intermediate connections at the Fort Gillem and Morrow Hubs, until it merges onto Main Street and continues south to Smith Street. On Smith, the route proceeds west, then turns south onto Tara Boulevard to connect to its southern terminus at the Justice Center Hub.
- *Route 4, Conley/SR 42/Mt. Zion* – This route starts in the north at the Mountain View Hub and heads east on Conley Road to Moreland Avenue, where it then heads southeast to Rex Road. At Rex, the route proceeds west to Mt. Zion Boulevard, where it turns south. The route heads southwest on Mt. Zion until it connects with Stockbridge Road via Wright Circle, then goes west on Stockbridge to Main Street and turns south towards Smith Street. On Smith, the route proceeds west, then turns south onto Tara Boulevard to connect to its southern terminus at the Justice Center Hub.
- *Route 5, Forest Parkway* – This route starts in southern Fulton County at the College Park MARTA Station and goes southwest on Roosevelt Highway to Riverdale Road. The route stays on Riverdale until it reaches Forest Parkway, then it heads east. On Forest Parkway, the route connects with the Fort Gillem Hub before continuing east to terminate at a location near the intersection with Bouldercrest Road in FY 2016. This eastern terminus is maintained until the route is extended north by FY 2020 to connect with MARTA in DeKalb County. In this later year, the route continues north on Bouldercrest Road until it reaches Panthersville Road, then it heads slight east and north again into DeKalb until eventually connecting with MARTA Routes 15 and 34 at the Decatur Campus of Georgia Perimeter College at Clifton Springs Road.
- *Route 6, Church/Upper Riverdale/Mt. Zion* – This route starts in southern Fulton County at the College Park MARTA Station and goes southwest on Roosevelt Highway to Riverdale Road. The route stays heading southeast on Riverdale (SR 139) and Church Street until it reaches Main Street/Valley Hill Road SE, where it turns east to SR 85. It proceeds south on SR 85 to the Riverdale Hub, then goes back north on SR 85 to Valley Hill Road SE to turn east and continue onto Upper Riverdale Road. From Upper Riverdale, the route goes south on Tara Boulevard to Mt. Zion Road, where it heads east once again to connect with the Morrow Hub before continuing east to complete a terminal loop using Mt. Zion to Southlake Parkway to Jonesboro Road.
- *Route 7, Valley Hill/Battlecreek* – This route starts at the Riverdale Hub and heads north on SR 85 to Valley Hill Road SE, where it turns east to continue on Valley Hill Road. From Valley Hill, the route shifts over to Battlecreek Road before crossing Tara



Boulevard. The route continues on Battlecreek until it reaches Jonesboro Road, where it proceeds north to Mt. Zion Road. The route heads east on Mt. Zion Road until it crosses Mt. Zion Boulevard, then it completes a large loop using Conkle Road to the southeast, Fielder Road to the northeast, and Mt. Zion Parkway to the northwest, and a short jog back to Mt. Zion Road via Mt. Zion Boulevard.

- *Route 8, SR-138* – This route starts at the Mt. Zion Park & Ride and continues west to Old National Highway. (Note: when this route is initiated Route 1 will return to Flint River Rd. for all trips; Route 1A will be eliminated).

It should be noted that basic route designations have been assumed for the routes (Route 1, 2, etc.) for purposes of this report. While these designations can easily be changed for the final routes that are ultimately implemented, it is recommended that the naming convention not utilize the prior C-Tran designations to enable a clean break with any history and/or perceptions of that previous service.

Based on the described routes, Table 2-1 shows the general characteristics of the local bus routes for Clayton County.

*Table 2-1: General Characteristics for Local Bus Service by Route*

<b>Route</b>	<b>One-Way Length in Miles<sup>1</sup></b>	<b>Assumed Average Operating Speed<sup>3</sup></b>	<b>Annual Weekday Days of Service</b>	<b>Annual Saturday Days of Service<sup>4</sup></b>	<b>Annual Sunday Days of Service</b>
1 & 1A – SR 85/Riverdale/SR 138	14.26	15	255	58	52
2 – Old Dixie/Tara	14.23	15	255	58	52
3 – SR 54/Jonesboro	11.82	15	255	58	52
4 – Conley/SR 42/Mt. Zion	17.40	15	255	58	52
5 – Forest Parkway	14.26 <sup>2</sup>	15	255	58	52
6 – Church/Upper Riverdale/Mt. Zion	17.07	15	255	58	52
7 – Valley Hill/Battlecreek	8.58	15	255	58	52
8 – SR 138	11.65	15	255	58	52

*Notes:*

- 1. All route distance mileages have been estimated using Google Earth aerial images and verified to the extent possible with ArcGIS measuring tools. The mileage for Route 2 increases to 15.03 miles in FY 2020 due to changes in its termini.*
- 2. The mileage for Route 5 increases to 20.30 miles in 2020 due to an extension north to DeKalb County.*
- 3. The average speed of 15 mph is based on historical C-Tran system-level revenue miles per revenue hour data.*
- 4. It should be noted that the number of Weekdays, Saturdays and Sundays can change on an annual basis.*

### 2.1.2 Planned Bus Transit Hubs and Stops

In addition to routes, Figure 2-1 shows the presence of five key transit “hubs” that will be the primary points of connection for the proposed initial local bus routes in Clayton County, as well as a sixth hub (in Lovejoy) that will be developed by FY 2020. Sometimes referred to as Transfer (or Transit) Centers, these enhanced stops are intended to be larger and more involved in terms of infrastructure and available amenities than regular bus stops. The general concept for a hub is that it will be an access point to the fixed-route bus network that acts as a transfer point for two or more routes. The hubs will be co-located with major activity centers, and have convenient access to nearby major intersections. The hubs also will provide sufficient bays (depending on anticipated demand) to allow for at least two buses to simultaneously board and alight passengers. Some of the desired infrastructure and amenities that will be considered to support the high level of passenger activity that typically occurs at these types of stops include concrete bus pads, sidewalk connectivity, ADA-compliant boarding and alighting areas, shelter space, benches, trash receptacles, lighting, bicycle racks, security telephones, and bus network and schedule information.

The hubs that have been proposed for the Clayton County local bus network are as follows:

- *Mountain View Hub* – This hub is proposed to be located near the Conley Road and Old Dixie Highway intersection in the Mountain View community area. It is intended to provide a northwest Clayton County connection point for local service, as well as convenient access to Hartsfield-Jackson Atlanta International Airport.
- *Fort Gillem Hub* – This hub is proposed to be located adjacent to the Fort Gillem redevelopment area, near the confluence of State Road (SR) 54 (Jonesboro Road), Forest Parkway, and Metcalf Road. It is intended to provide a northeast county connection point between the Forest Park and Lake City communities.
- *Morrow Hub* – This hub is proposed to be located adjacent to the Southlake Mall, near the Mt. Zion Road and Jonesboro Road intersection. It is intended to provide a connection point in the central portion of the county’s core.
- *Riverdale Hub* – This hub is proposed to be located adjacent to the Walmart Supercenter on SR 85 at Lamar Hutcheson Parkway. It is intended to provide a connection point in the western portion of the county’s core.
- *Justice Center Hub* – This hub is proposed to be located adjacent to the Harold R. Banke Justice Center on Tara Boulevard. It is intended to provide a connection point in the southern portion of the county’s core.
- *Lovejoy Hub* – This hub is proposed to be developed by FY 2020 adjacent to the commercial development straddling Tara Boulevard south of McDonough road. It is intended to eventually become the southernmost connection point in the county.

Specific guidance on the locations of “non-hub” local bus stops is not provided herein. These stops will need to be located as part of a final bus operating plan once route alignments have been finalized. However, it will be important to ensure that typical stop spacing ranges from 0.25 to 0.5 miles, dependent on passenger access demand and logical access to adjacent major uses, but also to ensure maintenance of efficient local bus operations.

### 2.1.3 Flex Route Description

A Flex route is a fixed schedule service with a set circulator route serving a particular area that deviates from its route when requested. Calls to deviate from the general circulator route can be scheduled ahead of time. In this way, one vehicle can provide fixed route and

demand responsive service in an area with lower demand for transit, but a need to connect to the main bus system in Clayton County.

Table 2-3 shows the general characteristics for all flex route areas and the year they are slated for implementation.

*Table 2-2: 2025 General Characteristics for Flex Bus/Circulator Service by Route*

Route	FY Year	One-Way Length in Miles <sup>1</sup>	Assumed Average Operating Speed <sup>2</sup>	Annual Weekday Days of Service	Annual Saturday Days of Service <sup>3</sup>	Annual Sunday Days of Service
West Riverdale	2016	15	15	255	58	52
Irondale/Lovejoy <sup>4</sup>	2016	15	15	255	58	52
Ellenwood	2020	15	15	255	58	52

*Notes:*

- 1. The mileage for each flex route is based on the amount of service that could be provided by one vehicle in one hour within an assumed 7-square-mile zone.*
- 2. The average speed of 15 mph was used to match that assumed for local bus service, which is based on historical C-Tran system-level revenue miles per revenue hour data.*
- 3. It should be noted that the number of Weekdays, Saturdays and Sundays can change on an annual basis.*
- 4. The Irondale/Lovejoy flex route is replaced with the extension of Route 2 in 2020.*

Figure 2-1 shows a map of the full bus system vision in FY 2025, including all local bus routes, flex routes, and the transit hubs.

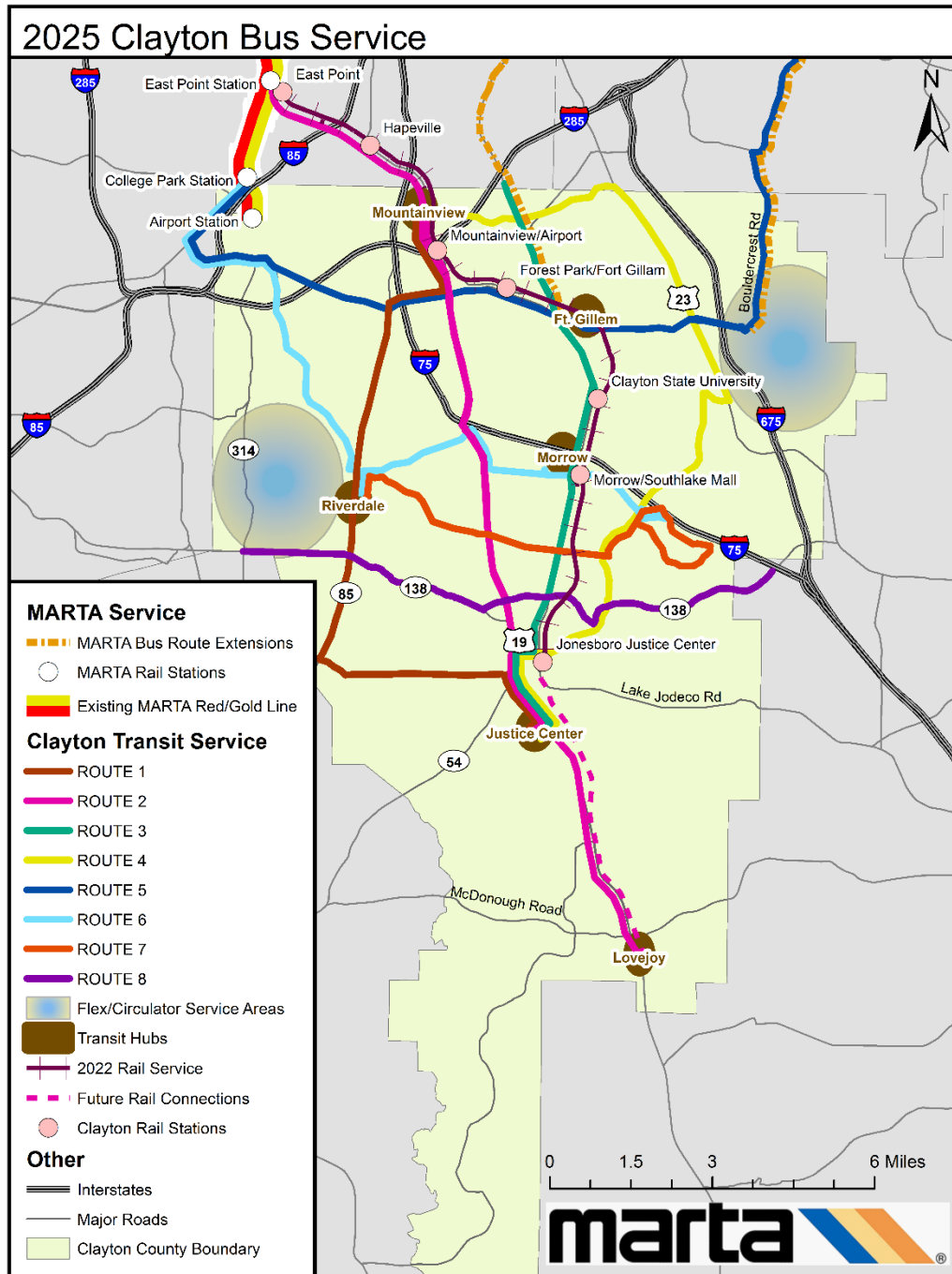


Figure 2-1: FY 2025 Built Out Clayton Transit System

## 2.2 ADA Complementary Paratransit

Section 223 of the Americans with Disabilities Act of 1990 (ADA) requires public entities operating non-commuter, fixed-route transportation services to also provide complementary paratransit service for individuals unable to use the fixed-route system due to disabilities or physical limitations. The regulations require such agencies to offer a level of service that is comparable to the level of service offered to the general public without disabilities. Comparability generally includes specifications for the following six ADA minimum paratransit service requirements:

- *Service area* - within  $\frac{3}{4}$  mile of a fixed route;
- *Hours and days of service* - same hours and days as fixed route;
- *Fares*- may not exceed twice the fare that would be charged to an individual paying full fare for a trip of similar length at a similar time of day on the fixed route (with no charge for a personal care attendant);
- *Response time* - service must be provided at any requested time on a particular day in response to a request for service made the previous day. (Real time scheduling, in which a call to the transit provider would result in pickup the same day, is explicitly allowed but not mandated.);
- *Trip purpose restrictions* - no restrictions or priorities based on trip purpose are allowed; and
- *Capacity constraints* - restrictions on the number of trips per eligible individual, waiting lists for access to the service, substantial numbers of significantly untimely pickups for initial or return trips, substantial numbers of trip denials or missed trips, and substantial numbers of trips with excessive trip lengths are not allowed.

In addition, the ADA regulations require the agencies that are subject to the complementary paratransit requirements to develop and administer a process for determining whether individuals who request service meet the regulatory criteria for eligibility. Since Clayton County would be joining MARTA, eligible Clayton residents would have to follow the current MARTA *Mobility* procedures for receiving a pass to ride the ADA complementary paratransit service.

As discussed previously, complementary paratransit service must be provided within the same service area extents as that of the local fixed-route bus service. The federal definition of this service area includes a buffer encompassing  $\frac{3}{4}$  of a mile on either side of and around all fixed bus routes, with no small, enclosed areas left unserved. Figure 2-2 presents a map of the proposed local bus routes in Clayton with a  $\frac{3}{4}$  mile buffer applied in the shaded areas surrounding the local routes. It is important to note that federal law requires that small areas surrounded by coverage be included in the service as depicted in the Figure 2-2.

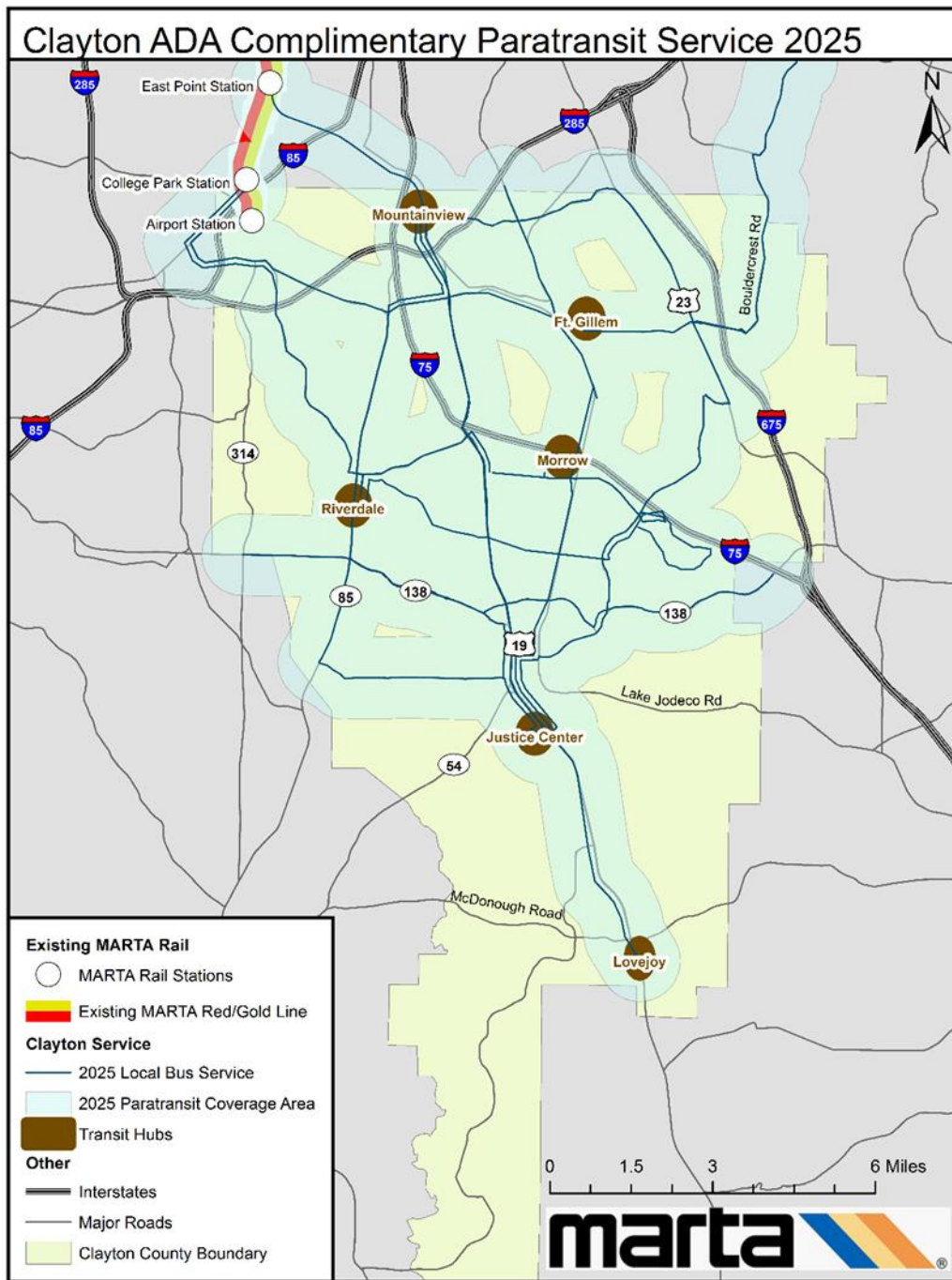


Figure 2-2: FY 2025 Clayton County Paratransit Coverage Area

## 2.1 Rail Line Components

The MARTA Clayton Rail Extension line will require track, stations, grade crossings, signals and communications, structures, roadway modifications, civil works, utility

relocations, vehicle storage and maintenance facility, vehicles, right-of-way, professional services, and unallocated contingency for exclusive operations. The project will require new rail work construction and the adjustment/relocation of Norfolk Southern facilities to accommodate passenger rail service.

### **2.1.1 Planned Rail Route Description**

There are two rail infrastructure alternatives described in this report; shared use and exclusive track. In the shared use alternative, passenger rail will run along the same tracks as the Norfolk Southern freight trains with temporal separation. The exclusive track alternative requires construction of a separate track adjacent to the Norfolk Southern freight tracks. Both of these alternatives will require a lease of right-of-way and/or use from Norfolk Southern and will be examined further during the environmental/engineering studies to determine the most cost-effective alternative based on passenger demand.

It should be noted that the rail project development process is dynamic and will require a number of actions, agreements (e.g. Norfolk Southern), to be in place in order to achieve timely delivery of the project. Figure 2-3 shows a map of the rail transit line in Clayton County slated for implementation in FY 2022. The alignment generally begins at the East Point MARTA station and extends south to Clayton State University, where the alignment continues through the Morrow/Southlake area, and then to Jonesboro.

### **2.1.2 Planned Rail Station Locations**

The exact location of stations will require detail station area planning, agreements with local governments and property owners, as well as, potential property acquisition. Thus, generalized station locations are shown in Figure 2-3, and include the following areas:

- East Point (with elevated transfer to MARTA East Point Station)
- Hapeville
- Mountain View | Airport
- Forest Park | Fort Gillem
- Clayton State University
- Morrow | Southlake Mall
- Jonesboro

### **2.1.3 Infrastructure/ROW Requirements**

The existing Norfolk Southern right-of-way along the corridor is nominally 100-ft wide, and generally the MARTA Clayton Rail Extension would remain within the right-of-way. However, there are areas within Hapeville and Morrow where existing streets encroach upon the railroad right-of-way. In these locations, there are impacts to the adjacent roadways and the potential for isolated right-of-way impacts in the case of the exclusive track alternative. Additionally, there would be the need to purchase property for a Vehicle Storage and Maintenance Facility (VSMF).

### **2.1.4 Rail Service Plans**

By FY 2022, it is envisioned that revenue passenger service could begin in Clayton County. Rail service plan options include a 15-minute headway option during peak hours or a 30-minute headway option during peak hours. These headway options as well as others (such as midday service) will be further analyzed as part future engineering and design studies.

## **2.2 Other System Components**

In addition to the bus system in Clayton County, this section defines the other potential components of the successful extension of MARTA service into Clayton County.

### **2.2.1 Safety and Security**

MARTA's current security system includes its own dedicated law enforcement agency as well as security cameras and direct emergency telephone service. MARTA security systems would be appropriately expanded into Clayton County. The costs included in this report incorporate extending MARTA law enforcement and security systems proportionately throughout Clayton County.

In accordance with the federal legislation Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21), the Federal Transit Administration (FTA) is currently identifying and implementing new nationwide safety standards for transit agencies. As these new safety standards come online, MARTA will work with the FTA to ensure that all areas served by MARTA bus and rail meet these new federal requirements including Clayton County.

### **2.2.2 Transit Amenities**

Transit amenities may include, but are not limited to, bus shelters at bus stops, benches at stops, trash receptacles at stops, and real-time bus arrival information. MARTA has a range of amenities at various bus stops based on the location of the stop and the usage. These amenities would be appropriately extended into Clayton County. Bus shelters providing posted maps, shelter, and benches will be placed at stops that are most heavily used, with benches and trash receptacles placed as appropriate. In addition to providing these amenities, it will be essential MARTA will maintain these amenities to ensure that the benches and shelters remain in a safe and clean condition. Costs for amenities are included in Chapter 5.

In addition to physical amenities, the real-time arrival information for bus service will be extended into Clayton County. This will include coding all Clayton County stops and routes into MARTA's existing General Transit Feed Specification (GTFS) database so that the current MARTA real-time mobile application and any third party real-time mobile applications can provide information for Clayton County routes.

### **2.2.3 MARTA Maintenance/Dispatch/Security Center**

A maintenance/dispatch/ bus fueling and security facility on approximately 10 acres of land fully fenced and lighted with secured access to support a 70+ bus fleet with an 11,000 square foot building capable of housing at 150+ staff for maintenance, operations and police will be constructed by 2020. Fuel facility would include 3 Compressed Natural Gas (CNG) pumps housed in a separate (but on-site) 3,600 square foot facility.

### **2.2.4 Park and Ride Facilities**

A plan to situate up to 300 park and ride stalls either in one location or in a combination of locations to accommodate parking for commuters wishing to ride local service. The facilities would be for surface parking only with shelters for customer convenience.



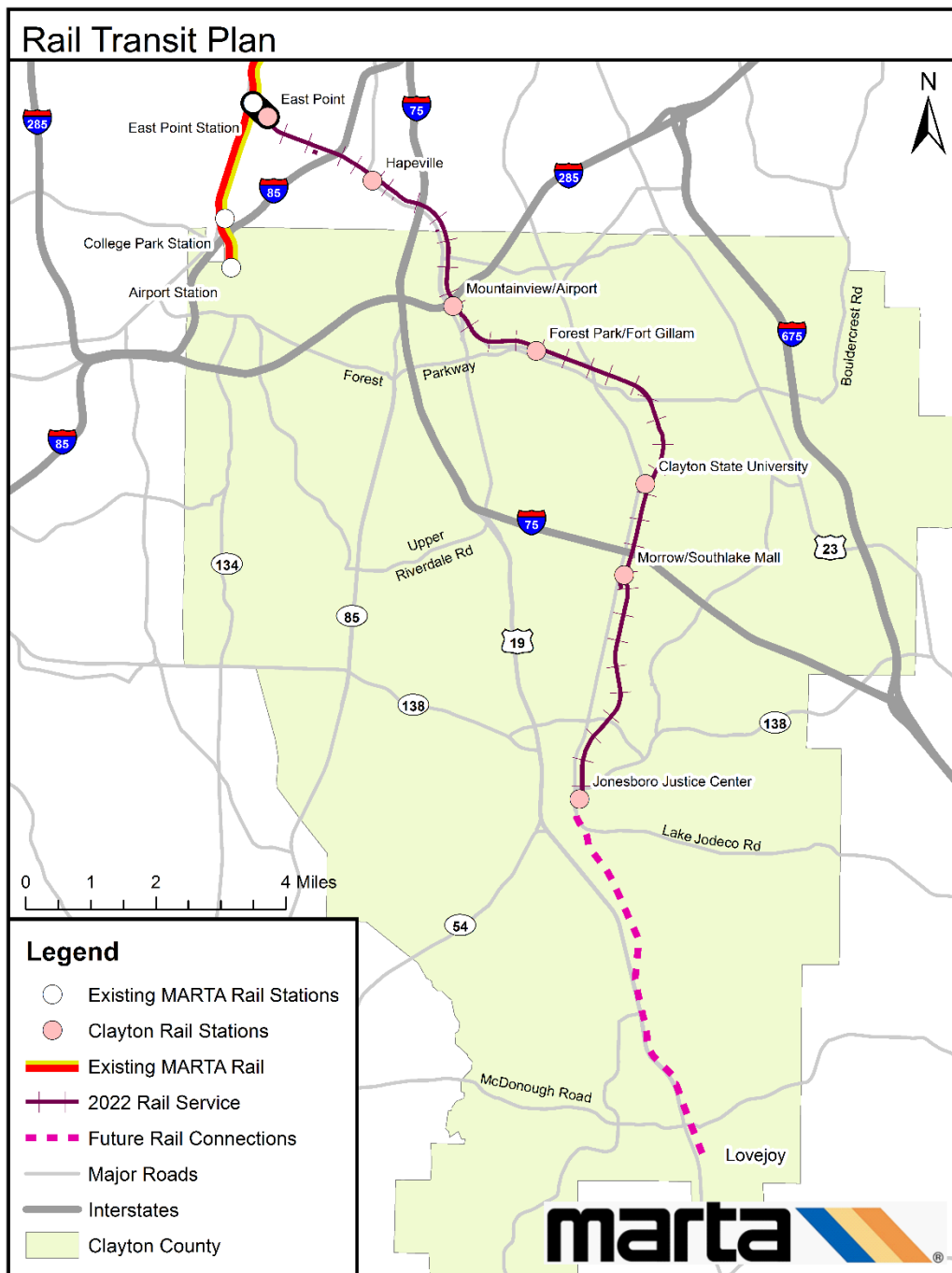


Figure 0-1: Rail Transit Plan

### 3 SYSTEM IMPLEMENTATION PLAN

This section provides an overview of the 10-year implementation plan describing the activities that are slated for completion as well as the system components scheduled to be in revenue service broken out by FY 2016, FY 2020, and FY 2025 respectively. This will include an incremental delivery approach to the provision for both bus services. It is important to note that this implementation plan is based on the assumption that Clayton County will pass a 1% sales tax to support transit within the county. It is important to note that this implementation plan is based on the assumption that Clayton County will pass a 1% sales tax to support transit within the county, and two out of the three current MARTA jurisdictions ratify the RTCAA between MARTA and Clayton County. Figure 3-1 below provides a high level implementation timeline for Clayton County transit services.

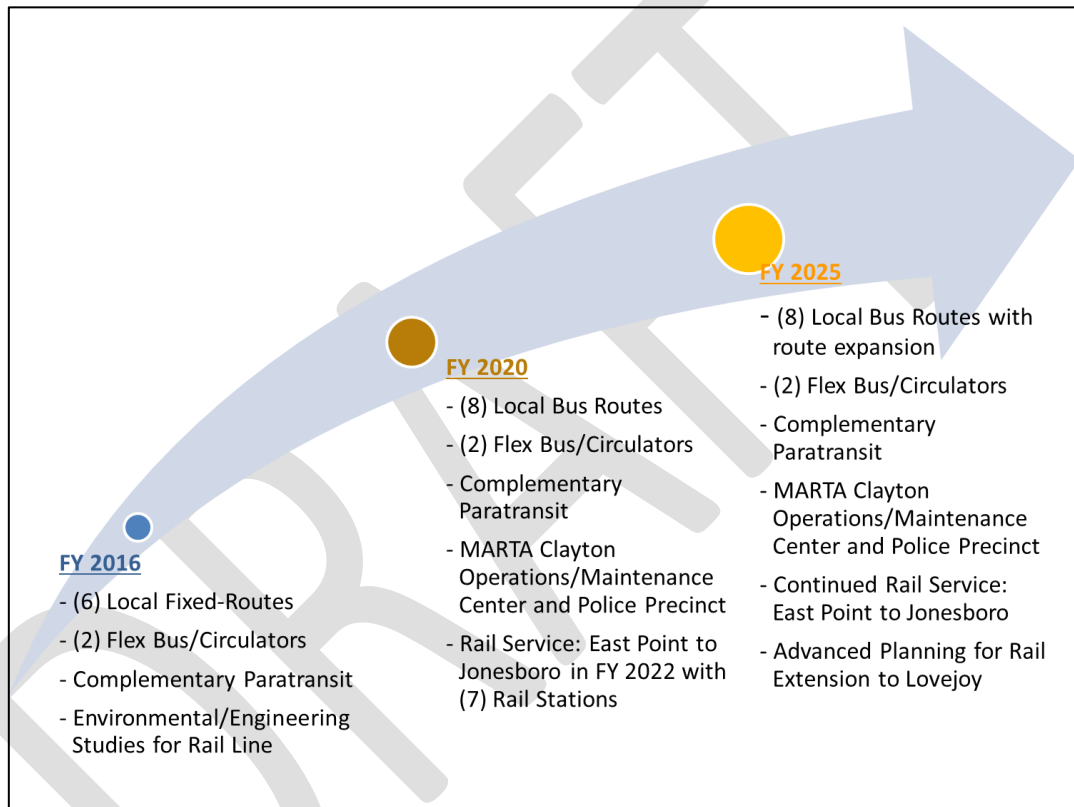


Figure 3-1: Clayton County Transit Implementation Timeline

#### 3.1 FY 2016

It is proposed that bus revenue service begin in Clayton County early FY 2016 (i.e., July 2015). The service plan includes local bus service, limited flex route service, ADA complementary paratransit, and planning activities for future implementations.

##### 3.1.1 Planned Revenue Bus Service

This section describes the bus service plan for FY 2016. The service will include six local bus routes, two flex route areas, and ADA complementary paratransit.

##### **Local Bus Service**

Based on the proposed operating characteristics for the FY 2016 service plan, items including frequency, span of service, and vehicle requirements were estimated for the fixed-route bus-related services and can be seen in Table 3-1. The following information describes the operating results for bus service proposed for Clayton County for FY 2016. It is important to note that the service estimates contained herein are preliminary and will be confirmed prior to implementation. However, the statistics are presented in sufficient detail and based on reasonable assumptions such that they can be utilized for estimation of probable operating costs for the service plan.

Table 3-1: FY 2016 Service Characteristics by Route

Route	Service Characteristics		
	Frequency	Span of Service	# of Vehicles
1 & 1A– SR 85/Riverdale/SR138			
Weekday	30	5a – 12a	4
Saturday	30	6a – 12a	4
Sunday	60	7a – 10p	2
2 – Old Dixie/Tara			
Weekday	30	5a – 12a	5
Saturday	30	6a – 12a	4
Sunday	60	7a – 10p	2
3 – SR 54/Jonesboro			
Weekday	60	5a – 12a	2
Saturday	60	6a – 12a	2
Sunday	60	7a – 10p	2
4 – Conley/SR 42/Mt. Zion			
Weekday	60	5a – 12a	3
Saturday	60	6a – 12a	3
Sunday	60	7a – 10p	3
5 – Forest Parkway			
Weekday	60	5a – 12a	2
Saturday	60	6a – 12a	2
Sunday	60	7a – 10p	2
6 – Church/Upper Riverdale/ Mt. Zion			
Weekday	30	5a – 12a	6
Saturday	30	6a – 12a	5
Sunday	60	7a – 10p	3

#### Complementary Paratransit Service

Given the nature of paratransit being a demand-response service that is dependent on the extents of the corresponding local bus service area and the demographics of the potential riders within it, it is not possible to project an assumed level of future service provision

(e.g., revenue miles or hours) without first establishing some relationship in this factor between these modes. As such, based on historical C-Tran data, it was assumed that the amount of service expended for paratransit is approximately 15 percent of the amount of local bus service provided on an annual basis. Therefore, paratransit miles and hours of service are assumed to equal 15 percent of the total miles and hours of local bus service, respectively. This will help ensure that the two services are comparable as required by the regulations of the ADA. The span of service for the complementary paratransit area will be the same as the route for which it is providing complementary service. Additionally, similar to the local fixed route service, it is expected that the paratransit service will require adjustment and calibration based on usage and demand.

#### ***Flex Bus/Circulator Service***

For FY 2016, there are two planned flex route circulators serving West Riverdale, and Irondale/Lovejoy. Table 3-2 provides information on the service characteristics for each flex bus service area. The primary purpose of the flex bus service is to provide circulation within each community or residential area in which the service is located, as well as provide a means for convenient connectivity to the rest of the local bus network and other county transit services.

*Table 3-2: FY 2016 Service Characteristics by Flex Area*

Route	Service Characteristics		
	Frequency	Span of Service	# of Vehicles
West Riverdale			
Weekday	60	5a – 12a	1
Saturday	60	6a – 12a	1
Sunday	60	7a – 10p	1
Irondale/Lovejoy			
Weekday	60	5a – 12a	2
Saturday	60	6a – 12a	2
Sunday	60	7a – 10p	2

**Summary of Proposed Services**

Table 3-3 provides a summary of the total bus operating statistics for FY 2016 for all of bus services proposed for Clayton County, while Figure 3-2 shows local bus system by route for FY 2016.

*Table 3-3: FY 2016 Estimated Operating Statistics for Bus-Related Services by Service Type*

Service Type	Operating Statistics	
	Revenue Hours	Platform Hours
Local Bus	128,960	141,471
Complementary Paratransit	19,344	21,110
Flex Bus/ Circulator	20,007	21,948
<b>Total</b>	<b>168,311</b>	<b>184,640</b>

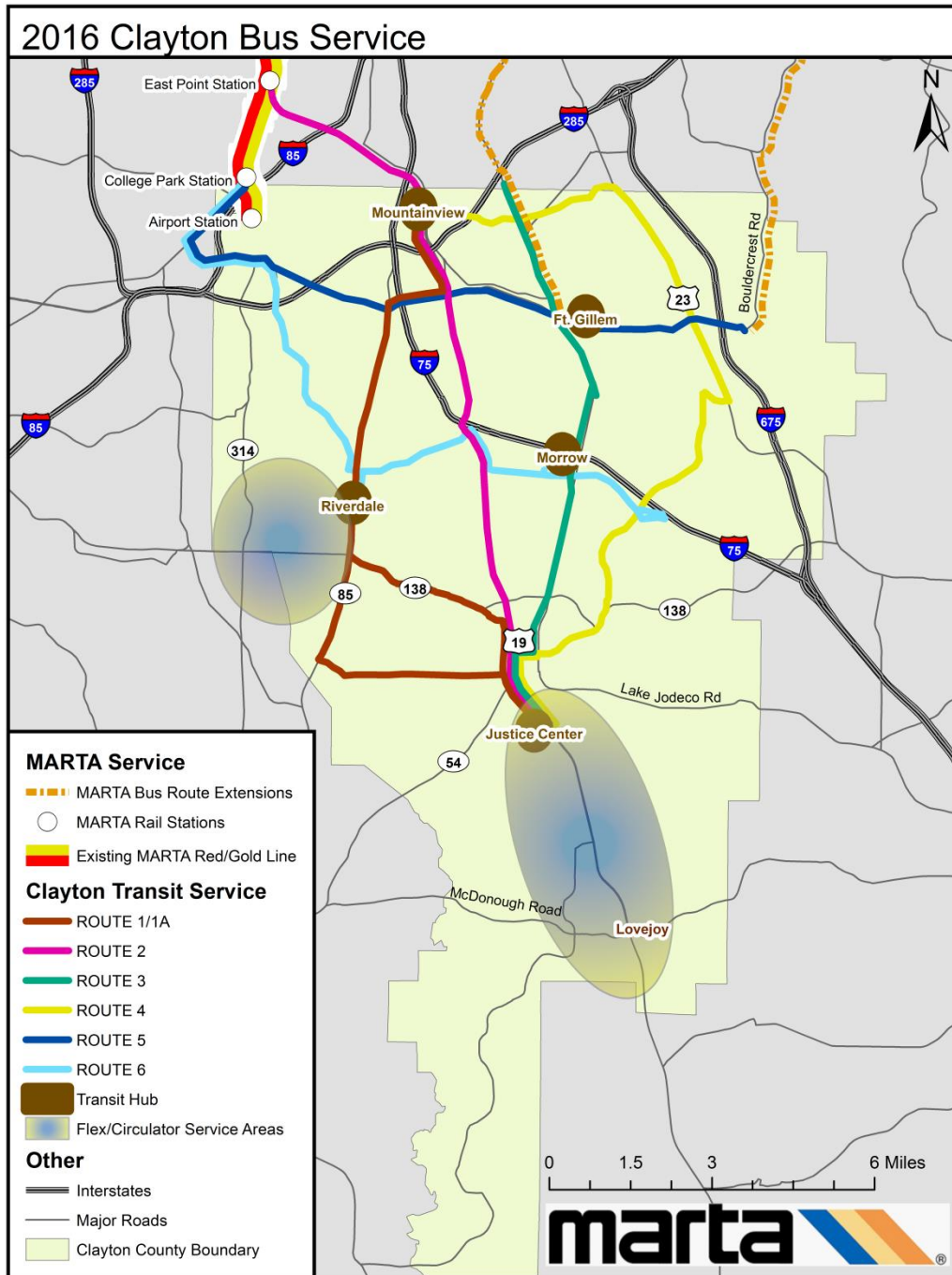


Figure 3-2: FY 2016 Clayton County Bus Service

### **3.1.2 Rail Project Development and Engineering**

For the initial transit system in FY 2016 there will be no rail service extended into Clayton County. However, MARTA will complete environmental and engineering studies to prepare for rail service project delivery. This will include planning and engineering for the rail line as well as associated maintenance facilities. The detailed engineering studies will also include selecting the preferred alternative: shared or exclusive track.

#### **3.1.2.1 Environmental/Engineering Studies – Rail System**

An environmental document and construction documents will be required to develop the project. Preliminary engineering and mapping would be required to support the environmental analysis. The GDOT commuter rail environmental document from 2001 would need to be re-evaluated due to its age and changes that have occurred within the corridor. Upon the approval of an environmental document, final design would commence along with procurement of vehicles.

#### **3.1.2.2 Environmental/Site Development Plans – Maintenance/Dispatch Security Center**

A site development plan will be required for design and construction of a MARTA Clayton Operations Center in Clayton County. The site design work would also commence in FY 2016, and be completed in approximately 6 to 8 months.

#### **3.1.2.3 Construction of Park & Ride Lot(s)**

Identify a specific location(s) where park & ride lots will be beneficial to the development of ridership within the County. Commence property acquisition and development of site specific details for implementation within 2 years. Site(s) may be in conjunction with the development of rail station development, however are not contingent upon rail development.

## 3.2 FY 2020

### 3.2.1 Planned Revenue Bus Service

This describes the revenue bus service plan for FY 2020. The plan includes eight local bus routes, two flex route areas, and ADA complementary paratransit.

#### **Local Bus Service**

The FY 2020 service plan proposes two additional local bus routes. The Route 7 provides service between Riverdale and Mt. Zion Parkway. The Route 8 provides service between Mt. Zion Park & Ride and Old National Highway on SR-138. The additional service results in a need for an additional four buses. Finally, Routes 2 and 5 will provide service to extended areas, as seen in Figure 3-3.

*Table 3-4: 2020 New Service Characteristics*

Route	Service Characteristics		
	Frequency	Span of Service	# of Vehicles
7 – Valley Hill/Battlecreek Weekday	60	5a – 12:00a	2
8 – SR 138 Weekday	60	5a – 12:00a	2

#### **Complementary Paratransit Service**

As with the service provided in 2016, the ADA complementary paratransit will provide service within  $\frac{3}{4}$  miles of the existing local bus service. In 2020 this service area will be expanded to include the new Route 7 and Route 8. The service will provide service during the same times as the local bus services are available.

#### **Flex Bus/Circulator Service**

The FY 2020 service plan includes two planned flex routes West Riverdale and Ellenwood. Table 3-5 provides information on the service characteristics and the proposed operating assumptions for the flex areas in FY 2020. The Irondale/Lovejoy flex route is replaced with the extension of Route 2 to Lovejoy.



Table 3-5: FY 2020 Service Characteristics by Flex Route

Route	Service Characteristics		
	Frequency	Span of Service	# of Vehicles
Ellenwood			
Weekday	60	5a – 12:00a	1
Saturday	60	6a – 12:00a	1
Sunday	60	7a – 10p	1
West Riverdale			
Weekday	60	5a – 12:00a	1
Saturday	60	6a – 12:00a	1
Sunday	60	7a – 10p	1

### Summary of Proposed Services

Table 3-6 provides a summary of the total operating statistics for the FY 2020 for all Clayton County bus services. Figure 3-3 provides a map showing all bus services.

Table 3-6: 2020 Estimated Revenue and Platform Hours for Bus-Related Services by Service Type

Service Type	2020	
	Revenue Hours	Platform Hours
Local Bus	143,295	156,190
Complementary Paratransit	21,495	23,430
Flex Bus/ Circulator	14,260	15,543
<b>Total</b>	<b>179,050</b>	<b>195,163</b>

## 3.2.2 Rail Services

### 3.2.2.1 Planned Revenue Rail Services

There are two rail alternatives illustrated for Clayton County; the shared use and exclusive track option. It is proposed that revenue rail passenger service in Clayton County would begin in FY 2022. The service would provide rail transit access to the major activity centers within Clayton County, as described in Chapter 2. The rail service plan options include a 15-minute headway option during peak hours and/or a 30-minute headway option during peak hours. These headway options as well as other operating scenarios (such as midday service) will be further analyzed as part future engineering and system design.

Table 3-7 describes the service characteristics of the rail service planned for FY 2022.

Table 3-7: FY 2022 Rail Service Characteristics

Route	Shared Track		Exclusive Track	
	Frequency	# of Vehicles <sup>1</sup>	Frequency	# of Vehicles <sup>1</sup>
Weekday	15	5 (3-car)	TBD	TBD
Saturday	15	5 (3-car)	TBD	TBD
Sunday	15	5 (3-car)	TBD	TBD

Notes:

1. The final number of rail vehicles will be determined based on future detailed engineering and analysis of system capacity vs. passenger demand.

### 3.2.2.2 Planned Rail Infrastructure

As previously mentioned, there are two alternatives for the rail line, sharing the existing Norfolk Southern tracks or building an exclusive track within the Norfolk Southern right-of-way. Both alternatives will require a corridor access lease with Norfolk Southern.

For the shared track alternative, MARTA would be required to upgrade the tracks and assist Norfolk Southern with track maintenance. This alternative would also require temporal separation of passenger rail vehicles and freight train operations.

In the case of the exclusive track, MARTA would construct a single track with passing sidings with the sole purpose of providing passenger rail operations within the railroad right-of-way. The single track would allow rail service between East Point and Jonesboro, without restricting Norfolk Southern freight train operations in the same corridor. Norfolk Southern will likely require access to the tracks outside of normal operations to provide freight service to existing customers located to the west of the MARTA Clayton Rail Extension tracks.

### 3.2.3 Construction of MARTA Maintenance/Dispatch Security Center

A maintenance/dispatch/ bus fueling and security facility on approximately 10 acres of land fully fenced and lighted with secured access to support a 70+ bus fleet with an 11,000 square foot building capable of housing at 150+ staff for maintenance, operations and police will be constructed by 2020. Fuel facility would include 3 Compressed Natural Gas (CNG) pumps housed in a separate (but on-site) 3,600 square foot facility.

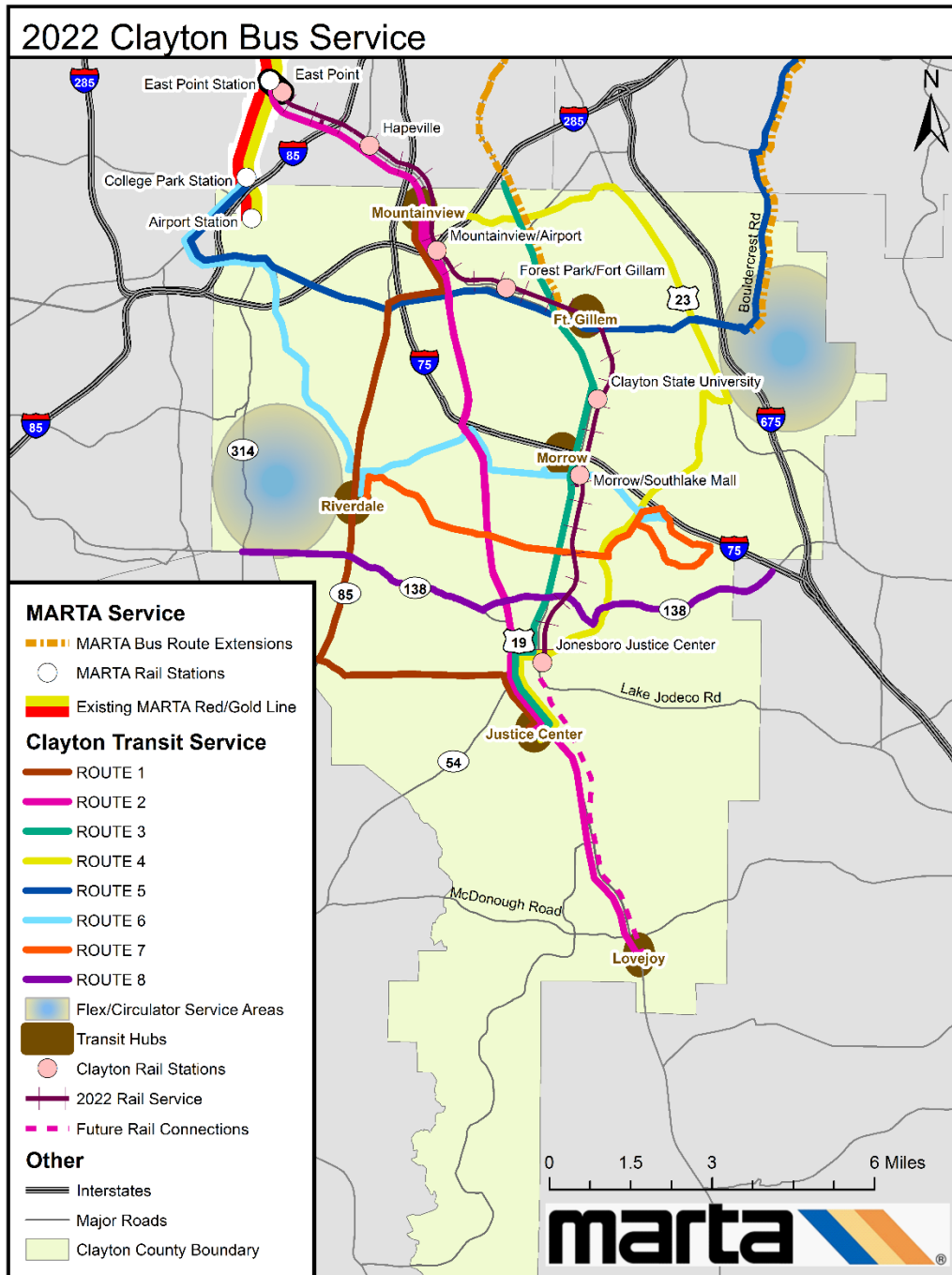


Figure 3-3: FY 2022 Clayton County Transit Service

### 3.3 FY 2025

#### 3.3.1 Planned Revenue Bus Service

This describes the revenue bus service plan for FY 2025. The plan includes eight local bus routes, two flex route areas and ADA complementary paratransit. This section will describe the FY 2025 bus service plan, and any changes to the service previously implemented.

##### **Local Bus Service**

The local bus service plan would remain the same in 2025, with Routes 1 through 8 continuing service. The span of service would remain that same as 2020.

##### **Complementary Paratransit Service**

FY 2025 bus service plan would include no additional local bus routes, therefore the service area providing ADA complementary paratransit will remain the same

##### **Flex Bus/Circulator Service**

The FY 2025 bus service plan includes two flex route/circulator service areas similar to 2020. Table 3-8 provides the service characteristics for the flex routes. The flex routes would have their span of service as noted in the table.

*Table 3-8: FY 2025 Service Characteristics by New Flex Route*

Route	Service Characteristics		
	Frequency	Span of Service	# of Vehicles
Ellenwood			
Weekday	60	5a – 12a	1
Saturday	60	6a – 12a	1
Sunday	60	7a – 10p	1
West Riverdale			
Weekday	60	5a – 12a	1
Saturday	60	6a – 12a	1
Sunday	60	7a – 10p	1

##### **Summary of Proposed Services**

Table 3-9 provides a summary of the total operating statistics for the proposed FY 2025 bus service plan, all of which can be seen on the map provided in Figure 3-4.

*Table 3-9: FY 2025 Estimated Revenue and Platform Hours for Bus-Related Services*

Service Type	FY 2025	
	Revenue Hours	Platform Hours
Local Bus	151,570	165,212
Complementary Paratransit	24,874	27,113
Flex Bus/ Circulator	14,260	15,543
<b>Total</b>	<b>190,704</b>	<b>207,868</b>

### **3.3.2 Rail Services**

#### **3.3.2.1 Planned Revenue Rail Services**

The FY 2025 rail service plan would continue between East Point MARTA Rail station and the Jonesboro Justice Center Rail station. Additionally, advanced planning studies to evaluate a rail line extension to Lovejoy would be required if demand and conditions warrant such a system expansion.

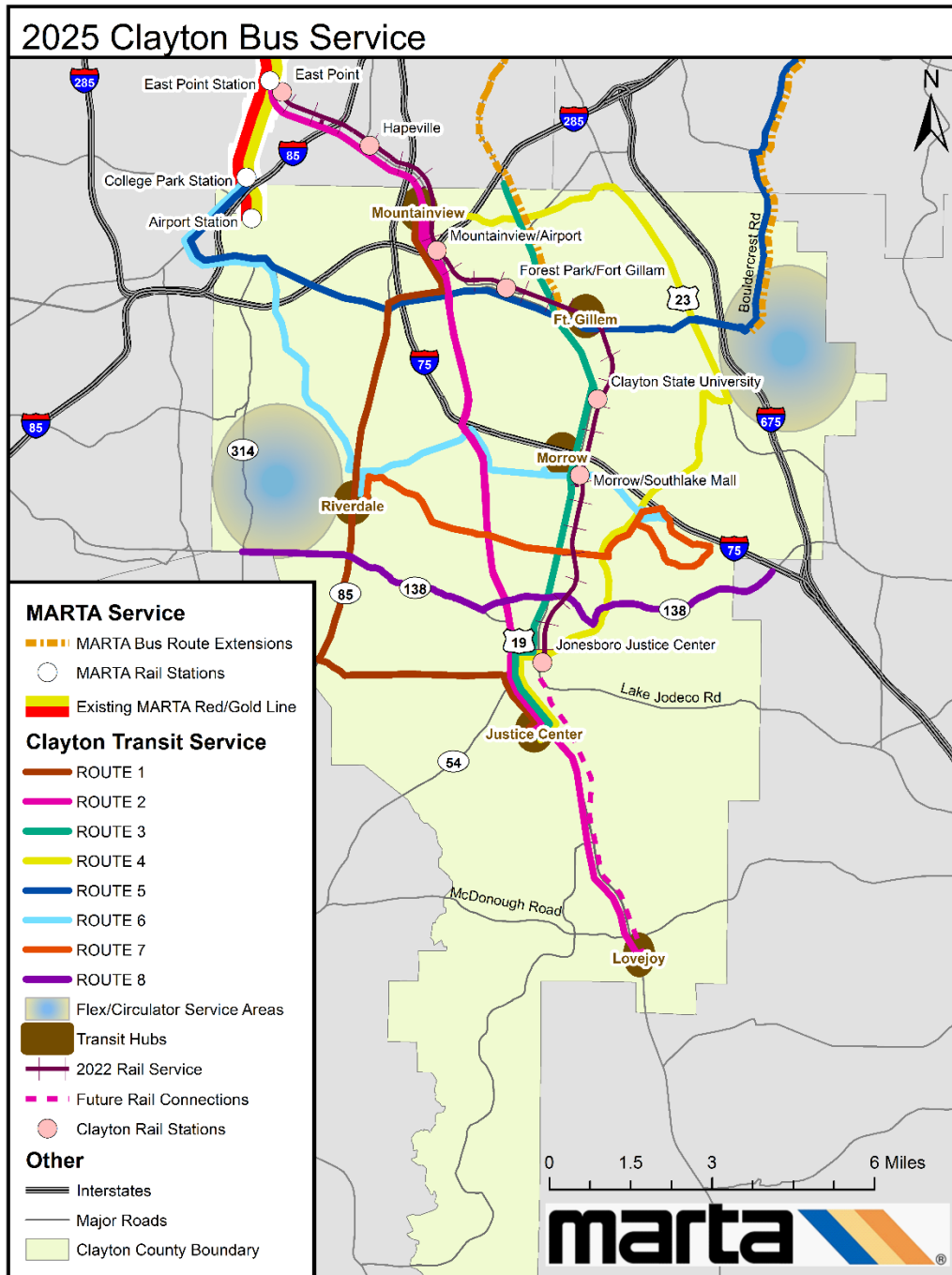


Figure 3-4: FY 2025 Clayton County Transit Service

## 4 PATRONAGE ESTIMATES

For the purposes of planning the capacity of transit service in Clayton County and estimating future fare revenues, analyses were made of the relative attraction of the proposed Clayton County transit service plan based on the implementation scheduled discussed in Chapter 3.

As described in Chapter 3: Implementation Plan, the service scenarios in the system development years used to estimate ridership are as follows:

- Network 2016: Countywide local bus services, limited flex route service, and ADA complementary paratransit. There will be no rail service considered in 2016.
- Network 2022: Improved headways and extended span of service on local bus routes, additional flex service, ADA complementary paratransit, and rail service to Jonesboro.
- Network 2025: Same local bus route service as 2020, additional flex service, ADA complimentary paratransit, and continued rail service to Jonesboro.

The rail patronage estimates were made using data from the Atlanta Regional Commission's (ARC) regional travel demand model that has been updated for the 2040 Regional Transportation Plan. To focus the model specifically on Clayton County growth rather than general growth, jobs were added to select traffic analysis zones (TAZ) based on the following assumptions of increased growth in Clayton County surrounding the proposed rail stations (employment for areas outside Clayton County were proportional reduced so that the regional control totals remained the same as in the current ARC forecasts):

- **Hapeville Station:** Jobs were added in this area to account for the new Porsche Headquarters Site currently under construction as well as the planned Aerotropolis multi-use development surrounding the airport with proposed hotels, Business Park, retail, and parking facilities.
- **Airport/Mountain View Station:** Jobs were added in these TAZs to account for planned Mountain View development, inclusion in a Clayton County development subarea, a potential new Community Improvement District (CID), and the creation of an opportunity zone with incentives for businesses.
- **Forest Park (Fort Gillem) Station:** Jobs were added in this area to account for the redevelopment planned as part of the Fort Gillem Base Realignment and Closure Act of 2005. This will include development for multiple uses in the area.
- **Clayton State Station:** The Clayton State University Master Plan projects an enrollment of 11,000 with full build-out and focused development in the areas immediately near the proposed rail station.
- **Southlake Mall Station:** Redevelopment in the area is expected after the planned mall acquisition. Employment projections by the Southlake Mall LCI Study are forecast to be higher than those in the current ARC Model. Additionally, Chime Solutions has recently announced the addition of 1,200 jobs in the area.

Using these service descriptions and employment adjustments, Table 4-1 shows the estimated daily ridership range for bus service and at individual rail stations.

Table 4-1: Patronage Estimates

Service	Station	2016 Patronage Estimate		2022 Patronage Estimate		2025 Patronage Estimate	
		Low	High	Low	High	Low	High
<b>Bus</b>	<b>N/A</b>	9,400	12,800	13,400	18,100	14,100	19,000
<b>Fixed Guideway</b>	East Point	N/A	N/A	960	4,500	980	5,500
	Hapeville	N/A	N/A	130	810	140	1,000
	Mt. View/Airport	N/A	N/A	300	1,290	390	1,700
	Forest Park/Fort Gillem	N/A	N/A	360	960	430	1,300
	Clayton State	N/A	N/A	350	720	390	900
	Southlake	N/A	N/A	350	820	400	1,100
	Jonesboro	N/A	N/A	1,200	2,560	4,590	4,700
	Total Rail	N/A	N/A	3,650	11,660	7,320	16,200
<b>Total</b>		<b>9,400</b>	<b>12,800</b>	<b>17,050</b>	<b>23,760</b>	<b>21,420</b>	<b>35,200</b>

It is important to note that the East Point Boardings are higher than all other stations because it includes all rail boardings at that station, including those for MARTA's existing Red and Gold heavy rail lines.



## 5 COST AND FINANCING PLAN

This section outlines all of the estimated costs for implementing the previously described transit service in Clayton County. The cost estimates herein are based on the anticipated service plans for bus and rail service as well as current costs per mile and revenue hour of service used by MARTA.

The purpose of these estimates is not to guarantee costs for service within Clayton County, but to provide a reasonable estimate so that both parties understand the magnitude of funds needed to provide the system described in this report.

### 5.1 System Costs

System costs are broken up by mode and by capital and annual operating and maintenance costs. These costs are estimates based on current allocated costs from MARTA, as well as, comparable transit systems whose costs are available from the National Transit Database.

#### 5.1.1 Bus

##### 5.1.1.1 Bus Capital Costs

The majority of bus capital costs will be the acquisition of vehicles. In addition, the proposed Clayton County fixed-route bus-related services will require expenditures on capital and supplementary infrastructure needs, including vehicles, but also bus stop and transit hub infrastructure and amenities. Following is a summary of the capital infrastructure that will be needed to provide and support the proposed service plan, along with related units, assumed unit costs, and resulting estimates of probable cost. Note that the provided unit costs come from MARTA's Fleet Maintenance Operations Division. Additionally, all vehicle figures include spare vehicles to maintain a standard 20 percent spare ratio.

- Bus Vehicles
  - Local bus vehicles = 32 vehicles x \$500,000/vehicle = \$16,000,000
  - Flex bus vehicles = 5 vehicles x \$125,000/vehicle = \$625,000
  - Paratransit vehicles = 10 vehicles x \$100,000/vehicle = \$1,000,000
- Bus stops, shelters and amenities: \$10,000,000 (over 10-year horizon period or approximately \$1M per year)
- Additional equipment to support expanded service area (e.g., service vehicles, police vehicles, etc.).

##### 5.1.1.2 Bus Operating Costs

To develop estimates of probable cost by year for the proposed bus-related services contained in this report, it is necessary to convert the planned revenue hours for each service type to platform hours (which includes deadhead and operator report times) so that typical MARTA unit costs can be used for this process. This is done by applying a relationship factor that was derived from the MARTA Service Planning and Scheduling. Using the platform hours reported in Chapter 3 for each year, the estimated annual costs for operations and maintenance can be seen in Table 5-1.

*Table 5-1: Estimated Operations and Maintenance Costs*

Service Type	2016	2020	2025
Local Bus	\$15,150,131	\$16,718,577	\$17,684,292
Complementary Paratransit	\$1,897,975	\$2,095,580	\$2,425,000
Flex Bus/ Circulator	\$2,350,000	\$1,663,723	\$1,663,723
<b>Total</b>	<b>\$19,398,514</b>	<b>\$20,477,880</b>	<b>\$21,773,015</b>

*Note: Costs include costs for safety and security/law enforcement.*

## **5.1.2 Rail Costs**

### **5.1.2.1 Rail Capital Costs**

Capital cost estimate for the exclusive rail alignment and shared track are shown below. The alignment anticipated an at-grade station located at East Point and extends south to Jonesboro. These estimates are preliminary and will be refined as part of the engineering and design phase.

Table 5-2: Exclusive Track Rail Capital Costs

SCC #	FTA Standard Cost Category	Estimated Cost
10	Guideway and Track Elements	\$64,220,000
20	Stations, Stops, Terminals, Intermodals	\$14,560,000
30	Support Facilities: Yards, Shops, Admin. Bldgs.	\$8,760,000
40	Sitework & Special Conditions	\$30,960,000
50	Systems & Signals	\$46,050,000
	<b>Construction Cost</b>	<b>\$164,550,000</b>
60	ROW, Land, Existing Improvements <sup>1</sup>	\$2,450,000
70	Vehicles <sup>2</sup>	\$96,040,000
80	Professional Services	\$56,140,000
90	Unallocated Contingency	\$95,420,000
100	Finance Charges	\$0
	<b>Total Rail Construction Cost</b>	<b>\$414,600,000</b>

Note:

1. Right-of-Way only for VSMF.
2. 2022 five three-car trains estimated to be required.

Table 5-3: Shared Use Rail Capital Costs

SCC #	FTA Standard Cost Category	Estimated Cost
10	Guideway and Track Elements	\$26,660,000
20	Stations, Stops, Terminals, Intermodals	\$15,660,000
30	Support Facilities: Yards, Shops, Admin. Bldgs.	\$7,470,000
40	Sitework & Special Conditions	\$12,410,000
50	Systems & Signals	\$47,870,000
	<b>Construction Cost</b>	<b>\$110,070,000</b>
60	ROW, Land, Existing Improvements <sup>1</sup>	\$2,450,000
70	Vehicles <sup>2</sup>	\$55,210,000
80	Professional Services	\$37,410,000
90	Unallocated Contingency	\$63,260,000
100	Finance Charges	\$0
	<b>Total Rail Construction Cost</b>	<b>\$268,400,000</b>

Note:

1. Right-of-Way only for the VSMF.
2. 2022 four two-car trains estimated to be required.

These rail construction costs are estimates based upon conceptual plans, the purpose of which is to inform the Rapid Transit Contract parties of anticipated costs and not to guarantee costs of the rail construction nor do they reflect all potential Norfolk Southern requirements. These estimates are in 2014 dollars and do not account for inflation.

#### 5.1.2.2 Rail Operating Costs

Based on the planned rail service for FY 2022 and FY 2025, analyses were performed on the rail corridor to estimate the annual operation and maintenance costs associated with each service plan.

For 2022, the operations and maintenance cost estimates are based 15 minute headway during peak period between the East Point MARTA Rail Station and the proposed Jonesboro Station. However, as previously mentioned, a 30-minute peak hour headway option will also be analyzed as part of future engineering and design studies.

The annual estimates operations and maintenance costs for shared track and exclusive track are \$10,000,000 and \$12,000,000 respectively. These costs are exclusive to the access fee for the Norfolk Southern right-of-way. These estimates account for costs such as administration, contractor fee, dispatching, sales and marketing, train crew personnel, fuel, train maintenance, track and right-of-way maintenance, station maintenance, and insurance.

*Table 5-4: Exclusive Track Annual Operating and Maintenance Costs*

<b>Annual Operations</b>	<b>Estimated Operating Costs</b>
<b>Annual O&amp;M Cost</b>	<b>\$10,000,000</b>
<b>Overhead</b>	<b>\$1,350,000</b>
<b>Contingency</b>	<b>\$650,000</b>
<b>Total Annual O&amp;M Cost</b>	<b>\$12,000,000</b>

*Table 5-5: Shared Track Annual Operating and Maintenance Costs*

<b>Annual Operations</b>	<b>Estimated Operating Costs</b>
<b>Annual O&amp;M Cost</b>	<b>\$8,400,000</b>
<b>Overhead</b>	<b>\$1,045,000</b>
<b>Contingency</b>	<b>\$555,000</b>
<b>Total Annual O&amp;M Cost</b>	<b>\$10,000,000</b>

These rail operating costs are estimates, the purpose of which is to inform the Rapid Transit Contract parties of anticipated costs and not to guarantee costs of the rail service. These estimates are in 2014 dollars and do not account for inflation.

### **5.1.3 MARTA Clayton Operations Center**

The MARTA Clayton Operations Center for Clayton County costs are estimated in the table below. The center will provide the services as previously noted.

*Table 5-6: MARTA Clayton Operations Center Building Estimated Costs*

<b>Description</b>	<b>Total</b>
<b>Construction Total<sup>1</sup></b>	<b>\$25,000,000</b>
<b>Real Estate Cost</b>	<b>\$1,250,000</b>
<b>Total Project Cost</b>	<b>\$26,250,000</b>

*Note:*

- 1. Architecture/engineering/project management is included in the construction cost. Land cost will be subject to the prevailing prices at the times of construction.*

## **5.2 Sources of Funds**

The Clayton County Transit Plan includes two primary sources of revenue funds to meet the capital and operating costs. These are the proceeds of the retail sales and use tax levied for transit purposes pursuant to the Transit Contract, and the revenues derived from fare revenue from the MARTA extension into Clayton County. In addition to the revenue sources, MARTA anticipates obtaining financing primarily from Federal transit grants and

Bond Issuance to fund the capital costs associated with the implementation of the Clayton County Transit Plan. Additionally, based on the 1% sales tax sales, the MARTA policy regarding 50-50 split between capital and operating costs is required.

### **5.2.1 Projected Sales Tax Generation**

Operation of the Clayton County Transit Plan will be funded by a portion of the proceeds of the statutory retail sales and use tax as it may be applied for rapid transit purposes. The Authority derived an annual forecast of such proceeds based upon a reasonable projection of retail sales volume and value over the period covered by the Financing Plan. This source of revenue includes the proceeds of the retail sales and use tax and that portion of the proceeds of future issues of Authority sales tax revenue bonds which can be repaid from the proceeds of the retail sales and use tax levied within Clayton County.

### **5.2.2 Farebox Revenues**

The rates charged for services on Clayton County Transit will be same rates charged for the same services on the Authority's existing System. Under the Authority's present policy, fares to be charged to users of any segment of the existing System are to be uniform and equal regardless of trip length, transfers made, or component of the system used. Furthermore, the Authority's present Fare policy is to charge the lowest fare consistent with its ability to fulfill its budgeted obligations. The rates charged for services on the Authority's system, including Clayton County Transit, may, in the sole discretion of the Authority, be based in the future upon zone fares or time and distance based fares provided that such rates or fares are applied uniformly throughout the System.

### **5.2.3 Other Sources**

MARTA has not assumed Federal operating and maintenance funding since the availability of such funds is dependent on accurate ridership estimates, which are not yet available. Once ridership estimates can be prepared with a reasonable degree of accuracy, estimates of annual Federal funding for operations and maintenance will be included in the Financing Plan.

## **5.3 Financing Plan**

The Authority's plan of financing the Clayton County Transit Plan is a blending of work by many experts, including financial consultants, general counsel, and other advisors. Input into the Financing Plan itself included the funds draw down requirements to meet the capital expenditures, the annual costs of operations, the projected needs for equipment replacement, and, on the income side, the projection of sales tax revenues and fare revenues.

The following tables summarize the Financing (Cash Flow) Plan for both alternatives. It presents the annual costs and funding requirements for the Clayton County Transit Plan together with the anticipated income and the manner in which that income is applied. This table also summarizes the revenue distribution from the retail sales and use tax levied in Clayton County, as well as the debt service schedule. Note that the cash flow assumes no increase in annual operating costs for bus or rail service over time. This will be revisited as part of implementing the system and analyzing passenger demand.

# Clayton County Comprehensive Transit Plan – Clayton Extension Report

Table 5-7: Shared Track Option Cash Flow

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	TOTAL
<b>Sources</b>											
Sales Tax 1%	46.1	46.1	46.2	46.2	46.3	46.3	46.4	46.6	46.8	47.1	464.2
Clayton County SPLOST	7.0	-	-	-	-	-	-	-	-	-	7.0
Bus - Farebox Recovery	4.4	4.4	4.4	4.4	4.7	4.7	4.7	4.7	4.7	5.1	46.4
Rail - Farebox Recovery	-	-	-	-	-	2.7	2.7	2.7	2.7	2.7	13.5
Federal Funds - Capital	5.9	1.6	1.6	56.2	52.5	12.1	2.1	1.7	1.6	3.0	138.3
Federal Funds - Operating	-	-	-	-	-	-	-	-	-	-	-
Financing	-	-	-	-	-	55.0	-	-	-	-	55.0
<b>Total Sources</b>	<b>63.4</b>	<b>52.2</b>	<b>52.2</b>	<b>106.9</b>	<b>103.5</b>	<b>120.9</b>	<b>55.9</b>	<b>55.7</b>	<b>55.9</b>	<b>57.9</b>	<b>724.4</b>
<b>Uses</b>											
<b>Operating</b>											
Rail Operations	-	-	-	-	-	10.0	10.0	10.0	10.0	10.0	50.0
Rail Corridor Access Fee	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0
Bus/Paratransit Operations	19.4	19.4	19.4	19.4	20.5	20.5	20.5	20.5	20.5	21.8	201.9
<b>Total Operating Expenditures</b>	<b>19.4</b>	<b>19.4</b>	<b>19.4</b>	<b>20.4</b>	<b>21.5</b>	<b>31.5</b>	<b>31.5</b>	<b>31.5</b>	<b>31.5</b>	<b>32.8</b>	<b>258.9</b>
<b>Capital/Debt Service</b>											
Rail Feasibility and Engineering Environmental	5.0	5.0	5.0	-	-	-	-	-	-	-	15.0
Rail/Facilities Sustaining Capital	-	-	-	-	-	-	2.5	2.5	2.5	2.5	10.0
Rail Capital Investment	-	-	-	50.0	100.0	109.2	-	-	-	9.2	268.4
Bus/Facilities Sustaining Capital	4.0	4.0	4.0	4.9	4.0	4.5	4.9	4.1	4.0	10.2	48.6
Bus/Facilities Capital Investment	18.2	1.0	1.0	8.3	16.1	10.0	6.0	1.0	1.0	4.4	67.0
Debt Service	-	-	-	-	-	7.0	7.0	7.0	7.0	7.0	34.8
<b>Total Capital/Debt Service</b>	<b>27.2</b>	<b>10.0</b>	<b>10.0</b>	<b>63.2</b>	<b>120.1</b>	<b>130.7</b>	<b>20.4</b>	<b>14.6</b>	<b>14.5</b>	<b>33.2</b>	<b>443.7</b>
<b>Total Uses</b>	<b>46.6</b>	<b>29.4</b>	<b>29.4</b>	<b>83.6</b>	<b>141.6</b>	<b>162.2</b>	<b>51.9</b>	<b>46.1</b>	<b>46.0</b>	<b>66.0</b>	<b>702.6</b>
<b>Balance</b>	<b>16.8</b>	<b>22.8</b>	<b>22.8</b>	<b>23.3</b>	<b>(38.1)</b>	<b>(41.3)</b>	<b>4.1</b>	<b>9.7</b>	<b>9.9</b>	<b>(8.1)</b>	
<b>Cumulative Balance</b>	<b>16.8</b>	<b>39.6</b>	<b>62.4</b>	<b>85.7</b>	<b>47.6</b>	<b>6.3</b>	<b>10.4</b>	<b>20.0</b>	<b>30.0</b>	<b>21.8</b>	
* Note Fare Box Recovery Ratio of 27%											

# Clayton County Comprehensive Transit Plan – Clayton Extension Report

Table 5-8: Exclusive Track Option Cash Flow

	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	TOTAL
<b>Sources</b>											
Sales Tax 1%	46.1	46.1	46.2	46.2	46.3	46.3	46.4	46.6	46.8	47.1	464.2
Clayton County SPLOST	7.0	-	-	-	-	-	-	-	-	-	7.0
Bus - Farebox Recovery	4.4	4.4	4.4	4.4	4.7	4.7	4.7	4.7	4.7	5.1	46.4
Rail - Farebox Recovery	-	-	-	-	-	-	3.2	3.2	3.2	3.2	13.0
Federal Funds - Capital	5.9	1.6	2.0	66.2	42.1	62.1	22.1	2.1	2.1	2.1	208.3
Federal Funds - Operating	-	-	-	-	-	-	-	-	-	-	-
Financing	-	-	-	-	65.0	85.0	-	-	-	20.0	170.0
<b>Total Sources</b>	<b>63.4</b>	<b>52.2</b>	<b>52.6</b>	<b>116.9</b>	<b>158.1</b>	<b>198.2</b>	<b>76.4</b>	<b>56.7</b>	<b>56.9</b>	<b>77.5</b>	<b>908.9</b>
<b>Uses</b>											
<b>Operating</b>											
Rail Operations	-	-	-	-	-	-	12.0	12.0	12.0	12.0	48.0
Rail Corridor Access Fee	-	-	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	7.0
Bus/Paratransit Operations	19.4	19.4	19.4	19.4	20.5	20.5	20.5	20.5	20.5	21.8	201.9
<b>Total Operating Expenditures</b>	<b>19.4</b>	<b>19.4</b>	<b>19.4</b>	<b>20.4</b>	<b>21.5</b>	<b>21.5</b>	<b>33.5</b>	<b>33.5</b>	<b>33.5</b>	<b>34.8</b>	<b>256.9</b>
<b>Capital/Debt Service</b>											
Rail Feasibility and Engineering Environmental	5.0	5.0	5.0	-	-	-	-	-	-	-	15.0
Rail/Facilities Sustaining Capital	-	-	-	-	-	-	2.5	2.5	2.5	2.5	10.0
Rail Capital Investment	-	-	-	114.0	137.0	149.8	-	-	-	13.8	414.6
Bus/Facilities Sustaining Capital	4.0	4.0	4.0	4.9	4.0	4.5	4.9	4.1	4.0	10.2	48.6
Bus/Facilities Capital Investment	18.2	1.0	1.0	8.3	16.1	10.0	6.0	1.0	1.0	4.4	67.0
Debt Service	-	-	-	-	5.0	11.5	11.5	11.5	11.5	14.1	65.2
<b>Total Capital/Debt Service</b>	<b>27.2</b>	<b>10.0</b>	<b>10.0</b>	<b>127.2</b>	<b>162.1</b>	<b>175.8</b>	<b>24.9</b>	<b>19.1</b>	<b>19.0</b>	<b>44.9</b>	<b>620.3</b>
<b>Total Uses</b>	<b>46.6</b>	<b>29.4</b>	<b>29.4</b>	<b>147.6</b>	<b>183.6</b>	<b>197.3</b>	<b>58.4</b>	<b>52.6</b>	<b>52.5</b>	<b>79.7</b>	<b>877.2</b>
<b>Balance</b>	<b>16.8</b>	<b>22.8</b>	<b>23.2</b>	<b>(30.7)</b>	<b>(25.5)</b>	<b>0.8</b>	<b>18.0</b>	<b>4.0</b>	<b>4.4</b>	<b>(2.2)</b>	
<b>Cumulative Balance</b>	<b>16.8</b>	<b>39.6</b>	<b>62.8</b>	<b>32.1</b>	<b>6.6</b>	<b>7.4</b>	<b>25.4</b>	<b>29.5</b>	<b>33.9</b>	<b>31.6</b>	
* Note Fare Box Recovery Ratio of 27%											