

County Council Of Howard County, Maryland

2018 Legislative Session

Legislative Day No. 4

Resolution No. 48 -2018

Introduced by: The Chairperson at the request of the County Executive

A RESOLUTION endorsing the Central Maryland Transit Development Plan as a guide for future transit development in Howard County and in the Central Maryland region.

Introduced and read first time _____, 2018.

By order _____
Jessica Feldmark, Administrator

Read for a second time at a public hearing on _____, 2018.

By order _____
Jessica Feldmark, Administrator

This Resolution was read the third time and was Adopted __, Adopted with amendments __, Failed __, Withdrawn __, by the County Council on _____, 2018.

Certified By _____
Jessica Feldmark, Administrator

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; Strike-out indicates material deleted by amendment; Underlining indicates material added by amendment.

1 **WHEREAS**, Howard County is a Locally Operated Transit System (LOTS)
2 subject to Federal and State rules and regulations pertaining to Maryland’s LOTS; and
3

4 **WHEREAS**, these rules and regulations require that Howard County has a
5 Transportation (Transit) Development Plan (TDP) that is endorsed by local elected
6 officials; and
7

8 **WHEREAS**, the TDP is an important document that is used in many transit-
9 related planning documents such as the County’s Annual Transportation Plan, Asset
10 Management Plan, Fleet Management Plan, and grant applications; and
11

12 **WHEREAS**, Howard County, together with Anne Arundel County, Prince
13 George’s County and the City of Laurel, have each appointed representatives to the
14 Central Maryland Transportation & Mobility Commission which was established to
15 maintain an efficient and effective coordinated regional bus system throughout central
16 Maryland known as the "Regional Transportation Agency of Central Maryland" (or
17 “RTA”); and
18

19 **WHEREAS**, Howard County and Anne Arundel County have combined
20 resources, with the support of the Maryland Transit Administration, to develop a Central
21 Maryland TDP to serve as a guide for future transit development in central Maryland; and
22

23 **WHEREAS**, the TDP preparation process included an extensive amount of
24 public and stakeholder input and involvement; and
25

26 **WHEREAS**, Howard County desires to and is taking steps towards implementing
27 the TDP; and
28

29 **WHEREAS**, the TDP is a plan that does not obligate or commit Howard County
30 to implement each of the TDP’s specific recommendations, and
31

1 **WHEREAS**, additional public input is required before the TDP’s
2 recommendations for route or fare changes are implemented, and such input may result in
3 changes to the TDP’s specific recommendations.

4
5 **NOW, THEREFORE, BE IT RESOLVED** by the County Council of Howard
6 County, Maryland this ____ day of _____, 2018 that the County Council
7 endorses the Central Maryland Transit Development Plan as attached to this Resolution as
8 Exhibit A and incorporated herein.

Central Maryland Transit Development Plan

Your Transit Future 2022



Transit for Central Maryland

Draft Final Report

January 2018



Anne Arundel
County



Howard
County



Prince George's
County



City of
Laurel

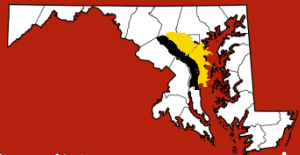


Regional Transportation
Agency of Central Maryland



MARYLAND DEPARTMENT
OF TRANSPORTATION...

MARYLAND TRANSIT
ADMINISTRATION



Central Maryland Transit Development Plan

Planning the Future of Transit in Our Region

Executive Summary, January 2018



Anne Arundel
County



Howard
County



Prince George's
County



City of Laurel



Regional Transportation
Agency of Central Maryland





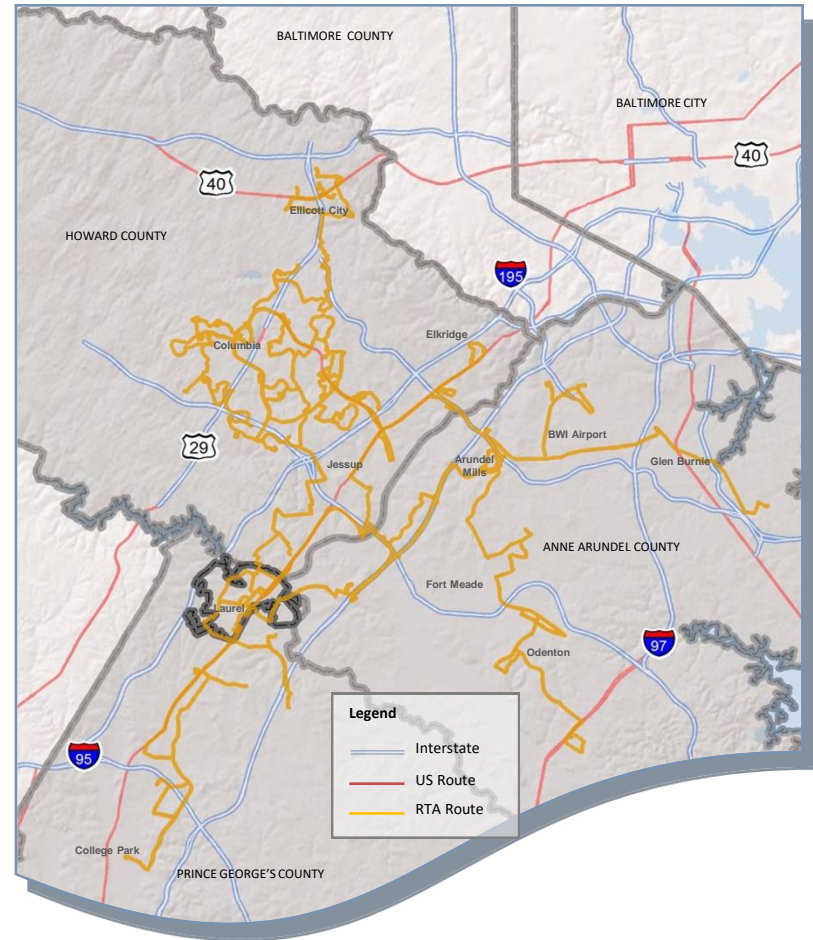
TDP Purpose

- Guide public transit service improvements in Central Maryland region over next 5 years.
- Opportunity to engage public & stakeholders about what transit should look like.
- Study required by MTA, funded by MTA with local match.
- Public hearings required before implementation actions, implementation depends on funding.

Partners

- Anne Arundel County
- Howard County
- Northern Prince George's County
- City of Laurel
- Regional Transportation Agency of Central Maryland (RTA)
- Maryland Transit Administration

Service Area





RTA Service

- 15 bus routes (8 Howard Transit, 7 Connect-A-Ride in Anne Arundel County and Prince George's County)
- RTA ADA complementary demand-response service within $\frac{3}{4}$ mile of all fixed-routes (including Anne Arundel County)
- Operates Monday-Sunday
- Fares
 - Regular one-way \$2.00, Reduced one-way \$1.00, Transfer \$1.00
 - \$4.00 ADA trips for non-Howard County residents
- Key destinations include Arundel Mills, BWI Airport, Columbia Mall, Towne Centre at Laurel, College Park Metro Station & Odenton MARC Station



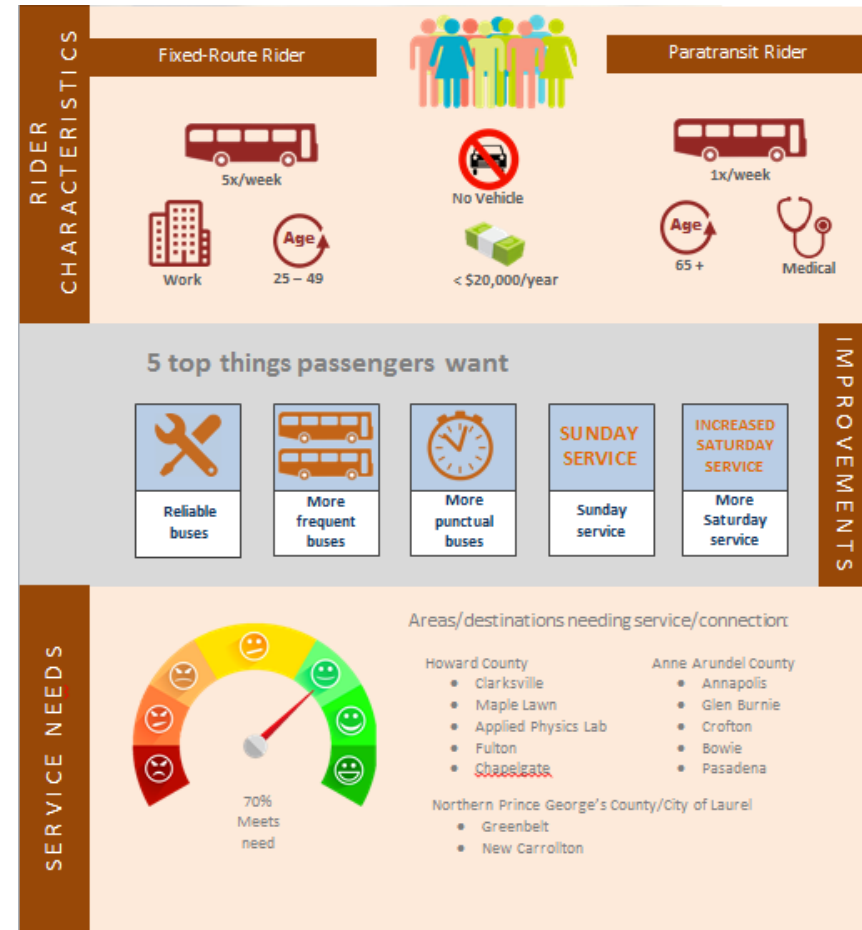
Plan Overview

- Demographics and Land Use
- Public and Stakeholder Input
 - Fixed-Route Rider Survey
 - Paratransit Rider Survey
 - Community Survey
 - Public meetings and Stakeholder input
- Review of Existing Services
- Service Alternatives
- Transit Plan
 - Routes and Services
 - Fleet Replacement and Expansion
 - Fare Collection
 - Facilities
- Future Transit Development
 - Beyond Five Years



Key Aspects

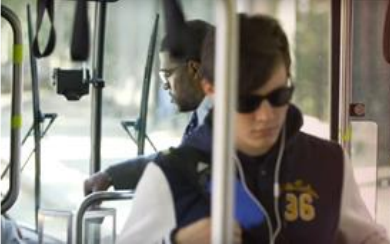
- Connect residents to jobs and education
- Improve service reliability
- Increase frequency of service
- Expand weekend service
- Develop new local services and cross-county routes connecting activity centers





Anne Arundel Strategies

- Expand frequency and span of service, minor routing changes on existing RTA routes in the County
- Develop Call N'Rides as a new kind of community based demand-response service in limited areas:
 - Providing local access
 - Connecting to existing and new MTA and RTA services
- Developing new cross-county routes connecting activity centers

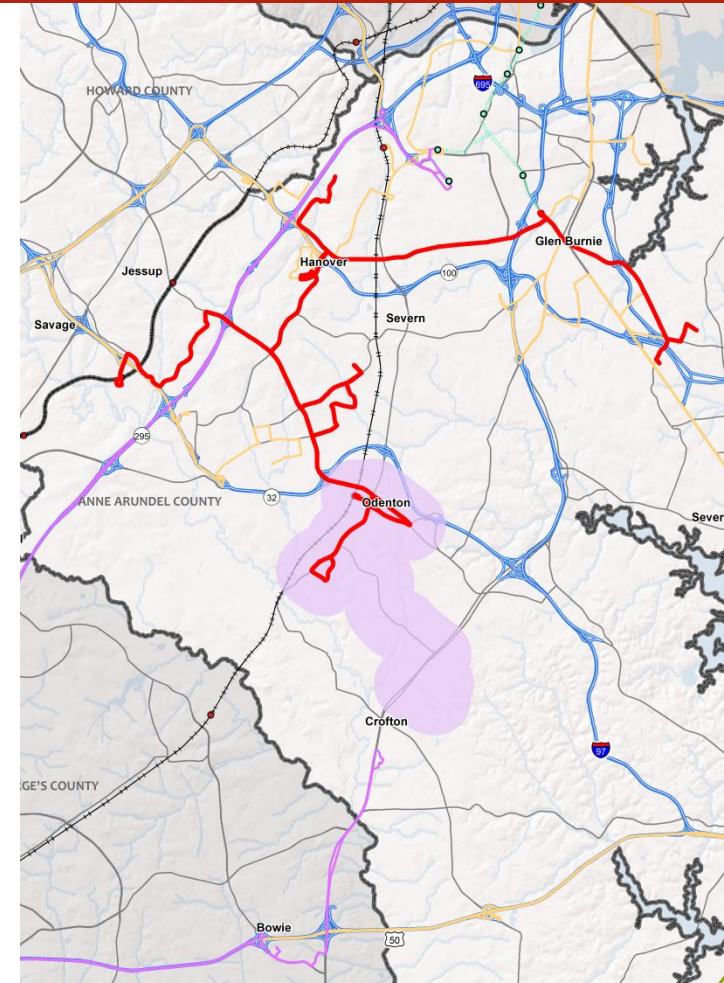


Anne Arundel Recommended Services

- Phase 1: Improve Existing Services
- Phase 2: Call N'Rides Initial implementation
- Phase 3: New Route Connections-Annapolis to Arundel Mills/BWI
- Phase 4: New Route Connections/Expansions-Anne Arundel Community College-Severn-NSA/Fort Meade
- Phase 5: New Route Connections – Crofton/Waugh Chapel Connections

Anne Arundel County Phase 1

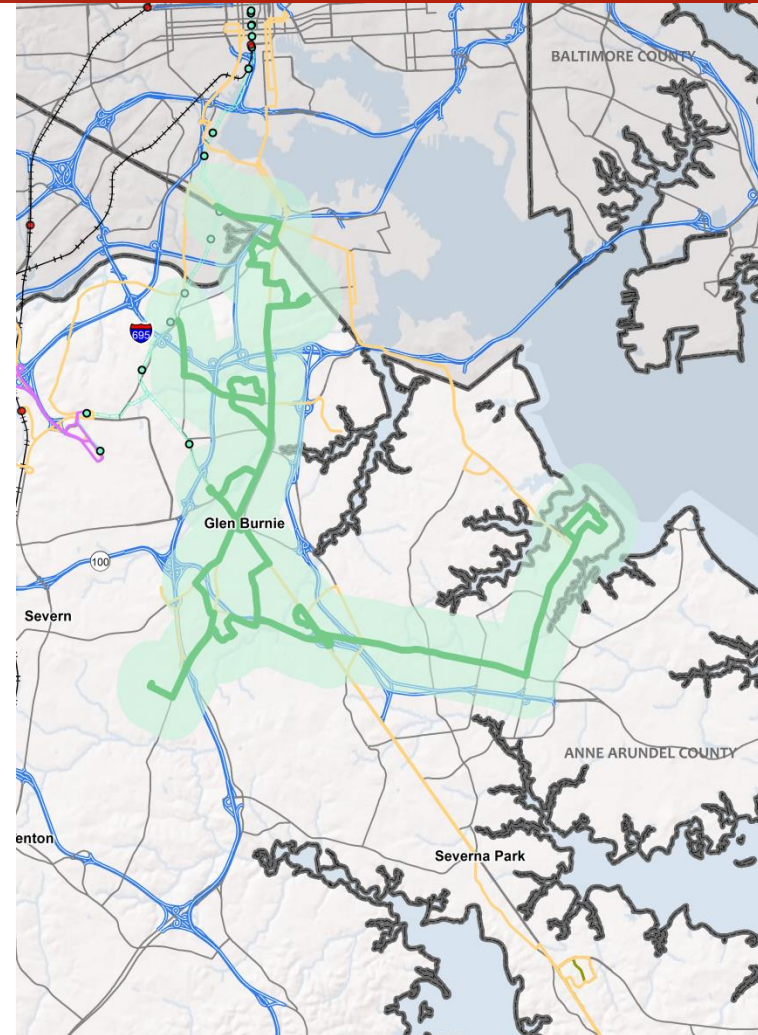
- **Route 201:**
 - Extend service from Freetown Village to Walmart
 - Frequency improved to 30 minute peak, 45 minute midday and evening
- **Route 202:**
 - Extend service to Coca-Cola facility
 - Daily service to Odenton Marc
 - Frequency improved to 35 minutes peak, 45 off-peak
- **Route 504:**
 - Improved frequency of fixed-route service to 30 minutes in peak
- **Phase 1 improvement cost: \$1.6 million**



Anne Arundel County Phase 2

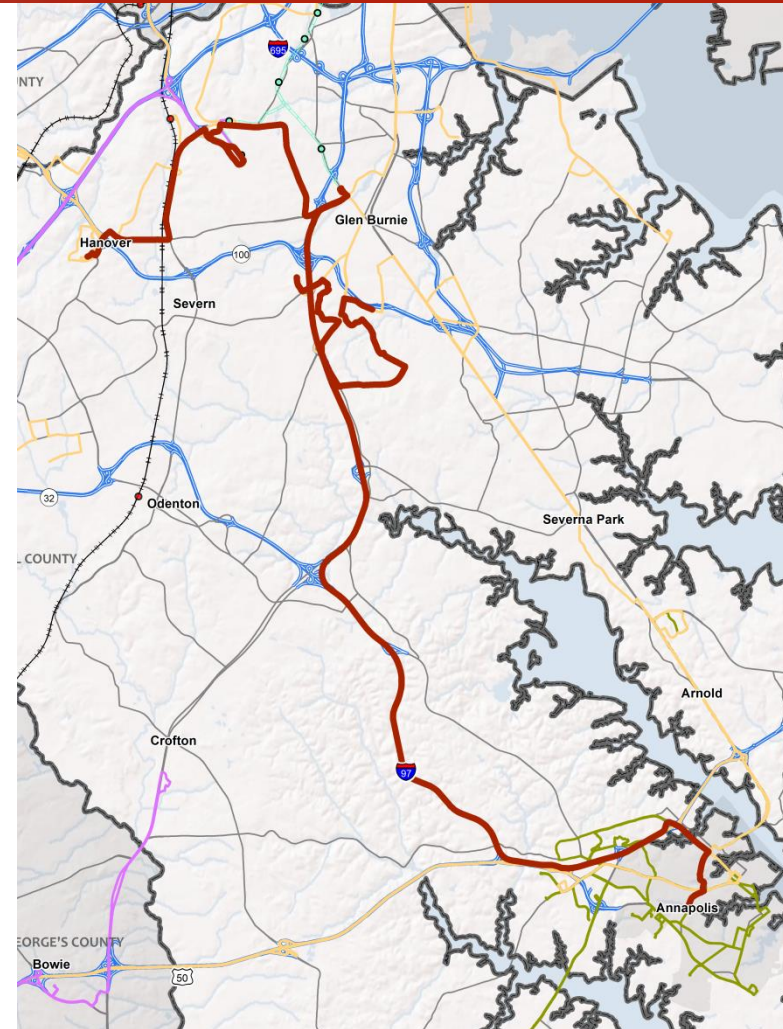


- Riviera Beach Call N'Ride
- Patapsco Light Rail Station to Glen Burnie District Court Call N'Ride
- Patapsco Plaza to Cromwell Light Rail Station Call N'Ride
- Glen Burnie Call N'Ride
- Phase 2 improvement cost: \$2.6 million



Anne Arundel County Phase 3

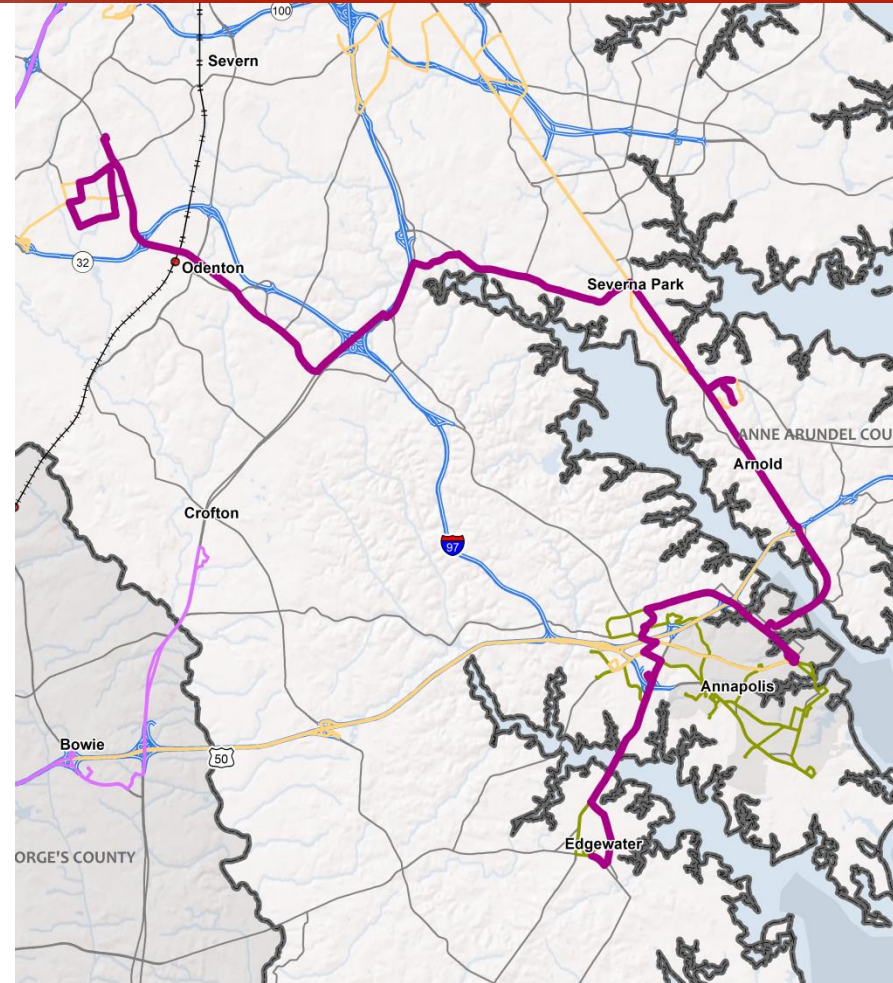
- New Fixed-Route Annapolis to Arundel Mills/BWI
- South Glen Burnie Call N'Ride
- Additional ADA service to support new route coverage
- Phase 3 improvement cost: \$2.1 million



Anne Arundel County Phase 4

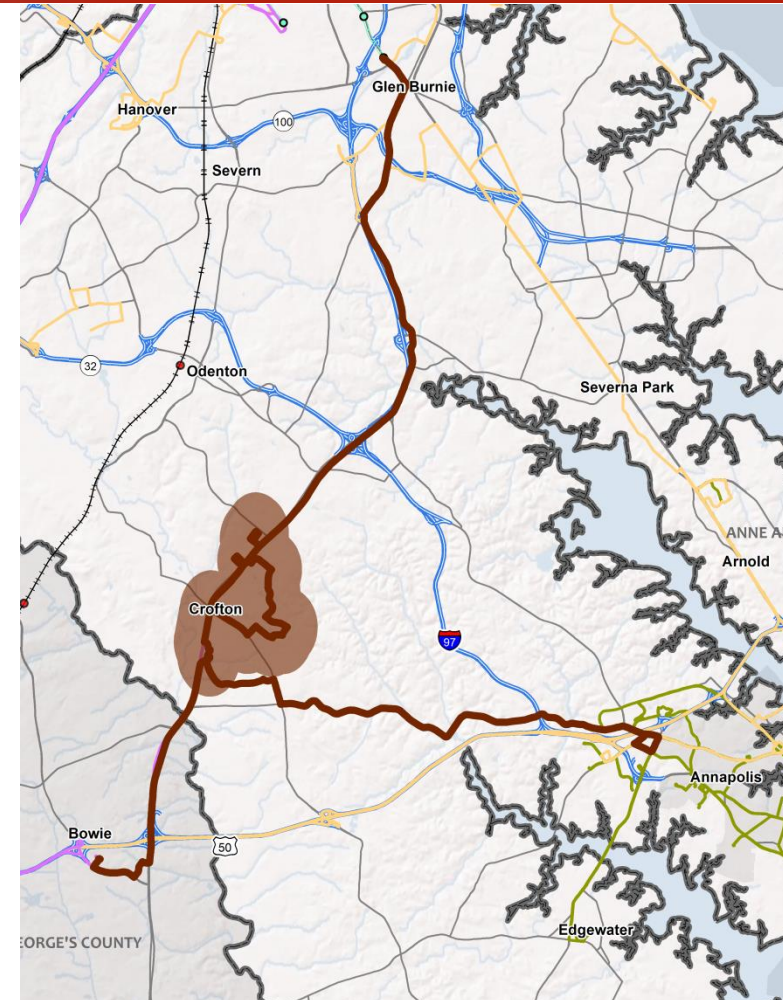


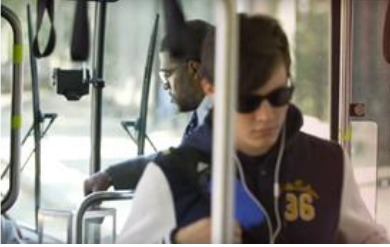
- New Fixed-Route Anne Arundel Community College-Severn-NSA
- Improvements to County service on Annapolis Transit Gold Route
- Additional ADA service to support new route coverage
- Phase 4 improvement cost: \$1.8 million



Anne Arundel County Phase 5

- New Fixed-Route Crofton to Annapolis Mall
- Crofton area Call N'Ride service
- New Fixed-Route Bowie Town Center-Crofton-Cromwell Light Rail Station
- Additional ADA service to support new route coverage
- Phase 5 improvement cost: \$2.4 million





Anne Arundel County Capital Requirements

- **Fleet Replacements:**

- Anne Arundel portion of RTA fleet is 6 vehicles, 4 just replaced
- Additional vehicle for RTA ADA service needed, plus additional replacement of 2
- Fleet Replacement Cost: \$2,130,203

- **Anne Arundel share of new fare collection system:**

- Modern registering fareboxes to improve revenue control and data collection, allow for regional transfers (MTA and WMATA)



Anne Arundel County Capital Requirements

- Expansion Vehicles:
 - Phase 1: 2 Medium-Duty Transit Buses
 - Phase 2: 10 Cutaway Small Buses
 - Phase 3: 3 Cutaway Small Buses, 3 Medium-Duty Transit Buses
 - Phase 4: 3 Medium-Duty Transit Buses
 - Phase 5: 4 Heavy-Duty Transit Buses, 2 Cutaway Small
- Total fleet of 37 at end of five-phase expansion
- Total capital cost for expansion:\$9,768,303



Howard County Strategies

- **Basic performance and service improvements**
 - Replace older, unreliable buses that are outdated and expensive to maintain
 - Streamline fare structure
 - Improved bus stops and bus shelters
- **System reconfiguration and service expansions within 18 months (after public hearings)**
 - Routes that better align with riders' needs
 - More shorter routes versus fewer longer routes within same service area
 - More direct routes and shorter travel times
 - More weekend and evening service, shorter headways



Howard County Strategies

- 3 plus year vision for service expansion
 - Local service Maple Lawn (via APL); Elkridge (via Long Reach), River Hill (via HCPS headquarters); Turf Valley
 - Bus Rapid Transit to Silver Spring
 - Downtown Columbia to Gateway transit corridor
- **Mobility**
 - Options to address the high cost and rising demand for demand-response services
 - Ideas suggested to focus mobility services to where needs are greatest
 - Discussions with affected communities beginning in Spring/Summer of 2018



Howard County Recommended Services

- Phase 1

- More shorter routes, fewer longer routes – 14 proposed routes verses 9 today.
 - 14 Proposed Routes – 10 entirely within Howard County and 4 regional
 - 9 Existing – 6 entirely within Howard County and 3 regional
- Half-hour headways on 4 key routes, Monday to Saturday during daytime hours.
- Increase weekend service
- Increase overall level of service – 132,400 annual service hours in Phase 1 versus 109,500 today.
- Reduce travel times on many routes (e.g. Route 405 – Columbia Mall to Ellicott City and Route 406 – Columbia Mall to Columbia Gateway).
- Virtually no loss in service – Only 2 stops out of 500 (on Route 408 at Millrace Ct. and Carriage House Lane – nearest stop will be 1,000 feet away).
- Implement in Winter/Spring 2019.
- Annual operating cost increase of \$1.3 million on top of existing \$8.3 million.



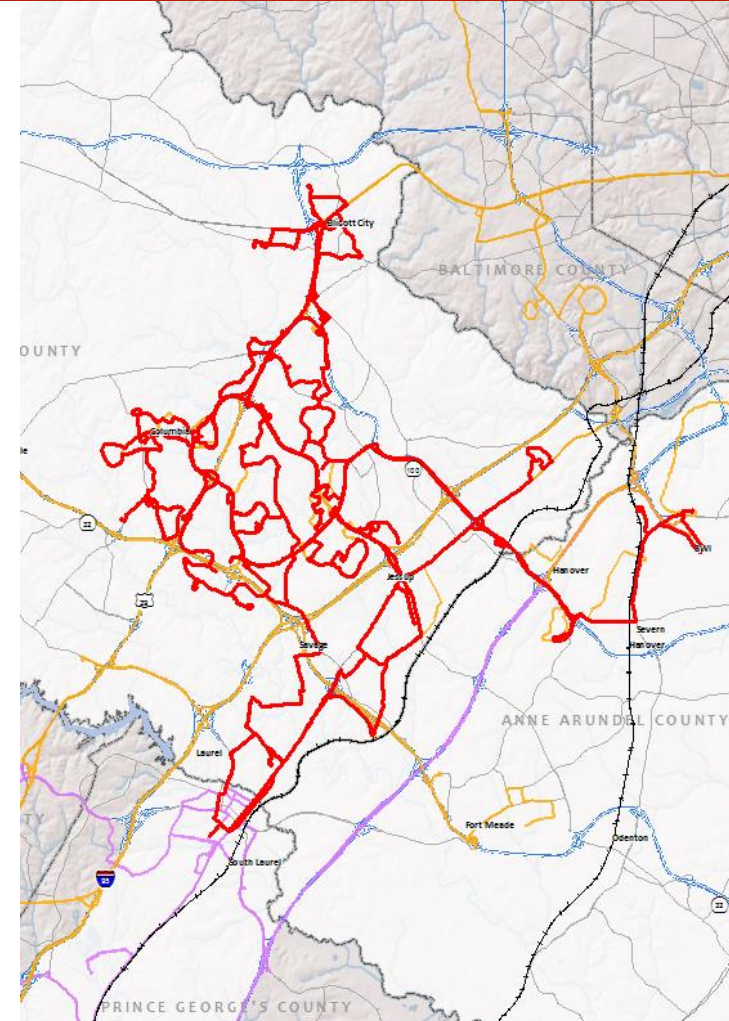
Howard County Recommended Services

- Phase 2
 - Expand service to areas not currently served
 - Maple Lawn via APL
 - Elkridge via Long Reach
 - River Hill via HCPS headquarters
 - Turf Valley
 - Catonsville (with MTA and Baltimore County support)
 - Increase overall level of service – An additional 39,388 annual service hours over Phase 1 totaling approximately 171,788 overall
 - Increase number of routes
 - Increase number of route with half hour frequency
 - Increase number of routes on weekends
 - Time of expansions dependent on funding and community interest/support

Howard County Phase 1



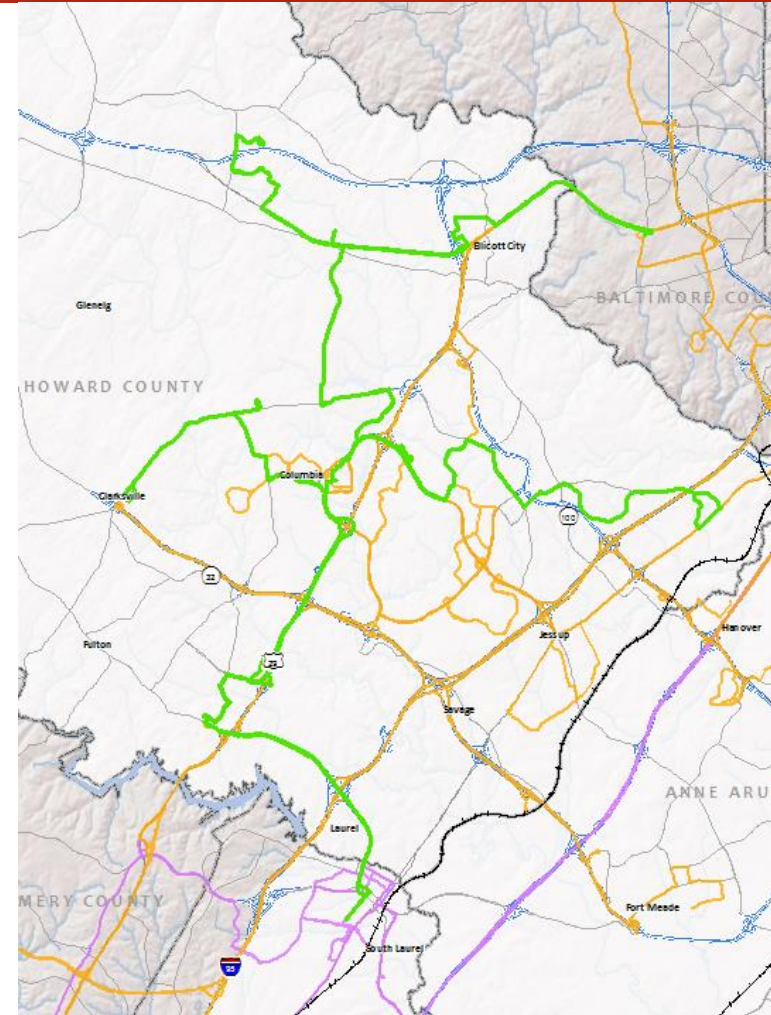
- Route 401 – More ½ hour service during midday & Sat.
- Route 402 - New route with more direct north-south between major shopping centers.
- Route 403 – Serves southern portion of existing Route 405. Shorter route in central Columbia.
- Route 404 – Serves northern portion of existing route; shorter more efficient route.
- Route 405 – Serves norther portion of existing route; more direct alignment.
- Route 406 – Shorter, more direct alignment.
- Route 407 – Increase frequency between Columbia Mall and Owen Brown.
- Route 408 – Shorter, more direct alignment.
- Route 409 – Split into 409A & 409B; ½ hour on 75% of route.
- Route 410 – New route serving portions of existing Route 406.
- Route 411 – New route serving portions of existing Route 404.
- Route 501 – No longer serve BWI; BWI served by 505 or shuttle.
- Route 503 – No Change.
- Route 505 – New route serving portions of existing 406 and 501. Express to BWI.



Howard County Phase 2



- Route 410 – Extension to Elkridge via Long Reach; Expansion Route
- Route 412 – Columbia Mall to River Hill via HCPS Headquarters; Expansion route.
- Route 413 – Columbia Mall to Turf Valley; Expansion route.
- Route 414 – Columbia Mall to Towne Center Laurel via Maple Lawn; Expansion route.
- Ellicott City to Catonsville; Expansion route with MTA and Baltimore County support.





Howard County Capital Requirements

- **Fleet Replacements:**

- Continue to bring fleet to state of good repair; eliminate over age vehicles, and provide for adequate spares to provide reliable service
- Howard County portion of RTA fleet fixed-route fleet is 36 vehicles, 12 of which were eligible for retirement in FY2017; 11 in FY2018; 5 in FY2019; 3 in FY2020; and 2 in FY2023.
- 13 new buses are currently on order (including 3 buses for implementation of Phase 1)
- Fleet Replacement Cost: \$5,896,711 (excludes amount funded in FY2017 and FY2018)

- **Howard County share of new fare collection system:**

- Modern registering fareboxes to improve revenue control and data collection, allow for regional transfers (MTA and WMATA)



Howard County Capital Requirements

- Expansion Vehicles:
 - FY2018: 5 Medium-Duty Transit Buses
 - FY2019: 4 Medium-Duty Transit Buses
 - FY2020: 2 Medium-Duty Transit Buses
- Implementation of Phases 1 and 2 and elimination of over aged vehicles by FY2023 would require 17 buses in addition to the 13 currently on order.
- Total capital cost for expansion:\$6,260,626



Howard County Capital Requirements

- Expansion Vehicles:
 - FY2018: 5 Medium-Duty Transit Buses
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 - FY2020: 2 Medium-Duty Transit Buses
- Implementation of Phases 1 and 2 and elimination of over aged vehicles by FY2023 would require 17 buses in addition to the 13 currently on order.
- Total capital cost for expansion:\$6,260,626

A collage of three images related to mobility services. The left image shows a white bus with a wheelchair lift at a stop. The middle image shows a person in a blue vest with the number 36 assisting a passenger. The right image shows a person walking towards a bus. The title 'Howard County Mobility Services' is overlaid in white text on a red background.

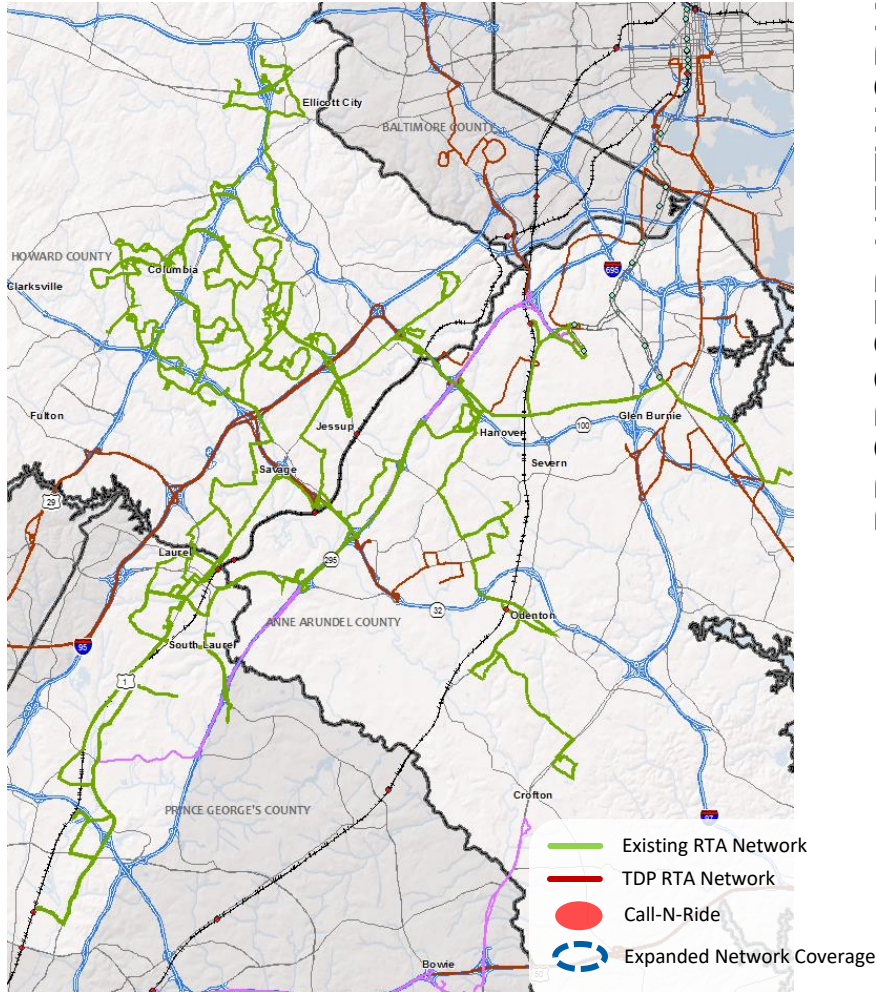
Howard County Mobility Services

- No specific proposal for immediate implementation.
- Ideas suggested include focus mobility services on where needs are greatest; encourage paratransit riders to use fixed routes; ensure long-term program financial stability.
- Examples of ideas – increase use of taxicab services; free fares for seniors/disabled on fixed routes; raise senior age from 60 to 65.
- Recommends discussion with affected communities beginning in Spring/Summer of 2018.

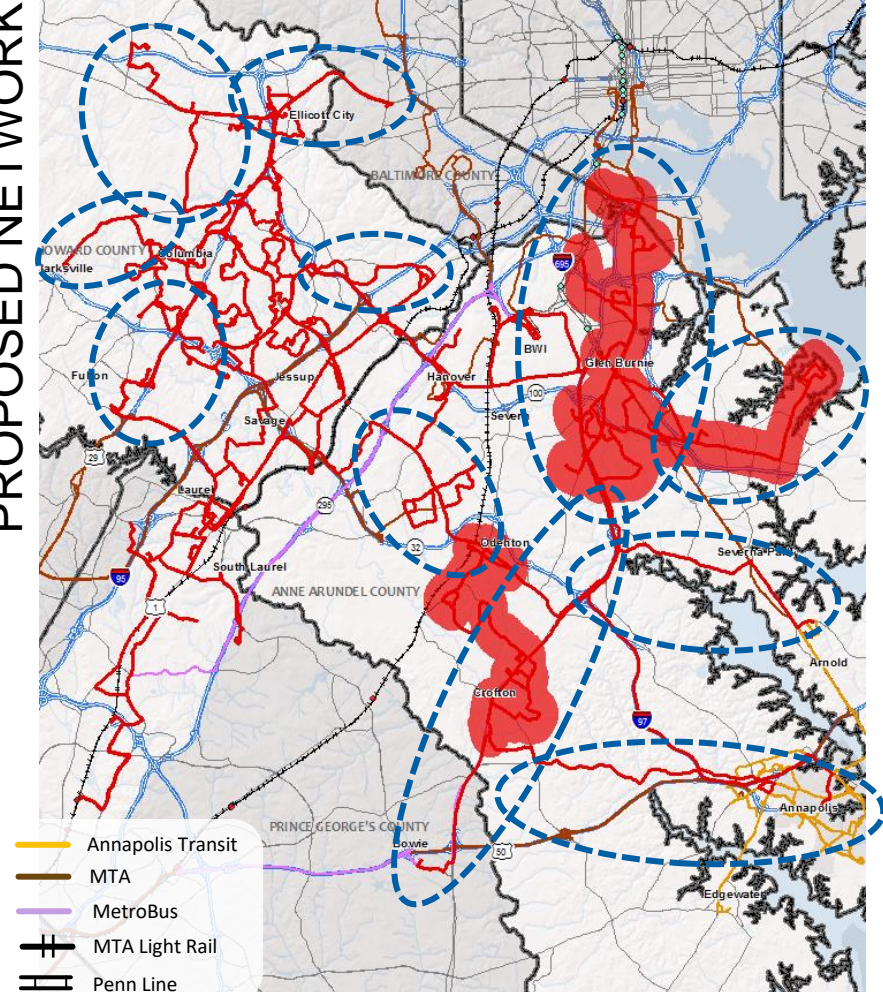
RTA Network



EXISTING NETWORK



PROPOSED NETWORK





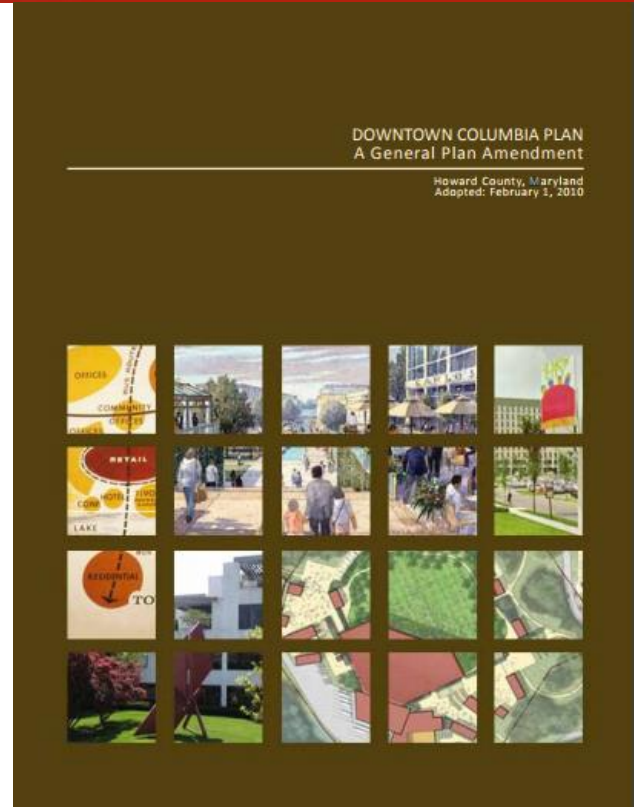
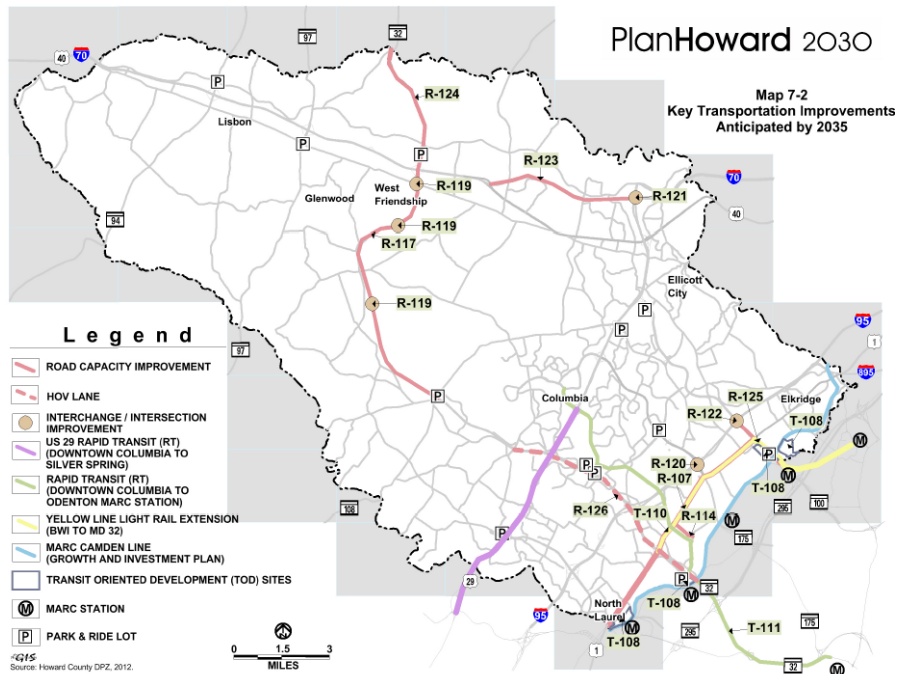
RTA Service & Facility Improvements

- Driver training and customer service.
- Real time bus tracking on mobile devices – RouteShout.
- Downtown Columbia Transit Center.
- Marketing and branding to improve/increase name recognition.
- Consolidated fare structure.
- Electronic fare media.
- Bus stop/shelter improvements.

Future Transit Development



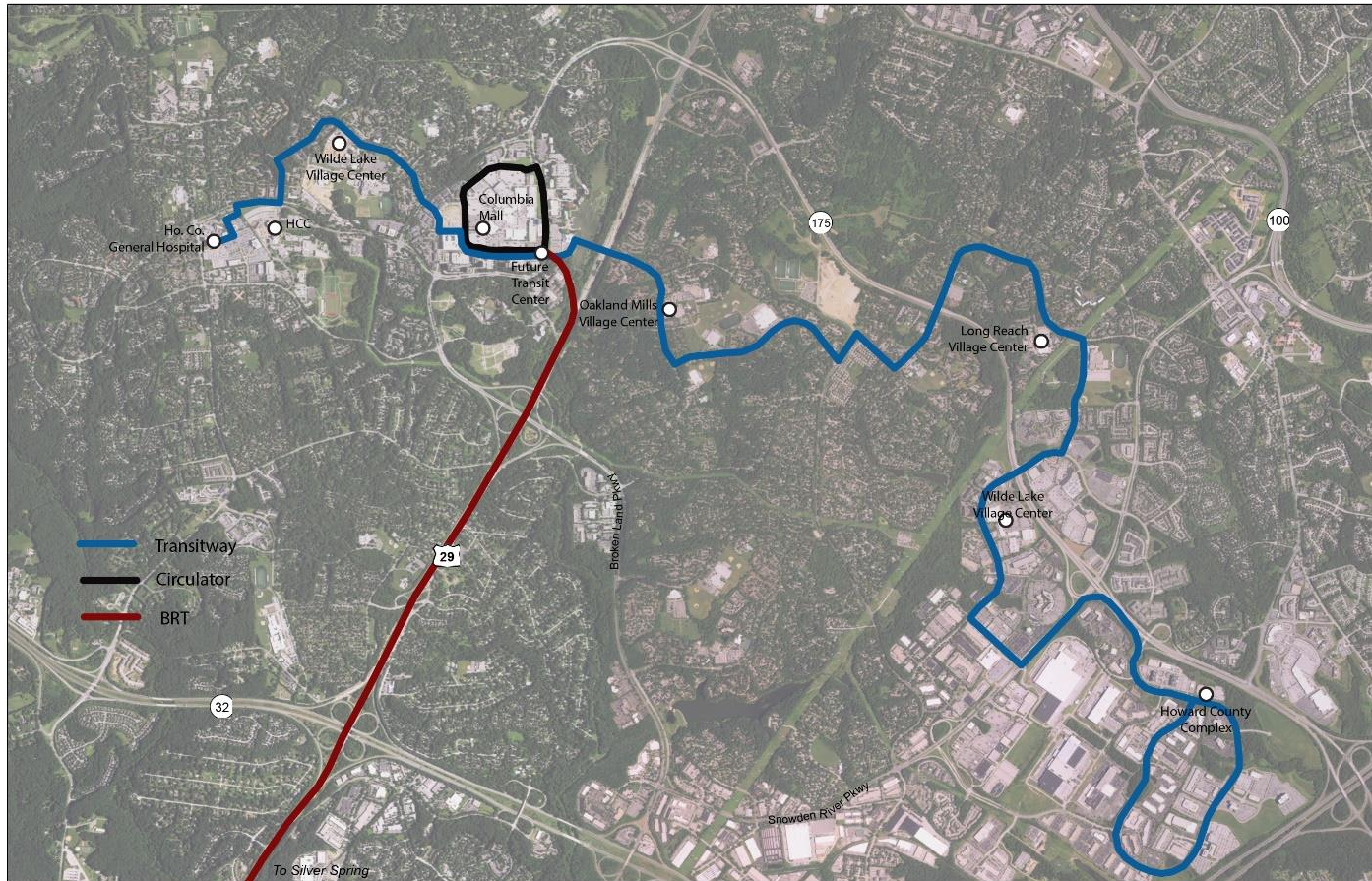
- Plan Howard 2030 Rapid Transit Corridors.
- Focus on Route 29 corridor; coordination with Montgomery Co.



- Downtown Columbia Shuttle

Future Transit Development

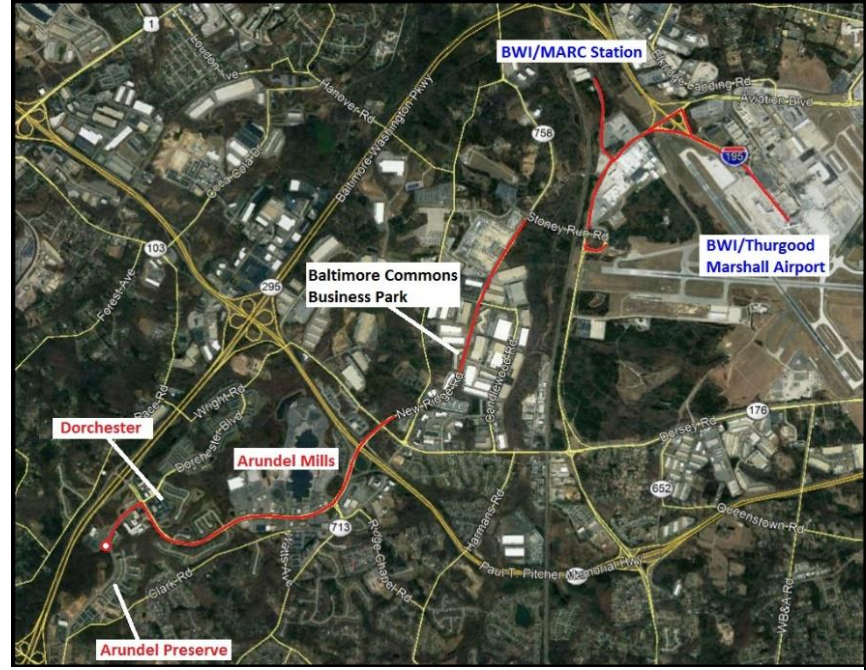
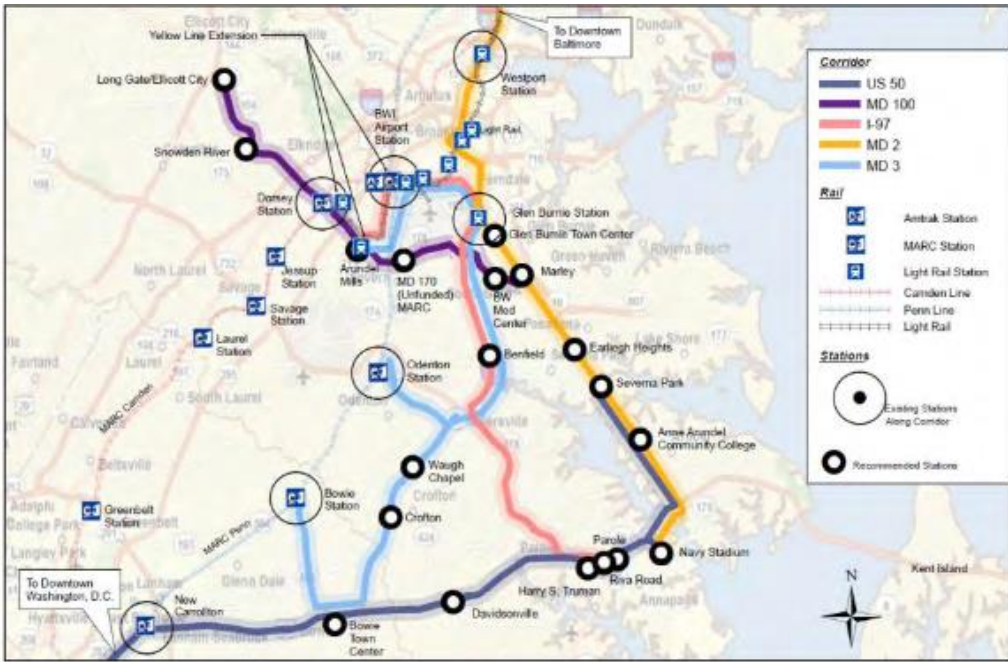
- Downtown Columbia to Gateway Transit Corridor



Future Transit Development



- Anne Arundel County Preferred Transit Network (from the Anne Arundel County Corridor Growth Management Plan)



- Arundel Mills-BWI High Frequency Shuttle

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Appendix A: Stakeholder Agencies Interviewed

Appendix B: Onboard Rider Survey

Appendix C: Onboard Rider Comments

Appendix D: Paratransit Rider Survey

Appendix E: Paratransit Survey Comments

Appendix F: Community Survey

Appendix G: Community Survey Comments

Appendix H: Community Suggestions and Comments

Appendix I: Summary of all Comments Collected

Appendix J: Stakeholder Input – New Services

Appendix K: Stakeholder Input – Existing Services

Chapter 1

Introduction

INTRODUCTION

This report documents the results and recommendations of the short-range (five-year) Transit Development Plan (TDP) for the Central Maryland area including Anne Arundel County (except the City of Annapolis¹), Howard County, and Northern Prince George's County including the City of Laurel. The Maryland Transit Administration (MTA) requires the Locally Operated Transit Systems (LOTS) in Maryland to conduct a TDP update every five years. The LOTS use their TDPs as a basis for preparing their Annual Transportation Plans (ATPs) that serve as their Annual Grant Application (AGP) for transit funding. The TDP planning process builds on or formulates the county's or region's goals and objectives for transit, reviews and assesses current transit services, identifies unmet transit needs, and develops an appropriate course of action to address the objectives in the short-range future, typically a five-year horizon. A completed TDP serves as a guide for the local transit system, providing a roadmap for implementing service and/or organizational changes, improvements, and/or potential expansion during the five-year period.

This particular TDP is a significant development in the planning process for transit in this region. Previously TDPs were developed separately for Howard County, Anne Arundel County, and for Connect-a-Ride (now RTA) services in Prince George's County. In addition, the staff of the RTA (and predecessor organizations) and the counties performed a great deal of short-range operational planning as the organizational changes in the region progressed. The previous TDPs for Howard and Anne Arundel Counties were separate plans, but they were done at the same time with the thought that they could be joined at the match lines to result in a regional plan. To an extent, the *Fort Meade BRAC Transit and Ridesharing Planning Study* of 2010 was the first regional transit plan to combine the local service plans. However this current *Central Maryland Transit Development Plan* will be the first fully regional transit plan to encompass this unique multi-jurisdictional region.

The fully regional nature of this TDP is reflected in the scoping process that led to the final Scope of Work. A scoping committee including representatives of the MTA, Howard County, Anne Arundel County Planning and Zoning, the Baltimore Metropolitan Planning Organization, the RTA, and the consultant met three times and provided comments on draft scope and budget documents. While there is a standard set of tasks included in a TDP and the MTA has a framework that must be followed, there is significant latitude within these guidelines. This scoping committee provided direction that was reflected in the final scope of services and eventually in this Central Maryland Transit Development Plan document.

¹ A separate TDP is being conducted for the transit services operated by the City of Annapolis, but this study does include recommendations for the routes operated by Annapolis Transit with support from Anne Arundel County.

Project Process

This study was guided through the participation of the public and agencies affected by public transit services primarily by a Technical Advisory Committee (TAC), which included representatives from the RTA, Anne Arundel County, Howard County, Prince George’s County, the City of Laurel, and the MTA. The role of TAC members included provision and validation of data, input on process, assistance in public outreach, review and comment on draft products and recommendations, and assistance in the final presentation and review process with key decision-makers. A broader Study Advisory Committee (SAC) was initially involved in the transition from the scoping process to the study and members of this group were informed during the study tasks. The TAC was a substantial subset of the SAC, which also included representatives of the Baltimore Metropolitan Commission (BMC) and the MTA. It should be noted that MTA staff provided data and contributed significantly to the development of service alternatives and recommendations, particularly for the Howard County routes.

Review of Previous Studies and Data

An initial task involved review of recent studies and plans in the region to gain a better understanding of previous planning efforts, local trends, and directions that key participants will be taking. This review included:

- Recent and historic transportation studies for Anne Arundel, Howard and Prince George’s Counties and the City of Laurel, including the current regional Baltimore Region Coordinated Public Transit – Human Services Transportation Plan, Bus Rapid Transit (BRT) studies for Route 29 and Route 1, plans for the Downtown Columbia Transit Center, and the recent analysis of Anne Arundel County Department of Aging and Disabilities paratransit services.
- RTA passenger count data.
- Operating reports and performance data for systems under study, including MTA Form 2A reports.
- Land use or development plans for the area under study, including plans for downtown Columbia; the recently adopted Odenton Town Center Master Plan; and any other plans that have been adopted or are in force.
- Other regional plans or studies such as the Baltimore Regional Transit Needs Assessment, Baltimore Metropolitan Council (BMC) BWI Workforce Development Study, MTA Baltimore Link plan, and the Fort Meade Regional Growth Management Committee Comprehensive Regional Plan Addressing Growth Impacts.

- Previous and current funding for local transit systems.
- Progress on implementation of previous TDPs.

Demographic Analysis and Land Use

In order to determine locations of major origins for transit ridership, a population profile was developed to identify areas of the region that are likely to have higher transit needs and the density that is required to support different types of transit services. The analysis used 2010 Census and American Community Survey updates. The analysis focused on the density of potentially transit dependent populations by Census block group. The transit dependent population included:

- Persons age 60 and older
- Persons with disabilities
- Zero car households
- Youth population
- Persons living below poverty level

In addition, overall population densities at the block group level were mapped to indicate whether or not the existing transit network was serving locations of sufficient density to support fixed-route service, or to identify areas of density lacking transit service.

In order to identify regional travel patterns, data was obtained from the BMC regional travel demand model. An analysis focusing on significant levels of home-based work trip productions/attractions resulted in tables and maps showing the key regional flows—for all modes. In addition, the study team collaborated with Sidewalk Labs (a subsidiary of Google) to attempt to use cell phone location data to identify regional travel patterns, which did not yield data usable for transit travel pattern analysis.

As transit can have a major role in providing access to jobs for those who are unemployed or underemployed, the density and location of employment was mapped, and combined with information on the percentage of households in poverty. This information was mapped to help identify the adequacy of current transit coverage and the need for new transit links.

Finally, land use information was obtained from the counties to identify new or recent major developments to confirm that existing or planned transit services provide adequate access.

The results of these analyses are presented in Chapter 2.

Public and Stakeholder Outreach

A substantial effort was made to collect public and stakeholder input as part of the process of developing this plan. In the public and stakeholder input subtask, the consultants worked with the counties, the city and RTA to obtain public input regarding the issues and concerns to be addressed in the study by identifying and interviewing stakeholders. The stakeholders, typically public agency representatives, were identified jointly with county staff, and were interviewed by telephone, email, and in meetings.

A single project website was developed and linked to the RTA website and to each jurisdiction's website, providing an overview of the study process. It included a link to an open-ended community survey that could be completed online. The RTA and the counties publicized the project and survey. The project website included high-level summaries of draft products and links to technical memoranda, and also included contacts available for any public input or questions. Presentations and other materials from the public meetings were also made available on the website.

The consulting team worked with the RTA and the jurisdictions to conduct public meetings. An initial round of public meetings presented the purpose of the study and was designed to solicit input regarding needs. The consultant developed the materials and content, and conducted a meeting in each jurisdiction—Howard County used the materials to conduct an additional two meetings. A second round of public meetings was held to present service alternatives.

Finally, user surveys were developed to solicit the input of riders. For fixed-route services, a printed survey was developed, distributed and collected on buses with significant assistance from the RTA staff and operators. The survey was also available to users electronically through the website. A second survey was designed primarily for users of demand-response services, and it was mailed to current users. All surveys were made available in English, Spanish, and Korean.

Results of the outreach process are presented in Chapter 3 of this report.

Existing Public Transit System

Chapter 4 of the study included an assessment of existing RTA fixed-routes, RTA demand-response services, and Anne Arundel Department of Aging and Disabilities (DOAD)² demand-response services. This task involved collection and calculation of basic route and service level performance data to allow an assessment of current routes and services and evaluate performance against the MTA's established performance standards. For RTA services, initially MTA Form 2a performance data was used, but subsequent analyses

² Responsibility for these Anne Arundel County demand-response services was shifted to the new Ann Arundel County of Office of Transportation during the course of the study.

conducted by the counties and the RTA to update cost-allocation to RTA partners resulted in data that better reflected the current service and ridership, so this information was included in the analysis. The result provided a route-level analysis of key performance indicators.

In addition, data was collected from the RTA's Nextbus system to develop estimates of activity by stop for each route. Because this equipment is only working on a portion of the fleet, and the fact that many buses move from route to route during the course of a day, a considerable effort was needed to reassemble this information to provide a good approximation of the on-off information. The performance and ridership data was combined with the user survey data to present a route profile for each route.

Separate analyses of RTA and Anne Arundel County demand-response services were included, focusing on basic service productivity and costs. The RTA fare structure was also reviewed.

Information on other transit providers in the TDP service area, including routes, schedules, fares and connectivity with local services, was collected and presented. This included MTA local routes, MTA commuter bus services, MTA light rail, MARC commuter rail services, and WMATA Metrobus routes. These also included new services developed by MTA as part of the Baltimore Link restructuring of Baltimore's bus transit network. Information on other providers, including human service agencies, is also presented in Chapter 4. City of Annapolis routes and services connecting the City and County were included in this inventory.

Transit Service Alternatives

The first three tasks of the TDP lay the foundation for development of the recommended plan. In Chapter 5, the needs identified in the previous task are used as a basis for detailed alternatives.

For each service option a route map is provided showing the existing service and potential changes in routing. Text is used to describe changes in frequency or span, or to describe the proposed frequency or span for new expansion services. Summary tables include planning estimates of operating costs. Similarly, for vehicle capital a proposed alternative is presented to address the vehicle replacement needs for the RTA, and to address fare collection.

These alternatives were presented at a series of meetings in the RTA service area in summer and fall of 2017, and the comments and input received were used to revise the alternatives for inclusion in the TDP.

Recommended Plan

Chapter 6 presents the recommended plan, based on the previous analyses and the input received on the alternatives described in Chapter 5. The plan includes conceptual routes and schedules structure for planned modifications to existing services, and for proposed

expansion services. The plan is presented as a phased plan over the five years, though the specific year of implementation may change depending on the resources available and local opportunities. Budget information is provided for the plan, with greater detail for the initial year and more generalized cost estimates for the out years.

A capital plan is included, reflecting vehicle replacement needs and the planned expansion of services. It addresses capital requirements for a new fare collection system for the RTA and Central Maryland.

Vision—Beyond the TDP

Chapter 7, the final chapter, presents information on additional transit initiatives that are likely to emerge in the final years of this plan. These include the development of bus rapid transit options in Howard County, implementation of a new intermodal bus terminal in Columbia, (potentially) a high-frequency east-west transit corridor connecting key activity centers in Howard County, and development of a high-frequency shuttle between Arundel Mills and Baltimore Washington International airport (BWI).

Chapter 2

Review of Demographics and Land Use

INTRODUCTION

Chapter 2 presents and analyzes demographic data and land use to assess the need for transit in the Central Maryland region, including the area served by the Regional Transit Agency (RTA) of Central Maryland. It includes an analysis of population and demographic data, and analysis of land use and travel patterns that provide a context for evaluating the existing transit network. It includes a general population profile, identification and evaluation of underserved population subgroups, and a review of the demographic characteristics pertinent to a Title VI analysis. Data sources include the U.S. Census Bureau and American Community Survey (ACS) estimates. This chapter also presents a land use profile based on the major trip generators and commuting patterns in Anne Arundel County, Howard County, and the portions of Northern Prince George's County served by the RTA. This information will inform the evaluation of the current transit network and guide the development of service alternatives and subsequent plan recommendations.

This chapter is divided into the following two sections.

- Population Profile
- Community and Land Use

POPULATION PROFILE

This section provides an analysis of current and future population trends for the Central Maryland region, as well as an analysis of the demographics of population groups that often depend on transportation options beyond an automobile.

Population Trends, 1990-2015

Table 2-1 presents information on population trends for the state of Maryland and the Central Maryland region for the period from 1990 to 2015. During the 25-year period, the state, region, and county all experienced population growth. The region as a whole experienced a population growth of over 40 percent for this period, led by a 62 percent growth in Howard County's population. The City of Laurel and Anne Arundel County (less the City of Annapolis) also exceeded statewide growth rates with population increases over 30 percent, compared to the statewide figure of 24 percent. Of note is that this combined regional population (846,403) exceeds that of the City of Baltimore (621,849 in 2015) and is close to the overall

population of Prince George’s County (909,535 in 2015—some of which is included in the Central Maryland estimate).

Table 2-1: Historic and Current Population, 1990-2015

Place	Population				Population Percent Change		
	1990	2000	2010	2015	1990 - 2000	2000 - 2010	1990- 2015
Maryland	4,781,468	5,296,486	5,773,552	5,930,538	10.8%	9.0%	24.0%
Central Maryland ¹	601,557	721,620	811,462	846,403	20.0%	12.5%	40.7%
Anne Arundel County ²	394,591	453,818	499,262	516,439	15.0%	10.0%	30.9%
Howard County	187,328	247,842	287,085	304,115	32.3%	15.8%	62.3%
Prince George's County (Laurel) ³	19,638	19,960	25,115	25,849	1.6%	25.8%	31.6%

Source: U.S. Census Bureau 1990, 2000 & 2010, and 2015 American Community Survey 5-Year Estimates

Notes:

1. Includes Anne Arundel County, minus Annapolis + Howard County + only Laurel of Prince George’s County.
2. The City of Annapolis is excluded from the population.
3. Only includes the City of Laurel.

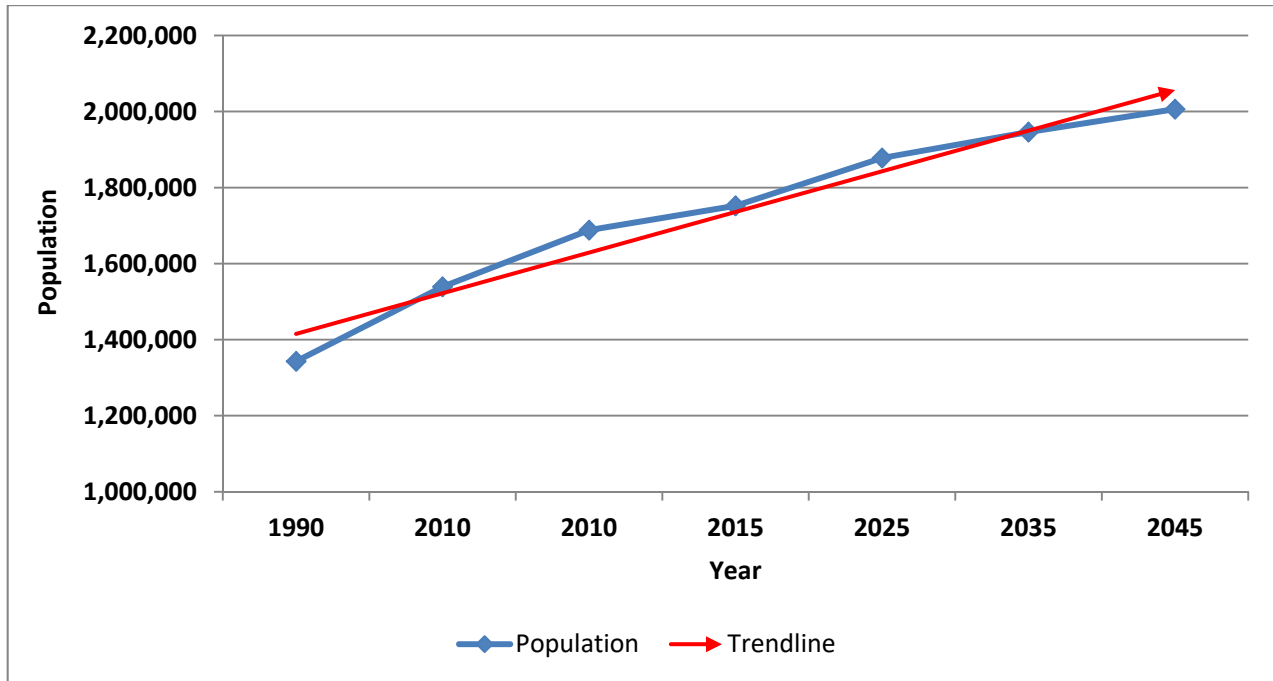
Population Forecasts, 2025-2045

The Maryland Department of Planning, Projections and State Data Center prepare county population projections for the state in 10-year increments. Currently forecasts are available through the year 2045, and these are presented in Table 2-2. Because these are county-level estimates it is not possible to separate the area of Prince George’s County served by the RTA, or the City of Annapolis from Anne Arundel County. However, the basic picture presented by the county-level data is that the population growth will continue for the region, but at a much slower pace as can be seen in Figure 2-1 which shows the trend line.

Table 2-2: Future Population Projections, 2025-2045

Place	2025 Population Projection	2035 Population Projection	2045 Population Projection
Maryland	6,336,500	6,676,900	6,968,700
Central Maryland			
Anne Arundel County	584,400	608,950	637,900
Howard County	355,700	369,500	372,350
Prince George's County	938,000	967,850	995,900

Source: Maryland Department of Planning, Projections and State Data Center, 2017

Figure 2-1: Historical and Projected Population, 1990-2045

Note: Population projections (2025, 2035, & 2045) are on available at the countywide level. The above numbers include countywide population for Anne Arundel, Howard, and Prince George’s Counties.

Demographic Change—Aging Population

In addition to overall population growth, another factor which will affect the need for public transportation is the aging of the baby boomer generation in the Central Maryland region. Table 2-3 presents projections from the Maryland Department of Aging indicating that over the period 2010-2040 the population of persons 60 and above will increase 50.4 percent in Anne Arundel County, 82.34 percent in Howard County, and 68.3 percent in Prince George’s County. The growth in this age group peaks by 2030 and then begins to decline.

While a significant number of persons continue to drive as they age, the percentage of non-drivers increases as a cohort ages, increasing the need and demand for public transportation to maintain mobility. Both Howard and Anne Arundel County have programs to provide demand-responsive transportation to seniors, age 55 and above in Anne Arundel, and 60 and above in Howard County. The implication is that these services will face calls to expand, and there will be a need to implement and maintain quality fixed-route services and provide travel training to those who do not know how to use public transportation.

Table 2-3: Central Maryland 60+ Population Projections by Jurisdiction

Jurisdiction	2010	2020	2030	2040	Percent Change 2010-20140
Anne Arundel County	92,695	120,290	142,972	139,412	50.4%
Howard County	44,750	65,120	82,140	81,599	82.3%
Prince George's County	137,473	192,853	233,444	231,367	68.3%
Regional Total	274,918	378,263	458,556	452,378	64.6%
State of Maryland	1,058,253	1,439,791	1,717,931	1,701,414	60.8%

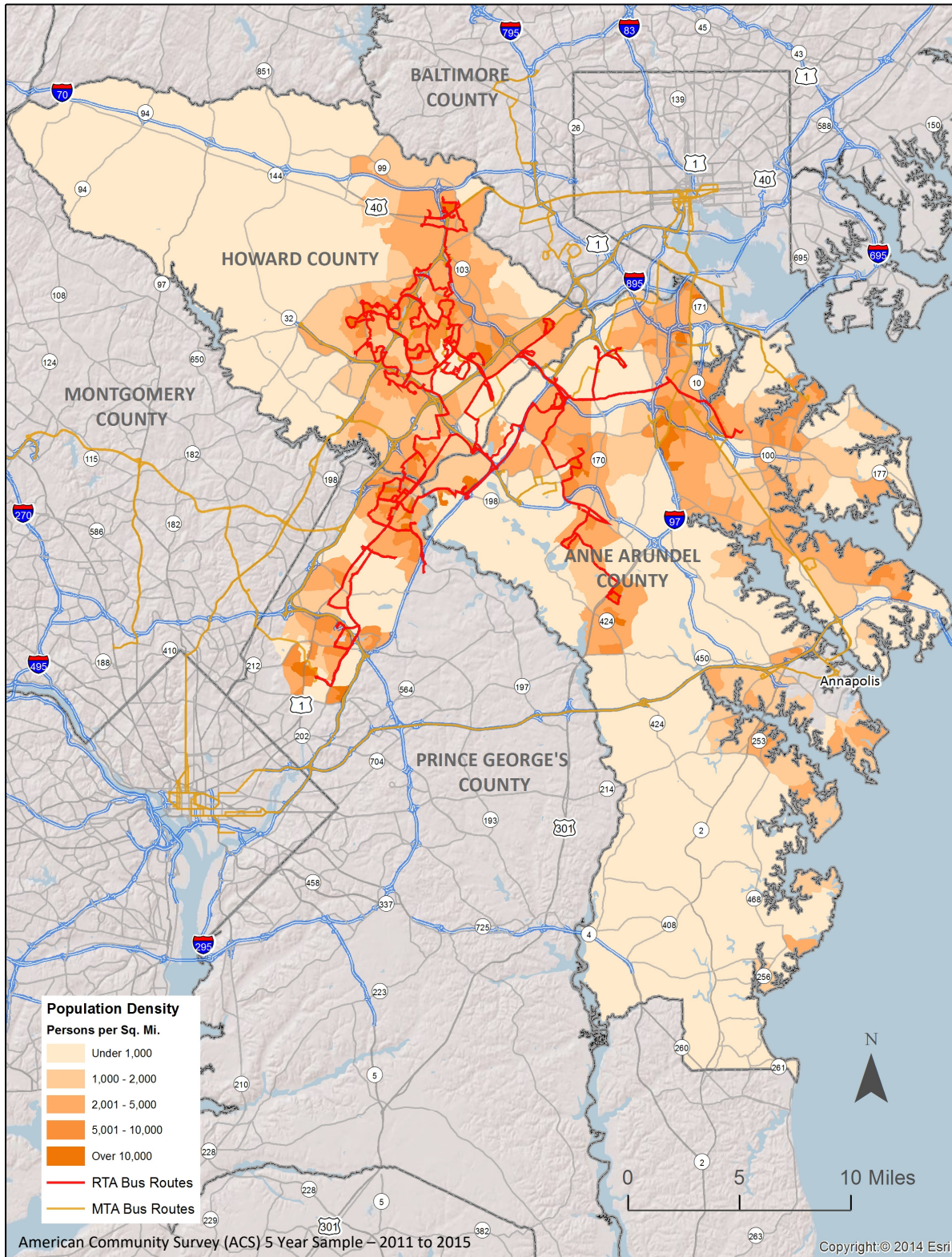
Population Density

The population of the region is not spread uniformly across this large area, but is concentrated in a number of population centers that have developed around historic communities, transportation facilities, or as a result of planned development. Figure 2-2 presents a map of the region showing the population density in terms of per persons per square mile.

As can be seen in the population density map, the Central Maryland region has a greater population density in Eastern Howard County and in Western and Northern Anne Arundel County. Portions of Anne Arundel County on the peninsulas extending into the Chesapeake Bay also have higher population densities. Western Howard County and Southern Anne Arundel County are both rural in nature by policy, as the counties have adopted land-use plans that preserve low density and limit development. Much of the region has developed with typical suburban land use patterns with relatively low residential density, though there are areas with concentrations of multi-family and townhouse development.

Population density is often an effective indicator of the types of public transit services that are most feasible within a study area. While exceptions exist, an area with a density of 2,000 persons per square mile will generally be able to sustain frequent, daily fixed route transit service. Conversely, an area with a population density below 2,000 persons per square mile may be better suited for deviated fixed route, flex schedule, or dial-a-ride service. As can be seen in the map, the existing transit network generally provides service in or between the areas with supportive residential density.

Figure 2-2: Population Density



Employment Density

Figure 2-3 presents employment densities for the region, again with the transit network as an overlay. As can be seen employment is more concentrated, but in a number of areas that represent key destinations for transit services. These include the Columbia area, Ellicott City, Elkridge, Jessup, Laurel, College Park, Arundel Mills, Glen Burnie, and Annapolis. Several other major employment centers do not appear on the density map as having a high density, because the employment is spread out over large areas—Baltimore-Washington Thurgood Marshall Airport (BWI), Fort Meade and the National Security Agency (NSA).

Figure 2-4 presents a map with the location of jobs in the region, showing the number of jobs by location, rather than the density of employment. As expected, jobs are concentrated along the I-95/U.S.1/295 corridor, with major concentrations in Columbia, North Laurel, the Gateway, Guilford and Jessup areas of Howard County; in Brooklyn Park/North Linthicum, BWI, Arundel Mills, National Business Park/Fort Meade, Parole and Annapolis.

Figure 2-3: Employment Density: Jobs Per Square Mile

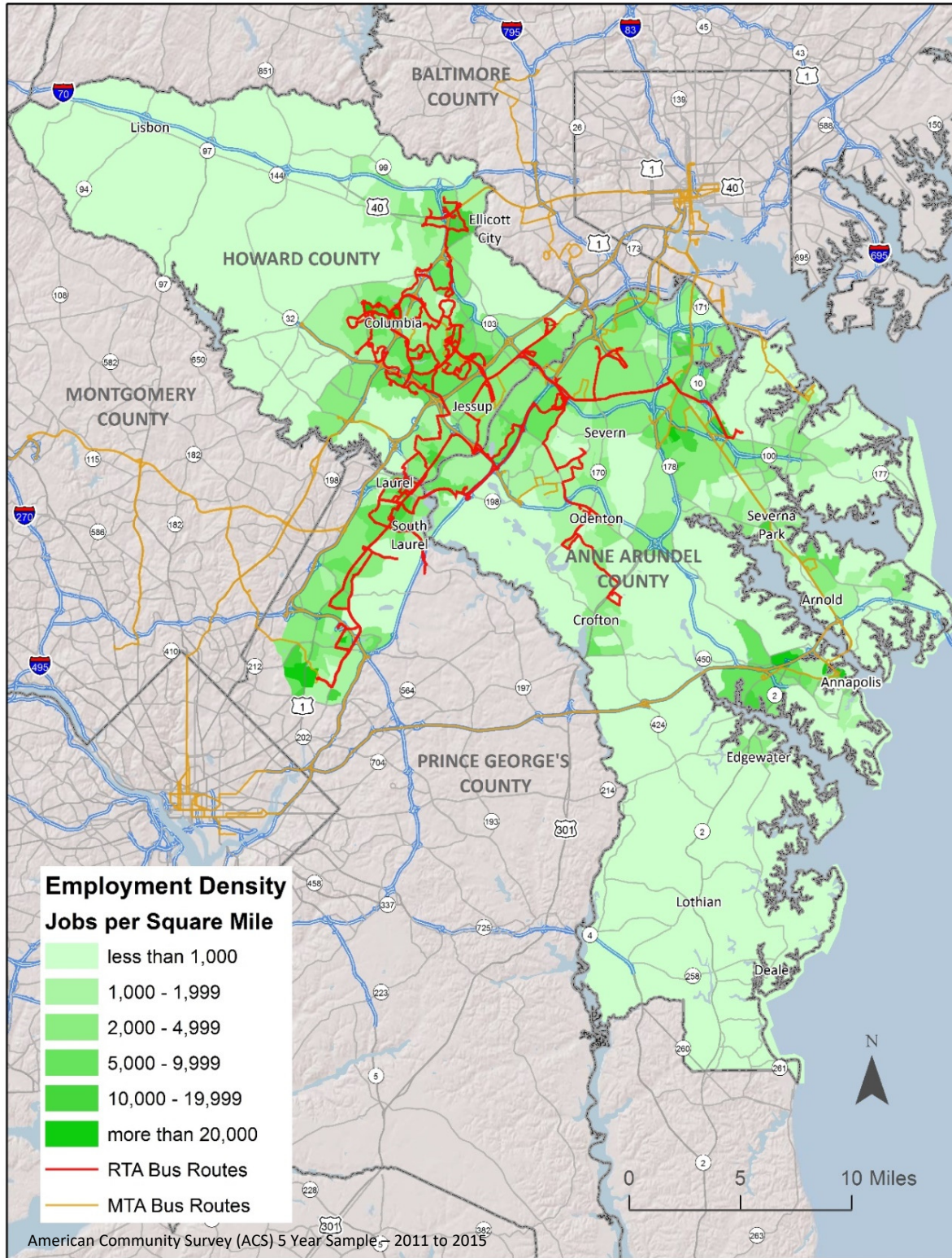
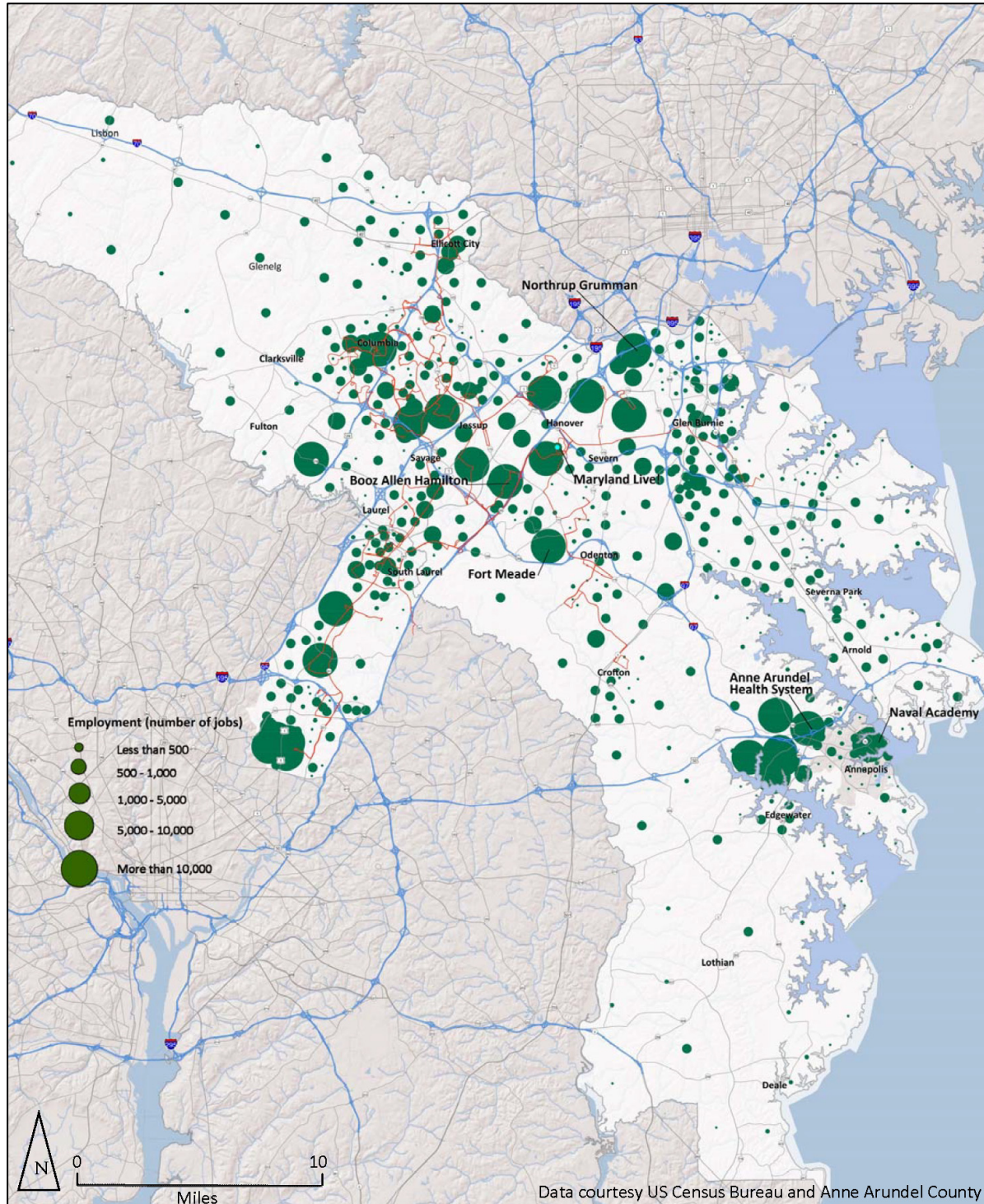


Figure 2-4: Central Maryland Employment—Number of Jobs



Transit Dependent Populations

Public transportation need may be determined by identifying the relative sizes and locations of transit dependent populations. Transit dependent populations may include individuals who do not have access to a personal vehicle or who are unable to drive themselves due to age restrictions or disability. The analyses of transit dependent population uses data from the American Community Survey five-year estimates (2010-2014) and presented by Census block group. Determining the location of these populations assists in the evaluation of current transit services and the extent to which services meet community needs.

Transit Dependent Index (TDI)

The Transit Dependence Index (TDI) is an aggregate measure that utilizes recent data from the American Community Survey (ACS) 5-Year Estimates and the United States Decennial Census to display relative concentrations of transit dependent populations. Five factors make up the TDI calculation:

- Population density per square mile,
- Zero vehicle households,
- Elderly population,
- Youth population, and
- Below poverty population.

For each factor, individual block groups were classified according to the prevalence of the vulnerable population relative to the study area average. The factors were then combined to create an overall index depicting the relative transit dependence of each block group (low, elevated, moderate, high, or very high)—as compared to the average values of the study area.

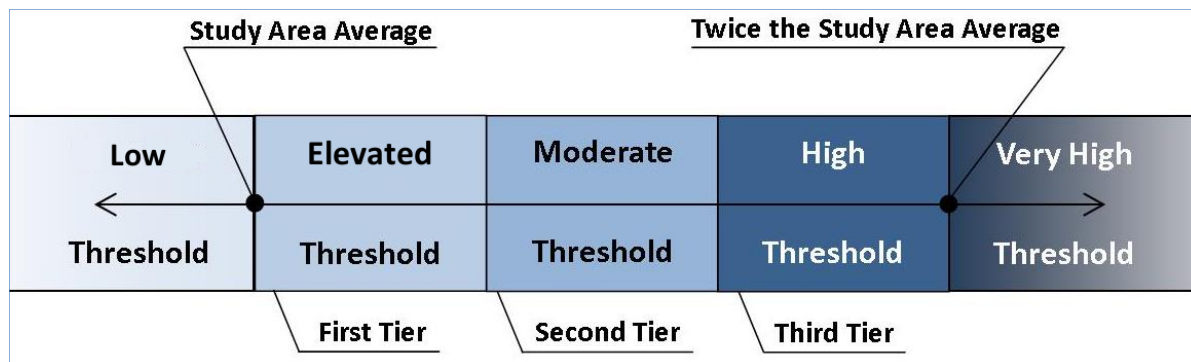
The classifications are determined by comparing transit dependent populations of each block group to the average for the entire study area. A block group classified as “low” may still have a significant transit dependent population, since classifications are relative; a block group with a “low” classification may have as high as the area average transit dependent population. Classifications are defined in Table 2-4.

Table 2-4: Transit Dependent Index Classifications

Number of Persons or Households	Class
Less than or equal to the study area average	Low
Greater than the study area average and up to 1.33 times the average	Elevated
Greater than 1.33 times the average and up to 1.67 times the average	Moderate
Greater than 1.67 times the average and up to two times the average	High
Greater than two times the study area average	Very high

From a transit perspective, the TDI illustrates the areas of greatest overall need. While some block groups show low need, they may include major destinations that should be served by transit. It should be noted that because of the different factors considered, it is possible that a given Census tract could be identified as having a high transit need or dependence based on having a high proportion of seniors—who might well have higher incomes and higher auto ownership, with relatively little need for transit services. Or a given tract may have a high youth population that results in a ranking of high need—but again with higher incomes and auto ownership it may have a lower need for transit. The impact of these factors is more evident in the analysis of the individual factors that make up the overall index. The individual factors are presented later in this chapter.

As illustrated in Figure 2-5, the relative classification system utilizes averages in ranking populations. For example, areas with less than average transit dependent population fall into the low classification, and areas that are more than twice the average are classified as “very high”. Classifications elevated, moderate, and high fall between the average and twice the average; these classifications are divided into thirds.

Figure 2-5: Transit Dependent Populations Classification System

Transit Dependence Index—Density

Figure 2-6 displays the results of the TDI analysis of Central Maryland, based on the density of the populations with higher levels of transit need. Areas shown in darker shading are reflective of a higher density of persons with a potentially greater need for public transportation. The high needs areas are somewhat scattered, but again the existing transit network generally connects these areas, though in many cases it would require transfers for riders to access major activity centers.

Transit Dependence Index—Percentage

The Transit Dependence Index Percent (TDIP) provides a complement to the TDI density analysis. It is nearly identical to the TDI measure with the exception of the population density. By removing the population per square mile factor the TDIP measures the degree rather than the amount of vulnerability. TDIP represents the percentage of population within the block group with socioeconomic characteristics above the average, and follows the TDI's five-tiered categorization of very low to very high. Figure 2-7 presents a map showing areas in which a high percentage of the population with a transit need is located, rather than where there are high numbers of persons in need.

By showing the degree of need rather than the total amount of need, TDIP can show where there is high transit need in areas with lower population densities. In other words, TDI will show high need in areas with larger transit dependent populations, and TDIP will show high need in areas where transit dependent persons make up a larger *portion* of the total population, regardless of population size. As can be seen in the map, based on percentage areas some lower density areas such as Wayson's Corners in Anne Arundel County now show some level of transit dependence, though in many cases areas with a high density of need also have a high percentage of residents that potentially need transit services.

Figure 2-6: Transit Need Index-Based on Density of High Needs Populations

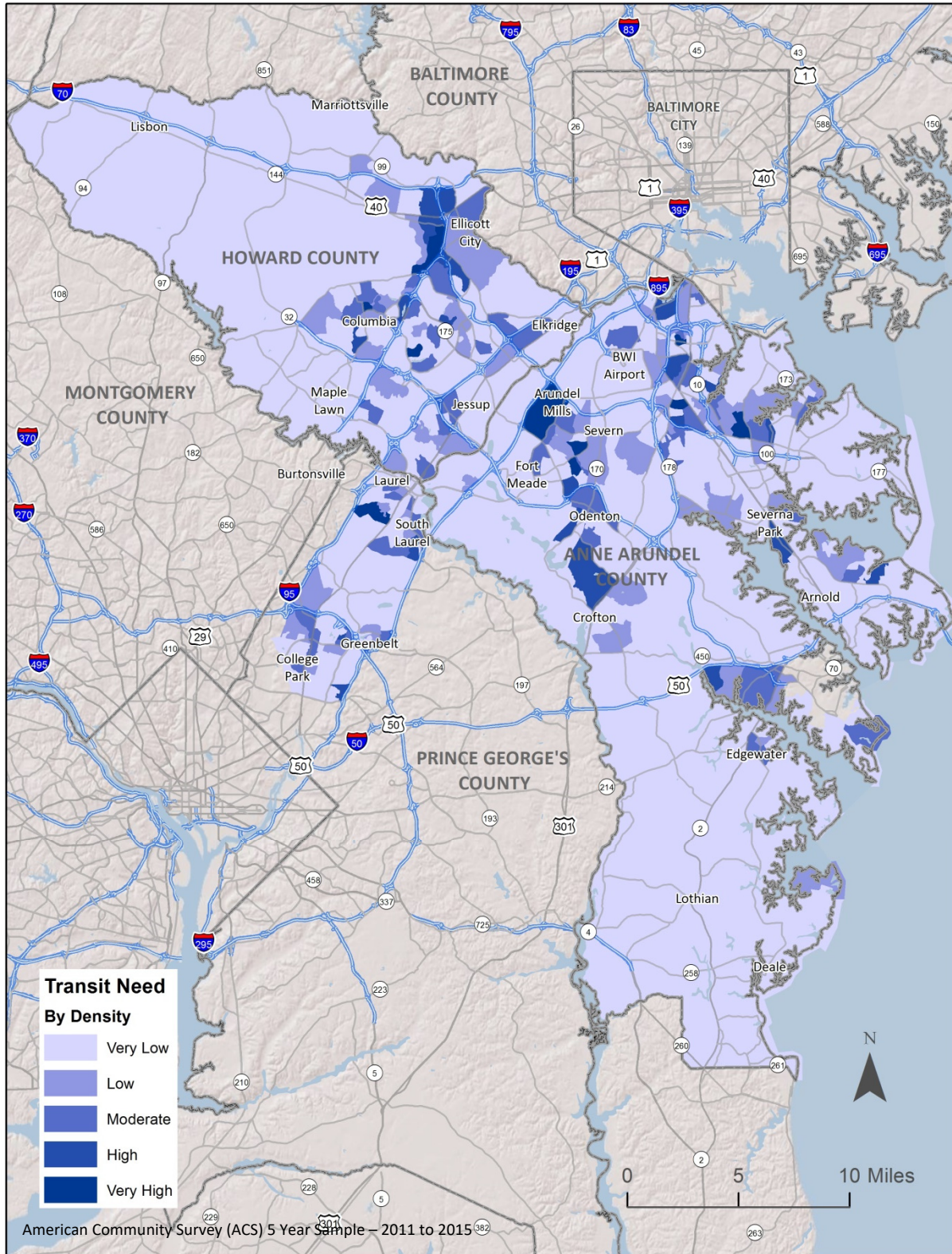
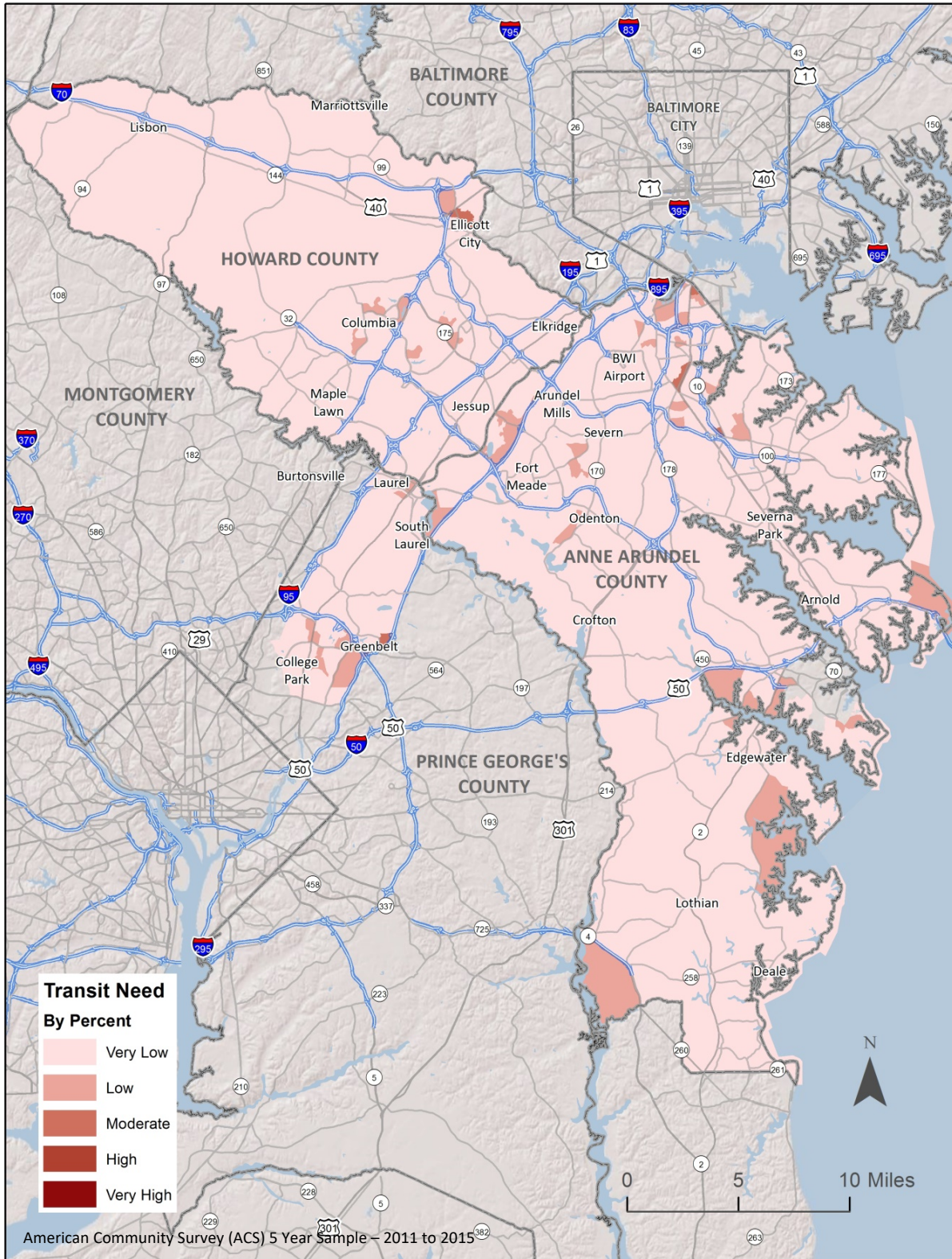


Figure 2-7: Transit Need Index-Percentage



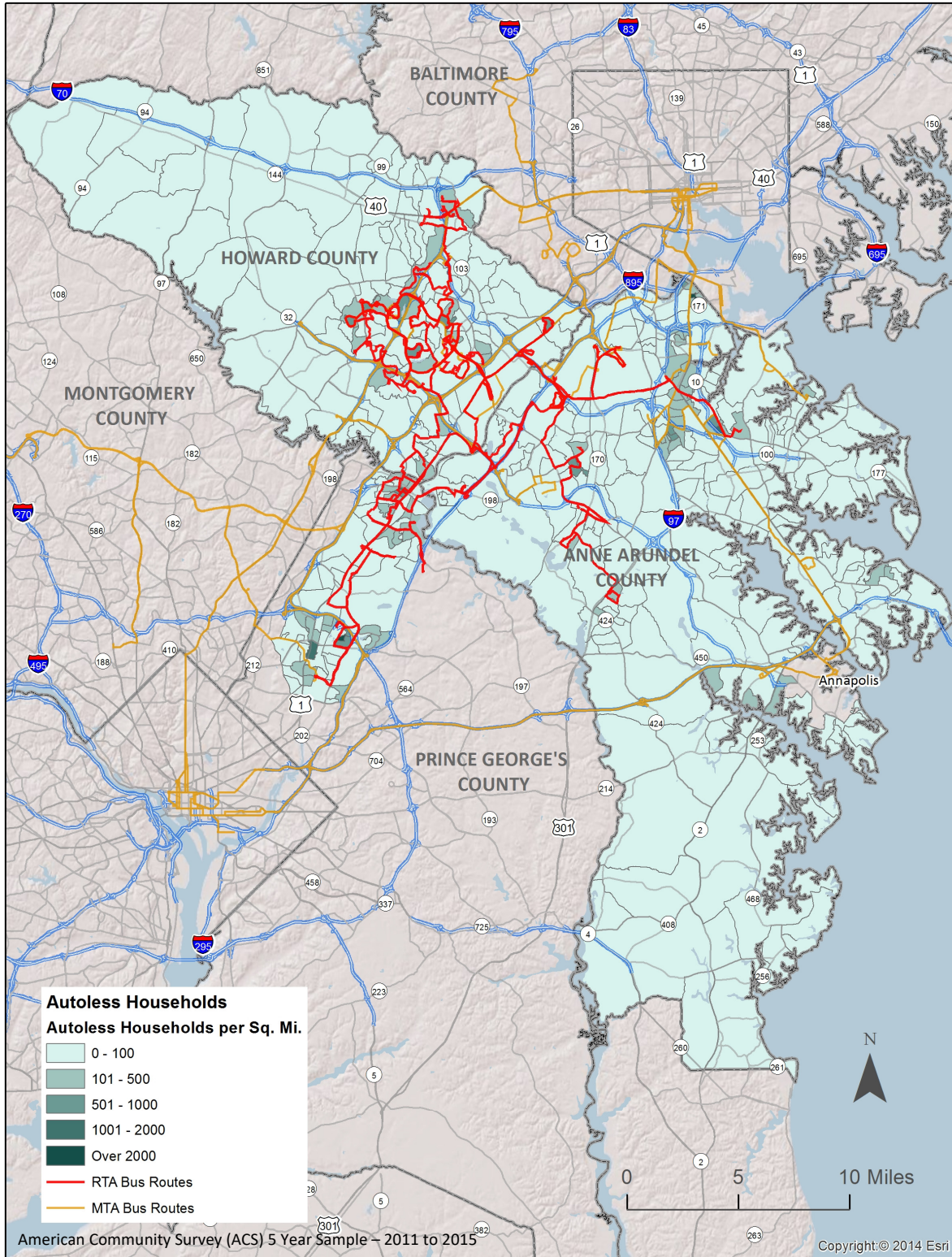
Analysis of Individual Needs Factors

As noted above, the use of a combined index of potential transit dependence can sometimes mask variations that may indicate a greater or lesser need for transit based in the impact of one or two factors. For that reason each of the factors is presented separately.

Autoless Households

Households without at least one personal vehicle are more likely to depend upon the mobility offered by public transit than those households with access to a car. Although households with no automobiles are reflected in both the TDI and TDIP measures, displaying this segment of the population is important because many land uses in the region are at distances too far for non-motorized travel. Figure 2-8 presents the relative density of households with no personal vehicles available, with the existing RTA and MTA transit networks. As can be seen, the result of many years of planning is that essentially all the areas that are relatively high in autoless households are served at some level by the existing transit network.

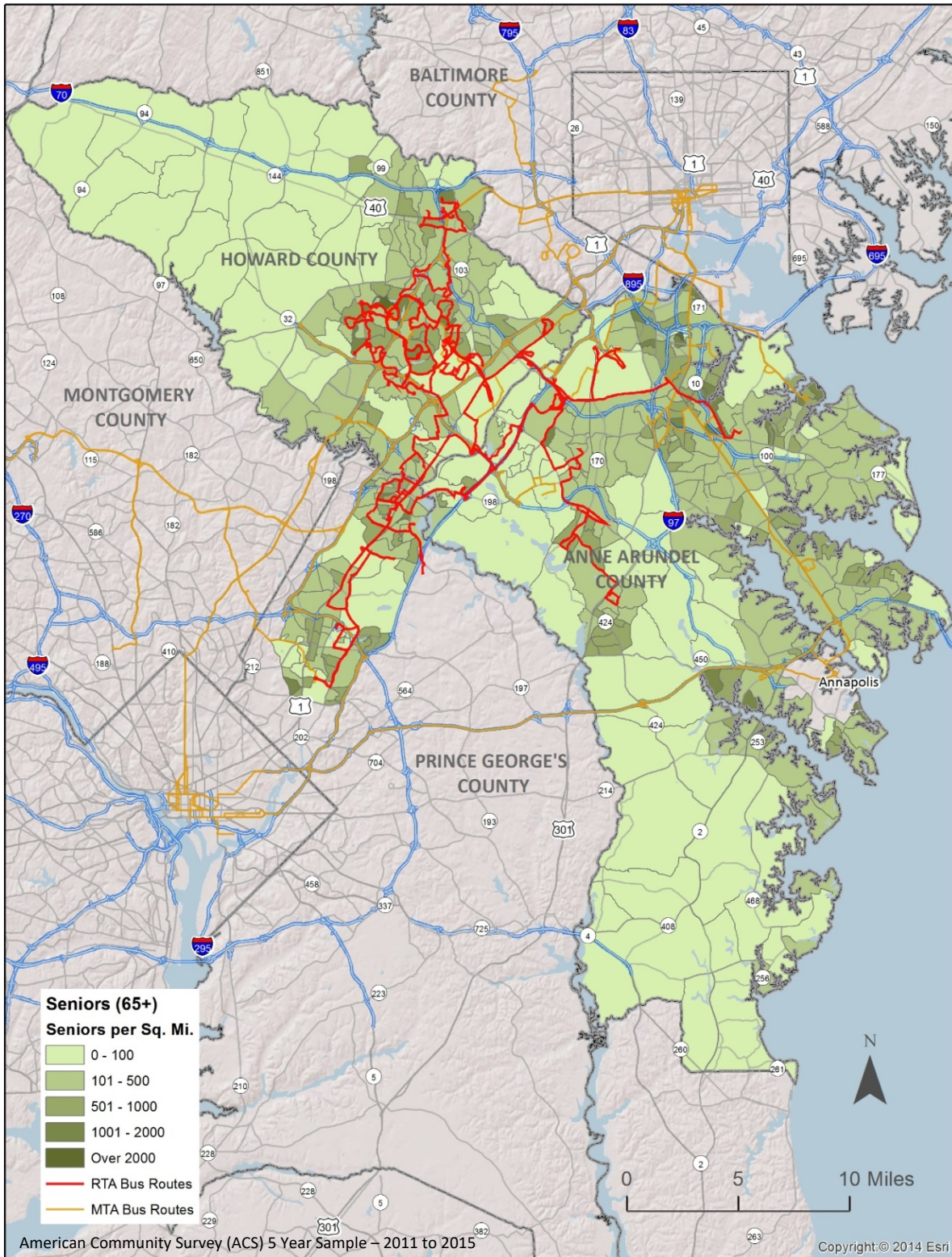
Figure 2-8: Autoless Households



Older Populations

Individuals ages 65 and older may scale back their use of personal vehicles as they age, leading to a greater reliance on public transportation compared to those in other age brackets. Illustrated in Figure 2-9, the senior population is more dispersed throughout the region. Areas in Southern Howard County, Central Anne Arundel, Severn, South Glen Burnie, Harundale, Crofton, Arnold, Severna Park, Jacobsville, Lake Shore, Edgewater, Heritage Harbour, all show moderate to high densities of seniors but are not served by fixed-route services. In both Anne Arundel and Howard there are significant county-wide demand-response programs providing transportation for senior populations in areas with limited fixed-route transit service.

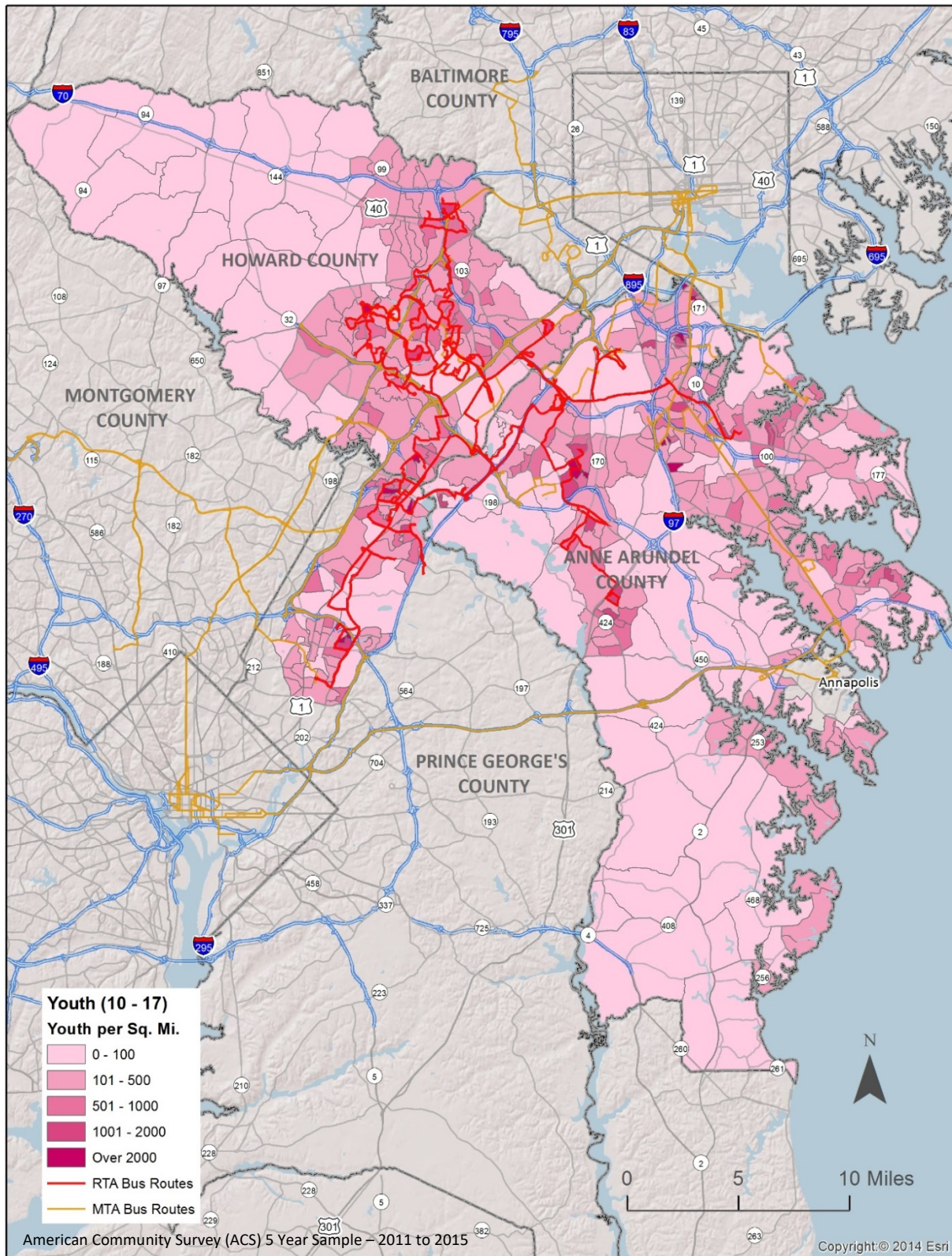
Figure 2-9: Older Populations (Persons Ages 65 and Older)



Youth Populations

Youths and teenagers, ages 10 to 17, who cannot drive or are just starting to drive but do not have an automobile available may utilize public transit to reach jobs, activities, shopping or social activities. The youth population is also dispersed throughout the study area, but there are particular areas with a high density of youth lacking transit service in Howard County along Route 103 in between Ellicott City and Route 100, in the River Hill area, in the Kings Contrivance area east of Route 29, in the Elkridge area west of I-95, and in the Waterloo/Sherwood Crossing area west of I-95. In the portion of Prince George's County served by the RTA an area with a high density of youth population lacking RTA or MTA service is the Ammendale/West Beltsville area. In Anne Arundel County residential areas of Fort Meade, Arundel Hills and areas east of I-97 south of I-695, Pasadena, Crofton, Millersville, Severna Park, and along College Parkway to Saint Margarets are all areas with a moderate or high density of youth and minimal or no fixed-route transit. The density of youth populations can be seen in Figure 2-10.

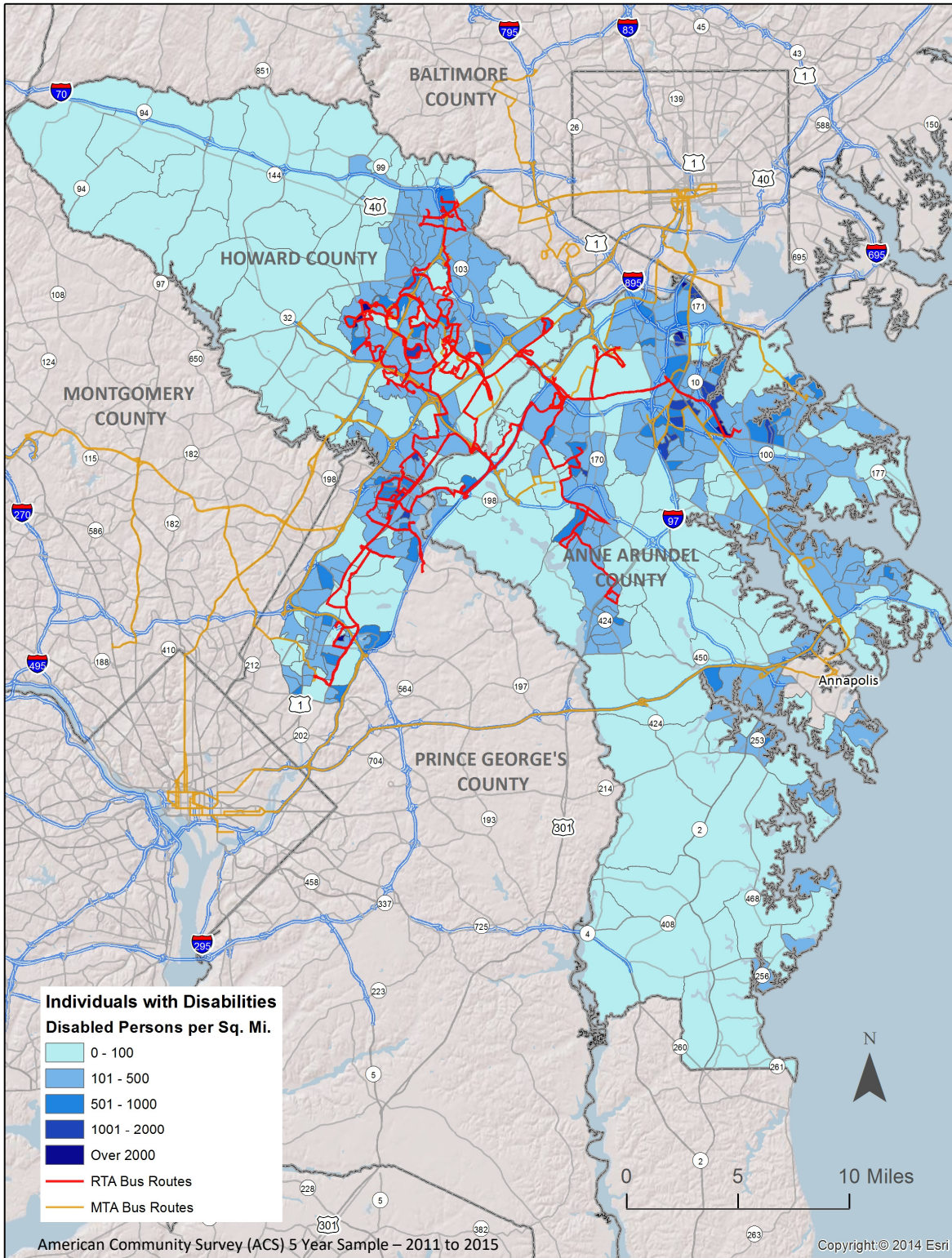
Figure 2-10: Density of Youth Populations (Ages 10-17)



Persons with Disabilities

Due to changes in Census and American Community Survey reporting, the 2010-2014 ACS provides the most recent data available to analyze the prevalence and geographic distribution of individuals with disabilities. Unlike the factors above, data is only available at the tract level, not the block group. Though it cannot show finer trends, this information is still important to consider. Those with disabilities may be unable to operate a personal vehicle and consequently be more likely to rely on public transportation. Figure 2-11 displays that disabled populations are dispersed throughout the region, generally in proportion to the overall population density. Again, as in the case of the senior populations, the area of Anne Arundel east of Route 2 has a relatively high density of persons with disabilities, but no fixed-route transit service. Maintaining the availability of demand-response transportation for persons with disabilities is likely to be the best way to meet the needs in these areas.

Figure 2-11: Individuals with Disabilities



Title VI, Environmental Justice, and Limited English Proficiency Analysis

Minority populations, low-income populations, and populations with limited English proficiency are federally protected. Federally funded public transportation providers are mandated to consider the three population groups when considering transit improvement projects. As part of the Civil Rights Act of 1964, Title VI *prohibits discrimination on the basis of race, color, or national origin in programs and activities receiving federal subsidies*. Executive Order 12898: *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* augments Title VI to include federal protection to low-income populations. This section examines the minority and populations living below the poverty level in Central Maryland and summarizes the prevalence of residents with Limited-English Proficiency (LEP).

Minority Populations

In accordance with FTA Circular 4702.1B: *Title VI Requirements and Guidelines for Federal Transit Administration Recipients*, transit recipients are mandated to ensure there are no disparate impacts towards minority persons for transit improvement projects. To determine whether a transit investment would have a disparate impact it is necessary to first understand where concentrations of minority individuals reside. Figure 2-12 provides a map of the service area showing the Census block groups shaded according to whether they have minority populations of above or below the service area average (32%). As explained in Figure 2-4, only the lowest category of shading is below the service area average percentage of minority population, and the other four categories of shading are all above that average figure—e.g. “Low” to “Very High” are all above 32 percent minority.

Low-Income Populations

FTA Circular 4703.1: *Environmental Justice Policy Guidance for Federal Transit Administration Recipients* provides guidance for identifying and analyzing low-income populations. The Circular identifies low-income populations as “persons whose median household income is at or below the U.S. Department of Health and Human Services (HHS) poverty guidelines”.¹ A low-income population means any readily identifiable group of low-income persons who live in geographic proximity. These individuals face financial hardships that may make ownership and maintenance of a personal vehicle difficult. In such cases, they may be more likely to depend on public transportation.

Figure 2-13 presents a map showing the percentage of the Central Maryland population living below the poverty level by Census block group. Again, the average for the region, the lightest shading in the map, is above average, while the other categories are above the average.

¹ HHS

Because this map represents the percentage of the population, some areas with a high percentage of the population with very low incomes are in more rural areas.

Figure 2-12: Minority Populations

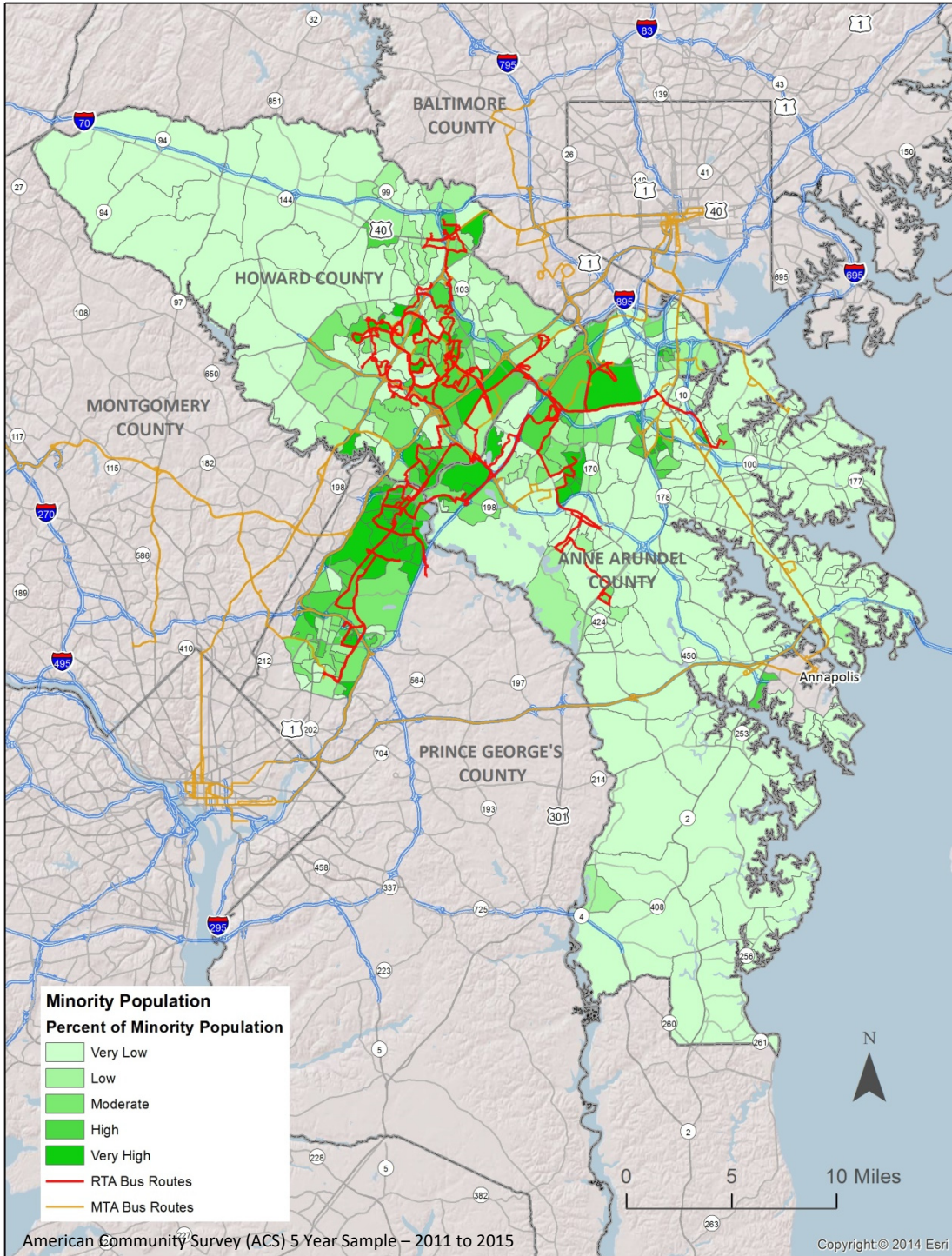
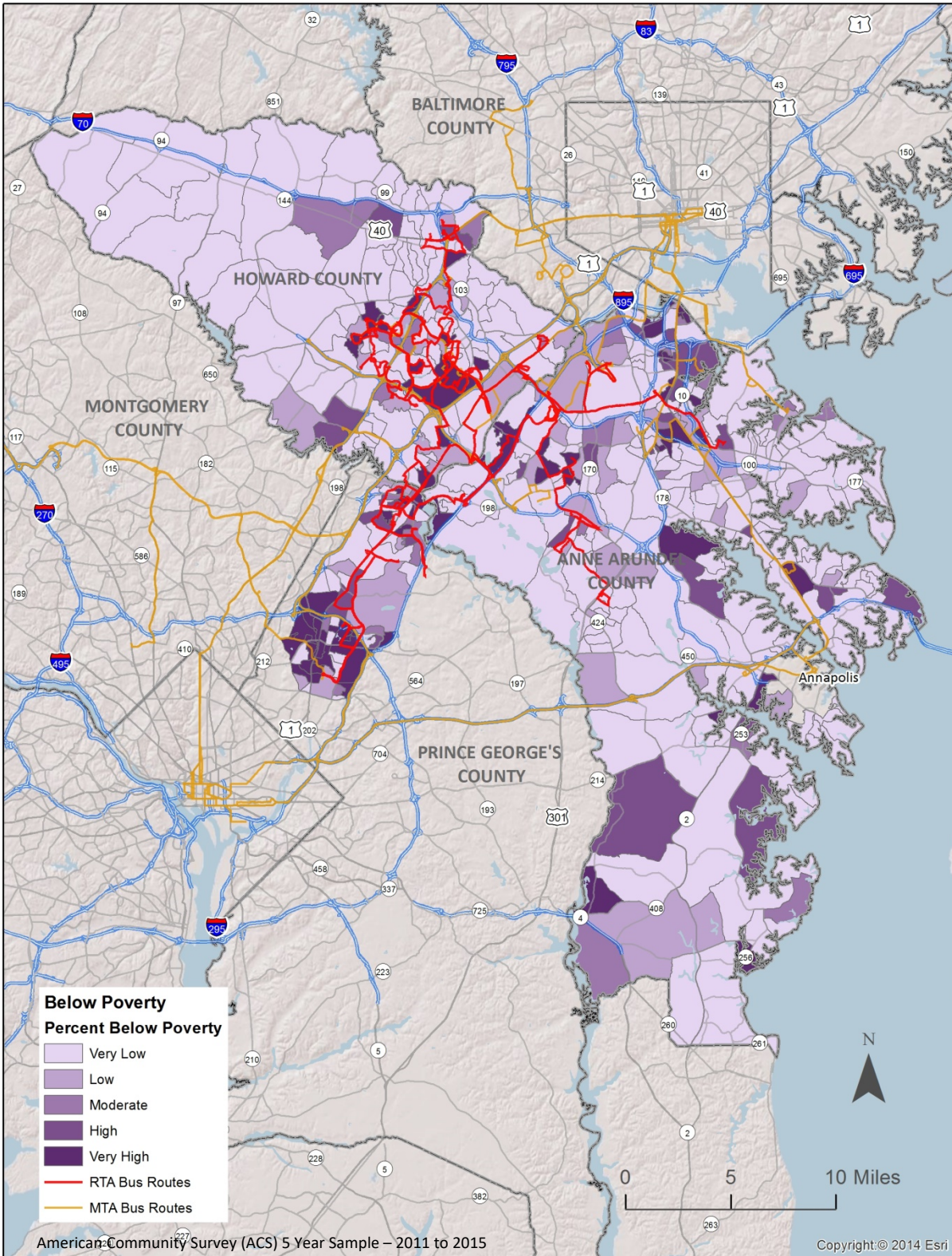


Figure 2-13: Population Living below Poverty Level



Limited-English Proficiency

In addition to providing public transportation for a diversity of socioeconomic groups, it is also important to serve and disseminate information to those of different linguistic backgrounds.

As shown in Table 2-5, Central Maryland study area residents predominately speak English only (approximately 83%). Spanish is the next most prevalent language, spoken by 6.1 percent of the regional population, though only 2.4 percent are persons with Limited English Proficiency (LEP). The next most prevalent language is Korean at 1.48 percent, though in this case there are more Korean speakers who are LEP, 0.9 percent. Of the remaining residents who do not speak English at home, 71 percent are able to speak English well or very well. The remaining 29 percent of Non-English speakers with Limited English Proficiency constitute 2.7 percent of the regional population. Overall, 55,843 individuals (6.0 %) of the regional population are LEP. No population group exceeds the five percent threshold, though there are fifteen language groups each with over 1,000 LEP speakers in the regional population. These results suggest a need to make sure that transit materials are available in Spanish and possibly Korean.

Table 2-5: Limited English Proficiency

	Population	Percent of Total Population	
Central MD Study Area Total Population (Ages 5+)	925,314	-	
Speaks English Only	766,740	82.9%	
Speaks Language Other than English	158,574	17.1%	
Non LEP Population	102,731	11.1%	
LEP Population	55,843	6.0%	
Language Spoken by Non-English Speakers	Non-LEP Population	LEP Population	LEP Population as a Percent of Total Population
Spanish or Spanish Creole	33,910	22,423	2.4%
Korean	5,721	7,993	0.9%
Chinese	7,216	5,679	0.6%
African languages	8,389	2,291	0.2%
Vietnamese	1,763	2,051	0.2%
Other Asian languages	6,482	1,831	0.2%
Other Indic languages	3,299	1,752	0.2%
Tagalog	3,450	1,493	0.2%
Urdu	3,210	1,409	0.2%
Hindi	3,317	1,073	0.1%
Gujarati	1,942	961	0.1%

French (incl. Patois, Cajun)	5,047	895	0.1%
French Creole	1,377	780	0.1%
Russian	1,759	538	0.1%
German	2,627	534	0.1%
Arabic	1,445	532	0.1%
Portuguese or Portuguese Creole	1,653	480	0.1%
Persian	1,227	462	0.0%
Other Indo-European languages	1,466	320	0.0%
Japanese	802	312	0.0%
Thai	244	260	0.0%
Italian	1,332	250	0.0%
Other and unspecified languages	190	240	0.0%
Polish	540	193	0.0%
Other Pacific Island languages	278	170	0.0%
Greek	1,011	162	0.0%
Armenian	160	153	0.0%
Other Slavic languages	705	151	0.0%
Mon-Khmer, Cambodian	173	140	0.0%
Other West Germanic languages	300	76	0.0%
Serbo-Croatian	318	64	0.0%
Laotian	166	63	0.0%
Hungarian	119	47	0.0%
Hebrew	538	34	0.0%
Yiddish	9	12	0.0%
Scandinavian languages	374	11	0.0%
Other Native North American languages	93	8	0.0%
Hmong	0	0	0.0%
Navajo	79	0	0.0%
LEP and Non-LEP Totals	102,731	55,843	6.0%

Source: 2011-2015 ACS 5-Year Estimates, Table B16001.

Regional Employment Travel Patterns

It is important to account for commuting patterns of residents working inside and outside of the Central Maryland region. The region is unique in having both significant employment within each county, commuting between counties, and significant commuting to both Baltimore and Washington, D.C. As shown in Table 2-6, Anne Arundel has a much larger commuting population, with 277,880 commuters compared to 155,666 in Howard County. With several of the major regional employment centers, Anne Arundel has a higher percentage of its residents commute within the County, 58 percent, compared to Howard's 41 percent.

In terms of numbers of commuters rather than percentage, however, the regional nature of commuting is apparent. More Anne Arundel residents commute to Howard County than vice versa (18,142 to 17,512). There are more Howard County commuters to Anne Arundel (17,512) than to Baltimore City (15,692), Baltimore County (12,749), Montgomery (15,759) or the District of Columbia (9,849). Anne Arundel sends more residents to work in Prince George's (26,946) and the District of Columbia (19,591). Combined, these two destinations receive 46,537 Anne Arundel residents, compared to the 33,394 Anne Arundel residents who commute to Baltimore City and County.

Table 2-6: Journey to Work Patterns for Central Maryland

Origin County	Destination																TOTAL
	Anne Arundel County		Howard County		Baltimore County		Baltimore City		Prince George's County		District of Columbia		Montgomery County		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Howard	17,512	11%	63,149	41%	12,749	8%	15,692	10%	14,094	9%	9,849	6%	15,759	10%	6,861	4%	155,666
Anne Arundel	159,848	58%	18,142	7%	11,707	4%	21,687	8%	26,946	10%	19,591	7%	7,809	3%	12,149	4%	277,880

Source: ACS, Five-Year Estimates (2011 - 2015)

Another source of data that provides an understanding of regional employee travel patterns is the Baltimore Metropolitan Council's regional travel demand model. Using data on home-based work trips by all modes (productions) by Regional Planning District, Figure 2-14 presents a map showing all regional connections over 1,000 trips (all income groups combined) for Howard County origins, and Figure 2-15 presents a similar map for Anne Arundel origin areas. Table 2-7 presents the data associated with the Howard County map, and Table 2-8 presents the data supporting the Anne Arundel County map.

From Howard County work trips originating in Columbia, Ellicott City, and Elkridge have Baltimore Metro Center, Fort Meade, Brooklyn Park/Linthicum, and Jessup/Severn as major destinations outside the county. From the Laurel Regional Planning District (RPD), the major destinations are Fort Meade and Columbia. Internally, Columbia is the major destination from the other RPDs, with higher levels of trips than those going to destinations outside the county. Trips to Laurel in Prince George's did not reach the 1,000 level, but from Columbia trips to Calverton and Vansville did reach that threshold.

As an alternative method of identifying regional travel patterns, the study team worked with Sidewalk Labs using Google's aggregate, anonymized historical traffic data in an effort to improve understanding of multimodal travel demand.

Of particular interest was whether aggregate, anonymized data could offer insights for transit planning, such as potential demand for new or adjusted bus routes to meet unmet needs. The available data included comprehensive geographic and temporal coverage, and thus potentially offered complementary dimensions (such as travel patterns at night) to data collected through conventional methods. However, analysis of the data also revealed some noisy, unexpected patterns, which called for deeper investigations against the backdrop of local context.

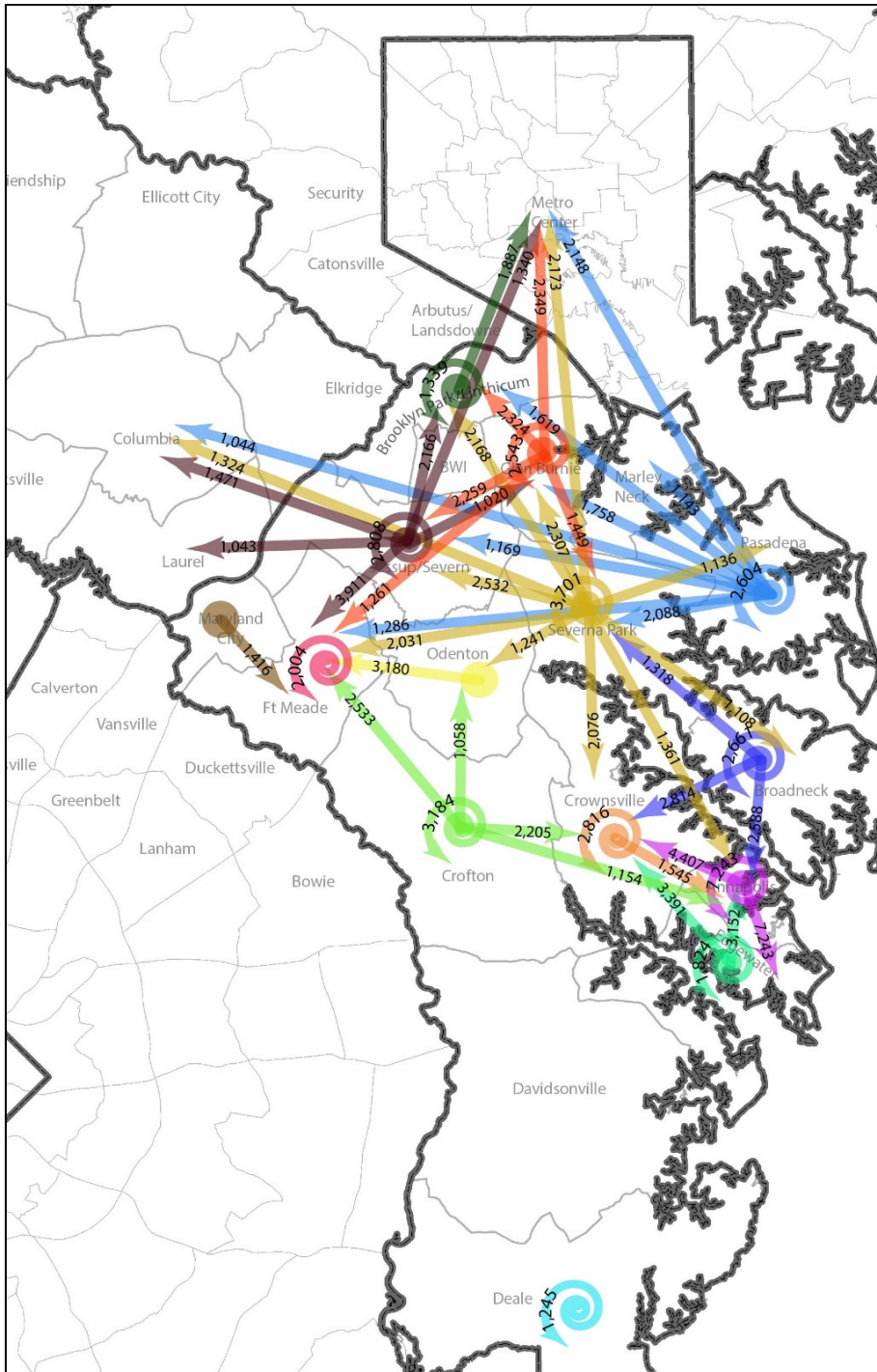
Imbuing the data pattern with local significance and actionable insights would have required a non-trivial amount of analysis, beyond the resources available for the TDP. Given more resources, further analysis would lead to a more definitive assessment of whether—and how—this data source could be used to develop specific recommendations for future transit services.

Table 2-7: Howard County Home-Based Work Trips: Attractions with over 1,000 trips

Origin	Destination	Total
Laurel	Columbia	2,933
Laurel	Laurel	2,474
Laurel	Fort Meade	1,955
Elkridge	Columbia	3,569
Elkridge	City of Baltimore - Metro Center	2,203
Elkridge	Elkridge	1,863
Elkridge	Brooklyn Park/Linthicum	1,672
Elkridge	Fort Meade	1,402
Elkridge	Laurel	1,367
Columbia	Columbia	15,241
Columbia	Fort Meade	3,505
Columbia	Laurel	3,475
Columbia	City of Baltimore - Metro Center	3,422
Columbia	Ellicott City	2,686
Columbia	Clarksville	2,621
Columbia	Elkridge	2,164
Columbia	Jessup/Severn	1,727
Columbia	Brooklyn Park/Linthicum	1,451
Columbia	Vansville	1,333
Clarksville	Columbia	1,790
Ellicott City	Columbia	5,460
Ellicott City	City of Baltimore - Metro Center	3,705
Ellicott City	Ellicott City	3,369
Ellicott City	Security	1,524
Ellicott City	Elkridge	1,370
Ellicott City	Laurel	1,175
Ellicott City	Brooklyn Park/Linthicum	1,148
Ellicott City	Fort Meade	1,126
West Friendship	Columbia	1,158

Source: Baltimore Metropolitan Council Regional Travel Demand Model

Figure 2-15: Home-Based Work Trips from Anne Arundel County Regional Planning Districts-Productions Over 1,000 Trips



Source: Baltimore Metropolitan Council Regional Travel Demand Model

Table 2-8: Anne Arundel County Home-Based Work Trips: Attractions with over 1,000 trips

Origin	Destination	Total
Brooklyn Park/Linthicum	Baltimore City - Metro Center	1,888
Brooklyn Park/Linthicum	Brooklyn Park/Linthicum	1,340
Glen Burnie	Glen Burnie	2,543
Glen Burnie	Baltimore City - Metro Center	2,349
Glen Burnie	Brooklyn Park/Linthicum	2,325
Glen Burnie	Jessup/Severn	2,260
Jessup/Severn	Fort Meade	3,911
Jessup/Severn	Jessup/Severn	2,809
Jessup/Severn	Brooklyn Park/Linthicum	2,167
Jessup/Severn	Columbia	1,472
Jessup/Severn	Baltimore City - Metro Center	1,341
Jessup/Severn	Laurel	1,044
Jessup/Severn	Glen Burnie	1,020
Severna Park	Severna Park	3,701
Severna Park	Jessup/Severn	2,532
Severna Park	Glen Burnie	2,308
Severna Park	Baltimore City - Metro Center	2,173
Severna Park	Brooklyn Park/Linthicum	2,169
Severna Park	Crownsville	2,077
Severna Park	Fort Meade	2,031
Severna Park	Annapolis	1,361
Severna Park	Columbia	1,325
Pasadena	Pasadena	2,605
Pasadena	Baltimore City - Metro Center	2,148
Pasadena	Severna Park	2,089
Pasadena	Glen Burnie	1,758
Pasadena	Brooklyn Park/Linthicum	1,619
Pasadena	Jessup/Severn	1,619
Pasadena	Fort Meade	1,286
Pasadena	Marley Neck	1,143
Pasadena	Columbia	1,044
Maryland City	Fort Meade	1,417
Fort Meade	Fort Meade	2,005
Odenton	Fort Meade	3,180
Crofton	Crofton	3,185
Crofton	Fort Meade	2,533

Origin	Destination	Total
Crofton	Crownsville	2,205
Crofton	Annapolis	1,155
Crofton	Odenton	1,059
Crownsville	Crownsville	2,817
Crownsville	Annapolis	1,545
Broadneck	Crownsville	2,815
Broadneck	Broadneck	2,661
Broadneck	Annapolis	2,588
Broadneck	Severna Park	1,318
Annapolis	Annapolis	7,243
Annapolis	Crownsville	4,408
Annapolis	Annapolis Neck/Edgewater/Mayo	1,248
Annapolis Neck/Edgewater/Mayo	Crownsville	3,391
Annapolis Neck/Edgewater/Mayo	Annapolis	3,152
Annapolis Neck/Edgewater/Mayo	Annapolis Neck/Edgewater/Mayo	1,824
Deale/Lothian	Deale/Lothian	1,245

Source: Baltimore Metropolitan Council Regional Travel Demand Model

On the Anne Arundel side of the region, the higher volume home-based work trip interchanges are more internal, though there are high levels (over 1,000) trips to Baltimore Metro Center (from Brooklyn Park/Linthicum, Jessup/Severn, Glen Burnie, Severna Park and Pasadena). The other major external destination is Columbia, with trips over the 1,000 threshold from Pasadena, Severna Park and Jessup/Severn. Laurel (in Howard County) is a destination for trips from Jessup/Severn.

Major internal work-trip patterns involve Fort Meade as key destination, with work trips originating in Maryland City, Jessup/Severn, Glen Burnie, Pasadena, Severna Park, Odenton and Crofton. Brooklyn Park/Linthicum is also a major destination from Jessup/Severn, Glen Burnie, Severna Park and Pasadena.

Of interest is that the BMC model did not identify any home-based work trip interchanges over 1,000 trips for the BWI RPD. The largest interchanges for BWI are with the Glen Burnie (957 trips), Severna Park (770 trips), RPDs and Jessup Severn (708 trips).

Summary of Needs

When combining the demographic, land-use, and commuter trends contained within this section the following needs and themes emerge:

- This is a very large region, with a population that exceeds that of the City of Baltimore (621,849 in 2015) and is close to the overall population of Prince George’s County (909,535 in 2015—some of which is included in the Central Maryland estimate).
- The region’s population has grown substantially, and is continuing to grow.
- The region’s population of seniors is projected to increase substantially in real numbers and as a percentage of the population.
- The density of population varies considerably across the region, with concentrations of residential density in all three counties served by the RTA. Much of the residential development is lower-density single family, though recent development patterns include a balance of multi-family and single-family residential construction.
- There is a significant population of persons with a high potential need for transit services based on income, auto ownership, age, and disability status. Transit connections are needed to link the residential areas housing this population to employment and services.
- There is a substantial amount of employment across the region, and substantial commuting of residents to employment in Baltimore and Washington, D.C. In addition, many commuters staying within the region cross county lines to reach their jobs, particularly from Howard County to Western Anne Arundel and vice versa.
- The existence of these regional travel demand patterns means that there is a need for both local transit within the counties and regional connections to ensure that workers can reach employment within the region and in the two metro areas (Baltimore and Washington, D.C.).

Chapter 3

Public and Stakeholder Input

INTRODUCTION

A significant outreach effort was conducted to obtain input from riders, the general public, and stakeholders. The information and opinions gathered from these efforts are presented in this chapter. The following outreach was conducted:

- Fixed-route rider survey
- Mobility/paratransit rider survey
- Community survey
- Interactive online map
- Public meetings
- Stakeholder interviews
- Public website

Rider surveys were conducted on all RTA operated services and were available in the three languages that are predominant in the service area – English, Spanish, and Korean. The community survey was conducted through the assistance of local government and non-profit agencies. All three surveys were also available online.

Five public meetings (three in Howard County, one in Anne Arundel County, and one in the City of Laurel) were held at different locations throughout the service area. These locations included:

- George Howard Building
- North Laurel Community Center
- Charles I. Ecker Business Training Center
- Arundel Mills Mall
- Laurel Municipal Center

Stakeholder interviews were conducted with local agencies and advocacy groups. A list of agencies interviewed is provided in Appendix A. During the project period a Central Maryland website with information about the project and public input opportunities was available. The website can be reached at this address:
<http://www.kfhgroup.com/centralmd/transitplan.html>.

In addition to background information about the plan, there was a project schedule, public input section with links to the surveys and an interactive Wikimap that allowed people to draw and comment on a map. The website also had information about all of the

public meetings, copies of the study materials, and contact information for the project partners.

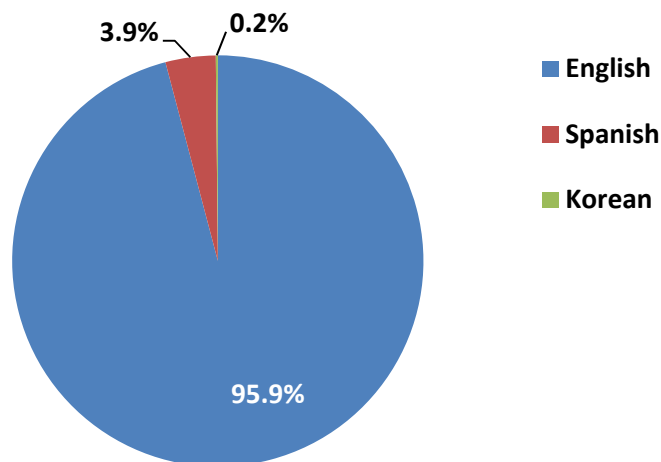
RTA FIXED-ROUTE RIDER SURVEY

An important task for the Transit Development Plan (TDP) was to gather opinions from system users concerning RTA's current fixed-route services. With input from RTA staff, an onboard survey was prepared for this purpose. The survey was administered onboard RTA vehicles from November 1-November 14, 2016. RTA staff assisted with distributing and collecting the surveys.

Additionally, riders could fill out the survey online from November 1 - December 6, 2016. In total, 1,243 valid surveys were returned and analyzed. A copy of the onboard rider survey instrument is provided in Appendix B.

Of the 1,243 valid surveys collected, 95.9 percent were in English, 3.9 percent were in Spanish, and 0.2 percent were in Korean. This is represented in Figure 3-1.

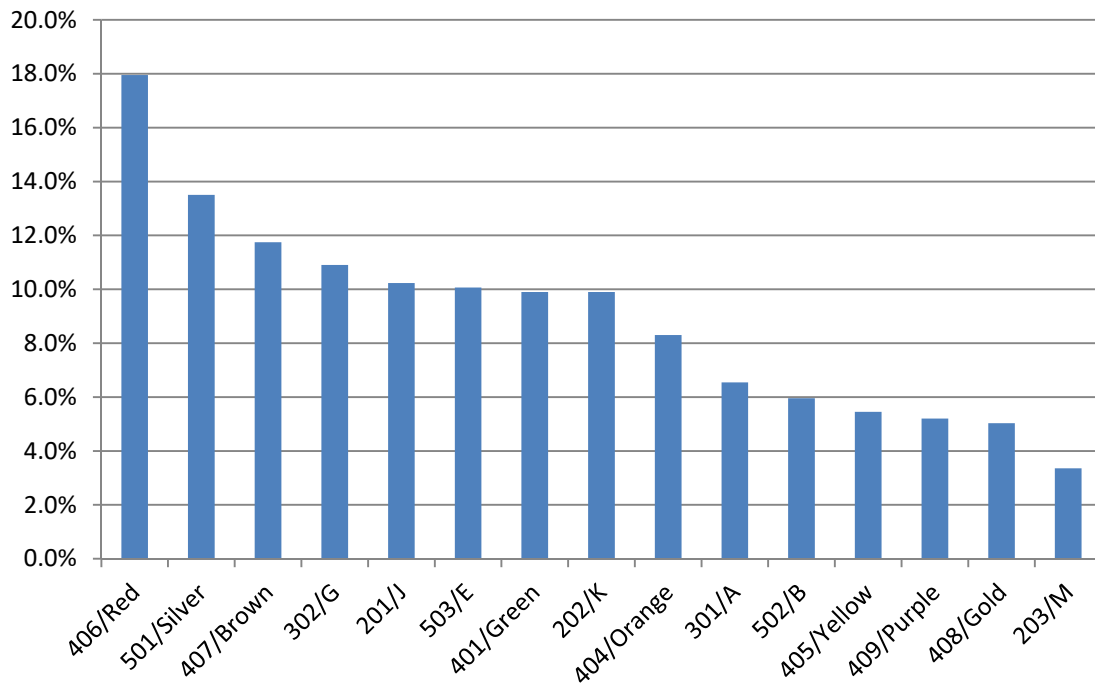
Figure 3-1: Language of Surveys Returned by Fixed-Route Riders



Trip Information

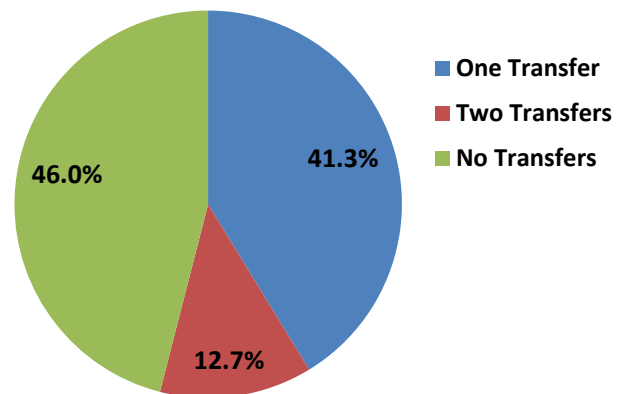
Survey respondents were asked several questions pertaining to their trip. The first question asked participants to indicate which RTA route they boarded. The three routes that generated the most responses were the 406/Red, 501/Silver, and 407/Brown. Figure 3-2 provides the results across all routes.

Figure 3-2: Percentage of Respondents by Route



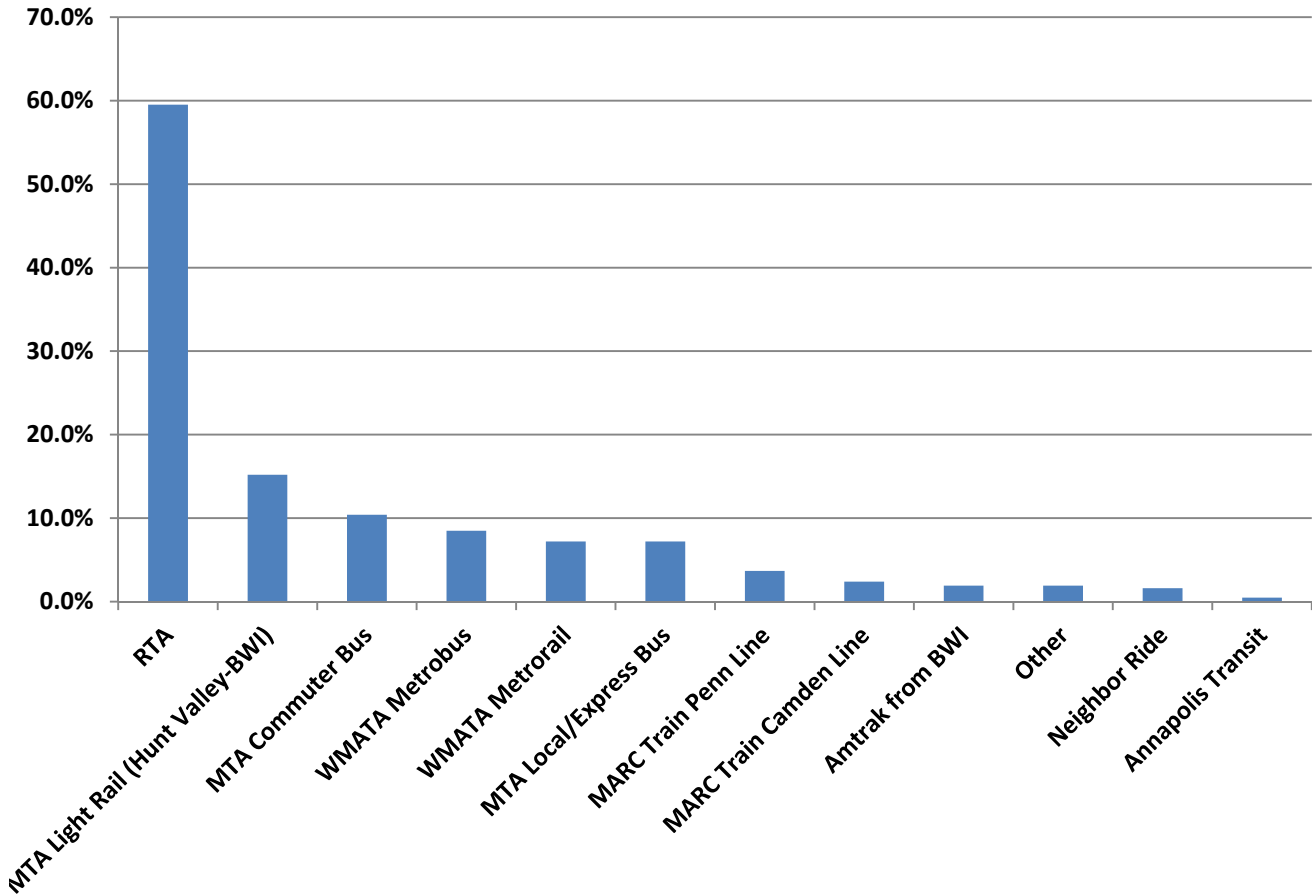
The survey then asked riders about whether or not they had to transfer to complete their trip and, if so, how many times. Most of the fixed-route riders (54%) had to make at least one transfer. This information is reflected in Figure 3-3.

Figure 3-3: Fixed-Route Riders that Transferred



The survey asked which, if any, alternative transit services riders were transferring to. Statistics were derived by dividing the total number of responses for each service by the total number of individuals that responded to this question. Since multiple responses could be recorded, the total percentage of responses could exceed one-hundred percent. A plurality of riders indicated they were transferring to other RTA routes. Other popular services were MTA Light Rail, MTA commuter bus, Metrobus, and Metrorail. Full results may be viewed in Figure 3-4.

Figure 3-4: Transfers To/From Other Routes and Operators



The survey inquired about the frequency and purpose of riders' trips. Since multiple responses could be recorded for this question, statistics were derived by dividing the total number of responses for each trip purpose by the total number of responses that were marked. A plurality of riders indicated they were traveling for work. After work, the top three purposes for traveling were shopping, school, and medical. Full results are on display in Figure 3-5.

Figure 3-5: Trip Purpose

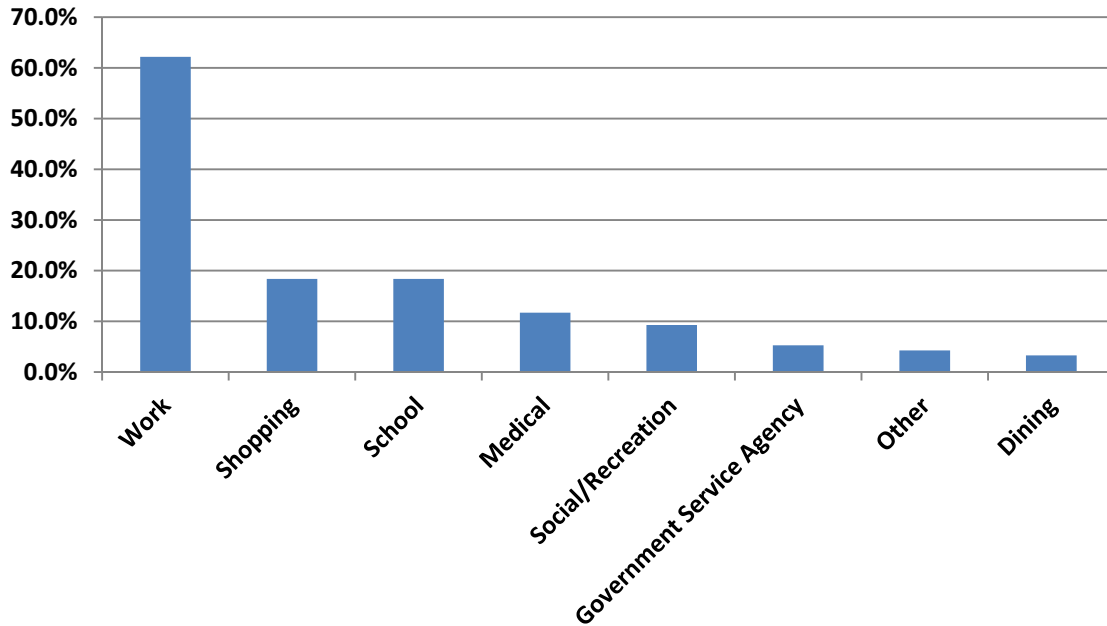
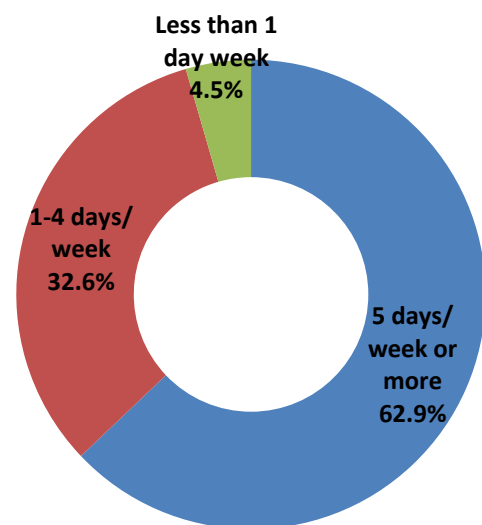


Figure 3-6: Frequency of Use

Rider Profile

The survey sought to learn more about RTA riders. Several questions were asked to identify characteristics of RTA riders. The survey asked how often they ride the bus. Nearly 2/3 of respondents claimed they rode the bus five days a week or more, roughly 1/3 of respondents marked they rode the bus one to four days a week, and only 4.5 percent of riders said they use the bus less than one day a week. Full results are shown in Figure 3-6.



Several questions focused on rider car ownership, car availability and whether or not they have a driver's license. Eighty-five percent of respondents said they do not have a car, while 15 percent said they do. Of those with a car, 40.3 percent of respondents said a car was available for them to use at the time of their RTA trip and 59.7 percent said their car was not available. A slim majority of 51.8 percent reported they do not have a driver's license while 48.2 percent said they do. This information is displayed graphically in Figures 3-7, Figure 3-8, and Figure 3-9.

Figure 3-7: Car Ownership

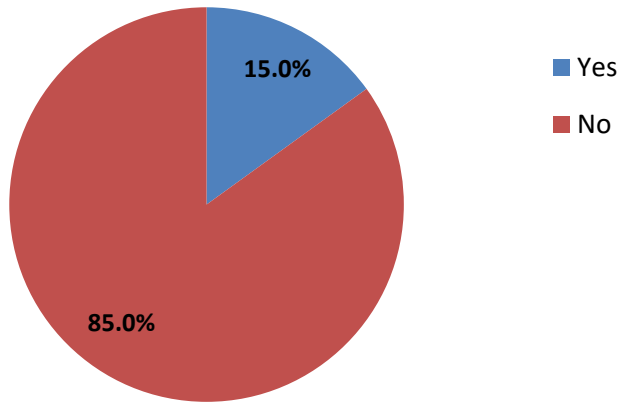


Figure 3-8: Access to a Car

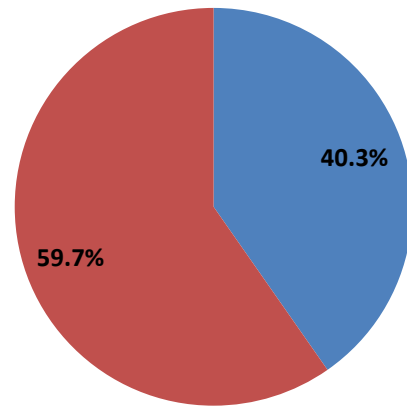
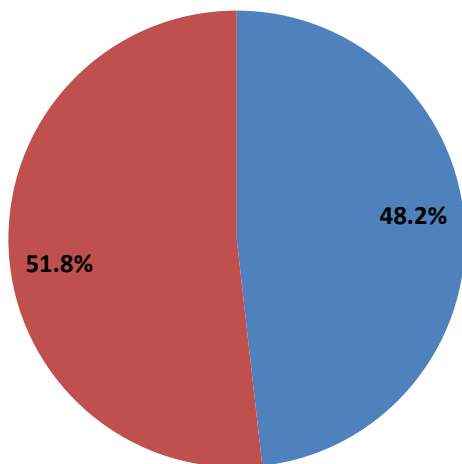
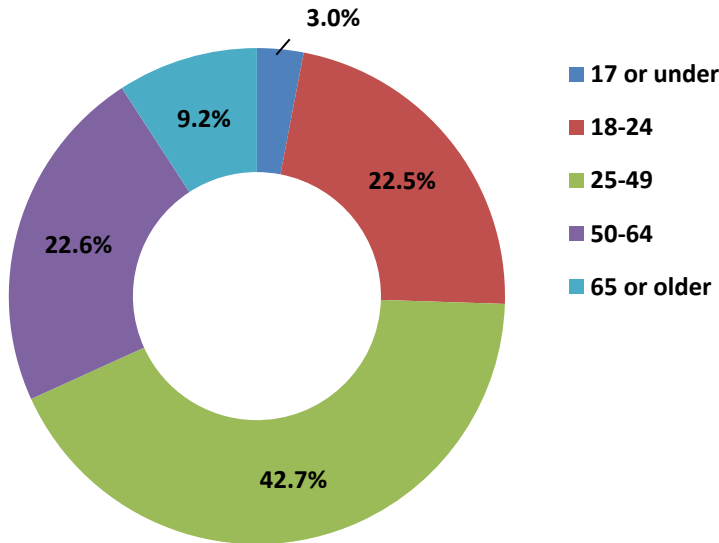


Figure 3-9: Driver's License



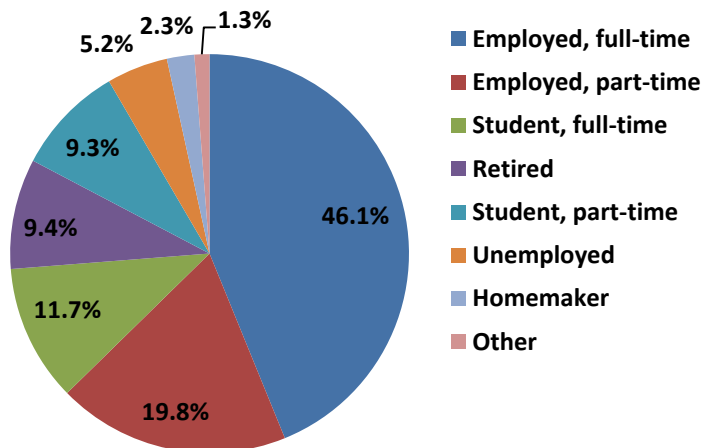
The survey asked a series of questions to obtain demographic information pertaining to RTA riders. Regarding age, a plurality of respondents indicated they were between the ages of 25 and 49. Additionally, 22.6 percent of respondents indicated they were between the ages of 50 and 64 and 22.5 percent reported they were between the ages of 18 and 24. Full results can be found in Figure 3-10.

Figure 3-10: Age of Riders



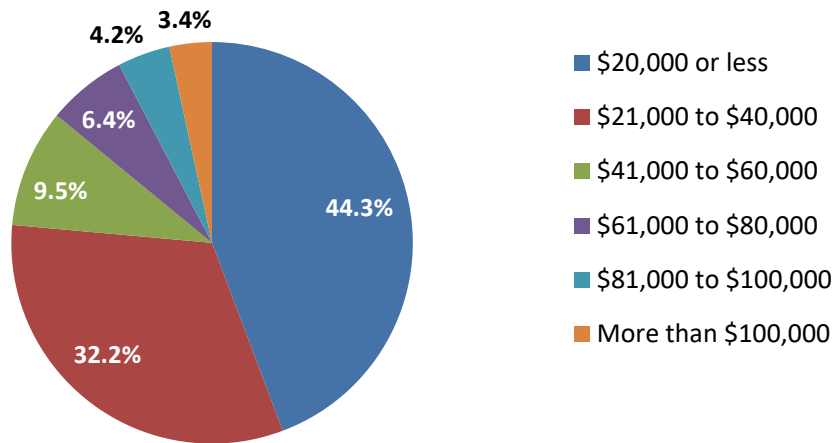
The survey continued by asking riders about their employment status. Nearly 50 percent of respondents indicated they were employed full-time, 21.4 percent were employed part-time, and 12.6 percent were full-time students. Full results can be seen in Figure 3-11. A plurality of those who marked “other” indicated they were disabled.

Figure 3-11: Employment Status



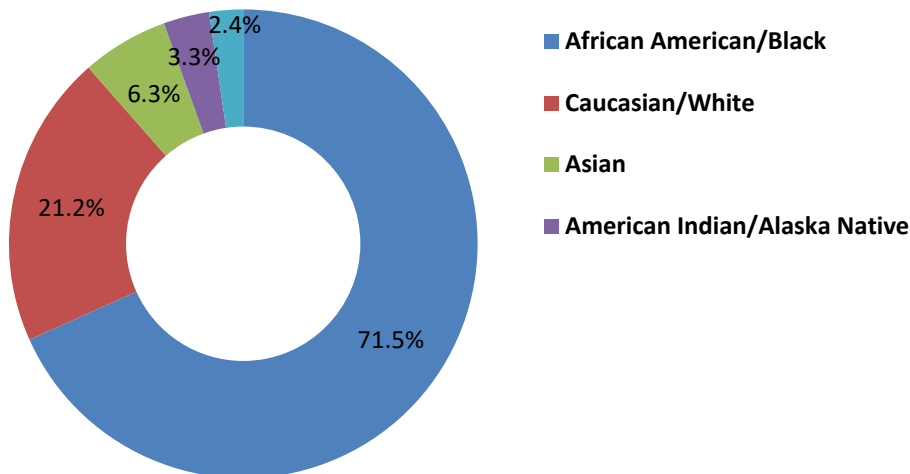
The survey asked about the annual household income of riders. Forty-four and 3/10 percent of riders indicated they had an annual household income of under \$20,000, 32.3 percent claimed between \$21,000 and \$40,000, and 9.5 percent said they made between \$41,000 and \$60,000. Full results are on display in Figure 3-12.

Figure 3-12: Annual Household Income



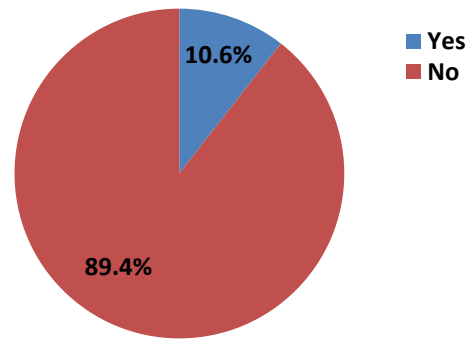
The survey continued by asking riders about which ethnic group/groups they identified with. Approximately 71.5 percent identified themselves they were African American/Black, 21.2 said they were Caucasian/White, and 6.3 percent indicated they were Asian. Full results are displayed in Figure 3-13.

Figure 3-13: Ethnic Background



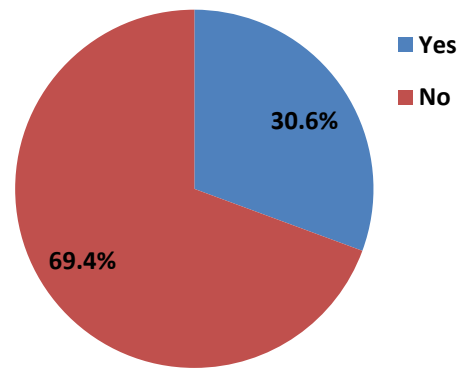
The survey asked whether the respondent was of Hispanic or Latino origin. Ten and 6/10 percent of respondents indicated they were of Hispanic or Latino origin and 89.4 percent claimed they were not. This is shown in Figure 3-14.

Figure 3-14: Hispanic or Latino Status



The survey then asked several questions regarding the languages spoken and their proficiency in English. Riders were asked if they spoke a language other than English at home. Thirty and 6/10 percent of respondents indicated they speak a language other than English at home and 69.4 percent indicated they do not. This is seen in Figure 3-15.

Figure 3-15: Speak Language Other than English



Riders were asked which other language they spoke at home. To derive data for this question we combined results which were written-in on the English survey with 49 “Spanish” and two “Korean” entries which corresponded to the number of surveys collected in these languages. Spanish was the most commonly cited language spoken, followed by French and Yoruba. Full results can be viewed in Table 3-1.

Table 3-1: Languages Spoken Other than English

Language	Count	Language	Count	Language	Count
Spanish	44%	Portuguese	1.8%	Cherokee	0.3%
French	11.5%	Twí	1.8%	Dominican	0.3%
Yoruba	8.5%	Hindi	1.5%	Farsi	0.3%
Creole	4%	Russian	1.5%	Greek	0.3%
Korean	3.7%	Thai	1.5%	Haitian	0.3%
Tagalog	3.7%	Igbo	0.7%	Jamaican Patois	0.3%
Arabic	3%	Japanese	0.7%	Krio	0.3%
Amharic	2.6%	Luganda	0.7%	Latin	0.3%
American Sign Language	2.6%	Malayalam	0.7%	Somali	0.3%
Chinese	2.6%	Bassa	0.3%	Swahili	0.3%
Urdu	2.6%	Bengali	0.3%	Telugu	0.3%
German	1.8%				

Riders who completed foreign language surveys were asked whether or not they spoke English. Eighty-three and 3/10 percent of respondents indicated they could speak English while 16.7 percent could not. This is shown in Figure 3-16.

Those who indicated they spoke a language other than English at home and those who completed foreign language surveys were asked how well they spoke English. Sixty-six and 4/10 percent said they spoke English “very well”, 20.9 percent claimed they spoke it “well”, 12.3 percent said “not well”, and 0.4 percent indicated “not at all”. This is shown in Figure 3-17.

Figure 3-16: Speaks English

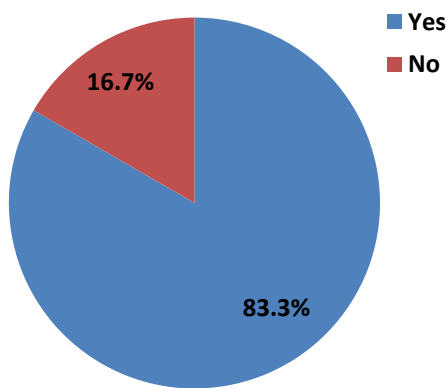
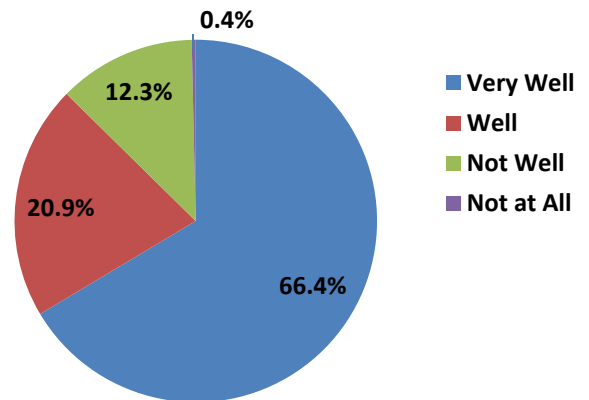


Figure 3-17: Fluency in English

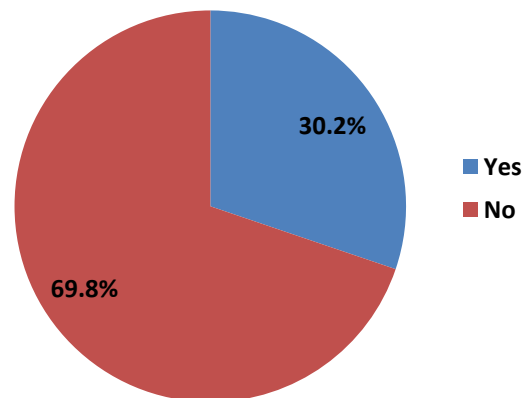


Rider Input and Comments

Destinations Not Served

A chief aim of the survey was to ascertain riders’ opinions about RTA’s service. First, the survey asked whether or not there were specific destinations which they needed to go on a regular basis that transit does not currently service. A majority of the respondents (69.8%) indicated that the service meets their needs. Thirty and 2/10 percent of respondents indicated there were destinations which they could not go. This is shown graphically in Figure 3-18. Some of the destinations that were noted as not being served are listed below. Several of the destinations in this list can be accessed using RTA and other transit services, to some extent. It could be that the specific address the respondent intended is not served by public transit in that area. The destinations that are **not** accessible via public transportation are in **bold**.

Figure 3-18: Destinations not Served



- **UMUC in Largo, MD**
- Baltimore City
- **Annapolis**
- **Clarksville**
- Laurel Regional Hospital
- Jessup
- **Walmart, Bowie, MD**
- Walmart, Ellicott City, MD
- Pasadena
- Elkridge
- Savage
- Marley Station Mall
- **Owings Mill**
- Crofton
- Maple Lawn
- H Mart
- **Fulton**
- Greenbelt
- **New Carrollton**
- BWMC Hospital, Glen Burnie, MD
- Bowie State College
- **Applied Physics Lab**
- **Chapelgate**
- AACC Arnold Campus

Service Satisfaction

A major component of the survey concerned rider satisfaction with various components of RTA service. They were asked to rate their satisfaction from “strongly dissatisfied” to “strongly satisfied” for thirteen aspects of RTA service. The most dissatisfaction was found with lack of Sunday service, reliability and condition of vehicles, limited Saturday service, and buses being on time. Full results may be viewed in Figure 3-19 and Table 3-2.

Figure 3-19: Rider Satisfaction

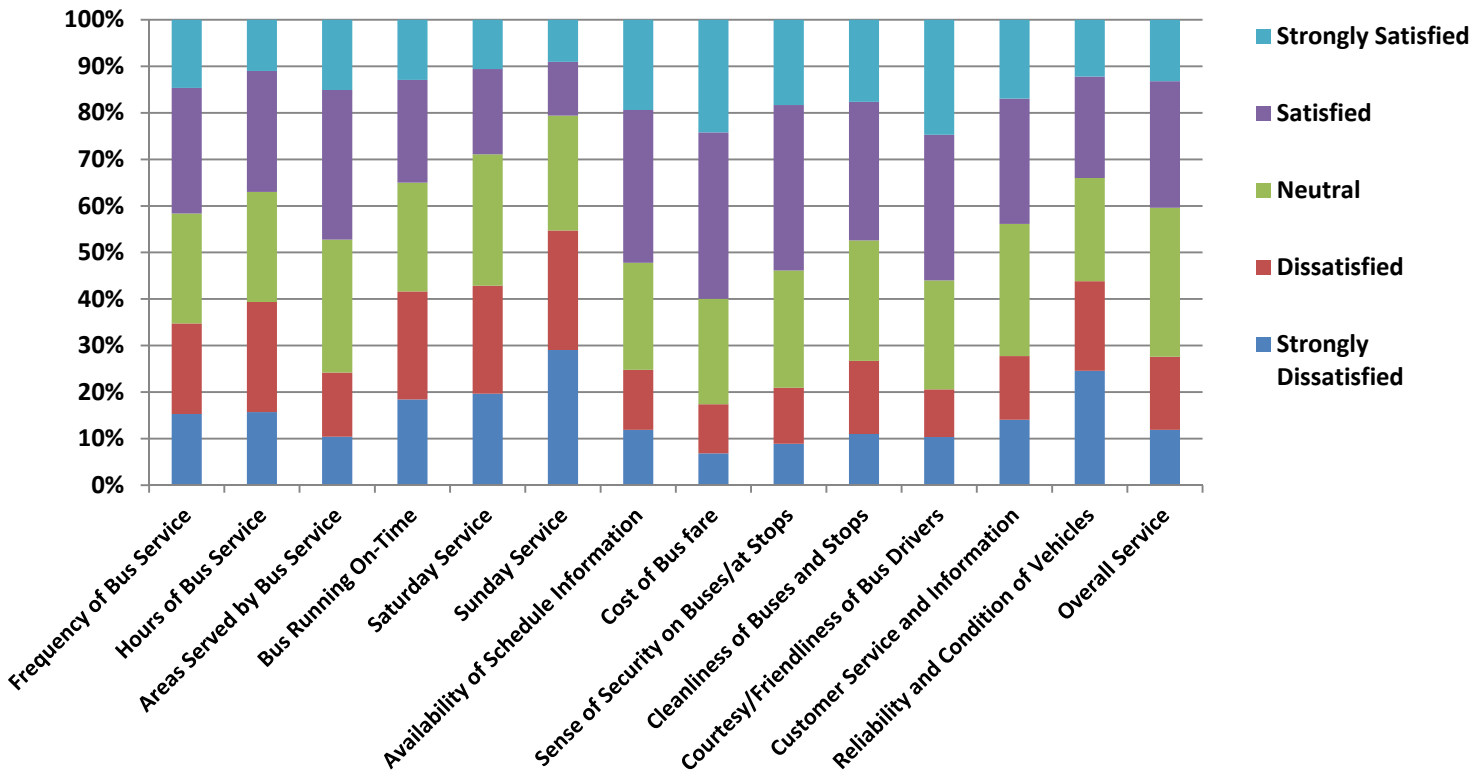


Table 3-2: Rider Satisfaction

Area	Strongly Dissatisfied	Dissatisfied	Neutral	Satisfied	Strongly Satisfied
Frequency of Bus Service	15.3%	19.5%	23.6%	27.0%	14.7%
Hours of Bus Service	15.7%	23.6%	23.6%	26.0%	11.0%
Areas Served by Bus Service	10.4%	13.8%	28.6%	32.1%	15.1%
Bus Running On-Time	18.4%	23.2%	23.4%	22.1%	12.9%
Saturday Service	19.6%	23.2%	28.2%	18.3%	10.6%
Sunday Service	29.1%	25.7%	24.7%	11.6%	9.0%
Availability of Schedule Information	11.9%	12.9%	23.0%	32.9%	19.4%
Cost of Bus fare	6.8%	10.6%	22.7%	35.8%	24.2%
Sense of Security on Buses/at Stops	8.9%	12.0%	25.2%	35.6%	18.3%
Cleanliness of Buses and Stops	11.0%	15.7%	25.9%	29.8%	17.7%
Courtesy/Friendliness of Bus Drivers	10.3%	10.2%	23.4%	31.3%	24.7%
Customer Service and Information	14.1%	13.7%	28.4%	26.9%	16.9%
Reliability and Condition of Vehicles	24.6%	19.2%	22.2%	21.8%	12.2%
Overall Service	11.9%	15.7%	32.0%	27.2%	13.2%

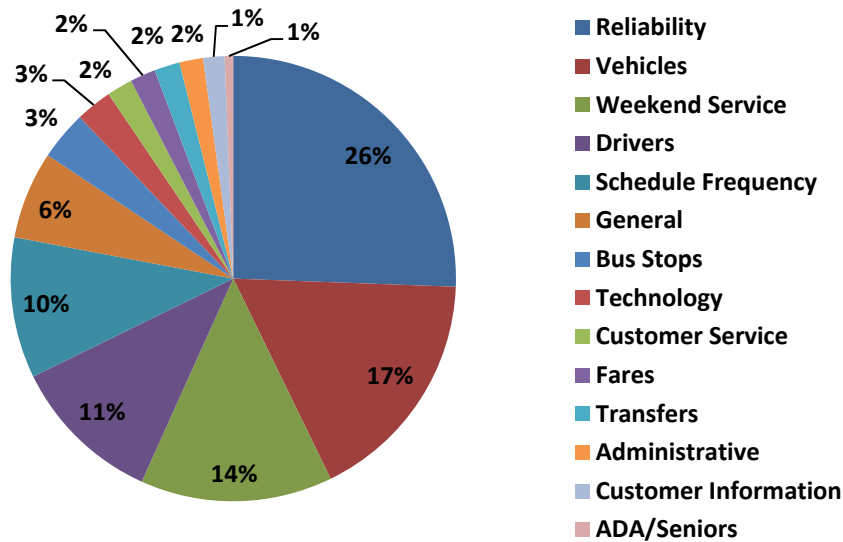
Rider Comments

The survey provided participants an opportunity to submit comments concerning public transportation in Central Maryland. Since the survey was for people riding the RTA system, the majority of comments were directed toward RTA. The comments were grouped into topic areas and are available for review in Appendix C. Figure 3-20 illustrates the amount of comments received in each topic area.

The majority of comments focused on a need to improve system reliability, capital, scheduling, and customer service. Several riders commented about the difficulty of using the buses to get to work on time. Here is a sample of some comments regarding reliability of the system.

“New buses a must!!! Have to leave 2-3 hours earlier for appointments because buses are breaking down frequently, miss connecting bus.”

Figure 3-20: Number of Comments by Topic Area



“Monday it took 4 HOURS to get to work. First Silver bus was early, second skipped the BWI Business District stop, and we nearly missed the Brown. I was 2 hours late to work. It sucks in the evening because if I miss the Silver connection from the Brown, I won't get home until 10 pm, when I left at 7 pm.”

“It is terrible! The buses don't run on time. They break down constantly. At least once a week I am late to work because of the bus.”

“The bus is always late. Need new bus!!! And when I go back to work I will take the bus and have to leave my house 2 hours early to be at work on time.”

An overwhelming majority of comments were about system reliability and a need for more reliable buses. One hundred and sixty five comments mentioned a need to increase reliability of the system. In addition, poor condition of the buses was mentioned 111 times, often in relation to unreliable service. The 71 negative comments about drivers had some relation to unreliable service, with both customers and drivers expressing frustration about inconsistencies in scheduling and service. Comments about the buses include the following:

“Please provide buses that are new and that will not break down and interfere with my commute.”

“The bells-- why do they not work about 1/3 of the time? Why should I have to look for a working bell when I get on the bus when the bell is a key feature of the bus?”

“Totally dissatisfied with conditions of buses in use, they are unsafe and poorly maintained.”

“A bus literally caught on fire.”

After reliability (mentioned 165 times), specific capital needs were mentioned 153 times. The need for newer, more reliable, buses was mentioned 111 times in addition to the 165 comments about reliability issues. The need for improved bus stops and bus stop amenities was second at 23 mentions, and technology improvements were third with seventeen requests for better payment and vehicle tracking systems. Improved pathways to bus stops were mentioned twice.

Scheduling also had a large number of comments, mentioned 141 times. Survey participants mentioned the need to increase frequency of service 66 times, expand service hours or area 56 times, and add express routes seven times. A need for more weekend service was mentioned 90 times in the comments. Some scheduling comments included the following:

“Bus services should be available at least every ½ hour for all buses. New, clean buses are needed. An all-day bus pass should be available.”

“Buses should run more frequently. They should run longer on weekends being as how places are open 24 hours now. Better buses.”

“I wish it was less than one hour, because if you miss one there's not another one until one hour then you have to wait at stop for one hour until next bus.”

There were 95 mentions of drivers, 71 comments were negative and 24 were positive, complementing drivers. There were 58 comments about general service. With, 41 of those comments reflecting positive views and seventeen negative. A need for better communications about scheduling and customer service was reflected in 32 comments. Fare policy was mentioned 31 times with requests for improved transfer policy mentioned twelve times, fare passes were requested twelve times and seven riders thought the fares were too high. Some of the positive comments are below.

“I have been taking the K bus for 14 years and I have seen some changes and improvements over the last year that are great.”

“I'm pretty satisfied with this system of public transportation, after using it for the past year and half.”

“I am grateful for this transportation option. This is a much needed service.”

RTA PARATRANSIT RIDER SURVEY

The paratransit rider survey was mailed directly to paratransit customers and caregivers and included a return envelope with pre-paid postage. The mailing list included all active clients (or caregivers) on the RTA paratransit client list, approximately 600 clients. Additionally, riders and caregivers could fill out the survey online from November 1 - December 12, 2016. In total, 228 valid surveys were returned and analyzed an overall response rate of approximately 38 percent. A copy of the survey is provided in Appendix D.

Survey Language

Surveys were made available in three languages which are predominant in the area: English, Spanish, and Korean. Of the 228 valid surveys collected, 98.2 percent were in English, 0.9 percent were in Spanish, and 0.9 percent were in Korean. This is represented in Figure 3-21.

Survey respondents were asked several questions pertaining to their use of RTA's ADA and general paratransit services, the purpose of their trips, frequency of use and length of time using the service. The first question asked participants to indicate which type of rider they are, Americans with Disabilities Act (ADA) rider, General Paratransit (GPT) rider, or both. Two hundred and seven out of the 228 survey participants answered this question. The majority indicated they were ADA riders (47.3%), 28 indicated they were GPT riders and 24.2 percent said they were both ADA and GPT riders. Figure 3-22 shows the type of rider that survey respondents identified as.

Figure 3-21: Language of Returned Surveys

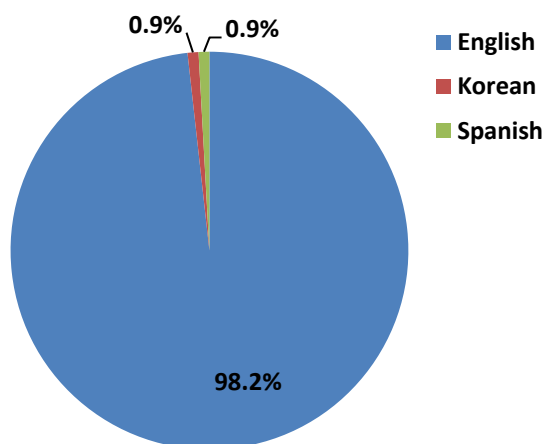
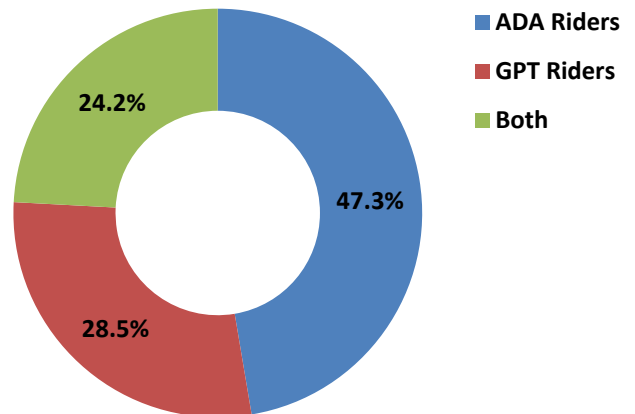


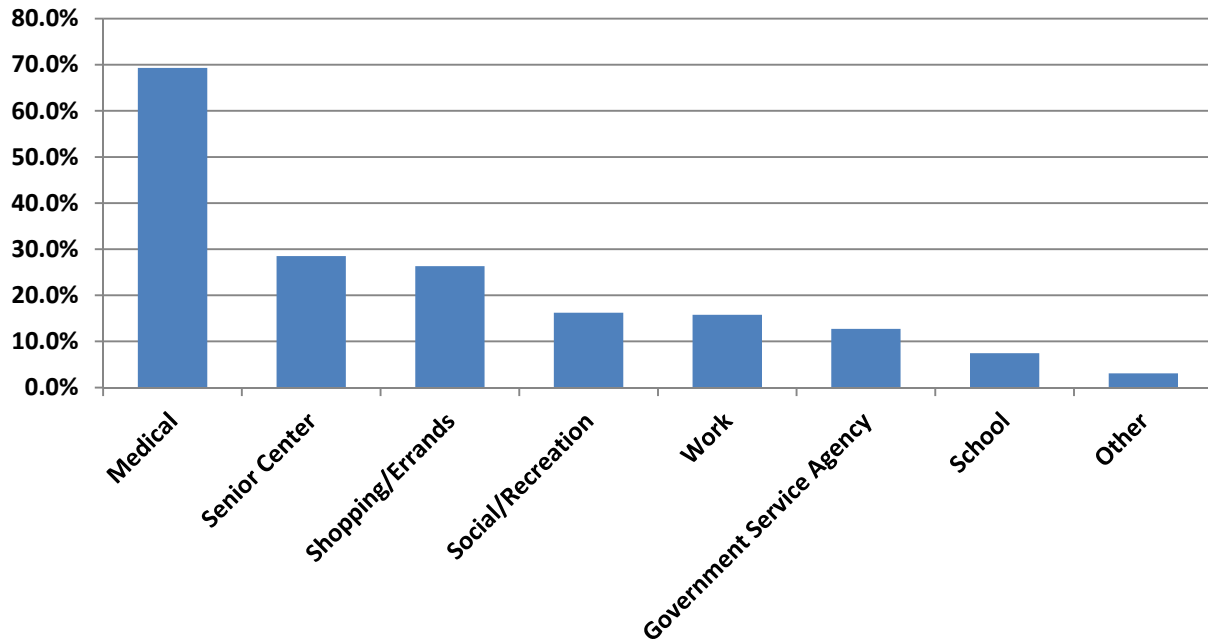
Figure 3-22: Type of Rider



The survey asked riders what they normally used the service for. Participants could select as many trip purposes as appropriate. Statistics were derived by dividing the total number of responses for each trip purpose by the total number respondents. Almost 70 percent of

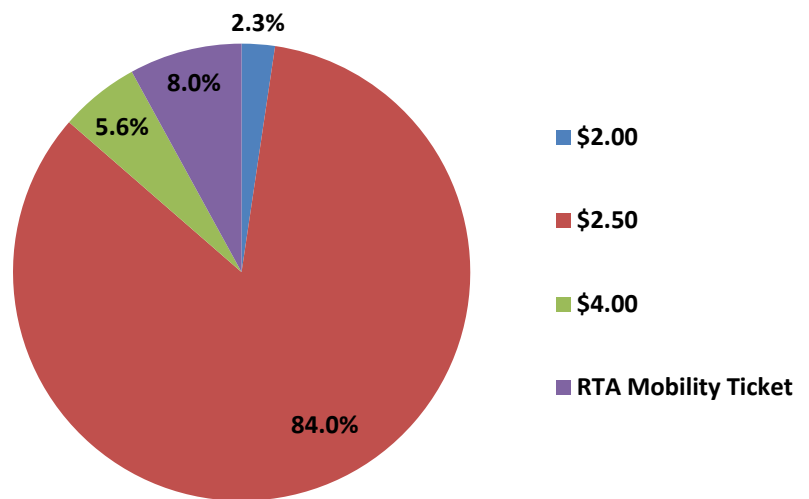
trip purposes were for medical services. Trips to senior centers (28%), and shopping and errands (26%) were the next most selected answers. Full results for this question are reflected in Figure 3-23.

Figure 3-23: Trip Purpose



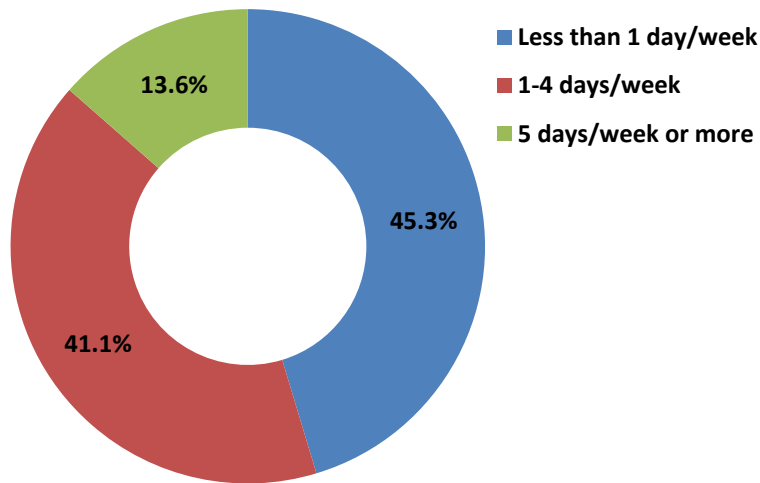
The survey asked what fare riders normally paid for a one-way trip. Eighty-four percent indicated they normally paid \$2.50 per one-way trip. Full results may be viewed in Figure 3-24.

Figure 3-24: Fare Type



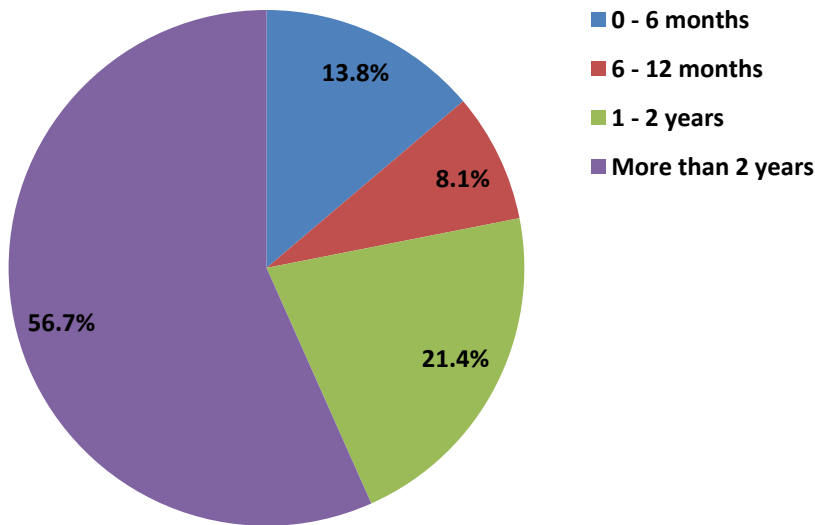
The survey also inquired how often survey participants rode this service. Most participants indicated they rode less than five days a week, 45.3 percent selected less than one day a week and 41.1 percent selected one to four days a week. Only 13.6 percent indicated they rode five days a week or more. Full results are on display in Figure 3-25.

Figure 3-25: Rider Frequency



The survey asked how long participants had been using the service. Fifty-seven percent of survey participants indicated they had been using the service more than two years. Full results are shown in Figure 3-26.

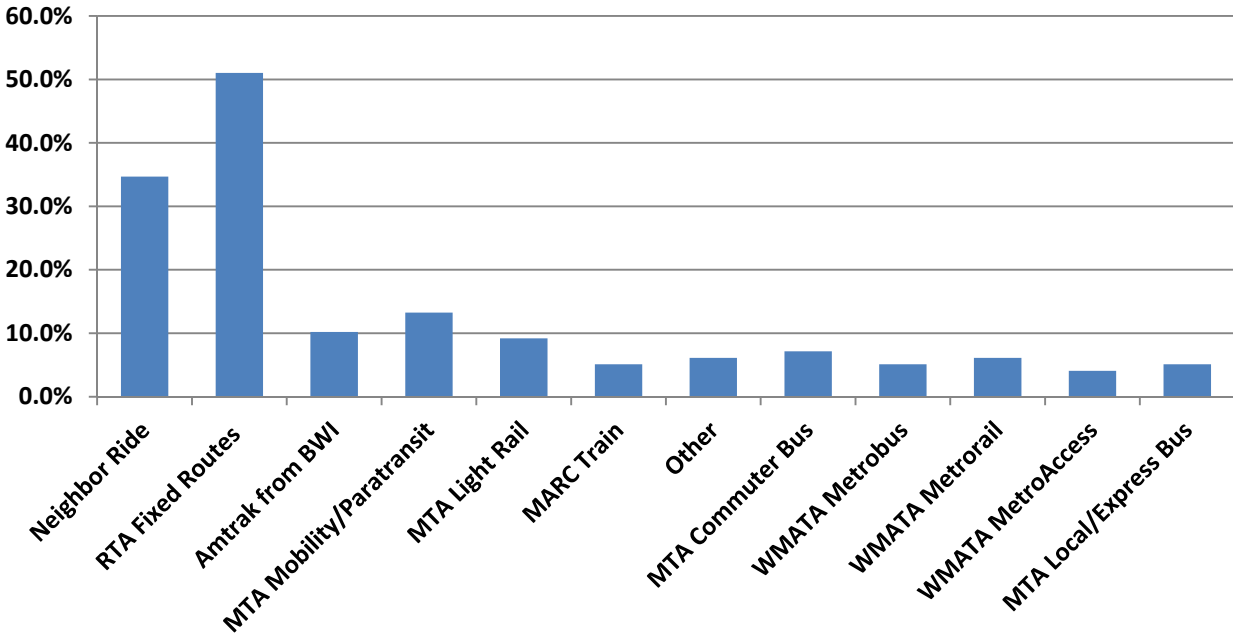
Figure 3-26: Duration of Use



Survey participants were asked to select the other transportation services they use from a list of public transit services in the region. Statistics for this question were calculated by dividing the number of responses per transportation service by the number of individuals

that responded. RTA fixed-routes (51%) and Neighbor Ride (34.7%) were the two most frequently selected transportation services. The full results are available in Figure 3-27.

Figure 3-27: Other Transportation Services Used



The survey asked if there were specific destinations that participants needed to go on a regular basis that transit does not serve. One hundred and eighty two people answered this question; a little over half (62.6%) indicated that transit does cover the areas they needed to travel on a regular basis. Figure 3-28 illustrates the responses to this question. Thirty seven percent indicated there were places they regularly needed to travel that they could not reach by using transit. Table 3-3 provides the comments participants shared when asked to describe the destinations they could not reach by using transit. The majority of places people said that they could not reach were related to medical services. Some of the destinations in this list have some form of RTA service but respondents indicated that they were not able to reach the places there that they needed to go.

Figure 3-28: Destinations Not Served

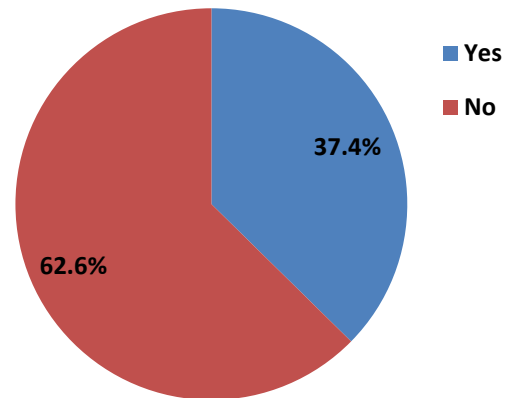
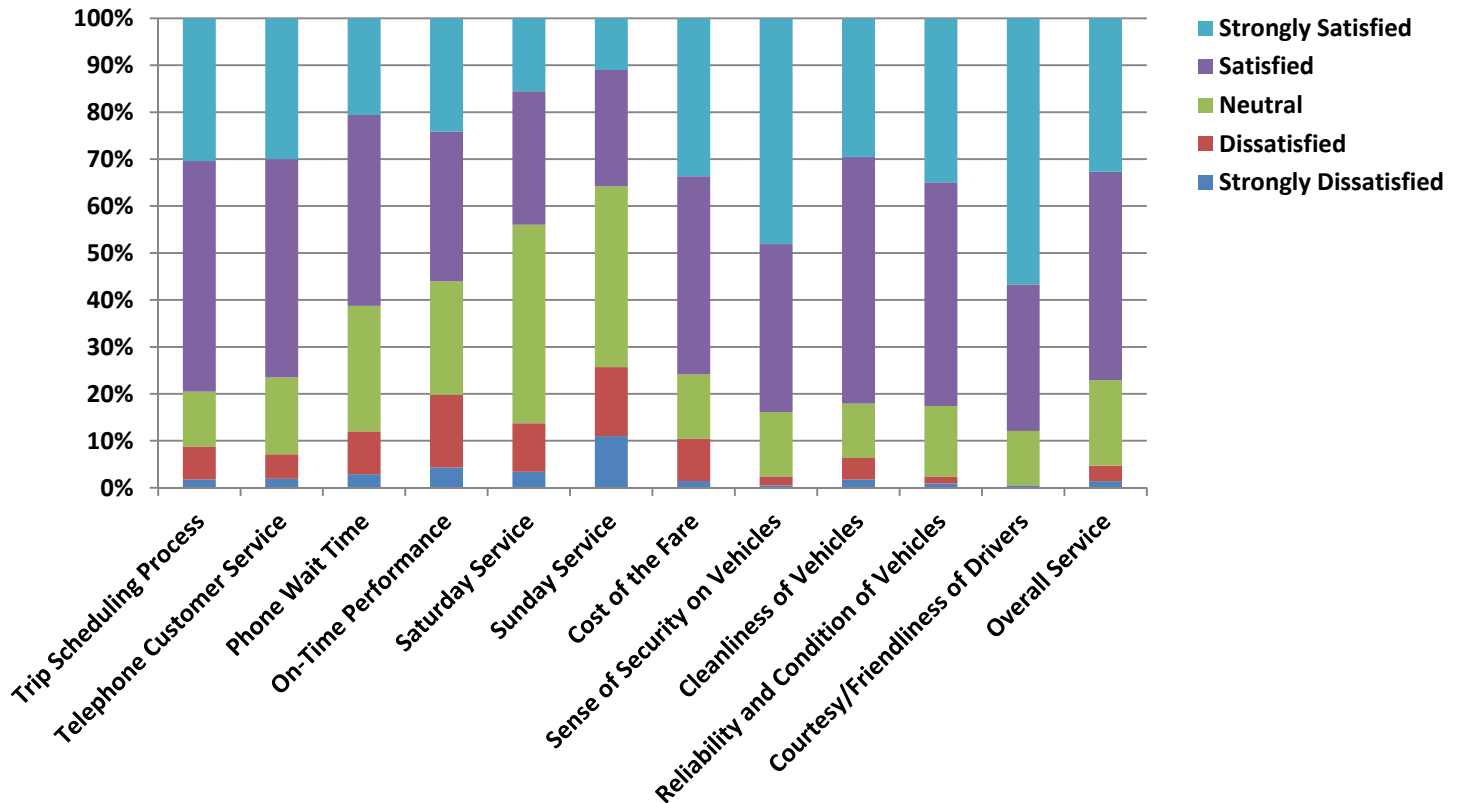


Table 3-3: Destinations Not Served by Transit

	Comment	Category/ Location
1.	Baltimore City, Prince George's and Baltimore Counties	Baltimore
2.	Baltimore City, Silver Spring, and Washington D.C.	Baltimore
3.	Baltimore County Medical Offices	Baltimore
4.	John Hopkins Clinic in Baltimore	Baltimore
5.	I want to go to East Columbia Library. 6600 Cradlerock Way in Owen Brown at 6:30 pm and return 9:00 pm 3 rd Tuesday of every month to attend the World Lang Café Meeting	East Columbia
6.	50+ Center in Elkridge, 5660 Furnace Road	Elkridge
7.	Church on Sundays	Faith
8.	Columbia Church in Ellicott City. This service will not transport to this location on Sundays.	Faith
9.	Howard County 1 st Presbyterian Church	Faith
10.	Nearby Hindu temples for worship and senior programs like yoga and seminars on health	Faith
11.	St. John the Evangelist Catholic Church. Columbia Medical Campus, Charter Drive in Columbia, MD. Medical Buildings	Faith
12.	Glen Burnie, 21061. I moved to this area but RTA doesn't serve this area so therefore I have to get a cab home.	Glen Burnie
13.	Glen Burnie, MD every two weeks to visit my son, who has a mental illness and is in a group home.	Glen Burnie
14.	Bayview Asthma Clinic	Medical
15.	Eye doctor. Internist	Medical
16.	Germantown- medical services	Medical
17.	Giant Pharmacies for Rx's	Medical
18.	Hospital and doctors not in Howard County	Medical
19.	Kaiser	Medical
20.	Omni eye specialist in Baltimore	Medical
21.	Rehab. Activities Center	Medical
22.	RTA fixed-routes do not go to my medical doctor	Medical
23.	University of Maryland Hospital	Medical
24.	Wish I could go beyond Howard County. Needed to go to Annapolis for Prosthetics, was unable to	Medical
25.	Baines Senior Center	Senior Center
26.	Grocery shopping	Shopping
27.	Local Walmart	Shopping
28.	Market and mall	Shopping
29.	Glenwood, MD at 6 a.m.	Time
30.	Sunday travel	Time
31.	From drop off point in Laurel to home in West Laurel	West Laurel
32.	Deaf event outside of Howard County	Miscellaneous
33.	Maplelawn	Miscellaneous
34.	Nursing- Nama (Mom) Howard Co ling!!	Miscellaneous

A major component of the survey concerned rider satisfaction levels with various components of RTA Mobility paratransit service. They were asked to rate their satisfaction from “strongly dissatisfied” to “strongly satisfied” for twelve aspects of RTA Mobility paratransit service and their overall satisfaction with RTA Mobility paratransit service. Overall, riders reported a high level of satisfaction with the service. The most dissatisfaction was found with the lack of Saturday and Sunday service, and on-time performance. Full results may be viewed in Figure 3-29.

Figure 3-29: Rider Satisfaction with RTA Service by Component



The survey sought to learn more about RTA Mobility paratransit riders. Several questions were asked to identify characteristics of RTA Mobility paratransit riders. To this end, the survey asked about their ability to drive a private vehicle. A majority (61%) of respondents indicated they did not have a driver’s license. A large majority of respondents (83%) stated they did not have a car and of the respondents that reported having a car, only eight respondents reported that the car was available for the trip. This information is displayed graphically in Figure 3-30, Figure 3-31 and Figure 3-32.

Figure 3-30: Driver's License

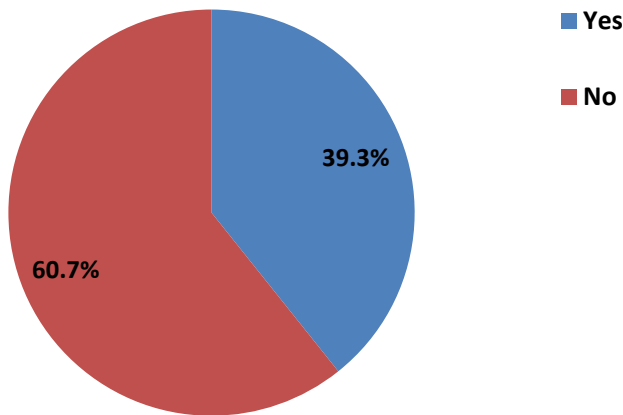


Figure 3-31: Own Car

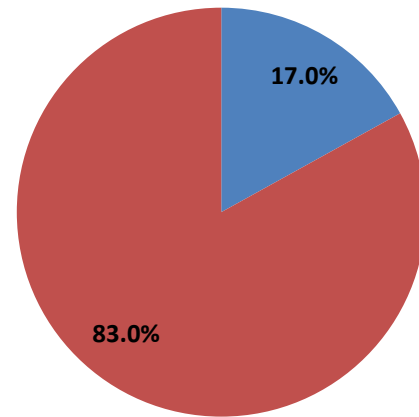


Figure 3-32: If Yes, Was a Car Available for This Trip?

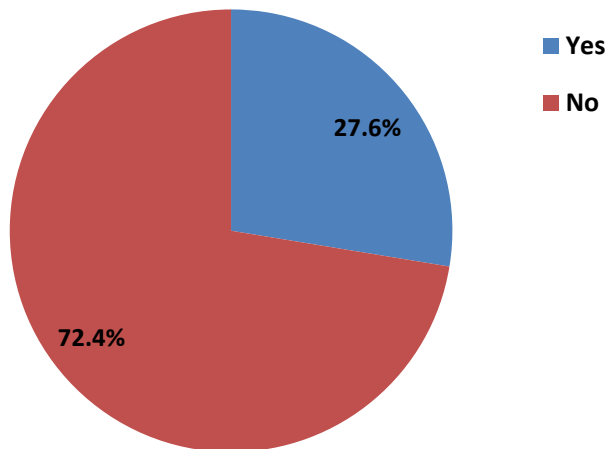
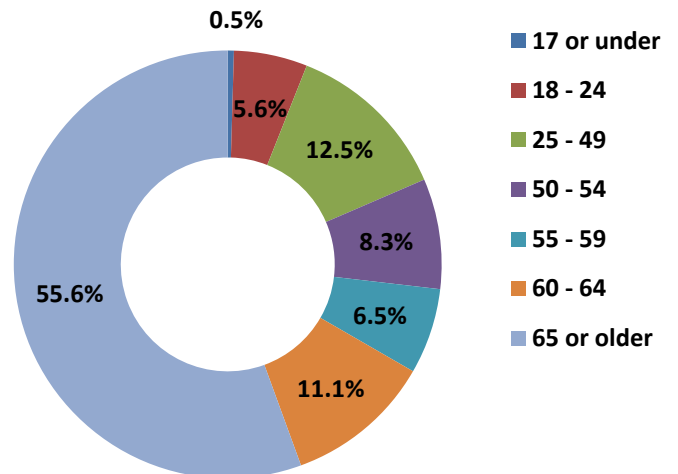


Figure 3-33: Age of Riders



The survey then asked a series of questions to obtain demographic information pertaining to RTA Mobility paratransit riders. Regarding age, a plurality of respondents marked they were 65 or older, or 55.6 percent of the 216 participants that answered this question. Additionally, 12.5 percent of respondents indicated they were between the ages of 25 and 49 and 11.1 percent reported they were between the ages of 60 and 64. The full results can be found in Figure 3-33.

The survey continued by asking riders about their employment status and household income. Since multiple responses could be recorded for this question employment status, statistics were derived by dividing the total number of responses for each employment status by the total number of responses. More than half (53%) of respondents indicated they were retired, 12.9 percent were unemployed, and 12.1 percent were employed part-time. Full results can be seen in Figure 3-34. Additionally, a plurality of those who marked “other” indicated they were disabled. In terms of income, over sixty percent of paratransit riders have an annual income of less than \$20,000. Figure 3-35 provides of the responses for household income.

Figure 3-34: Employment Status

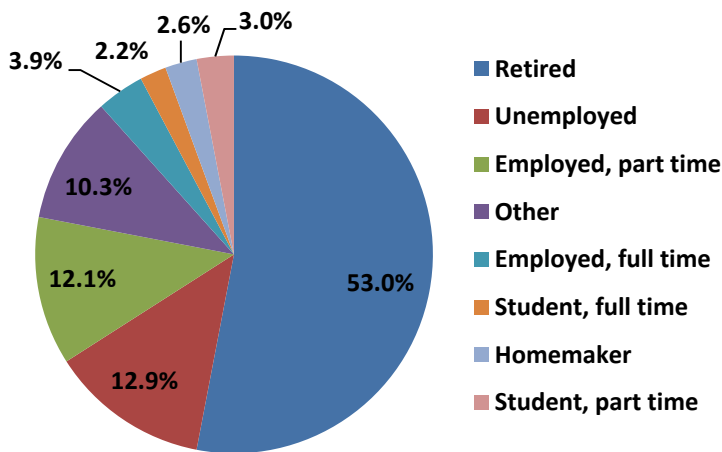
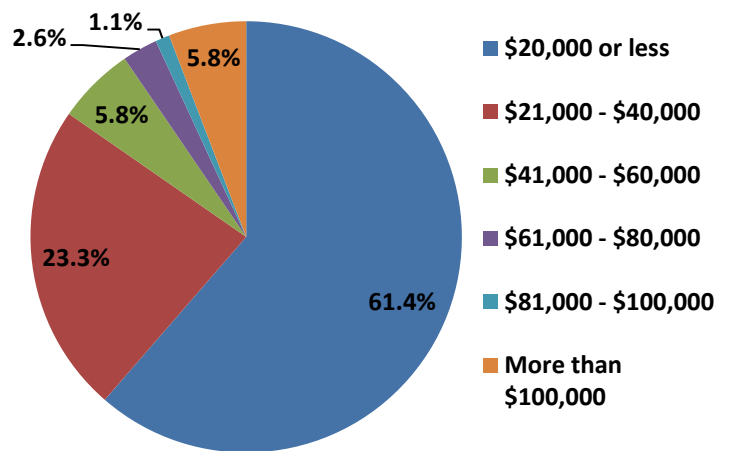


Figure 3-35: Annual Household Income



The survey continued by asking RTA Mobility paratransit riders about which ethnic group/groups they identified with. Since multiple responses could be recorded for this question, statistics were derived by dividing the total number of responses for each ethnicity by the total number of responses. Paratransit riders reported a higher percent of Caucasian ethnicity than the fixed route riders. More than half (51.7%) indicated they were Caucasian/white, 39.2 percent said they were African American/black, and 8.1 percent indicated they were Asian. Full results are displayed in

Figure 3-36: Ethnic Background

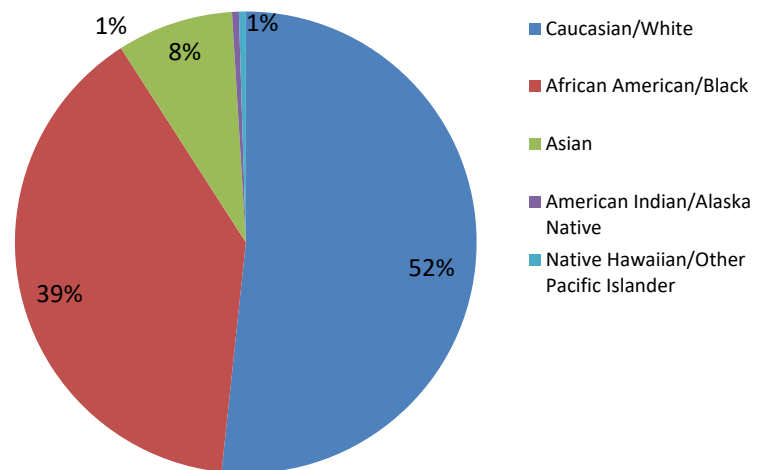
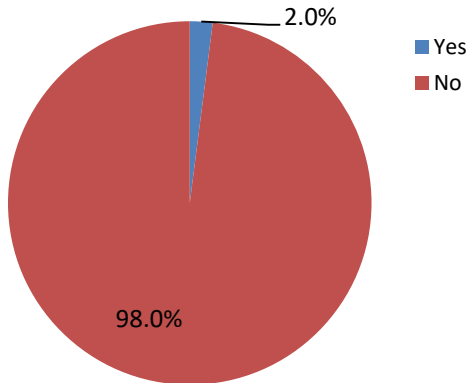


Figure 3-36.

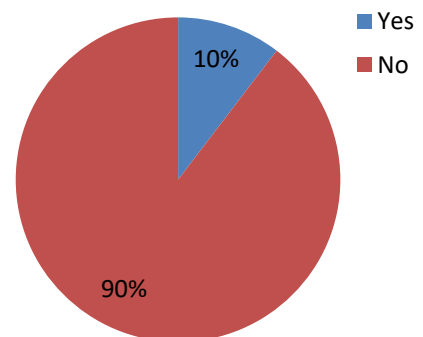
The survey asked whether or not RTA Mobility paratransit riders were of Hispanic or Latino origins. Ten and 2/10 percent of respondents identified themselves as Hispanic or Latino and 98 percent claimed they were not. This is shown in Figure 3-37.

Figure 3-37: Status as a Hispanic or Latino



The survey then asked several questions regarding the languages RTA Mobility paratransit riders spoke and their proficiency in English. First, respondents were asked if they spoke a language other than English at home. Ten percent indicated they spoke a language other than English at home and 89.6 percent indicated they do not. This is seen in Figure 3-38.

Figure 3-38: Language Spoken Other than English



RTA Mobility paratransit riders were asked which other language they spoke at home. Korean was the most commonly cited language, followed by Spanish and German. Full results can be viewed in Table 3-4.

Those who indicated they spoke a language other than English at home were asked how well they spoke English; 45 respondents answered this question. Seventy one percent said they spoke English “very well”, 11.1 percent stated they spoke it “well”, 15.6 percent said “not well”, and 2.2 percent, or one respondent, indicated “not at all”. This is shown in Figure 3-39.

Figure 3-39: English Fluency

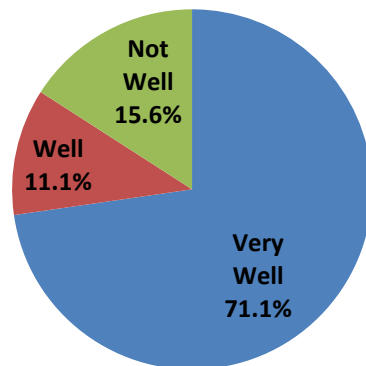


Table 3-4: Other Spoken Languages

Language
Korean
Spanish
German
Hindi
Punjabi
Tamil
Ukrainian
Albanian
Krio
Telugu
Akan
American Sign Language (ASL)
French, Basaa
Sinhalese
Swahili
Urdu
Vietnamese

Rider Suggestions and Comments

A chief aim of the survey was to ascertain RTA Mobility paratransit rider opinions about RTA service. The survey provided a space for respondents to provide open ended comments about their experience with RTA Mobility paratransit services. All of the comments are offered in Appendix E. A majority of the comments (33) were requests to expand either the service hours or service area. Some of the comments received about expanding RTA Mobility paratransit services are presented below:

“Public transportation is not adequate to meet the needs of those who cannot drive. I am legally blind. I am very limited in looking for jobs and traveling around the area by the bus system, it does not have enough routes and there are not frequent enough pickups. It often requires transfers and takes all day to do simple errands. I wish we had a connection to DC/MD metro stations.”

“Need to improve overall coverage of the city of Laurel and improve the frequency of current routes.”

“The limitations on crossing county lines in paratransit living in Howard County severely limits ability to go to work opportunities when I can't go to Baltimore County on paratransit to be useful, there needs to be more flexibility. Also, their windows are so large as to not be useful for part-time employment. Not reliable enough for start and end times.”

There were 25 comments complementing RTA Mobility paratransit services. RTA Mobility paratransit riders are grateful for services and complemented drivers and service in general. Some of the comments complementing RTA Mobility paratransit services are presented below:

“As I have indicated, the RTA is a lifesaver for me. Due to my vision loss I HAD to stop driving. I have found the phone people, order takers, dispatch people, drivers to be of the highest quality. I have observed the kindness of the drivers toward wheelchair bound individuals, which goes way beyond just basic kindness. And much shown to me as well. Thank you all!”

“I am very pleased with your service. My husband who is actually the rider has early dementia and is never upset or nervous about the ride.”

“I don't know how I would get around if it wasn't for them. I am in a wheel chair and riding with RTA gives me a sense of control and security. Thank God for them.”

Many of the remaining comments centered on improving scheduling and wait-times. The phone system and customer service also had feedback and suggestions for improvements.

COMMUNITY INPUT

Input from the broader community was also solicited. This was accomplished with a community survey and an online interactive mapping tool called Wikimap.

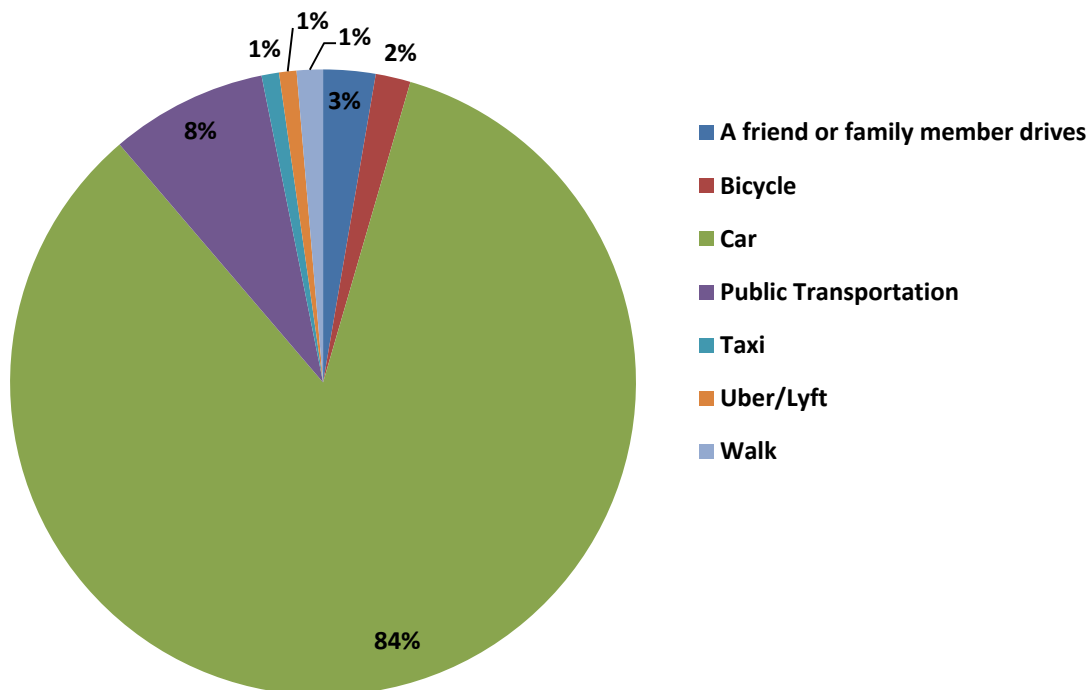
Community Survey

The community survey was available as a paper survey and an online survey. The paper survey was provided through the public meetings and partner outlets. Members of the Central Maryland community could fill out the survey online from October 18 - December 6, 2016. Members of the public were notified of the online survey through the public meetings, government and non-profit agencies, and the project website. In total, 216 valid surveys were submitted and analyzed. A copy of the community survey is provided in Appendix F.

Public Transit Use and Knowledge

Survey respondents were asked several questions pertaining to their use of and knowledge about public transportation in Central Maryland. The first question asked participants to indicate their primary mode of transportation. Eighty-four percent of survey participants indicated that a car was their primary mode of transportation. Figure 3-40 shows transportation modes which survey participants reported using.

Figure 3-40: Primary Transportation Mode



The survey then asked which, if any, of the available public transportation services participants used. Since multiple responses could be recorded for this question, statistics were derived by dividing the total number of responses for each service by the total number of responses. The top three transportation services used were Amtrak from BWI (45%), Uber/Lyft (42%) and WMATA Metrorail (32%). RTA was fourth with 24 percent of participants indicating they used this service. A plurality of riders indicated they used more than one type of transportation service. Full results may be viewed in Figure 3-41.

Figure 3-41: Transportation Services Used

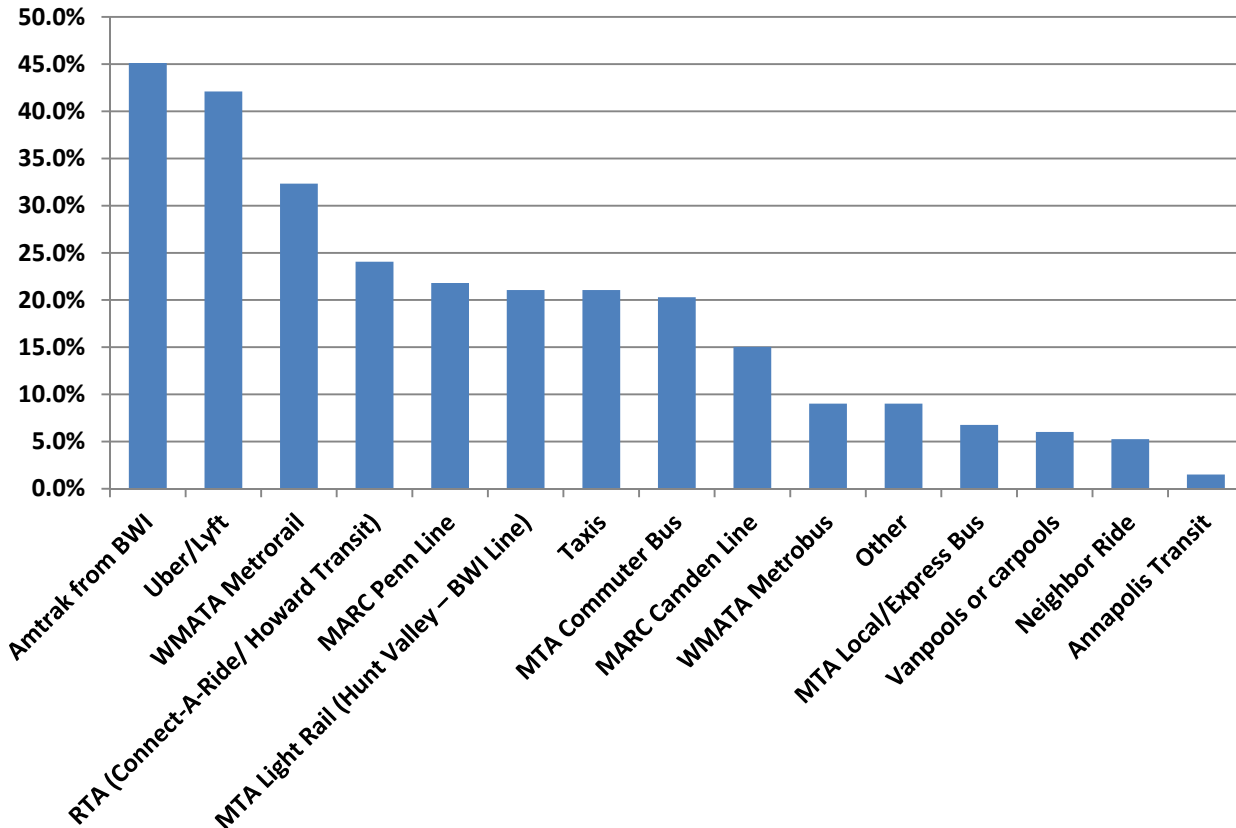
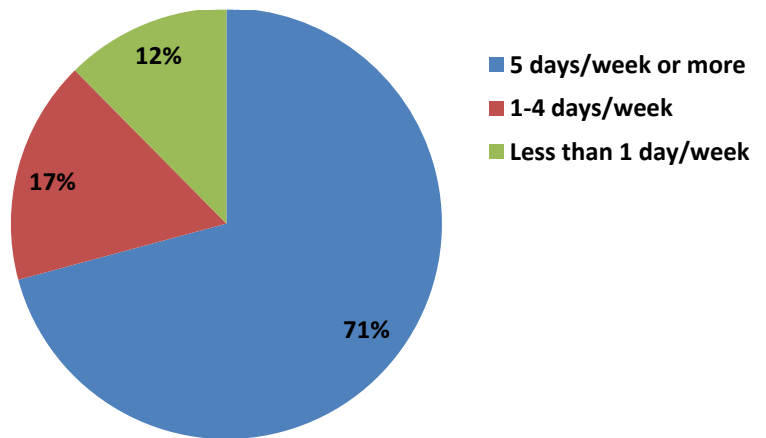


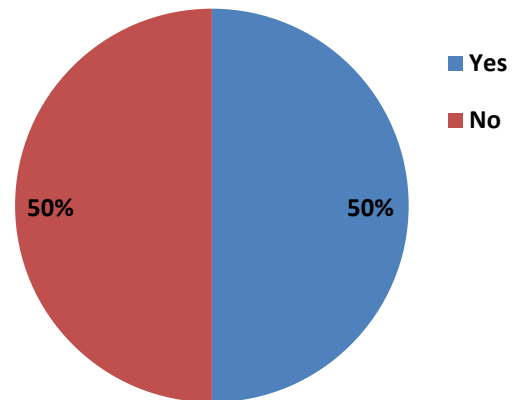
Figure 3-42: Frequency of Transit Use

The survey inquired about the frequency of participant’s use of public transit. One hundred and thirty seven participants out of 216 answered this question. The majority of participants that answered this question indicated they used public transportation services five days a week or more (71%). Full results are on display in Figure3-42.



The survey asked participants if there were specific destinations they needed to go on a regular basis that transit did not serve. The response was split fifty-fifty. Half said there were destinations they needed to go that were not served by transit and the other half said there were not destinations they needed to go that were not served. The full results are shown in Figure 3-43.

Figure 3-43: Destinations Not Served by Transit



The survey provided a space for participants to indicate places they needed to go that were not served by transit. An analysis of these responses found that most people wanted to make connections to nearby metropolitan systems like the Washington, D.C. and Baltimore transit systems. Baltimore, including BWI, was mentioned 14 times as a desirable destination. Washington D.C. and Fort Meade were both mentioned 9 times. Several destinations requested in the comments were connections to other transit systems, especially rail, including Baltimore, D.C., Greenbelt Metro Station, College Park, and Silver Spring. A full list of comments provided to this question can be found in Appendix G.

Survey Participant Information

The survey sought to learn more about the community members participating in the survey. Several questions were asked to identify characteristics of participants. To this end, the survey first asked about participant’s zip codes. The majority of participants were from the Columbia and Ellicott City area. Full results are shown in Table 3-5 below.

Table 3-5: Location of Respondents

Number of Respondents	City	Number of Respondents	City	Number of Respondents	City
103	Columbia	2	Millersville	1	Pasadena
34	Ellicott City	2	Severn	1	Brooklyn
7	Laurel	2	Catonsville	1	Frederick
6	Jessup	2	Woodbine		
5	Annapolis	1	Arnold		
4	Elkridge	1	Clarksville		
4	Odenton	1	Crownsville		
3	Hanover	1	Edgewater		
3	Glen Burnie	1	Marriottsville		
2	Baltimore	1	Crofton		

The next questions about survey participants asked about the availability of travel by private vehicle. As indicated in Figure 3-44 and Figure 3-45, 95 percent of participants answered that yes, they did have a driver’s license and 89 percent indicated they have a car available to drive on a regular basis. This is in contrast to the results from the rider survey where 48 percent reported having a driver’s license and only 15 percent reported having cars.

Figure 3-44: Driver’s License

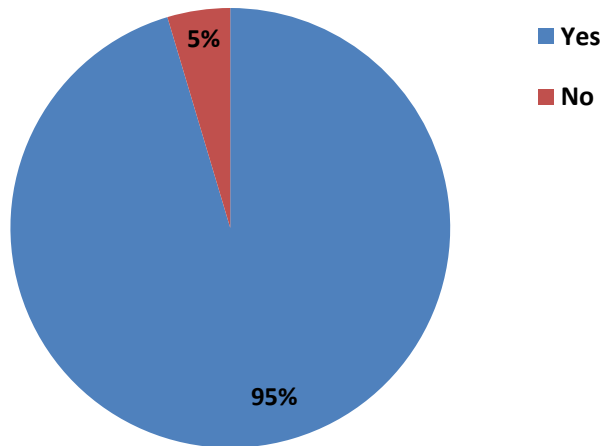
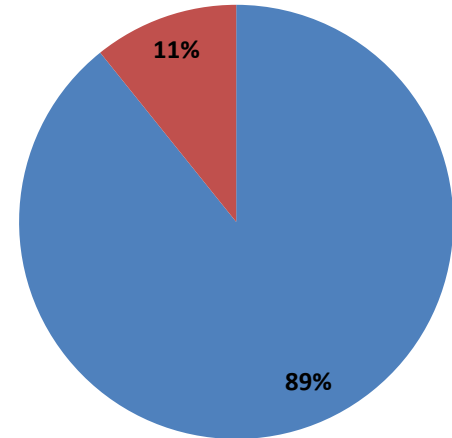
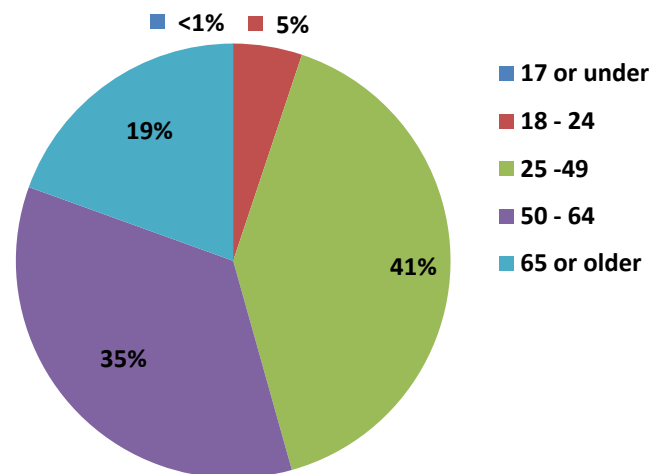


Figure 3-45: Car Ownership



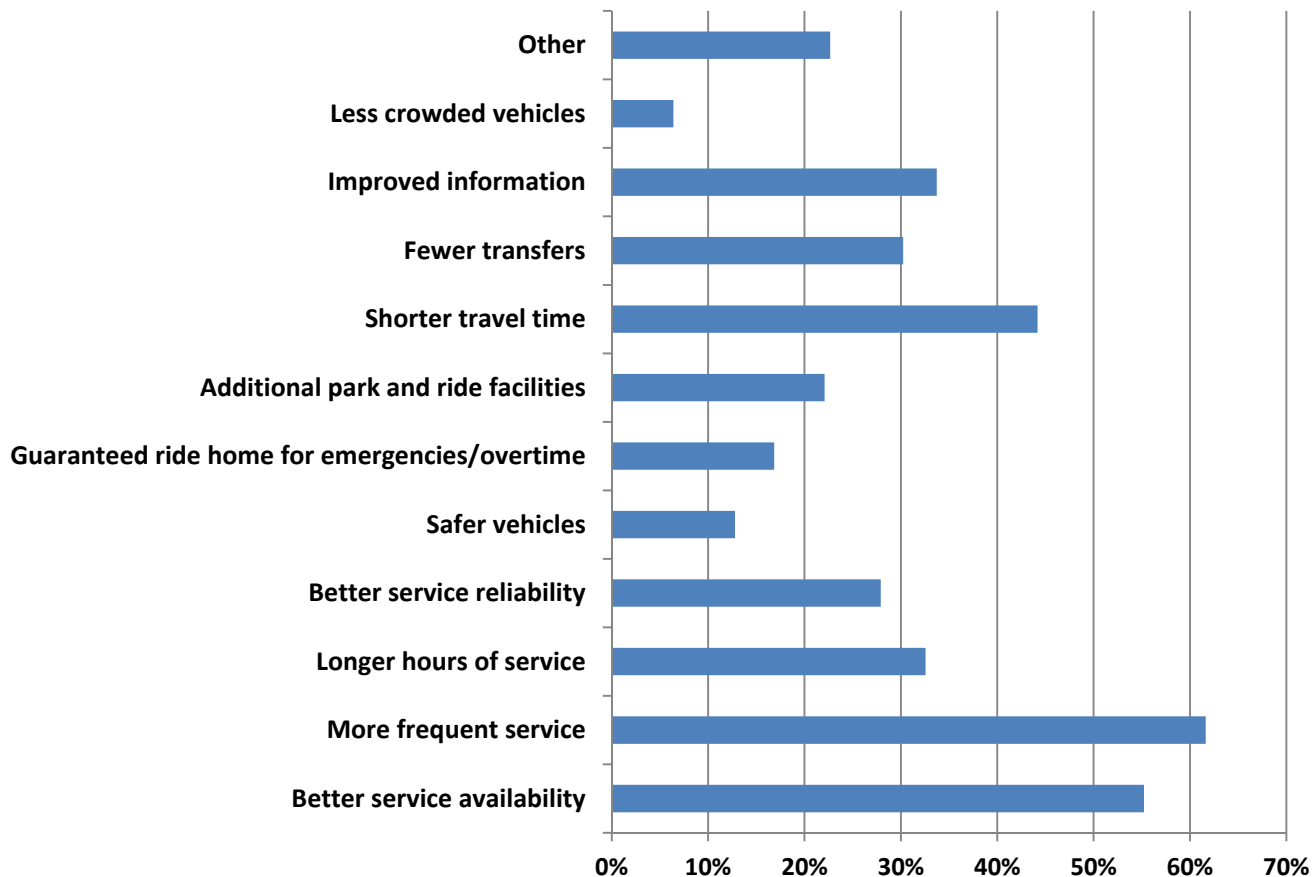
The survey asked participants to indicate their age range. Regarding age, 41 percent of respondents marked they were between the ages of 25 and 49. Additionally, 35 percent of respondents indicated they were between the ages of 50 and 64, 19 percent reported they were 65 or older and five percent reported being between the ages of 18 and 24. Full results can be seen in Figure 3-46.

Figure 3-46: Age Distribution



The survey then asked participants if they do not currently use public transportation, what improvements would be needed for them to ride public transportation. Since multiple responses could be recorded for this question, statistics were derived by dividing the total number of responses for each listed improvement by the total number of responses. The most popular answer selected was “more frequent service” which was selected 62 percent of the time by non-riders. Full results can be seen in Figure 3-47.

Figure 3-47: Suggested Transit Improvements

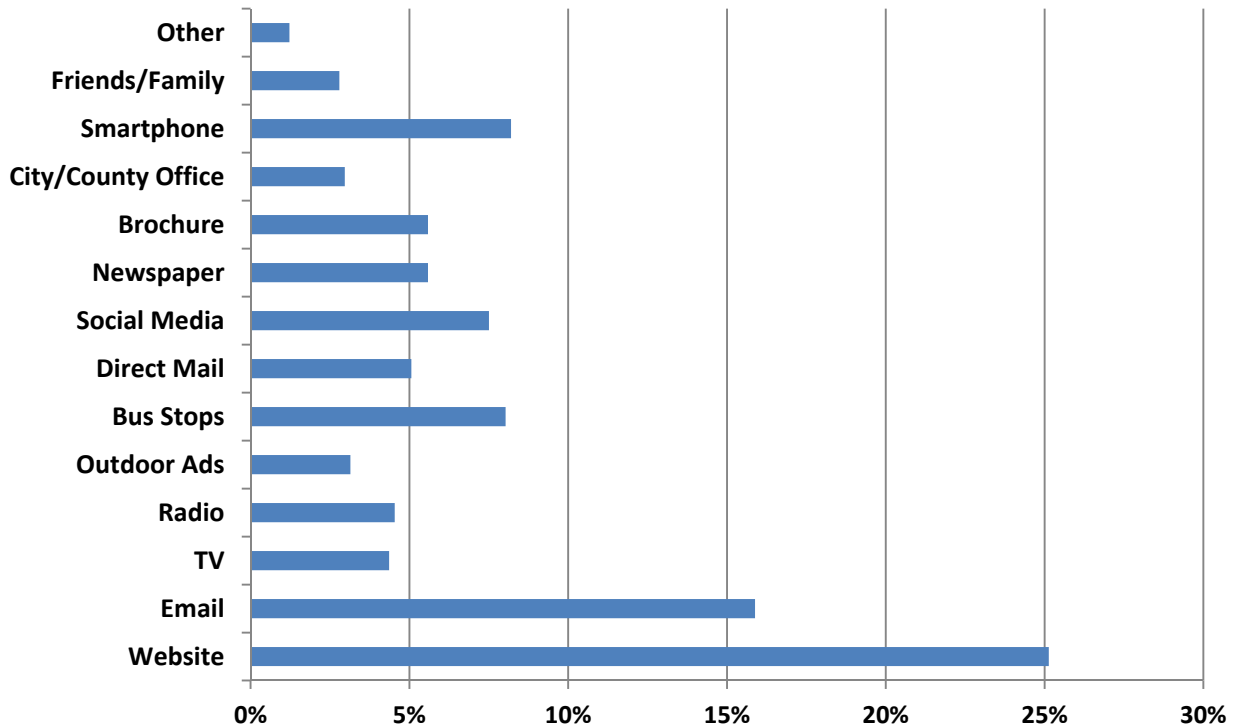


Additionally, 23 percent marked other and provided comments on improvements they would like to see in the public transit system. These comments, as received, are provided below:

- An actual, usable method to travel from Columbia (21044) to DC (Metro-Rail) within a reasonable amount of time during commuting hours.
- Better coverage of where I need to go.
- Information.
- Ability to safely walk and wait at pickup points.
- Rail between Ft. Meade and Annapolis. Rebuild Annapolis rail with connections to Baltimore, Washington, D.C.
- Safety once on the vehicle.
- Transport from Howard County to UMD.
- A train (light rail) from Columbia to Baltimore.
- Pedestrian and bike access to park and ride; better connectivity for bike to transit.

- Improved bicycle infrastructure that allows me to safely reach bus/metro stops from where I live.
- I use it for work.
- It is not a matter of improvements needed. My work and life transportation requirements do not allow me to consider public transportation.
- Support for disabled adult riders.
- Shelter during waits.
- Service within one mile of my house.
- More safety on vehicle.
- Run the RTA buses earlier in the morning and more often.
- Better and safer mobility for families with small kids.
- Better tools for figuring out how to get from point A to point B.
- New direct destinations.
- I use public transportation, why am I being forced to answer this question?
- Too numerous to get into on this form.
- Bus from Glen Burnie to Annapolis with no stops; light rail from Glen Burnie to Baltimore with no stops.
- Vehicle locator systems and transfer passes to other systems.
- Does not stop anywhere near my home.
- I would not use your loud bad air polluting traffic jamming bus.
- Do not anticipate using public transportation.
- Better bicycle routes from Arundel Mills to MARC station.
- Sheltered stop locations.
- Knowledge about the system.
- Local Howard County transportation is generally a waste of my tax dollars.
- Metro easily accessible to major cities like Baltimore and Washington, D.C.
- None- that's why we moved out here.
- Free use of transit for persons age 65+ during peak hours
- I do not think Public transportation in a suburban neighborhood is acceptable since it will ruin the quality of life/rural feel. Not a good use of our tax dollars.

The survey asked participants how they would prefer to receive information about public transportation. This question has multiple responses that could be recorded; statistics were derived by dividing the total number of responses for each listed improvement by the total number of responses. Receiving information via a website was the most frequently selected response, 25 percent . The next highest response was receiving information via email at 18%. The full range of answers is available in Figure 3-48.

Figure 3-48: Information Dissemination Preferences

Only a small number of respondents selected other and provided suggestions for alternative methods of communication. These suggestions included:

- Application similar to NextBus
- Laurel Leader
- Columbia Village Centers
- Office on Aging and Independence Mobility Guide for Seniors
- Special needs community channels

The survey asked participants about their employment status and household income. Fifty-seven percent of participants reported they were employed full-time, 23 percent were retired, and 9 percent were employed part-time. Full results for this question are illustrated in Figure 3-49.

For household income, 52 percent of participants indicated they had an annual household income of more than \$100,000 and 18 percent claimed between \$81,000 and \$100,000. The full results are on display in Figure 3-50.

Figure 3-49: Employment Status

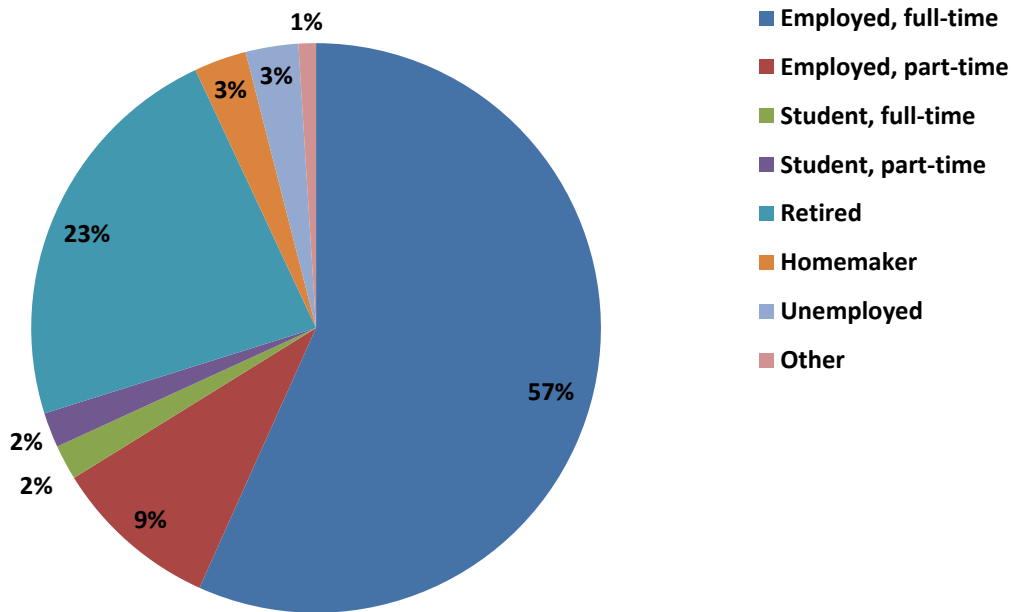
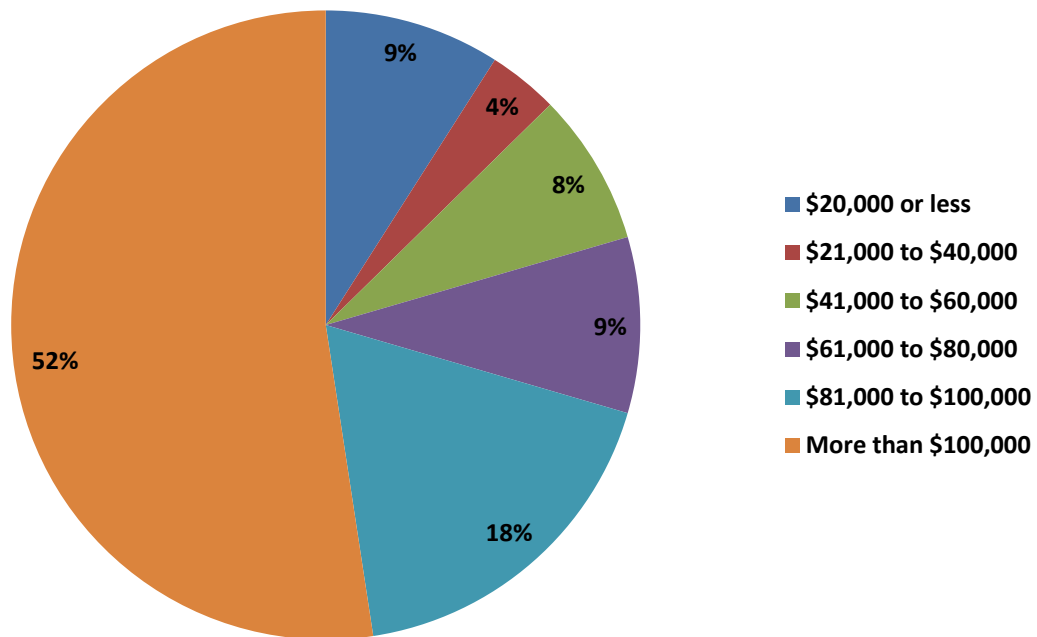


Figure 3-50: Annual Household Income



Respondents were asked to provide some demographic information. As illustrated in Figure 3-51, Figure 3-52 and Figure 3-53, the majority of participants reported they were Caucasian (79%), not of Hispanic or Latino origin (93%), and that they spoke English at home (85%).

Figure 3-51: Ethnic Background

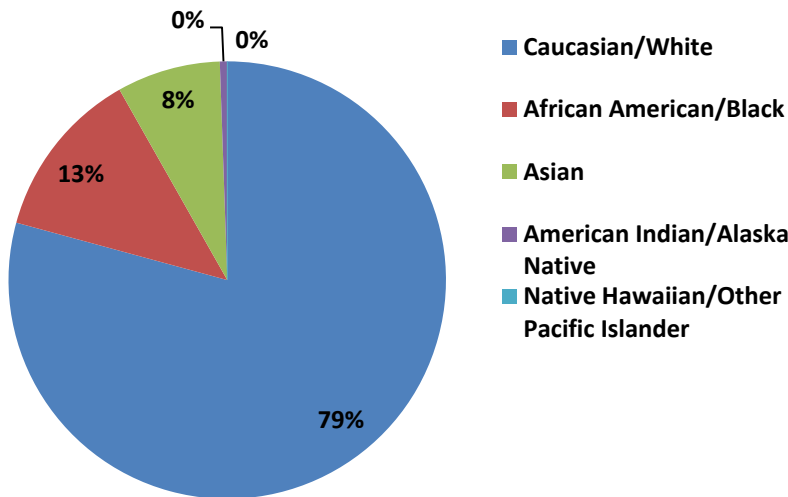


Figure 3-52: Hispanic or Latino

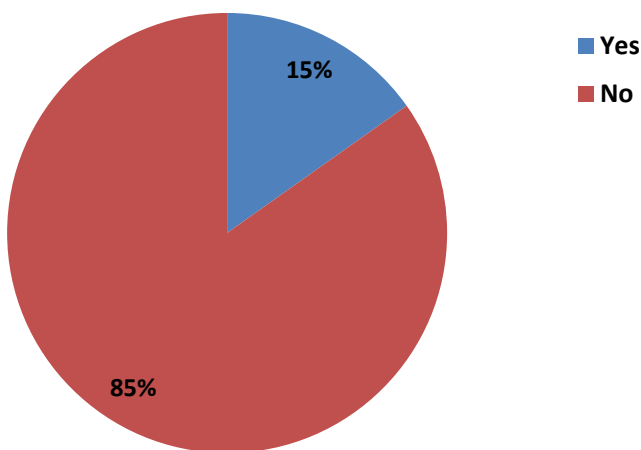
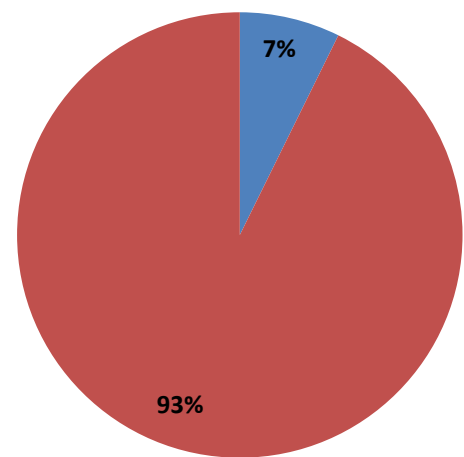


Figure 3-53: Language Spoken Other than English



Community Suggestions and Comments

Seventy-seven comments were submitted by 216 survey participants. The majority of comments focused on a need to improve services (45 comments) related to scheduling like expanding services (13 comments) and increasing the frequency of buses (8 comments). Several riders commented about the need to transfer and connect to Washington, D.C. and Baltimore transit systems. Following is a sample of some comments about the need to expand service:

"I would like to be able to take public transportation rather than to drive alone. Job opportunities at Ft Meade and in Baltimore have no public transportation att. What transportation there is would take many transfers and over 3 hours, which is not practical."

"It's in a sad state in Anne Arundel. Buses run once an hour on major job corridors like the 17 in the BWI area and the 14 on the Ritchie Highway corridor, connecting the state's major city the state's Capital."

"I live only 20 miles from my work; but it takes almost three hours of my day to get there and back. It negatively affects my family and personal life, and adds extra stressors"

The comments are grouped into topic areas and are available for review in Appendix H.

Baltimore Metropolitan Council (BMC) Public Transportation Choice Study: Attitudes and Behavior of Baltimore Area Residents with Access to Transit

Another source of information about public perceptions of transit in the Central Maryland region is a survey conducted concurrently with the TDP by the BMC. This study surveyed the general public regarding attitudes and behavior of residents with regard to transit usage. It found that the RTA currently has both low usage and low name recognition. The study found that the RTA, in comparison to other locally-operated transit services, is rated low with regard to availability, is seen as not easy to use, and as not fitting into the lifestyles of the average central Maryland resident. The BMC surveyors found that nearly 70 percent of the residents in the RTA service area either know of the system by name only or have never heard of the RTA¹. While the TDP community and user surveys reflect input from a public that is aware of the RTA and its services to some degree, the BMC findings suggest that much of the public is unaware of the existence of RTA services, and if they are aware, do not have a high regard for transit as an option. However, it must be

¹ Baltimore Metropolitan Council, Public Transportation Choice Study: Attitudes and Behavior of Baltimore Area Residents with Access to Transit, April 2017, p.106.

remembered that the RTA's passengers are largely low-income persons dependent on transit to access employment or education, and in that sense have lifestyles different from the average Central Maryland resident (who has access to personal transportation and a higher income).

Online Interactive Map (Wikimap)

In addition to the community survey, an online interactive map was developed to allow individuals to provide further input about public transit in Central Maryland. The Wikimap allowed people to comment on existing routes and stops, suggest new stops and areas to serve. Comments that were provided on the Wikimap can be seen in Appendix I.

The Wikimap tool collected about 30 comments on existing and suggested bus routes and stops. There were thirteen new routes suggested, modifications to twelve existing bus stops, and suggestions for six new bus stops. Some of the input and suggestions included:

New Stops Locations and/or Service

- Establishing service and stops to serve Maple Lawn, APL, and Clarksville.
- Establishing a stop to serve housing at Sandy Stream Road and Crest Road in Laurel.
- Service between Lancaster Foods (Jessup) and Langley Park Plaza (Hyattsville).
- Service between Columbia Mall and Maple Lawn.
- Service between Ellicott City and Elkrigde (Giant Store and Montgomery Woods).
- Service between Applied Physics Lab and Weis.
- Turf Valley (Ellicott City) and Village Green Shopping Center (Ellicott City).
- Atholton Elementary School (Columbia) and Honeywell Technology Solutions (Columbia).
- Gambrills to Annapolis Mall.
- Broken Land Parkway Park and Ride Lot (Columbia) to Village Center (River Hill).
- Hickory Ridge Village Center (Columbia) to Tysons Corner (Virginia).

Bus Stop Improvements

- Relocate stop on Ridge Road and Thames River Drive closer to Teague Road.
- Missing bus stop sign at Shaker Drive and Seneca Farm Road stop.
- Missing bus stop sign at Robinson Nature Park stop.
- Needs bench at Lincoln Tech stop.
- Needs better lighting at Snowden Square stop.
- Needs shelter and bench at Snowden River Parkway and Minstrel Way stop.
- Needs sidewalk toward Snowden River Parkway with lighting at Broken Land Parkway Park and Ride Lot.

SURVEY COMPARISON

There were 1,243 valid rider surveys collected and analyzed. The number of public and paratransit survey results collected was smaller, with 228 and 216 responses collected and analyzed respectively.

Table 3-6: Number of Survey Responses

Survey Type	Number of Responses
Fixed-Route Rider Survey	1,243
Paratransit Rider Survey	228
Community Survey	216

Survey Comparison

The profile of the respondents of the rider survey, paratransit survey and public survey had some differences. While most survey respondents spoke English, in general, their ethnicity, income, trip purpose, and vehicle ownership varied between the groups. In general, respondents to the rider survey identified as African American (71%) and low income. They reported being employed full-time (43%) and 47 percent reported employment as their trip purpose. The public survey respondents, in general, identified as mostly Caucasian (79%), employed full-time (57%) and 52 percent reported earning more than \$100,000. A majority of respondents from the rider and paratransit survey reported incomes as less than \$20,000. The majority of paratransit respondents (53%) reported being retired and riding transit to reach medical appointments. Both the rider and paratransit respondents reported a low rate of car ownership, while only 11 percent of respondents from the public survey reported not owning a vehicle.

Table 3-7 outlines selected results from the three surveys for comparison. There were multiple answers for each of the questions listed in Table 3-7. The answers selected for inclusion in the table were the highest ranking answers for each question.

Table 3-7: Transit Rider Compared to Non-Rider

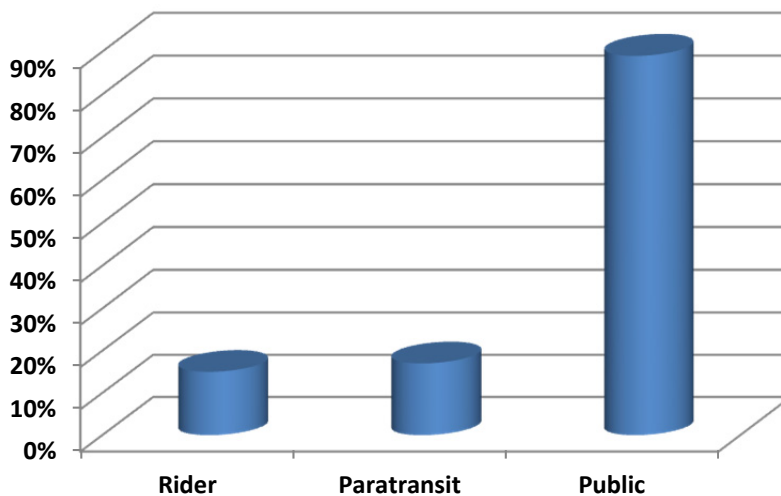
Category	Rider	Paratransit	Public
Language	96% English	98% English	95% English
Trip Purpose	47% Work 9% Medical	39% Medical 9% Work	N/A
Auto Ownership	85% No	83% No	11% No

Age	42%: 25 – 49 years old	56%: 65 years or older	41%: 25 – 49 years old
Employment	43% Employed fulltime	53% Retired	57% Employed fulltime
Income	44% < than \$20k	61% < than \$20k	52% > than \$100k 18% < than \$20k
Ethnicity	71% African American	52% Caucasian	79% Caucasian

Over 95 percent of respondents for all three surveys reported speaking English as their first language. The fixed-route riders reported their main trip purpose, at 47 percent, to be for work, while paratransit riders reported using the transportation service for primarily reaching medical services at 39 percent. Riders of paratransit services reported that only 9 percent of their trips were for work. The public survey did not ask respondents to report their trip purpose; only 8 percent of the public survey respondents reported using public transit as their primary mode of transportation.

Eighty-four percent of the public survey respondents reported that a private vehicle was used as their primary method of transportation. The rider survey found that 85 percent of respondents using RTA fixed-route services did *not* have a private vehicle, and 83 percent of paratransit riders did *not* have a private vehicle. For this same question about car ownership, 89 percent of public survey respondents reported owning a private vehicle. Figure 3-54 illustrates this graphically.

Figure 3-54: Auto Ownership

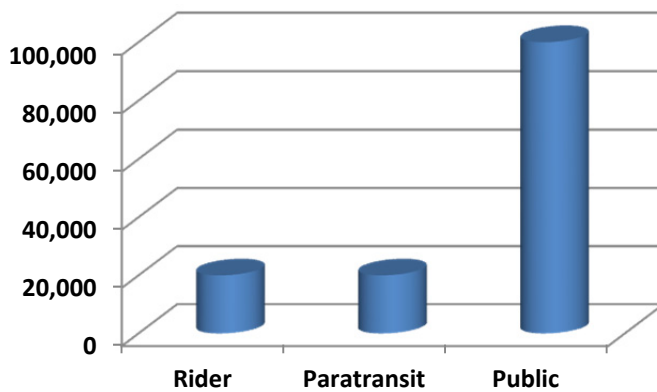


A majority of fixed-route rider and general public respondents reported being between the ages of 25 to 49 years old, as did 42 percent of rider survey respondents and 41 percent of public survey respondents. Paratransit riders were much older as a group, with 56 percent reporting being age 65 or older.

This corresponded with the respondent’s reported employment status as well. Paratransit riders reported that 53 percent were retired while fixed-route riders (43%) and public (57%) respondents reported being employed fulltime.

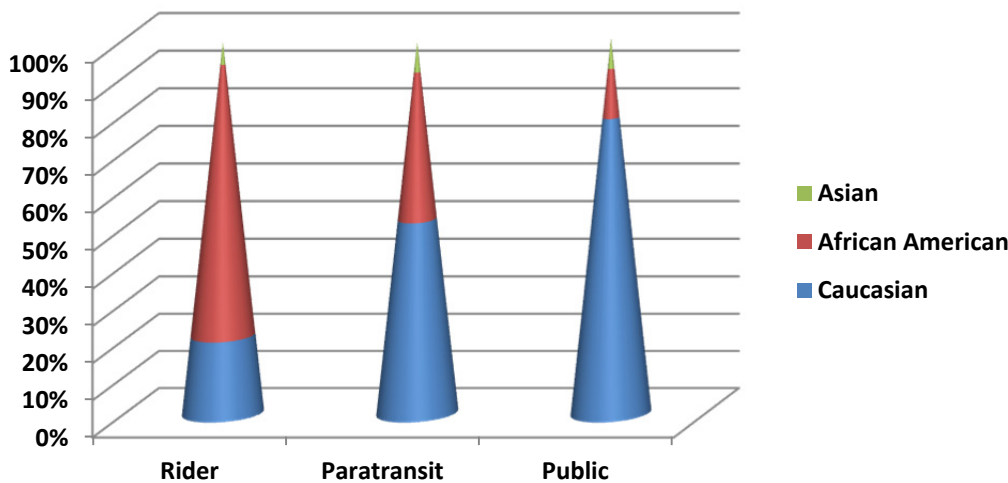
Despite being employed fulltime, 44 percent of respondents from the rider survey reported their income was less than \$20,000. Paratransit riders reported an income of less than \$20,000. Fifty-two percent of respondents from the public survey reported incomes above \$100,000 and only 18 percent reported an income of less than \$20,000. Figure 3-55 represents the reported incomes of the rider, paratransit, and public survey respondents.

Figure 3-55: Annual Household Income



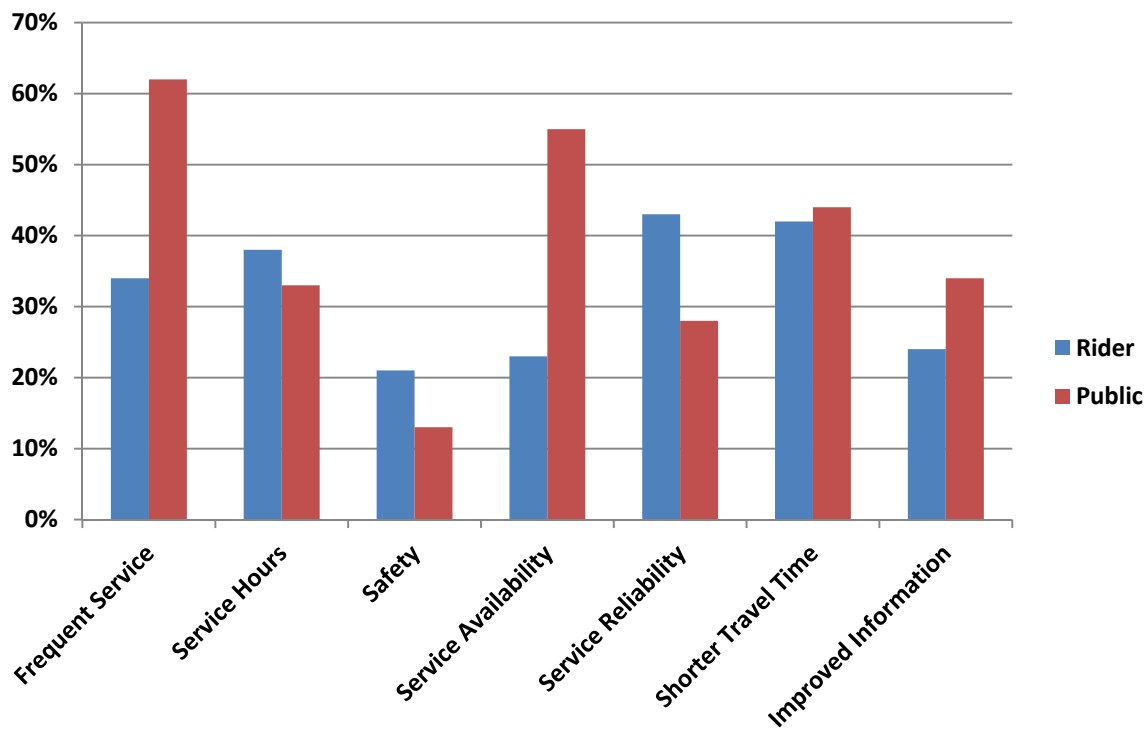
When asked about ethnicity, 71 percent of rider survey respondents reported being African American. The paratransit (52%) and public (79%) survey respondents reported their ethnicity as Caucasian. Figure 3-56 represents the top three ethnicities reported by the respondents of the three surveys.

Figure 3-56: Top Three Ethnicities of Survey Respondents



While the public survey did not have specific questions about respondent satisfaction with RTA services, it did ask about suggested transit improvements. Table 3-57 provides a comparison of the overlapping elements that fixed-route riders were dissatisfied or very dissatisfied with and improvements that the public selected as needing. The general public indicated that frequency of service and service availability was high a priority while for the riders it was service reliability and shorter travel time. Other measures, such as reducing travel time and improving service hours, were fairly similar between the two groups.

Figure 3-57: Rider versus General Public Priorities



Most survey results were in agreement about increasing and improving services. There were subtle differences between the fixed-route riders and the general public.

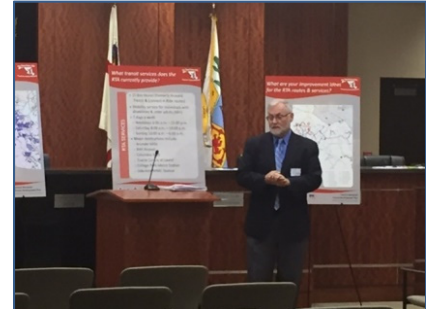
In general, the public survey respondents focused more on metropolitan connections and wanted more rail services while riders reported more concerns with the reliability of services and the condition of buses.

PUBLIC MEETINGS AND STAKEHOLDER INPUT

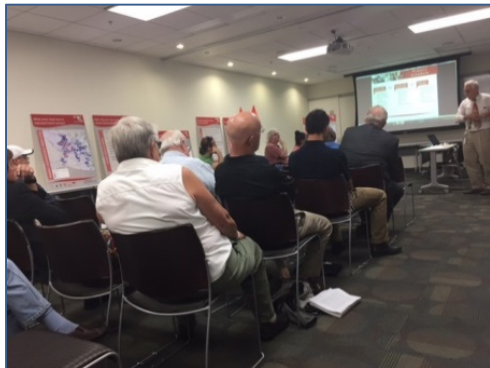
During the months of October, November and December 2016, KFH staff and project partners gathered input from the public and key stakeholders for the Central Maryland Transit Development Plan. The study team used surveys, public meetings and stakeholder

interviews to gather public and stakeholder input. Public, bus rider, paratransit rider and employer surveys were available on the project website, at public meetings and public gathering spaces like community centers and libraries, and handed out to customers on the RTA buses.

The open-ended comments from all three surveys focused on improved scheduling and increasing services. Current RTA riders were focused on reliability and timeliness of services currently offered. Both the RTA fixed-route and paratransit riders wanted increased weekend and evening services and expanded service areas. The public survey respondents focused on expanding services and in addition, making connections to metropolitan areas like Baltimore and Washington, D.C.



Five public meetings, three in Howard County and one in both Anne Arundel and Northern Prince George’s Counties, were conducted to gather input from the public. In addition to the public meetings, stakeholders in all three counties were contacted and interviewed in person and over the phone. All comments were combined onto one spreadsheet, shared by all project partners. Results of the public and stakeholder meetings are summarized below.



The data collected through public and stakeholder meetings are categorized into fourteen categories, as listed below:

- New services
- Existing routes
- New stops
- Existing stops
- Vehicle/fleet issues
- Operations issues
- Passenger amenities and facility improvements
- Safety and security issues
- Fares
- Marketing, information and education
- Coordination and connections
- Non-transit modes
- Policy and funding issues

Each category is summarized in this section. The majority of comments fell under new and existing services and many were about specific routes. Specific route requests and feedback were shared with the RTA staff as they were collected.

New Services

The majority of public and stakeholder comments were about additional locations (30 comments) to be served and the second most popular was scheduling adjustments or additional service hours and service frequency increases (15 comments). Baltimore and Washington, D.C. were the most requested connections (7 comments), in addition to rail connections to MARC. Maple Lawn and Howard County Public Schools were the next highest requested locations at three comments each. BWI, Arundel Mills Mall and Ellicott City were mentioned twice and Piney Orchard and Howard Community College were mentioned once each as areas that needed additional bus service.

Central Maryland Regional Transit staff reported that the most frequently requested places requested through their TRIP call line, that people cannot access via public transit, are:

- Fulton
- Maple Lawn
- Burtonsville
- Fort Meade
- Severn/Glen Burnie
- Woodland Job Corps Center (Laurel)

As far as scheduling requests, increasing frequency and weekend and evening services were tied with seven comments each. More service hours, better alignment and connections and faster routes were also mentioned as requested improvements. With long headways and poor timing, some transfers can take a long time and cause trips to take much longer than by other transportation modes. Some stakeholders suggested express routes for commuters.

Transportation to employment had eight mentions, with John Hopkins Hospital and Fort Meade mentioned the most. BWI and the Route 1 corridor in Jessup were also mentioned. Anne Arundel County's executive leadership indicated that transportation to employment for their low income residents was a priority for public transportation in their region. Specialized transportation for older adults was mentioned four times by stakeholders.

The full listing of input regarding new services is provided in Appendix J.

Existing Services

While there were specific comments about route improvements, mostly from operators, the majority of comments from the public and stakeholders were about scheduling issues (11 comments), inefficient routes (7 comments) and extending service hours (7 comments) or frequency. Top among the scheduling issues mentioned was the timeliness of buses. Working on a pulse system depends on making connections and people commented that they missed connections due to late buses. The long headways were also mentioned, with one hour headways, if you missed your connection, you would be waiting an additional hour for the next bus.

The need to transfer, untimely service, and traffic can make a trip via bus much longer than driving. Some comments about inefficient routes suggested eliminating unused stops. Stakeholder feedback indicated that some routes and schedules are confusing, an example cited was the Red line stopping at some stops sometimes but not always.

People also wanted extended service hours, for shift work, nights and weekends and more services for older adults, students and people with disabilities. There were requests for more bus service in Anne Arundel County, including extending service to Pasadena and South County for people who cannot drive, like students, older adults, and people with disabilities.

The full listing of input regarding existing services is provided in Appendix K.

Transit Stops

New Stops

New stops were requested at the following locations.

- Board of Education Headquarters, and high schools in Howard County
- Homewood School (and safer pedestrian conditions)
- Northbound stop at Troy Hill
- On Guilford between National Business Park and Dorsey Run Road
- Move bus stop closer to Salvation Army of Howard County, on Pine Orchard Lane off Route 40 in Ellicott City
- Howard County Non-Profit Center, 9770 Patuxent Woods Drive
- North End, National Business Parkway (Hanover), move closer to the offices
- The new large apartment complex in the southeast quadrant of the National Business Parkway
- Downtown Ellicott City
- Blandair Park

- Goodwill Industries, 10164 Baltimore National Pike (Route 40, Ellicott City)

Stakeholders and the public mentioned the pedestrian conditions and visibility of stops. They suggested considering accessibility and safety when building new stops. Some conditions to consider include: safe accessible pathways and street crossings, wheelchair landing pads, ramps so wheelchairs do not have to wait in the street, and clear sight lines so drivers can see passengers waiting for the bus. People also asked for lighting at stops so the drivers can see them in the dark.

Existing Stops

Like new stops, there was concern over accessibility and safety for existing stops as well. Stakeholders and the public requested adding benches, shelters, lighting, accessible pathways and safe street crossings to existing stops. They also mentioned that sightlines should be clear for street crossings and people waiting at the stop. Snow removal was mentioned, stops and pathways should be cleared from snow so people can access them.

The majority of comments about passenger amenities and facility improvements focused on improving pathways and bus stops. There were several comments about trash and cigarette smoke at bus stops. Stakeholders and the public also mentioned that some pathways and street crossings to bus stops were not safe. People requested more bus-stop amenities, like benches, better informational signs and shelters.

In Laurel, the city has installed some shelters but they do not have RTA branding on them. There were comments to address confusing situations, like a shelter in front of the DSS building that the bus does not stop at. There were comments about stops on one side of a street but not the other that confused people. The seniors at Parkview in Ellicott City need more time to get to the bus stop and another stop at the other building would help.

Vehicle Fleet Needs

Stakeholders and the public commented that the RTA needs new buses and that this would help with service reliability. They mentioned they would like the new electric bus to be used on the Green route that serves the downtown area in Columbia. A stakeholder in Anne Arundel County mentioned that the Department of Aging and Disability Services vans were clean and well maintained.

Operations

Many of the operational issues mentioned by stakeholders and the public concerned timing, for example: connections were off, the route took too long, headways were too long, ADA paratransit late notification system does not work, connections to other transit systems need to be improved and hours that transit is available need to be expanded. One

stakeholder suggested that installing real-time trackers on buses would help riders know when the bus is coming. Other suggestions included:

- Simplifying the route structure and timing
- More flexible first and last mile connections to transit
- Dedicated transit lanes
- Aligning the stop names on the schedules with Google maps
- More consistent headways
- Better notifications to passengers about late and/or canceled service
- More frequent service and extending the service hours

Safety and Security

Safety and security focused on pathways, street crossings and bus stops. People were concerned about the proximity of fast moving cars combined with poor sight lines to street crossings and people waiting at bus stops. The Director of Planning and Community Affairs at the Columbia Association suggested installing additional countdown walk signals at and near bus stops to improve safety.

Fares

The Central Maryland Regional Transit's staff reported that people often call their TRIP line complaining and confused about the complex fare structure. Drivers reported that the transfer system is open to fraud and difficult to enforce. People requested that they be able to pay with their smart phone, transfer to other systems, and have more locations to purchase transit passes.

Marketing, Information and Education

As comments in other categories alluded to, several aspects of the public transportation system in Central Maryland are complex and difficult for the public to understand. For example, fare structures vary depending on the system and location, some route schedules vary depending on the time of the day, and there are several different transit systems that users may want to make connections between. Stakeholders and the public indicated that trip planning and public education about all the systems in one place would be helpful. Anne Arundel County mentioned the need for a mobility manager to help people navigate different systems. Another stakeholder mentioned the need for travel training and programmatic supports, especially for older populations in both Howard and Anne Arundel Counties.

Coordination and Connections

The stakeholder and public comments around coordination and connections included connecting to other transit systems, coordinating with public services, and coordinating with employers. People wanted to see a more seamless transit system for Central Maryland

and beyond, with better connections between the Washington, D.C. and Baltimore systems. They also wanted to coordinate with the planning process for these larger systems to look into sharing resources.

Connecting to Baltimore and Washington, D.C. was brought up during both the public meetings and stakeholder interviews. Stakeholders and the public were concerned about attracting and keeping younger residents in Central Maryland. They noted that millennials want fast easy transit and are moving to Washington, D.C. to get it. Employers expressed concern about attracting and retaining younger employees who expect urban amenities and better transit. Easy public transit from Central Maryland to Washington, D.C. and Baltimore would allow residents and employees in Central Maryland to access attractive urban amenities and still work or live in Central Maryland.

Non-Transit Modes

Stakeholders and the public urged the Central Maryland Transit Development Plan team to consider new modes of transportation and partnerships. An example would be making last mile connections using Transportation Network Companies or taxis. They also suggested creating shuttles and routes based on senior's needs, using smaller vehicles and purchasing wheelchair accessible taxis.

Policy and Funding

Stakeholders and the public observed that the counties in Central Maryland do not have the same density, pedestrian and transit infrastructure as do cities. With the counties making efforts to include affordable housing, some people moving to more suburban areas rely on public transportation, so they need more urban infrastructures, like pedestrian infrastructure and transit. The aging population was mentioned throughout the public and stakeholder input process, its populations that cannot drive, but still want to be able to live in Central Maryland. They need transportation support from the counties. One stakeholder provided the following policy advice:

"The most important thing that could be done to improve transit services would be to use outcome based decision making when it comes to transportation plans and budgets. Measure for what you want to achieve."

Chapter 4

Existing Services

OVERVIEW OF EXISTING TRANSIT SERVICES

This TDP is intended to address future transit services over a five-year period in Howard County and Anne Arundel County, and this chapter provides an overview of existing transit services in the region. Howard and Anne Arundel Counties are jointly served by the Regional Transit Agency of Central Maryland (RTA), which provides fixed-route service in both counties, ADA complementary paratransit, and demand-response service for seniors and persons with disabilities in Howard County. The RTA also provides fixed-route service in Prince George's County, which is addressed in this plan as it is an integral part of RTA service offerings.

The study region is also served by other transit providers. Central Maryland is located between the Washington, D.C. and Baltimore metropolitan areas, and there are transit routes from each urban area linking them with the RTA, including Maryland Transit Administration (MTA) services from Howard and Anne Arundel Counties to Baltimore; and Washington Metropolitan Area Transit Authority (WMATA) services providing connections from Anne Arundel County (Thurgood Marshall Baltimore-Washington International Airport (BWI) and Crofton) to the Washington Metro rail system; and in the City of Laurel and Prince George's County. In addition, there are regional services provided by the MTA through its MARC commuter rail services and commuter bus program. There are also intercity connections in the region, including Amtrak.

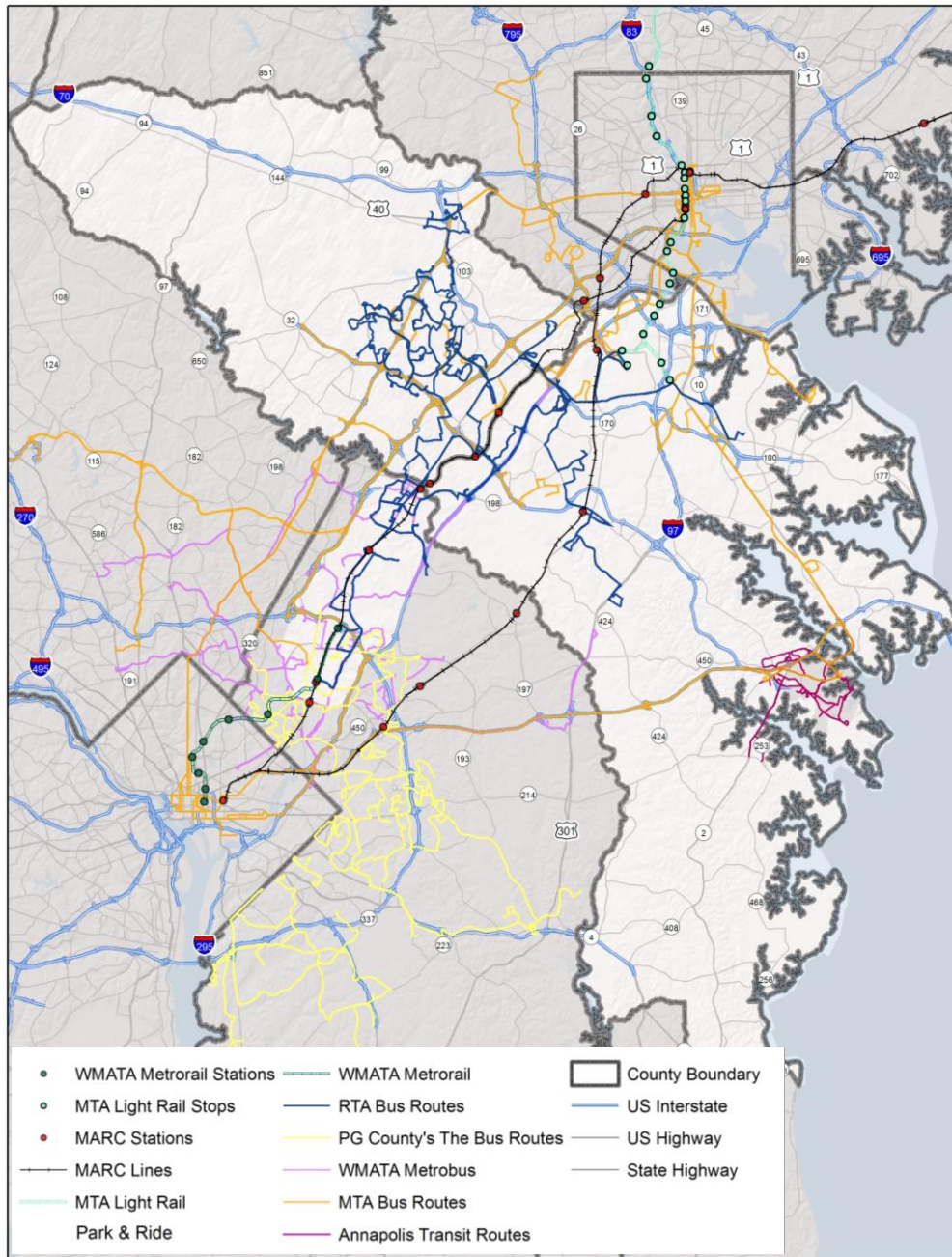
Specialized transportation services, including demand-response service for seniors and persons with disabilities are provided by the Anne Arundel County Office of Transportation (OOT), and similar services are provided by the RTA for Howard County. Other specialized transportation providers focus on the needs of particular populations. Finally, there are numerous private taxi firms, and ridesourcing or transportation network companies (TNCs) such as Uber and Lyft.

This section begins by examining the transit services provided by the RTA in Anne Arundel, Howard and Prince George's Counties, an overview of transit services in the region, and a review of transportation services, such as human service and specialized transportation.

RTA - EXISTING SERVICES

The RTA operates fixed-route and demand-response services within Anne Arundel, Howard, northern Prince George’s Counties and the City of Laurel (see Figure 4-1). The RTA service area is located in the largely suburban counties between Baltimore and Washington, D.C. in Maryland. Transit connections are located throughout the service area and to connect passengers to Baltimore and Washington, D.C.

Figure 4-1: Central Maryland RTA Service Area



Fixed-Route Service

The RTA operates fifteen fixed routes throughout its service area. The routes are divided into numbering sequences:

- 200 series routes serve Anne Arundel County; Arundel Mills Mall serves as the primary transfer location,
- 300 series routes serve the City of Laurel; Towne Centre at Laurel serves as a major transfer location,
- 400 series routes serve Howard County; Columbia Mall serves as the primary transfer location, and
- 500 series routes provide regional connections between counties.

The route identifications in this TDP (and on the RTA website) use this numbering system, and also have an identification based on the historical route designation. Before consolidation under the RTA, Howard County routes were designated with a color. Routes in Anne Arundel and Prince George's Counties, once operated by Corridor Transportation Corporation and branded as Connect-a-Ride (and later operated by Central Maryland Regional Transit), had letter designations. To help long-term users identify routes, these designations are also used, for example, 401/Green (now RTA 401, formerly Howard Transit Green) or 201/J (now RTA 201, formerly the J route).

Service Span and Frequency

Service is operated seven days a week. All routes operate on weekdays, with service spanning between 5:30 a.m. and 11:55 p.m. Peak hour headways range between 30 and 120 minutes. Off-peak headways vary between 30 and 150 minutes.

On Saturdays, fourteen of the fifteen routes operate, with service spanning from 7 a.m. to 11 p.m. Headways vary between 60 and 120 minutes. On Sundays, eight of the fifteen routes operate with service spanning from 9 a.m. to 10 p.m. Headways range between 60 and 150 minutes. Table 4-1 presents the service characteristics, which include service area, origin-destination, days of service, span of service, and headways.

Detailed route-level characteristics are described in the Route Profiles Section.

Table 4-1: Fixed-Route Service Characteristics

Route	Service Area (County)	Service Characteristics			
		Day	Span	Peak Headways	Off-Peak Headways
201/J: Arundel Mills Mall – Freetown Village	Anne Arundel County	Weekday	6:30am – 11:55pm	45 min.	90 min.
		Saturday	8:30am – 11:00pm	-	90 min.
		Sunday	10:30am – 7:20pm	-	120 min.
202/K: Arundel Mills Mall – Odenton MARC Station	Anne Arundel County	Weekday	6:15am – 11:10pm	45 min.	120 min.
		Saturday	8:45am – 11:00pm	-	120 min.
		Sunday	9:00am – 9:50pm	-	120 min.
203/M1: Odenton MARC Station – Piney Orchard (The 203 was replaced by the 504 on 10/1/17)	Anne Arundel County	Weekday	7:50am – 6:50pm	30 min.	-
203/M2: Odenton MARC Station – Crofton Village (The 203 was replaced by the 504 on 10/1/17)	Anne Arundel County	Weekday	7:15am – 7:25pm	60 min.	-
301/A: Towne Centre at Laurel – South Laurel	Prince George’s County	Weekday	6:25am – 7:20pm	60 min.	60 min.
		Saturday	9:25am – 7:20pm	-	60 min.
302/G: Towne Centre at Laurel – College Metro Station	Prince George’s County	Weekday	6:00am – 9:15pm	60 min.	60 min.
		Saturday	9:00am – 7:15pm	-	60 min.
		Sunday	10:00am – 6:50pm	-	60 min.
401/Green: Columbia Mall – Clary’s Forest	Howard County	Weekday	5:40am – 11:10pm	30 min.	60 min.
		Saturday	7:40am – 10:10pm	-	60 min.
		Sunday	9:00am – 6:52pm	-	60 min.
404/Orange: Columbia Mall – Kings Contrivance Shopping Center	Howard County	Weekday	6:00am – 10:27pm	60 min.	60 min.
		Saturday	7:27am – 8:23pm	-	60 min.
		Sunday	9:00am – 6:42pm	-	60 min.
405/Yellow: Columbia Mall – North Chatham	Howard County	Weekday	6:00am – 10:11pm	60 min.	60 min.
		Saturday	7:45am – 8:11pm	-	120 min.
406/Red: Columbia Mall – Howard County Complex	Howard County	Weekday	5:35am – 11:19pm	30 min.	30 min.
		Saturday	7:37am – 10:20pm	-	60 min.
		Sunday	9:10am – 6:21pm	-	120 min.
407/Brown: Columbia Mall – Kings Contrivance Shopping Center	Howard County	Weekday	5:30am – 11:27pm	60 min.	60 min.
		Saturday	8:00am – 10:20pm	-	60 min.
		Sunday	9:05am – 6:48pm	-	120 min.
408/Gold: Columbia Mall – MD	Howard County	Weekday	5:53am – 10:17pm	60 min.	120 min.

Route	Service Area (County)	Service Characteristics			
		Day	Span	Peak Headways	Off-Peak Headways
Food Center		Saturday	7:53am – 10:17pm	-	120 min.
409/Purple: Towne Centre at Laurel – Elkridge Corners Shopping Center	Howard County	Weekday	6:00am – 9:55pm	60 min.	60 min.
		Saturday	9:00am – 9:50pm	-	120 min.
501/Silver: Columbia Mall – BWI Marshall Airport	Howard County, Anne Arundel County	Weekday	5:28am – 11:00pm	60 min.	60 min.
		Saturday	7:00am – 11:00pm		60 min.
		Sunday	9:00am – 7:00pm	-	120 min.
502/B: Towne Centre at Laurel – Arundel Mills Mall	Prince George’s County, Anne Arundel County	Weekday	6:00am – 10:50pm	60 min.	60 min.
		Saturday	9:00am – 10:25pm		120 min.
		Sunday	10:00am – 7:50pm	-	150 min.
503/E: Towne Centre at Laurel – Columbia Mall	Prince George’s County, Howard County	Weekday	5:30am – 9:15pm	60 min.	60 min.
		Saturday	8:30am – 8:15pm	-	60 min.

Source: Central Maryland RTA Route Maps & Schedules, 2017

Table 4-2 presents system wide statistics and performance information including unlinked passenger trips, services supplied (vehicle service hours), effectiveness (passenger trips per service hour), financial indicators (operating cost, farebox revenue, and farebox recovery ratio), and efficiency (operating cost per passenger trip and operating cost per hour).

It should be noted that this table was generated from several different sources because it was determined that that this combination would present the most accurate depiction of the relative performance of the routes. Although it combines FY 2016 ridership with FY 2018 costs by route, the best information available on service hours by route was available only from the revised FY 2018 RTA system cost allocation. The FY 2018 overall system cost per service hour is projected to be \$75.43. There were only very minor changes in the routes and schedules over this period, so the combination of data from different periods should have little impact on the relative performance of the different routes. The revenue estimates are based on average FY 2016 revenue per passenger boarding by jurisdiction times the number of boardings. The revenue per jurisdiction varies because of the fact that RTA still has two different fare systems, a holdover from operating two separate systems.

Finally, the local cost recovery percentage is the sum of fare revenue and local subsidy for each route. The variance across routes reflects differences in the funding sources. Howard County provides a higher percentage of local funding for routes it funds, while the routes primarily serving Prince George’s County are largely funded with state dollars so the local cost recovery percentage is basically equivalent to the percentage covered by passenger fares.

Table 4-2: System Wide Performance Statistics and Performance

Route	Unlinked Passenger Trips ⁽¹⁾	Vehicle Service Hours ⁽²⁾	Financial			Farebox Recovery Ratio	Local Recovery Ratio ⁽⁶⁾	Passengers per Service Hour ⁽⁷⁾	Cost per Trip ⁽⁸⁾
			Operating Cost ⁽³⁾	Farebox Revenue ⁽⁴⁾	Fare Revenue per Passenger ⁽⁵⁾				
201/J	77,556	8,092	\$610,380	\$105,017	\$1.35	17%	68.2%	9.58	\$7.87
202/K	93,254	9,109	\$687,092	\$126,273	\$1.35	18%	68.2%	10.24	\$7.37
203/M	8,938	3,514	\$265,061	\$12,103	\$1.35	5%	68.1%	2.54	\$29.66
301/A	34,149	4,497	\$339,209	\$46,240	\$1.35	14%	19.5%	7.59	\$9.93
302/G	114,453	9,752	\$735,593	\$154,978	\$1.35	21%	19.6%	11.74	\$6.43
401/Green	179,063	8,922	\$672,986	\$140,393	\$0.78	21%	70.2%	20.07	\$3.76
404/Orange	84,258	9,388	\$708,137	\$66,062	\$0.78	9%	70.4%	8.98	\$8.40
405/Yellow	81,230	9,558	\$720,960	\$63,688	\$0.78	9%	70.1%	8.50	\$8.88
406/Red	171,876	19,905	\$1,501,434	\$134,758	\$0.78	9%	63.7%	8.63	\$8.74
407/Brown	128,783	11,399	\$859,827	\$100,971	\$0.78	12%	70.2%	11.30	\$6.68
408/Gold	42,682	7,830	\$590,617	\$33,464	\$0.78	6%	70.4%	5.45	\$13.84
409/Purple	61,080	7,933	\$598,386	\$47,889	\$0.78	8%	53.9%	7.70	\$9.80
501/Silver	194,107	16,357	\$1,233,809	\$152,188	\$0.78	12%	70.2%	11.87	\$6.36
502/B	77,673	10,188	\$768,481	\$105,175	\$1.35	14%	19.5%	7.62	\$9.89
503/E	92,850	14,169	\$1,068,768	\$125,726	\$1.35	12%	19.5%	6.55	\$11.51
TOTAL	1,441,952	150,613	\$11,360,739	\$1,414,926	\$0.98	12%	54.8%	9.22	\$7.88

■	Successful
■	Acceptable
■	Needs Review

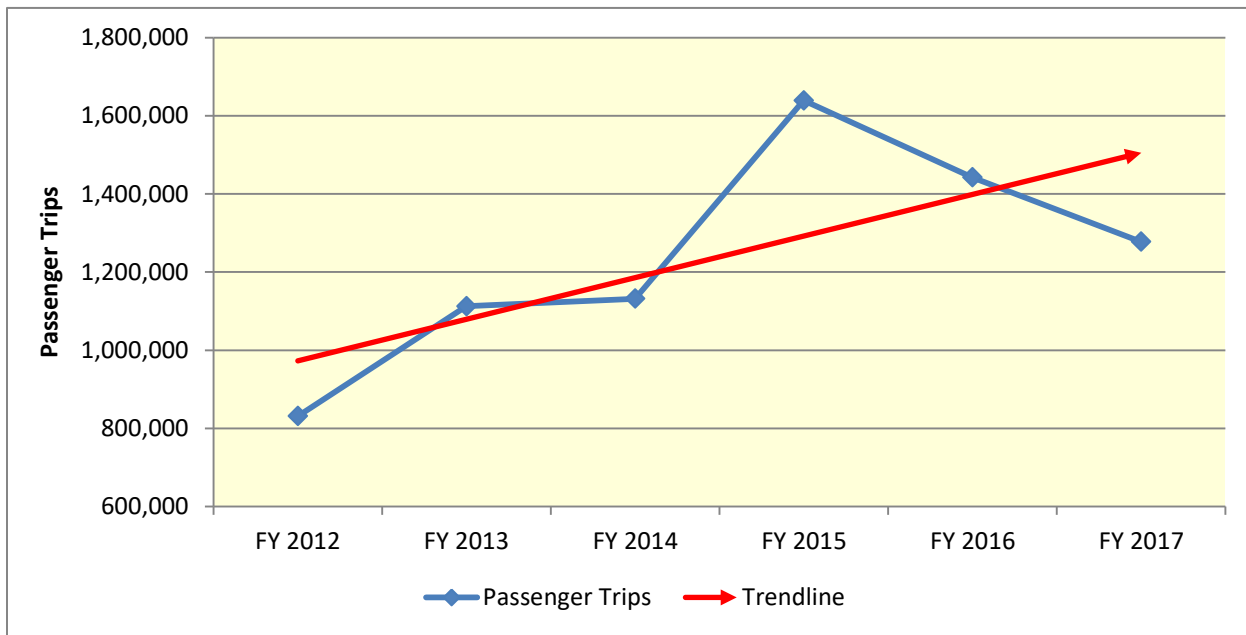
Notes:

- (1) From FY 2016 MTA Form 2A.
- (2) Vehicle Service Hours by Route from RTA FY 18 Cost Allocation.
- (3) Operating cost estimated by taking total fixed-route operating cost from FY 2018 Cost Allocation, dividing by total service hours (from the same document) to get fixed-route operating cost per service hour. Includes Management Fee.
- (4) Average revenue calculated from Form 2A data by summing revenue and ridership in two categories: the former CTC routes, and the former Howard Transit routes.
- (5) Fare revenue per passenger calculated by dividing estimated revenue per route by Form 2A ridership by route.
- (6) Local operating ratio taken from Form 2A verbatim.
- (7) Passengers per revenue hour developed by dividing ridership by route from the Form 2A by estimated revenue hours.
- (8) Cost per trip calculated by dividing estimated cost per route by Form 2A ridership.

Fixed-Route Ridership

Total system ridership has had a long-term growth trend, though it has dropped in the recent past. Figure 4-2 depicts the overall trend. The recent decline could be related to several factors — bus transit ridership both nationally and regionally has dropped over the past year or two. This is generally attributed to the impact of low gasoline prices (which attracts a shift to auto use) and the growth of TNCs such as Uber and Lyft which offer demand-responsive transportation. In the case of the RTA, ridership is also likely affected by a decline in service reliability related to the aging fleet.

Figure 4-2: RTA Total Fixed-Route Ridership, FY 2012-FY 2017



Ridership growth has generally followed an increase in the service provided, with service hours also expanding during this period. However, as can be seen in Figure 4-3, the amount of service has continued on this trend even with the recent short-term decline in ridership, which has resulted in a decrease in productivity (measured in terms of passenger trips per service hour), as shown in Figure 4-4.

Figure 4-3: RTA System Wide Fixed-Route Annual Service Hours, FY 2012-FY 2017

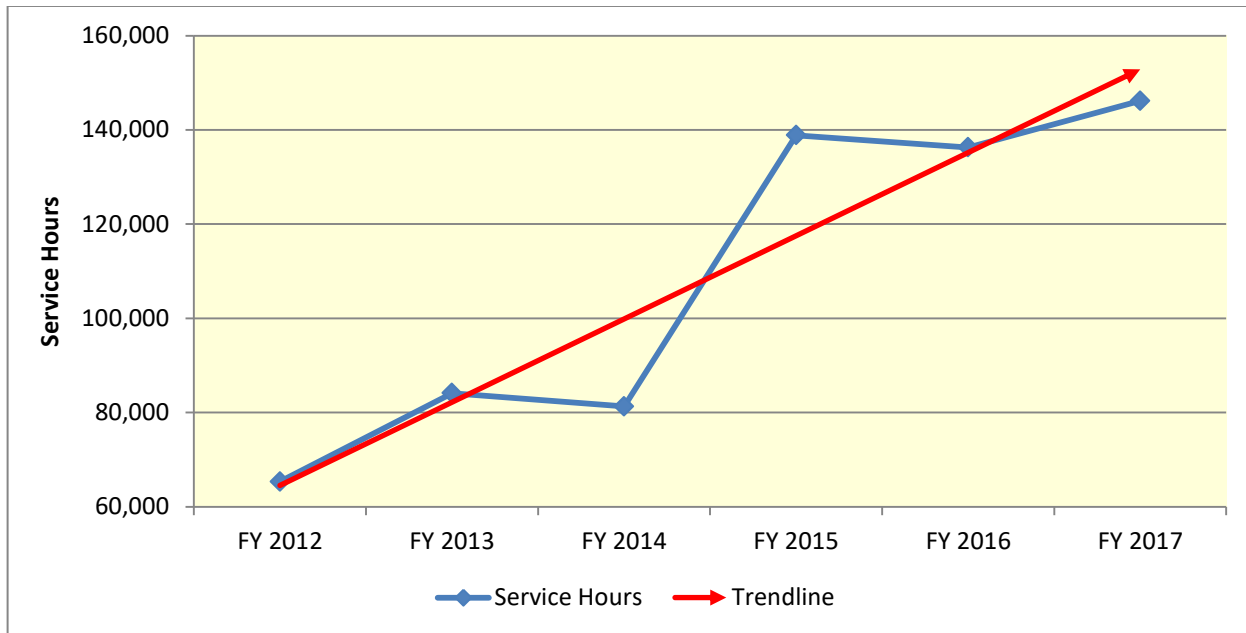


Figure 4-4: RTA System Wide Fixed-Route Trips per Service Hour, FY 2012-FY 2017

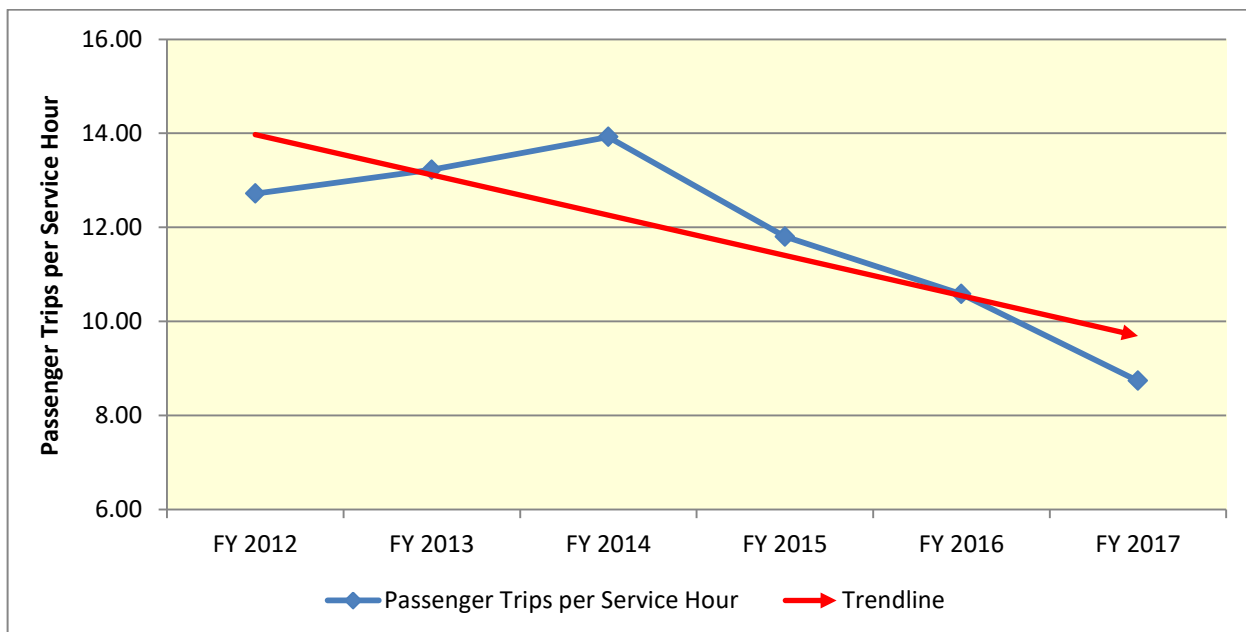


Figure 4-5 displays the fixed-route ridership ranking by route. Notable findings are:

- The 501/Silver ranks first and the 203/M ranks last in passenger boardings. It should be noted that the 203/M was discontinued effective October 1, 2017, replaced by a new route, the 504. The data used in this chapter was collected prior to the change, but it provides support for the elimination of the 203/M.
- System wide, there are an average of 96,130 boardings per route, and ten of the fifteen routes are below that average.
- The former Howard County routes account for 65% and the former Connect-a-Ride routes account for 35% of the boardings.
- After the 501/Silver regional route, three Howard County routes – 401/Green, 406/Red, and 407/Brown rank second, third, and fourth in ridership, respectively.

Figure 4-5: RTA Fixed-Route Ridership by Route

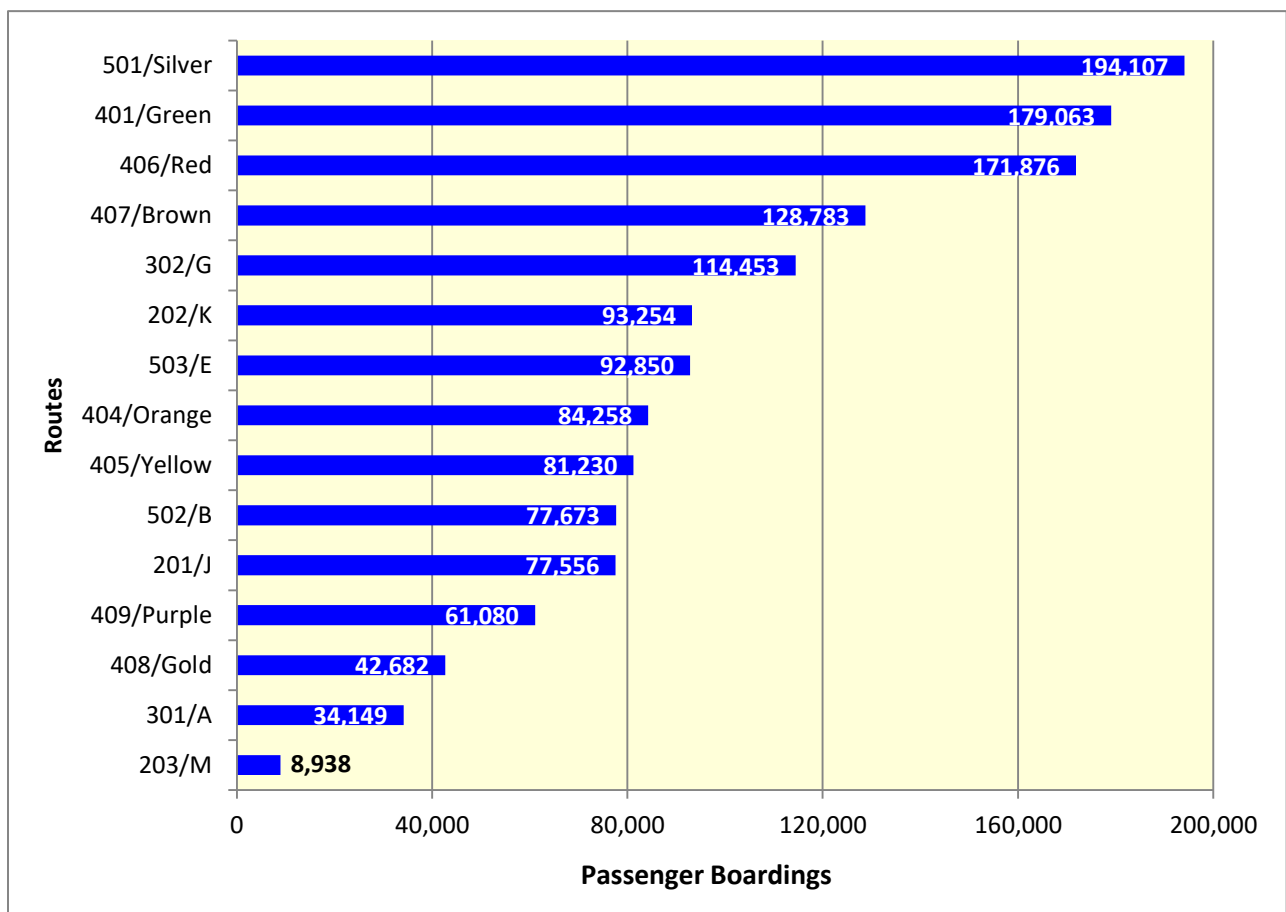
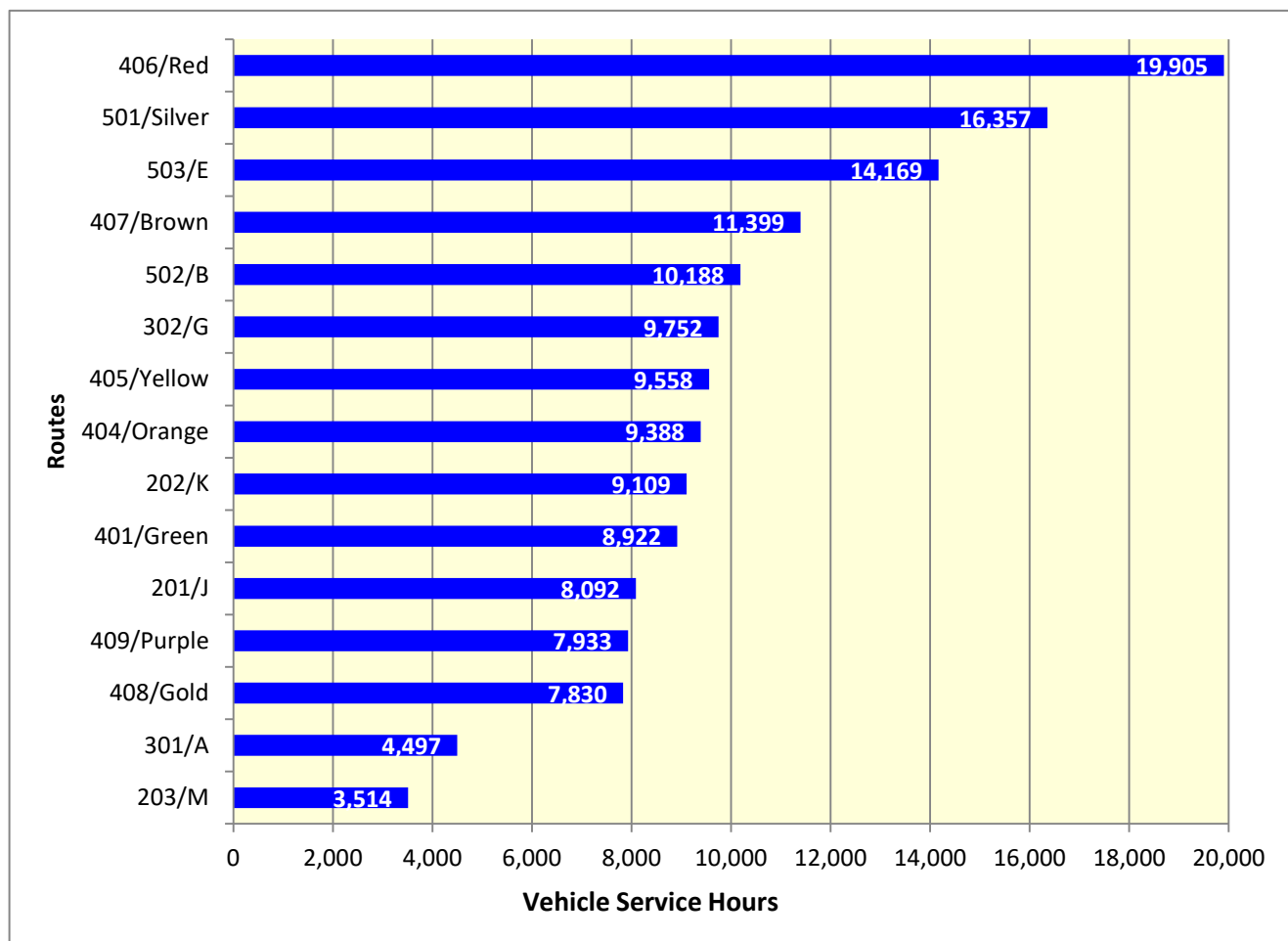


Figure 4-6 displays the vehicle service hours ranking by route. Notable findings are:

- The 406/Red provides 19,905 service hours, the most of the routes. This is 16% of the system wide hours supplied.
- The 203/M (now replaced by the 504) provided 3,514 service hours, the fewest of the routes. This was 2% of the system wide hours supplied.
- Howard County routes (400 series) account for 61% and other RTA (200, 300, and 500 series) account for 39% of the operating cost.

Figure 4-6: RTA Fixed-Route Vehicle Service Hours by Route

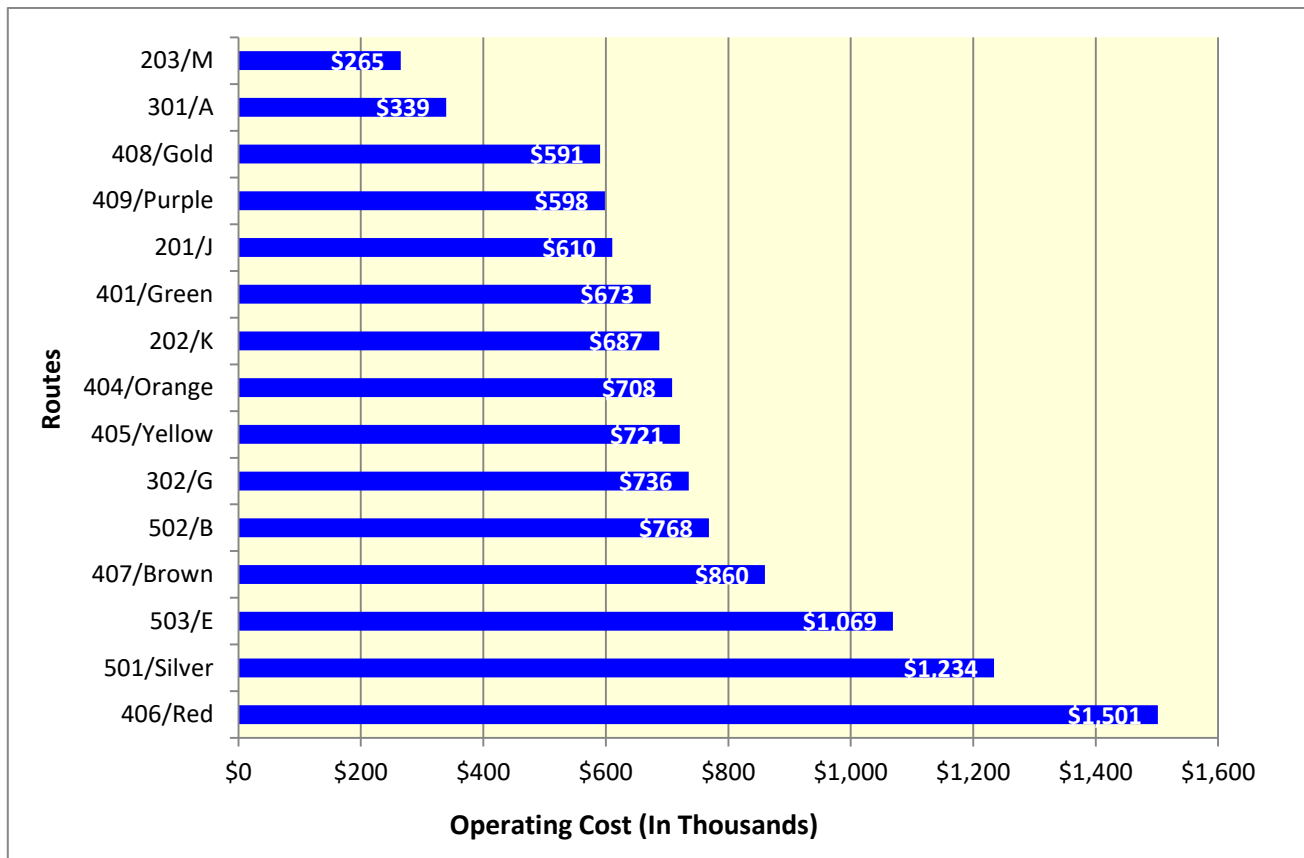


Financials

Figure 4-7 presents the operating cost ranking by route. The rankings (from lowest cost to highest) are the reverse of the number of service hours, as the average cost per service hour is applied to the services to estimate route level costs. Consequently:

- The 203/M (now replaced by the 504) was the cheapest bus route to operate, accounting for 2% of the operating cost.
- The 406/Red is the most expensive bus route to operate, accounting for 13% of the operating cost.
- Howard County routes (400 series) account for 61% and other RTA routes (200, 300, and 500 series) account for 39% of the operating cost.

Figure 4-7: RTA Fixed-Route Operating Cost by Route

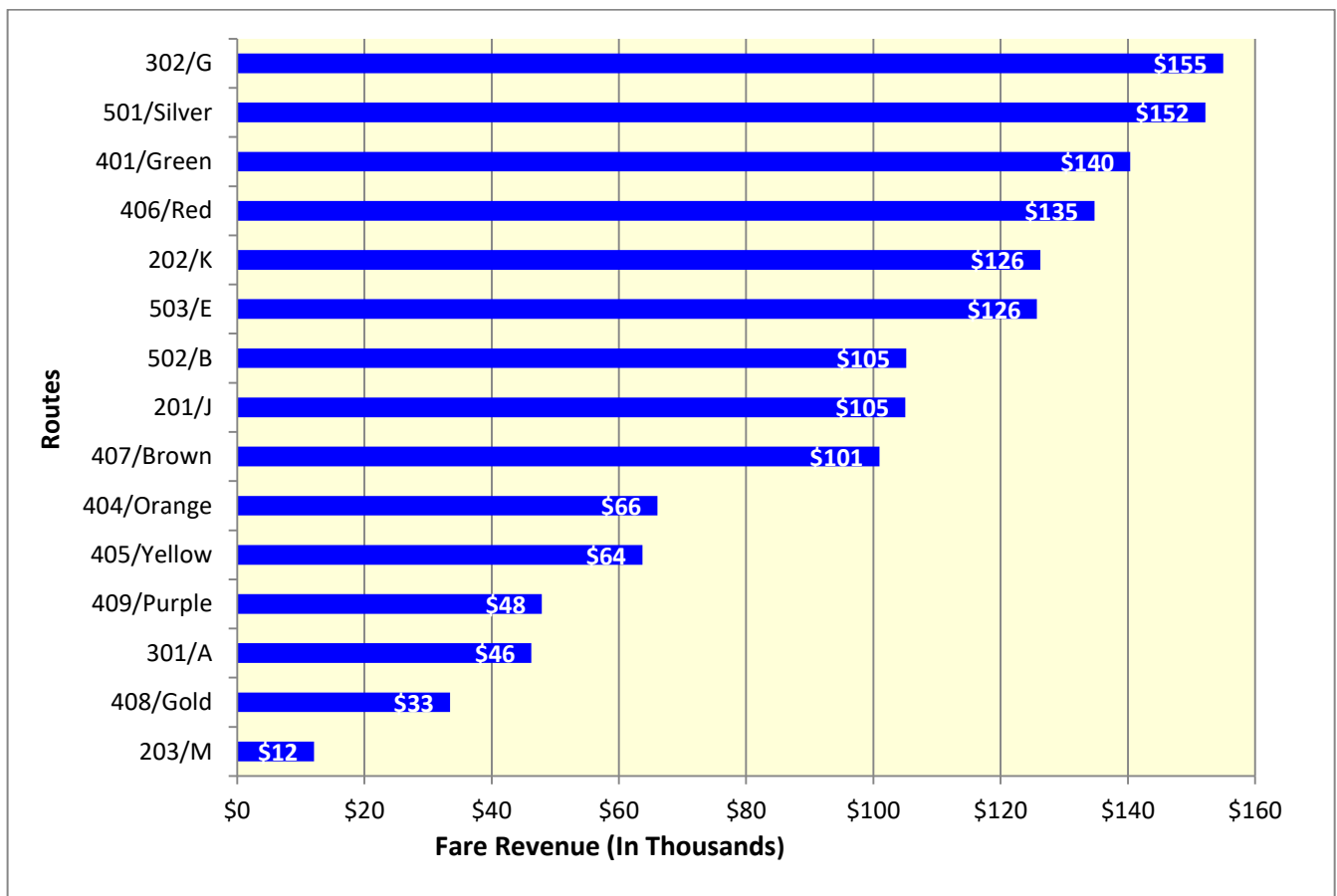


Fare Revenue

Figure 4-8 displays the fare revenue ranking by route. Notable findings are:

- The 302/G ranks 1st in fare revenue, accounting for 11% of the system wide fares.
- The 203/M (now replaced by the 504) ranked last in fare revenue, accounting for less than 1% of the system wide fares.
- Howard County routes (400 series) account for 52% of all fare revenue, and the Anne Arundel and Prince George’s routes (200, 300, and 500 series) account for 48% of the fare revenue.

Figure 4-8: RTA Fixed-Route Fare Revenue by Route

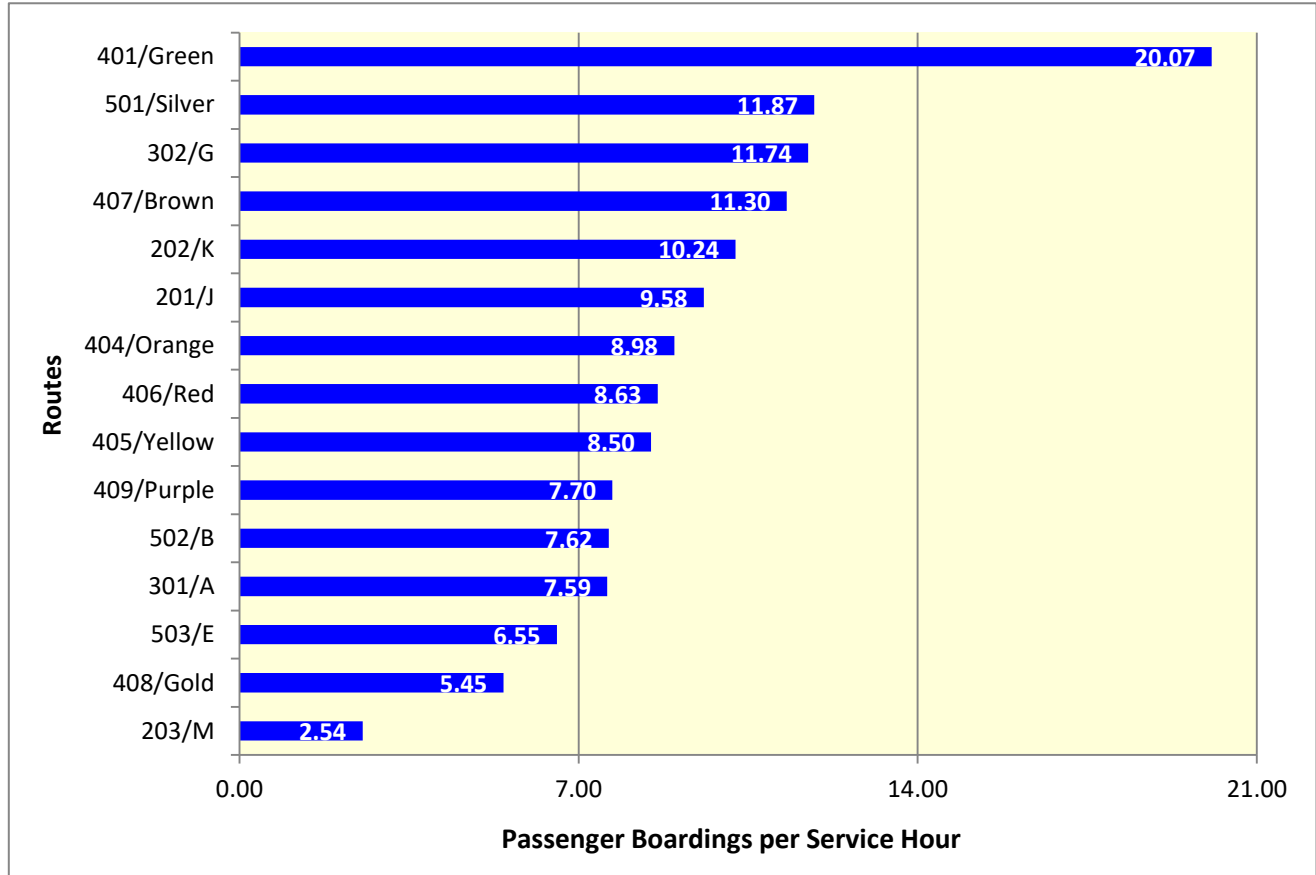


Passenger Boardings per Service Hour

Figure 4-9 displays passenger boardings per service hour, ranked by route. Notable findings are:

- The 401/Green transported 20.07 passengers per hour, the highest ranking route.
- After the 401/Green Route, passenger boardings per service hour decrease significantly. Thirteen of the other routes rank between 5.45 and 11.87 passenger boardings per service hour, nine of the routes are lower than the system average of 9.22 boardings per hour.
- The 203/M (now replaced by the 504) ranked last, with 2.54 boardings per service hour.

Figure 4-9: Passenger Boardings per Service Hour by Route

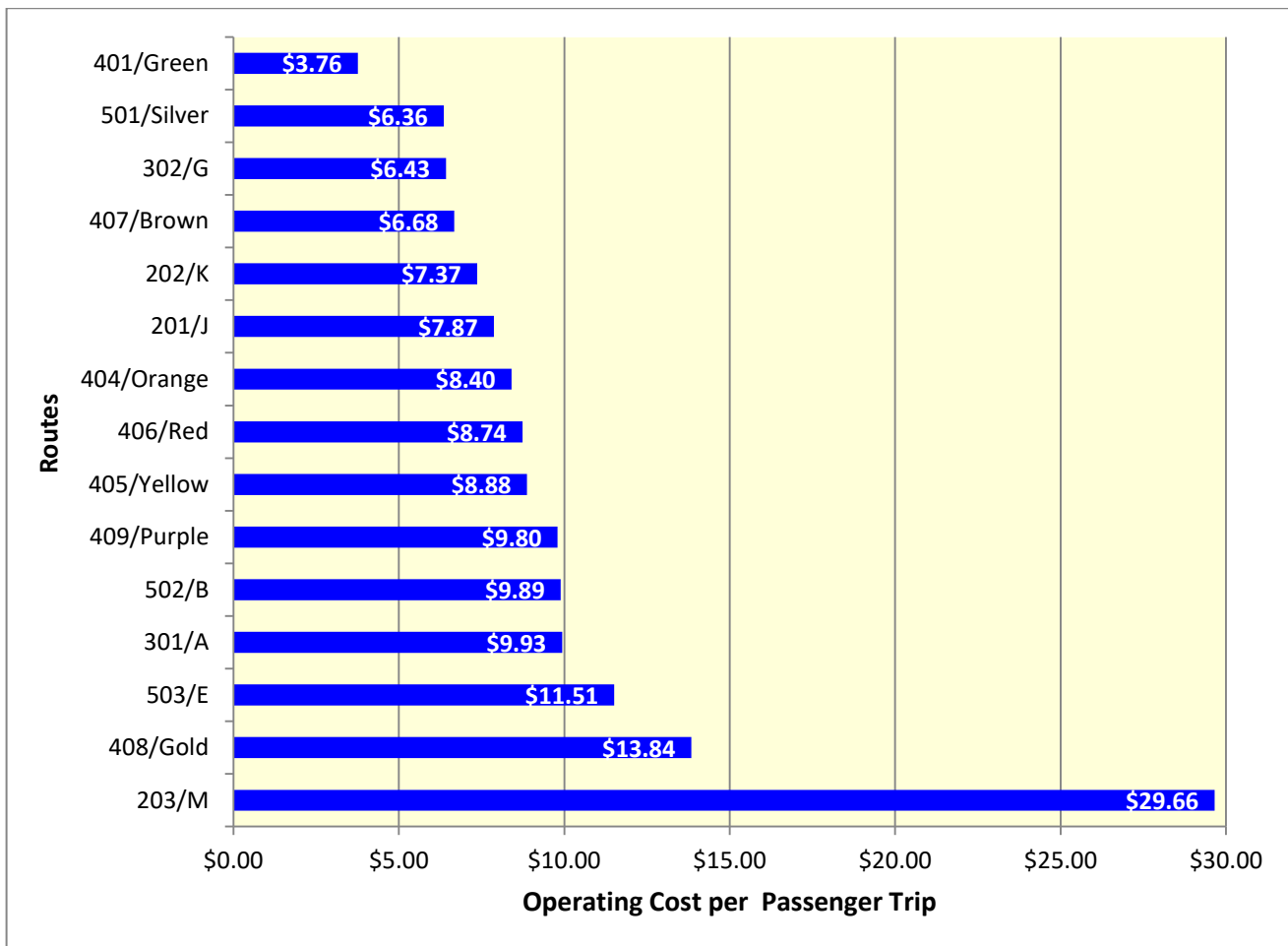


Operating Cost per Passenger Trip

Figure 4-10 displays operating cost per trip ranking by route. Notable findings are:

- The 401/Green ranks lowest in operating cost per trip.
- The 203/M (now replaced by the 504) operating cost per passenger trip ranked the highest.
- Eleven of the routes have an operating cost per passenger trip ranging between \$6.36 and \$9.93.

Figure 4-10: Operating Cost per Passenger Trip by Route

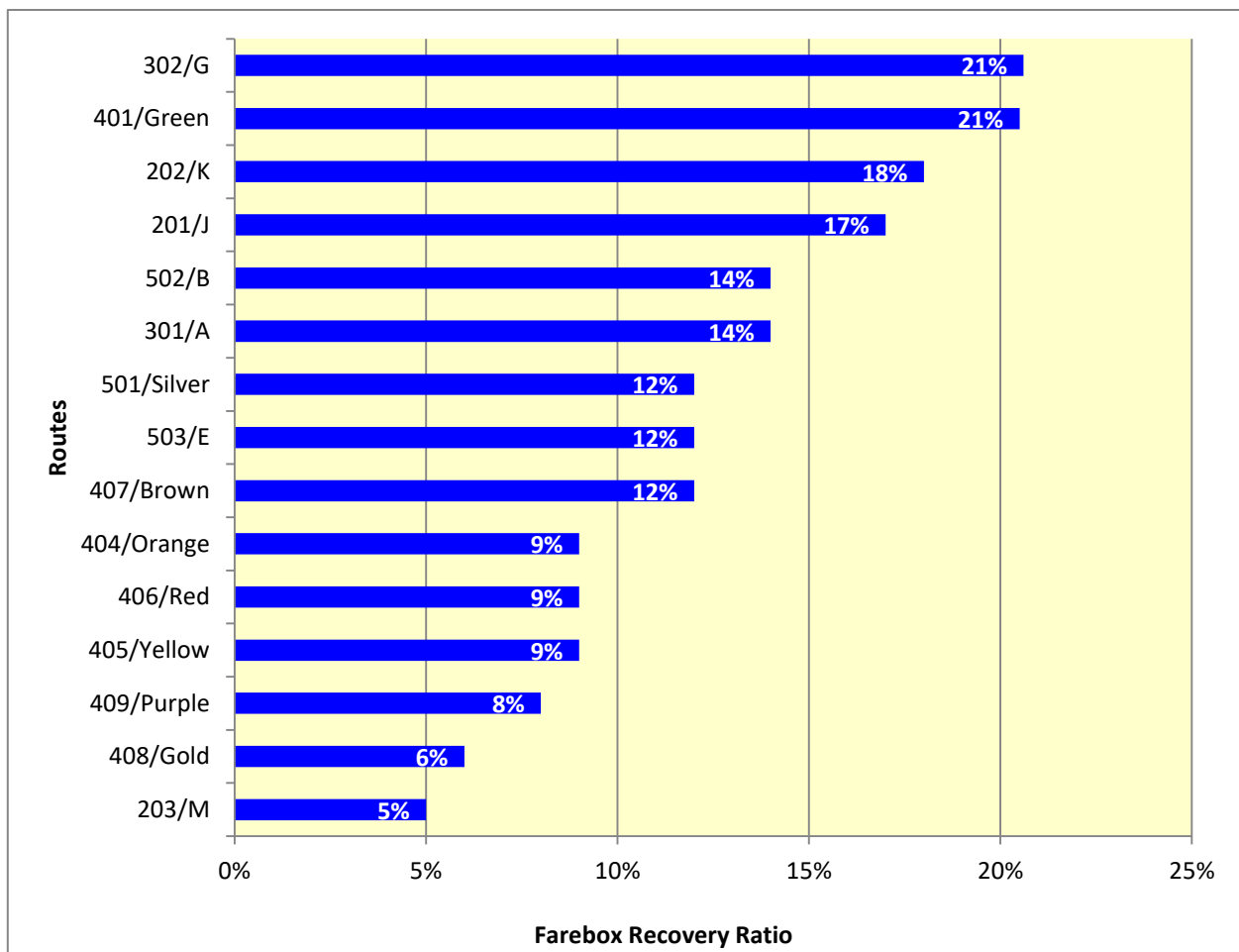


Farebox Recovery Ratio

Figure 4-11 displays the farebox recovery ratio ranking by route. Notable findings are:

- Both the 302/G and 401/Green farebox recovery ratios are 21%, the highest ranking among the routes.
- The remaining farebox recovery ratios vary from 5% to 18%.
- The system average is 12%, with six of the routes below that level.

Figure 4-11: Farebox Recovery Ratio by Route



On-Time Performance

System wide on-time performance was calculated using Howard County’s Next Bus Schedule Adherence by Route report for September 2016. Table 4-3 summarizes the results by route. Service on a route is considered early if it departs more than one minute before the scheduled time, and it is considered late if it departs more than five minutes after the scheduled time. The percentage shown is the percentage of time points with early or late departures during September 2016, and the number is the number of time points checked for that route with early or late departures during that month.

For the system as a whole, on weekdays 18 percent of bus departures were more than a minute early, and 34% of bus departures were more than five minutes late. Forty-nine percent of departures were on time (between one-minute early and five minutes late). However, there are several routes that have much worse performance—the 503/E shows 75% late departures, the 302/G is late 71% of the time (based on this data). Also, based on the same data set, 15% of all departures system wide were over ten minutes late (which could include scheduled departures that were completely missed).

Overall on-time performance on weekdays and Saturdays is similar—49% of departures were on-time. The variation among the routes was greater than by day of the week. Overall 19% of departures were more than a minute early, and 32% percent were more than five minutes late—so the less-peaked traffic on a Saturday apparently allows slightly faster running.

For comparison, 75% of Baltimore’s core bus routes are listed as on-time in MTA’s Performance Improvement web page, although MTA does not share how it defines on-time. At WMATA, the most recent “Scorecard” report states that overall Metrobus services are operating 77% on time, defined as no more than two minutes before scheduled time, and not more than seven minutes after scheduled time. WMATA’s goal is 79%. WMATA’s definition of on-time makes it easier to achieve a higher percentage attainment.

RTA does not have an adopted goal or standard for on-time performance, but its 48-49% on-time performance is in need of improvement based on user input and comparison to regional peers. This is particularly important for the RTA services, as a high percentage of users must transfer between buses due to the dispersed nature of the region’s population and destinations. The system is designed to facilitate timed transfers, but with relatively low frequencies, missing a transfer can easily double a rider’s travel time. It is likely that the poor condition of the fleet is responsible for a significant portion of the late departures, due to breakdowns in service, delays required to swap out vehicles, or missed trips resulting from not having enough buses to service all the schedules.

Table 4-3: System Wide On-Time Performance

Route	Percentage of Time Points		Number of Time Points	
	Early	Late	Early	Late
Weekday				
201/J	8%	53%	176	1128
202/K	42%	13%	505	157
203/M	32%	21%	771	501
301/A	13%	51%	19	74
302/G	14%	71%	107	544
401/Green	15%	29%	786	1537
404/Orange	11%	41%	205	752
405/Yellow A	27%	21%	592	468
405/Yellow B	18%	33%	325	604
406/Red	19%	30%	1095	1739
407/Brown	12%	39%	541	1699
408/Gold	12%	33%	175	484
409/Purple	10%	45%	258	1119
501/Silver	18%	32%	772	1394
502/B	41%	24%	219	128
503/E	14%	75%	66	348
Weekday Average	18%	34%	6612	12676
Saturday				
201/J	34%	3%	61	5
202/K	25%	38%	67	102
301/A	26%	42%	8	13
302/G	15%	72%	31	146
401/Green	25%	18%	125	88
404/Orange	16%	21%	46	60
405/Yellow A	20%	39%	25	49
405/Yellow B	23%	25%	62	68
407/Brown	13%	20%	71	107
408/Gold	16%	32%	54	107
501/Silver	3%	53%	10	164
502/B	54%	18%	49	16
503/E	14%	76%	21	116
Saturday Average	19%	32%	630	1041

Route Profiles

This section of the TDP includes a complete route profile documenting service characteristics and performance. It includes information from the on-board survey of riders on that route, including trip purpose, transfer activity, demographic characteristics, least satisfying aspects of service, and key improvements desired. Each profile presents the following:

Service Area Description

- Where does the route operate?
- What are the key trip generators the route serves?
- What are the connecting routes and transit services (WMATA and MTA)?

For each route, there is a table or figure that presents:

- Strengths and Challenges
- Service and Operating Characteristics
- Route alignment to include ridership by stop and identification of major activity centers
- Travel characteristics
- Demographic and Socioeconomic Characteristics, and
- Rider satisfaction

The route profiles conclude with identifying themes from the rider surveys.

Route 201/J: Arundel Mills – Freetown Village

Service Area Description

Route 201/J provides daily service within northern Anne Arundel County. The route originates at Arundel Mills Mall and provides connections to Routes 202/K, 501/Silver and 502/B, MTA LocalLink Route 75 and MTA Commuter Bus Route 201. From the mall, the route travels along Dorsey Road toward Cromwell Light Rail Station, connecting with MTA LocalLink 70 and light rail service. From Cromwell Station, the route travels along Baltimore-Annapolis Boulevard to Sun Valley Shopping Center, and service terminates at Freetown Village. Service to ITT Tech in Hanover has been discontinued, as the school is closed.

Table 4-4: Route 201/J Strength and Challenges

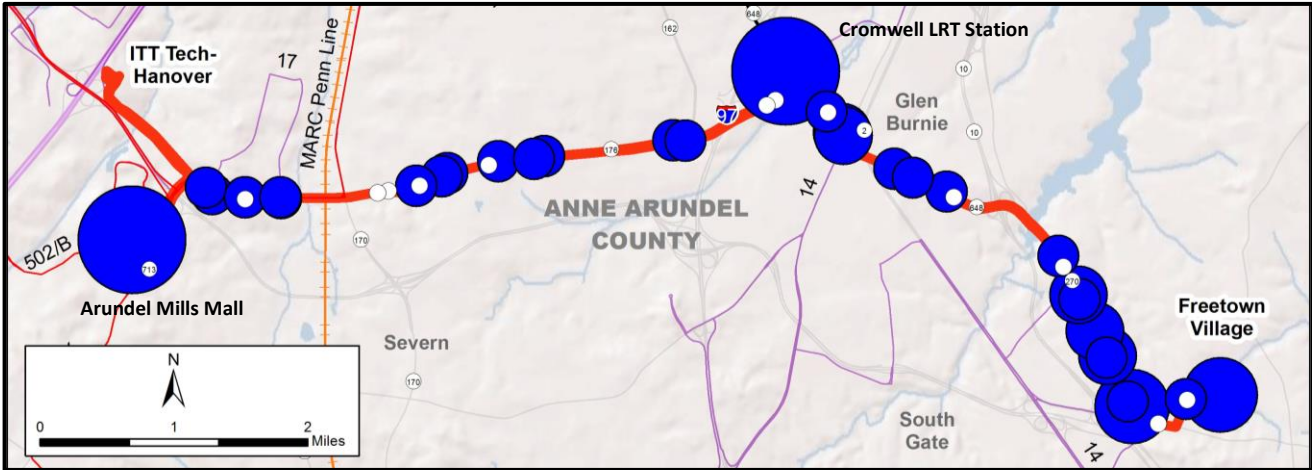
Strengths	Challenges
<ul style="list-style-type: none"> Serves Arundel Mills Mall, one of the largest activity centers and employment centers in the service area. Serves Cromwell Light Rail Station which allows passengers to connect to MTA services to Baltimore. 	<ul style="list-style-type: none"> Short layover times.

Table 4-5: Route 201/J Service Operating Characteristics

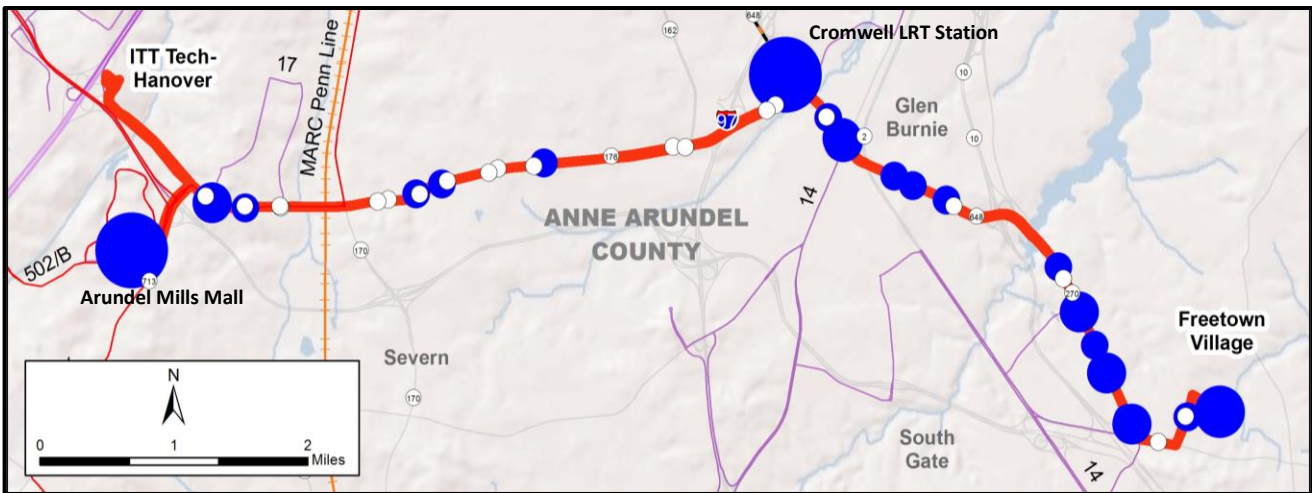
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Service Span		6:30 am – 11:55 pm	8:36 am – 10:58 pm	10:33 am – 7:20 pm
Frequency (minutes)	Peak	45	-	-
	Off-Peak	75	75	120
One-way Trips		18	9	4
Cycle Time (minutes)		80	80	80
Layover Time (minutes)		0	0	7
Daily Service Hours		24.00	12.00	5.33

Figure 4-12: Route 201/J - Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 50
- 51 & Above

Figure 4-13: Route 201/J - Travel Characteristics

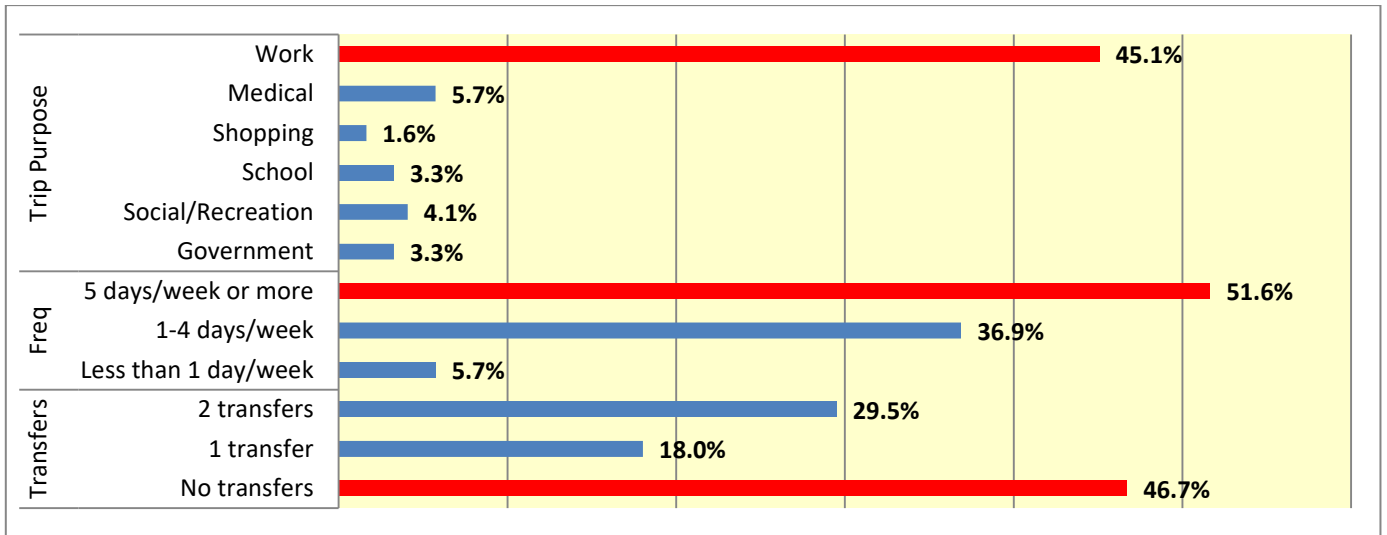


Figure 4-14: Route 201/J - Demographic and Socioeconomic Characteristics

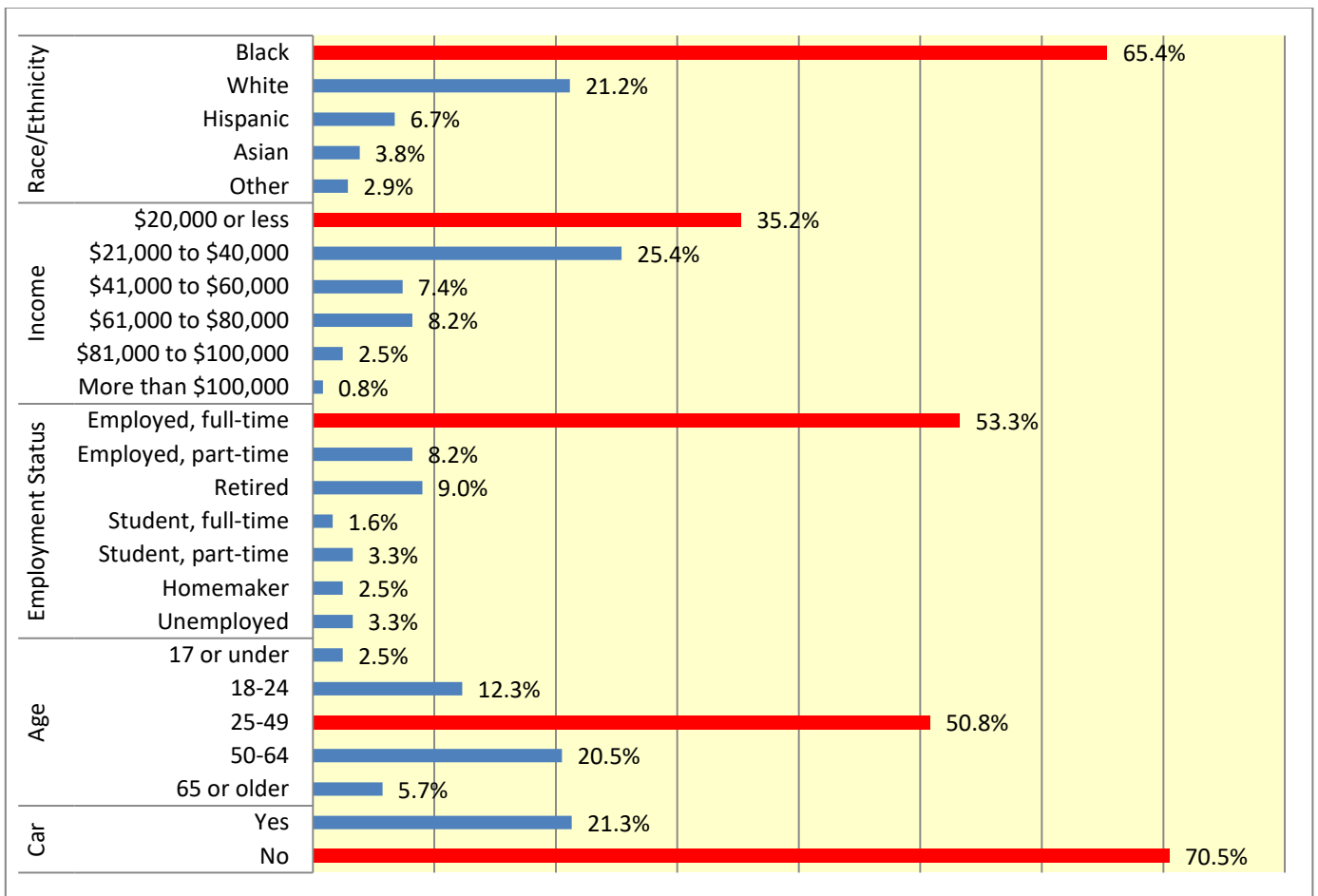
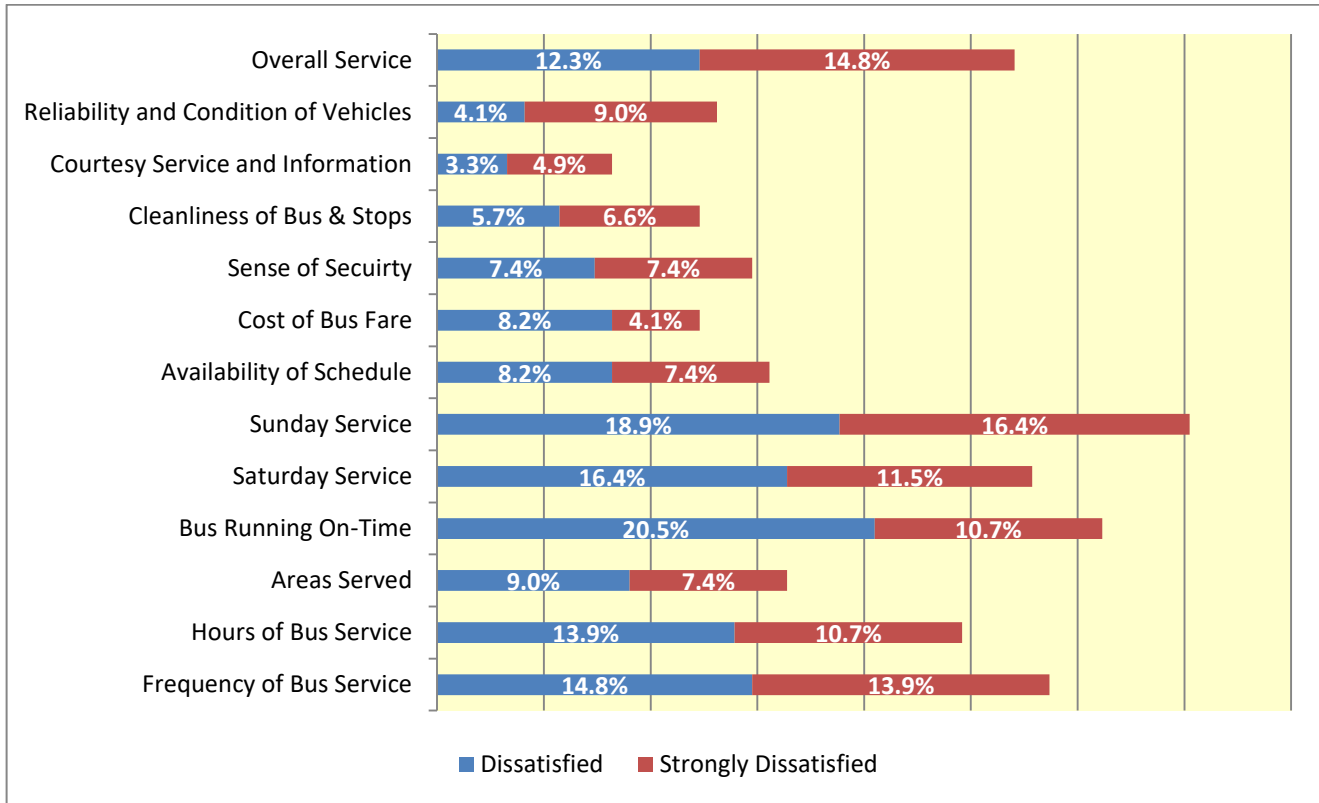
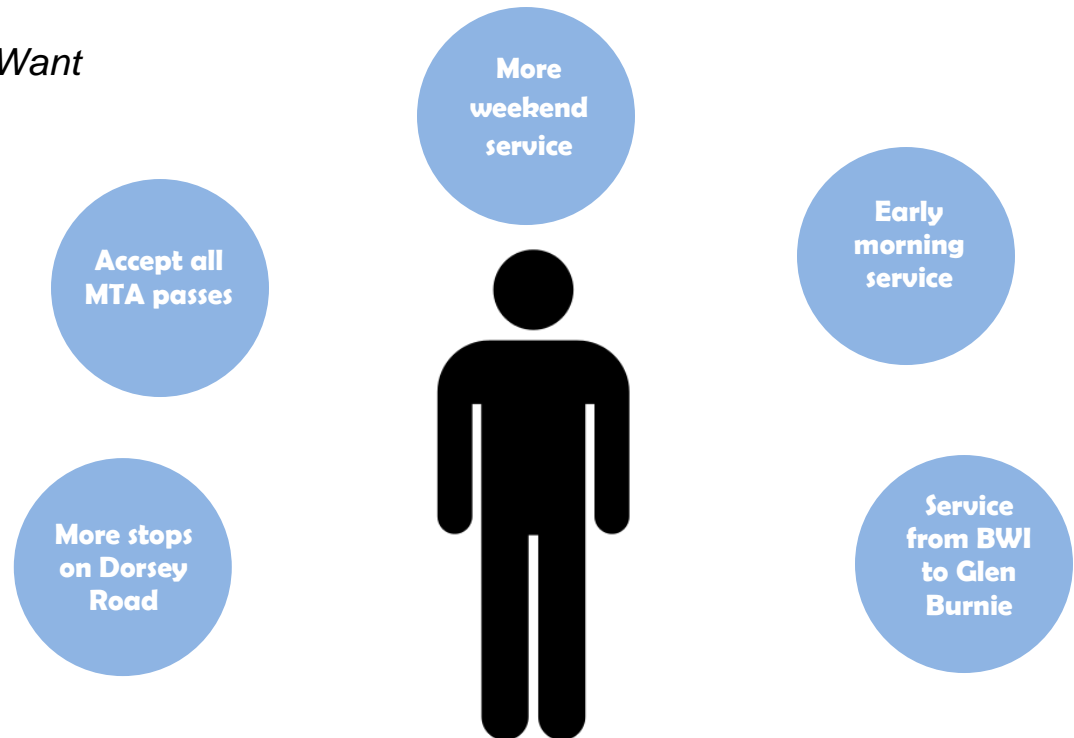


Figure 4-15: Route 201/J Rider Dissatisfaction



What Riders Want



Route 202/K: Arundel Mills – Odenton Health Campus

Service Area Description

Route 202/K originates at Arundel Mills Mall, providing connections to Routes 201/J, 501/Silver, 502/B, and 504; MTA LocalLink Route 75; and MTA Commuter Bus Route 201. From the mall, the route travels along Ridge Road, to Annapolis Road, and Reece Road and continues to Meade Village. From Meade Village, the route travels along Charter Oaks Boulevard to Seven Oaks Apartment Homes. On weekdays, from Seven Oaks Apartments, the route travels along Blue Waters Boulevard – Annapolis Road, terminating service at Odenton MARC Station.

Table 4-6: Route 202/K Strength and Challenges

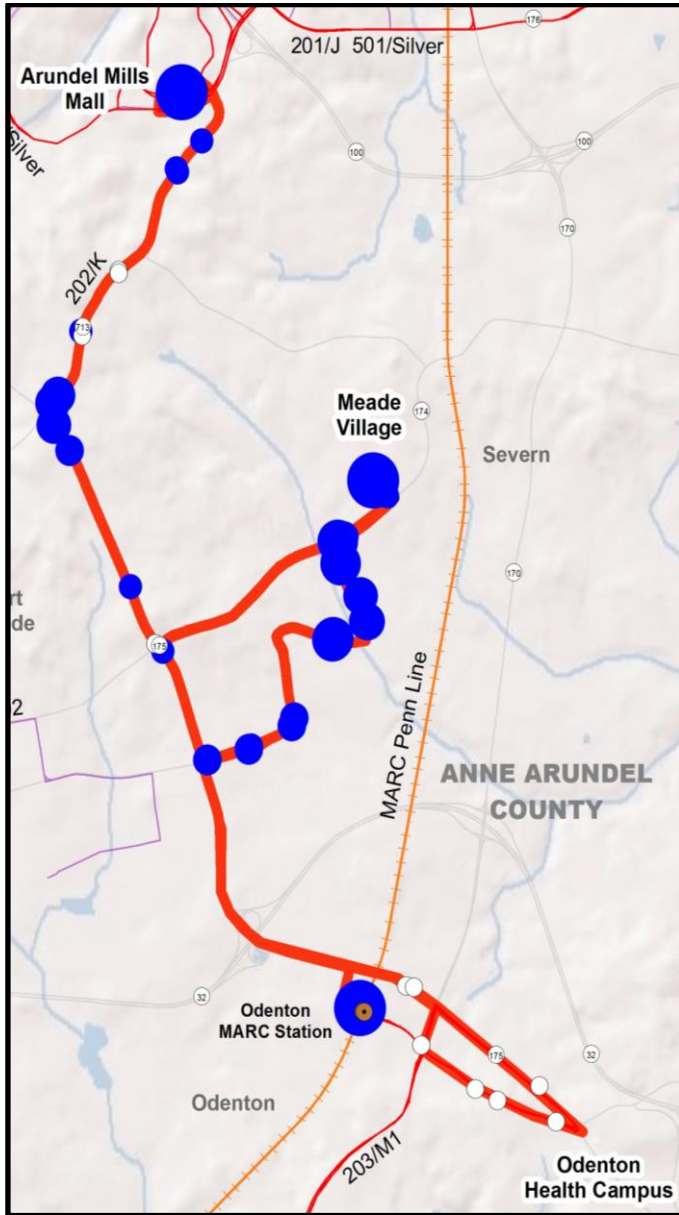
Strengths	Challenges
<ul style="list-style-type: none"> The route serves Arundel Mills Mall, one of the largest activity centers within the service area. The route serves Odenton MARC Station, providing connection to commuter rail service to downtown Baltimore and Washington, D.C. The route serves Odenton Health Campus. 	<ul style="list-style-type: none"> Undefined.

Table 4-7: Route 202/K - Service and Operating Characteristics

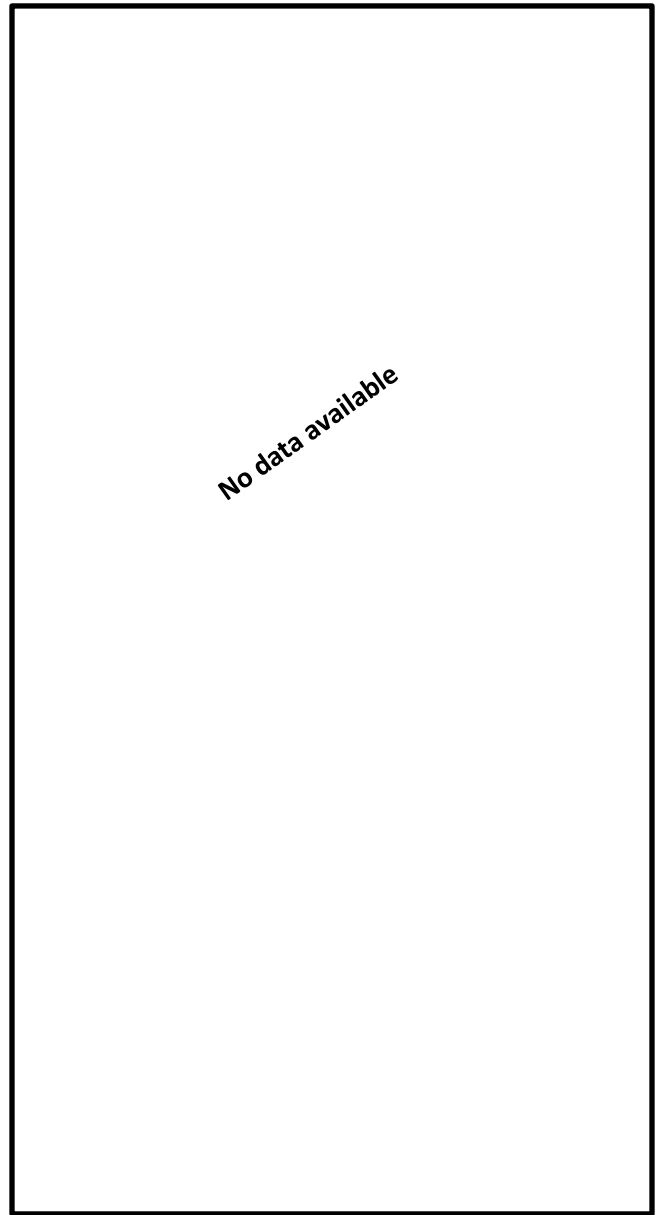
Service and Operating Characteristics	Weekdays	Saturday	Sunday
Service Span	6:15 am – 11:55 pm	8:36 am – 10:58 pm	9:00 am – 9:50pm
Frequency (minutes)	Peak	45	-
	Off-Peak	80	80
One-Way Trips	18	12	10
Cycle Time (minutes)	84	85	85
Layover Time (minutes)	6	6	6
Daily Service Hours	25.20	16.80	12.60

Figure 4-16: Route 202/K - Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 50
- 51 & Above

Figure 4-17: Route 202/K – Travel Characteristics

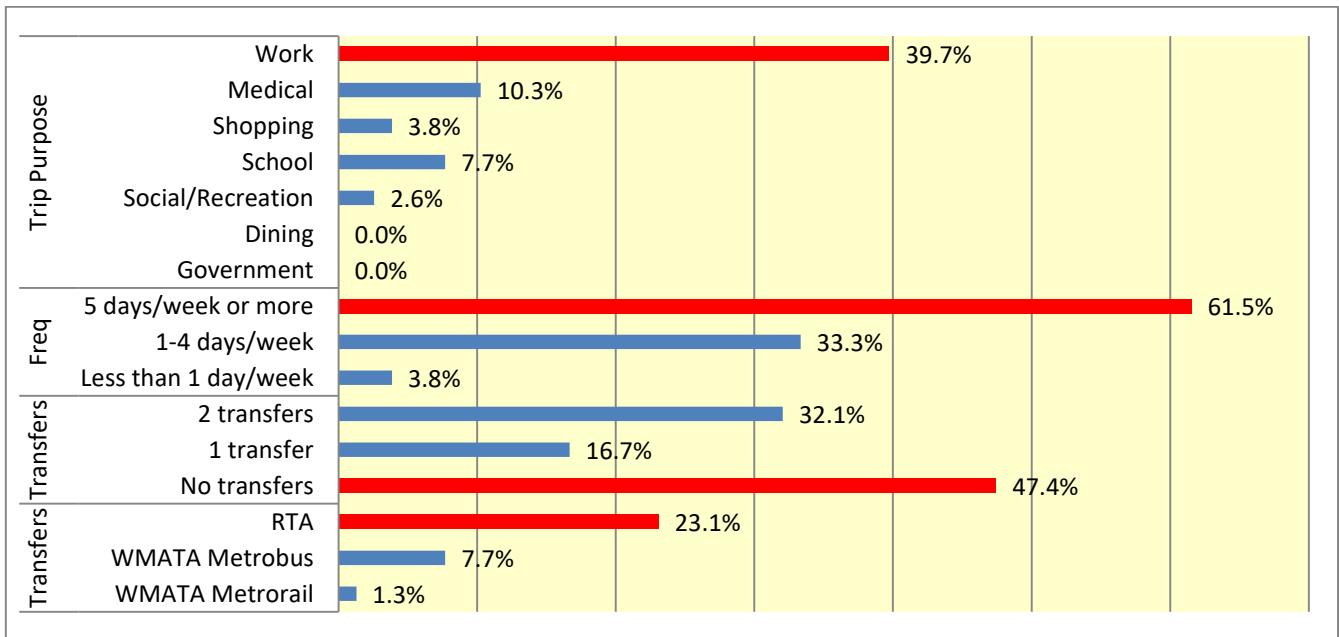


Figure 4-18: Route 202/K – Demographic and Socioeconomic Characteristics

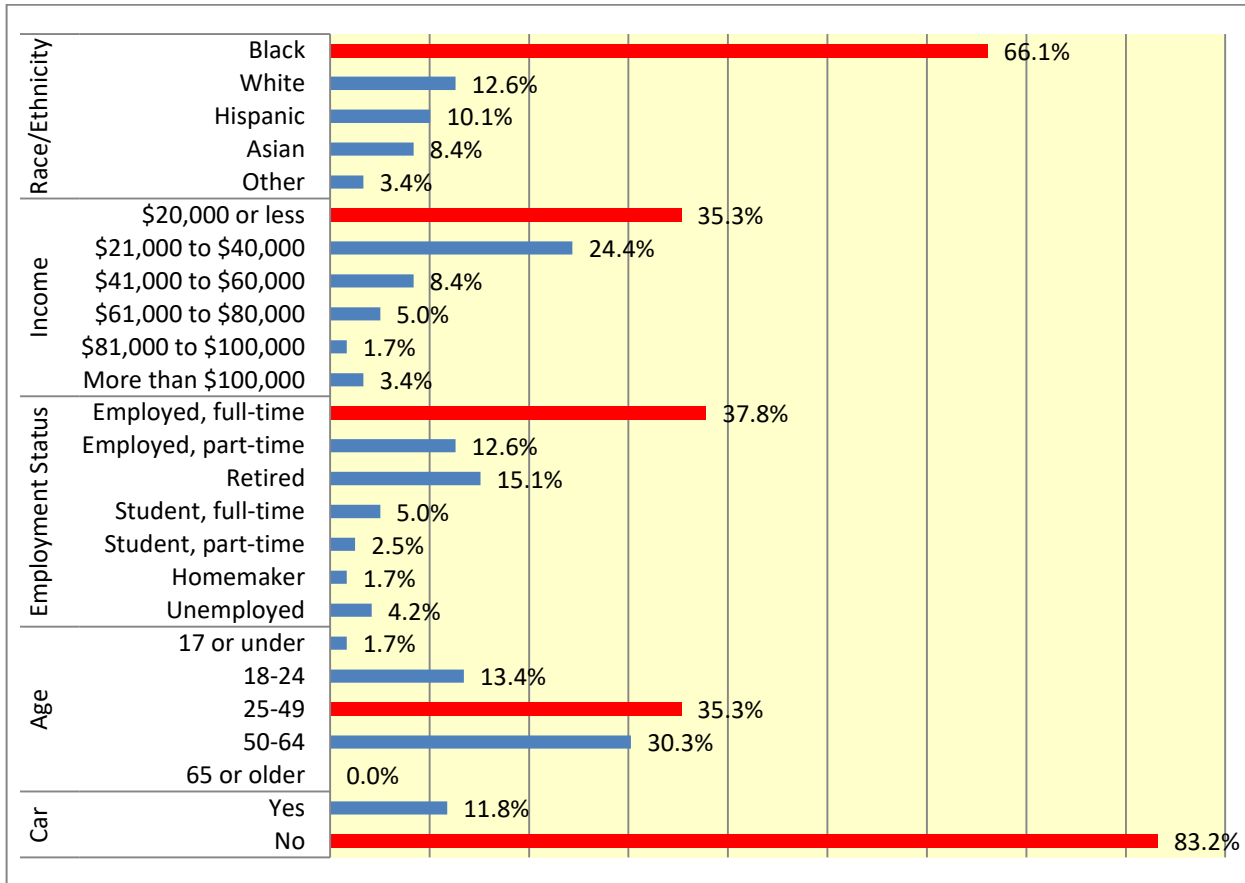
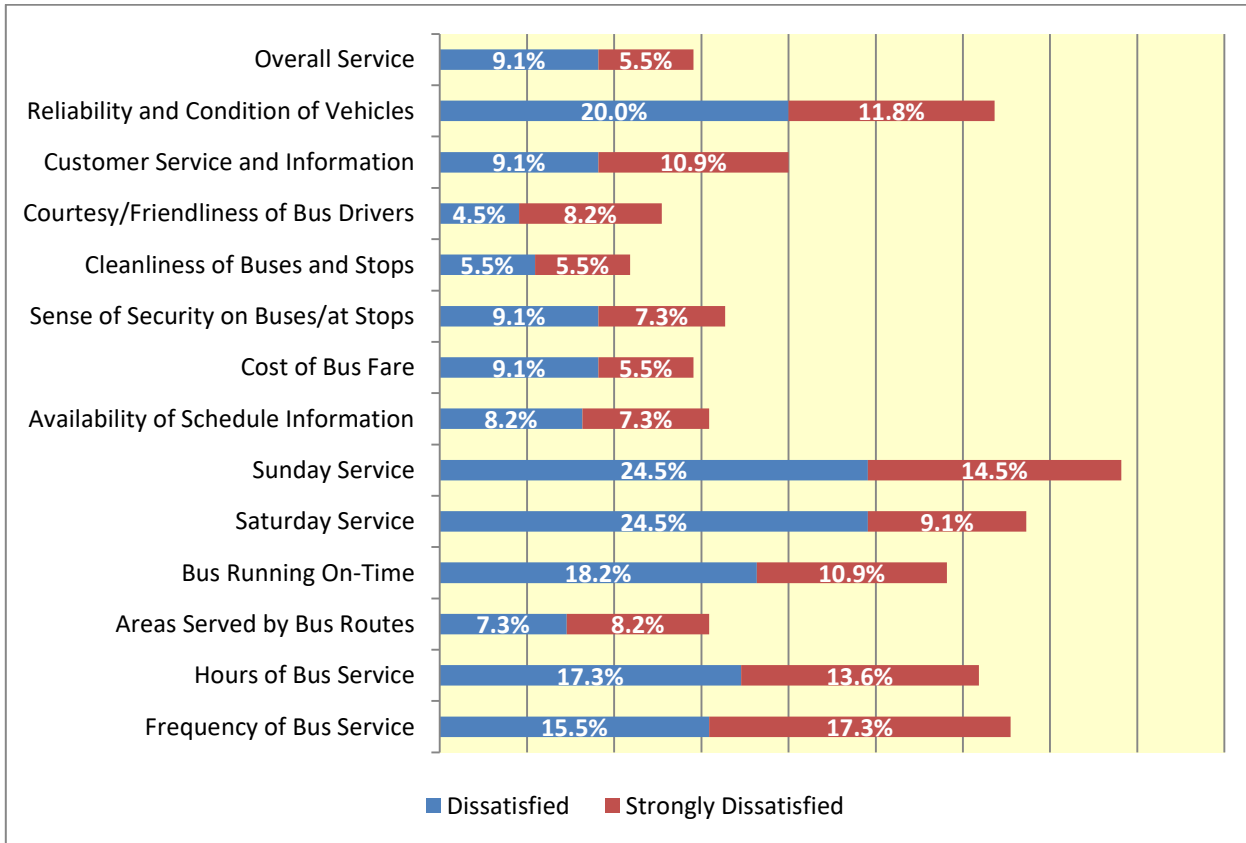
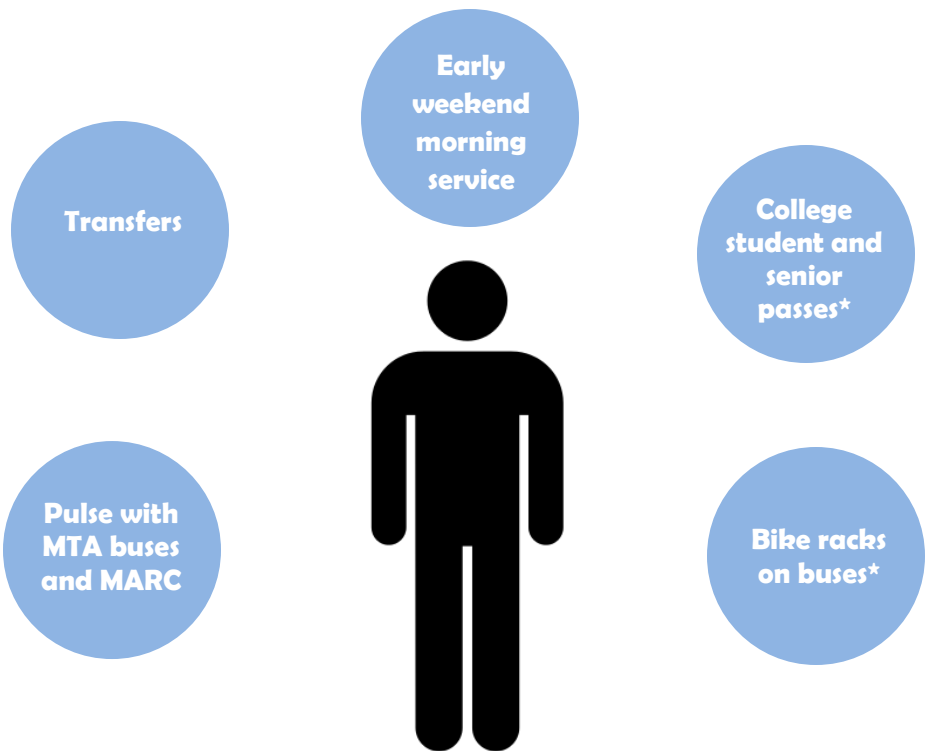


Figure 4-19: Route 202/K – Rider Dissatisfaction



What Riders Want



*RTA already offers these features, but riders still requested them, indicating a lack of rider awareness or inconsistent availability.

Route 504 (old Route 203)/M: Odenton MARC Station – Crofton Village

Service Area Description

Route 203/M was replaced by a new service, the Route 504, on 10/1/2017. A map of the new service is included in Figure 4-20. The data was collected when the 203/M was still in operation, and the analysis here pertains to the 203/M. It operated two weekday route patterns in western Anne Arundel County. Route M1 operated peak periods between Odenton MARC Station and Piney Orchard Village Center, and it also provided service to the Odenton Health Campus. During off-peak periods, Route M2 followed the Route M1 alignment between Odenton MARC Station and Piney Orchard Village Center. From the Center, the route traveled along Waugh Chapel Road to Crofton Village, providing service to the Village at Waugh Chapel shopping area. Once at the MARC Station, commuter rail service is available to downtown Baltimore and Washington, D.C.

Table 4-8: Route 203/M Strength and Challenges

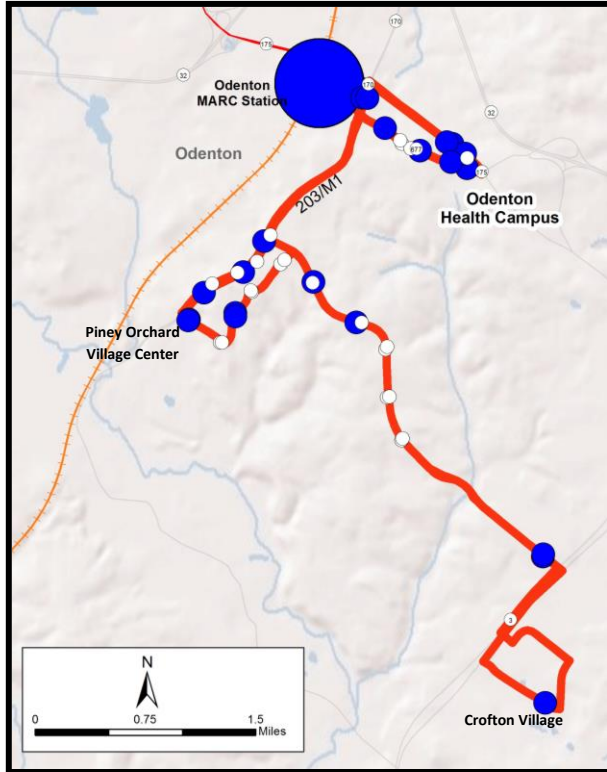
Strengths	Challenges
<ul style="list-style-type: none"> Serves Odenton MARC Station providing a connection to commuter rail service to downtown Baltimore and Washington, D.C. Serves Odenton Health Campus. 	<ul style="list-style-type: none"> Poorest performing route overall. Serves no major activity centers. Does not connect to Fort Meade.

Table 4-9: Route 203/M – Service and Operating Characteristics

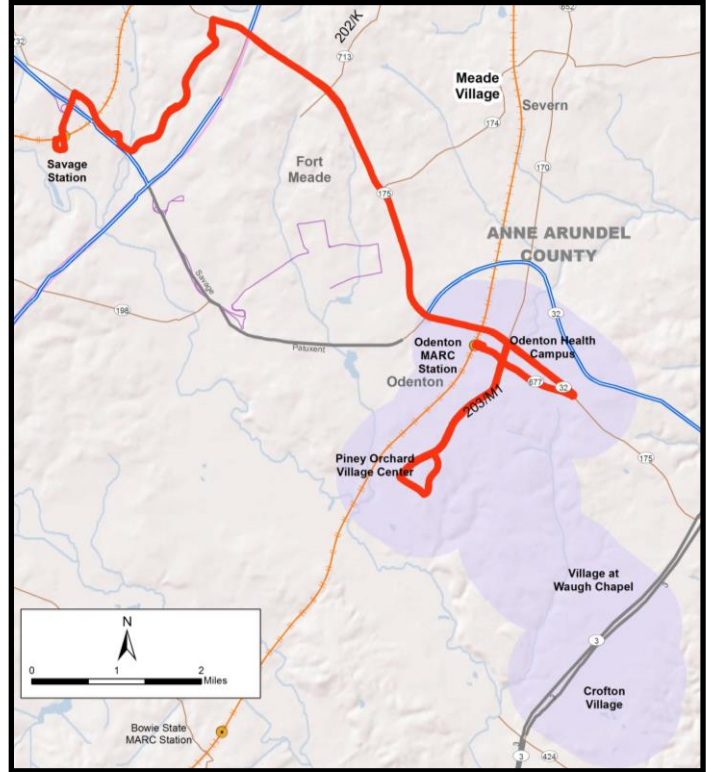
Service and Operating Characteristics		Route M1 Weekday Peak	Route M2 Weekday Off-Peak
Span of Service		7:50 am - 6:50 pm	10:15 am - 4:07 pm
Frequency (minutes)	Peak	30	-
	Off-Peak	-	60
Cycle Time (minutes)		25	52
Layover Time (minutes)		0	0
One-Way Trips		9	7
Daily Service Hours		3.75	8.55

Figure 4-20: Route 203/M Ridership by Stop and New Route 504 (no ridership data is yet available)

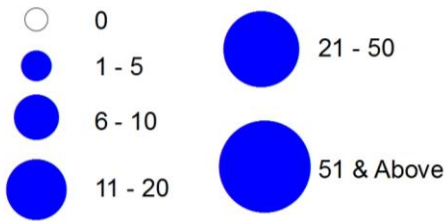
Former Route 203/M



New Route 504



Ridership by Stop



Legend

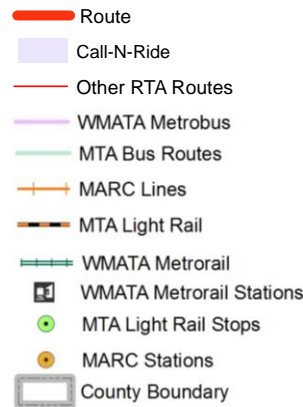


Figure 4-21: Route 203/M – Travel Characteristics

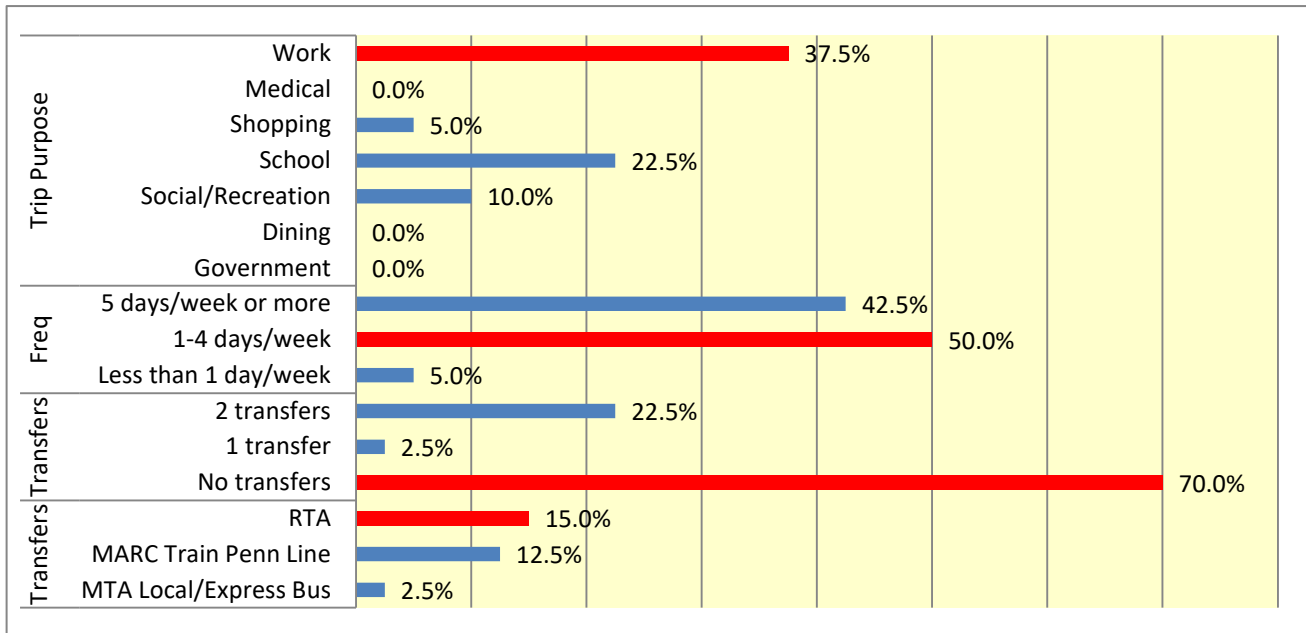


Figure 4-22: Route 203/M – Demographic and Socioeconomics Characteristics

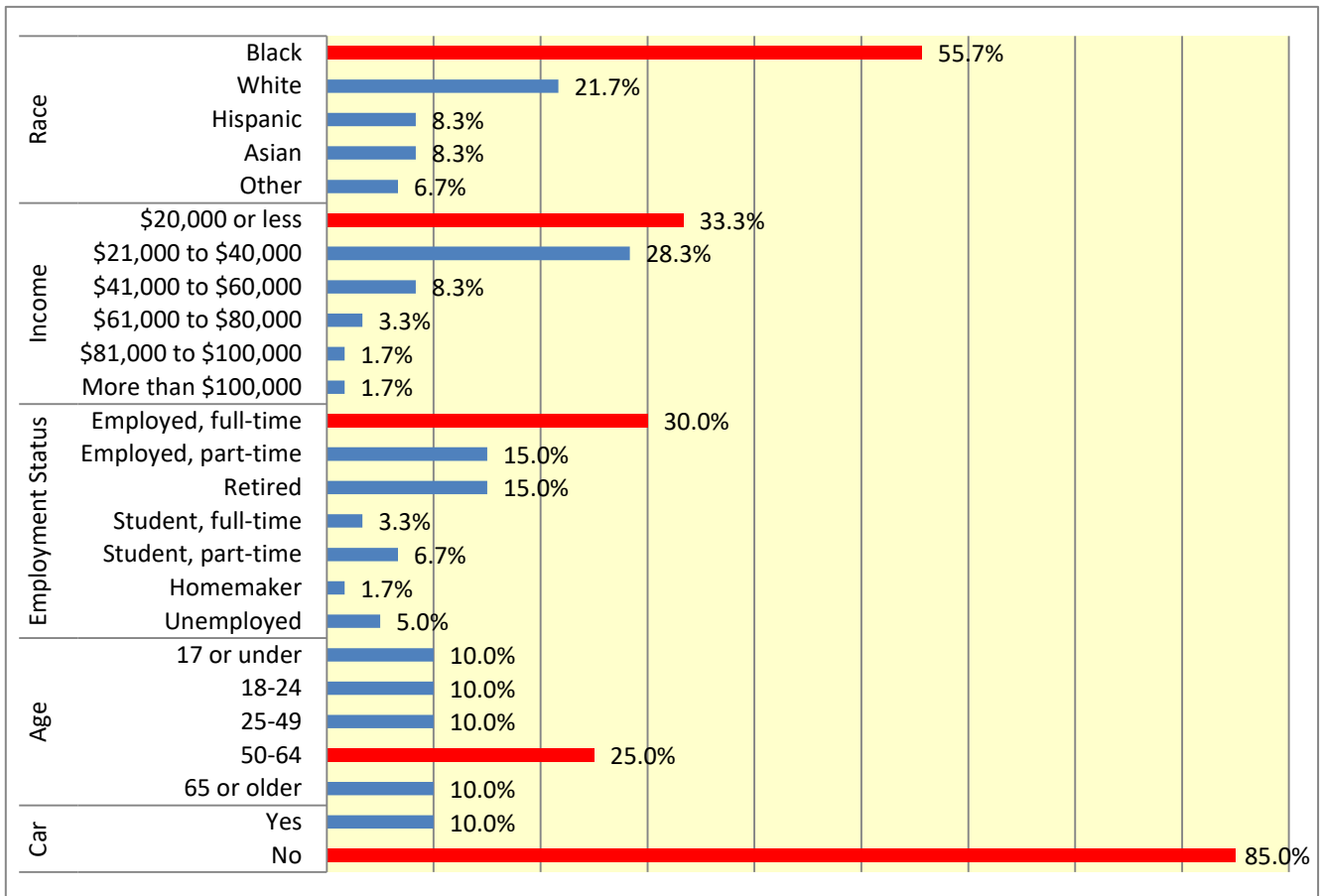
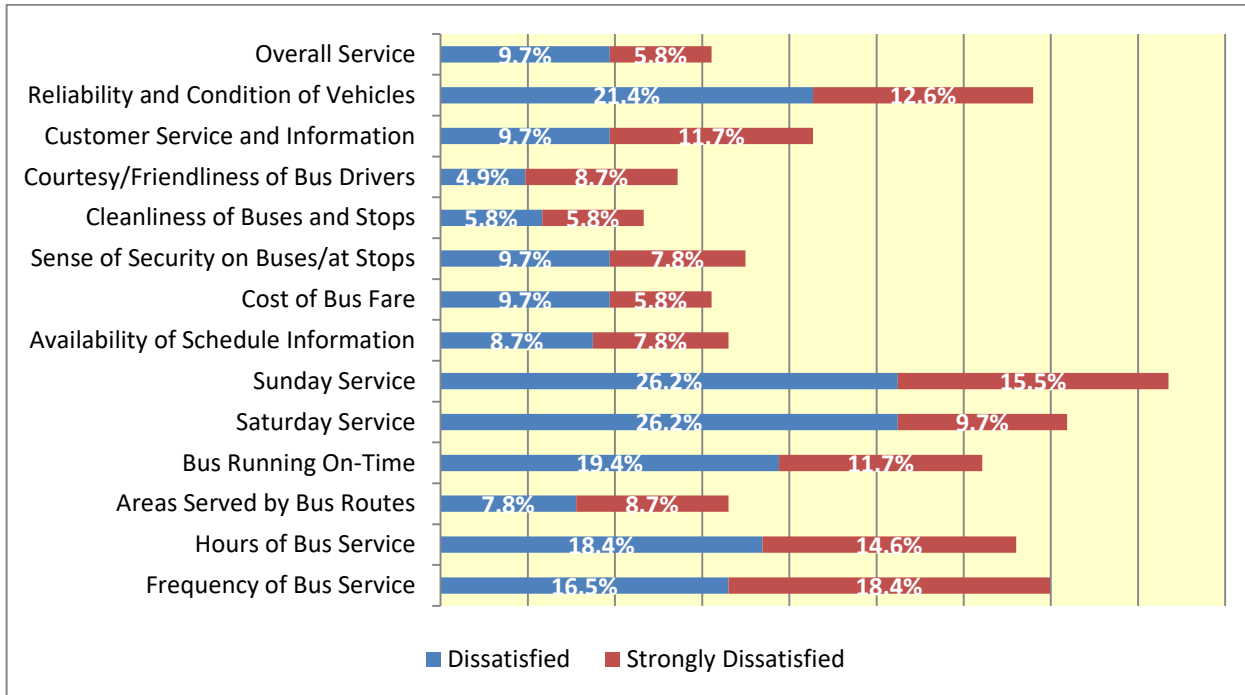
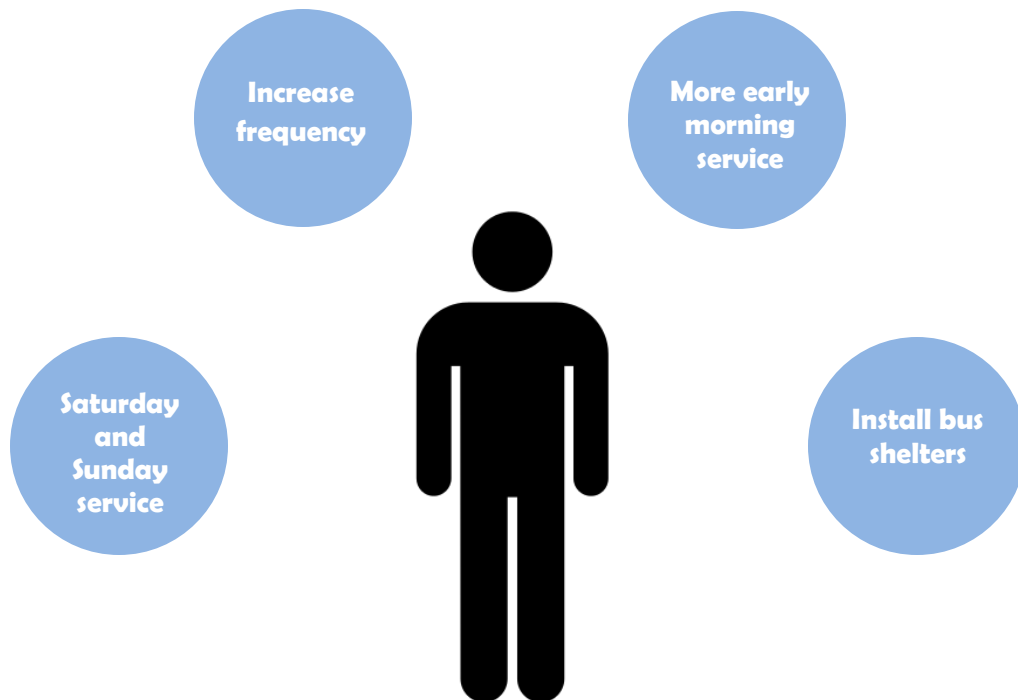


Figure 4-23: Route 203/M – Ridership Dissatisfaction



What Riders Want



Route 301/A: Towne Centre at Laurel – South Laurel

Service Area Description

Route 301/A operates weekday and Saturday service in northern Prince George’s County. The route originates at the Towne Centre at Laurel, providing connections to Routes 302/G, 409/Purple, 502/B, and 503/E, and WMATA local bus Routes 87, 88, 89, and 89M. From Towne Centre, the route travels along Cherry Lane and Van Dusen Road to Laurel Regional Hospital. The route continues along Contee Road and Laurel Bowie Road to the terminus at the intersection of South Laurel Drive and Laurelwalk Drive.

Table 4-10: Route 301/A Strength and Challenges

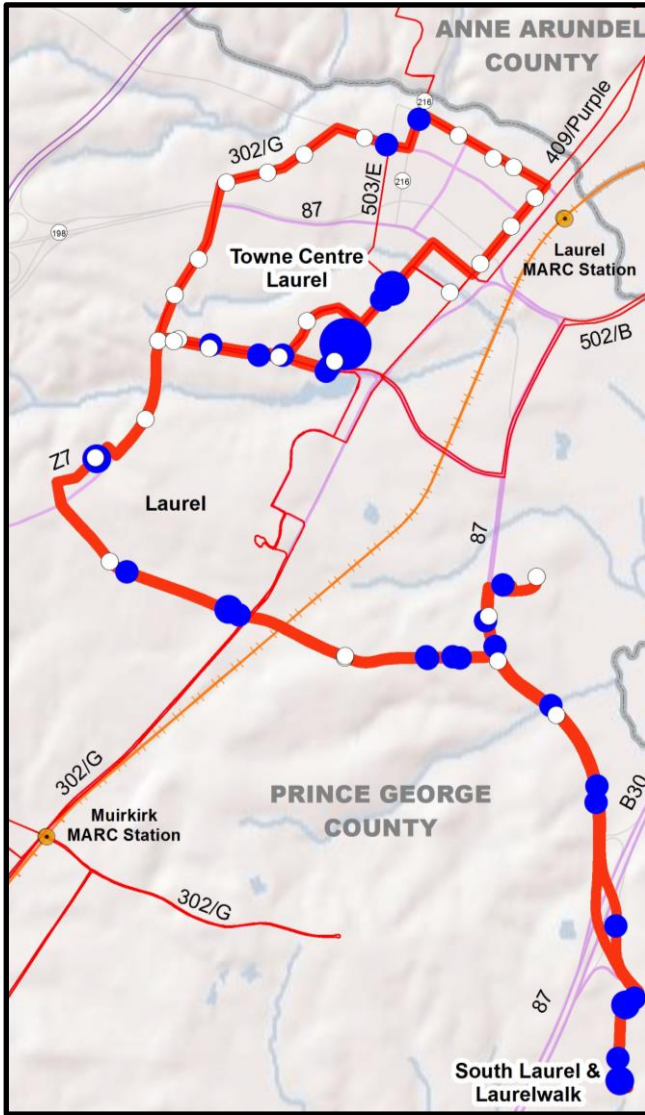
Strengths	Challenges
<ul style="list-style-type: none"> Serves Towne Centre at Laurel, connecting with four routes. Provides local service in Laurel. 	<ul style="list-style-type: none"> Low ridership. Poor on-time performance. Serves only one regional activity center.

Table 4-11: Route 301/A - Service and Operating Characteristics

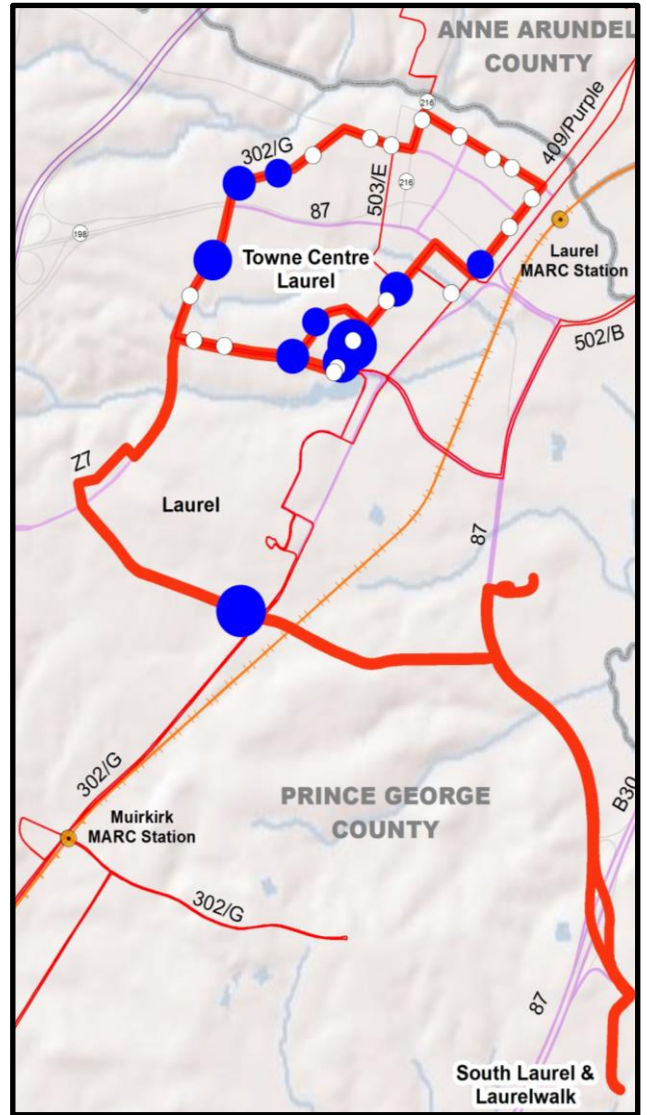
Service and Operating Characteristics		Weekdays	Saturday
Span of Service		6:25 am - 7:20 pm	9:25 am - 7:20 pm
Frequency (minutes)	Peak	60	-
	Off-Peak	60	60
One-Way Trips		13	10
Cycle Time (minutes)		55	55
Layover Time (minutes)		5	5
Daily Service Hours		11.92	9.17

Figure 4-24: Route 301/A – Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 50
- 51 & Above

Figure 4-25: Route 301/A – Travel Characteristics

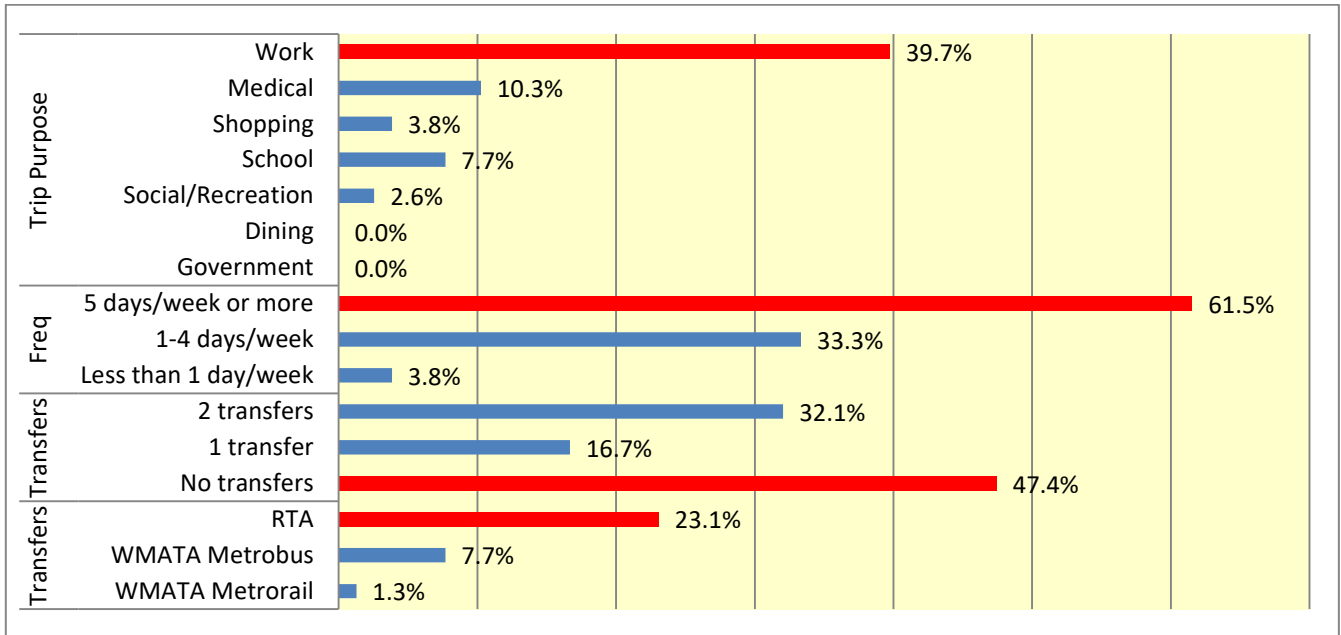


Figure 4-26: Route 301/A – Demographic and Socioeconomic Characteristics

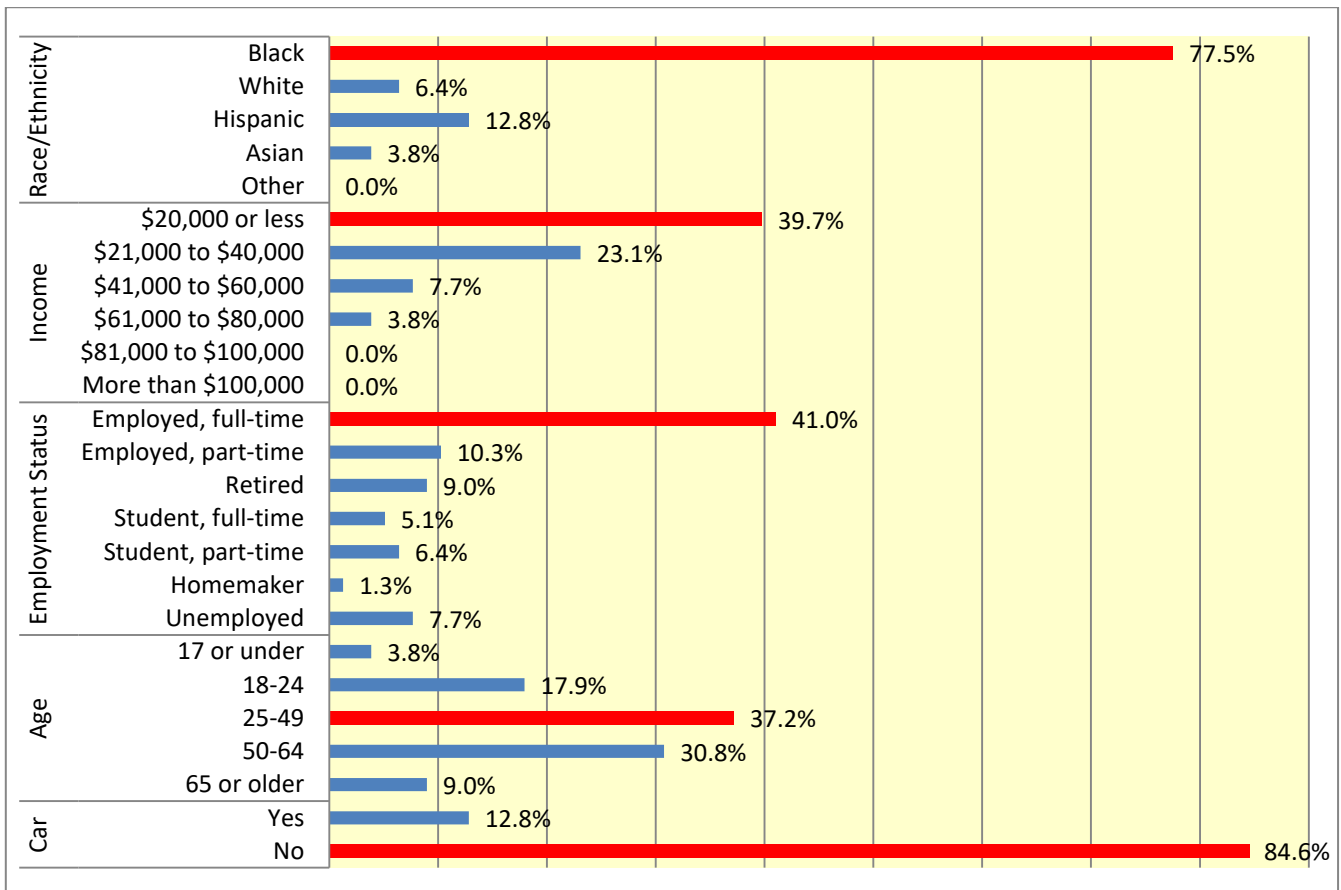
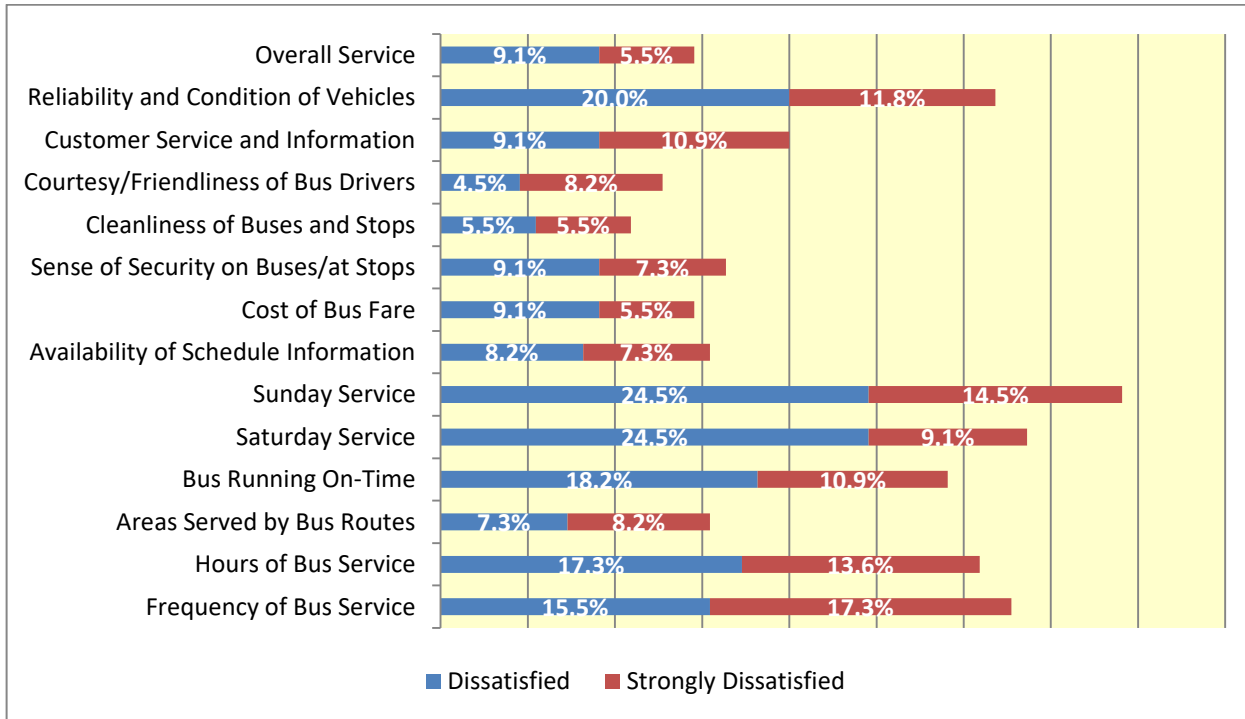


Figure 4-27: Route 301/A – Ridership Dissatisfaction



What Riders Want



Route 302/G: Towne Centre at Laurel – Greenbelt Metro Station

Service Area Description

Route 302/G provides daily service within northern Prince George’s County. The route originates at Towne Centre at Laurel, providing connections to Routes 301/A, 409/Purple, 502/B, and 503/E, and WMATA Routes 87, 88, 89, 89M, Z9, and Z29. From Towne Centre, the route travels along U.S. 1 towards Muirkirk MARC Station, providing direct connections to downtown Baltimore and Washington, D.C. From the station, the route continues along Muirkirk Road to FDA Muirkirk Campus. From the FDA Muirkirk Campus, the route travels along Old Baltimore Pike to Kenilworth Avenue and College Park Metro Station. On the return trip, the route loops around Towne Centre at Laurel prior to terminus. On Saturdays, the bus does not serve the Muirkirk Campus. In addition, on Sundays the bus does not serve the College Park Metro Station.

Table 4-12: Route 302/G Strength and Challenges

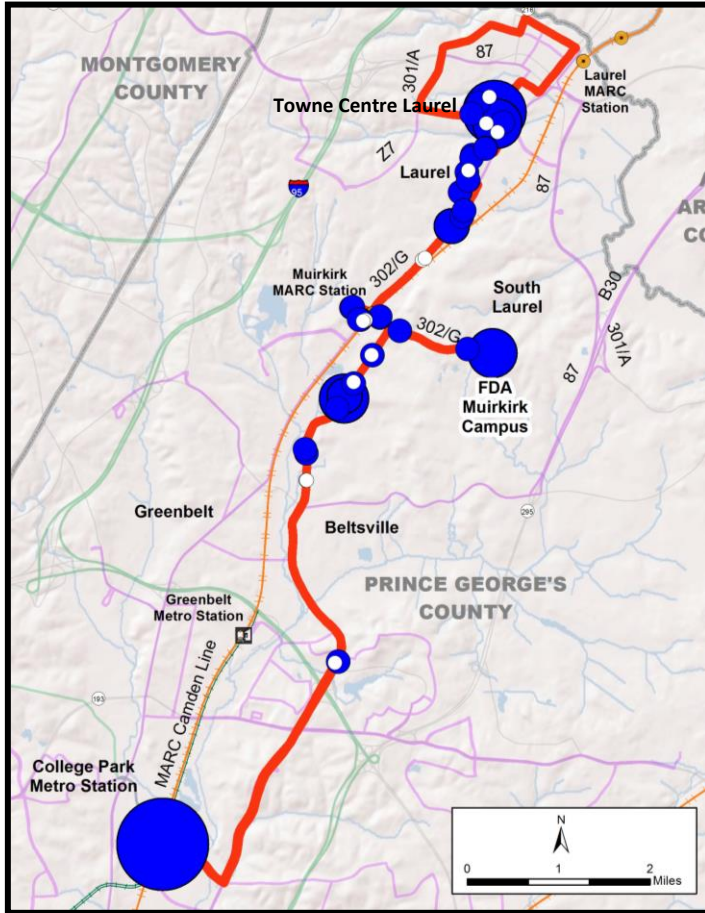
Strengths	Challenges
<ul style="list-style-type: none"> Serves 2 activity centers – Towne Centre at Laurel, and FDA Muirkirk Campus. Serves 3 transit centers – Muirkirk MARC Station, College Park Metro Station, and Greenbelt Metro Station. Consistent 60-minute headways all day. 	<ul style="list-style-type: none"> Undefined.

Table 4-13: Route 302/G - Service Operating Characteristics

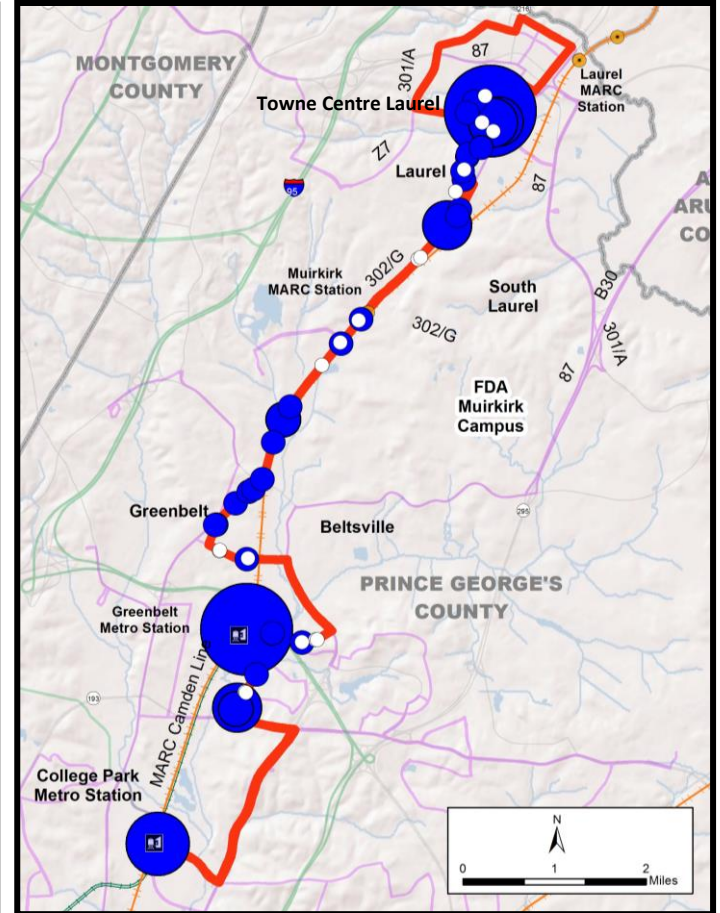
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		6:25 am - 7:20 pm	9:25 am - 7:20 pm	10:00 am – 6:50 pm
Frequency (minutes)	Peak	60	-	-
	Off-Peak	60	60	60
One-Way Trips		13	10	9
Cycle Time (minutes)		110	110	108
Layover Time (minutes)		5	5	1
Daily Service Hours		31.25	20.83	18.75

Figure 4-28: Route 302/G Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- M WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- | | |
|---|--|
| 0 | 21 - 50 |
| 1 - 5 | 51 & Above |
| 6 - 10 | |
| 11 - 20 | |

Figure 4-29: Route 302/G – Travel Characteristics

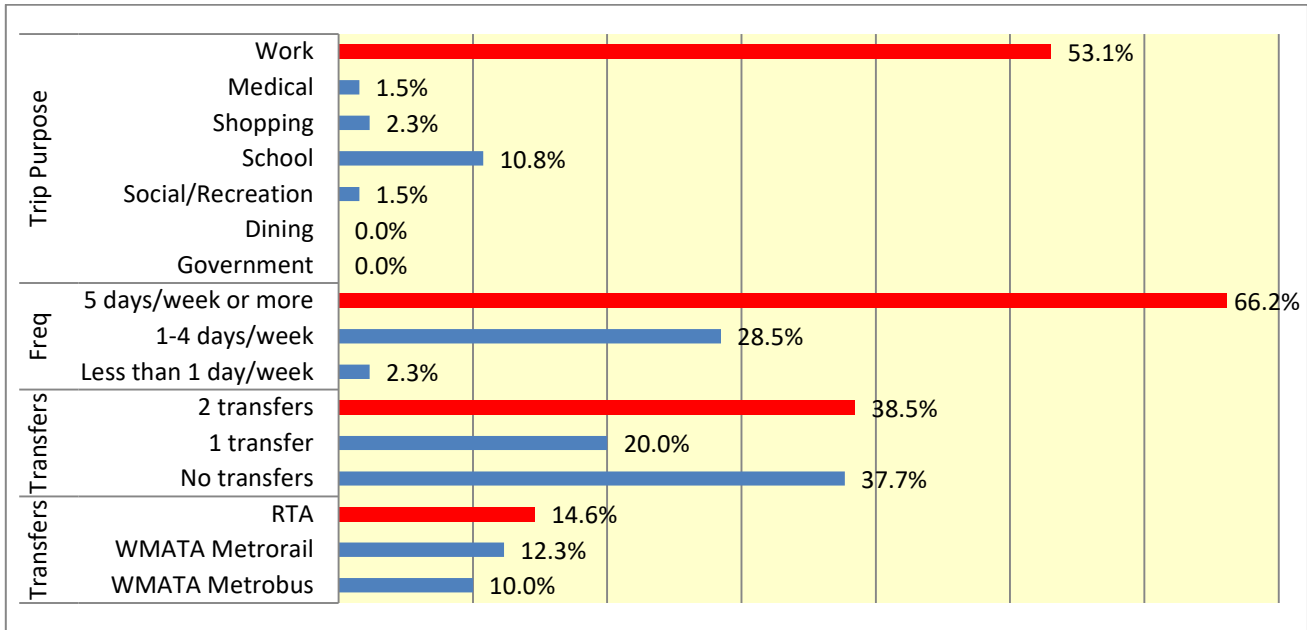


Figure 4-30: Route 302/G – Demographic and Socioeconomic Characteristics

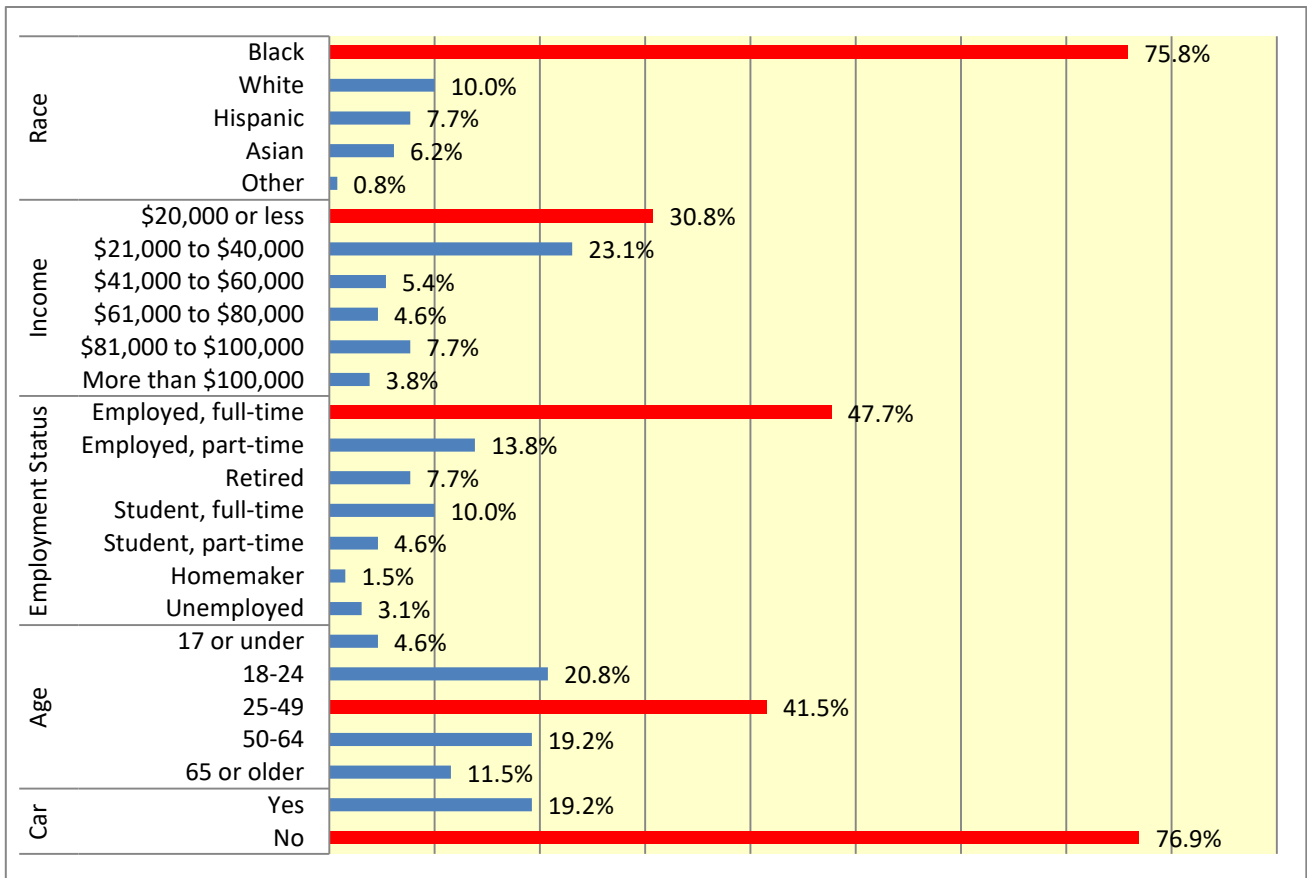
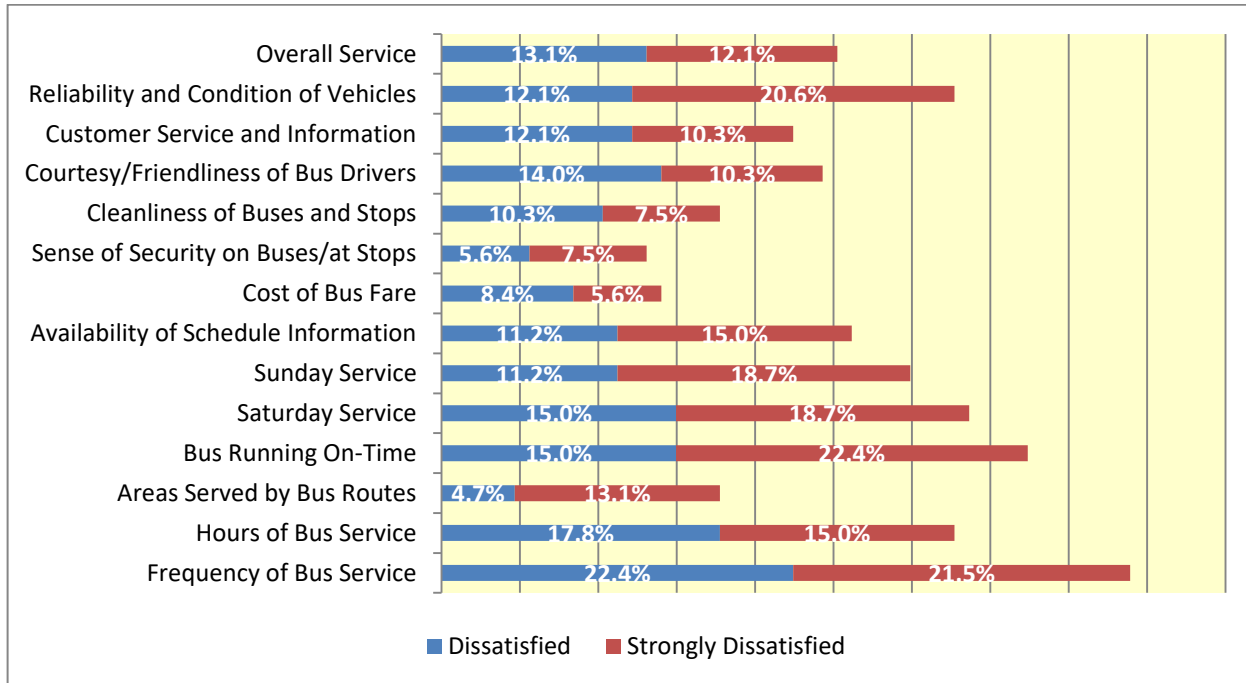
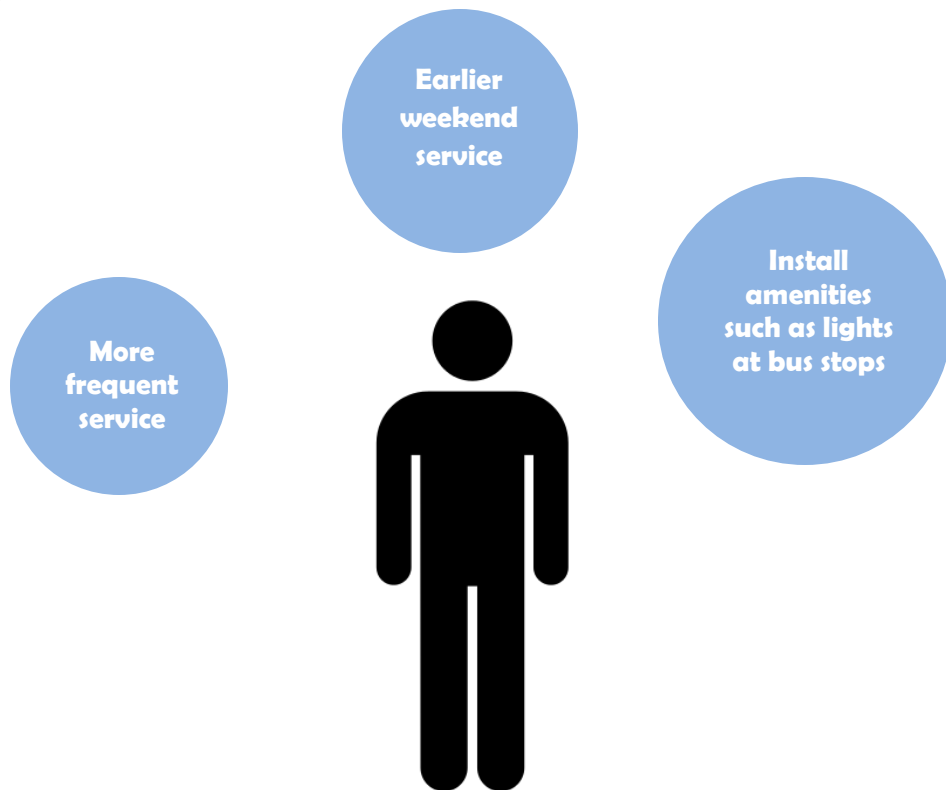


Figure 4-31: Route 302/G – Rider Dissatisfaction



What Riders Want



Route 401/Green: Columbia Mall – Clary’s Forest

Service Area Description

Route 401/Green provides daily service within Howard County. The route originates at Columbia Mall, providing connections to Routes 404/Orange, 405/Yellow, 406/Red, 407/Brown, 408/Gold, 501/Silver, and 503/E. From the mall, the route travels along Twin Rivers Road, serving Wilde Lake Village Center, continuing along Harpers Farm Road to Harper’s Choice Village Center and the Bain Center. From the Village Center, the route travels along Cedar Lane to Howard County General Hospital, continuing to Howard County Community College. From the community college, the route loops around Clary’s Forest servicing Hickory Ridge Place and Little Patuxent Parkway.

Table 4-14: Route 401/Green Strength and Challenges

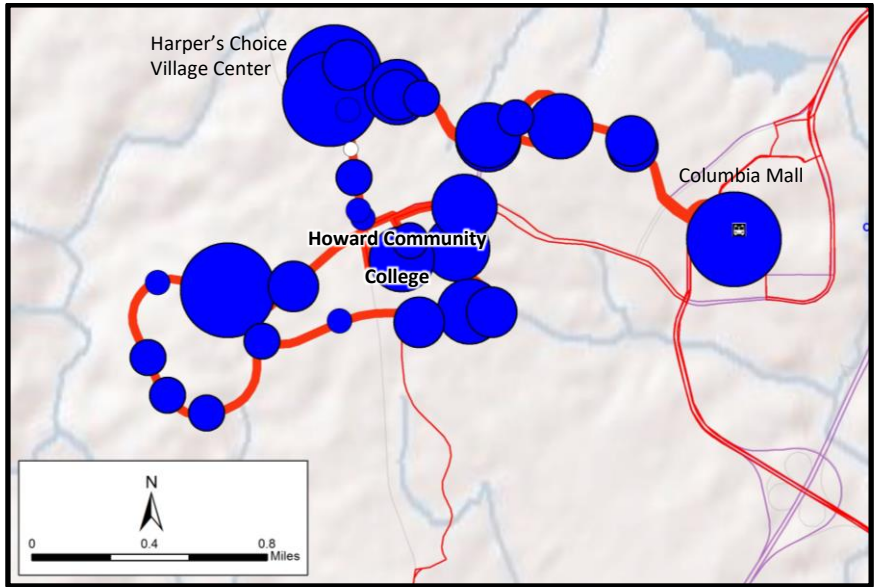
Strengths	Challenges
<ul style="list-style-type: none"> Serves three activity centers –Columbia Mall, Howard County Community College, Howard County General Hospital, and Wilde Lake Village Center. Frequent peak hour service – 30 minute headways. Connects with seven RTA routes. Long weekday and Saturday span of service. 	<ul style="list-style-type: none"> Undefined.

Table 4-15: Route 401/Green Service and Operating Characteristics

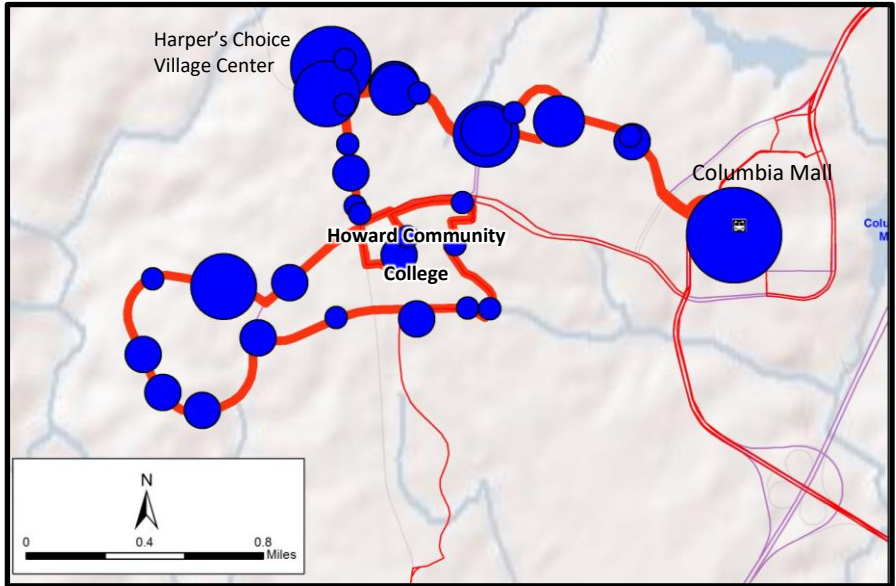
Service and Operating Characteristics	Weekdays	Saturday	Sunday
Span of Service	5:40 am - 11:10 pm	7:40 am - 10:10 pm	9:00 am - 6:52 pm
Frequency (minutes)	Peak	30	-
	Off-Peak	60	60
Cycle Time (minutes)	52	52	52
Layover Time (minutes)	8	8	8
One-way Trips	27	15	10
Daily Service Hours	20.80	13.00	8.67

Figure 4-32: Route 401/Green Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

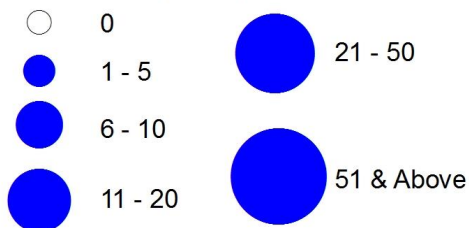


Figure 4-33: Route 401/Green – Travel Characteristics

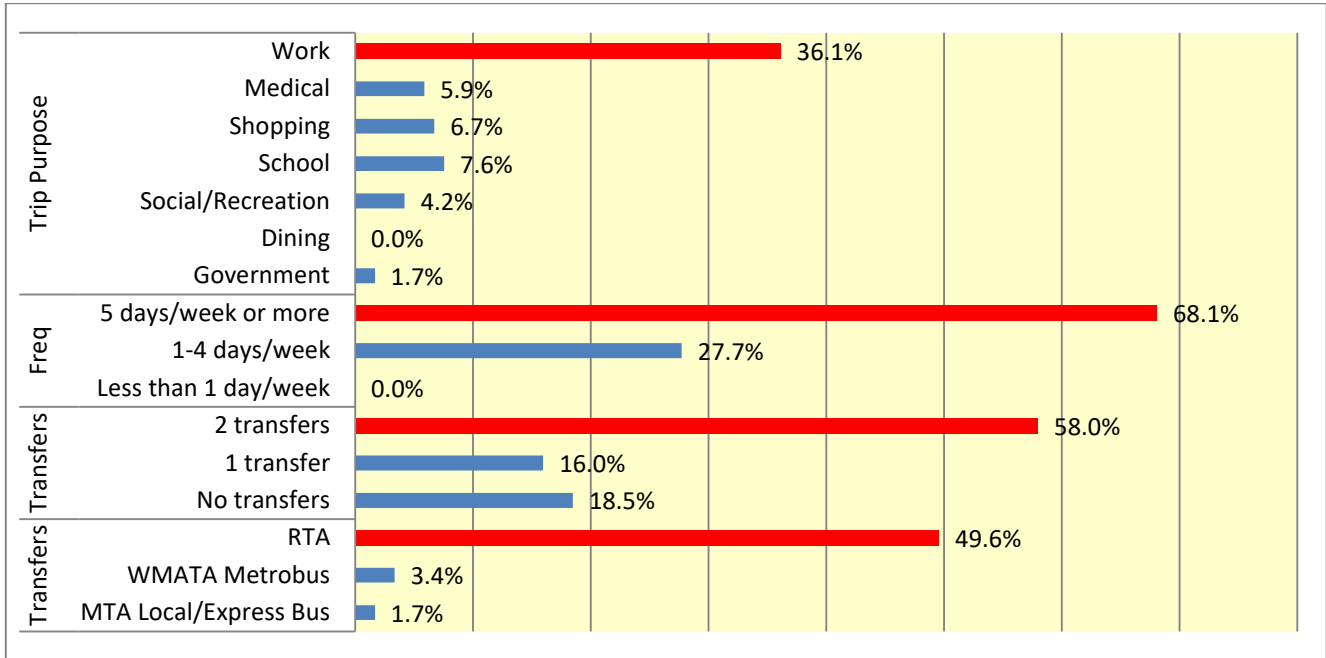


Figure 4-34: Route 401/Green – Demographic and Socioeconomic Characteristics

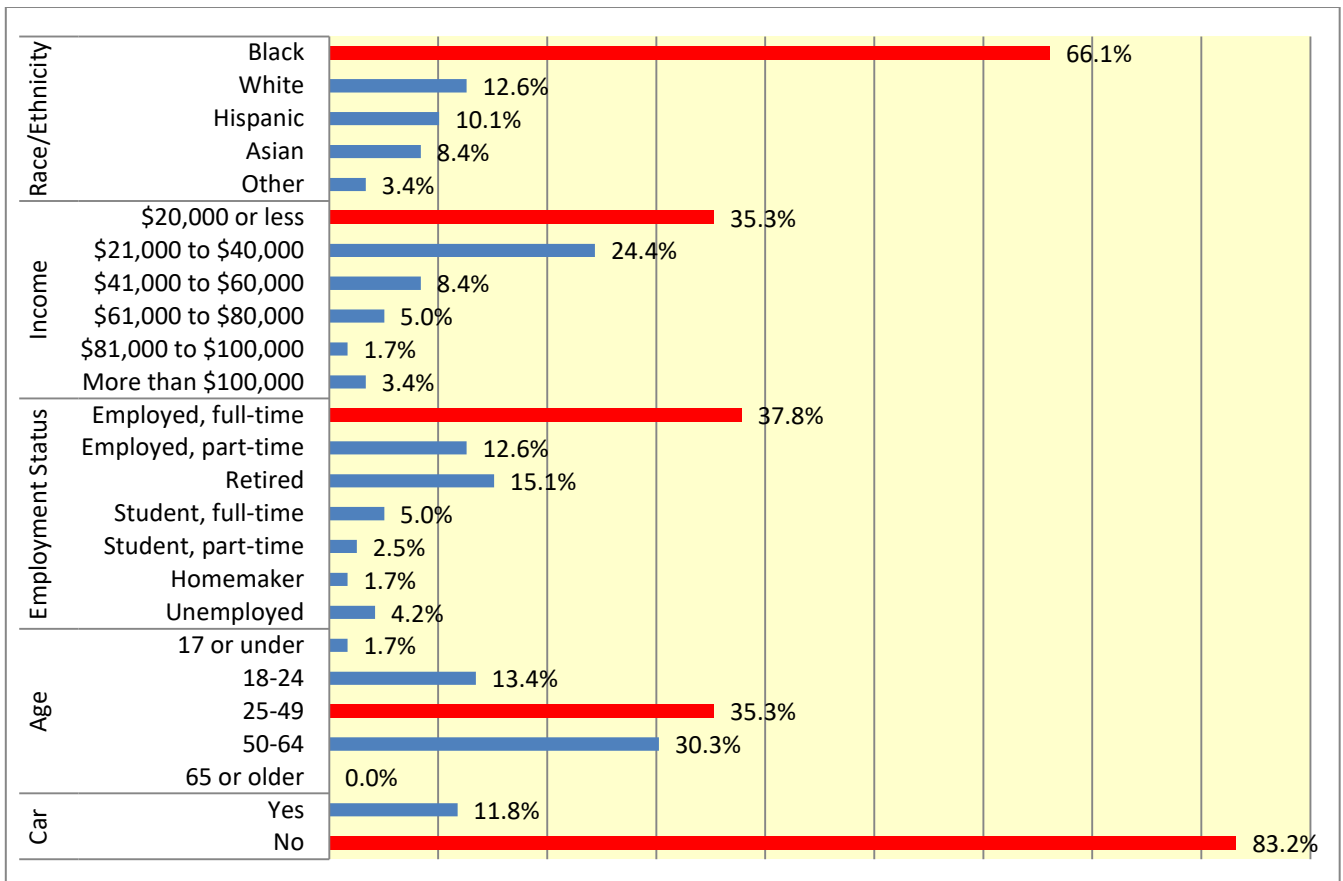
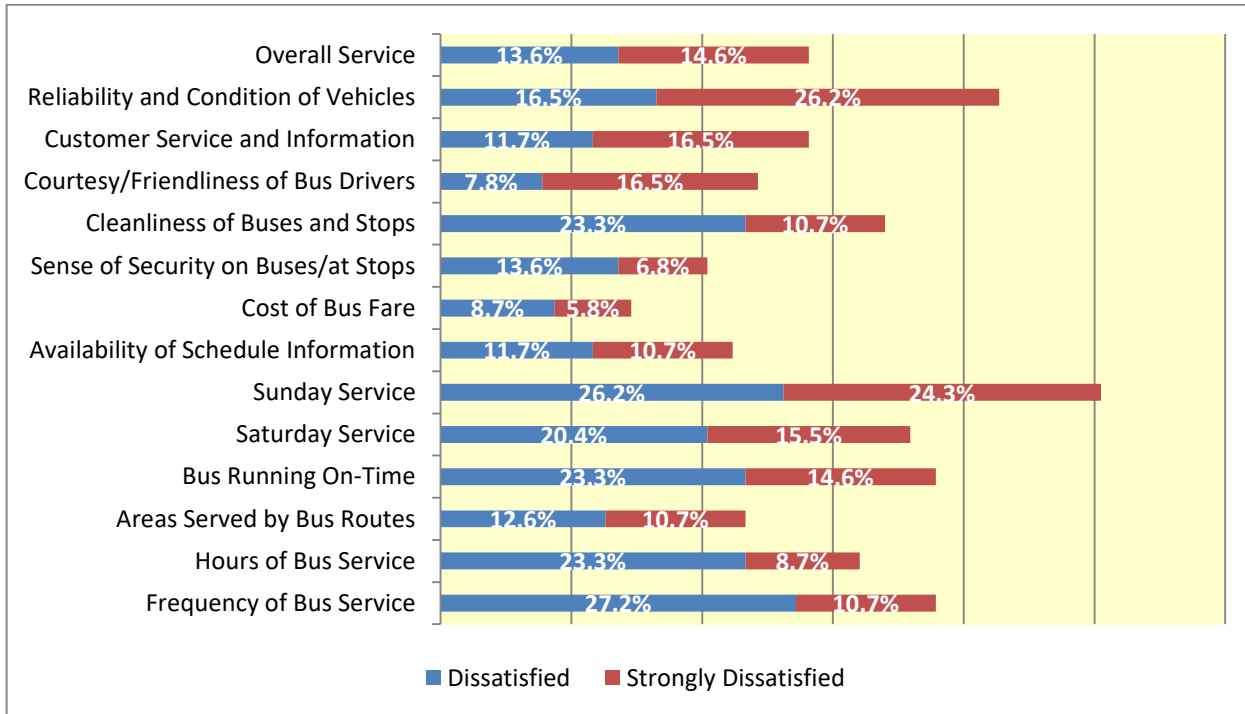
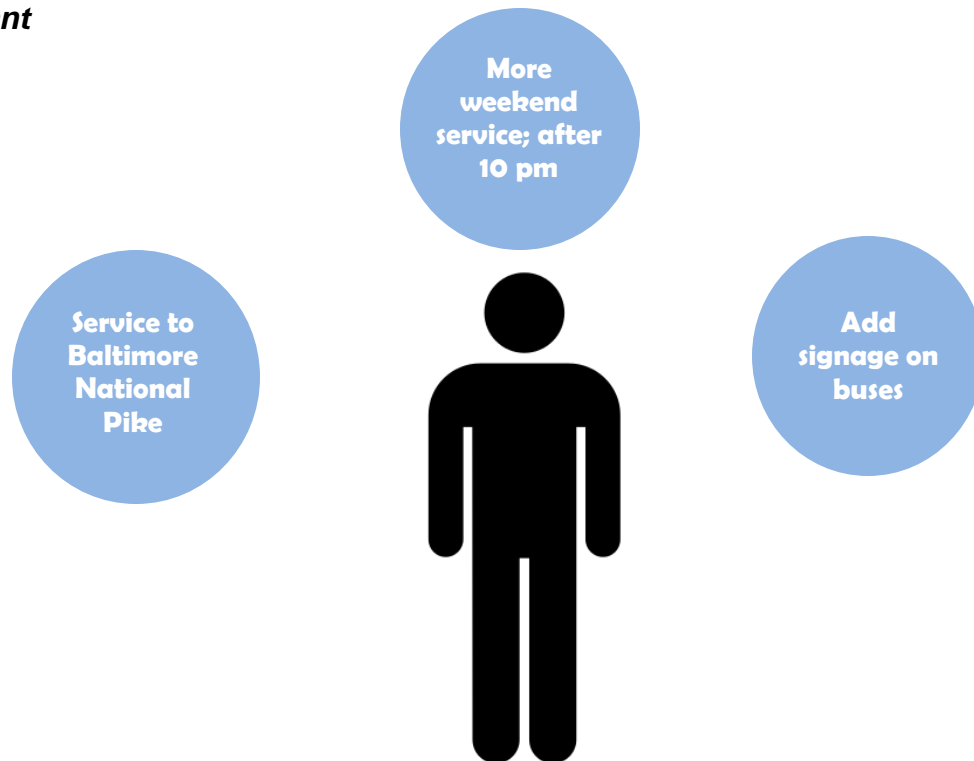


Figure 4-35: Route 401/Green – Rider Dissatisfaction



What Riders Want



Route 404/Orange: Columbia Mall – Kings Contrivance Village

Service Area Description

Route 404/Orange provides daily service within Howard County. The route originates at Columbia Mall, providing connections to Routes 401/Green, 405/Yellow, 406/Red, 407/Brown, 408/Gold, 501/Silver, and 503/E. From Columbia Mall, the route travels along Little Patuxent Parkway toward Howard County General Hospital, and loops back to Howard County Community College and Hickory Ridge Place. The route continues along Sandy Spring and Cedar Lane to Hickory Ridge Village Center. From the Village Center, the route loops around to Quarter Road and Martin Road. Next, the route continues south to provide service to Atholton Shopping Center, continuing to the terminus at Kings Contrivance Village Center.

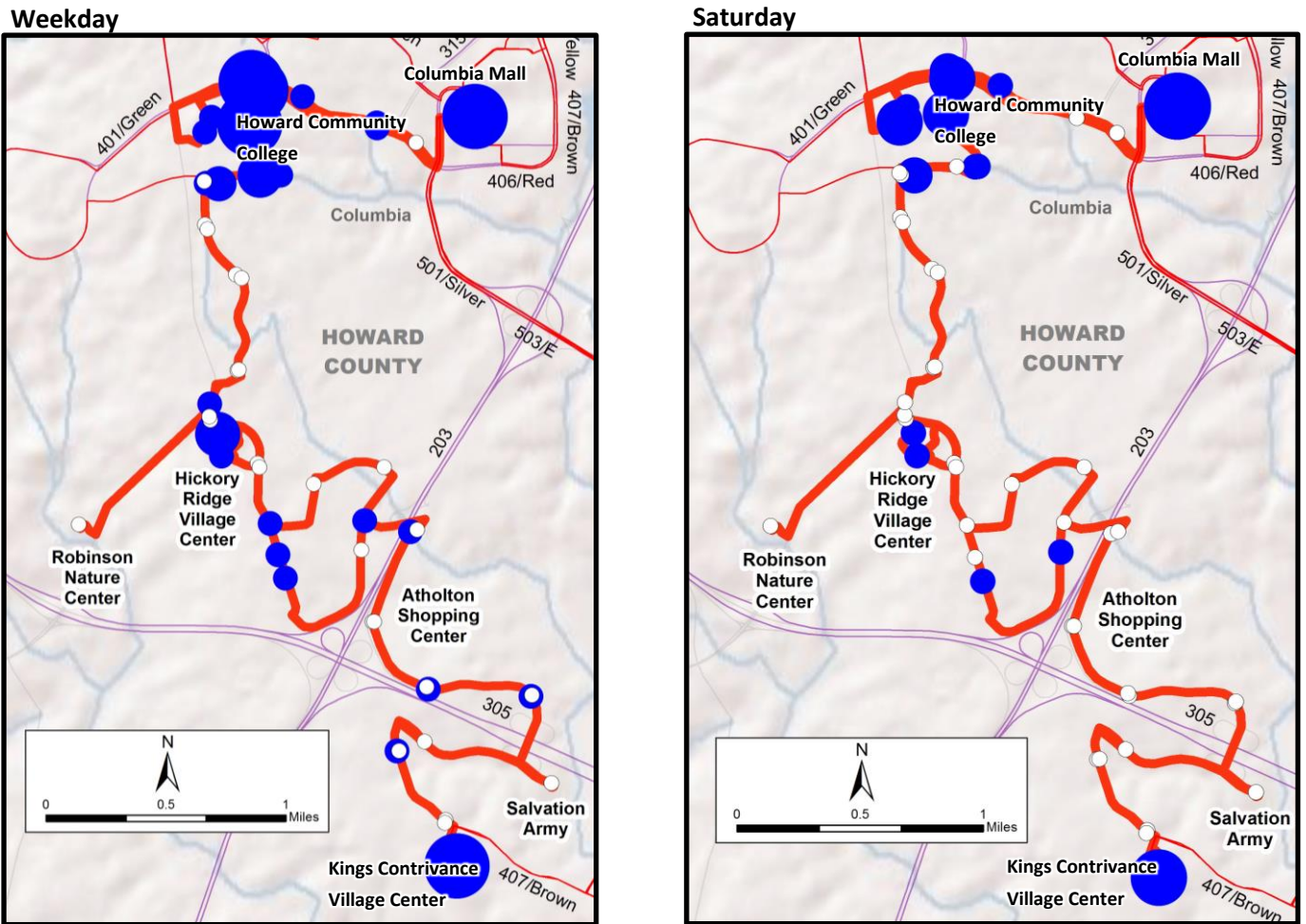
Table 4-16: Route 404/Orange Strength and Challenges

Strengths	Challenges
<ul style="list-style-type: none"> Provides service to five activity centers. Connects with seven other RTA routes. 	<ul style="list-style-type: none"> Long headways (120 minutes) on Sundays. Very low ridership between Hickory Ridge Village Center and King's Contrivance

Table 4-17: Route 404/Orange - Service and Operating Characteristics

Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		6:00 am - 10:27 pm	7:27 pm - 8:23 pm	9:00 am - 6:42 pm
Frequency (minutes)	Peak	60	-	-
	Off-Peak	60	60	120
One-way Trips		16	15	6
Cycle Time (minutes)		144	144	144
Layover Time (minutes)		10	20	14
Daily Service Hours		27.75	22.20	16.65

Figure 4-36: Route 404/Orange – Ridership by Stop



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- | | |
|---|--|
| ○ 0 | ● 21 - 50 |
| ● 1 - 5 | |
| ● 6 - 10 | |
| ● 11 - 20 | ● 51 & Above |

Figure 4-37: Route 404/Orange – Travel Characteristics

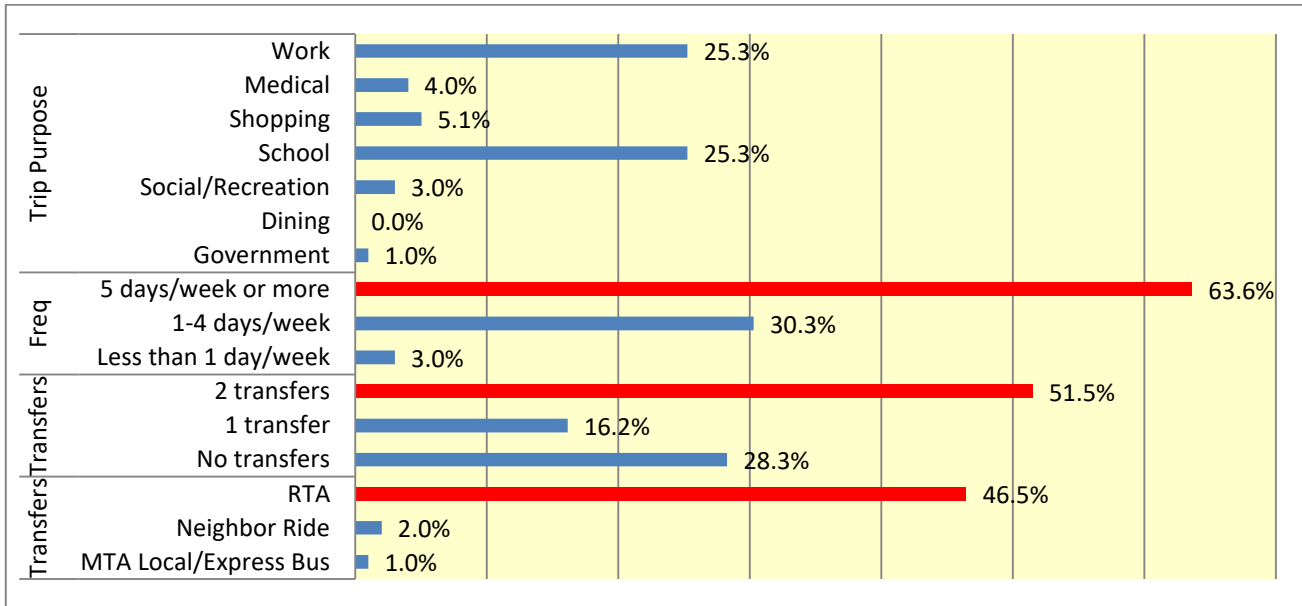


Figure 4-38: Route 404/Orange – Demographic and Socioeconomic Characteristics

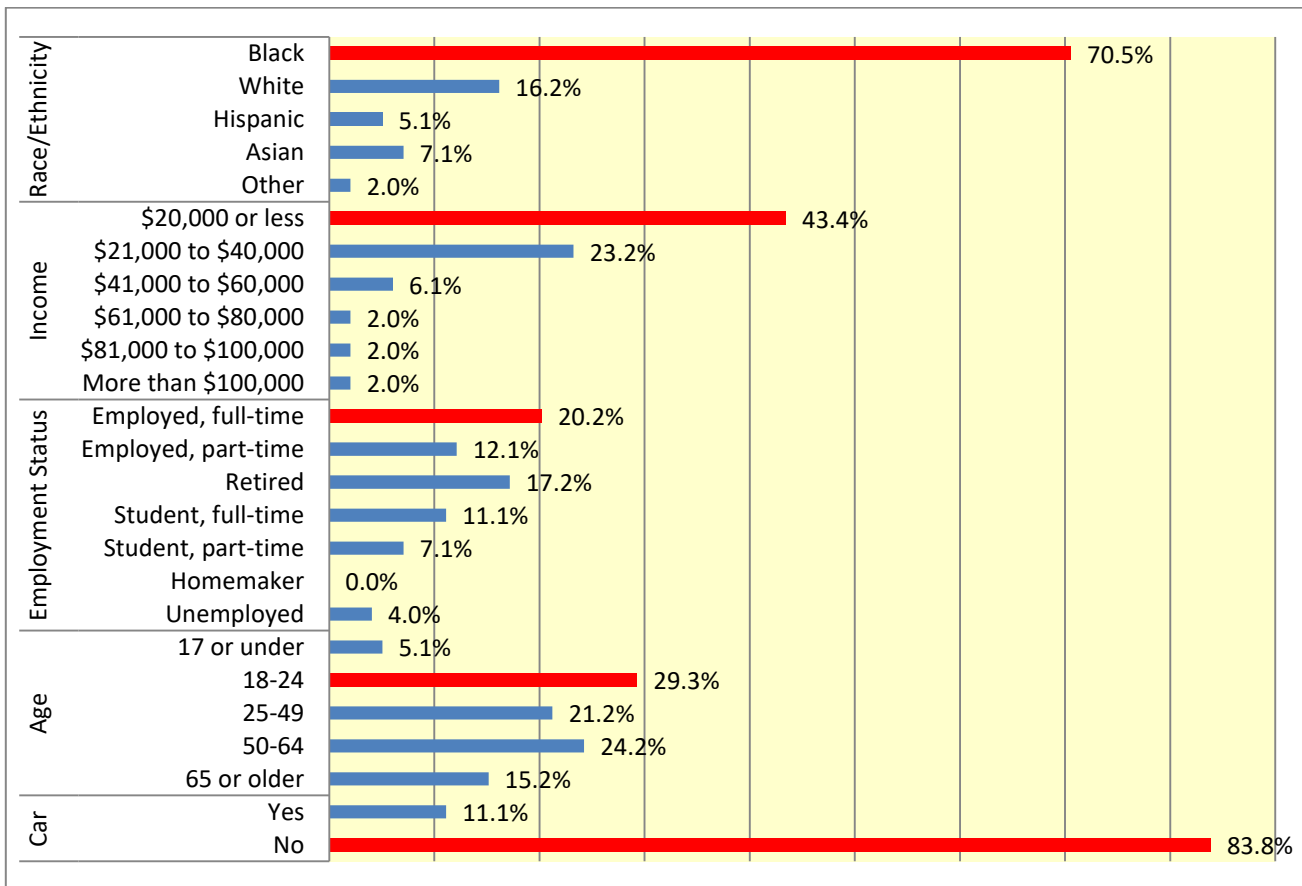
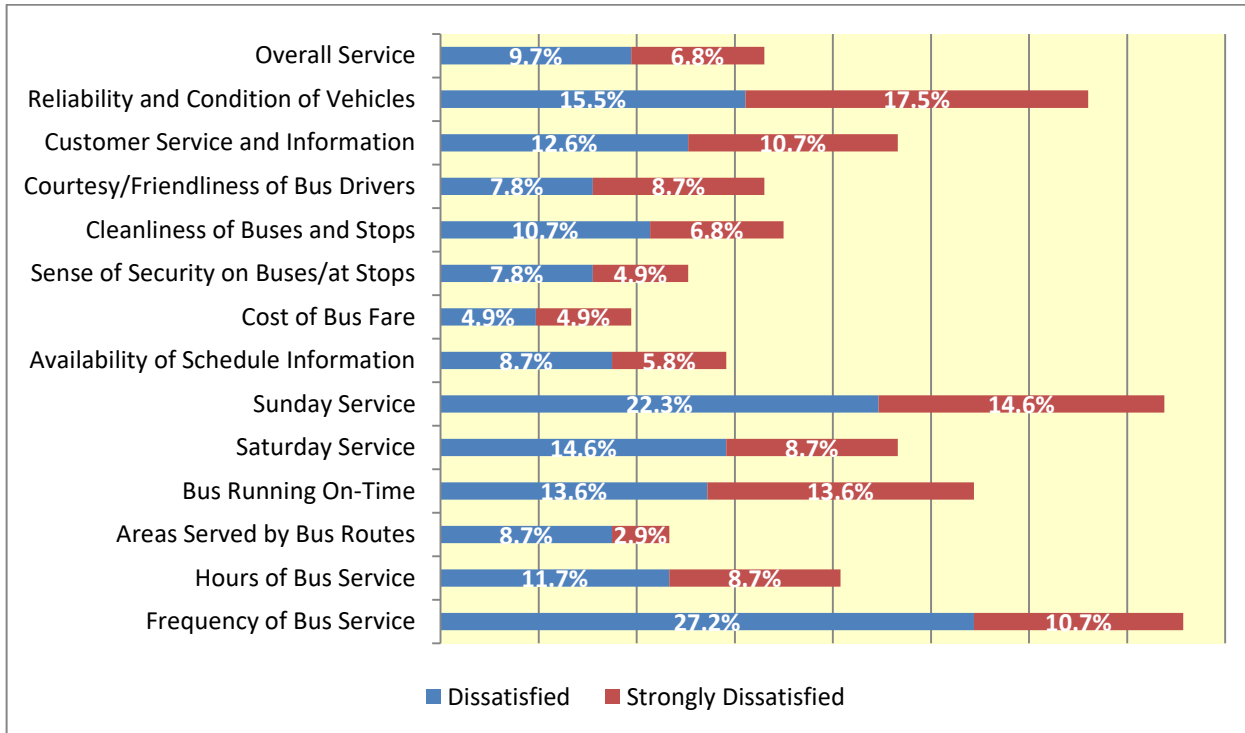
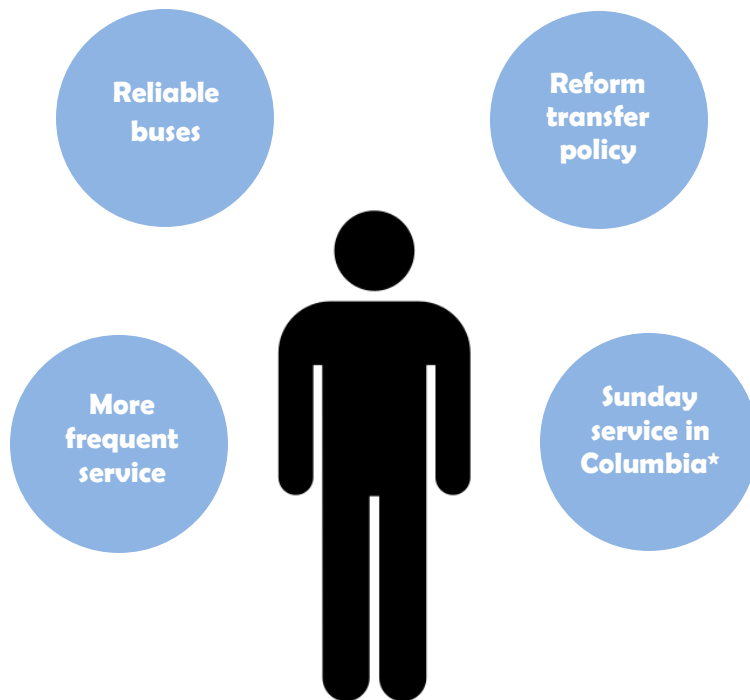


Figure 4-39: Route 404/Orange – Rider Dissatisfaction



What Riders Want



*RTA already offers Sunday service in Columbia, but riders still requested it suggesting a lack of rider awareness, inconsistent availability or a desire for more frequency.

Route 405/Yellow: Columbia Mall – Miller Library/EC Senior Center

Service Area Description

Route 405/Yellow operates weekday and Saturday service throughout northern Howard County. The route originates at Columbia Mall, and has connections to Routes 401/Green, 404/Orange, 406/Red, 407/Brown, 408/Gold, 501/Silver, and 503/E. From Columbia Mall, the route continues north providing service to Dorsey’s Search Village Center, Howard County Government Center, Normandy Shopping Center, Walmart and HCLS Miller Library/Ellicott City Senior Center.

Table 4-18: Route 405/Yellow Strength and Challenges

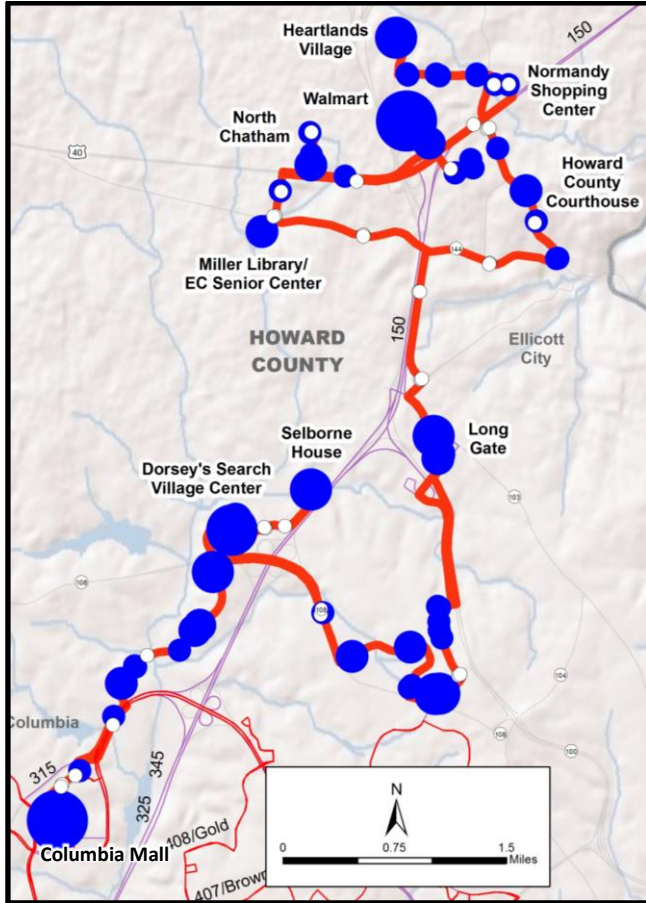
Strengths	Challenges
<ul style="list-style-type: none"> Consistent ridership throughout the route, highest ridership at Walmart, Miller Library, and Columbia Mall. 	<ul style="list-style-type: none"> Long headways (120 minutes). Circuitous routing at the end of the route; long travel times. No Sunday service.

Table 4-19: Route 405/Yellow – Service and Operating Characteristics

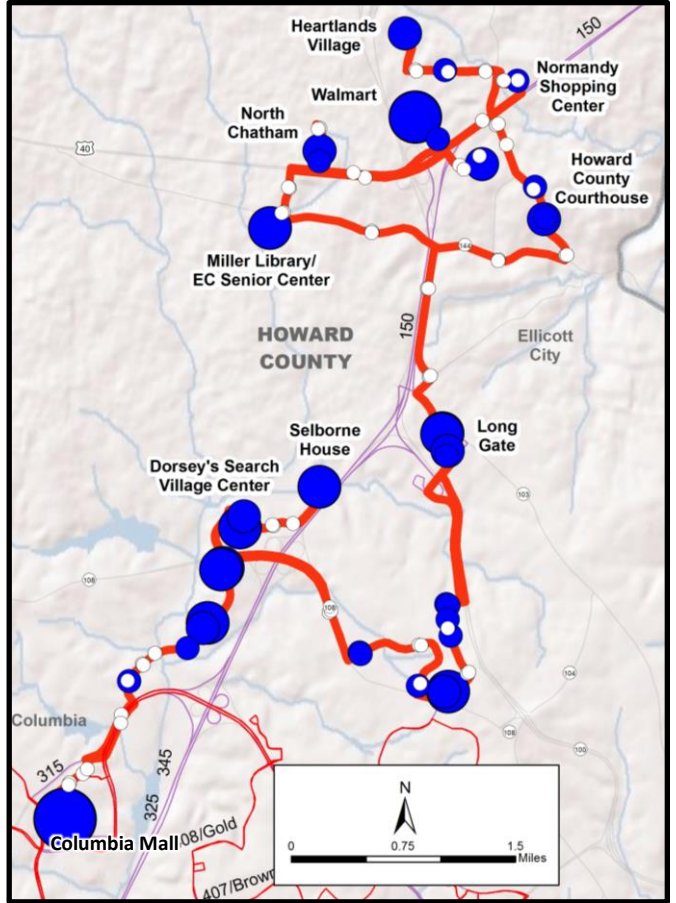
Service and Operating Characteristics		Loop A		Loop B	
		Weekdays	Saturday	Weekdays	Saturday
Span of Service		6:00 am - 10:11 pm	8:00 am - 8:11 pm	6:08 am – 6:10 pm	8:03 am – 6:10 pm
Frequency (minutes)	Peak	120	-	120	-
	Off-Peak	120	120	120	120
Cycle Time (minutes)		112	112	112	112
Layover Time (minutes)		7	7	7	7
One-way Trips		9	6	6	5
Daily Service Hours		13.10	11.20	11.20	9.30

Figure 4-40: Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 50
- 51 & Above

Figure 4-41: Route 405/Yellow – Travel Characteristics

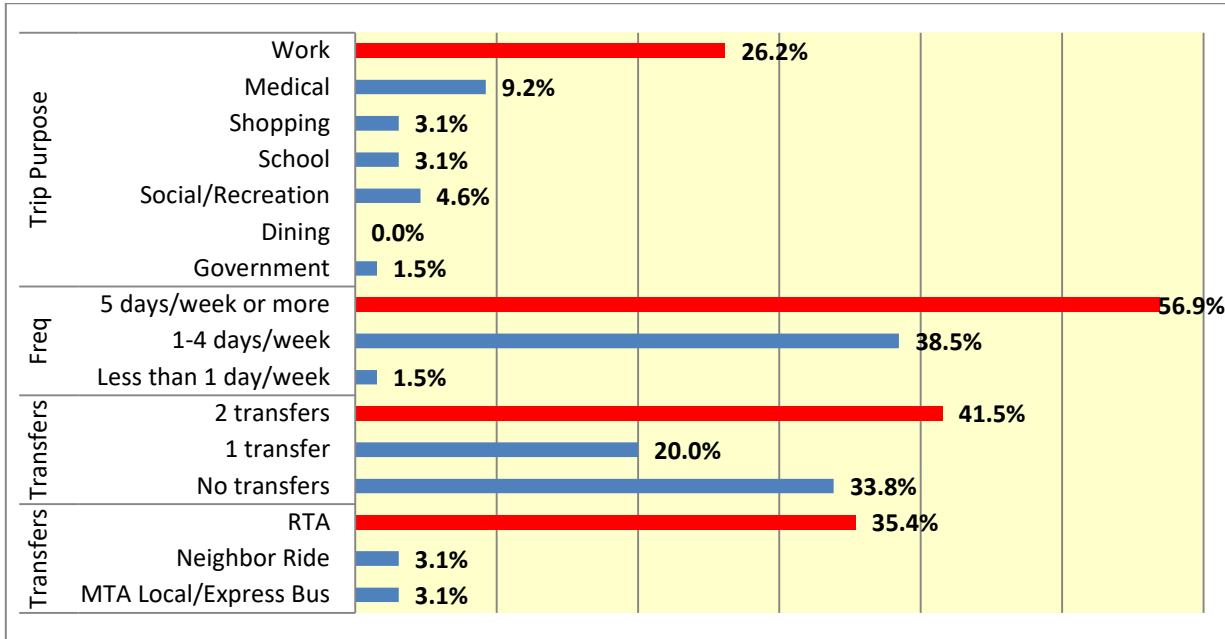


Figure 4-42: Route 405/Yellow – Demographic and Socioeconomic Characteristics

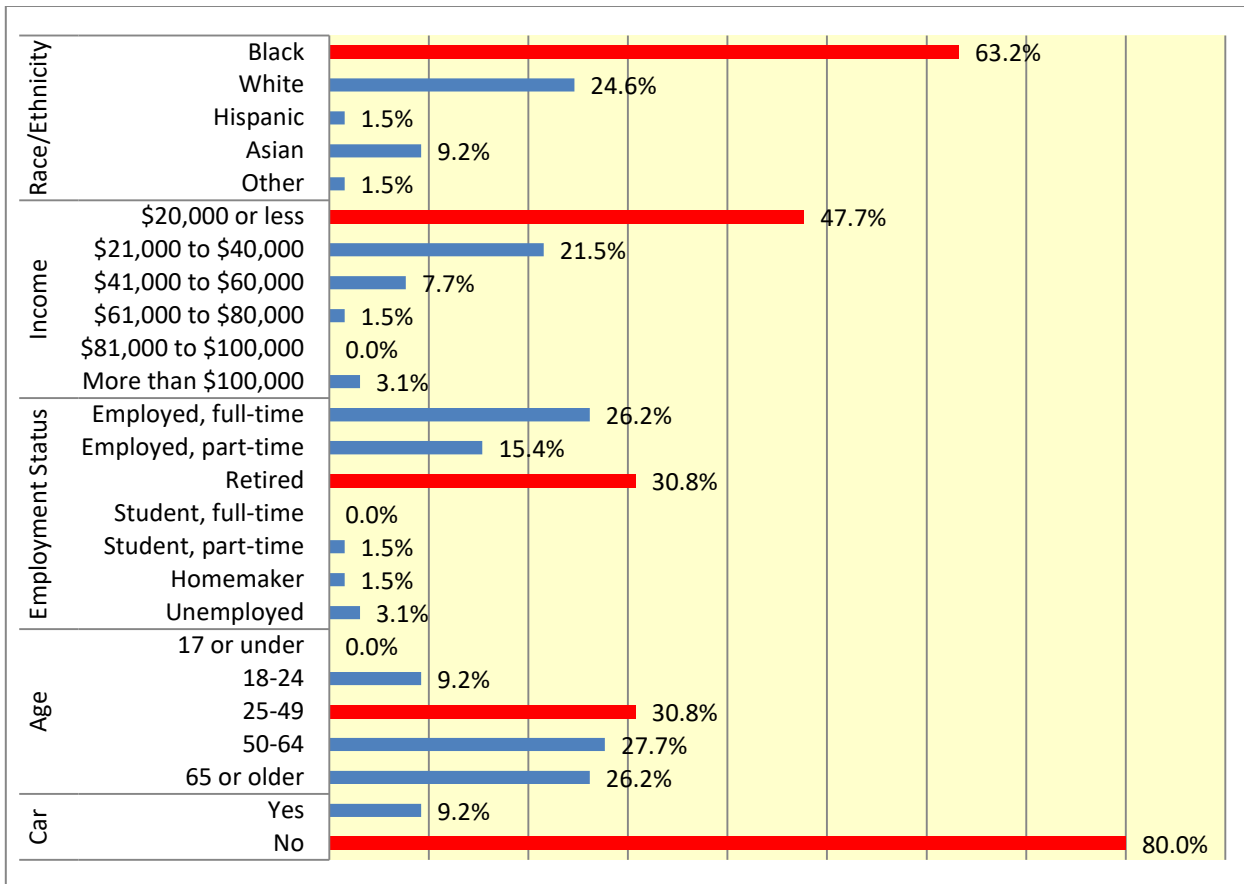
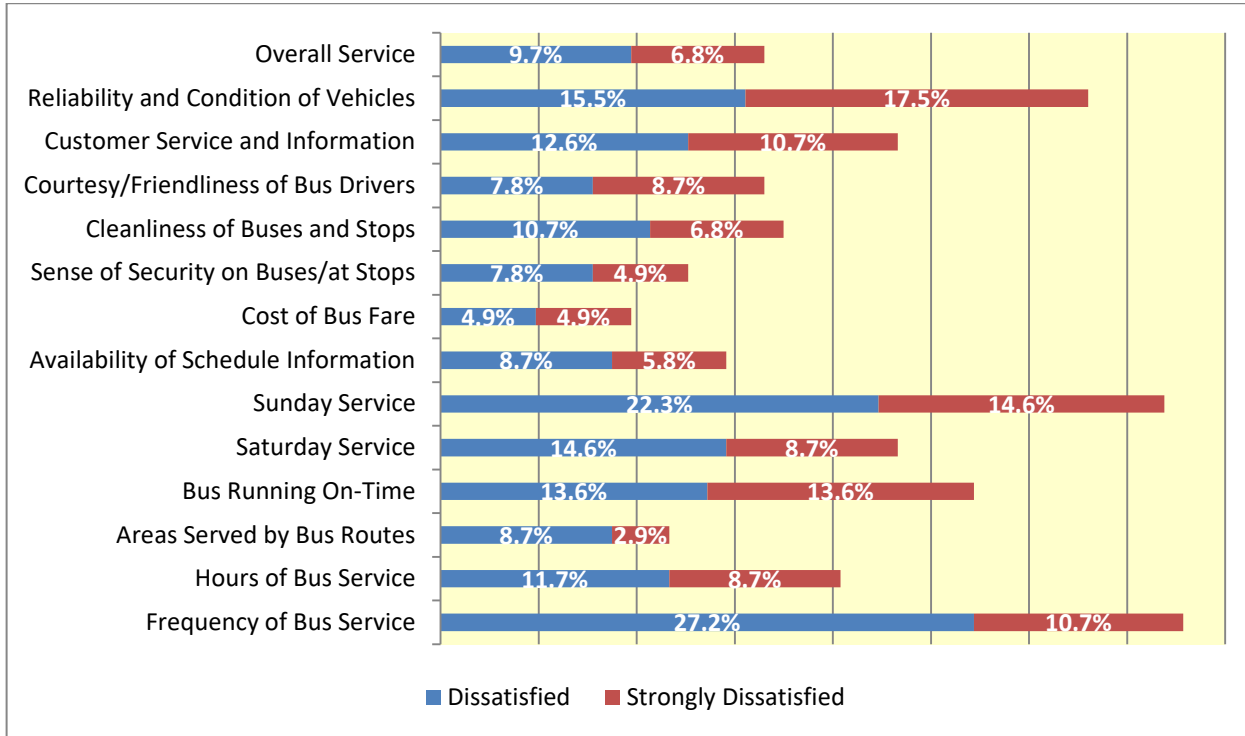
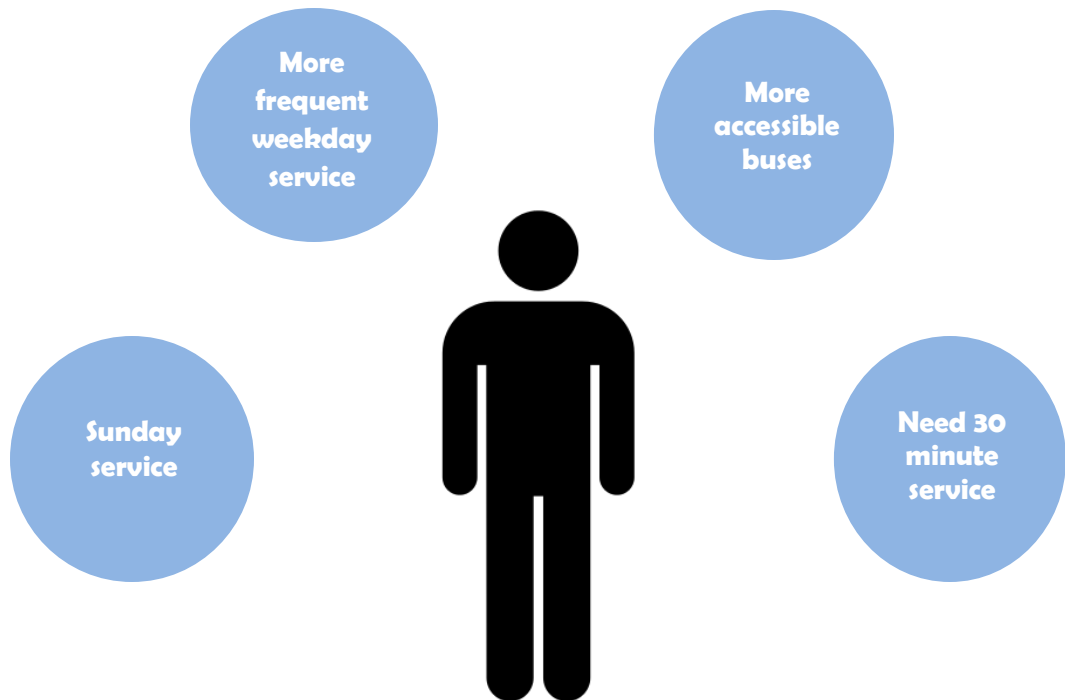


Figure 4-43: Route 405/Yellow – Rider Dissatisfaction



What Riders Want:



Route 406/Red: Columbia Mall – Howard County Complex

Service Area Description

Route 406/Red provides daily service in Howard County. The route originates at Columbia Mall, providing connections to Routes 401/Green, 404/Orange, 405/Yellow, 407/Brown, 408/Gold, 501/Silver, and 503/E. From Columbia Mall, the route travels west in Howard County, serving Long Reach Village Center. From the Village Center, the route travels south providing service to Columbia Crossing, Dobbin Center, Howard County Complex, and terminates at Snowden Square.

Table 4-20: Route 406/Red Strength and Challenges

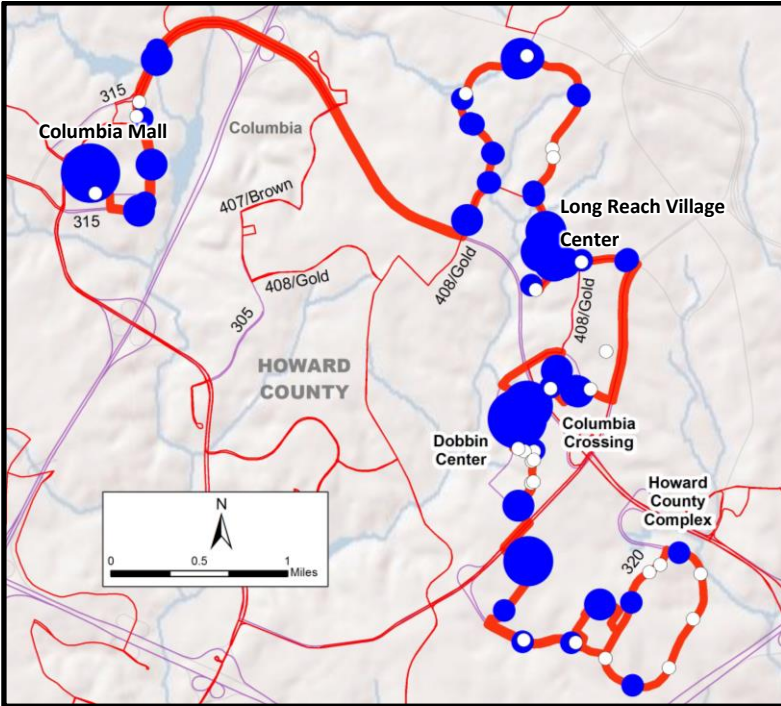
Strengths	Challenges
<ul style="list-style-type: none"> Consistent ridership along eastern part of route. Long Saturday span of service. 30 minute frequency all day on weekdays. 	<ul style="list-style-type: none"> Two hour headways on Sundays, on what is a retail-heavy route.

Table 4-21: Route 406/Red Service and Operating Characteristics

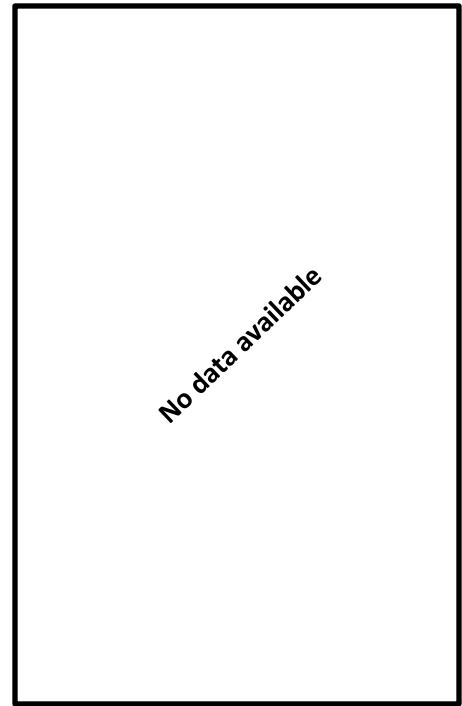
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		5:35 am - 11:19 pm	7:37 am - 10:20 pm	9:10 am - 6:21 pm
Frequency (minutes)	Peak	30	-	-
	Off-Peak	30	60	120
One-way Trips		30	13	6
Cycle Time (minutes)		110	118	117
Layover Time (minutes)		10	11	12
Daily Service Hours		55.28	24.97	8.92

Figure 4-44: Route 406/Red – Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- | | |
|---|--|
| ○ 0 | ● 21 - 50 |
| ● 1 - 5 | ● 51 & Above |
| ● 6 - 10 | |
| ● 11 - 20 | |

Figure 4-45: Route 406/Red – Travel Characteristics

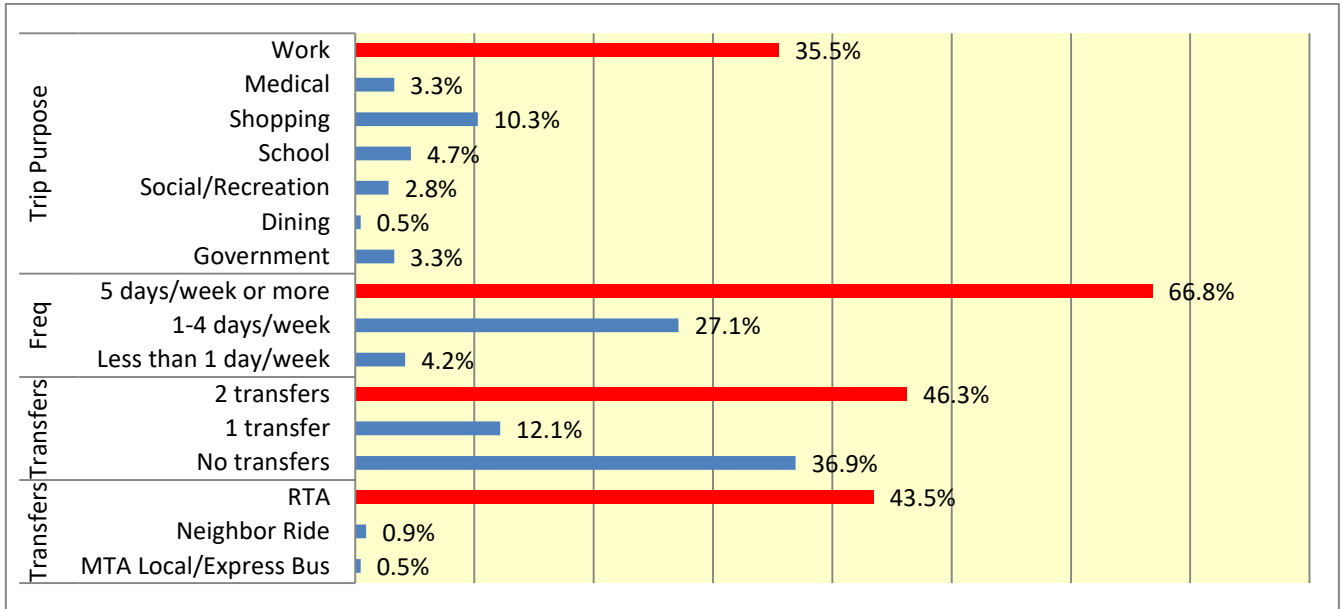


Figure 4-46: Route 406/Red – Demographic and Socioeconomic Characteristics

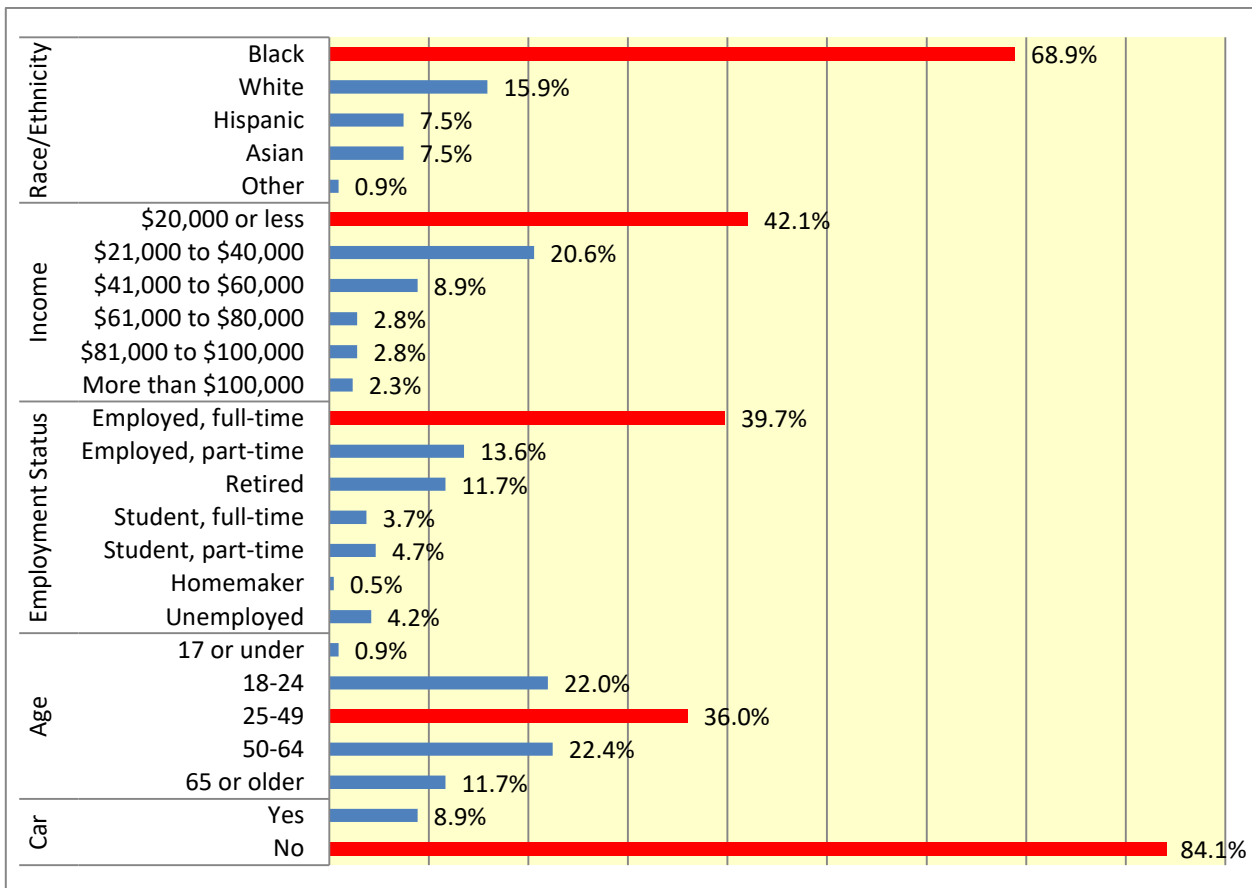
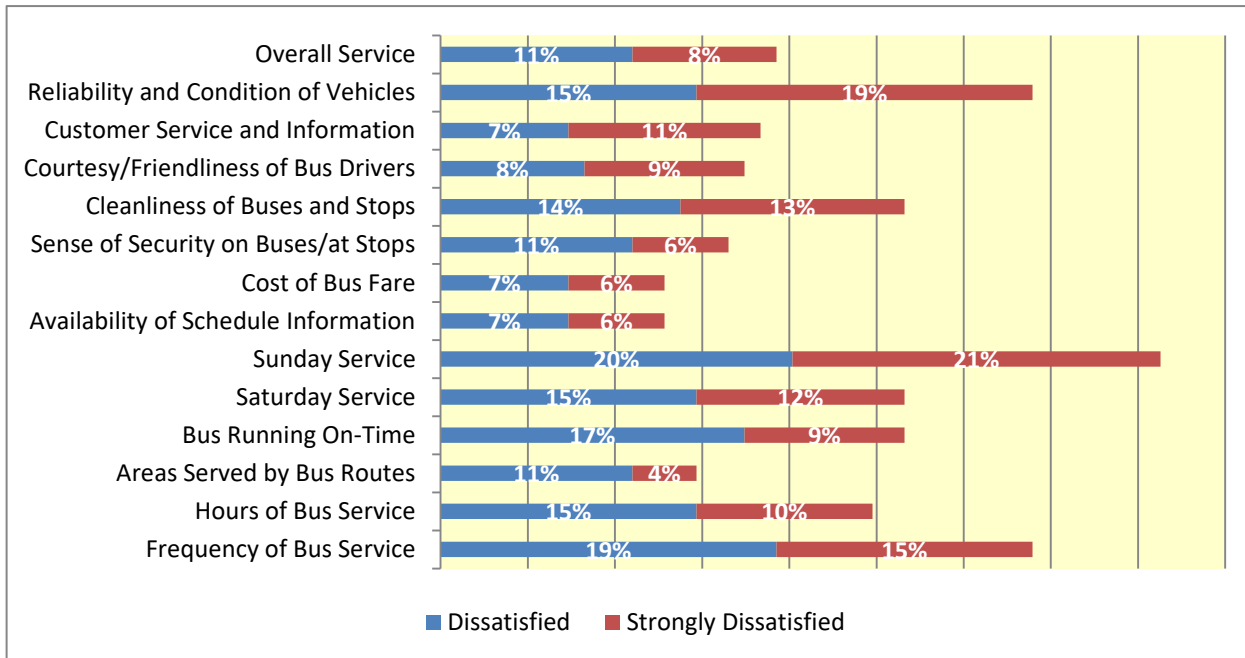
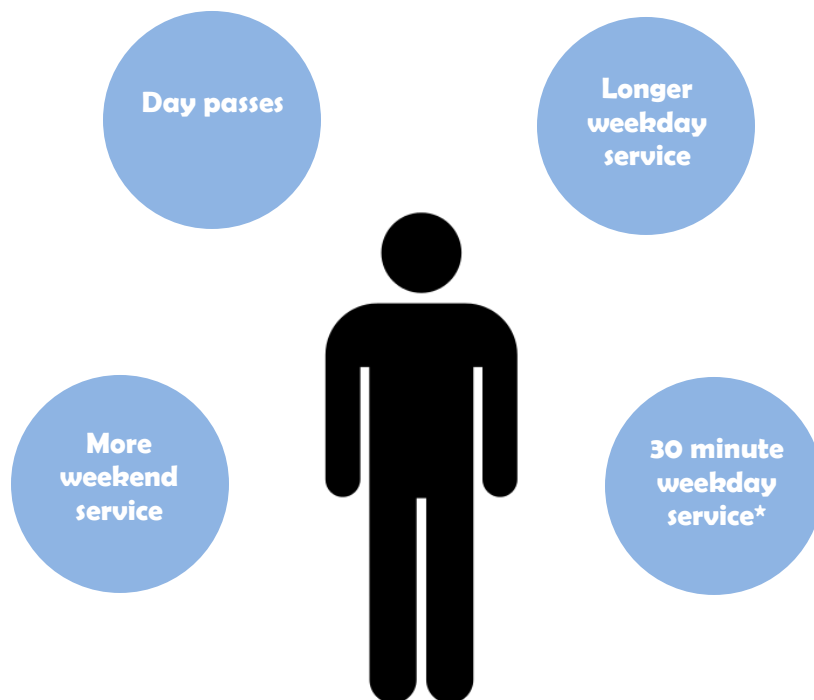


Figure 4-47: Route 406/Red – Rider Dissatisfaction



What Riders Want



*This route already has 30 minute weekday service, so the rider request suggests a lack of awareness or inconsistent availability.

Route 407/Brown: Columbia Mall – Kings Contrivance Village Center

Service Area Description

Route 407/Brown provides daily service within northern Howard County. The route originates at Columbia Mall, providing connections to Routes 401/Green, 404/Orange, 405/Yellow, 406/Red, 408/Gold, 501/Silver, and 503/E. From Columbia Mall, the route serves the Oakland Mills Village Center, Owen Brown Village Center, Snowden Square, and Guildford Elementary School. The route then travels west and terminates service at Kings Contrivance Village Center.

Table 4-22: Route 407/Brown Strength and Challenges

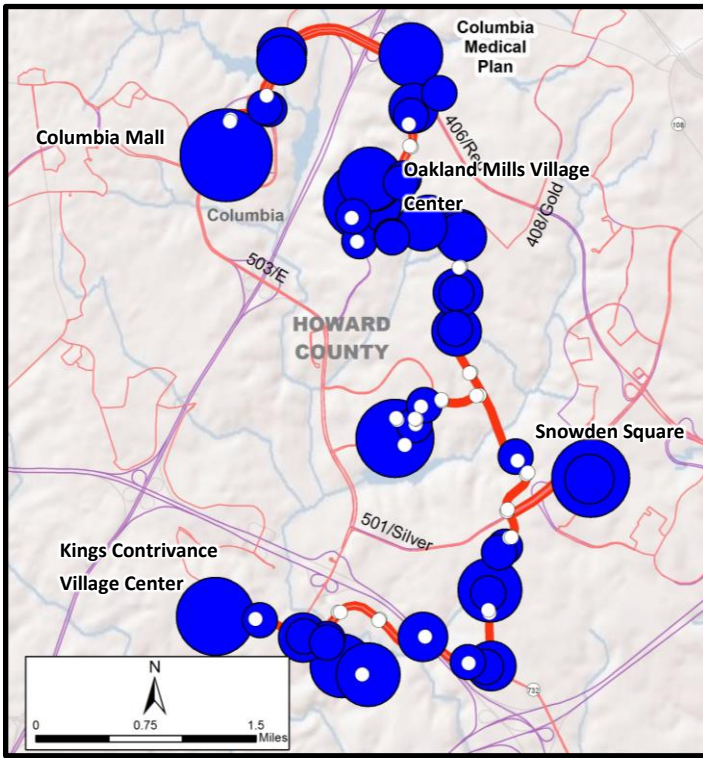
Strengths	Challenges
<ul style="list-style-type: none"> Alternates with 408 at many stops to offer 30 minute service at those locations. Serves five activity centers – Columbia Mall, Oakland Mills Village Center, Owen Brown Village Center, Snowden Square, and Kings Contrivance Village Center. High ridership. 	<ul style="list-style-type: none"> Route makes four deviations from alignment, which increases running time. Long Sunday headways (120 minutes).

Table 4-23: 407/Brown Service and Operating Characteristics

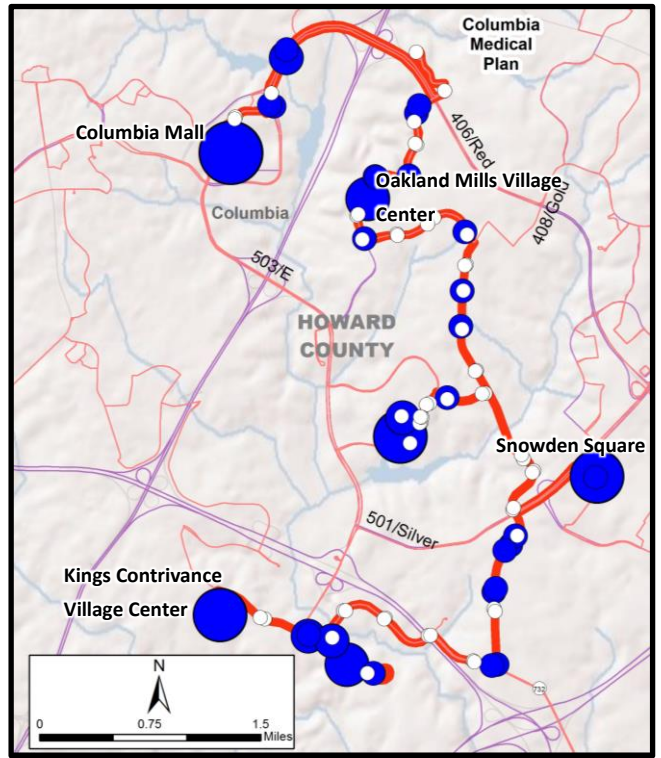
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		5:35 am - 11:19 pm	7:37 am - 10:20 pm	9:05 am - 6:48 pm
Frequency (minutes)	Peak	60	-	-
	Off-Peak	60	60	120
Cycle Time (minutes)		107	107	107
Layover Time (minutes)		10	2	10
Roundtrips		66	26	12
Daily Service Hours		29.33	18.33	9.17

Figure 4-48: Route 407/Brown – Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- | | |
|---|--|
| ○ 0 | ● 21 - 50 |
| ● 1 - 5 | ● 51 & Above |
| ● 6 - 10 | |
| ● 11 - 20 | |

Figure 4-49: Route 407/Brown – Travel Characteristics

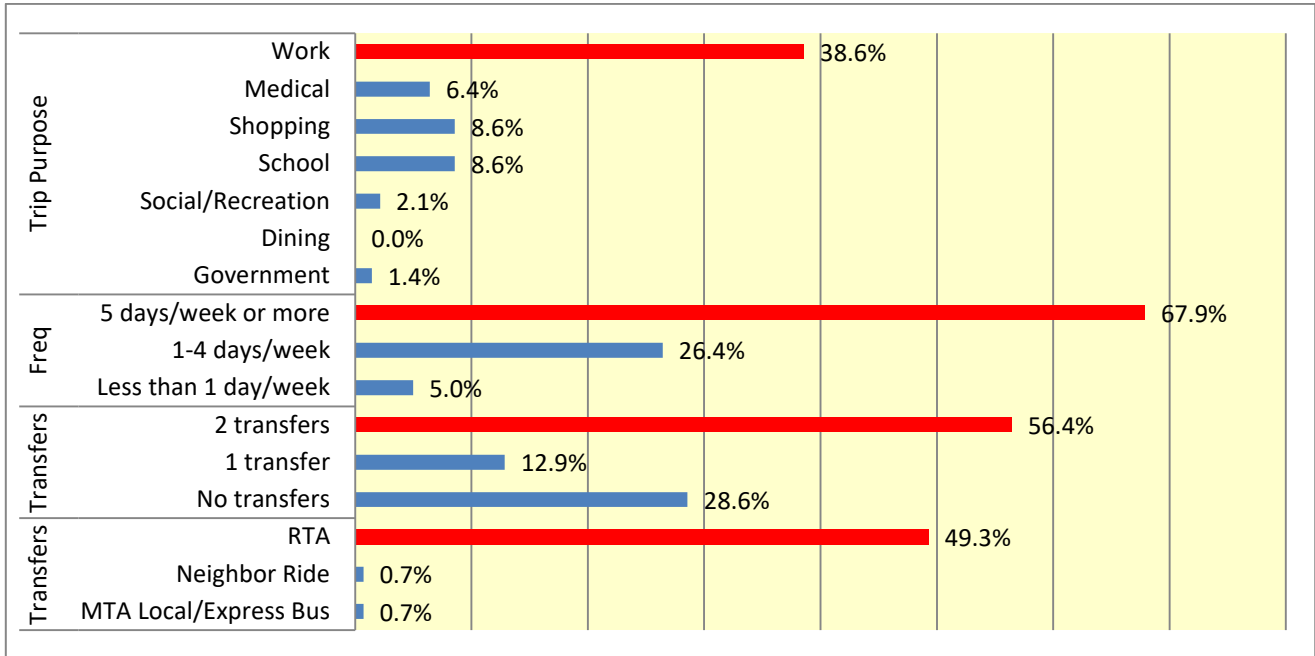


Figure 4-50: Route 407/Brown – Demographic and Socioeconomic Characteristics

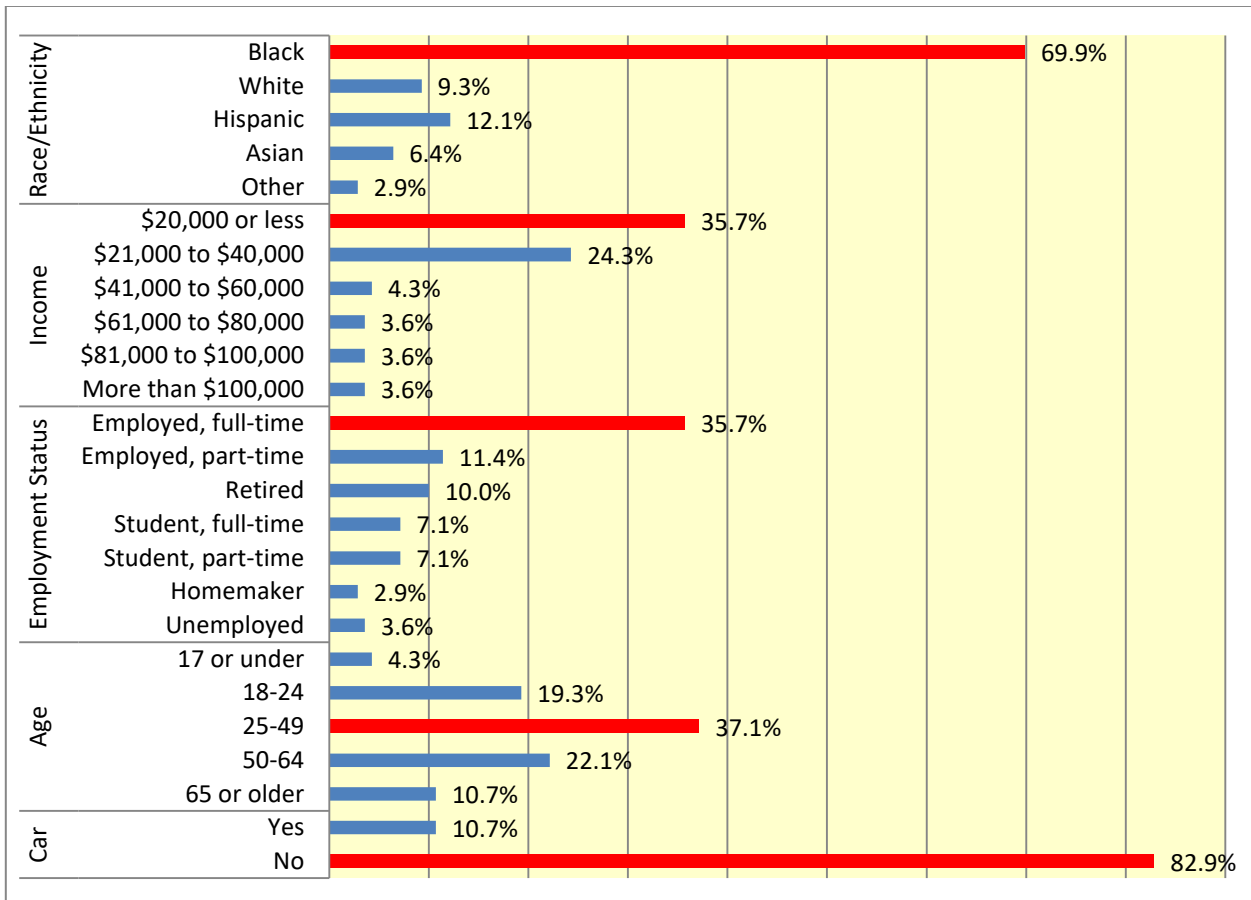
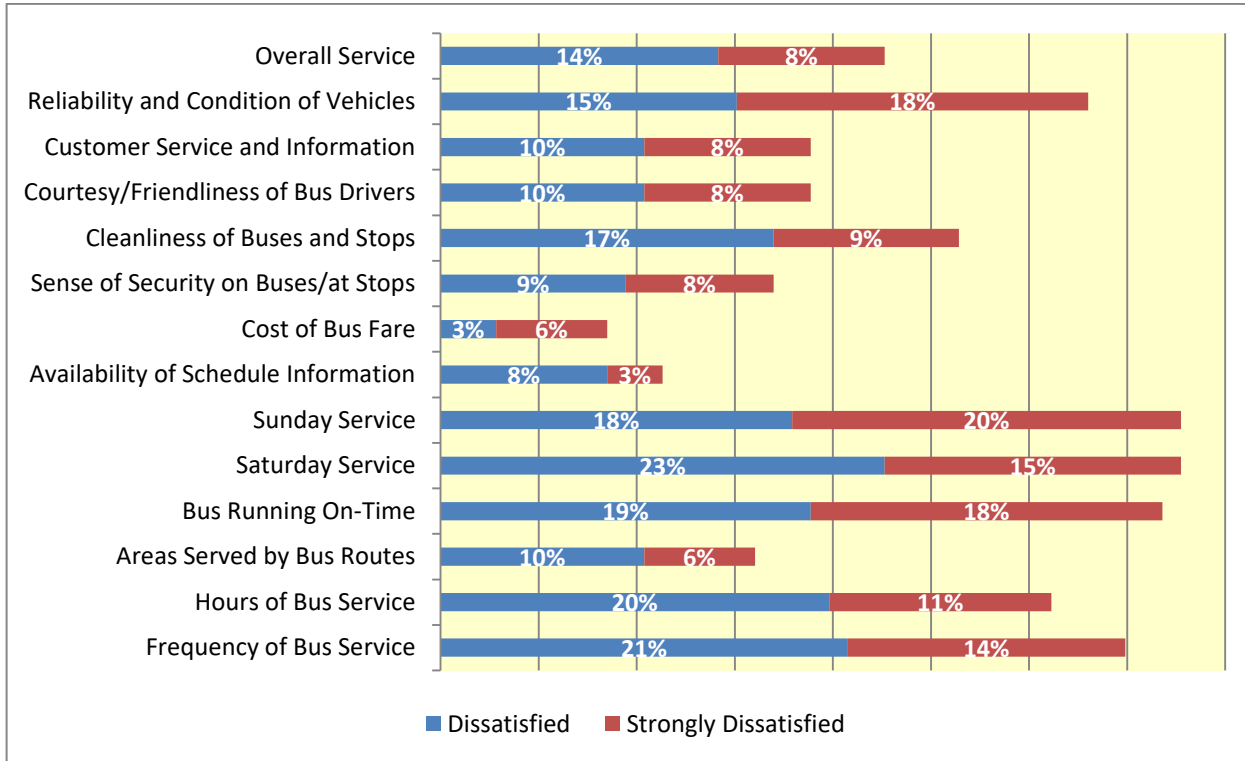
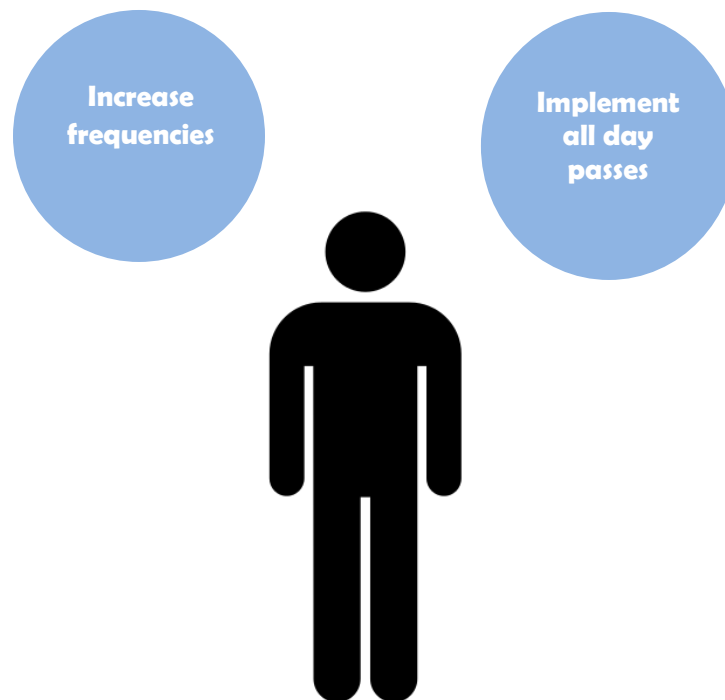


Figure 4-51: Route 407/Brown – Rider Dissatisfaction



What Riders Want



Route 408/Gold: Columbia Mall – MD Food Center

Service Area Description

Route 408/Gold operates weekday and Saturday service throughout northern Howard County. The route originates at Columbia Mall, providing connections to Routes 401/Green, 404/Orange, 405/Yellow, 406/Red, 407/Brown, 501/Silver, and 503/E. From Columbia Mall, the route travels west providing service to Columbia Medical Plan, Oakland Mills Village Center, and Long Reach Village Center. From the Village Center, the route travels south to serve the Snowden River Park and Ride and Sherwood Crossing, terminating service at the MD Food Center.

Table 4-24: Route 408/Gold Strength and Challenges

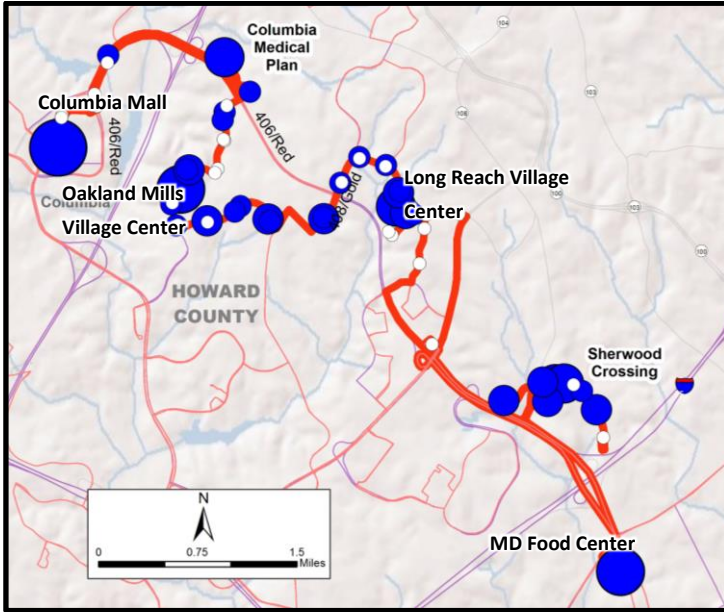
Strengths	Challenges
<ul style="list-style-type: none"> Long weekday span of service. 	<ul style="list-style-type: none"> Long frequencies (120 minutes). Lack of Sunday service on retail-heavy route.

Table 4-25: 408/Gold Service and Operating Characteristics

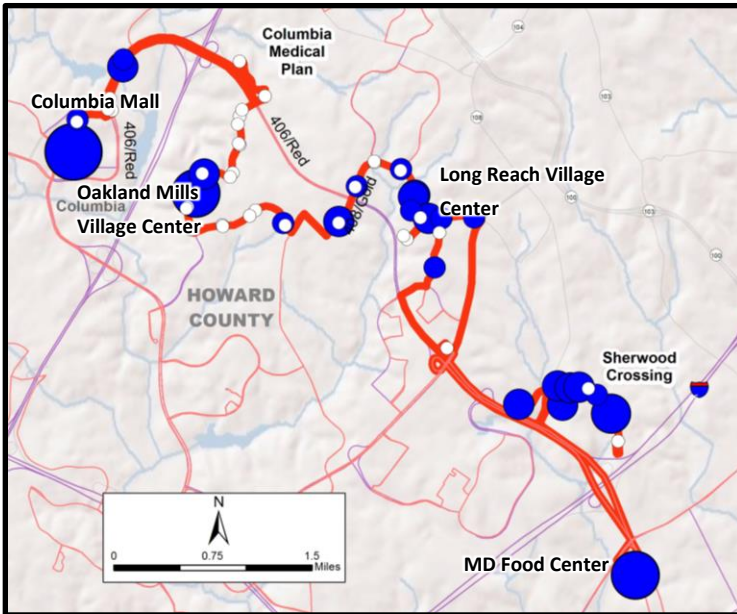
Service and Operating Characteristics		Weekdays	Saturday
Span of Service		5:53 am - 10:17 pm	7:53 am- 10:17 pm
Frequency (minutes)	Peak	60	-
	Off-Peak	120	120
One-Way Trips		26	8
Cycle Time (minutes)		111	111
Layover Time (minutes)		5	5
Daily Service Hours		24.05	24.05

Figure 4-52: Route 408/Gold – Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- 0
- 1 - 5
- 6 - 10
- 11 - 20
- 21 - 50
- 51 & Above

Figure 4-53: Route 408/Gold – Travel Characteristics

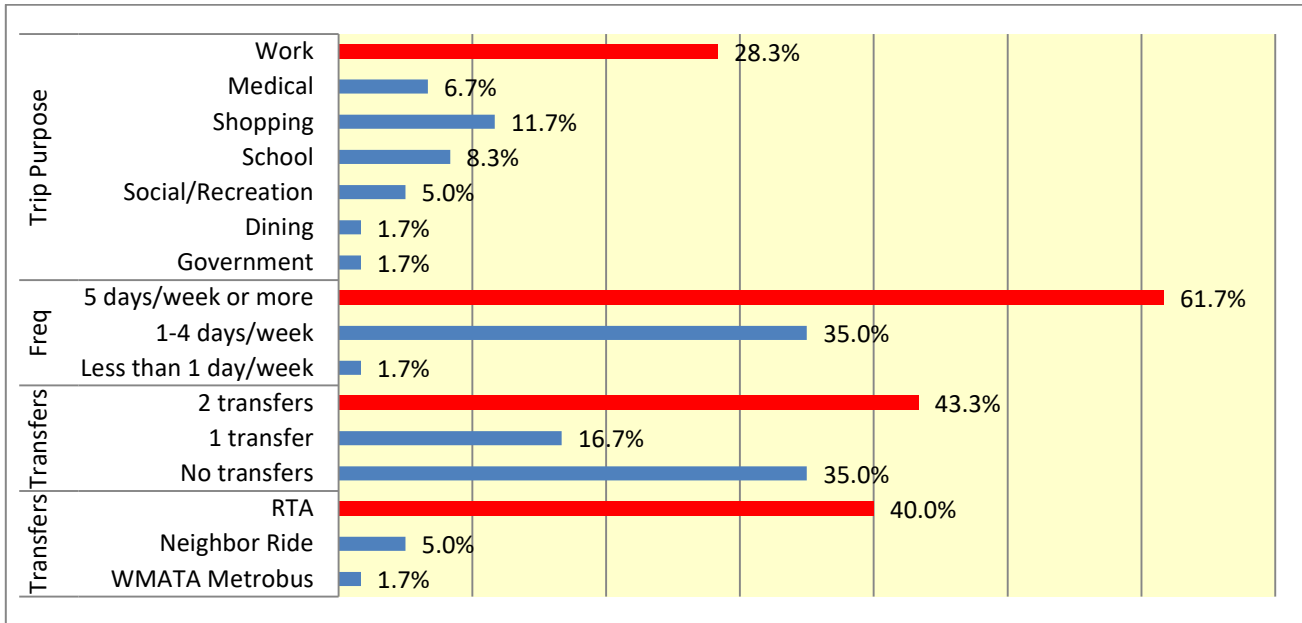


Figure 4-54: Route 408/Gold – Demographic and Socioeconomic Characteristics

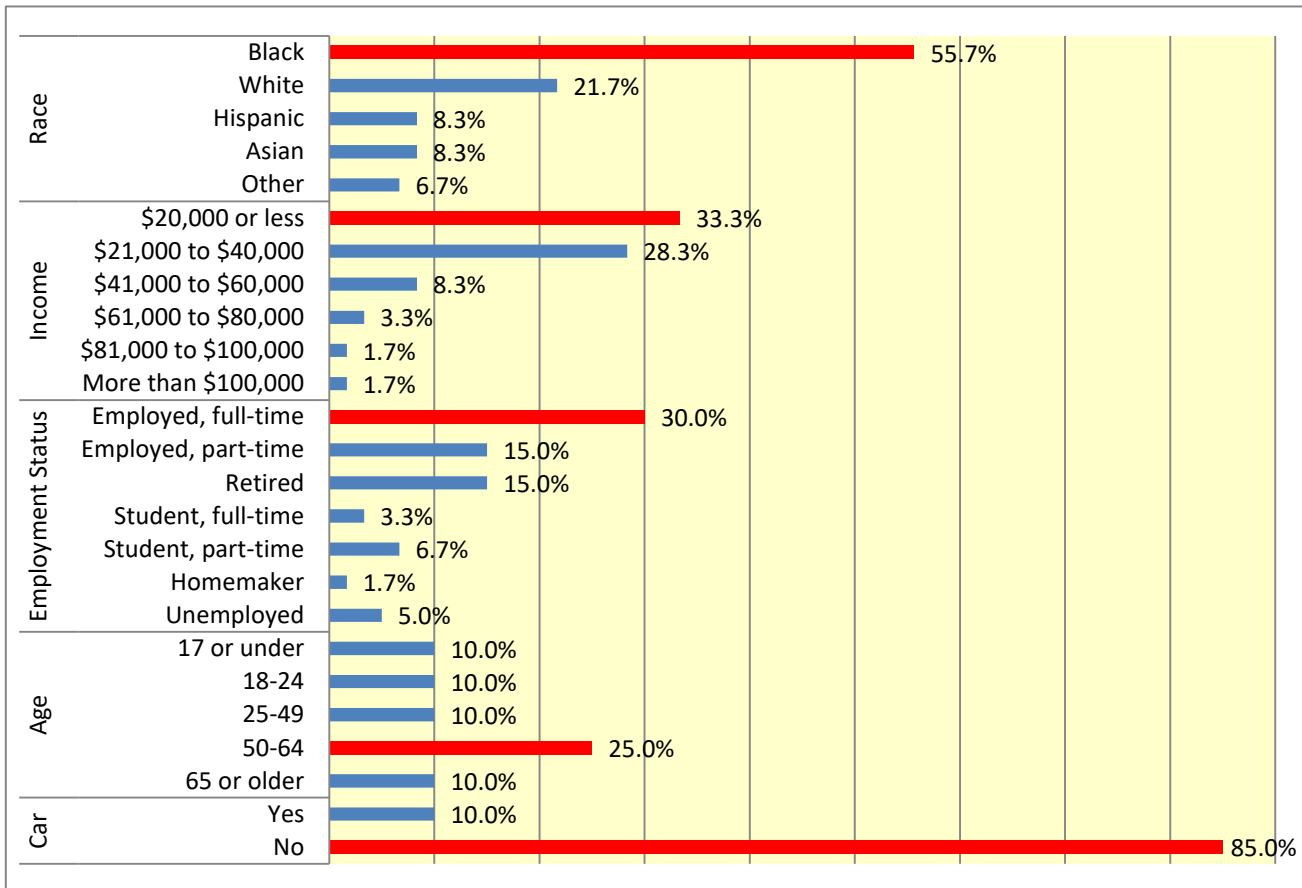
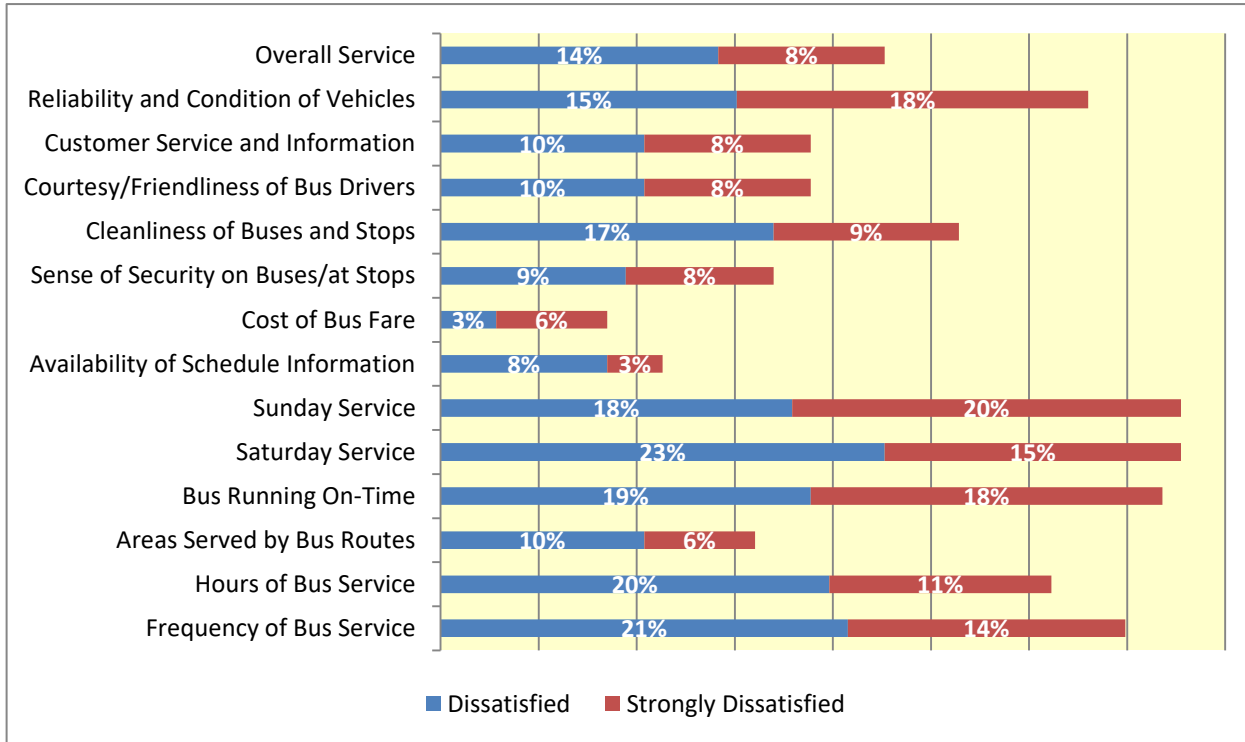
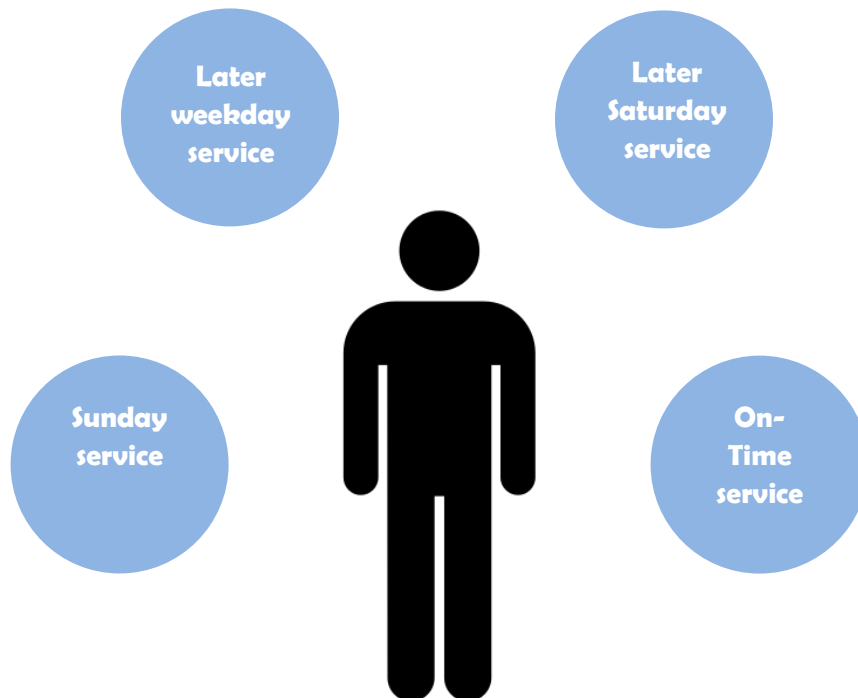


Figure 4-55: Route 408/Gold – Rider Dissatisfaction



What Riders Want



Route 409A (Previous 409/Purple): Towne Centre at Laurel – Elkridge Corners Shopping Center and 409/B: North Laurel Community Center and MD Food Center

Service Area Description

Route 409A (previous 409/Purple) provides weekday and Saturday service along Route 1, mostly in Howard County. The route originates at the Towne Centre at Laurel, providing connections to Routes 301/A 302/G, 502/B, and 503/E. From the Towne Centre, the route primarily travels along Washington Boulevard, providing connections to Perkins Hospital, MD Food Center, and Dorsey MARC Station, terminating service at Elkridge Corners. The recently implemented 409/B operates between the North Laurel Community Center and MD Food Center, providing service to the Salvation Army.

Since the 409/B was implemented in October 2017, the following tables and figures are not reflective of that service.

Table 4-26: Route 409/Purple Strength and Challenges

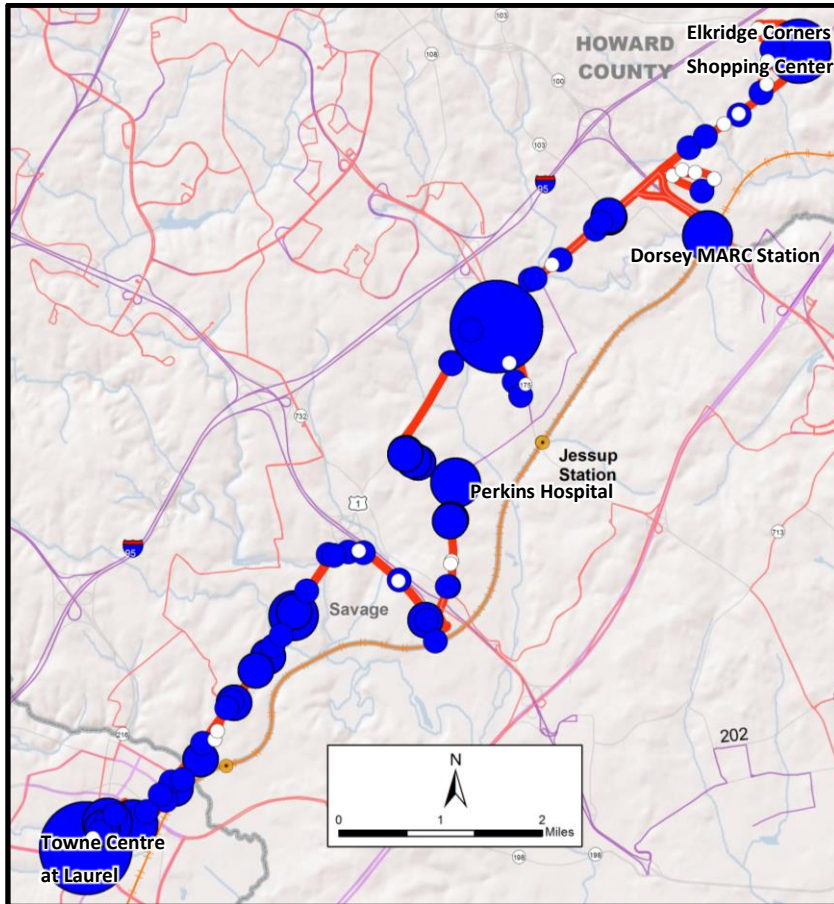
Strengths	Challenges
<ul style="list-style-type: none"> Primarily straight alignment along Washington Boulevard. Serves three trip generators/destinations, and one transit center. 	<ul style="list-style-type: none"> Long off peak frequencies (120 minutes). Difficulty making running time No Sunday service.

Table 4-27: Route 409/Purple Service and Operating Characteristics

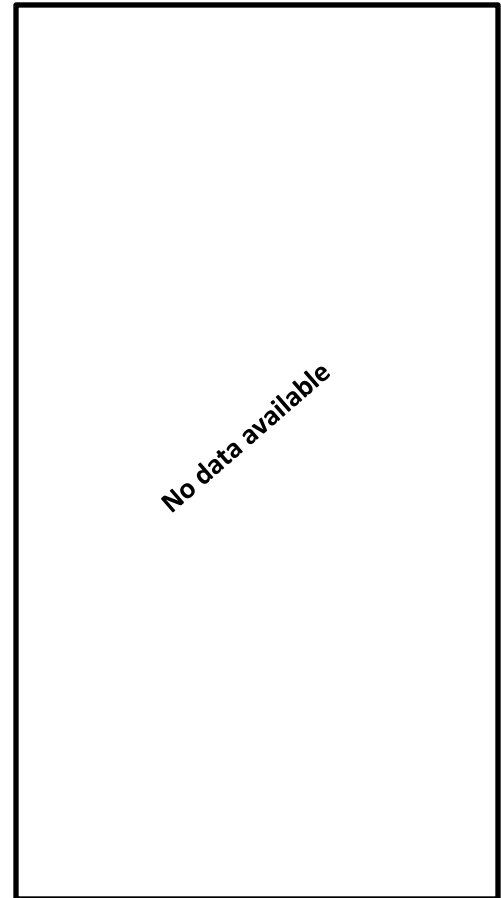
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		6:00 am - 9:55 pm	9:00 am - 9:50 pm	-
Frequency (minutes)	Peak	60	120	-
	Off-Peak	120		
One-Way Trips		12	6	-
Cycle Time (minutes)		115	110	-
Layover Time (minutes)		5	10	-
Daily Service Hours		23.00	13.42	-

Figure 4-56: Route 409/Purple – Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

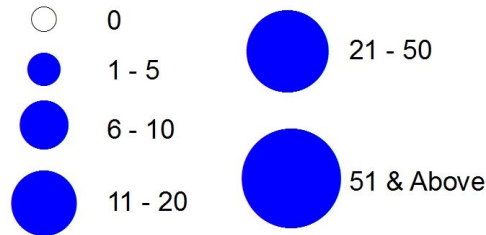


Figure 4-57: Route 409/Purple – Travel Characteristics

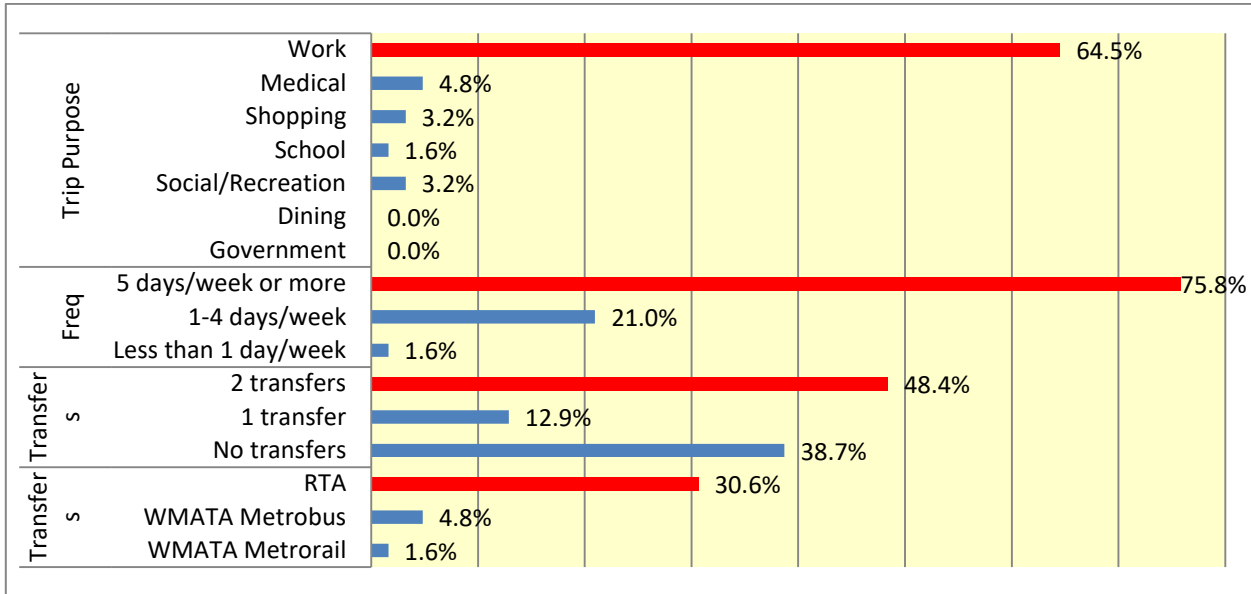


Figure 4-58: Route 409/Purple – Demographics and Socioeconomic Characteristics

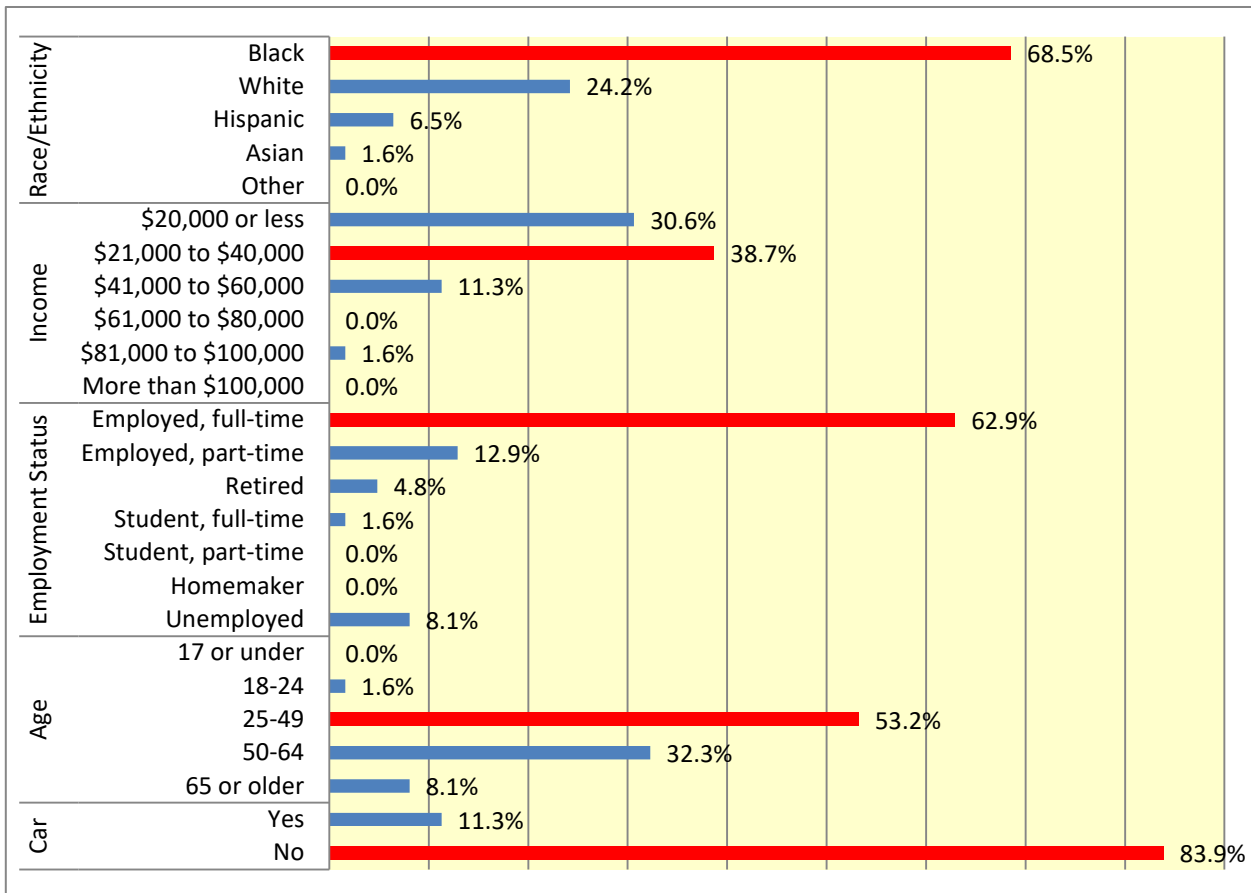
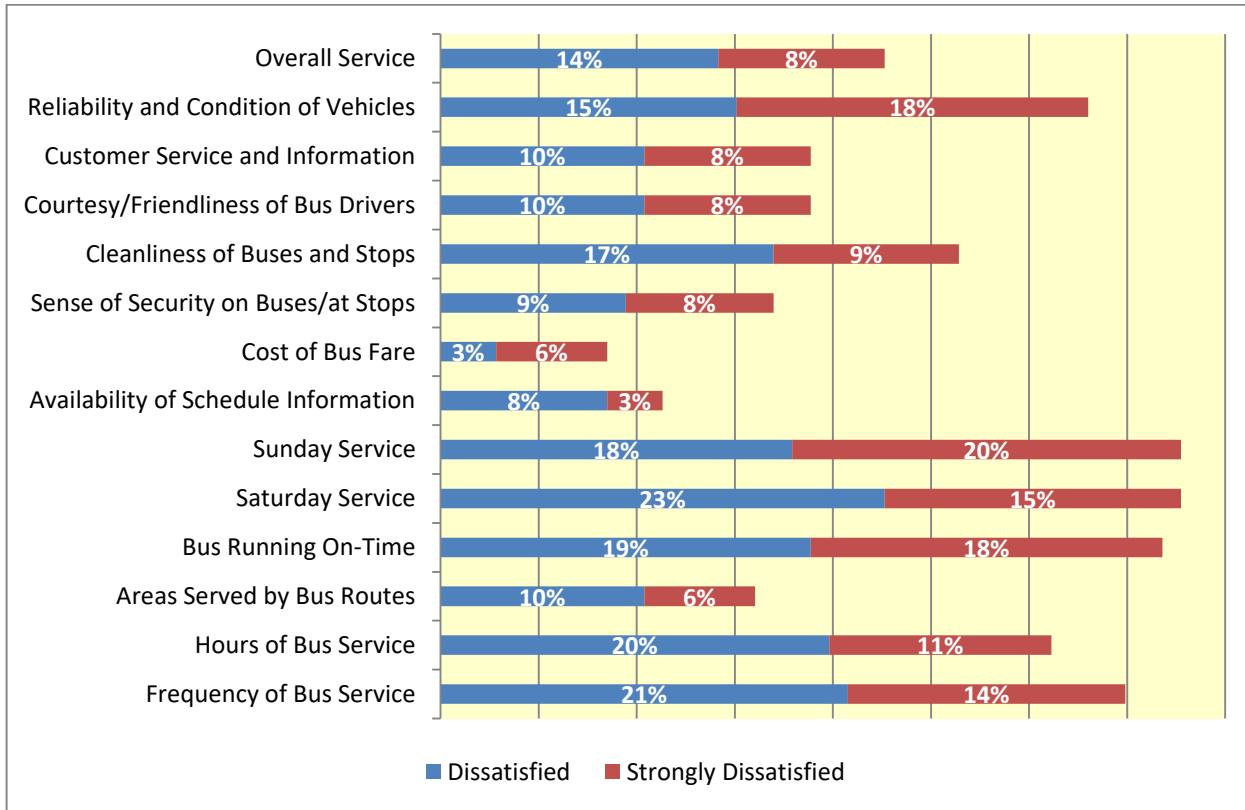
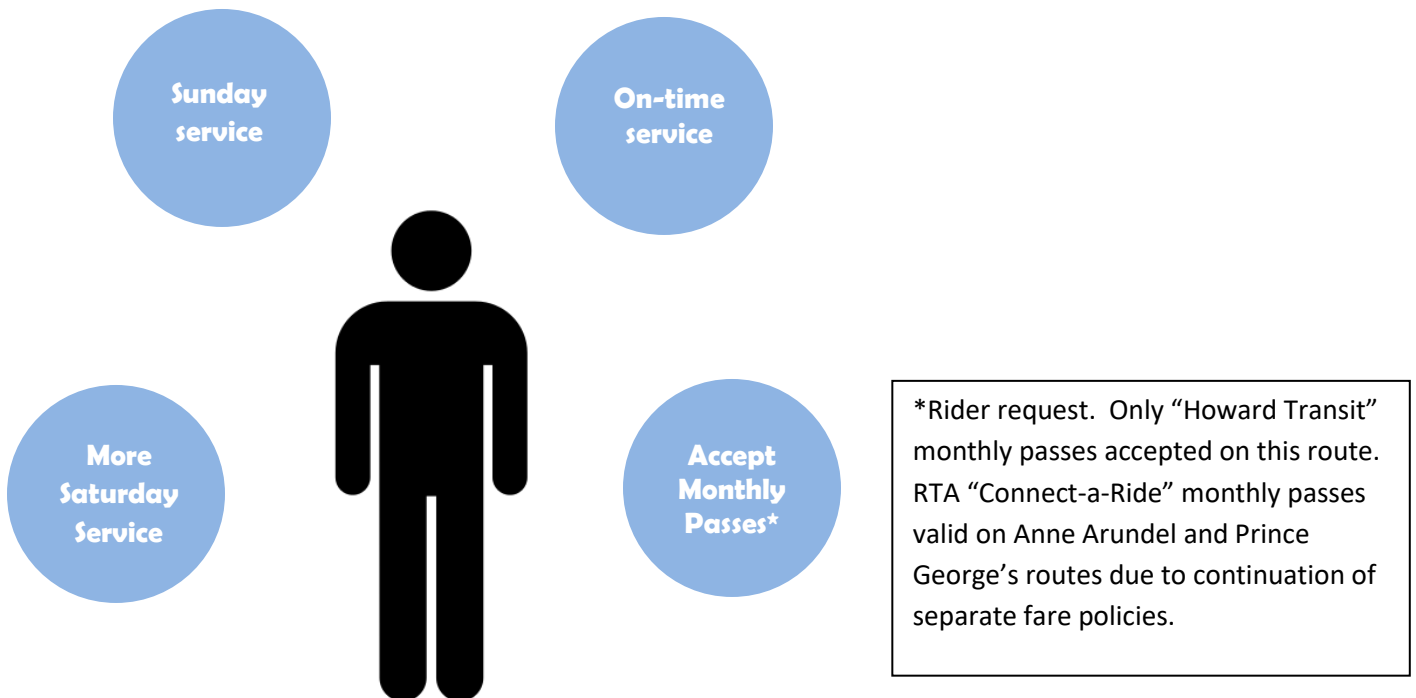


Figure 4-59: Route 409/Purple – Rider Dissatisfaction



What Riders Want



Route 501/Silver: Columbia Mall – BWI Marshall Airport

Service Area Description

Route 501/Silver provides daily service within eastern Howard County and western Anne Arundel County. The route originates at the Columbia Mall, providing connections to Routes 401/Green, 404/Orange, 405/Yellow, 406/Red, 407/Brown, 408/Gold, and 503/E. From Columbia Mall, the route travels east toward Snowden Square and Snowden River Park and Ride. The route continues east providing service to the MD Food Center (connections to 409 and 409B), Dorsey MARC Station, Arundel Mills Mall (connections to 201/J, 202K, 502/B, and MTA 75), and BWI MARC/Amtrak Station, and finally terminates at BWI Marshall Airport.

Table 4-28: Route 501/Silver Strength and Challenges

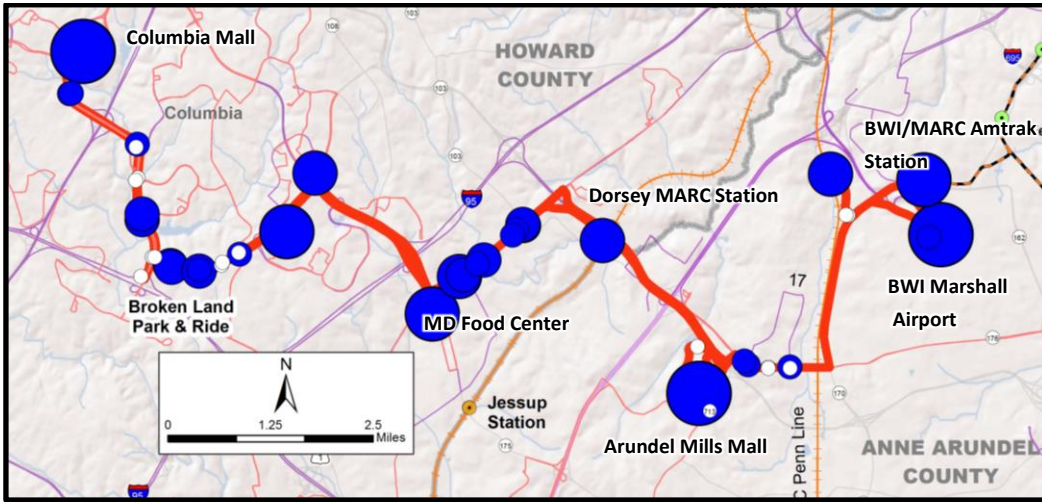
Strengths	Challenges
<ul style="list-style-type: none"> Serves six activity centers – Columbia Mall, Snowden Square, MD Food Center, Arundel Mills Mall, BWI Marshall Airport and BWI Business Park. Serves two transit facilities - Dorsey MARC Station and BWI/MARC Amtrak Station. 	<ul style="list-style-type: none"> Running time. 90-minute headways (effective 10/1/2017)

Table 4-29: Route 501/Silver Service and Operating Characteristics

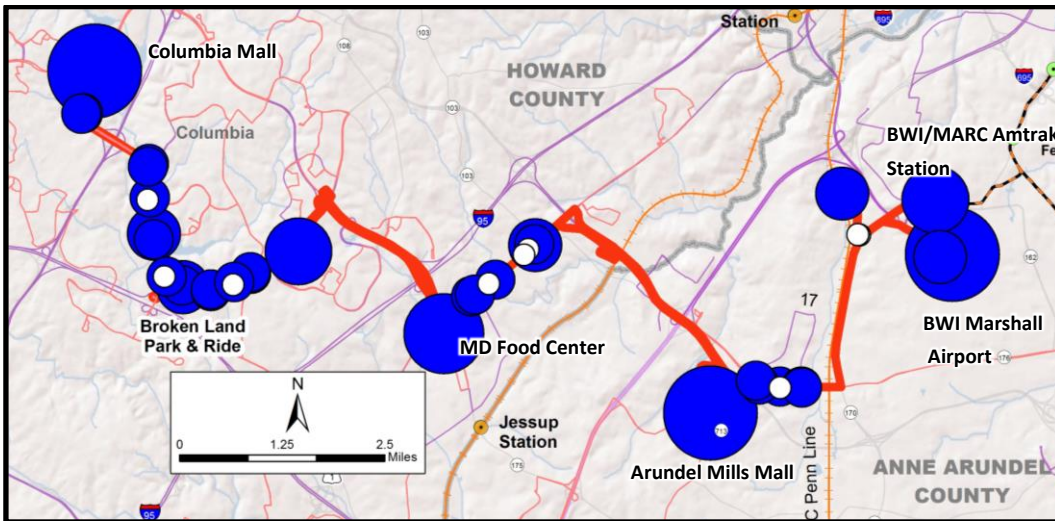
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		5:28 am - 10:59 pm	7:03 am - 10:59 pm	9:03 am – 6:59 pm
Frequency (minutes)	Peak	90	-	-
	Off-Peak	90	60	120
One-Way Trips		17	12	5
Cycle Time (minutes)		169	113	117
Layover Time (minutes)		4	4	4
Daily Service Hours		49.30	37.70	14.50

Figure 4-60: Route 501/Silver – Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- + MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

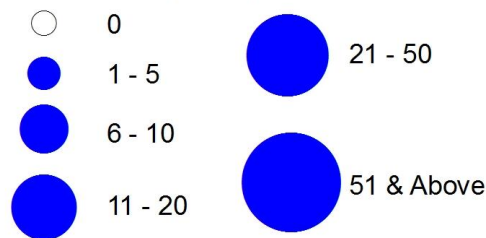


Figure 4-61: Route 501/Silver – Travel Characteristics

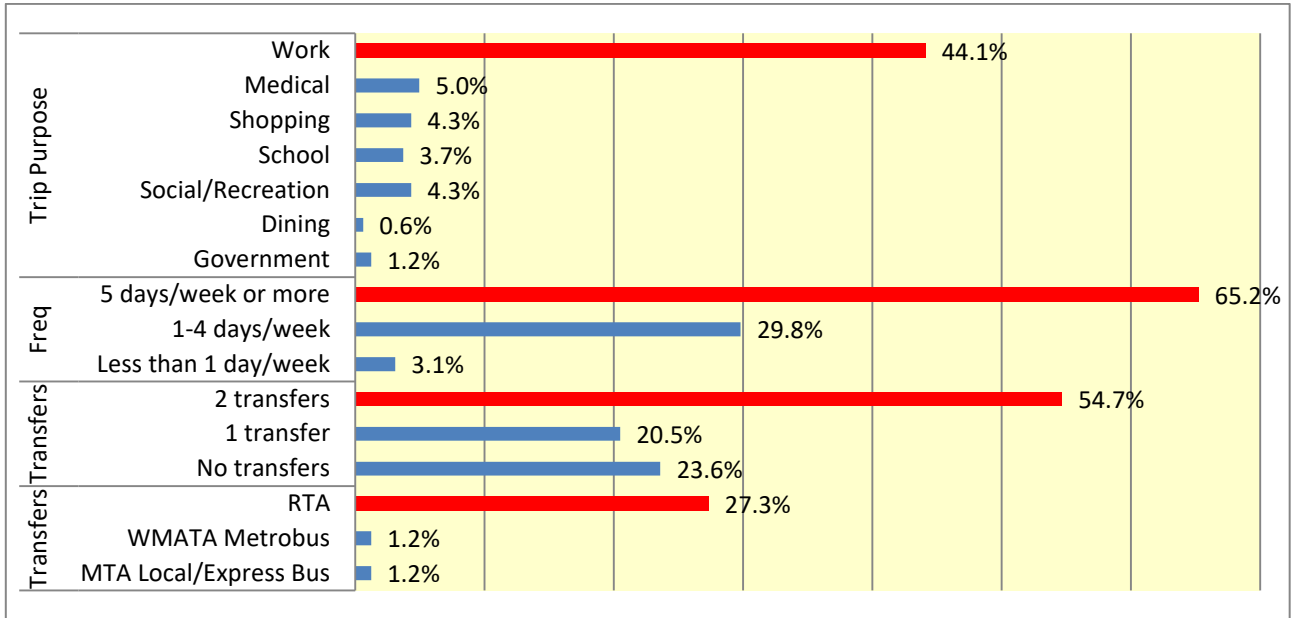


Figure 4-62: Route 501/Silver- Demographic and Socioeconomic Characteristics

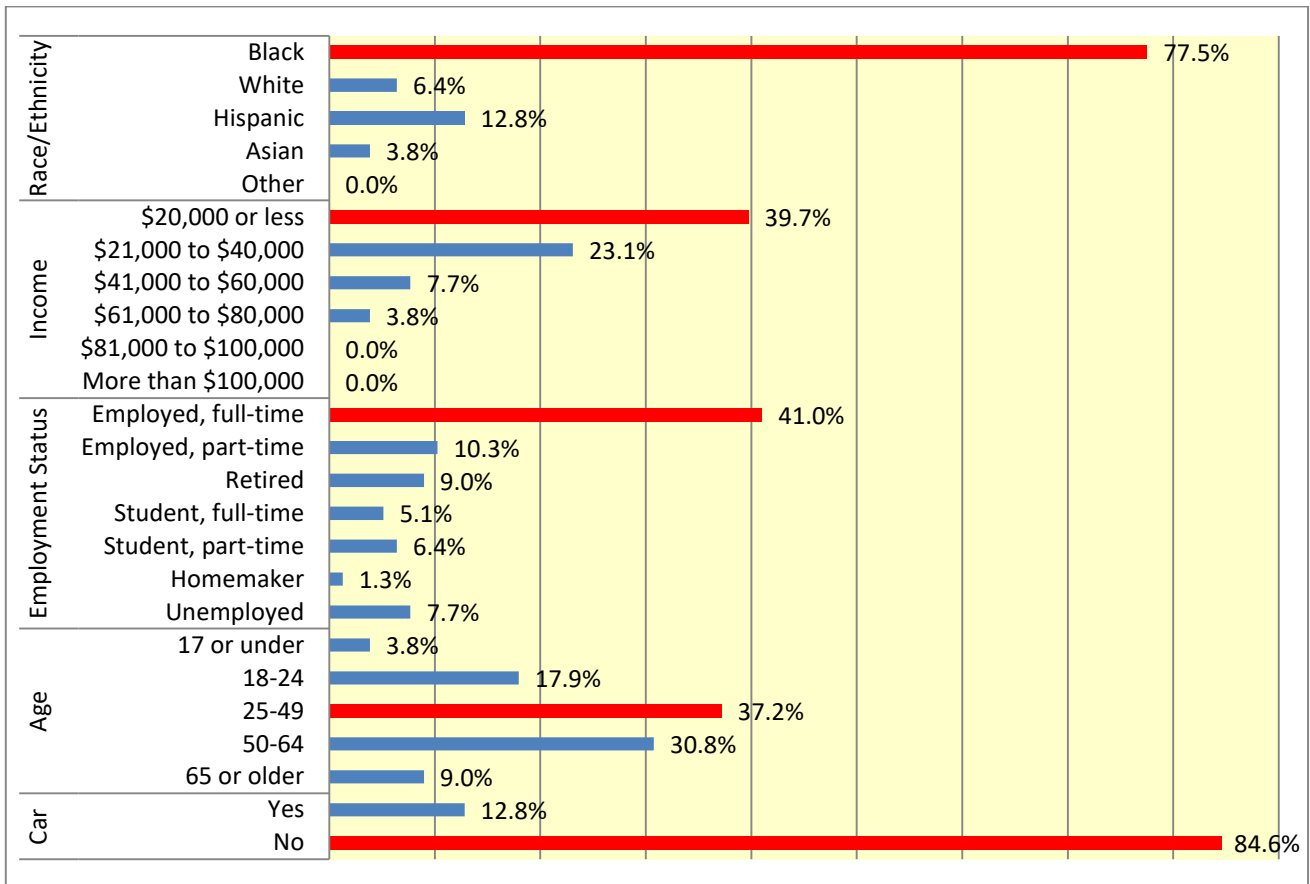
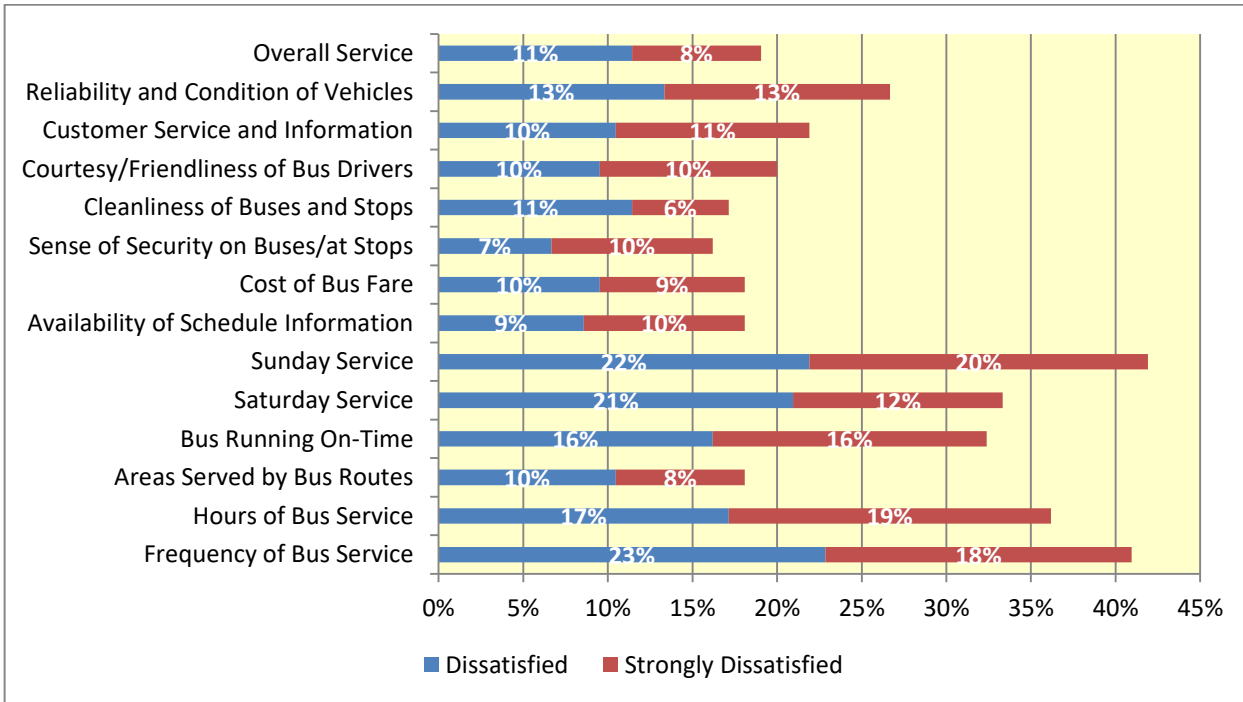
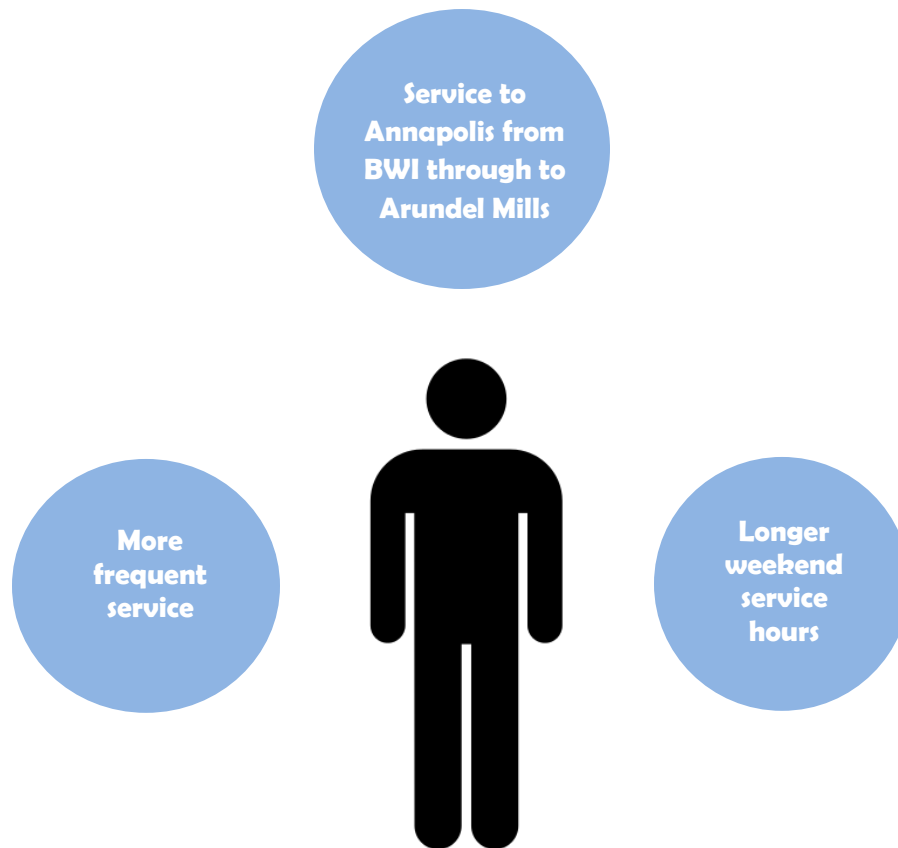


Figure 4-63: Route 501/Silver – Rider Dissatisfaction



What Riders Want



Route 502/B: Towne Centre at Laurel – Arundel Mills Mall

Service Area Description

Route 502/B provides daily service between Anne Arundel County and Laurel. The route originates at Towne Centre at Laurel, providing connections to Routes 301/A, 302/G, 409/Purple, and 503/E. From the Towne Centre at Laurel, the route travels east providing service to the Maryland City Plaza, Walmart, National Business Park, and terminates service at Arundel Mills Mall.

Table 4-30: Route 502/B Strength and Challenges

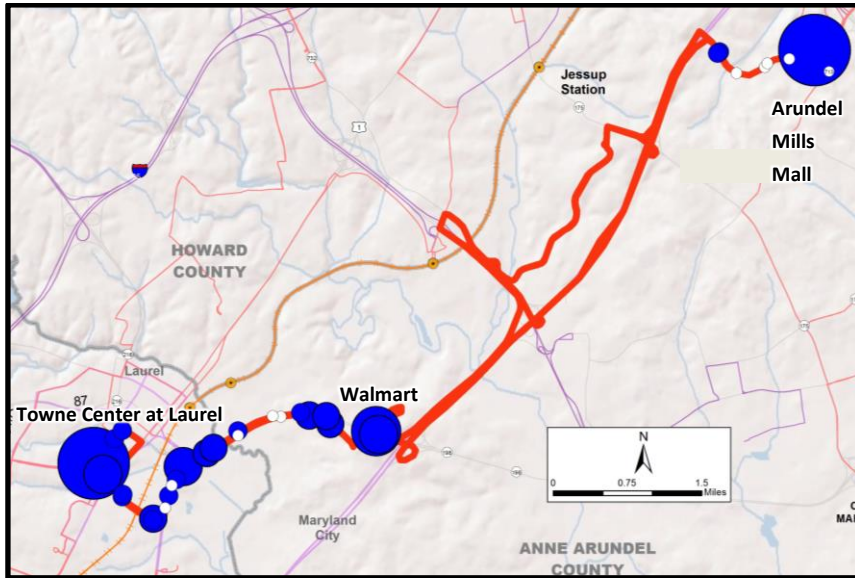
Strengths	Challenges
<ul style="list-style-type: none"> Serves two activity centers – Towne Centre at Laurel and Arundel Mills Mall. 	<ul style="list-style-type: none"> Long weekend headways: Saturday (120 minutes) and Sunday (150 minutes).

Table 4-31: Route 502/B Service and Operating Characteristics

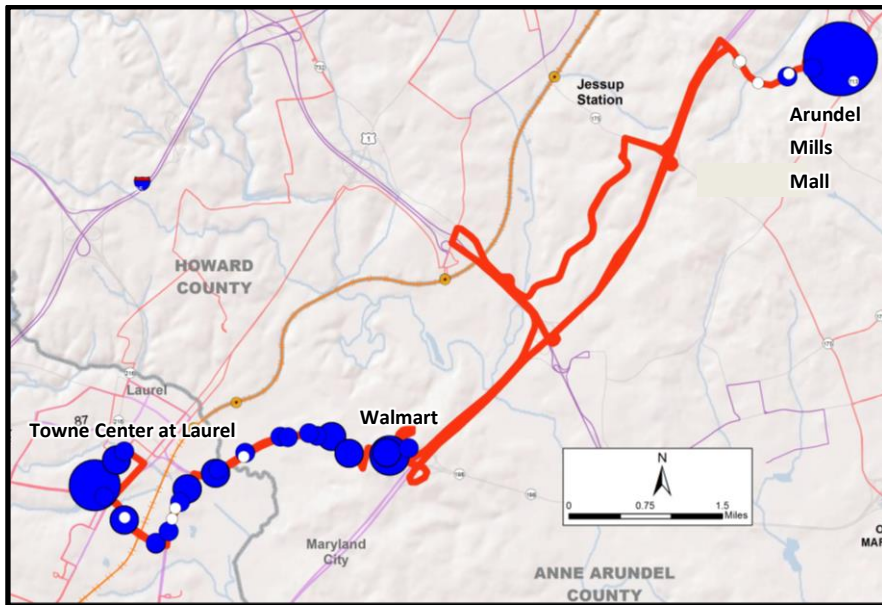
Service and Operating Characteristics		Weekdays	Saturday	Sunday
Span of Service		6:00 am – 10:48 pm	9:00 am – 10:26 pm	10:00 am – 7:50 pm
Frequency (minutes)	Peak	60	-	-
	Off-Peak	60	120	150
One-Way Trips		17	6	4
Cycle Time (minutes)		112	112	112
Layover Time (minutes)		6	10	-
Daily Service Hours		32.02	11.30	7.53

Figure 4-64: Route 502/B Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- | | |
|---|--|
| 0 | 21 - 50 |
| 1 - 5 | 51 & Above |
| 6 - 10 | |
| 11 - 20 | |

Figure 4-65: Route 502/B – Travel Characteristics

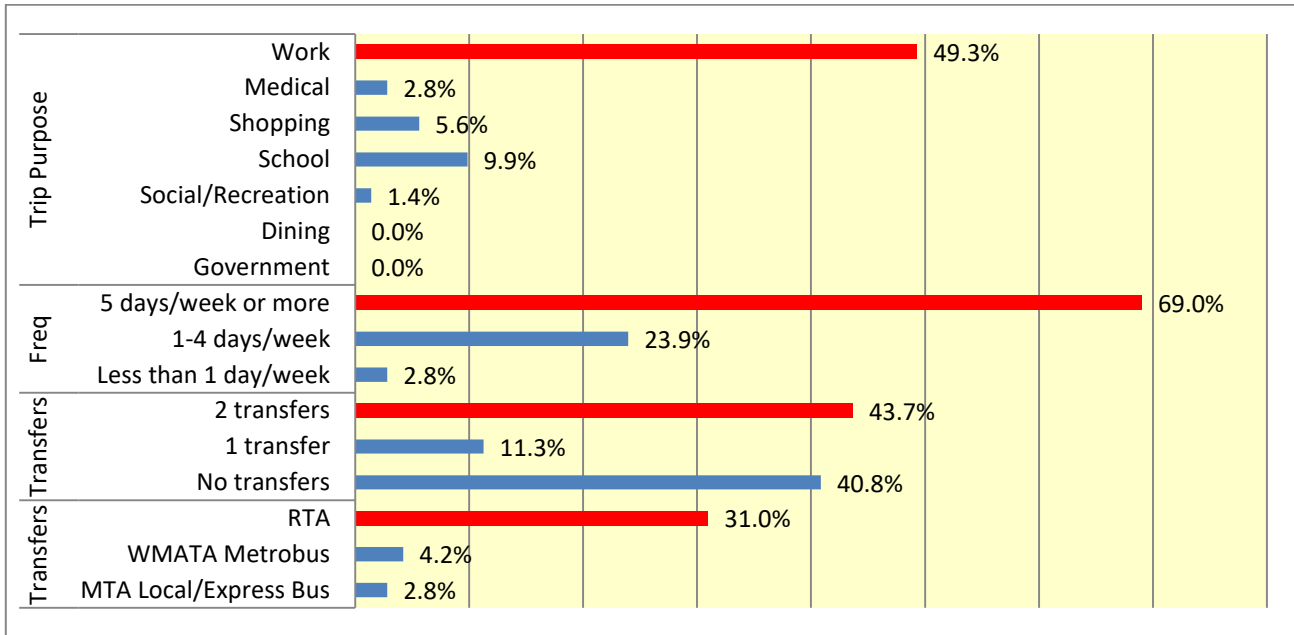


Figure 4-66: Route 502/B – Demographic and Socioeconomic Characteristics

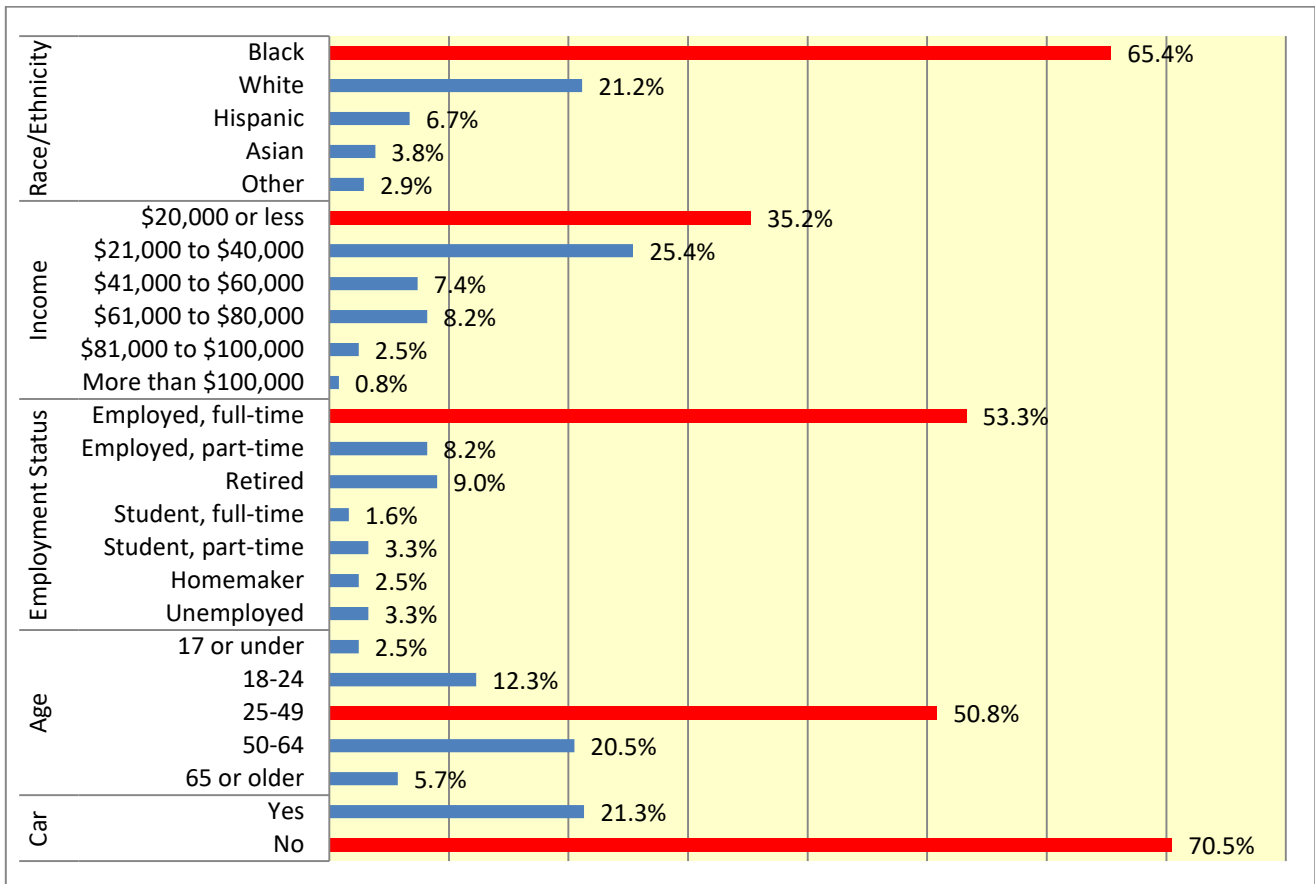
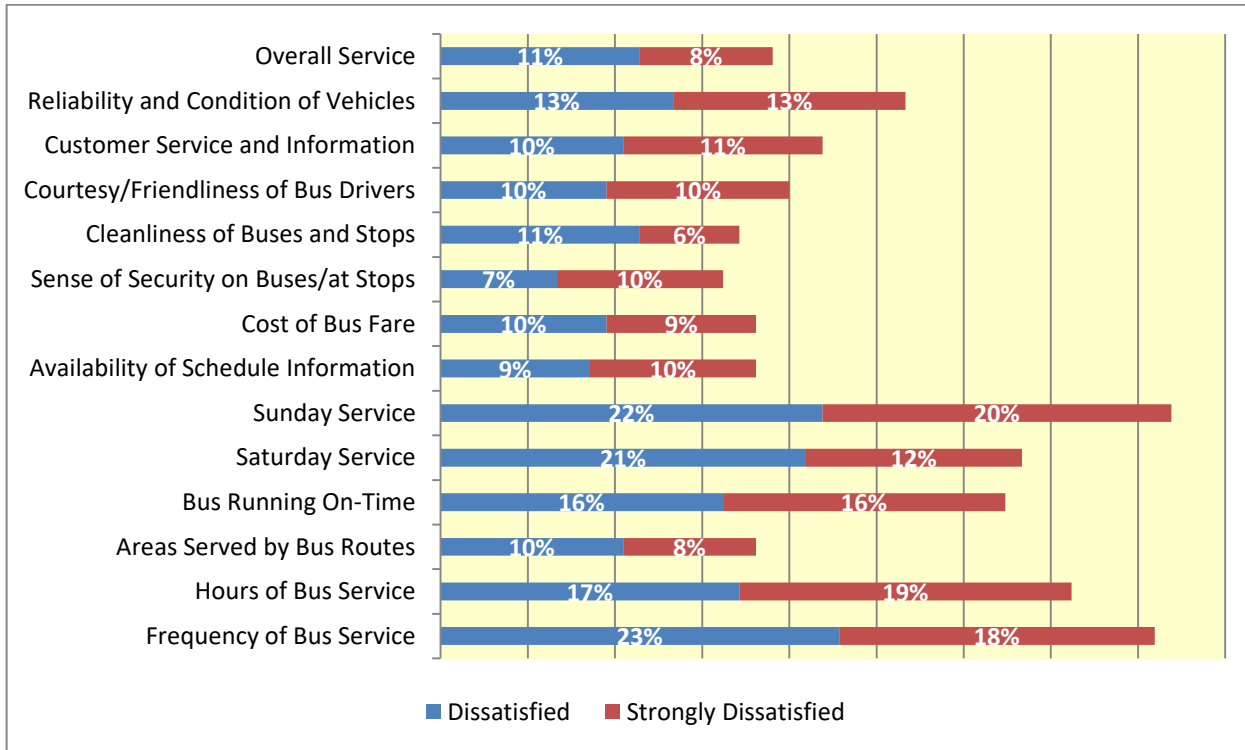
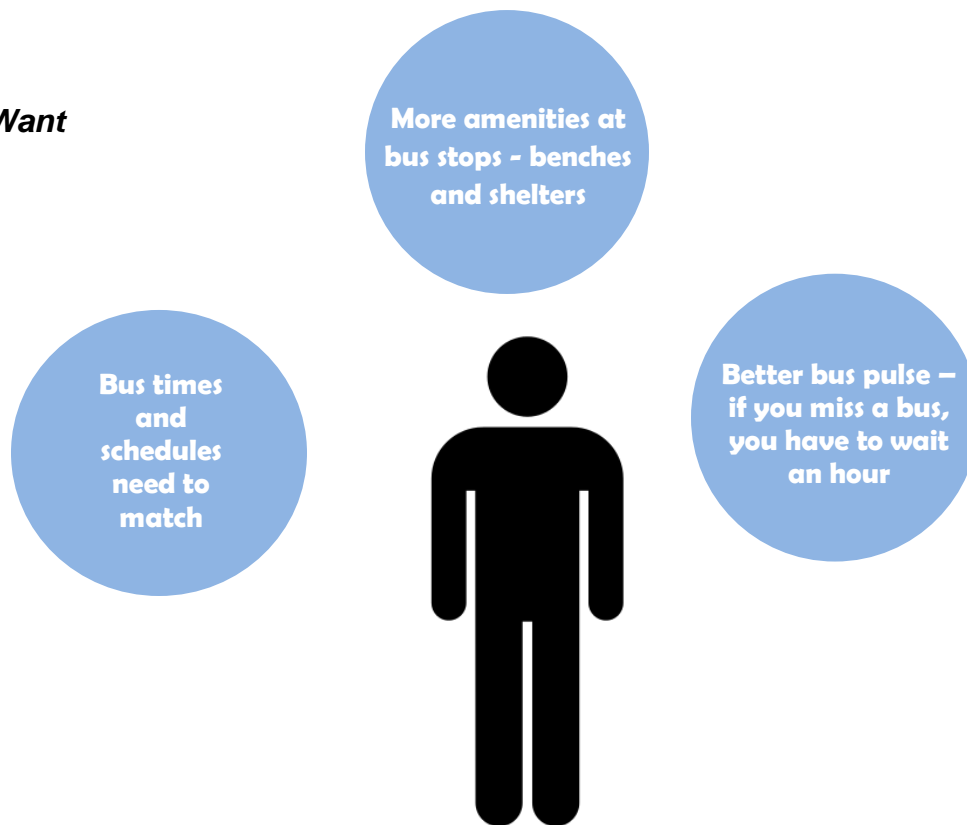


Figure 4-67: Route 502/B – Rider Dissatisfaction



What Riders Want



Route 503/E: Towne Centre at Laurel – Columbia Mall

Service Area Description

Route 503/E provides weekday and Saturday service to Howard County. The route originates at the Columbia Mall, providing connections to Routes 401, 404, 405, 406, 407, 408, and 501, and MTA Routes 203, 310, and 320. From Columbia Mall, the route travels along Broken Land Parkway, servicing Owen Brown Village Center and the Non-Profit Center at Patuxent Woods. It then takes Snowden River Parkway to Minstrel Way and Gerwig Lane, serving the Howard County Food Bank. The route then continues along Guilford Road to Savage Mill, and to North Laurel Community Center. From the community center, the route travels along several roads before terminating at the Towne Centre at Laurel.

Table 4-32: Route 503/E Strength and Challenges

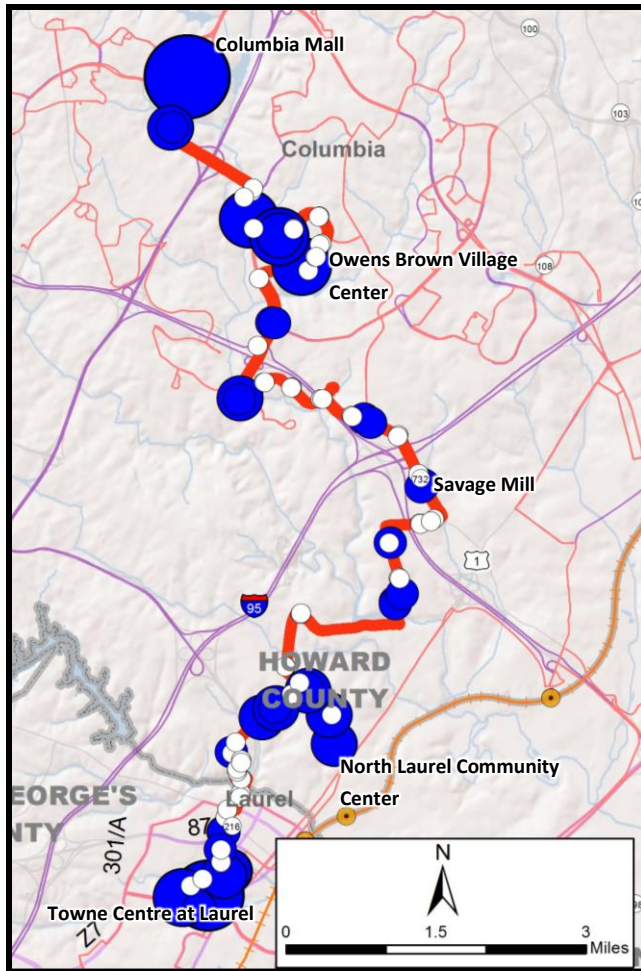
Strengths	Challenges
<ul style="list-style-type: none"> Serves three activity centers – Towne Centre at Laurel, Columbia Mall, and North Laurel Community Center. 	<ul style="list-style-type: none"> Running time issues.

Table 4-33: Route 503/E Service and Operating Characteristics

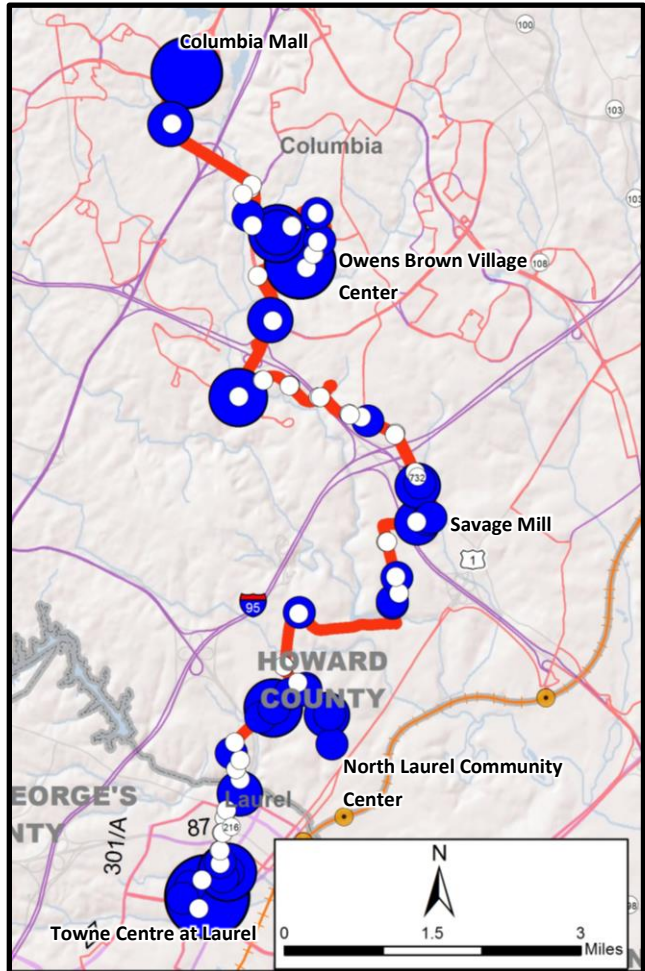
Service and Operating Characteristics		Weekday	Saturday	Sunday
Span of Service		5:30 am - 9:15 pm	8:30 am - 8:15 pm	-
Frequency (minutes)	Peak	60	-	-
	Off-Peak	60	60	-
One-Way Trips		17	13	-
Cycle Time (minutes)		165	165	-
Layover Time (minutes)		15	15	-
Daily Service Hours		41.25	30.25	-

Figure 4-68: Route 503/E Ridership by Stop

Weekday



Saturday



Legend

- Route
- Other RTA Routes
- WMATA Metrobus
- MTA Bus Routes
- MARC Lines
- MTA Light Rail
- WMATA Metrorail
- WMATA Metrorail Stations
- MTA Light Rail Stops
- MARC Stations
- County Boundary

Ridership by Stop

- | | |
|---|--|
| ○ 0 | ● 21 - 50 |
| ● 1 - 5 | ● 51 & Above |
| ● 6 - 10 | |
| ● 11 - 20 | |

Figure 4-69: Route 503/E – Travel Characteristics

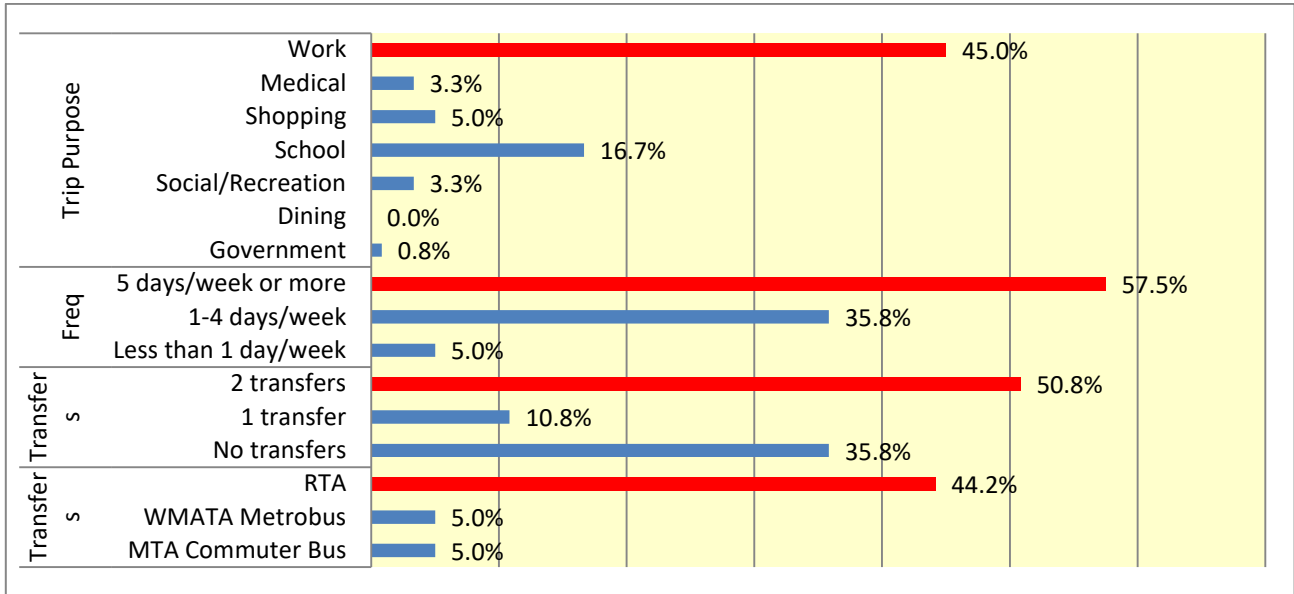


Figure 4-70: Route 503/E – Demographic and Socioeconomic Characteristics

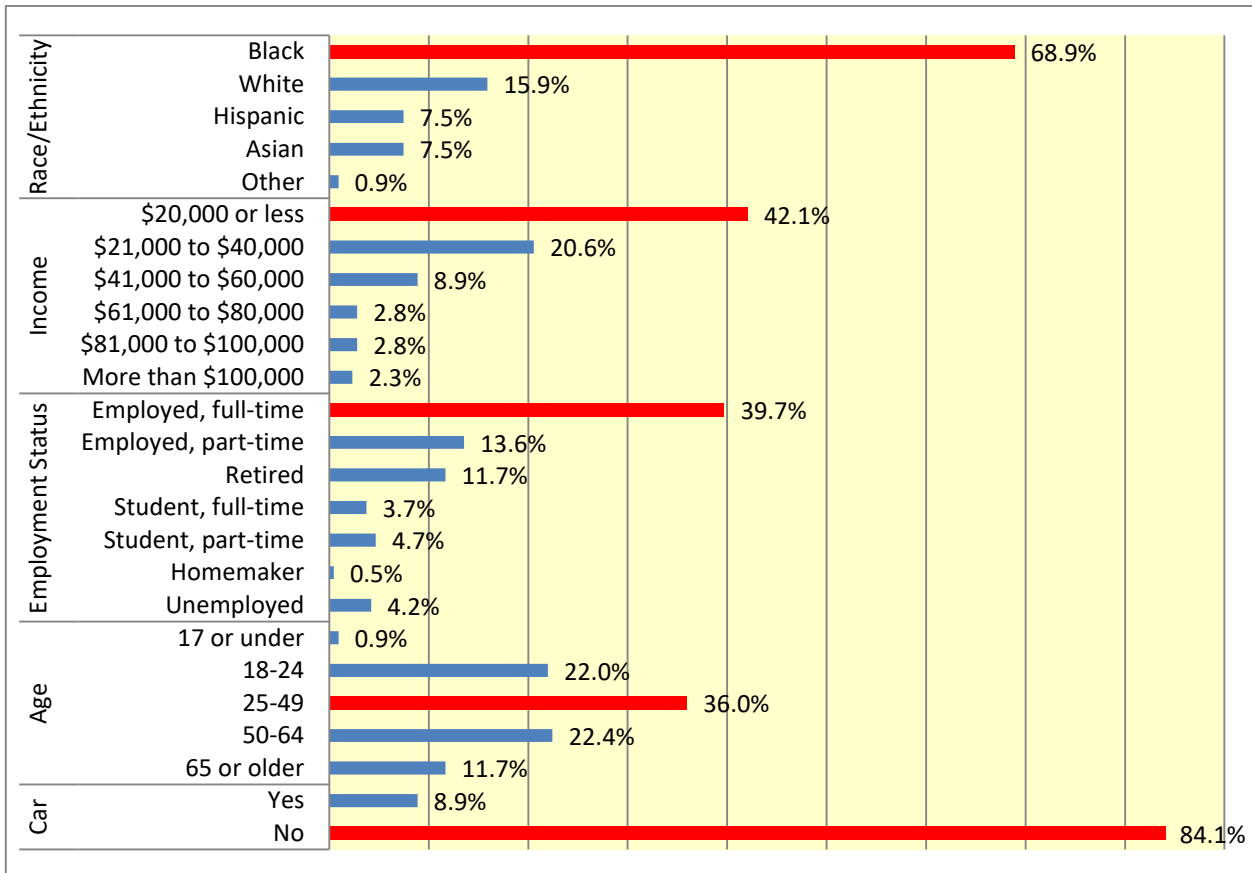
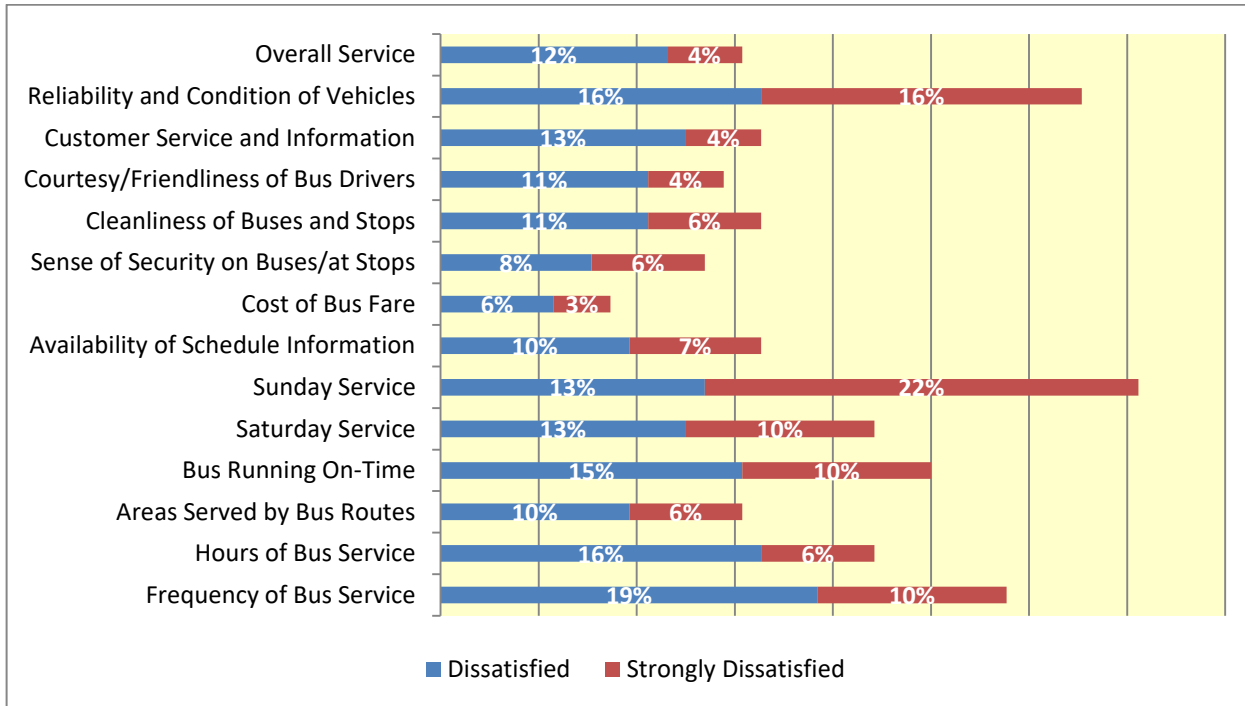
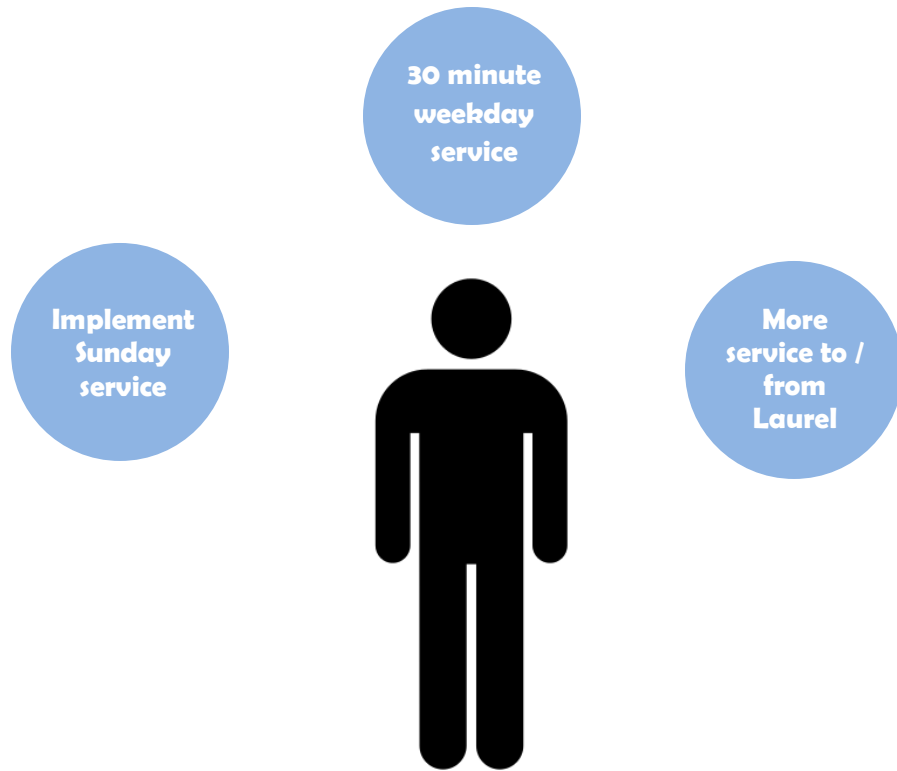


Figure 4-71: Route 503/E – Rider Dissatisfaction



What Riders Want



Summary Observations—RTA Services

Based on the review of existing services, one can make some general observations about the existing RTA services:

Ridership

Significant Ridership Decreases

Overall ridership has declined considerably since its FY 2015 high, with the loss of another 175,000 fixed-route trips in FY 2017 (a 22% decline from the peak year). Although low gas prices and the growth of transportation network alternatives are likely factors, given the continuing growth of population and employment in the service area, a significant factor in the decline in ridership has to be poor service quality, particularly late running buses and unreliable service. These problems combine with circuitous routing to make for long and unpredictable travel times. Many passengers must transfer (sometimes more than once) to reach destinations, and these issues affect the ability to make timely transfers. It is likely that many passengers seek alternatives if they can.

Existing Ridership Patterns

Ridership data at the stop level identified three patterns. First, the majority of the ridership occurs at five locations: Arundel Mills Mall, Towne Centre Laurel, Columbia Mall, Cromwell Light Rail Station, Odenton MARC Station. These locations are likely to be one end of the trip for a majority of riders. Second, there are routes with steady ridership along the alignment. Those routes include: 201/J, 401/Green, 405/Yellow, 406/Red, 407/Brown, 408/Gold, 409/Purple, 501/Silver, and 503/E. Third, there are routes with high clusters of ridership along the alignment, and other segments with no ridership. Those routes include: 202/K, 203/M, 301/A, 302/G, 404/Orange, and 502/B. Also of note, Saturday ridership levels on the 302/G and 501/Silver are comparable to weekday ridership levels.

The highest ridership routes are those that link the most activity centers. For example, the 501/Silver transports the most passengers. This route serves six major activity centers, and two transfer locations, one of which connects passengers to Washington, D.C. and two to Baltimore. Similarly, the 401/Green route links four major activity centers in Howard County. It has 30 minute headways (as do the 203/M and 406/Red), but it also achieves the highest productivity in terms of boardings per service hour—reflecting the demand between activity centers.

Passenger Boardings per Service Hour

System wide, there are 9.22 passenger boardings per hour. While twelve routes perform within a -/+4 difference of the average, one route has thirteen boardings above the average, and one route performs well below the average. The 401/Green is the top performing route with 23 boardings per hour. Factors contributing to the route's high performance are (1) long

span of service, (2) 30-minute peak hour frequencies, (3) connection to multiple routes, and (4) serves three activity centers. The 203/M, the lowest ranking route, only served one activity center and one transit center—during the course of the study it was discontinued and replaced by a new route, the 504.

Transfer Locations

Understanding transfer patterns is critical from a service evaluation standpoint. While this review did not conduct a transfer analysis, based on boarding and alighting data, evidence identifies locations where passengers transfer to other buses and other transit services. Based on this review of existing conditions, the following locations are identified as primary transit facilities: Arundel Mills Mall, Towne Centre Laurel, Columbia Mall, and the MD Food Center. The RTA also serves Cromwell Light Rail Station, Odenton MARC Station, South Laurel (Route 197) Park and Ride, Greenbelt Metro Station, Dorsey MARC Station, College Park Metro Station, Snowden River Park and Ride, and BWI MARC/Amtrak Station. The other connecting services increase the RTA rider's access to Washington, D.C. and Baltimore employment centers.

Span of Service and Frequency

Saturday: Lack of Early Morning Service

A common theme from the rider survey was the limited span of service on weekends. For the routes that operate on Saturday, there was a desire for routes to start early in the morning to service employment shifts that start before RTA's current service times.

Long Headways

When headways are more than 60 minutes, ridership decreases dramatically.

Table 4-34 identifies the routes that operate off-peak headways that are more than 60 minutes. During the course of the study, the weekday headway on Route 501 was increased to 90 minutes peak and off-peak on weekdays

Table 4-34: RTA Routes with Headways of 90 Minutes or more

Weekday Off-Peak		Saturday		Sunday	
Route	Headway (Minutes)	Route	Headway (Minutes)	Route	Headway (Minutes)
201/J	90	201/J	120	202/K	120
202/K	120	202/K	120	404/Orange	120
408/Gold	120	405/Yellow	120	405/Yellow	120
		408/Gold	120	406/Red	120
		409/Purple	120	407/Brown	120
		501/Silver	90	501/Silver	120
				502/B	150

Operational Issues

On-Time Performance

The observed on-time performance is poor, with a system average of 48% of weekday arrivals on-time (less than a minute early and no more than 5 minutes late). For the majority of the routes, there is less than 10 minutes of scheduled layover time at the end of the route. For some routes, there is zero schedule layover time. If a bus is running behind schedule, this decreases the opportunity to make up time at the end of the route, and contributes to lower on-time performance. Additionally, reduced vehicle fleet availability is reducing on-time performance because of missed trips.

Pulsing

Based on a review of the schedule and responses from riders, passengers miss connections at transit facilities. This is attributed to a combination of the buses running behind schedule, and not enough layover time built into the scheduled to recover at the end of the routes.

Scheduling: Some Route Schedules Are Difficult to Interpret

On the 201/J, 406/Red, and 407/Brown certain stops are served only on half the trips. This causes confusion for passengers when determining if the bus will serve both the origin and destination stop, and on what schedule. Clearer information is needed to assist riders when the service patterns vary by route/trip.

Circuitous Routing

Numerous routes make one-way loops and route deviations into residential communities. Specifically, the 302/G, 401/Green, 404/Orange, 405/Yellow, 406/Red, 407/Brown, 408/Gold, 409/Purple, and 503/E. This impacts on-time performance and travel times, making service less attractive—the question is whether the ridership loss that would result from more direct routing (and longer walk distances for those living on the deviations) would be greater than the gain in ridership from faster travel times and more reliable service.

PARATRANSIT SERVICE

In addition to fixed-route services in the region, demand-response services in central Maryland are available to older adults and persons with disabilities. Demand-response services are provided by the RTA and the Anne Arundel County Department of Aging and Disabilities (DOAD).

RTA's demand-response service is called RTA Mobility. This service provides the ADA complementary paratransit and general paratransit (GPT) service throughout Howard County, and ADA complementary paratransit in the RTA service areas of Anne Arundel and Prince George's County. Anne Arundel County's DOAD offers a taxi voucher program and county-wide paratransit for adults ages 55 and older and individuals with disabilities. This section will provide a review of these services.

RTA Mobility

RTA Mobility is a curb-to-curb paratransit service that is available to older adults ages 60 or older and individuals with a disability. Two types of RTA Mobility paratransit service are provided – the Americans with Disabilities Act (ADA) Complementary Paratransit service and General Paratransit (GPT) service.

Public transit agencies that operate fixed-route service are required to provide ADA complementary paratransit service within $\frac{3}{4}$ -mile of the fixed-route and be made available to persons with a disability regardless of age. Individuals needing RTA ADA complementary paratransit service are required to go through a certification process that includes completing a two-part application followed by a face-to-face interview.

Trips on ADA complementary paratransit service can be scheduled from one to seven days in advance. The ADA fare for a one-way trip is \$2.50 in Howard County, \$4.00 in Anne Arundel County and either \$2.00 or \$4.00 in Prince George's County (\$2.00 along the 203/M Route, \$4.00 on the other routes).

ADA complementary paratransit service is provided with a combination of sedans and cutaways (small buses). In FY2016, approximately 43 percent of all RTA Mobility trips were

ADA trips and cost approximately \$1.6 million, which accounts for 39% of the overall cost for the paratransit program.

GPT service is provided only in Howard County, serving residents that are ages 60 and older and disabled adults ages 18 to 59. Adults ages 18 to 59 must be determined eligible for the service after completing the certification process. Unlike the ADA service, trips on the GPT may be outside of the $\frac{3}{4}$ - mile transit shed.

GPT service is available Monday through Friday 8:00 a.m. to 5:00 p.m. and costs \$2.50 for a one-way trip. Reservations may be made between two and seven business days in advance and up to seven days in advance. Eligible trips include medical appointments, senior centers, social service agencies, places of employment and colleges. Medical trips to select hospitals in Baltimore are provided Monday, Wednesday, and Friday.

In FY 2016, GPT accounted for 57% of all RTA Mobility trips. Based on the trips that occurred in September 2016, 21% were to North Laurel Senior Plus Center, Ellicott City Senior Center, DaVita Cedar Lane Dialysis Center, Glenwood 50+ Senior Center, and Florence Bain Senior Center. Table 4-35 provides a breakdown of RTA Mobility paratransit trips. In FY 2016, GPT service costs approximately \$2.8 million which accounted for 61% of the overall paratransit program.

Table 4-35: RTA Mobility Trips

Trip Type	FY 2015	FY 2016
ADA	36,510	35,526
GPT	50,125	46,930
Total	86,635	82,456

Source: MTA Form 2a - Service Performance Summary, FY 2015 and FY2016

In FY 2016, the RTA Mobility program provided 82,456 one-way trips compared to 86,635 in FY 2015, a decrease of 4.8% in ridership. Operating costs over the same period increased 3.5% from \$4.0 million to approximately \$4.2 million. Farebox revenue also increased 2.8% between FY 2015 and FY 2016.

Generally an increase in farebox revenue is the result of a fare increase and/or an increase in ridership. No fare increases were implemented during this period, and while paratransit ridership went down in Howard County and Prince George's County the number of ADA trips in Anne Arundel County increased approximately 47%. The ADA fare in Anne Arundel County and Prince George's County (except in the area served by the 203M) is \$4.00, and \$2.50 in Howard County. The increase ADA in ridership in Anne Arundel County coupled with the \$4.00 fare may have resulted in increased farebox revenue even as overall RTA paratransit ridership decreased. Given the fact that in Anne Arundel County seniors and persons with disabilities age 18 and above can ride free on the demand-response service

provided by the Office of Transportation, the mystery is why ADA ridership in Anne Arundel increased if the fare is \$4.00.

Other performance characteristics such as service miles and service hours also increased. This may be an indication that more GPT trips are made farther out in Howard County and that trips are longer distances. This combined with lower ridership and increased costs would result in lower performance measures.

A map of RTA Mobility trips for a sample month (September 2016) along with the top ten paratransit destinations is provided in Figure 4-72. Table 4-36 and Table 4-37, provide basic service data, performance characteristics, and performance measures for the RTA Mobility service.

Table 4-36: RTA Mobility Service Characteristics

Service and Operating Characteristics	Weekdays	Saturday (ADA Only)	Sunday
Span of Service	5:30 am - 9:15 pm	8:30 am - 8:15 pm	-
One-Way Trips	307	202	-
Daily Service Miles	3,591	2,363	-
Daily Service Hours	198	130	-

Source: RTA published schedules, 2017

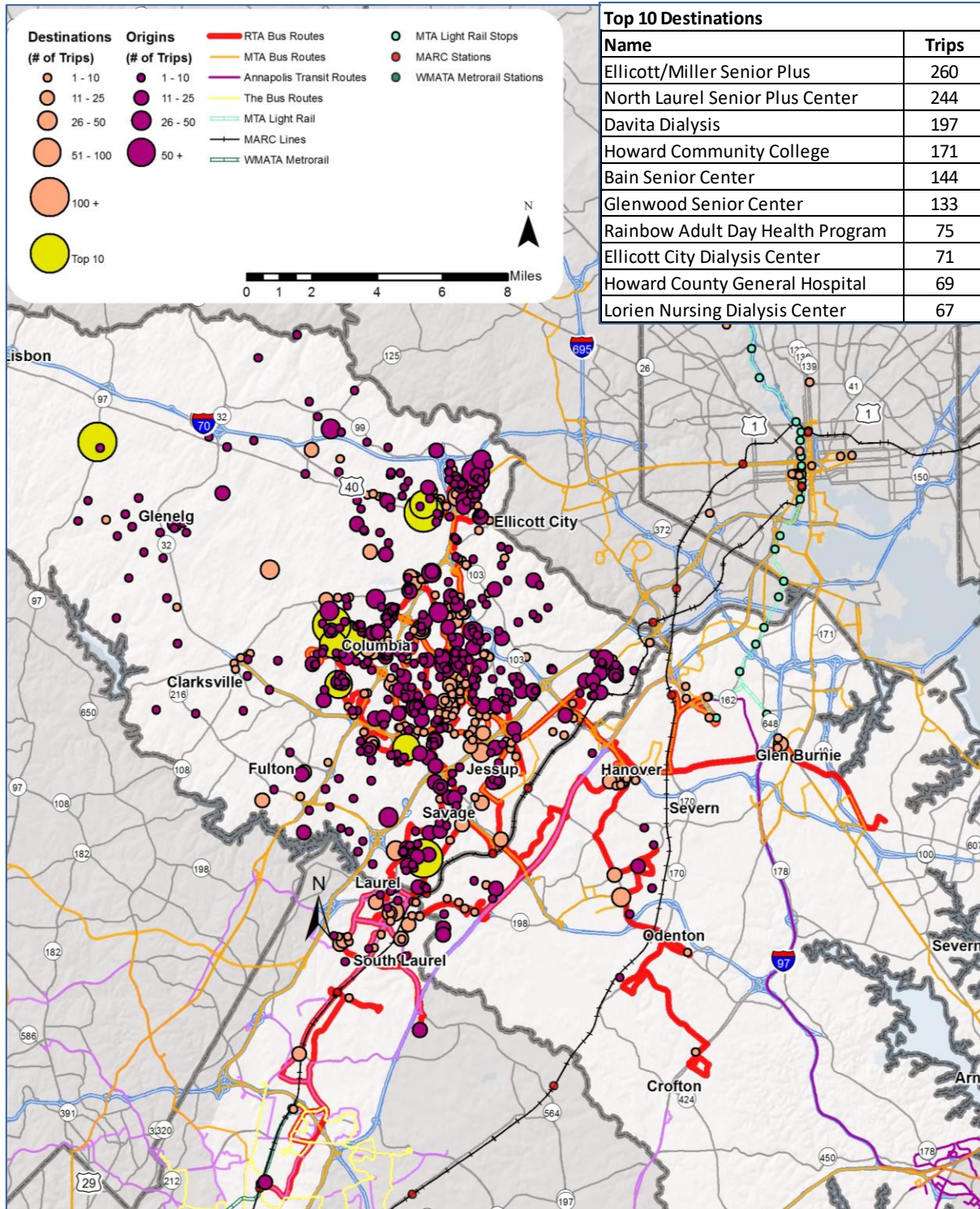
Table 4-37: RTA Mobility Performance Characteristics

Performance Characteristics	FY 2015	FY 2016	FY 2015 – FY 2016
Ridership	86,635	82,456	-4.8%
Vehicle Miles	893,280	964,372	8%
Vehicle Hours	51,552	53,355	3%
Operating Cost	\$4,054,968	\$4,205,793	3.7%
Fare Revenue	\$211,652	\$217,619	2.8%

Source: MTA Form 2a - Service Performance Summary, FY 2015 and FY2016

The MTA's performance standards for Locally-Operated Transit Systems (LOTS) call for demand-response service productivity to be approximately two passengers per service hour. RTA Mobility paratransit service carries 1.55 riders per vehicle service hour. Because this measure includes the RTA's ADA service (which generally has lower productivity because it is more difficult to group trips) and is based on vehicle hours (which includes deadhead time), it is lower than the two passengers per hour threshold.

Figure 4-72: RTA Mobility Origins and Destinations



Source: September 2016 RTA Paratransit Trips

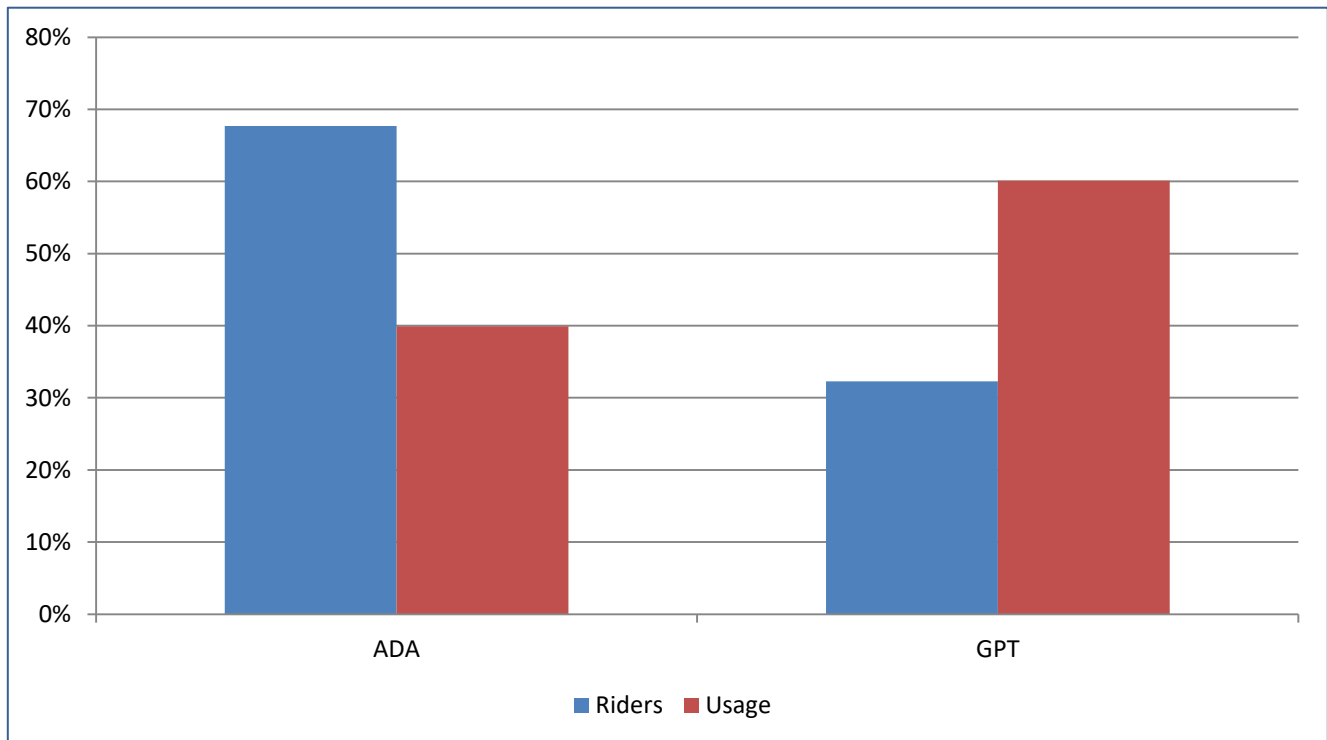
Based on RTA Mobility trips in September 2016, there were more ADA riders registered for paratransit service than GPT riders as illustrated in Table 4-38. ADA riders made up approximately 68% of those registered for MTA Mobility in this sample (some are registered for both). However, in terms of usage, GPT riders used paratransit service much more than ADA riders. While GPT riders made up 32% of riders, they accounted for approximately 60% of paratransit trips as shown in Table 4-39 and Figure 4-73. GPT riders generally have fewer mobility challenges than ADA riders and therefore are likely to make more trips. In addition, the GPT service provides access to many senior centers and communities in Howard County which account for a significant number of these trips.

Table 4-38: Percentage of RTA Mobility Riders by Jurisdiction (September 2016)

Type of Trip	Howard County	Anne Arundel County	Prince George's County/ City of Laurel
ADA	63%	2.6%	2.1%
GPT	32.3%	0%	0%
Total	95.3%	2.6%	2.1%

Table 4-39: Percentage of RTA Mobility of Trips by Jurisdiction (September 2016)

Type of Trip	Howard County	Anne Arundel County	Prince George's County/ City of Laurel
ADA Paratransit	34.6%	3.6%	1.7%
GPT	60.1%	0%	0%
Total	94.7%	3.6%	1.7%

Figure 4-73: Demand-Response Usage by Program Users: ADA vs GPT

Source: September 2016 RTA Paratransit Trips

Table 4-40 provides an analysis of RTA's GPT demand-response trips (Howard County only) that occurred within both a $\frac{3}{4}$ -mile and a $\frac{1}{4}$ -mile transit shed. A $\frac{3}{4}$ -mile transit shed was used since this is what is used for ADA complementary paratransit service and a $\frac{1}{4}$ -mile transit shed was used as this is the generally accepted reasonable walking distance to a transit stop. It should be noted that the general paratransit trips include trips to dialysis centers (less than 7%) that did not qualify for ADA complementary paratransit service.

Table 4-40: GPT Trips within Transit Shed

Trip End	RTA Transit Shed	
	$\frac{3}{4}$ Mile	$\frac{1}{4}$ Mile
Origin or Destination	77% (3,239)	67% (2,833)
Both Origin and Destination	70% (2,969)	44% (1,873)

Source: September 2016 RTA Paratransit Trips

The majority of riders on paratransit service are older adults that have been using the service for more than two years primarily for medical appointments and access to senior centers.

These riders are heavily dependent on this service since an overwhelming majority (92%) of paratransit riders either do not own a car or do not have access to a car.

The paratransit rider survey that was described in the previous chapter indicated that the majority of riders are satisfied overall with the service. Riders also provided input on service needs and improvements. The top three service improvements that are needed according to riders are:

- Add GPT service on Saturday and Sunday
- On-time performance
- Decrease phone wait time

Some of the comments include:

“Great service except for unreliability of delivery time. I am sometimes late for work because my ride is late.”

“My rides are regularly late. I use public transportation to get to work. The lateness may cost me my job.”

“It has been horribly hard to ever reach someone on the phone. Problems therefore take forever to fix.”

“Really need to have transportation available on Saturday and Sunday. There is no other transportation available on Saturday and Sunday. Awesome service!!!!”

A number of comments were also made with regards to the difficulty in traveling regionally particularly across county lines. RTA provides ADA complementary paratransit in all three counties but only within 3/4 -mile of its fixed-routes. GPT paratransit service operates only in Howard County, and the Anne Arundel County Office of Transportation paratransit operates only in Anne Arundel County with limited trips into Baltimore. Currently there is no coordination or connection other than RTA ADA paratransit between paratransit service in Howard and Anne Arundel Counties.

“I wish you had outside Howard County for Deaf Event. Since I’m deaf and ASL. I would love to have outside Howard County to be available for me to join deaf event would be nice. Let me know about available paratransit that provide outside Howard County.”

“It would be nice to get transport to go to other counties for medical appointments and worship centers. Sometimes I have to go to Kaiser Permanente at Security Blvd, Towson, or Halethorpe for specialist appointments.”

“In August I needed a ride to Rolling Road for a doctor’s appointment. I was told the service did not go that far. But I have seen the bus out there. So I have to find another way.”

“I wish that it was easier to visit my sister, who lives in the heart of Catonsville. There is no regular service from Ellicott City/Columbia to Baltimore County. I am very happy with the telephone staff and the drivers. They are all very kind to me. Thank you for all you do, RTA/Paratransit.”

Anne Arundel County Office of Transportation

The Office of Transportation (OOT) is now the provider of the formerly paratransit service previously provided by the Department of Aging and Disabilities (DOAD). The DOAD is the local Area Agency on Aging (AAA) for Anne Arundel County. The DOAD operates two transportation programs, a taxi voucher program and a demand-response program that provides van transportation. Eligible riders include persons ages 55 and older and ages 18 and older with disabilities.

The demand-response program is operated through a contract with First Transit, using a fleet of 41 vehicles. These vehicles are owned and maintained by Anne Arundel County. For the demand-response program, DOAD staff provides oversight and scheduling while contractor First Transit staff provides drivers, dispatch, and intake.

For the taxi voucher program, eligible clients can purchase coupons that can be used for a taxi ride. Each coupon book contains \$10.00 worth of coupons and is sold to clients for \$5.00. The coupons can only be used to pay the fare of the taxi ride, and may not be used for the tip.

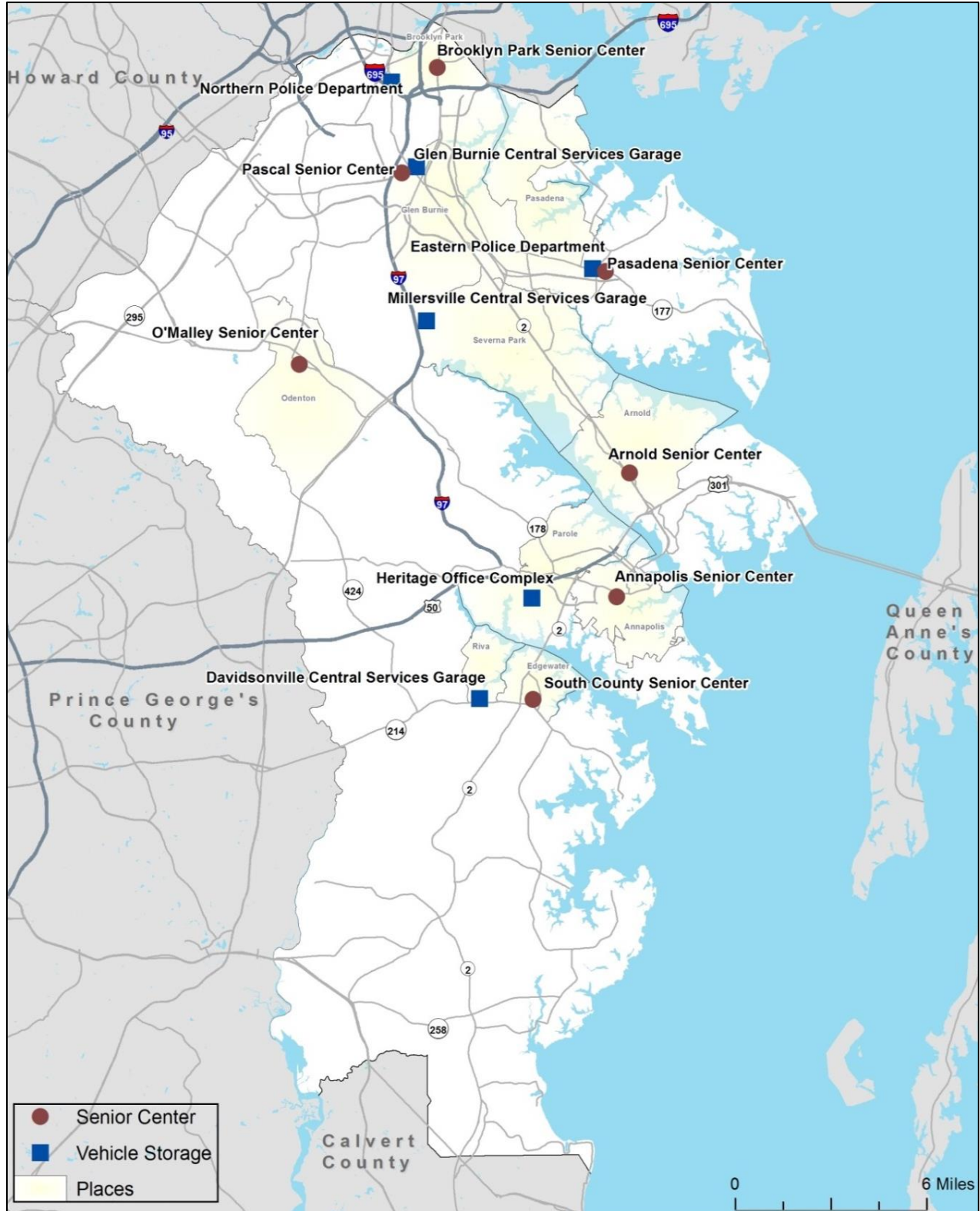
The transportation program provides transportation primarily to senior centers and medical appointments, although other trip purposes are accommodated if possible. Due to limited capacity, riders are generally limited to getting services three days per week. Riders are not charged a fare but are asked to provide a donation.

The senior centers that are served include:

- Annapolis Senior Center, Annapolis
- Arnold Senior Center, Arnold
- Brooklyn Park Senior Center, Brooklyn
- O’Malley Senior Center, Odenton
- Pasadena Senior Center, Glen Burnie
- South County Senior Center, Edgewater

Figure 4-74 provides a map of these senior locations and locations where vehicles are stored.

Figure 4-74: Locations of DOAD Senior Centers and OTT Vehicle Storage



Source: Anne Arundel Paratransit Service Evaluation, 2015

The following performance characteristics are based on the Anne Arundel County's Paratransit Service Evaluation report that was completed in FY 2015. In FY 2015, the program provided approximately 121,000, one-way trips, an increase from the previous two fiscal years. Table 4-41 provides a breakdown of the types of trips that were provided. Performance characteristics and measures for service are provided in Table 4-42.

Table 4-41: DOAD Trip Type

Trip Type	Percentage
Senior Centers	33%
Dialysis	23%
Other Purposes	45%

Source: Anne Arundel Paratransit Service Evaluation, 2015

Table 4-42: DOAD Transportation Performance Characteristics

Performance Measurements	FY 2012	FY 2013	FY 2014	FY 2015 – FY 2016
Trips per Mile	0.17	0.17	0.16	0%
Trips per Hour	2.29	2.21	2.15	-6.1%
Cost per Trip	-	\$20.51	\$21.78	6.2%
Cost per Mile	-	\$5.81	\$9.25	60%
Cost per Hour	-	\$45.25	\$46.77	3.3%
Speed	13.45	13.37	13.14	-2.3%

Source: Anne Arundel Paratransit Service Evaluation, 2016

DOAD's paratransit service had 2.15 passenger boardings per revenue hour in FY 2014. Productivity has declined slightly over the three-year period, down from 2.29 trips per revenue hour in FY 2012. No-shows have been reduced slightly over the period, from just over eleven percent in FY 2012 to 9.1% in FY 2014.

As part of the paratransit service evaluation study in Anne Arundel County, a focus group and an informal survey were conducted. Together, the focus group with riders and input from the survey, revealed that users generally were pleased and glad to have the service. There was interest in five day per week service, being able to go to more distant destinations, and service that could support employment. There was a willingness to consider a fare, and the acceptable amount was \$1.00 per trip. Even at that fare there was concern that some current users would be unable to pay so some special arrangement would be needed. The major issues concerned the quality of scheduling service—non-response, long phone wait times and inconsistencies in the application of policies.

RTA Fares

Structure

RTA's current fare policy sets the fares charged for different types of trips and provides rules regarding how fares are applied. The Regional Transportation Agency (RTA) has two separate fare structures for its fixed-route system. One structure covers routes in Howard County and the other covers routes in the Laurel area. In Howard County, RTA predecessors operated service under contract to Howard County, branded as Howard Transit, using this fare structure. It is still applied to the routes that serve Columbia, Ellicott City, Savage, and other locations in and around Howard County. These are RTA routes 401/Green, 404/Orange, 405/Yellow, 406/Red, 407/Brown, 408/Gold, 404/Purple, and 501/Silver. Similarly, the predecessor organization to the RTA provided daily bus service in the Laurel area, northern Prince George's County and Anne Arundel County branded as Connect-A-Ride, using a different fare structure. These fares are still in use by the RTA on Routes 201/J, 202/K, 203/M, 301/A, 302/G, 502/B, and 503/E.

Table 4-43, from RTA's November 9, 2016 *RTA Fare Policy Update*, illustrates the two different fare structures.

Table 4-43: RTA Fare Policy

Fare Type	RTA Howard Transit	RTA Connect-A-Ride
One-Way, Cash	\$2.00	\$2.00
One-Way, Reduced	\$1.00	\$1.00
Transfers	Free	N/A
Daily Pass	N/A	\$5.00
Daily Pass, Reduced	N/A	\$2.50
Ten-Trip	\$13.50	N/A
Monthly Pass	\$47.00	\$60.00
Monthly Pass, Reduced	\$16.00	\$30.00
Monthly Youth Pass	N/A	\$40.00
Children under Five	Free	Free
Student	Same as reduced	N/A
Paratransit, One Way	\$2.50	\$4.00

Source: RTA's November 9, 2016 *RTA Fare Policy Update*

Fare Media

In addition to the different rates for fixed-route service, the separate structures require different fare media. There are twelve different fare media items that can be purchased and used to ride the RTA system. These media items include monthly passes, books of discounted passes, and colored tokens. Eight of these media tools can be used on RTA Howard Transit routes, and six of them can be used on RTA Connect-A-Ride routes. The red and yellow tokens can be used on either RTA Howard Transit or RTA Connect-A-Ride routes. RTA's November 9, 2016 *RTA Fare Policy Update*, provide sample images of the passes and tokens that can be used on RTA Howard Transit Routes. These images are used as training aids and references for staff.

Figure 4-75: RTA Monthly Passes and Booklets/Tickets

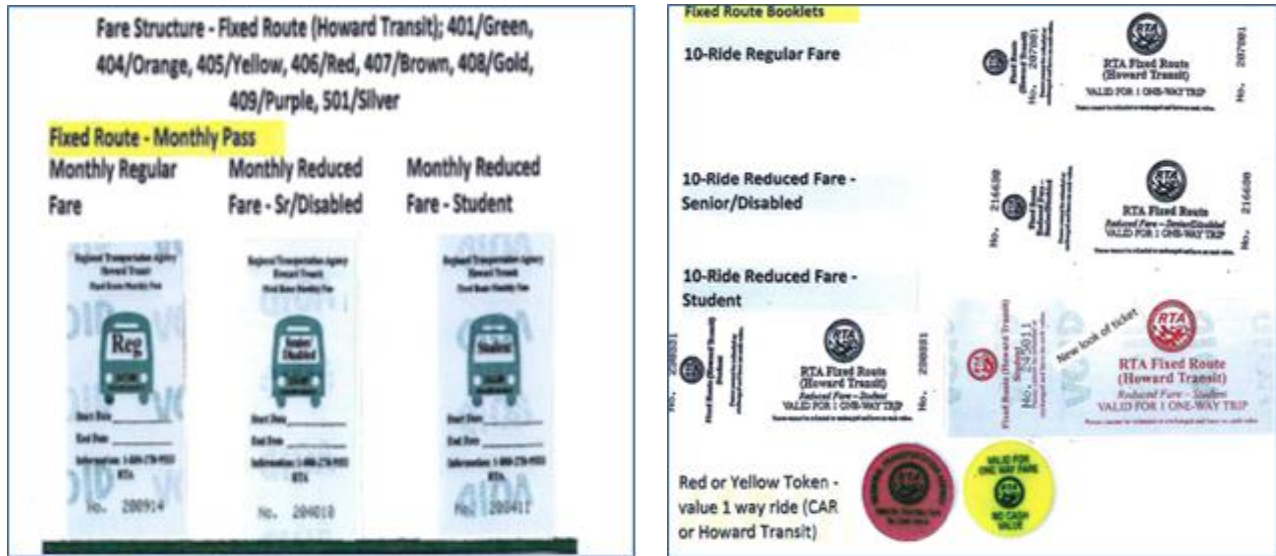


Figure 4-76: RTA Connect-A-Ride Passes and Tokens



Figure 4-75 displays monthly passes for RTA. Howard Transit routes cost \$47 for the regular fare. Seniors and people with disabilities can purchase a monthly pass for \$16 or a 10-ride booklet for \$4.50. Students pay \$16 for a monthly pass and \$4.50 for a 10-ride booklet.

In addition, the following passes and tokens, shown in Figure 4-76, are used on RTA Connect-A-Ride routes.

The RTA Connect-A-Ride passes and tokens are collected on Routes 201/J, 202/K, 203/M, 301/A, 302/G, 502/B, and 503/E. The RTA Howard Transit fare media are collected on Routes 401/Green, 404/Orange, 405/Yellow, 406/Red, 407/Brown, 408/Gold, 404/Purple, 501/Silver.

Monthly passes for RTA Connect-A-Ride routes cost \$60 for regular riders. Seniors and people with disabilities can purchase a monthly pass for \$16 or a 10-ride booklet for \$4.50. Students pay \$16 for a monthly pass and \$4.50 for a 10 ride booklet.

RTA Mobility, the ADA paratransit service also has different booklets that correspond with the RTA Howard Transit and RTA Connect-A-Ride routes.

A booklet of 10-ride passes costs \$25 for RTA Mobility (paratransit) service for Howard Transit routes and \$40 for RTA Connect-A-Ride routes.

Regional Transfers

MTA CharmCards and WMATA SmarTrip Cards are accepted on some routes under some conditions. RTA fare boxes are simple drop boxes, not electronic registering fareboxes, therefore if a CharmCard or SmarTrip card holder wants to ride an RTA bus, they show the card to the driver. If they are at a stop where it is allowed, the driver records the boarding, but the RTA receives no revenue (except for the \$1 cash add-on fare for SmarTrip cardholders), as it has no way to accept the stored value on the card, or to bill MTA or WMATA.

MTA CharmCards are accepted only at the following locations:

- On Route 501/Silver at Arundel Mills Mall, BWI Airport Terminal, BWI Business District Light Rail Station, BWI Amtrak/MARC Station, Broken Land Park and Ride and Snowden River Park and Ride stops
- On Route 405/Yellow at the Route 40 and Normandy Woods Drive and Long Gate Park and Ride stops
- On Route 407/Brown at the Oakland Mills Village Center stop
- On Route 408/Gold at Oakland Mills Village Center and Snowden River Park and Ride stops
- On Route 404/Purple at the Route 1 and Amberton Drive (Route 100 Industrial Park) stop

SmarTrip Cards can be used to pay RTA fares, with an additional \$1 fee, at the following locations.

- Route 501/Silver at the BWI Airport Terminal stop
- Routes 404/Purple, 301/A, 302/G, 502/B, and 503/E at the Laurel Mall stop
- Route 201/J and 202/K at the Arundel Mills Mall stop
- Route 302/G at the Greenbelt Metro Station stop
- Route 302/G at the College Park Metro Station stop
- Routes 301/A, 302/G, 502/B, and 503/E at all shared WMATA Metro bus stops; with the exception of the 4th Street Northbound shared stops

Sales Locations

Cash can be paid on the bus or passes can be purchased at the following locations. In addition, customers can also mail a check to the RTA or pay online with PayPal, and the fare media will be mailed to the customer.

<p>Regional Transportation Agency (RTA) 8510 Corridor Road, Suite 110 Savage, Maryland 20763 Hours of operations for ticket sales: Monday-Friday: 8:30 a.m.- 4:30 p.m.</p>	<p>Bain Center 5470 Ruth Keeton Way Columbia, MD 21044 Hours of operations for ticket sales Monday-Friday: 9 a.m. – 4 p.m. (Paratransit only – Howard County 10-Ride)</p>
<p>East Columbia 50+ Center 6600 Cradlerock Way Columbia, MD 21045 (Paratransit only – Howard County 10-Ride)</p>	<p>Elkridge Senior Center (HCLS Elkridge Branch is currently closed for construction. HCLS Elkridge Express Branch is open.) 7071 Montgomery Road, Elkridge 6540 Washington Blvd. Elkridge, MD 21075 Hours of operations for ticket sales Monday-Friday: 9 a.m. – 4 p.m. (Paratransit only – Howard County 10-Ride)</p>
<p>Glenwood Senior Center 2400 Route 97 Cooksville, MD 21723 410-313-5442 Hours of operations for ticket sales Monday-Friday: 9 a.m. – 4 p.m. (Paratransit only – Howard County 10-Ride)</p>	<p>Howard Community College Finance Student Monthly Passes Senior/Disabled Monthly pass (\$16.00) 10901 Little Patuxent Parkway Columbia, MD 21044 410-772-4800 Hours of operations for ticket sales Mon-Thurs 8:45am-7:30pm, Friday 8:45 a.m. – 5 p.m. (Must be a current student at HCC and show I.D.)</p>
<p>Longwood Senior Center 6150 Foreland Garth Columbia, MD 21045 410-313-7217 Hours of operations for ticket sales Monday-Friday: 9 a.m. – 4 p.m. (Paratransit only – Howard County 10-Ride)</p>	<p>North Laurel 50+ Center 9411 Whiskey Bottom Road Laurel, MD 20723 Hours of operations for ticket sales Monday-Friday: 9 a.m. – 4 p.m. (Paratransit only – Howard County 10-Ride)</p>

<p>Central Maryland Regional Transit 312 Marshall Avenue, Suite 100 Laurel, Maryland 20707 240)-581-5800 Hours of operations for ticket sales Monday-Friday: 8:30 a.m. – 4:30 p.m.</p>	<p>Ellicott City Senior Center 9401 Frederick Road Ellicott City, MD 21042 410-313-1400 Hours of operations for ticket sales Monday-Friday: 8:30 a.m. – 4 p.m. (Paratransit only – Howard County 10-Ride)</p>
<p>Kings Contrivance Village Center 7251 Eden Brook Drive Columbia, MD 21046 410-381-9600 Hours of operations for ticket sales Monday-Thursday: 9 a.m. – 9 p.m. Friday: 9 a.m. – 5 p.m. Saturday: 10 a.m. – 1 p.m. (Assorted 10-Ride books, Regular Fare; \$13.50, 10-Ride Reduced Senior/Disabled; \$4.50, 10-Ride Reduced Student; \$4.50. No Monthly Passes, No Paratransit)</p>	<p>Oakland Mills Community Association 5851 Robert Oliver Place Columbia, MD 21045 410-730-4610 Hours of operations for ticket sales Monday-Friday: 9 a.m. – 5 p.m. (Assorted 10-Ride books, Regular Fare; \$13.50, 10-Ride Reduced Senior/Disabled; \$4.50, 10-Ride Reduced Student; \$4.50. No Monthly Passes, No Paratransit)</p>

FACILITIES

Headquarters, Operations, and Maintenance

- **Headquarters** – Administrative offices are located at 8510 Corridor Road, Savage, Maryland 20763.
- **Operations and Maintenance** – The operations and maintenance facility is located at 8800 Corridor Road, Annapolis Junction, Maryland 20701.

Transit Centers

- **Columbia Mall** – The Columbia Mall Transit Center is located at 10300 Little Patuxent Parkway, Columbia, Maryland 21044. The transit center serves as the transfer point for eight routes – Routes 401, 404, 405, 406, 407, 408, 501, and 503. MTA commuter bus routes also serve the transit center – Routes 203, 310, and 320.
- **Towne Centre at Laurel** – The transit center at Towne Centre at Laurel is located at 14708 Baltimore Avenue, Laurel, Maryland 20707. The transit center serves as the transfer point for five routes – Routes 301, 302, 409, and 502. WMATA local bus routes also serve the transit center – Routes 87, 88, 89, and 89M.
- **Arundel Mills Mall** – This transit center is located at 7000 Arundel Mills Circle, Hanover, Maryland 21076. The transit center serves as the transfer point for four routes – Routes 201, 501, and 502. MTA local bus Route 75 and commuter bus Route 201 also serve the transit center.

Park and Ride Lots

Name	Address	City/Town	Zip Code	# of Spaces
Arundel Mills Mall	7000 Arundel Mills Circle	Hanover	21076	n/a
Benfield	I-97 & Benfield Blvd.	Odenton	21113	93
Bristol	MD 4 & MD 258	Lothian	20711	100
BWI Airport	Flightime Dr. & MD 170	BWI	21240	n/a
BWI Amtrak/MARC Station	Aviation Blvd. & Amtrak Way	BWI	21240	3200
Crofton	Crofton Pkwy & Crain Hwy	Crofton	21114	100
Cromwell Light Rail Station	7378 Baltimore Annapolis Blvd.	Glen Burnie	21061	795

Davidsonville	John Hanson Hwy & Davidsonville Rd.	Davidsonville	21035	199
Earleigh Heights Volunteer Fire Department	Government Ritchie Hwy & Earleigh Heights Rd.	Severna Park	21146	50
Glen Burnie County Government	Baltimore Annapolis Blvd & Government Ritchie Hwy	Glen Burnie	21061	555
Hahn Drive	7920 Ritchie Hwy	Glen Burnie	21061	200
Hammonds Ferry Rd.	Hammonds Ferry Rd & Baltimore	Linthicum	21090	203
Harry S. Truman	Harry S Truman Pkwy & Riva Rd	Annapolis	21401	500
Jessup MARC Station	Jessup Rd & Old Jessup Rd	Jessup	20794	100
Lower Pindell Rd.	MD 4 & Lower Pindell Rd	Lothian	20711	100
Mountain Rd.	Mountain Rd & Catherine Ave	Pasadena	21122	n/a
Navy-Marine Corps Stadium	Rowe Blvd & Taylor Ave	Annapolis	21402	400
North Linthicum Light Rail	Camp Meade Rd & Baltimore Annapolis Blvd	Linthicum	21090	347
Nursery Road Light Rail	Baltimore Annapolis Blvd & Nursery Rd	Linthicum	21090	
Snowden River Park & Ride	MD-175 Exit and Snowden River Parkway	Columbia	21045	345
Broken Land Parkway Park & Ride	9601 Broken Land Parkway	Columbia	21046	325
South Laurel Park & Ride	Briarcroft Land at the intersection of Laurel Bowie Road (Rt. 197)	Laurel	20708	684

MTA Transit Facilities

- Cromwell Light Rail Station** is located on Baltimore Annapolis Boulevard (MD-648) north of the intersection of Dorsey Road (8th Ave NW), Ferndale, Maryland 21061. The station primarily serves as an MTA light rail stop, and is served by local bus Routes 14 and 17, the Nixon Shuttle, and RTA Route 201/J. There are 795 parking spaces available.
- Odenton MARC Station** is located at 1400 Odenton Road, Odenton, Maryland 21113. The station primarily serves as a stop for the Penn Line commuter rail service between Baltimore and Washington, D.C. Routes 202/K serves the station. There are 1300 parking spaces available.

- **Muirkirk MARC Station** is located at 7012-B Muirkirk Road (just east of the bridge over US-1), Beltsville, Maryland 20705. The Muirkirk Station primarily serves as a stop for Camden Line commuter rail service between Baltimore and Washington, D.C. Routes 302/G, and WMATA local bus Routes 89 and 89M serve the station. There are 650 parking spaces available.
- **Dorsey MARC Station** is located at 7000 Route 100, which is on Exit 7, between US-1 and MD-295 in Elkridge, Maryland 21075. The Dorsey Station primarily serves as a stop for Camden Line commuter rail service between Baltimore and Washington, D.C. RTA Routes 409/Purple and 501/Silver serve the station. There are 802 parking spaces available.
- **BWI Business District Light Rail Station** is located in the BWI Business District on Aviation Boulevard, Linthicum, Heights, Maryland 21090 near the intersection with Terminal Road. It primarily serves as an MTA light rail stop, and is served by RTA Route 501/Silver, MTA LocalLink 75 and commuter bus Route 201; and WMATA local bus Route B30. There are 36 parking spaces available.
- **Laurel MARC Station** is located on the western end of Main Street at 1st Street in the City of Laurel, Maryland 20707. The Laurel MARC Station serves a stop for the Camden Line Commuter rail service between Baltimore and Washington, D.C. RTA Route 409/Purple and WMATA bus Routes 87 and 89M serve the station. There are 309 parking spaces available.
- **Laurel Racetrack MARC Station** is located on Race Track Road between MD 98 and Whiskey Bottom Road in Maryland City, Maryland 20724. The station serves as a flag stop along the Camden Line commuter rail service between Baltimore and Washington, D.C. As a flag stop, on certain trips, trains will pick up passengers standing on the platform and discharge passengers when if the conductor has been notified upon boarding. While there are no bus routes that serve this station directly, RTA Route 502/B has a stop on MD 198 at Race Track Road. There are 300 parking spaces available.

WMATA Transit Facilities

- **Greenbelt Metro Station** is located at 5600 Greenbelt Metro Drive, Greenbelt, Maryland 20770. The Greenbelt Metro Station serves as the Metro Green Line heavy rail and MARC Camden Line commuter rail stop. The station is served by RTA (Route 302/G); Metrobus (Routes 81,87,89,89M,B30,C2,C7,C9,R12,R3,T16,T17); The Bus (Routes 11, 15, and 16), and Connect-A-Ride (Route H). There are 3,399 parking spaces available.

- **College Park/University of Maryland Metro Station** is located on River Road, College Park, Maryland 20737, about ¼ mile south of the intersection with Campus Drive. This Metro station serves as the Metro Green Line and MARC Camden Line commuter rail stop. The station is served by RTA (Route 302/G); Metrobus, Connect-A-Ride (Routes G and H); The Bus (Routes 14 and 17); and UM Student Shuttle to Cherry Hill. There are 1,820 parking spaces available.

Amtrak

- **Amtrak/MARC – BWI Rail Station** is located at 7 Amtrak Way, Baltimore, Maryland 21240, near the intersection of Aviation Boulevard (MD-170) and Amtrak Way. It primarily serves as a stop for the MARC Penn Line commuter rail and Amtrak intercity rail passenger service. Route 501/Silver serves the station. MTA LocalLink 75, and MTA Commuter Bus 201 also serve the station. There are 1,600 parking spaces available.

Airport

- **BWI Airport Shuttle** stops at Terminal A, E, and the International terminal at BWI Airport. At Terminal E, connections are available to RTA Route 501/Silver, MTA light rail, MTA Commuter Bus 201, and MTA LocalLink bus Route 75.

OTHER TRANSIT SERVICES

Four agencies operate transit services within the RTA service area. The Maryland Transit Administration (MTA) operates local bus, express bus, commuter bus, commuter rail, and light rail services within the service area, primarily providing connections to Baltimore. Washington Metropolitan Area Transit Authority (WMATA) provides local bus, express bus, and heavy rail services within the service area, primarily providing connections to Baltimore and Washington, D.C.

Maryland Transit Administration (MTA)

The MTA operates 18 bus routes – four local, one express, and 13 commuter buses within the RTA service area. Two commuter rail lines – the Camden Line and Penn Line – serve the RTA service area. One light rail line serves the area.

Table 4-44 and

Table 4-45 identify the route, origin and destination, type of service, days of operation, and routes that intersect with the RTA. It should be noted that in mid-2017 MTA completed a comprehensive restructuring and rebranding of its Baltimore-area services under the

name BaltimoreLink. This description presents the revised BaltimoreLink services in Central Maryland.

Table 4-44: MTA Intersecting Bus Services

Route	Origin-Destination	Type	Days of Operation
MTA Service – Howard County			
BusLink 150	Columbia (Harper East) Baltimore (Harbor East)	Express	Weekday
201	Gaithersburg Park & Ride-BWI Marshall Airport	Commuter	Daily
203	Snowden River Park and Ride-Bethesda	Commuter	Weekday
305	Columbia-Silver Spring/Washington, D.C.	Commuter	Weekday
310	Columbia- John Hopkins Hospital	Commuter	Weekday
315	Ellicott City-Silver Spring/Washington, D.C.	Commuter	Weekday
320	Jessup/Columbia-Downtown Baltimore	Commuter	Weekday
325	Columbia/Silver Spring-Washington, D.C.	Commuter	Weekday
335	Clarksville/Columbia-Washington, D.C.	Commuter	Weekday
345	Ellicott City/Columbia-Washington, D.C.	Commuter	Weekday
MTA Service – Anne Arundel County			
LocalLink 67	Marley Neck (Energy Parkway)-Downtown	Local	Daily
LocalLink 69/70	Patapsco Light Rail Station-Jumpers Hole	Local	Daily
LocalLink 75	Patapsco Light Rail Station-Parkway Center	Local	Daily
BusLink 107	Old Court Metro Station-BWI Marshall Airport	Express	Weekday
BusLink 164	Riviera Beach-Downtown	Express	Weekday
201	Gaithersburg Park & Ride-BWI Marshall Airport	Commuter	Weekday
210	Kent Island-Annapolis-Downtown Baltimore	Commuter	Weekday
215	Annapolis- Downtown Baltimore	Commuter	Weekday
220	Annapolis-Washington, D.C.	Commuter	Weekday
230	Severna Park & Ride-Washington, D.C.	Commuter	Weekday
250	Kent Narrows/Stevensville/Davidsonville Park & Ride	Commuter	Weekday
260	Severna Park/Davidsonville-Washington, D.C.	Commuter	Weekday
291	Annapolis-New Carrollton	Commuter	Weekday

Table 4-45: MTA Intersecting Rail Services

Route	Origin-Destination	Type	Station
Camden Line	Baltimore Camden Station – Washington, D.C. Union Station	Commuter Rail	Jessup
			Savage
			Laurel
			Muirkirk
			College Park
Penn Line	Baltimore Penn Station – Washington, D.C. Union Station	Commuter Rail	BWI Rail Station
			Odenton
Hunt Valley – Cromwell/Glen Burnie		Light Rail	Cromwell/Glen Burnie
Hunt Valley – BWI Marshall Airport		Light Rail	BWI Business District
			BWI Marshall Airport

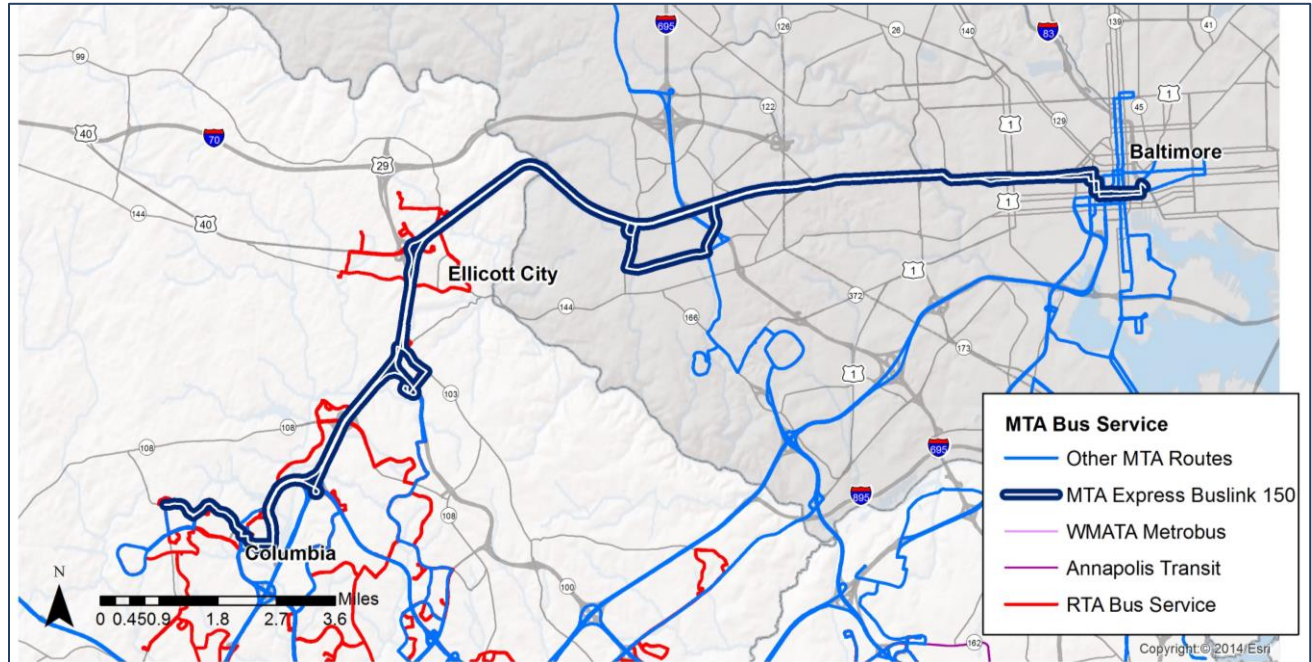
MTA Service-Howard County

In Howard County MTA provides two types of service: “Express” and “Commuter”. Express service is limited stop service operated directly by MTA under MTA’s fare policy, while the commuter bus service is operated under contract to MTA by private bus companies. The express service utilizes standard 40-foot long MTA transit buses, while the commuter bus service is operated using high-deck, over-the-road coaches with a single front door. The commuter bus fleet is a mixture of MTA-owned and contractor owned coaches. The fleet will be shifting to one that is completely owned by the contractors as the MTA coaches are retired. The Howard County services include the following routes.

Express BusLink 150: Columbia (Harper’s Choice) to Baltimore (Harbor East)

MTA Express BusLink 150 operates from Harper’s Choice Village Center to downtown Baltimore and then east to Harbor East, via Columbia Town Center, Long Gate Shopping Center (at the Park and Ride), with additional stops on U.S. 40 in Ellicott City between Route 29 and the Baltimore County line. Service operates between 6:00 a.m. and 6:30 p.m. weekdays, but is limited to peak hour service only. There are three morning inbound trips (to Baltimore) and two afternoon inbound trips; and two morning outbound trips and three afternoon inbound trips. Fares are the standard MTA \$1.80 one-way single cash fare, with a day pass at \$3.50 plus \$0.40 per ride. There are also multi-ride fares, a weekly pass at \$16.50 plus \$0.40 per ride, or \$80.00 per month, and senior/disabled fares at a reduced rate. MTA Express BusLink 150 is shown in Figure 4-77.

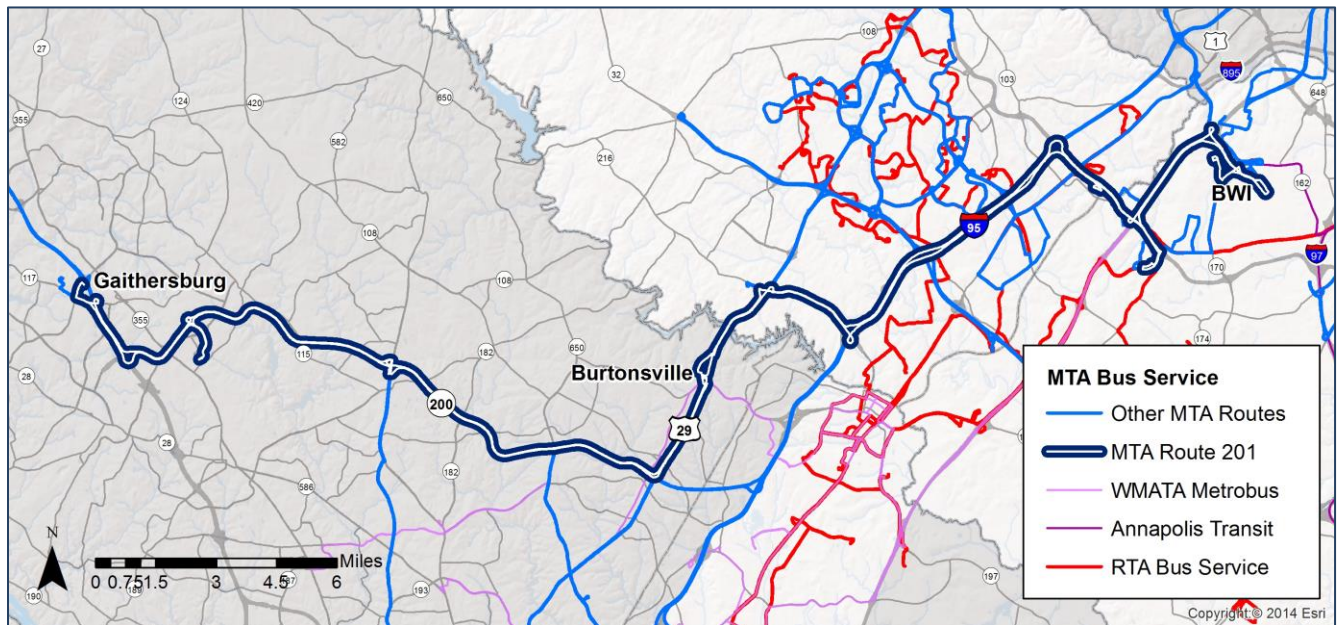
Figure 4-77: MTA Express BusLink 150 – Harper’s Choice to Baltimore



Commuter Route 201: Gaithersburg Park and Ride to BWI Marshall Airport

Route 201 operates from Gaithersburg to BWI Marshall Airport. It traverses Howard County, but has only one stop in Howard County at the Dorsey MARC station. Although this route operates on weekends, the Dorsey stops are weekday only because that is when there are MARC trains operating. On weekdays there are six eastbound stops at Dorsey Station between 1:56 p.m. and 6:56 p.m., and six westbound stops: four between 5:25 a.m. and 8:25 a.m., one at 1:25 p.m. and one at 10:25 p.m. It is described more fully in the Anne Arundel County MTA services. Figure 4-78 presents the route of the MTA 201.

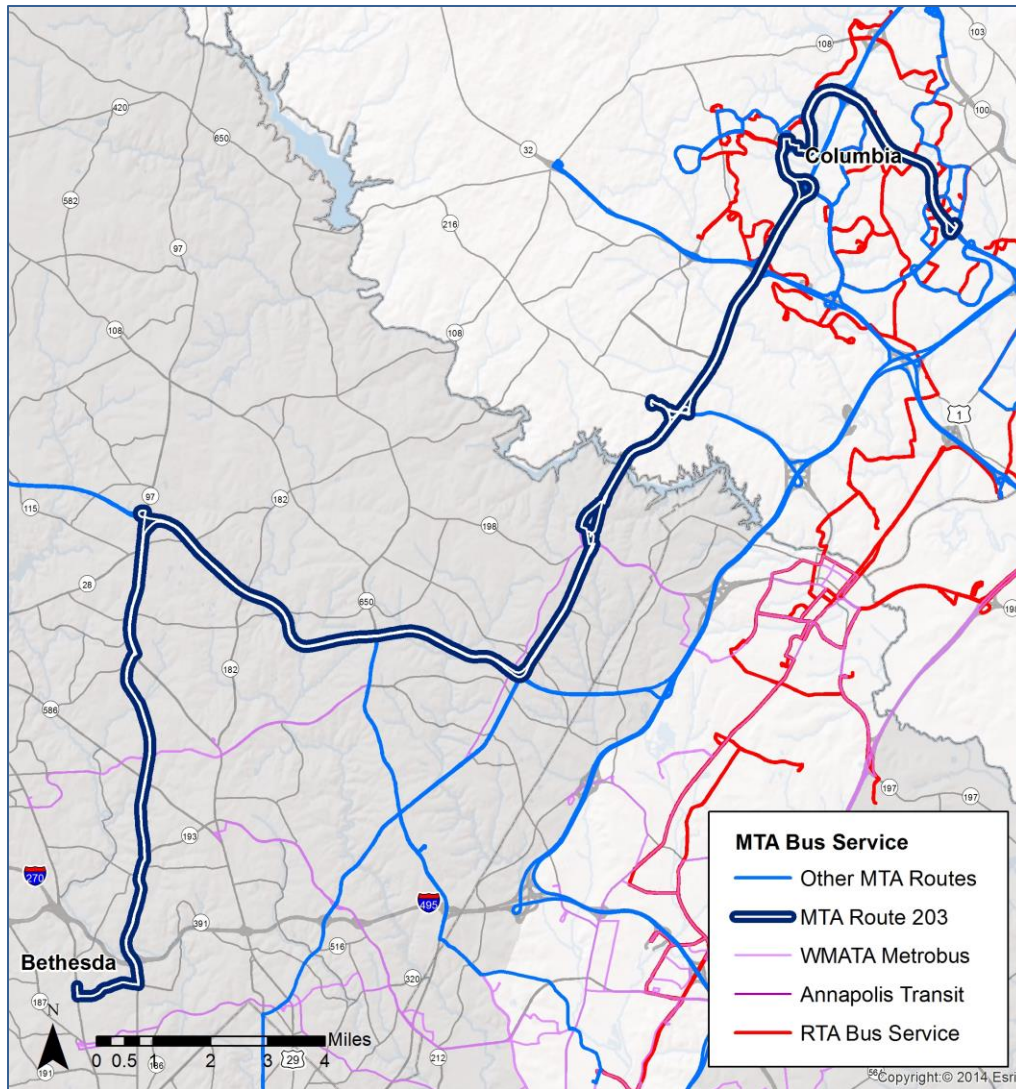
Figure 4-78: MTA Commuter Bus 201: Gaithersburg Park & Park-BWI Marshall Airport



Commuter Route 203: Snowden River Park and Ride to Bethesda

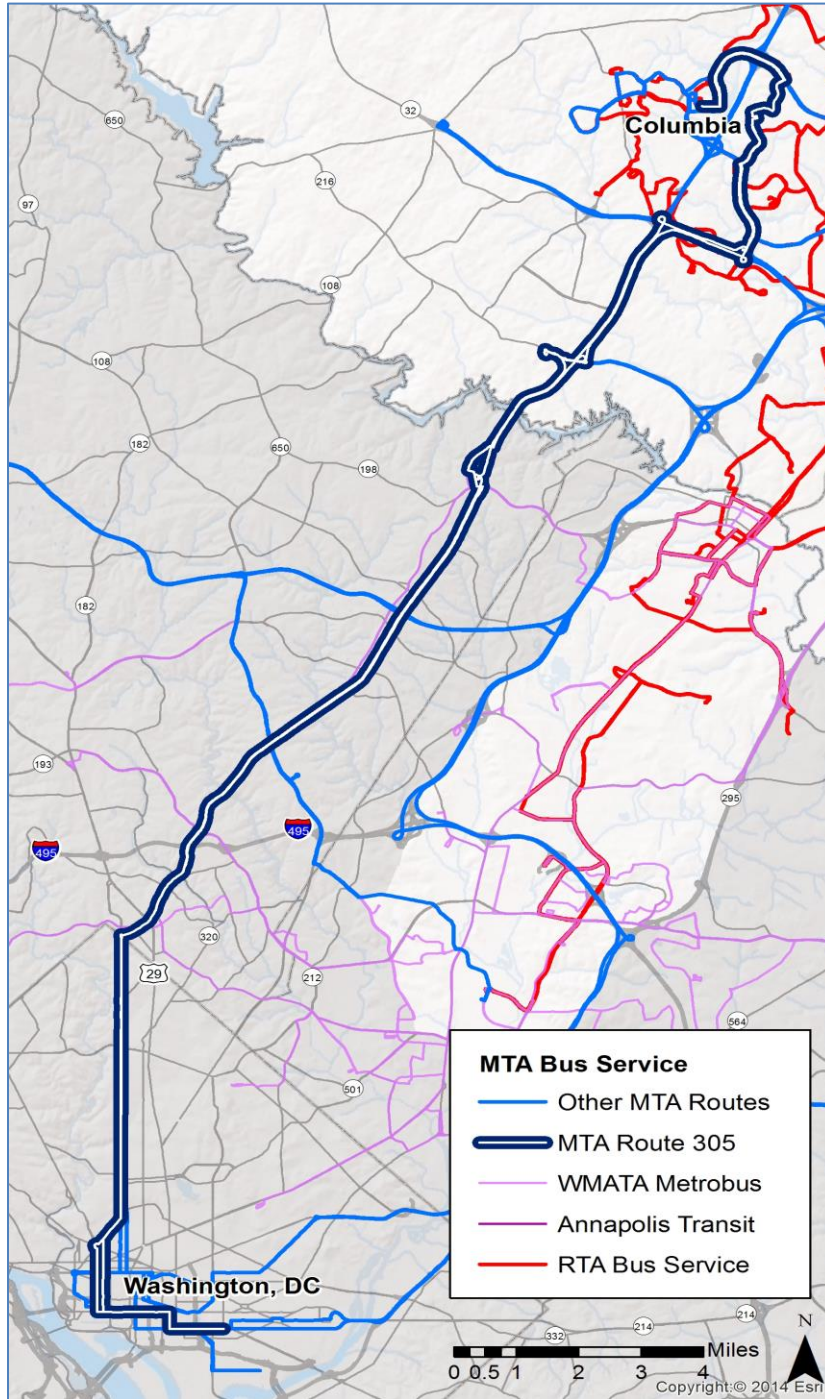
Commuter Route 203 offers commuter bus service between Howard County (with stops at Snowden River Park and Ride, Columbia Town Center, and Scaggsville Park and Ride) and the USUHS/Naval Medical Center/National Institutes of Health campus (Medical Center Metro Station) in Bethesda, Maryland. It is operated under contract by Dillon's Bus Service, Inc. Service. It runs weekdays only; with three southbound trips between 5:33 a.m. and 6:33 a.m., and four northbound trips between 3:40 p.m. and 5:10 p.m. Fares are MTA Zone 3 commuter fares; \$5.00 for a one-way cash fare, senior/disabled fares (\$4.00), and ten-trip tickets and monthly passes. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users register with Commuter Connections. MTA Commuter Route 203 is shown in Figure 4-79.

Figure 4-79: MTA Commuter Route 203 - Snowden River Park and Ride to Bethesda



Commuter Route 305: Columbia to Silver Spring and Washington, D.C.

Figure 4-80: MTA Commuter Route 305 – Columbia to Silver Spring and Washington, D.C.



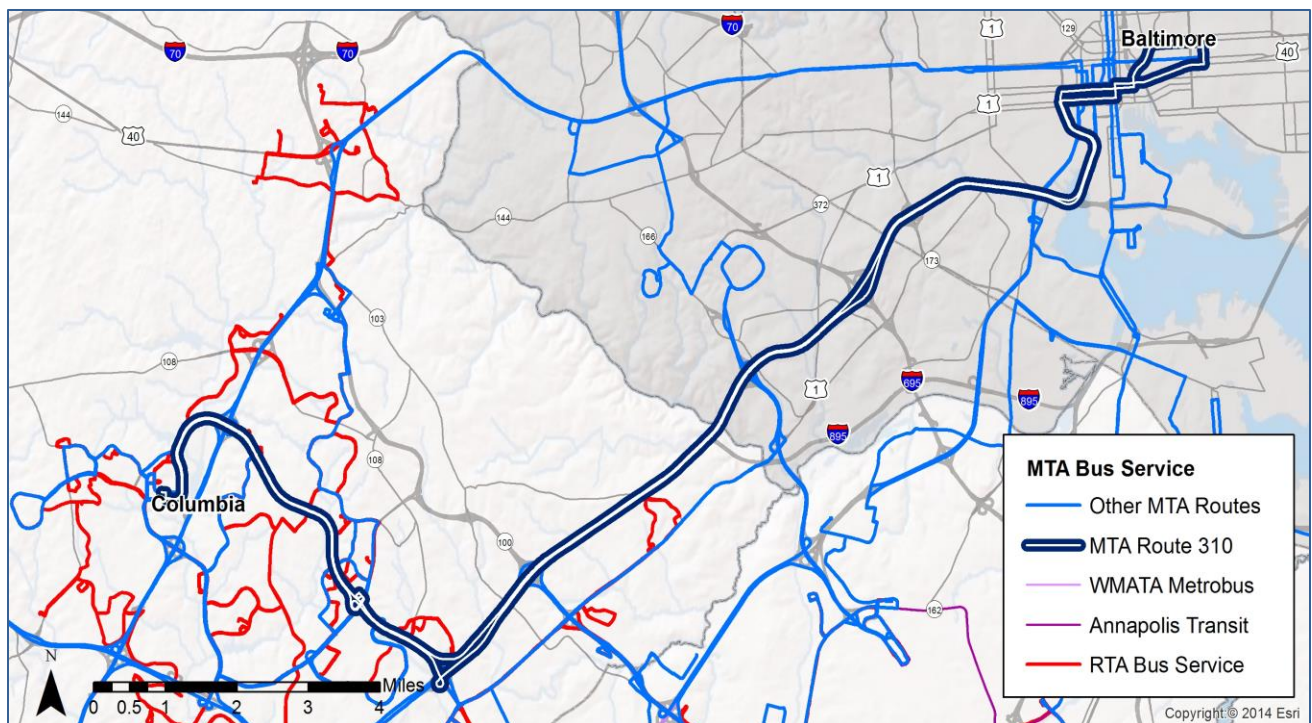
This commuter bus route connects Howard County stops at Columbia Town Center, Broken Land Park and Ride, and Scaggsville Park and Ride with the Silver Spring Metro Station and downtown Washington, D.C. It is operated under contract by Dillon’s Bus Service, Inc. Service is weekday only, with twelve southbound trips between 4:30 a.m. and 7:50 a.m., and twelve northbound trips between 1:00 p.m. and 7:00 p.m. Trips between Howard County and Silver Spring are Zone 2 fares; \$4.00 for a one-way full fare, while trips to downtown Washington, D.C. are MTA Zone 3 commuter fares; \$5.00 for a one-way cash fare, senior/disabled fares, and ten-trip tickets and monthly passes. Free transfers are available to MTA Commuter buses at the Columbia Mall and Broken Land Parkway. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users

register with Commuter Connections. Route 305 is shown in Figure 4-80.

Commuter Route 310: Columbia to Johns Hopkins Hospital (Baltimore)

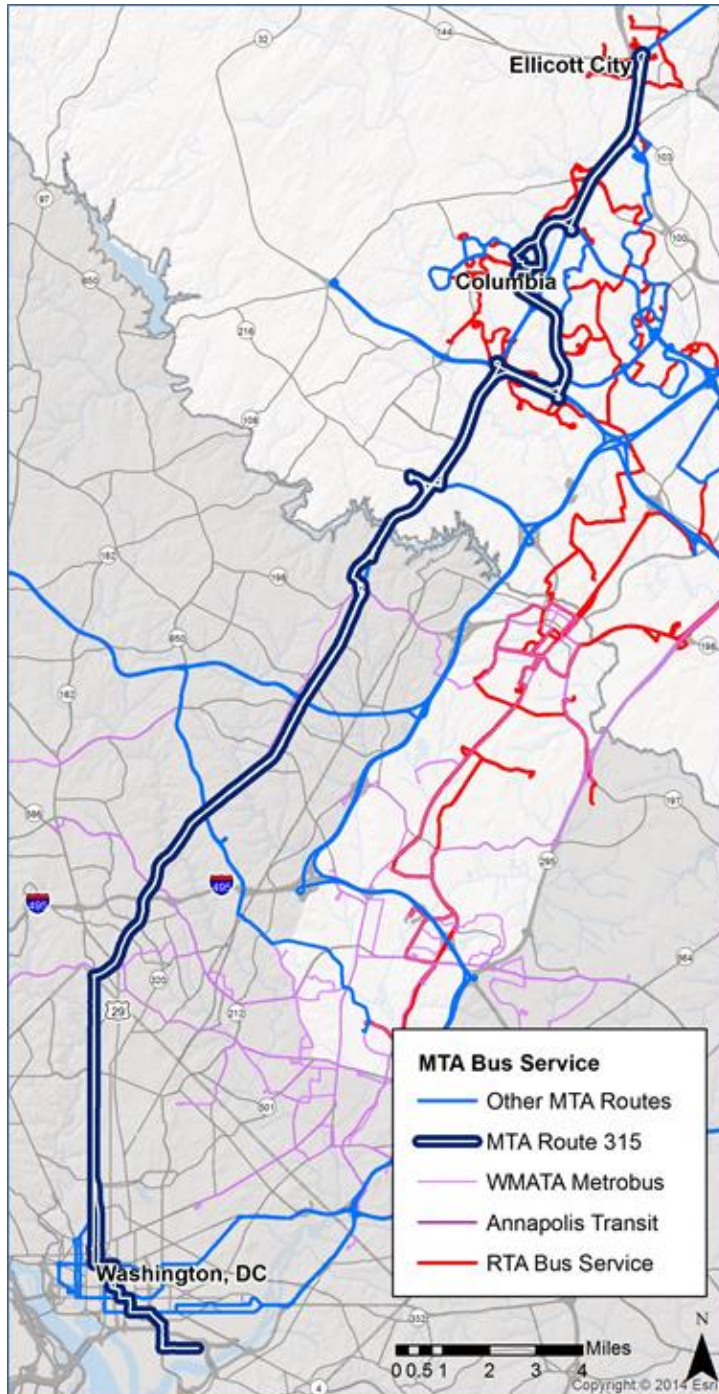
Commuter Route 310 connects Columbia Mall and the Snowden River Park and Ride with the University of Maryland at Baltimore, and the Charles Center and the Johns Hopkins Hospital in Baltimore. There are four morning inbound trips originating at Columbia Mall between 6:12 a.m. and 8:12 a.m. and an additional three originating at Snowden River Park and Ride during that period. There are seven outbound evening trips between 1:00 p.m. and 6:35 p.m., three terminating at Snowden River and the rest continuing on to Columbia. The service is operated under contract by Eyre Bus Service. Service is weekdays only, and fares are MTA commuter Zone 2 fares. Route 310 is shown in Figure 4-81.

Figure 4-81: MTA Commuter Route 310 – Columbia to Johns Hopkins



Commuter Route 315: Ellicott City (Lotte Plaza) to Silver Spring and Washington, D.C.

Figure 4-82: MTA Route 315 – Ellicott City to Silver Spring and Washington, D.C.

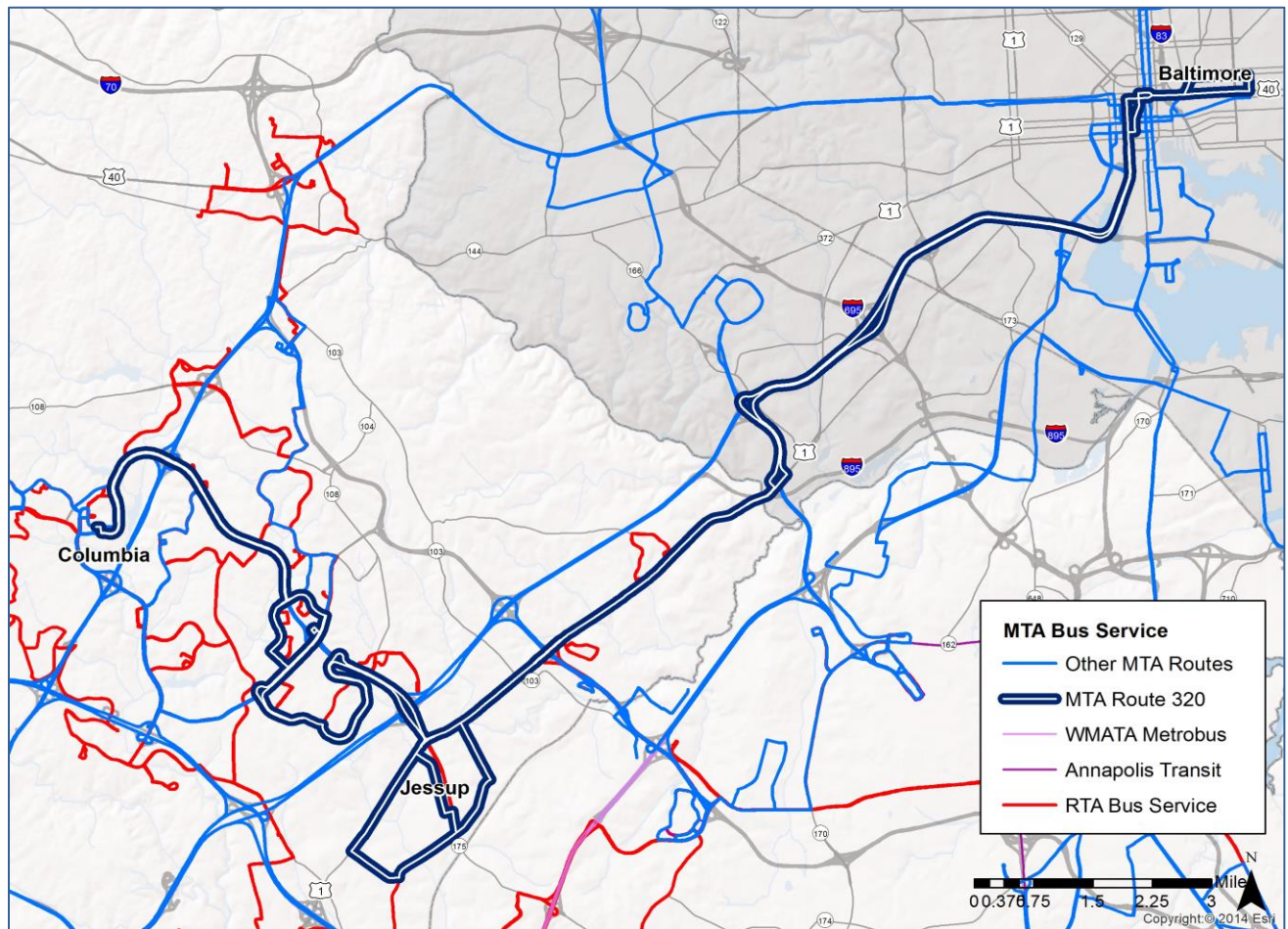


This commuter bus route connects Howard County stops at Lotte Plaza in Ellicott City, Columbia Mall, Broken Land Parkway, Broken Land Park and Ride, and Scaggsville Park and Ride with the Silver Spring Metro Station and downtown Washington, D.C. It is operated under contract by Dillon's Bus Service, Inc. Service is weekdays only, with ten southbound trips between 4:45 a.m. and 7:45 a.m., three of which originate at Lotte Plaza and the rest at Columbia Mall. There are ten northbound evening trips between 2:40 p.m. and 6:06 p.m., three of which continue only beyond Columbia Mall to Lotte Plaza. Trips between Howard County and Silver Spring are Zone 2 fares; \$4.00 for a one-way full fare, while trips to downtown Washington, D.C. are MTA Zone 3 commuter fares; \$5.00 for a one-way cash fare, senior/disabled fares, and ten-trip tickets and monthly passes. Free transfers are available to MTA Commuter buses at Columbia Mall and Broken Land Parkway. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users register with Commuter Connections. Route 315 is shown in Figure 4-82.

Commuter Route 320: Downtown Baltimore to Jessup/Columbia

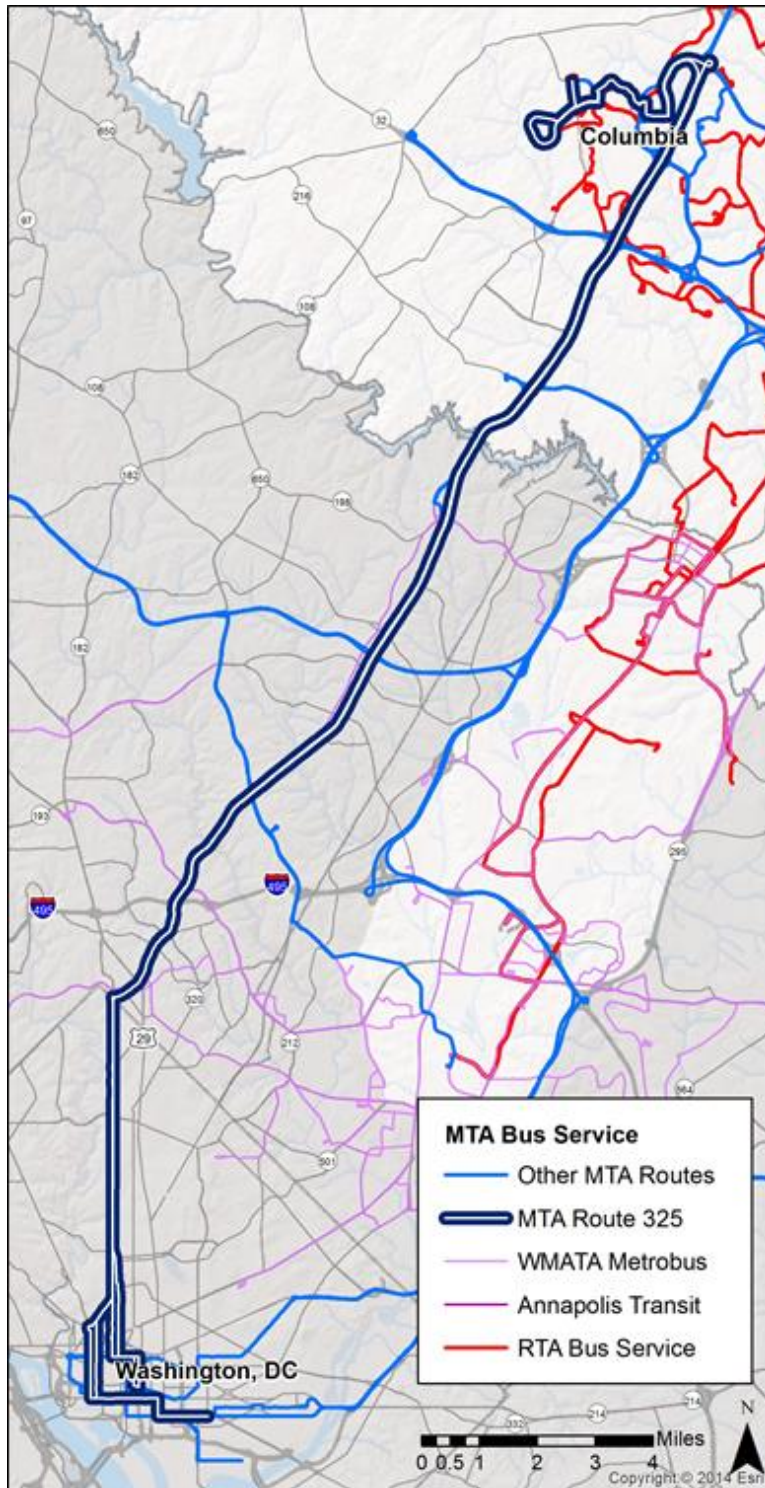
Commuter Route 320 provides service connecting Columbia, Jessup, Baltimore, and Johns Hopkins Hospital. The stops in Howard County include Columbia Mall, Snowden River Park and Ride, the Gateway area, Jessup, and Route 1 in Elkridge. Service is operated under contract by Eyre Bus Service, Inc. Route 320 operates southbound from Baltimore in the morning, and northbound to Baltimore in the evening (reverse commute). There are seven morning departures from Johns Hopkins Hospital, with four going to Columbia Mall and three going to Snowden River Park and Ride. Morning services depart between 5:05 a.m. and 7:35 a.m. Afternoon and evening northbound service begins at 11:47 a.m. and continues until the last departure at 5:10 p.m. Four northbound trips originate at Columbia Mall, and three at the Snowden River Park and Ride lot. Trips between downtown Baltimore, Elkridge and Jessup are MTA Zone 1, and longer trips are Zone 2. Zone 1 fares begin with a \$3.00 one-way cash fare, compared to the \$4.00 Zone 2 fare. Both Zones offer senior/disability fares, ten-ride tickets, and monthly passes. Route 320 is shown in Figure 4-83.

Figure 4-83: MTA Route 320 – Baltimore to Jessup/Columbia



Route 325: Columbia to Silver Spring and Washington, D.C.

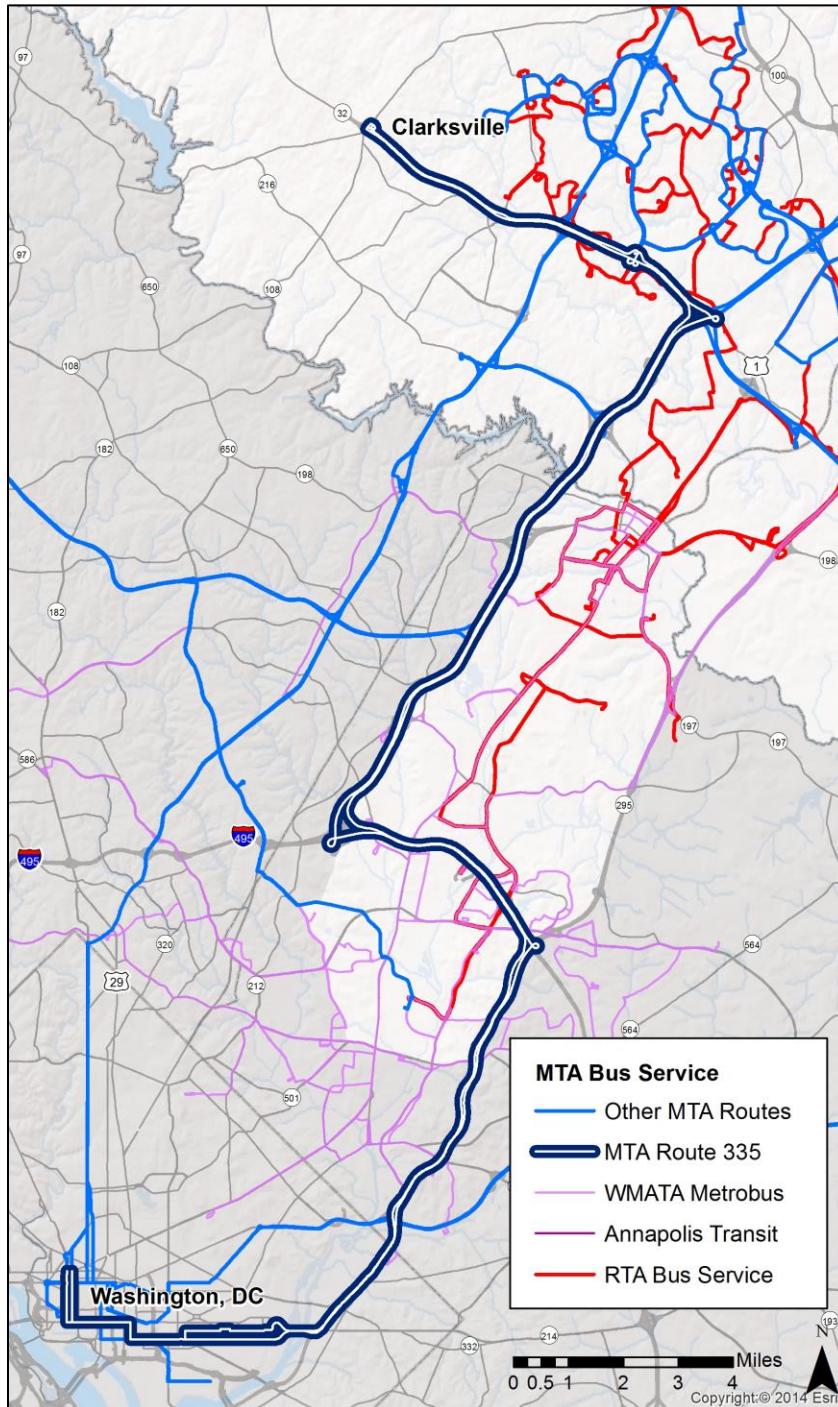
Figure 4-84: MTA Route 325 – Columbia to Silver Spring and Washington, D.C.



Route 325 offers a second line connecting Columbia to Washington, D.C. with seven trips originating at the Harper's Choice Village Center in the morning. There are stops at Columbia Mall and in downtown Columbia, and express service from there to Silver Spring and on to Washington, D.C. There are two different routings going to Capitol Hill and to Metro Center. Services depart between 5:35 a.m. and 7:35 a.m. Northbound evening services offer seven trips from downtown Washington, D.C. between 3:15 p.m. and 5:20 p.m. Trips between Howard County and Silver Spring are Zone 2 fares; \$4.00 for a one-way full fare, while trips to downtown Washington, D.C. are MTA Zone 3 commuter fares; \$5.00 for a one-way cash fare, senior/disabled fares, ten-trip tickets and monthly passes. Free transfers are available to MTA Commuter buses at Columbia Mall and Broken Land Parkway. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users register with Commuter Connections. Route 325 is shown in Figure 4-84.

Commuter Route 335: Clarksville/Columbia to Washington, D.C.

Figure 4-85: Clarksville/Columbia-Washington, D.C.

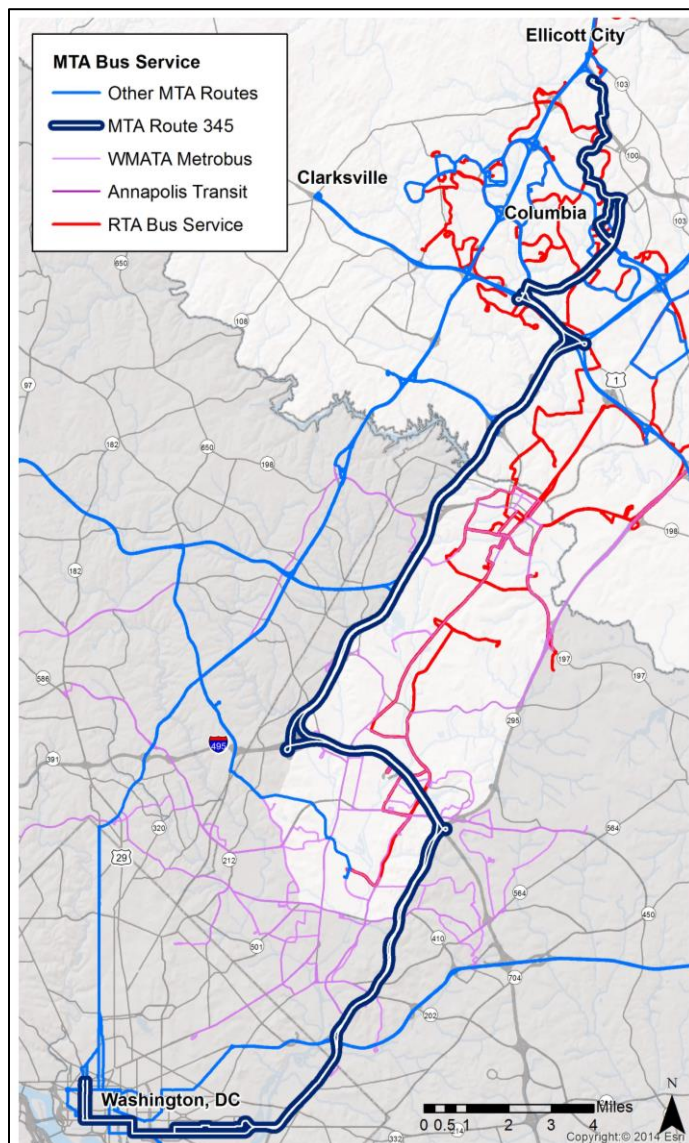


Another service to downtown Washington, D.C. is provided by Commuter Route 335 with Howard County stops in Clarksville and Broken Land Park and Ride, followed by an express ride to the west end of downtown Washington, D.C. southwest and Capitol Hill (Figure 4-85). The service is operated under contract by Dillon’s Bus Service. There are seven inbound trips between 5:08 a.m. and 7:13 a.m. In the afternoon there are seven return trips between 2:25 p.m. and 5:15 p.m. plus two Route 345 trips (that make local stops in Howard County) at 1:35 p.m. and 5:30 p.m. All services are MTA Zone 3, and free transfers are available to other MTA Commuter buses at Broken Land Parkway. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users register with Commuter Connections.

Commuter Route 345: Ellicott City/Columbia to Washington, D.C. via I-95

This commuter route 345 (Figure 4-86) connects Howard County stops at Long Gate Park and Ride, Snowden River Park and Ride, and Broken Land Park and Ride with Washington, D.C. via I-95. In addition to the park and ride lots there are a number of on-street stops in the Long Reach area. On weekdays only, there are seven southbound morning departures between 5 a.m. and 7:10 a.m., and seven northbound return trips between 12:15 p.m. and 5:30 p.m. Service is operated by Dillon's Bus Service. All services are MTA Zone 3, and free transfers are available to other MTA Commuter buses at Broken Land Parkway. The Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. Guaranteed Ride Home is available if users register with Commuter Connections.

Figure 4-86: MTA Commuter Route 345 – Ellicott City/Columbia to Washington, D.C.



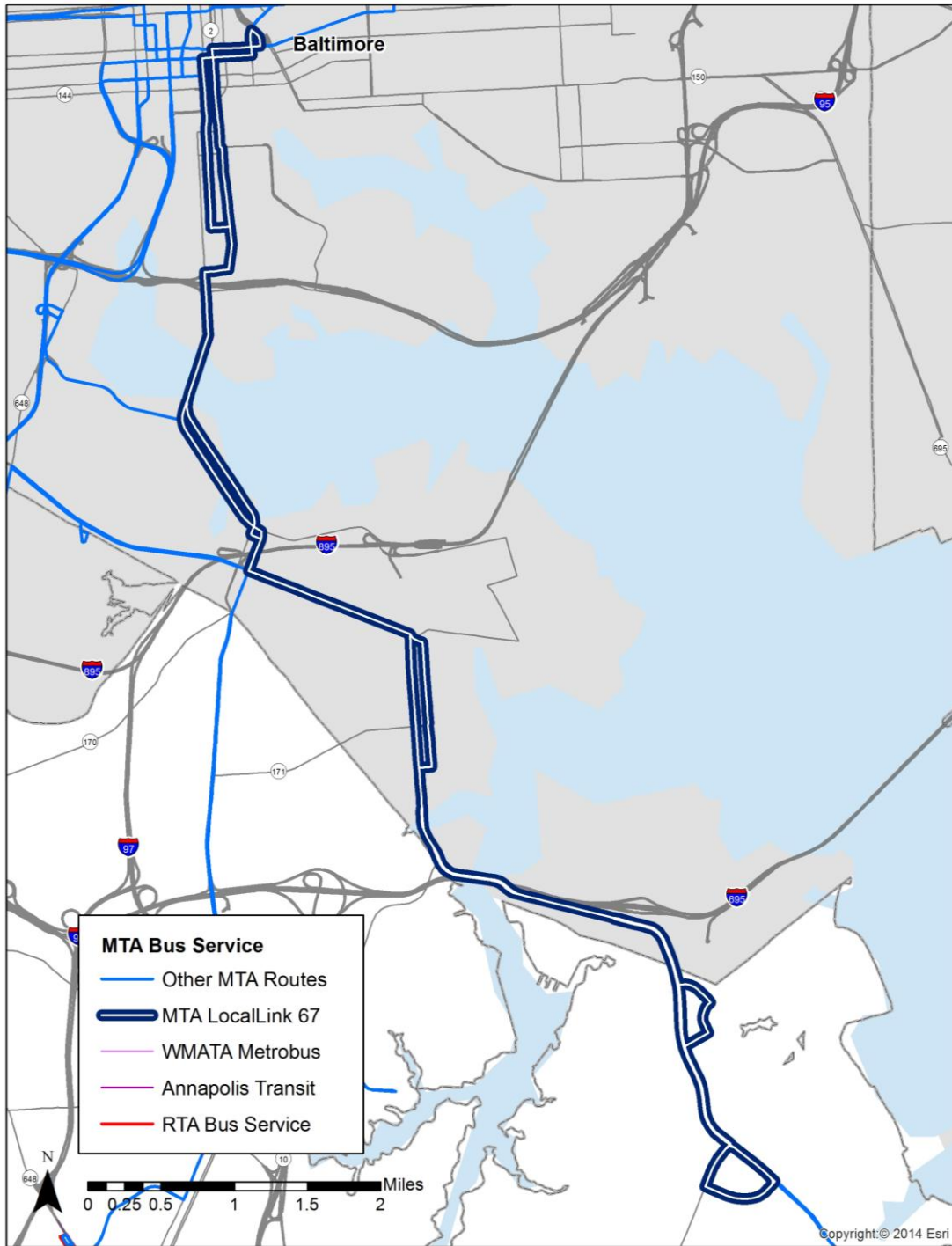
MTA Service—Anne Arundel County

In Anne Arundel County MTA provides a substantial amount of service, including four local bus service routes, five commuter bus routes, light rail service and commuter rail service. Some of this service will be affected by the Baltimore area transit service restructuring now underway as “BaltimoreLink”. The MTA services in Anne Arundel County are described below.

MTA LocalLink 67: Marley Neck (Energy Parkway) to Downtown (City Hall)

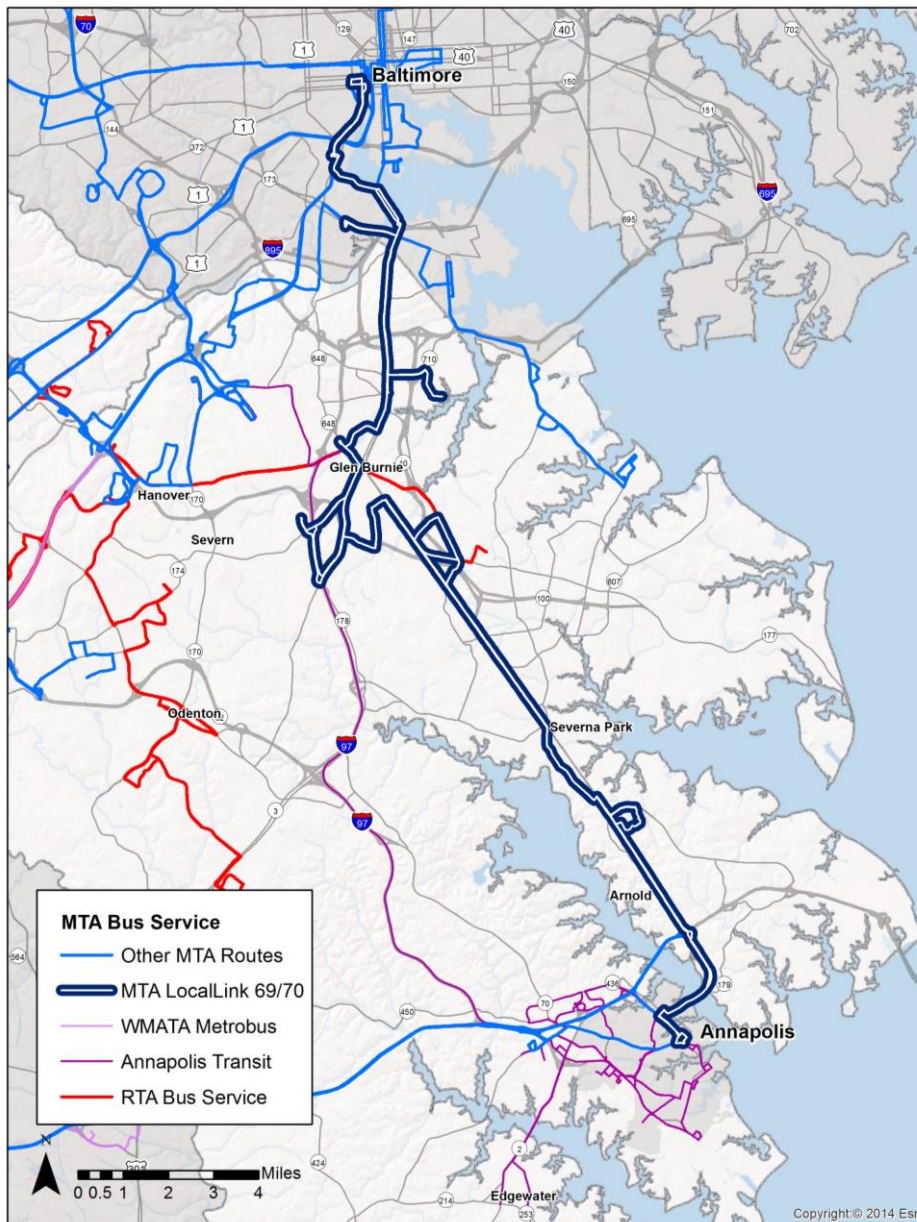
MTA LocalLink 67 provides local bus service connecting northeastern Anne Arundel County to downtown Baltimore. Key origins include Energy Business Park, Marley Neck and Curtis Bay. There is weekday and weekend service (both days). The Anne Arundel portion of the route originates at Marley Neck, makes a deviation into Marley Neck Industrial Park providing service to the Under Armour Factory House, and then continues north. Weekdays, from Marley Neck there are six a.m. northbound trips and ten southbound a.m. trips between 4:57 a.m. and 9:55 a.m., no late morning service, and then 13 northbound and 14 southbound trips between 12:21 p.m. and 1:06 a.m. Weekend service is reduced to four a.m. and 8 p.m. trips each way. Fares are MTA local bus fares, and there is no connectivity to RTA bus services on these services. The service was formerly called MTA Route 64, and it was heavily modified as part of the BaltimoreLink restructuring. As noted above, the section between Marley Neck/Energy Parkway and Curtis Bay was replaced with a new service, LocalLink 67, which will continue to downtown Baltimore. The former service between Curtis Bay and North Avenue was incorporated into the new higher-frequency CityLink Silver service (but without the deviation into Port Covington), which is a longer route that extends to University Parkway and the Morgan State University campus. Riviera Beach is now served by Express BusLink 164. LocalLink 67 can be seen in Figure 4-87.

Figure 4-87: MTA LocalLink 67 - Curtis Bay/Energy Parkway to North Avenue



MTA LocalLink 69/70: Patapsco Light Rail Station to Annapolis/Jumpers Hole

Figure 4-88: MTA LocalLink 69/70: Patapsco Light Rail Station to Annapolis/Jumpers Hole



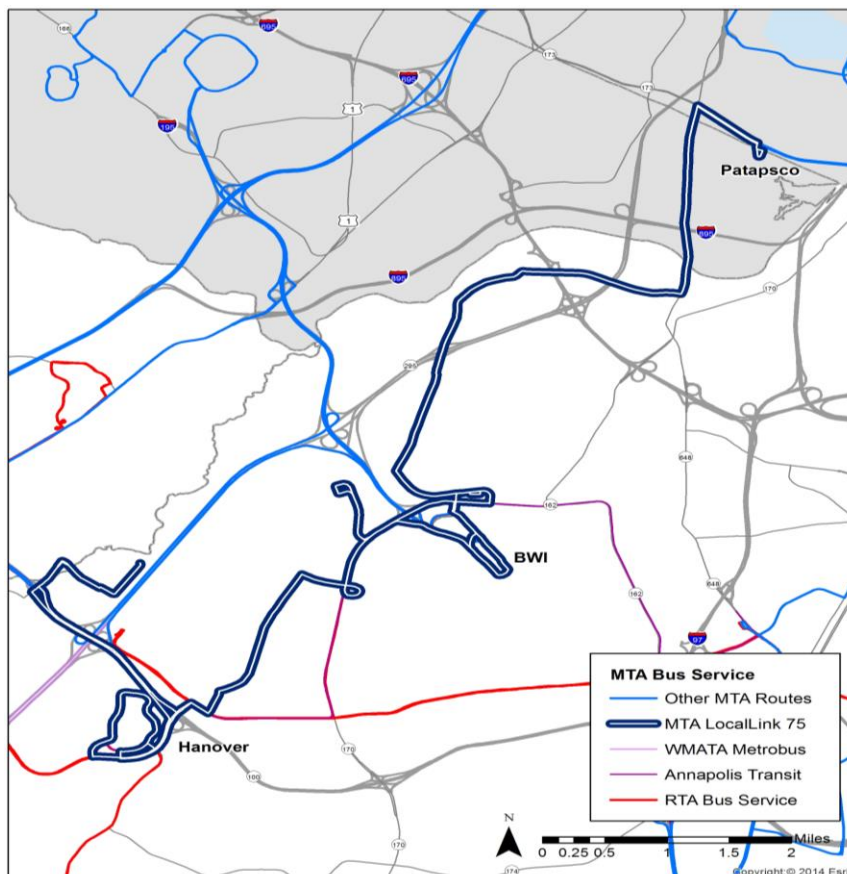
The BaltimoreLink plan rebrands the former MTA Route 14, with the Jumper's Hole service now called LocalLink 69, and the routing to Annapolis called LocalLink 70 (Figure 4-88). The only change on both services is the elimination of the service to Bayview Industrial Park. This local service route serves key Anne Arundel County points including Brooklyn Park, Glen Burnie, Cromwell Light Rail Station, Pasadena, Severna Park, Anne Arundel Community College, and Baltimore Washington Medical Center (not all trips). There are deviations on different trips and not all destinations

are served on each schedule. There are 14 trips to Annapolis, and another route that only goes as far as Jumpers Hole Road. Service operates from 4:45 a.m. to 2:00 a.m. on weekdays, and from 6:00 a.m. to midnight on Saturday and Sunday. The frequency on weekdays and Saturday is 60 minutes, stretching to 65 minutes on Sunday (10 a.m. to 7:00 p.m.) and two hours at other times on Sunday. There is limited service to downtown Baltimore (University of Maryland Transit Center) when the light rail system is not operating. Connections to RTA Route 201/J can be made at Cromwell Light Rail Station. Fares are MTA local fares.

MTA LocalLink 75: Patapsco Light Rail Station to Parkway Center

This local service in western Anne Arundel County recently was changed as part of the e BaltimoreLink restructuring. Formerly MTA Route 17, the changes include a rebranding to the LocalLink 75 name, elimination of service to Parkway Center South, and service to Parkway Center North only during the morning peak. A routing change moved service from Aviation Boulevard/Dorsey Road to New Ridge Road to serve the Baltimore Commons Business Park. LocalLink 75 continues to Route 17 links the Patapsco Light Rail Station with the Nursery Road business area, BWI Business Park, BWI Marshall Airport, BWI Amtrak/MARC Rail Station, Arundel Mills Mall and Parkway Center North. The span of service is 24 hours, and there is an extension to downtown Baltimore when light rail service is not operating. However, not all stops are served at all times - and headways vary from 30 to 60 minutes. Daytime service between Patapsco and Arundel Mills Mall is provided on all trips, but the extension to Parkway Center North now operates only during the morning peak period. At night, service operates from the University of Maryland Transit Center downtown (rather than Patapsco Light Rail) to Arundel Mills Mall. Fares are MTA local bus fares. There is connecting service to RTA's Route 201/J, 202/K, 501/Silver, and 502/B at Arundel Mills Mall. The route alignment is shown in Figure 4-89.

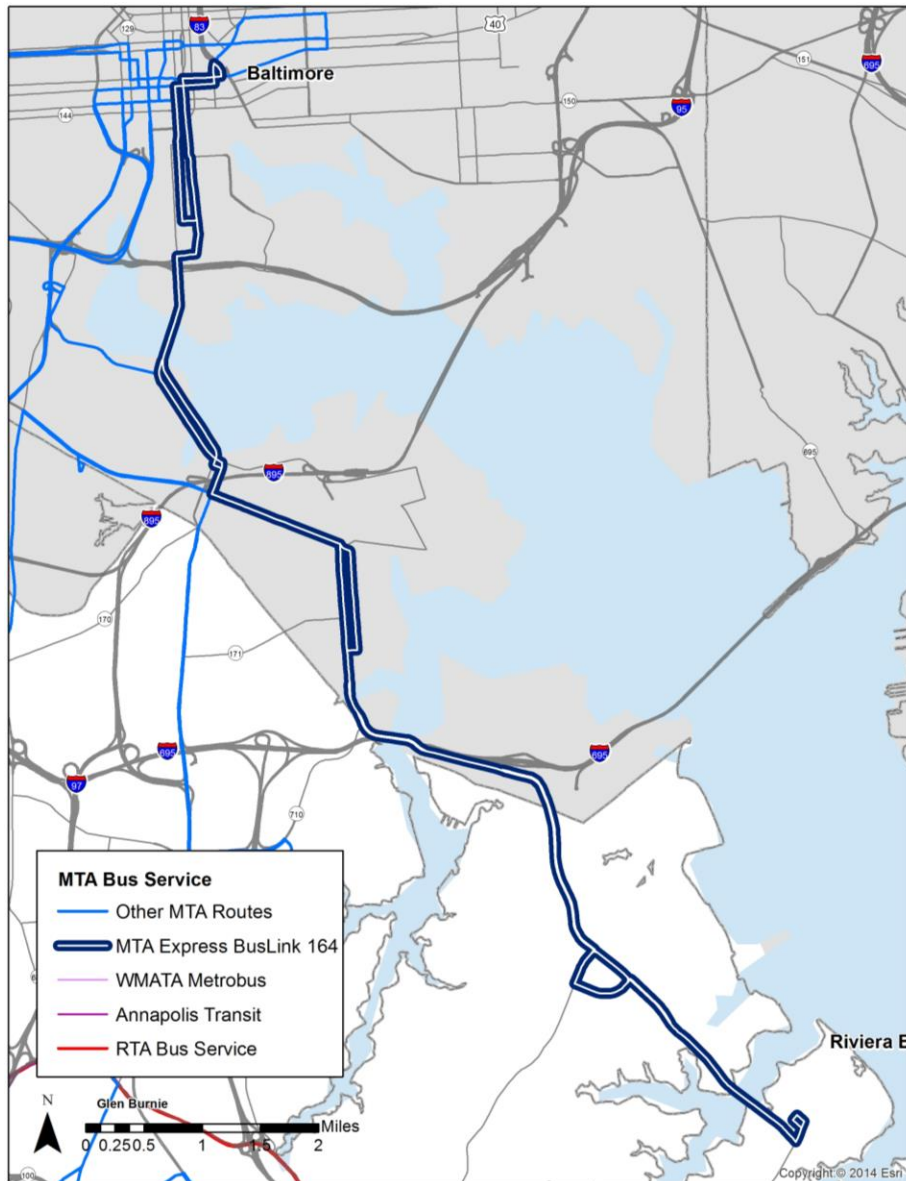
Figure 4-89: MTA LocalLink 75: Patapsco Light Rail Station to Parkway Center



MTA Express BusLink 164: Riviera Beach to Downtown

Between Riviera Beach and downtown, a new Express BusLink 164 provides service on weekdays only. Despite the name, the service operates as a local service making all stops. However, the frequency was reduced to two morning (5:55 and 7:45 a.m.) and two evening peak trips (leaving City Hall at 3:30 and 5:15 p.m.) because of the current low ridership from Riviera Beach. The service originates in Riviera Beach, deviates through Brandon Woods via Energy Parkway, and continues to Hawkins Point, through Curtis Bay to downtown Brooklyn, Harbor Hospital and then to Charles Center and City Hall. The new route has MTA local bus fares. The Express BusLink 164 route is presented in Figure 4-90.

Figure 4-90: MTA Express BusLink 164 – Riviera Beach to Downtown



Express BusLink 107: Old Court Metro Station to BWI Marshall Airport

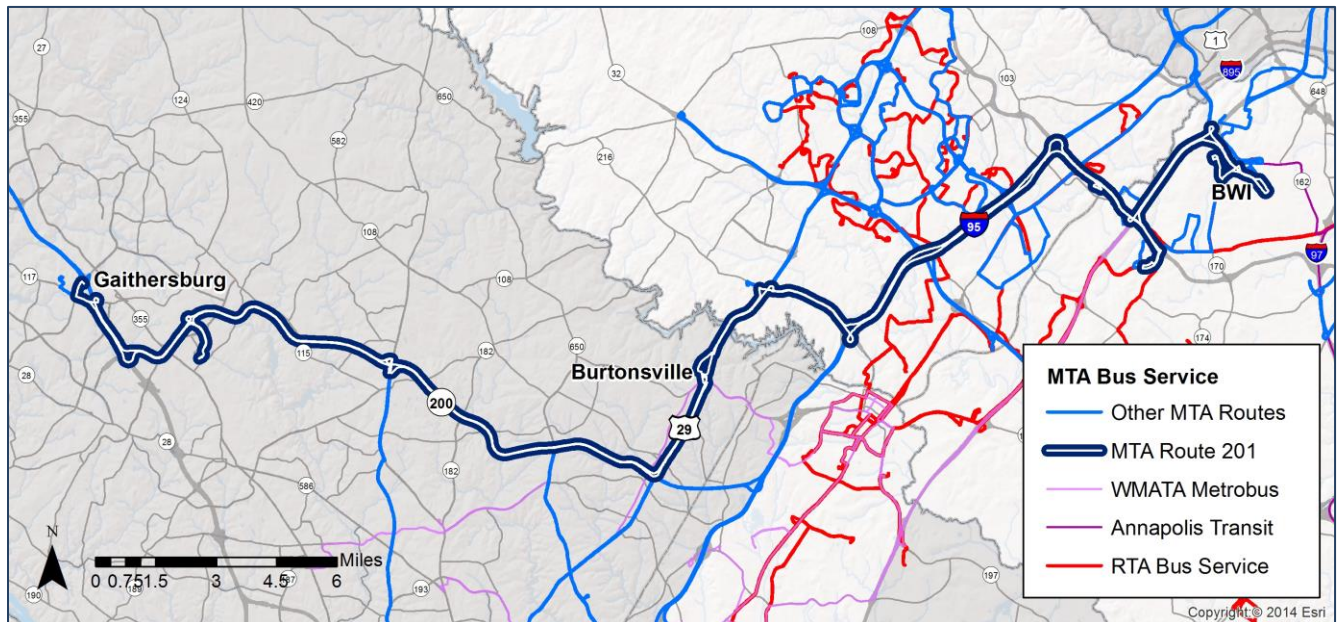
This route connects northwest Baltimore (the Metro, Centers for Medicare and Medicaid Services (CMS) and Security Square Mall) with the BWI employment centers via Catonsville (Community College of Baltimore County and University of Maryland Baltimore County campuses). The routing is circumferential, with local service in northwest Baltimore, express service on I-695, and local service in the Catonsville area to BWI Marshall Airport. Service is weekdays only, during morning and afternoon evening peak. Express BusLink 107 provides two round-trips in the morning peak and two in the afternoon peak. RTA Route 501/Silver connects at BWI Marshall Airport. Fares are MTA local bus fares. Under the BaltimoreLink plan, this service was modified from the former Route 99, with some of the local service between Old Court Metro and UMBC shifted to a new LocalLink 37 route, and the longer connection between Old Court Metro, Security Boulevard, Catonsville and BWI Marshall Airport is already being provided by the new Express BusLink 107.

MTA Commuter Bus Service

Commuter Route 201: Gaithersburg Park and Ride to BWI Marshall Airport

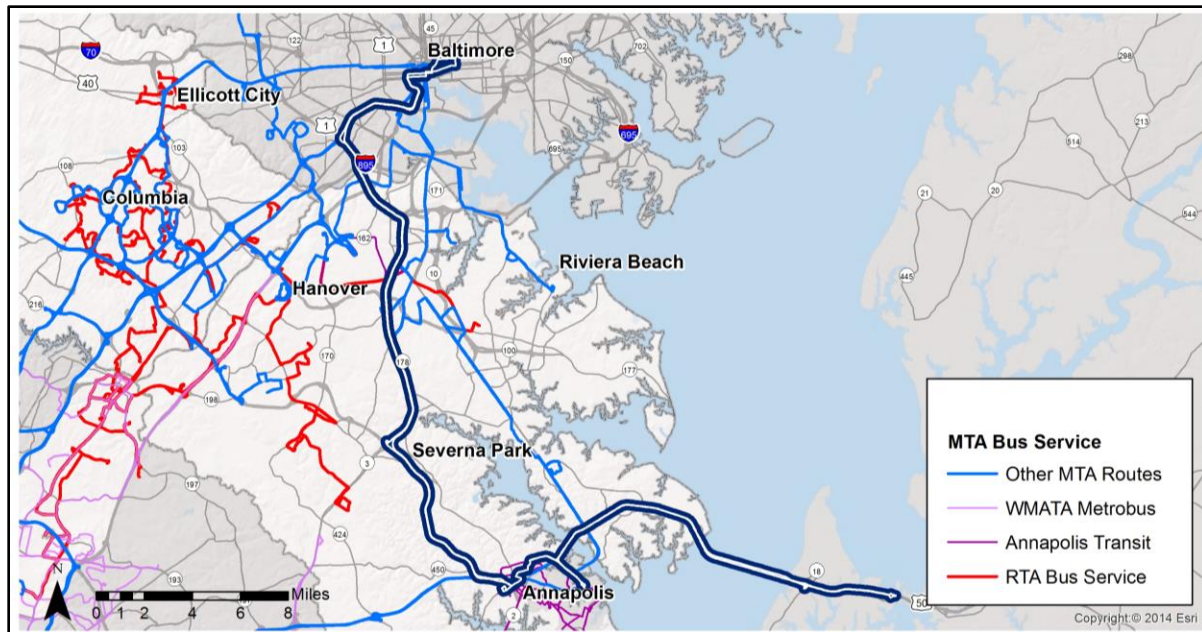
Route 201 links Gaithersburg with BWI Marshall Airport using Maryland 200, the Intercounty Connector, Route 29 and Route 32. On weekdays there are fifteen eastbound departures per day from the Gaithersburg Park and Ride lot, hourly beginning at 4:00 a.m. with the last departure at 6:00 p.m. All trips continue to the airport, but as noted previously, the Dorsey MARC Station stops are weekday only because that is when there are MARC trains operating. On weekdays there are six eastbound stops at Dorsey MARC Station between 1:56 p.m. and 6:56 p.m., and six westbound stops: four between 5:25 a.m. and 8:25 a.m., one at 1:25 p.m. and one at 10:25 p.m. There are no weekend or holiday stops at the Dorsey Station, but there are fifteen trips each way between Gaithersburg and BWI Marshall Airport on weekends and holidays; service is hourly in each direction between 4:00 a.m. and 6:57 p.m. All services are MTA Zone 3, and the Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. Guaranteed Ride Home is available if users register with Commuter Connections. See Figure 4-91.

Figure 4-91: MTA Commuter Route 201: Gaithersburg Park and Ride-BWI Marshall Airport



Commuter Route 210: Kent Island and Downtown Baltimore

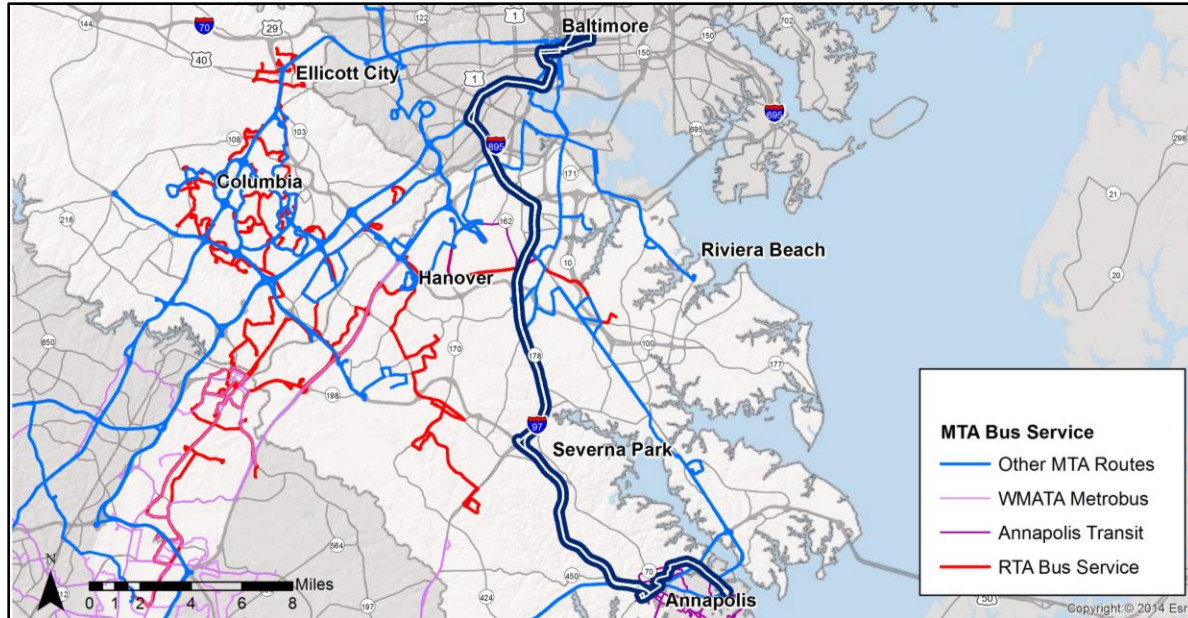
Commuter Route 210 offers commuter bus service between Kent Island (with stops four stops in Annapolis) and Downtown Baltimore. It runs weekdays only; with four northbound trips between 5:30 a.m. and 7:30 a.m., and five southbound trips between 3:10 p.m. and 5:10 p.m. Kent Island to Annapolis is \$4.00, Annapolis to Baltimore is \$5.00, and Kent Island to Baltimore is \$6.00. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users register with Commuter Connections. MTA Commuter Route 210 is shown in Figure 4-92.

Figure 4-92: MTA Commuter Route 210 – Kent Island and Downtown Baltimore

Commuter Route 215: Annapolis and Downtown Baltimore

Commuter Route 215 offers commuter bus service between Annapolis (with stops 1 stop at the Cromwell Light Rail Station) and Downtown Baltimore. It runs weekdays only; with three southbound trips between 5:45 a.m. and 7:45 a.m., and three northbound trips between 3:17 p.m. and 5:17 p.m. The route is Zone 3, and the cost is \$5.00. A Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. A Guaranteed Ride Home program is available if users register with Commuter Connections. MTA Commuter Route 215 is shown in Figure 4-93.

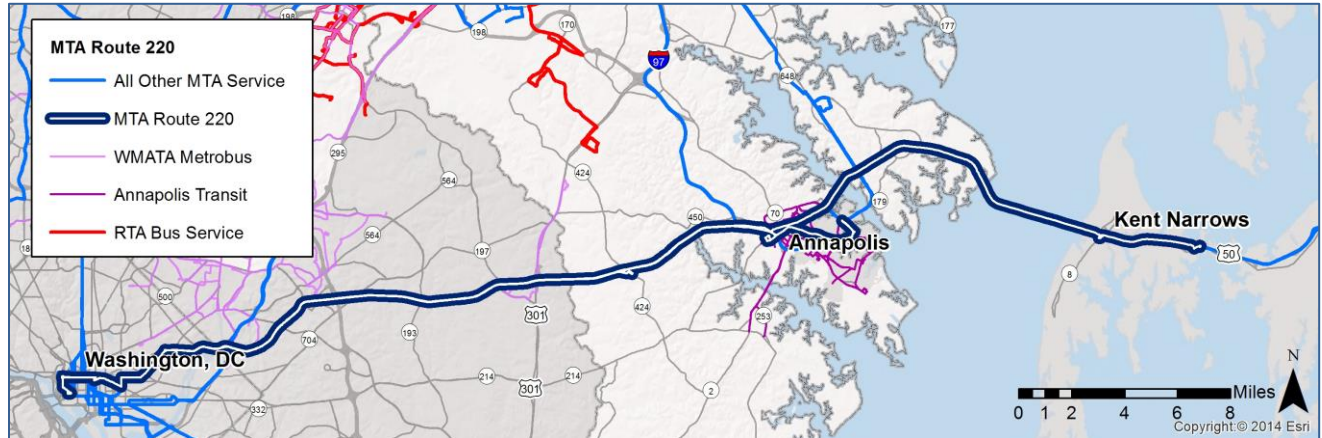
Figure 4-93: MTA Commuter Route 215 – Annapolis and Downtown Baltimore



Commuter Route 220: Annapolis to Washington, D.C.

Twelve round-trips per weekday are operated on Commuter Route 220 connecting Anne Arundel County with downtown Washington, D.C. In the morning, six trips originate at the Harry S. Truman Park and Ride in Parole, and then operate express service to K Street NE on Capitol Hill. They are provided on half-hour headways from 5:30 a.m. to 8:00 a.m. Another six trips originate in Annapolis, leaving Rowe Boulevard and Taylor Avenue between 4:55 a.m. and 7:25 a.m., making on-street stops on West Street and Riva Road on the way to the Harry S. Truman Park and Ride, after which the service operates express to downtown. In the evening the pattern is reversed, with a total of fourteen departures from downtown stops between 12:15 p.m. and 6:30 p.m. Two make stops at Davidsonville Park and Ride, and stop at Harry S. Truman Park and Ride. Seven of them make on-street stops on West Street. The service is operated under contract by Dillon's Bus service. All fares from Anne Arundel County are MTA Commuter Zone 3. The Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. In addition there are free transfers at the Harry S. Truman Park and Ride lot to eastbound 220 trips. MTA Commuter Route 220 is shown in Figure 4-92.

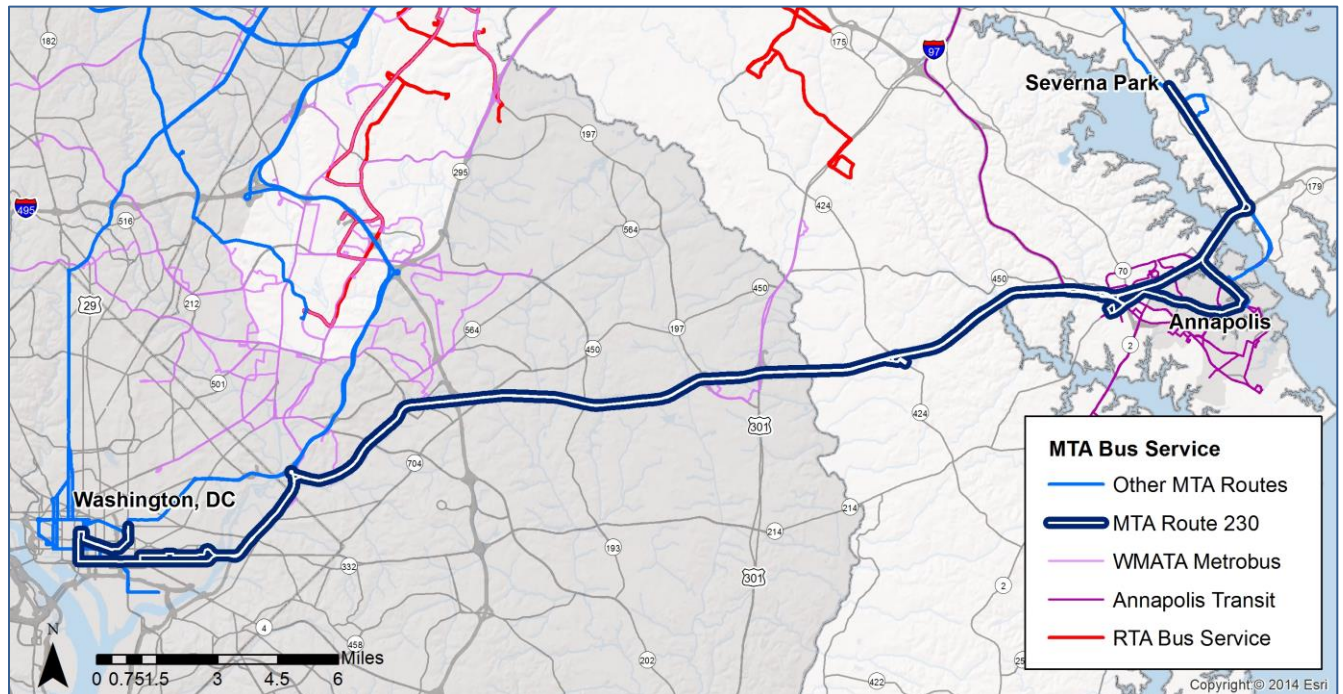
Figure 4-924: MTA Commuter Route 220 – Annapolis to Washington, D.C.



Commuter Route 230: Severna Park and Parole/Annapolis to Washington, D.C.

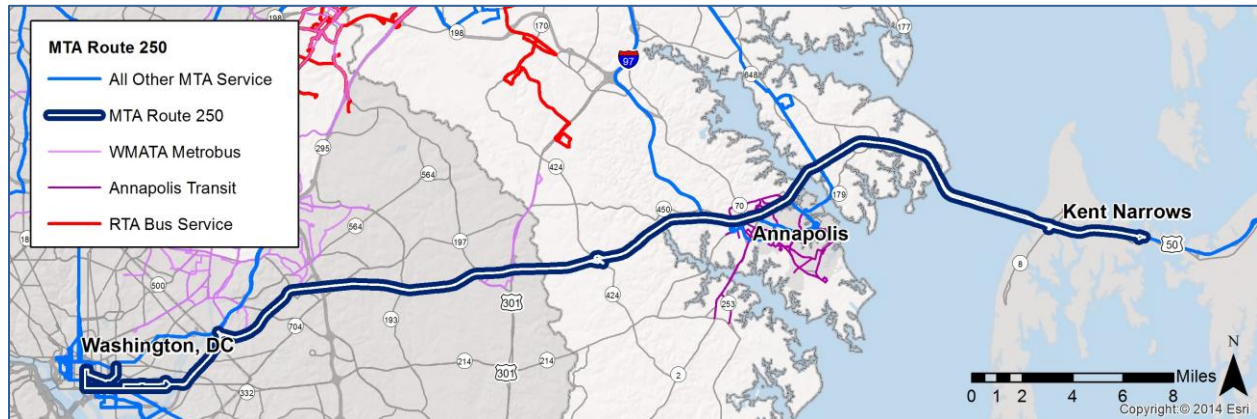
Ten round-trips per weekday are operated on Commuter Route 230. In the morning five trips originate at the Severna Park Park and Ride between 6:00 a.m. and 7:00 a.m. They operate express to the Harry S. Truman Park and Ride in Parole, and then express to Capitol Hill. Another five trips originate in Annapolis, leaving Rowe Boulevard and Taylor Avenue between 5:10 a.m. and 7:10 a.m., making on-street stops on West Street and Riva Road on the way to the Harry S. Truman Park and Ride, after which the service operates express to Capitol Hill. In the evening the pattern is reversed, with a total of ten departures from Union Station between 12:05 p.m. and 6:00 p.m. Three of them make stops at Davidsonville Park and Ride, all of them stop at the Harry S. Truman Park and Ride, seven make on-street stops on West Street, and seven continue on to the Severna Park Park and Ride. The service is operated under contract by Dillon's Bus service. All fares are MTA Commuter Zone 3. The Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. In addition there are free transfers at the Harry S. Truman Park and Ride lot to eastbound 220 trips. MTA Commuter Route 230 is shown in Figure 4-

Figure 4-95: MTA Commuter Route 230 – Severna Park and Parole/Annapolis to Washington, D.C.



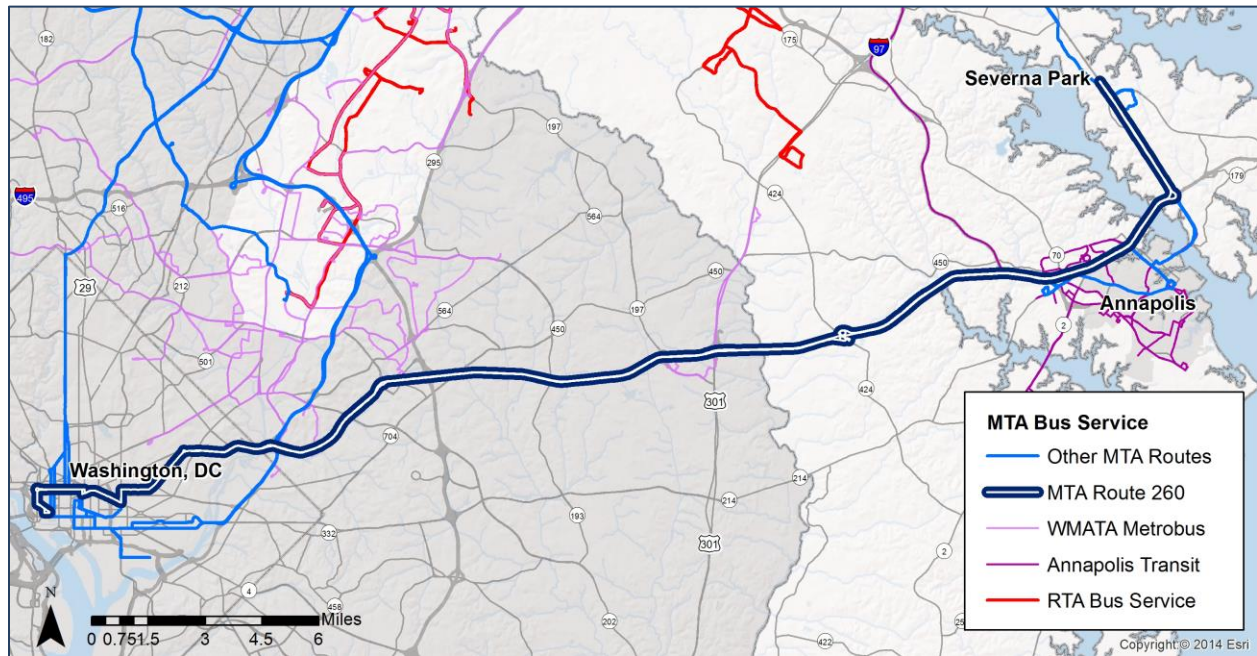
Commuter Route 250: Kent Narrows, Stevensville, and Davidsonville Park and Ride Lots to Downtown Washington, D.C.

This commuter bus service originates in Queen Anne’s County, and has one stop in Anne Arundel County, at the Davidsonville Park and Ride lot at U.S. 50 and MD 424. The service is weekday peak hours only, with six inbound trips departing Davidsonville between 5:20 a.m. and 7:26 a.m. Six afternoon return trips leave Union Station between 3:16 p.m. and 5:20 p.m. The service is operated under contract by Dillon’s Bus Service, Inc. Fares from Davidsonville are MTA Commuter Zone 3 fares, with a base one-way cash fare of \$5.00, with senior/disability fares, ten-trip tickets and monthly passes available. MTA Commuter Route 250 is shown in Figure 4-93.

Figure 4-936: MTA Commuter Route 250 – Kent Narrows to Washington, D.C.**Commuter Route 260: Severna Park and Davidsonville to Washington, D.C.**

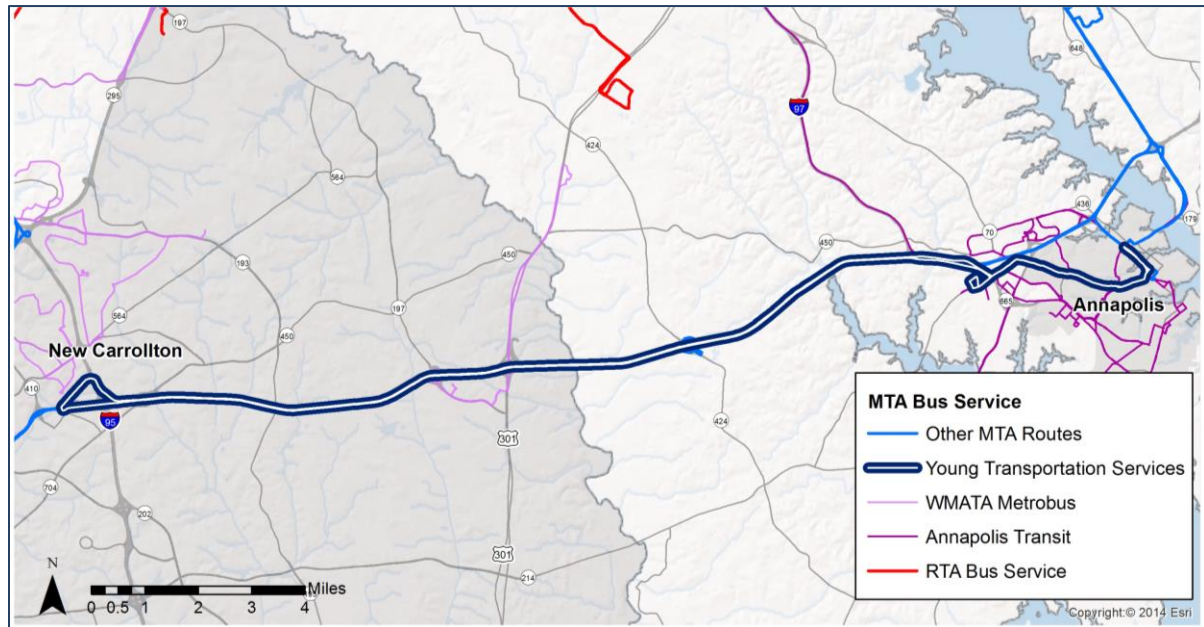
Anne Arundel County is also served by another MTA Commuter Bus route that originates at the Severna Park Park and Ride, stops at the Davidsonville Park and Ride, and continues to K Street in downtown Washington, D.C. The service is weekday only, peak hour with six inbound trips between 5:10 a.m. and 7:40 a.m., and outbound trips in the afternoon between 3:15 p.m. and 5:45 p.m. The service is operated under contract by Dillon's Bus Service, Inc. Fares from both Anne Arundel County stops are MTA Commuter Zone 3 fares, with a base one-way cash fare of \$5.00, with senior/disability fares, ten-trip tickets and monthly passes available. The Transit Link Card is available offering unlimited use of the commuter bus, Metrorail, Metrobus and Ride-On during the indicated month. In addition there are free transfers at the Davidsonville Park and Ride lot to eastbound Route 250 trips headed for Kent Island. MTA Commuter Route 260 is shown in Figure 4-94.

Figure 4-947: MTA Commuter Route 260 – Severna Park and Davidsonville to Washington, D.C.



Commuter Route 291: New Carrollton to Annapolis (Young Transportation Services)

In addition to the MTA commuter bus service, Young Transportation Services, a private for-profit firm, operates the daily commuter service between New Carrollton Metrorail and Annapolis with no state, federal or local subsidy. Figure 4-95 presents the route. Weekday service includes five a.m. roundtrips and four p.m. roundtrips, with three a.m. and four p.m. trips on Saturday and two a.m. and three p.m. trips on Sunday. There are 15 potential Annapolis stops that include Taylor Avenue, downtown, West Street, Parole, the Anne Arundel Medical Center, Westfield Mall and the Harry S. Truman Park and Ride. An intermediate stop is made at the Davidsonville Park and Ride. Fares are based on a \$10 one-way adult fare, Annapolis to New Carrollton, with an \$8 Senior fare, \$6 for children over 5 and \$3 for those under 5. A ten-trip ticket is \$100 (\$80 for seniors). The fares are somewhat lower from Davidsonville, with the base cash fare one-way of \$7, a \$6 senior fare, the same fares for children, a \$70 ten-ride ticket (\$60 for seniors). Young Transportation Services (Route 921) is shown in Figure 4-95.

Figure 4-958: YTS Route 921 Annapolis to New Carrollton Metrorail Station

MTA Light Rail Service

MTA operates light rail service into the study area on two north-south lines that link the northern suburbs of Baltimore, downtown, and portions of Anne Arundel County (there is no light rail service in Howard County). These two lines share tracks through much of their length, but are split at both the north and south ends. One of the lines connects Hunt Valley and BWI Marshall Airport, with stops in Anne Arundel County at Nursery Road, North Linthicum, Linthicum, the BWI Business District, and BWI Marshall Airport. The other line connects Timonium with Cromwell-Glen Burnie, with stops in Anne Arundel County at Ferndale and Cromwell in Glen Burnie. Table 4-46 summarizes the service levels, parking and connecting bus transit services at each station on these routes.

Table 4-46: MTA Light Rail Service in Central Maryland

Light Rail - Anne Arundel County Stations						
Station Name	Headway	Location	Number of Parking Spaces	Connecting Bus Service		
				MTA Route Number	RTA Route Number	WMATA Route Number
Hunt Valley-BWI Marshall Airport Route						
Nursery Road	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	6852 Baltimore Annapolis Boulevard Linthicum Heights, MD 21090	35 spaces	17	None	None
North Linthicum	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	450 N. Camp Meade Road, Linthicum Heights, MD 21090	324 spaces	None	None	None
Linthicum	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	595 Camp Meade Road, Linthicum Heights, MD 21090	None	None	None	None
BWI Business District	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	678 Elkridge Landing Road, Linthicum Heights, MD 21090	34 spaces	17, 99, Express BusLink 107	501/Silver	B30
BWI Marshall Airport	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	BWI Marshall Airport, Baltimore, MD 21240-0766	No Light Rail Parking	17, 99, Express BusLink 107, 201	501/Silver	B-30

Light Rail - Anne Arundel County Stations						
Station Name	Headway	Location	Number of Parking Spaces	Connecting Bus Service		
				MTA Route Number	RTA Route Number	WMATA Route Number
Timonium-Cromwell/Glen Burnie Route						
Ferndale	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	10 Broadview Boulevard, Glen Burnie, MD 21061	None	None	None	None
Cromwell/Glen Burnie	<u>Weekdays AM and PM:</u> 20 minutes <u>Weekend Midday, PM:</u> 30 minutes	7378 Baltimore Annapolis Boulevard, Glen Burnie, MD 21061	765 spaces	14	201/J	None

MARC Commuter Rail Service

The MTA provides regional connections to the study area with two commuter rail lines that link Baltimore and Washington, D.C. with stops in the study area. The Penn Line services share the electrified Northeast Corridor tracks with Amtrak, with stops in the study area at the BWI MARC/Amtrak station and Odenton, both of which have very large commuter parking lots. It provides significant capacity with 28 daily (weekday) trains scheduled each way, with a higher level of frequency in the morning headed toward Washington, D.C. and a similar higher level in the evening headed away from Washington, D.C. The Penn Line also offers weekend service.

The Camden Line also links Washington, D.C., and Baltimore, but its terminus in Baltimore is Camden station rather than Penn Station. The MARC services also share the tracks with CSX freight services. Stations in the study area include Dorsey, Jessup, Savage and Laurel Park—they are all on the Howard/Anne Arundel County line. In the portion of Prince George’s County served by the RTA Camden line trains also stop at Laurel and Muirkirk stations. Compared to the Penn line, frequencies are lower, with weekday service only. In the morning there are six southbound trains headed for Washington and three northbound, with the pattern reversed in the evening. There are no mid-day or weekend trains.

Table 4-47 summarizes the station locations, level of service, available parking and bus transit connections at each of the MARC stations in the study area.

Table 4-47: MARC Service in Central Maryland

MARC - Anne Arundel County Stations						
Station Name	Number of Trips	Location	Number of Parking Spaces	Connecting Bus Service		
				MTA Route Number	RTA Route Number	WMATA Route Number
Penn Line- Anne Arundel County						
BWI MARC/Amtrak	<u>AM</u> 11 Northbound, 15 Southbound <u>Midday</u> 4 Northbound, 5 Southbound <u>PM</u> 13 Northbound, 8 Southbound	2 Amtrak Way, Linthicum, MD 21240	3,200 spaces	201 Commuter, 17	501/Silver	B30
Odenton	<u>AM</u> 11 Northbound, 15 Southbound <u>Midday</u> 4 Northbound, 5 Southbound <u>PM</u> 13 Northbound, 8 Southbound	1400 Odenton Road, Odenton, MD 21113	1,977 spaces	None	504 202K	None
Camden Line – Anne Arundel/Howard County Stations						
Dorsey	Weekdays only <u>AM</u> 3 Northbound, 6 Southbound <u>Midday</u> None <u>PM</u> 6 Northbound, 3 Southbound	7000 Deerpath Road at MD 100, Elkridge, MD 21075	802 spaces	201 Commuter	501/Silver 409/Purple	None

MARC - Anne Arundel County Stations						
Station Name	Number of Trips	Location	Number of Parking Spaces	Connecting Bus Service		
				MTA Route Number	RTA Route Number	WMATA Route Number
Jessup	Weekdays only <u>AM</u> 3 Northbound, 6 Southbound, <u>Midday</u> None <u>PM</u> 6 Northbound, 3 Southbound	8 Old Jessup Road, Jessup, MD 20794	75 spaces	None	None	None
Savage	Weekdays only <u>AM</u> 3 Northbound, 6 Southbound <u>Midday</u> None <u>PM</u> 6 Northbound, 3 Southbound	9009 Dorsey Run Road, Annapolis Junction, MD 20710	914 spaces	None	501/Silver	None
Laurel Park	Weekdays only <u>AM</u> 3 Northbound, 6 Southbound <u>Midday</u> None <u>PM</u> 6 Northbound, 3 Southbound	Laurel Racetrack Road, Laurel, MD 20725	300 spaces	None	502/B	None

MARC - Prince George's County Stations						
Station Name	Headway	Location	Number of Parking Spaces	Connecting Bus Service		
				MTA Route Number	RTA Route Number	WMATA Route Number
Laurel	Weekday only <u>AM</u> 3 Northbound, 6 Southbound <u>Midday</u> None <u>PM</u> 6 Northbound, 3 Southbound	22 Main Street, Laurel, MD 20707	396 spaces	None	409/Purple	89M, 87
Muirkirk	Weekday only <u>AM</u> 3 Northbound, 6 Southbound <u>Midday</u> None <u>PM</u> 6 Northbound, 3 Southbound	7012-B Muirkirk Road, Beltsville, MD 20705	650 spaces	None	302/G	None

Washington Metropolitan Area Transit Authority (WMATA)

WMATA is the regional transit service provider for the Washington area, and neither Howard nor Anne Arundel County is a member of the WMATA Compact that defines the membership in WMATA. However, Prince George's County is a member, and so there are portions of the RTA study area in northern Prince George's County that are served by WMATA and Prince George's own county system, The Bus. However, many of these routes do not provide transfer opportunities with the RTA route except indirectly as they both serve the same Metrorail stations or transfer points. Several of the Metrobus routes do offer service in or to/from the City of Laurel in Prince George's County, and are potential alternatives services or transfer opportunities for RTA riders.

These include the WMATA Metrobus Routes 89 and 89M which serve Laurel, linking it with Greenbelt Metrorail station via Route 1, providing coverage on many of the same streets in Laurel served by the RTA. Metrobus Route 87 also serves Laurel, providing express bus service to New Carrollton Metrorail Station via the Baltimore-Washington Parkway and I-95/495. Finally, Metrobus Route Z7 links Laurel with Burtonsville, in Montgomery County, and then it travels down Route 29 to the Silver Spring Metrorail Station. Schedule changes resulting from FY 2018 WMATA budget resulted in a reduction in frequency to 35 minutes on the entire route. There are six southbound trips in the morning and three in the afternoon, and two northbound a.m. and six p.m. northbound trips. Service is weekday only.

In addition, there are two WMATA routes that extend into Anne Arundel County. The Metrobus B-30 route links the Greenbelt Metrorail station with BWI Marshall Airport and the BWI Business District Light Rail Station. The WMATA FY 2018 budget reduced service on this route to hourly service, 6:00 a.m. to 10:30 p.m., weekdays only. The fare on the B30 is \$7.50 (or \$3.75 for seniors and persons with disabilities). In addition, Anne Arundel County is served by Metrobus B-29 which offers peak hour express service from the Crofton Country Club Park and Ride Lot to Bowie and New Carrollton Metrorail Station. Table 4-48 provides more information on these WMATA services.

Table 4-48: Key WMATA Services

Route	Key Stops	Number of trips	Headway	Span	RTA Route Number	Transfer
89/89M: Laurel Line	South Laurel Park and Ride Lot (89M), Towne Centre Shopping Center (89M), Laurel Plaza, Laurel Shopping Center, Laurel Centre Mall, Laurel Lakes Shopping Center, Konterra, Beltsville, Greenbelt Metrorail	Weekdays Only <u>Southbound</u> AM: 7 trips Midday: 6 trips (89M) PM: 9 Trips (89) <u>Northbound</u> AM: 5 a.m. trips (89) Midday: 6 trips (89M) PM: 9 trips	<u>AM</u> 30-45 minutes <u>Midday</u> 60 minutes <u>PM</u> 50 minutes <u>Late PM</u> 60 minutes	5:45 a.m. to 11:31 p.m.	302/G, 301/A, 409/Purple, 502/B, 503/E	Laurel Centre Mall, all shared stops, Greenbelt Metro
87: Laurel Express	Laurel/Rt. 1 and Main St., Middletowne Apartments, Laurel Shopping Center, Laurel Centre Mall, Laurel Lakes Shopping Center, South Laurel Park and Ride Lot, Greenbelt Metrorail Station, New Carrollton Metrorail Station	Weekdays only <u>Southbound</u> 9 a.m. and 6 p.m. <u>Northbound</u> 6 a.m. and 11 p.m.	<u>AM and PM</u> 30 minutes	<u>AM peak</u> 4:46 a.m. - 8:25 a.m. <u>PM peak</u> 3:10 p.m.- to 7:05 p.m.	302/G, 301/A, 409/Purple, 502/B, 503/E	Towne Centre at Laurel, all shared stops, Greenbelt Metro
B-30: BWI Marshall	Greenbelt Metro Station, BWI Marshall Airport, BWI Business District Light Rail Station	Weekdays <u>Northbound</u> 6 a.m. and 10 p.m. <u>Southbound</u> 6 a.m. and 10 p.m.	35-40 minutes	6:10 a.m. to 11:19 p.m.	501/Silver	BWI Marshall Airport

Route	Key Stops	Number of trips	Headway	Span	RTA Route Number	Transfer
B-29: Crofton- New Carrollton	Crofton Country Club Park and Ride Lot, Gateway Center, Bowie, Covington, Bowie Town Center, Bowie Park and Ride Lot, New Carrollton Metrorail Station	Weekdays only <u>Westbound</u> 4 a.m. and 6 p.m. <u>Eastbound</u> 2 a.m. and 8 p.m.	<u>AM peak</u> 40 minutes <u>PM peak</u> 30 minutes No midday service	6 a.m. to 8:12 a.m. and 4:15 p.m. to 10:18 p.m.	None	
Z7: Laurel- Burtonsville Express Line	South Laurel Park and Ride Lot, Towne Centre at Laurel, Laurel Regional Hospital, Maryland 95 Corporate Park, Laurel Employment Park, Burtonsville Crossing Park and Ride Lot, Paul S. Sarbanes Transit Center (Silver Spring Metrorail)	Weekdays only <u>Southbound</u> 6 a.m. and 3 p.m. <u>Northbound</u> 2 AM trips and 6 PM trips	<u>AM and PM peak</u> 40 minutes	5:00 a.m. to 8:58 a.m. and 3:22 p.m. to 5:54 p.m.	302/G, 301/A, 409/Purple, 502/B, 503/E	Towne Centre at Laurel

OTHER AREA TRANSPORTATION PROVIDERS

Greyhound

Greyhound provides intercity bus service in Maryland. Their Baltimore to Washington, D.C. route travels the Baltimore-Washington Parkway through Central Maryland. There is a Greyhound stop at the 7-Eleven at 605 7th Street, in Laurel, where passengers can transfer to the 503/E. Greyhound offers intercity connections across the US and into Mexico and Canada. (<http://locations.greyhound.com/bus-routes/all-destinations/laurel/md>)

Amtrak

Amtrak serves one stop in Central Maryland--the BWI Marshall Airport Rail Station, in Anne Arundel County. It is linked to the airport terminal by a free shuttle bus. Three types of Amtrak service call at the BWI Station: the Acela Express, which travels between Washington, D.C. and Boston; the Northeast Regional, which runs between Virginia Beach, Washington, D.C., New York, Hartford and Boston; the Silver Service/Palmetto trains which run from New York, through Washington, D.C. and into Miami; and the Vermonter, which runs between Washington, D.C. and St. Albans in northern Vermont. (<https://www.amtrak.com/northeast-train-bus-stations>)

BWI Marshall Airport

Baltimore Washington International Marshall Airport in Linthicum, Maryland, offers both domestic and international flights. Ground transportation options for BWI Marshall Airport includes taxi, bus, van/shuttle, rail service and car rental. Taxi service from the airport is provided by BWI Airport Taxi and is available 24 hours a day. Taxis going to the airport are open to all local cab companies. Hotel courtesy shuttles, Supreme Airport Shuttle and Bay Runner Shuttle provide shuttle service to and from the airport. Amtrak, MARC, and MTA Light Rail, are the available rail services at or near the airport. Bus services include RTA, MTA Commuter Bus Route 201. (<http://www.bwiairport.com/en/travel/ground-transportation>)

Taxi and Private Car Service

Central Maryland is served by several taxi and private transportation services. The following providers serve Central Maryland. (http://www.thearcofpgc.org/resources_transportation_arc_prince_georges_maryland.html)

- AA County Cab (Howard, Anne Arundel, Prince George's)
- A Absolute Airport Taxi and Sedan (Howard, Anne Arundel, Prince George's)
- All American Ambulance Transport (Anne Arundel, Prince George's)
- American Limousines (Howard)
- Anne Arundel Taxi Inc. (Anne Arundel)
- Associated Cabs (Glen Burnie Taxicab Co.) (Howard, Anne Arundel, Prince George's)
- Bayshore Taxi (Anne Arundel)
- Beltway Transportation Service (Howard, Anne Arundel, Prince George's)
- BWI Airport Taxi (Howard, Anne Arundel, Prince George's)
- Carroll Cab (Howard, Anne Arundel, Prince George's)
- Elk Cab (Howard, Anne Arundel, Prince George's)
- Independent Taxi Association Inc. (Howard, Prince George's)
- Jeff's Transportation (Howard, Anne Arundel, Prince George's)
- Mini Star Cab (Howard)
- Morningstar Transportation (Howard, Anne Arundel, Prince George's)
- Uber – Greater Maryland (Howard, Anne Arundel, Prince George's)
- Prince George's County Call-A-Cab provides taxi vouchers at a 50 percent reduced rate for senior and people with disabilities through a network of taxicabs that accept the discount vouchers.

National Security Agency (NSA) Transportation Services

NSA Transportation Services runs two in-house shuttles for employees.

Home Life Help Services

Home Life Help Services specialize in wheelchair transport. They provide transportation, for a fee to the general public, primarily for non-emergency medical appointments.

Just 4U Transit, LLC

Just 4U Transit provides accessible door-to-door on-demand transportation for a fee to the general public in Annapolis, Baltimore City, and Anne Arundel, Baltimore, Carroll, Harford, Howard, Montgomery, and Prince George's Counties. Their services are available Monday through Saturday 7:15 a.m. to 5:00 p.m., including holidays.
(<http://just4utransit.com/>)

Med-Care Transportation

Med-Care Transportation provides 24 hour accessible van transportation services to the general public for a fee. Transportation must be arranged in advance. They serve Annapolis, Baltimore City, and Anne Arundel, Baltimore, Carroll, Harford, Howard, Montgomery, and Prince George's Counties.

Para-Med Medical Transportation

Para-Med Medical Transportation provides non-emergency medical transportation to the general public for a fee. Their services are door-through-door. They transport to and from hospitals, nursing homes, rehabilitation centers, cancer centers, dialysis facilities, day care facilities, airports, train stations, schools, work and special events. They offer long distance transport services, and will transport out-of-state. They are open Monday through Saturday from 5:00 a.m. to 8:00 p.m. Sunday service is available with advance notice. They serve Annapolis, Baltimore City, and Anne Arundel, Carroll, Harford, Howard, Montgomery, and Prince George's Counties.

Saferide

Saferide provides accessible non-emergency medical transportation to the general public for a fee. They have wheelchair accessible vehicles and offer personal care attendant service. Reservations must be made in advance. They serve Anne Arundel and Baltimore, and Carroll, Harford, and Howard Counties. Fees start at \$19.95.

Transport-U

Transport-U provides accessible non-emergency medical transportation to the general public for a fee. They require 24-hour advance notice and have wheelchair accessible vehicles. They provide both door-to-door and door-through-door services. They serve Annapolis, Anne Arundel, Baltimore City, Baltimore County, Carroll, Harford, Howard, Montgomery, and Prince George's Counties. (<http://www.mdtrip.org/transit-directory/>)

Associations

BWI Business Partnership

The BWI Business Partnership is a non-profit, membership organization that includes nearly 175 local and regional businesses and government agencies. The oldest Transportation Management Association (TMA) in the country according to the Association of Commuter Transportation, the BWI Business Partnership works with

major employers in Central Maryland to promote ridesharing and transit use. The organization promotes public policy that centers on good transportation resources and business infrastructure in the BWI area, which includes BWI Marshall Airport, National Security Agency, Fort Meade, and Arundel Mills Mall. The BWI Business Partnership supports improvements to transportation in the corridor, including operating employment-targeted shuttle service and promoting commuting alternatives.

The BWI Business Partnership operates the Mills Ride Shuttle that takes Arundel Mills and Maryland Live! employees to and from the Cromwell Light Rail Station when local transit is unavailable. The shuttle is free and runs 365 days a year. On weekdays and Saturday, the shuttle runs from 9:15 p.m. to 11:30 p.m. There are special schedules for Sunday and holidays
(<https://www.bwipartner.org/transportation/millsride>).

Annapolis Regional Transportation Management Association (ARTMA)

Founded in 1992, ARTMA is a non-profit member organization that serves as the TMA for southern Anne Arundel County and Annapolis. ARTMA promotes transportation options and transit expansion throughout the county to increase mobility, reduce traffic congestion, and improve air quality. ARTMA members consist largely of businesses, including developers, corporations, commercial property owners, and private and public sector employers. ARTMA provides information and links to available transportation options, including Commuter Connections ridesharing program managed by Metropolitan Washington Council of Governments. The organization is directed by a volunteer Board of Directors.
(<http://www.artma.org/>)

Other Government/Public Entities

Anne Arundel County Department of Health

The Anne Arundel County Department of Health offers Medical Assistance Transportation under the Medicaid program. They provide rides to approved medical providers for people covered for full medical assistance, live in Anne Arundel County, and have no other means of transportation. Clients are encouraged to use public transit and the Department of Aging Transportation before contacting them to schedule a ride. Rides must be scheduled at least two days in advance, and are offered Monday through Friday from 8:00 a.m. to 2:30 p.m. The service is free.
(<http://aahealth.org/programs/uninsured/trans/med-trans>)

The Department of Health contracts out transportation services. They provide rides to methadone treatment centers, one to six days a week; and dialysis three times a week.

- Transportation costs for FY 2016: \$2,396,602.00
- Who is eligible?: Older adults, people with disabilities, people with low incomes, veterans, clients who qualify for Medical Assistance
- Estimated one-way passenger trips provided in FY 2016: 60,880
- Passenger vans: 21 to 25

*Source: MD Human Services Transportation Survey

Anne Arundel County Department of Aging and Disabilities (DOAD)

The Anne Arundel County Department of Aging and Disabilities (DOAD) is the local Area Agency on Aging (AAA) for Anne Arundel County. DOAD provides a range of services to meet the needs of seniors and adults with disabilities, including operating a van shuttle service and taxi subsidy program. The demand-response transportation program is operated in collaboration with First Transit, using a fleet of 41 vehicles. First Transit provides drivers, and dispatch and intake and DOAD staff provides oversight and scheduling. Vehicles are owned by Anne Arundel County and maintained by Anne Arundel County Office of Central Services.

Eligible riders include people ages 55 and older and people with disabilities. The focus of the program is to provide transportation to the senior center and medical appointments. DOAD asks for donations from riders to help offset the cost of providing transportation services but does not charge a fee.

DOAD's subsidized taxi program, called the taxi voucher program, provides eligible participants with \$10 worth of taxi fare coupons for a \$5 fee. A maximum of \$75/month in coupons can be purchased. People with verified employment of at least twenty hours per month can purchase an additional \$40 worth of coupons. Eligible participants must be ages 55 or older, or be ages 18 or older and have a verifiable transportation disability. There is a disability verification form requiring verification from a physician, psychiatrist, psychologist or program director of a social service agency (serving the developmentally disabled). In some cases persons with particular medical conditions are eligible to purchase additional coupons.

(<http://www.aacounty.org/services-and-programs/taxi-voucher-program>)

Howard County Health Department

Within the Health Department, the Medical Assistance/HealthChoice Transportation Program provides transportation services, for Howard County residents who are Medical Assistance/HealthChoice recipients, to medical providers who accept these programs. All active Medical Assistance/Health/Choice clients who use mobility devices and need

accessible non-emergency transportation may use Area Agency on Aging (AAA) Transport. AAA Transport conducts the screening for eligible recipients and require 24-hour advance reservations for rides to approved medical providers. The Health Department encourages individuals requesting transportation services to exhaust all other options before seeking Medical Assistance transportation; this includes directing clients to RTA Mobility.

Medical Assistance transportation is provided Monday through Friday between the hours of 5:00 a.m. and 9:00 p.m., with limited Saturday service. Business hours for scheduling appointments are Monday through Friday from 9:00 a.m. to 5:00 p.m.

- Populations served: Medical assistance recipients
- Service area: Howard County
- Estimated annual people served by agency: 1,300
- Number of people receiving transportation services: 450
- One-way passenger trips in a year: 45,000
- Sedans: 1 to 5
- Minivans: 1 to 5
- Passenger vans: 1 to 5
- Annual estimated transportation costs to agency: \$1,210,000
- Financial sources: Department of Health and Mental Hygiene- \$1,210,000
- Type of transportation provided: Fixed reimbursement rate per trip and mileage determined by contract

*Source: MD Human Services Transportation Survey

Nonprofit Agencies

Active Day of Harford Medical Adult Day Care

Active Day provides adult day care services for older adults and people with disabilities. They provide door-to-door transportation service for clients to medical and recreational destinations.

American Cancer Society

The American Cancer Society provides transportation for cancer patients to cancer-related medical appointments. Patients must be able to walk unassisted to and from the vehicle, or have an accompanying caregiver to assist. Patients under age 18 must be accompanied by a legally responsible adult. Four business days advance notice is required.

Angel Wheels to Healing

Angel Wheels to Healing is a non-profit organization that provides non-emergency medical transportation to low-income patients. They provide gas cards, reimbursement for commercial ground transportation and utilize volunteer drivers to assist with medical transportation. Their service areas include Annapolis, and Baltimore City, and Anne Arundel, Baltimore, Carroll, Harford, Howard, Montgomery, and Prince George's Counties.

Arundel Lodge, Inc.

Arundel Lodge, Inc. is a non-profit organization offering multiple services, including residential services, supported employment, and community rehabilitation. They serve adults with emotional or psychiatric disabilities in Anne Arundel County. They own and operate their own vehicles.

The Arc of Howard County

The Arc of Howard County provides services to individuals with intellectual and developmental disabilities. Services include employment, family and individual support, respite care, residential services, day programs, and supported retirement. The Arc provides transportation for clients to their service centers using their own fleet of vehicles and drivers. Transportation expenses for FY 2015 were approximately \$508,500. (<http://www.archoward.org/site/wp-content/uploads/2012/04/FY15-Annual-Report.pdf>)

The Arc of the Central Chesapeake Region

The Arc of the Central Chesapeake Region serves Anne Arundel County is a non-profit agency, providing residential services, community supported homes, employment, education and advocacy. They serve people with cognitive disabilities and their families. They operate their own vehicles, providing clients transportation to employment and services.

The Arc of Prince George's County

The Arc of Prince George's County provides support and services for people with cognitive disabilities and their caregivers. They are a membership organization serving Prince George's County. The Arc of Prince George's County facilitates transportation for clients through MetroAccess or their own transportation services. Transportation is provided between Arc programs and participants' homes, and between Arc programs and community locations. (http://www.thearcofpgc.org/adult_transportation_arc_prince_georges_maryland.html)

Athelas Institute, Inc.

The Athelas Institute, Inc. provides residential, employment, and educational services to adults with cognitive disabilities. They serve Howard and Baltimore Counties, and parts of Anne Arundel and Carroll Counties. They provide door-to-door transportation for clients to grocery stores, doctor appointments, and errands with attendants. They have wheelchair accessible vehicles and require advanced reservations.

Bello Machre

Bello Machre is a non-profit, residential and support service agency serving people with cognitive and developmental disabilities. They operate and run their own vehicles in Anne Arundel County and parts of Carroll County.

Care Connection

Care Connection is a privately owned, in-home and onsite psychiatric rehabilitation center. They serve seriously mentally ill adults; provide psychiatric therapy, social services, and vocational training. They have three locations that serve Anne Arundel, Baltimore, Howard, Carroll and Prince George's Counties. Care Connection helps identify and obtain transportation options for clients, reimburses staff for use of personal vehicles, and occasionally uses agency-owned vehicles to transport clients.

(<http://www.mycareconnection.org/index.html>)

Center for Social Change, Inc.

The Center for Social Change is a private non-profit organization that supports children and adults with cognitive disabilities, including autism. They provide residential services, vocational and supported employment, day habilitation and transportation services for most of Maryland.

(<http://www.centerforsocialchange.org>)

Columbia Association

One of the community services provided by the Columbia Association is a free Seniors Events Shuttle. This service provides curb-to-curb evening (after 4:30pm) and weekend transportation shuttle to cultural events throughout Howard County for groups of four or more older adults ages 60 and over. These events include theaters, art exhibits, and concerts. Service is provided for groups of four or more. Smaller groups are referred to Neighbor Ride. The Special Events Shuttle is open to all Howard County residents. Columbia Association does not use their own vehicles for this service, but contracts with senior living communities who provide their vehicles for this service. In FY 2017 this service provided 1,374 passenger trips.

(<https://www.columbiaassociation.org/>).

Disabled American Veterans Transportation Program (DAV)

DAV is a non-profit agency that supports veterans across the United States. Their Maryland office is located in Baltimore. They help veterans with non-emergency medical transportation, benefit claims, and employment. DAV provides transportation to Veterans Administration medical centers for injured veterans.

(<https://www.dav.org/>)

Humanim

Humanim provides employment, behavioral health, psychosocial and medical rehabilitation services to older adults, people with disabilities, people with low incomes, and veterans. Their service area covers Howard, Baltimore, Anne Arundel, Carroll and Prince George Counties.

- Number of people served: 4,000 to 5,000
- Number of people receiving transportation services: 250 for day and vocational programs, and programs in the evening and weekends for school and after school.
- One-way passenger trips per year: 80,000. Many clients get 3-4 rides a day as they are also taken to work, work enclaves, and to and from programs.
- Minivans: 1 to 5
- Passenger vans: 11 to 15
- Small buses: 6 to 10
- Annual estimated transportation costs: \$903,567 (FY 2017)
- Financial sources: Received three vans that were 80% funded by MTA through and MTA preventative maintenance grant (80% of \$20,000); and Howard County \$116,000 for employment transportation.
- Type of transportation provided: Provide specialized and employment transportation for clients who reside in Howard County. They have social enterprise businesses providing job training and jobs in several counties other than what they are currently serving with their transportation services. Better county-to-county transportation services would be helpful. Jobs in outlying areas are hard to transport to. They use pickup/drop off points for several geographical areas that are way out.

*Source: MD Human Services Transportation Survey

Neighbor Ride

Neighbor Ride provides affordable, volunteer-based supplemental transportation to older adults in Howard County. Passengers are transported door-to-door by volunteer drivers in personal vehicles. Passengers may utilize Neighbor Ride for religious services, classes, volunteer activities, social outings, medical appointments, and shopping. They do not provide rides to the airport, cruise terminals, Amtrak stations or gaming venues. They will drive passengers to the Baltimore and Washington, D.C. areas. The maximum one-way distance is 35 miles from pick up. Rides can be scheduled by phone or website at least three days in advance. Fees are based on mileage: if less than two miles one-way the fare is \$6 round trip. Mileage and fees increase incrementally with a 20 to 35 mile one way trip costing \$35 round trip.

(<http://neighborride.org/wordpress/passengers/frequently-asked-questions/>)

- Populations served: Howard County residents ages 60 and older that are ambulatory
- Service area: Howard County
- Number of people receiving transportation services: 443
- One-way passenger trips per year: 16,500. The average client takes 37 trips per year; the median client trips per year is 14.
- Annual estimated transportation costs: 170,000
- Financial sources: Senior Rides \$33,640; Howard County Community Services Partnership \$44,400; Columbia Association \$10,000; United Way of Central Maryland \$10,000; Community Foundation of Howard County \$11,000
- Type of transportation provided: For local eligible citizens identified through Healthy Howard

*Source: MD Human Services Transportation Survey

Langton Green

Langton Green is a non-profit agency serving over 100 individuals in Anne Arundel County. They offer residential services, supported employment, day habilitation, family and individual support services, community supported living arrangements, and respite services. They provide transportation with their own vehicles and offer training for independent travel. They serve adults with disabilities.

(<http://langtongreen.org/about-us/>)

Omni House Behavioral Health System

The Omni House is a nonprofit mental health clinic, providing psychiatric and rehabilitative services for adults with mental illness. They offer outpatient psychiatric services, residential programs supported living, and day programs. They are based in Glen Burnie. The Omni House owns and operates vehicles. They provide their clients with rides to their day program, medical, and community activities in Anne Arundel County. (<http://omnihouse.org/about/faqs/>)

Partners in Care

Partners in Care is a community non-profit organization dedicated to helping seniors and adults with disabilities to live independently in their own homes. Established in 1993, Partners in Care uses a time-banking system to tap into its network of 2,400 members to support seniors and adults with disabilities in their daily tasks. They serve Anne Arundel County, Calvert County, Fredrick County and the Upper Shore.

Transportation is one of their most requested services. In fiscal year 2014 they provided 13,130 rides. They match volunteer drivers with clients who need transportation. Volunteers use their own vehicles and riders contribute to mileage and/or fuel reimbursement. Volunteers pick up passengers at their front door, drive them to appointments, wait with them, and drive them home again, providing assistance wherever needed. Time commitments range from a few hours to an entire day. Service hours are transferred to “time in the bank,” which volunteers may use when they are in need or donate to seniors to use as “credit in the bank.” Partners in Care has wheelchair accessible buses (funded with Section 5310 funds) for members.

Providence Center

Providence Center is a non-profit agency providing person centered planning, day programs, community inclusion and transportation to adults with cognitive disabilities. They operate a fleet of approximately 50 vans, trucks, and cars, providing transportation Monday through Friday from 6:00 a.m. to 6:00 p.m. They provide transportation to employment, vocational training, and community activities in Anne Arundel County, and to parts of Prince George’s and Baltimore Counties. Their 2015 annual report stated that 17% of expenditures were for transportation (approximately \$1,696,072). (<http://www.providencecenter.com/services/transportation>). (<http://www.providencecenter.com/wp-content/uploads/2016/09/Providence-Center-AnnualReport2015.pdf>).

Way Station Inc.

Way Station Inc. operates in Howard, Frederick and Washington Counties. In Howard County they offer child and adolescent services, community employment, day psychiatric rehabilitation, residential rehabilitation, supported housing and run an outpatient mental health clinic. In 2005, Way Station served more than 3,500 Howard County citizens, 1,053 of whom were children and adolescents.

Way Station Inc. provides group transportation picking up many clients at their homes and transporting them to day programs during the work week. Individual needs such as grocery shopping and doctor appointments are provided by staff using personal vehicles and/or local taxi service.

(<http://www.waystationinc.org/howard-county/>)

- Approximate annual transportation costs: \$700,000
- Small buses: 11 to 15
- Passenger vans: 26 to 30
- Minivans: 11 to 15
- Sedans: 1 to 5
- One- way passenger trips in a year: about 140,000
- Number of people receiving transportation services: 4,000
- Service area: Frederick, Howard, Washington, and Carroll Counties
- Populations served: Older adults, people with disabilities, people with low incomes, veterans

*Source: MD Human Services Transportation Survey

Winter Growth

Winter Growth provides medical day, respite care, assisted living, and assisted transportation for older adults and adults with disabilities in Howard and Montgomery Counties. Winter Growth's Assisted Transportation drivers provide door-through-door services.

(<http://www.wintergrowthinc.org/about-us/>)

- Populations served: Older adults, people with disabilities, people with low incomes, veterans
- Service area: Howard and Montgomery Counties
- One-way passenger trips in a year: 23,000
- Minivans: 6 to 10
- Small buses: 6 to 10
- Annual estimated transportation costs: \$335,000
- Financial sources: Central Maryland Regional Transit, \$4,000
- Type of transportation provided: Door-through-door

*Source: MD Human Services Transportation Survey

Woods Adult Day Services

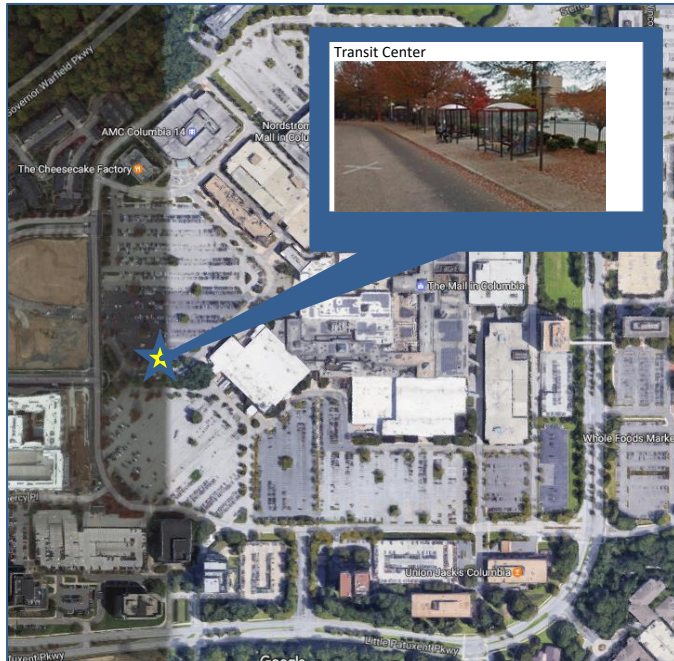
Woods Adult Day Services is a non-profit organization providing adult medical day care in Anne Arundel County. They operate their own vehicles, providing rides for clients to adult day care, medical, recreation and shopping.

(<https://woodsadultdayservices.com/woods-adult-day-services-essential-services/faqs>)

PEDESTRIAN/BICYCLE ACCESS

RTA currently has 852 transit stops throughout its service area. The majority (57%) of stops are in Howard County with 20% in Anne Arundel County and 22% in Prince George's County. Of the 852 transit stops, approximately 8.2% have either seating and/or passenger shelter (which generally includes seating on the inside). Over half (62%) of the bus stops are not connected with a sidewalk.



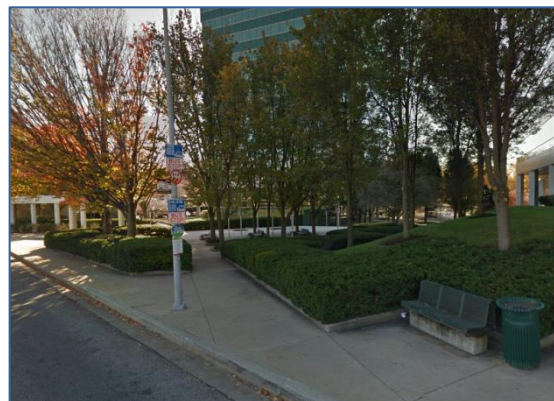


The transit center is located at Columbia Mall outside of Sears's Auto Center. The location has adequate pedestrian connectivity to the mall and space for movement of pedestrians. While there is a parking lane for buses to layover to pick up and drop off riders, there are no assigned bays for the routes which means that riders have to seek out their bus. Passenger amenities include seating, shelters, and localized lighting. Aside from the bus stop signs at the transit center there is little system and route information available.

There are eight RTA Routes that connect at the transit center:

- 401/Green
- 404/Orange
- 405/Yellow
- 406/Red
- 407/Brown
- 408/Gold
- 501/Silver
- 503/E

MTA commuter bus Routes 203, 305, 310, 315, 320, and 325, and MTA Express BusLink 150 stops at Columbia Mall along South Ring Road which is approximately 1,200 feet from the transit center. There is currently a study being conducted to develop a new transit center at Columbia Mall. It is anticipated that the future development of this new transit center will provide more passenger and driver amenities, allow for designated bus bays, improve operations, and provide better connectivity with other operators such as MTA bus service.



Improving the pedestrian and bicyclist infrastructure will help increase the transit mode share and create a safer and more comfortable environment for transit users. Recent studies have been conducted to look at improving pedestrian and bicycle access throughout the region within each county and municipality. These studies include:

Howard County

- 2007 Pedestrian Master Plan – Howard County has been in the process of updating its 2007 Pedestrian Master Plan. The new pedestrian plan, *Walk Howard: Moving Forward*, is in the final review process. The new pedestrian master plan will address necessary improvements in sidewalks, bus stops, and intersection.
- 2016 Bicycle Master Plan – This plan was adopted in 2016 with the purpose of providing a framework to guide Howard County’s future actions to improve conditions for bicyclists and promote bicycling as a safe and convenient travel option.

Anne Arundel County

- 2013 Pedestrian and Bicycle Master Plan – This plan was an update to the county’s 2003 Pedestrian and Bicycle Master Plan. The plan update focused on pedestrian and bicycle improvements within the urbanized area. Recommended improvements included both infrastructure and non-infrastructure improvements.

City of Laurel

- 2016 Bikeway Master Plan – This plan was recently completed and identifies potential new bikeways and makes use of existing roadways in a shared manner to accommodate bicyclists.

EXISTING FLEET

RTA Fleet

Based on an RTA vehicle inventory compiled on August 8, 2017 the overall combined fleet managed by the RTA includes 112 vehicles, of which thirteen are non-revenue vehicles. Table 4-51 provides an overall RTA fleet inventory. As can be seen in the table, twenty-nine vehicles are listed as inactive, including fourteen fixed-route vehicles and fifteen paratransit vehicles.

Current RTA services require a peak pull-out of 35 fixed-route vehicles and eighteen paratransit vehicles. Consequently there is apparently an excessive spare ratio. MTA guidelines call for no more than a 20% spare ratio, but the overall RTA spare ratio appears to be 30% if only the active revenue vehicles are included, and 85% if the inactive vehicles are included. The fact that the spare ratio is well over the guideline limit, and that the RTA did not have a Fleet Management Plan, led to MTA compliance findings regarding fleet management.

As can be seen by user comments, the major service issue for the RTA is unreliable service, and this is largely a result of the fact that of the active revenue fleet, some 46 vehicles, or 46% are eligible for retirement based on their age or mileage. The FTA and MTA have standards for the expected life of a transit vehicle based on the type of vehicle. Another factor contributing to maintenance costs and problems is that the fleet is composed of many types of vehicles ranging from aged MTA transit buses that have retired once already to nearly new hybrid sedans. Also, five vehicles on the inactive list are 2009 Azure hybrid cutaways that have just reached their retirement based on age, but have not come close to reaching the desired mileages due to component failures, lack of manufacturer support, and inability to obtain parts. The miles these vehicles should have provided have been supplied by other vehicles that are well over the mileage standard for retirement, but are still in service.

Finally, fleet management for the RTA is a challenge because of the mixed ownership of the fleet. Portions of the fleet are owned by Howard County, Anne Arundel County, Prince George's County, MTA, Transit Management of Central Maryland (TMCM-the legal name of the contracted RTA), and First Transit (the parent corporation of TMCM. However, the majority of the overall fleet is owned (or leased) by Howard County.

Related to the ownership is the question of service. Although the RTA fleet inventory assigns vehicles to a particular type and jurisdiction of service, it is clear even from the assignments (in the inventory) that vehicles are not operated in completely separate sub-fleets, or the relationship between ownership and vehicle requirements for the jointly funded regional services. For example, Anne Arundel County only owns two vehicles (which are used on Anne Arundel fixed-routes), while six vehicles owned by TMCM are also assigned to Anne Arundel fixed-route services. Also, because of the condition of the fleet, it is likely that any or all operating vehicles are assigned based on daily need, rather than based on ownership. If the

fleet is viewed as regional, and was owned by a regional entity, this would not be an issue. However, when a vehicle is due for replacement, but is owned by a particular jurisdiction or entity there are questions about the responsibility for replacement if it has been consumed in regional service. Currently Howard County has requested capital contributions from the other jurisdictions in proportion to their service hours to fund replacements, but in FY 2017 all replacements were funded by Howard County.

As a consequence of the findings of the MTA compliance review of Howard County, the MTA commissioned the development of a Fleet Management Plan for Howard County. From the MTA perspective the RTA is not a grant recipient, but federal/state grants flow to the individual jurisdictions who then fund the operation of services by the RTA. For that reason, the overall fleet inventory has been separated by ownership in the following tables.

Table 4-51: Overall RTA Fleet Inventory

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
RTA Fixed-Route Active										
Active	1	9520	2008	Gillig Hybrid	HCFR	HC/HC	Cummins	35	511,044	2020
Active	2	9521	2008	Gillig Hybrid	HCFR	HC/HC	Cummins	35	389,206	2020
Active	3	9525	2009	Gillig Hybrid	HCFR	HC/HC	Cummins	35	388,941	2021
Active	4	9534	2011	Gillig Hybrid	HCFR	HC/HC	Cummins	35	412,580	2023
Active	5	9535	2011	Gillig Hybrid	HCFR	HC/HC	Cummins	35	405,468	2023
Active	6	9536	2011	Gillig Hybrid	HCFR	HC/HC	Cummins	35	307,275	2023
Active	7	9526	2010	International/ Eldorado	HCFR	HC/HC	International	32	409,794	2018
Active	8	9527	2010	International/ Eldorado	HCFR	HC/HC	International	32	378,799	2018
Active	9	9528	2010	International/ Eldorado	HCFR	HC/HC	International	32	354,228	2018
Active	10	9529	2010	International/ Eldorado	HCFR	HC/HC	International	32	342,512	2018
Active	11	9530	2010	International/ Eldorado	HCFR	HC/HC	International	32	414,620	2018
Active	12	9531	2010	International/ Eldorado	HCFR	HC/HC	International	32	352,707	2018
Active	13	9532	2010	International/ Eldorado	HCFR	HC/HC	International	32	362,120	2018
Active	14	9533	2010	International/ Eldorado	HCFR	HC/HC	International	32	355,850	2018
Active	15	9538	2013	International/ Eldorado	HCFR	HC/HC	International	32	270,079	2021

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Active	16	9539	2013	International/ Eldorado	HCFR	HC/HC	International	32	267,275	2021
Active	17	9540	2013	International/ Eldorado	HCFR	HC/HC	International	32	168,952	2021
Active	18	9541	2013	International/ Eldorado	HCFR	HC/HC	International	32	186,219	2021
Active	19	9542	2013	International/ Eldorado	HCFR	HC/HC	International	32	181,330	2021
Active	20	9544	2002	Gillig	AAFR	TMCM	Cummins	30	404,563	2017
Active	21	9545	2002	Gillig	AAFR	TMCM	Cummins	30	457,267	2017
Active	22	9546	2002	Gillig	AAFR	TMCM	Cummins	30	415,162	2017
Active	23	9547	2002	Gillig	AAFR	TMCM	Cummins	30	406,188	2017
Active	24	9548	2002	Gillig	AAFR	TMCM	Cummins	30	454,658	2017
Active	25	9549	2002	Gillig	AAFR	TMCM	Cummins	30	402,231	
Active	26	8902	1999	NABI	HCFR	HC/HC	Cummins	40	527,516	2016
Active	27	8903	1999	NABI	HCFR	HC/HC	Cummins	40	402,332	2016
Active	28	8907	2000	NABI	HCFR	MTA	Cummins	40	285,179	2016
Active	29	8908	2000	NABI	HCFR	MTA	Cummins	40	285,179	2016
Active	30	8909	2000	NABI	HCFR	MTA	Cummins	40	285,179	2016
Active	31	8910	2000	NABI	HCFR	MTA	Cummins	40	285,179	2016
Active	32	8911	2000	NABI	HCFR	MTA	Cummins	40	285,179	2016
Active	33	9710	2010	International	AAFR	AA	International	32	190,289	2018
Active	34	9711	2010	International	AAFR	AA	International	32	162,750	2018
Active	35	7005	2006	Thomas	CARFR	PG	Mercedes	30	314,935	2016
Active	36	7007	2006	Thomas	CARFR	PG	Mercedes	30	315,166	2016
Active	37	7008	2006	Thomas	CARFR	PG	Mercedes	30	246,215	2016
Active	38	7010	2006	Thomas	CARFR	PG	Mercedes	30	233,636	2016

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Active	39	7011	2006	Thomas	CARFR	PG	Mercedes	30	223,297	2016
Active	40	9550	2002	Gillig	CARFR	HC/HC	Cummins	35	547946	2017
Active	41	9551	2002	Gillig	CARFR	HC/HC	Cummins	35	644954	2017
Active	42	9552	2002	Gillig	CARFR	HC/HC	Cummins	35	565667	2017
Active	43	9553	2002	Gillig	CARFR	HC/HC	Cummins	35	587,665	2017
Active	44	9554	2002	Gillig	CARFR	HC/HC	Cummins	35	542,439	2017
Active	45	9703	2004	Chevy C5500/ Eldorado 290 AeroElite	CARFR	HC/HC	Duramax	35	380,693	2012
Active	46	1701	2016	BYD	HCFR	HC/HC	N/A	35	563	2029
Active	47	1702	2016	BYD	HCFR	HC/HC	N/A	35	431	2029
Active	48	1703	2016	BYD	HCFR	HC/HC	N/A	35	693	2029
RTA Fixed-Route Inactive										
Inactive	1	7009	2006	Thomas	CARFR	HC/HC	Mercedes	30	191,894	2016
Inactive	2	7012	2006	Thomas	CARFR	HC/HC	Mercedes	30	263,044	2016
Inactive	3	8901	1999	NABI	HCFR	MTA	Cummins	40	432,971	2016
Inactive	4	8900	2000	NABI	HCFR	MTA	Cummins	40	416,226	2016
Inactive	5	9706	2009	International 3200 Champion	CARFR	MTA/HC	International	32	331,875	2017
Inactive	6	9707	2009	International 3200 Champion	CARFR	MTA/HC	International	32	262,100	2017
Inactive	7	7003	2006	Thomas	CARFR	HC/HC	Mercedes	30	288,484	2016
Inactive	8	7002	2006	Thomas	CARFR	HC/HC	Mercedes	30	221,240	2016
Inactive	9	7004	2006	Thomas	CARFR	HC/HC	Mercedes	30	224,128	2016
Inactive	10	9515	2006	Freightliner/ Eldorado	HCFR	HC/HC	Caterpillar	32	264,227	2016

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Inactive	11	9537	2013	International/ Eldorado	HCFR	HC/HC	International	32	215,957	2021
Inactive	12	7001	2006	Thomas	CARFR	HC/HC	Mercedes	30	216,419	2016
Inactive	13	7006	2006	Thomas	CARFR	HC/HC	Mercedes	30	260,930	2016
Inactive	14	9708	2009	International 3200 Champion	HCFR	HC/HC	International	32	341,165	2017
RTA Paratransit Active										
Active	1	8	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	139,264	2019
Active	2	9	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	149,658	2019
Active	3	10	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	129,890	2019
Active	4	11	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	143,508	2019
Active	5	12	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	93,898	2020
Active	6	13	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	81,138	2020
Active	7	14	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	78,315	2020
Active	8	9543	2014	International/ Eldorado	HCPT	HC/HC	International	32	180,174	2022
Active	9	200	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	169,324	2020
Active	10	201	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	198,948	2020
Active	11	202	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	178,115	2020
Active	12	203	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	174,454	2020
Active	13	204	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	193,668	2020
Active	14	205	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	94244	2021

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Active	15	206	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	86053	2021
Active	16	207	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	95573	2021
Active	17	208	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	85735	2021
Active	18	209	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	94,900	2021
Active	19	210	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	78,245	2021
Active	20	211	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	83,426	2021
Active	21	212	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	82,053	2021
RTA Paratransit Inactive										
Inactive	1	102	2009	Azure Hybrid	HCPT	HC/HC	Chevy	27	50,738	2015
Inactive	2	106	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	98,761	2015
Inactive	3	28	2006	Ford E450/ Startrans	HCPT	HC/FSL	Ford	25	284,606	2014
Inactive	4	100	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	91,582	2015
Inactive	5	101	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	99,021	2015
Inactive	6	9705	2001	Ford E450 Superduel	CARPT		Ford	25		2012
Inactive	7	15	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	5,207	2020
Inactive	8	105	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	120,600	2015
Inactive	9	7	2007	FORD E450	HCPT	HC/HC	Ford	24	283,990	2013
Inactive	10	22	2009	Ford E450/ Coach Bus	HCPT	HC/FSL	Ford	25	344,228	2015
Inactive	11	9519	2007	Ford E450/ Eldorado/ 240 Aerotech	HCPT	HC/HC	Cummins	25	387,166	2013
Inactive	12	6	2007	Ford E450	HCPT	HC/HC	Ford	24	332,950	2013

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Inactive	13	9516	2007	Ford E450/ Eldorado/ 240 Aerotech	HCPT	HC/HC	Ford	25	314,073	2014
Inactive	14	9517	2007	Ford E450/ Eldorado/240 Aerotech	HCPT	HC/HC	Ford	25	284,806	2014
Inactive	15	9518	2007	Ford E450/ Eldorado/240 Aerotech	HCPT	HC/HC	Ford	25	319,076	2014
RTA Supervisor Active										
Active	1	S10	2005	Kia Sedona	Service	TMCM	Kia	15	133,603	TBD
Active	2	S11	2000	Dodge caravan	Service	TMCM	Dodge	15	121,319	TBD
Active	3	S1	2014	Chevy Malibu	Service	First	Chevy	15	17,873	TBD
Active	4	S2	2014	Chevy Malibu	Service	First	Chevy	15	15,546	TBD
Active	5	S3	2014	Chevy Malibu	Service	First	Chevy	15	14,133	TBD
Active	6	S4	2004	Ford Explorer	Service	HC	Ford	15	108,000	TBD
Active	7	M1	2015	Ford	Service	First	Ford	20	9,955	TBD
Active	8	M2	1998	Chevy	Service	HC	Chevy	20	92,590	TBD
Active	9	M3	2017	Chevy	Service	HC	Chevy	20	1,500	TBD
Active	10	23	2009	Ford E450/ Coach Bus	Service	HC/FSL	Ford	25	345,349	2015
First Transit Leased Vehicles										
Active	1	S7		Ford Escape		First				
Active	2	S8		Ford Taurus		First				
Active	3	S9		Ford Escape		First				

Notes on Table 4-51:

HCFR -Howard County Fixed-Route

HCPT - Howard County Paratransit

CARFR-Connect-a-Ride Fixed-Route (series 300 and 500 routes)

AAFR - Anne Arundel Fixed-Route

TMCM-Transit Management of Central Maryland (contractor)

First- First Transit (parent company of TMCM)

HC- Howard County

AA- Anne Arundel County

PG-Prince George's County

MTA-Maryland Transit Administration (state)

FSL- Federal/State/Local

Howard County

Table 4-52 presents the fleet owned by Howard County as of August 30, 2017. There are 82 vehicles, of which four are non-revenue. Twenty-seven are inactive, leaving 51 revenue vehicles. Thirty are assigned to fixed-route service, and 21 to demand-response service (ADA and general paratransit). Because the 503 (connecting Columbia and Laurel) is 90% in Howard County and connects to the Columbia hub, it is effectively a Howard service, and it would raise the peak vehicle requirement (fixed-route) to 23.

For a peak pullout of 23, a 20% spare ratio would call for a fleet of 28 vehicles (rounding up). So the current active fleet of thirty is only slightly in excess of standards—if one assumes that the inactive fleet is taken off the books. Only one of the inactive fleet has a projected replacement year beyond 2017 (2021)—the rest are eligible in 2016 or 2017; that vehicle is a total loss and should be replaced by insurance.

There are seven heavy-duty 30' transit coaches on order for delivery in late fall 2017. Howard County ordered these vehicles under a lease-purchase agreement. One potential strategy for the near term fixed-route fleet would be to dispose of everything on the inactive list except the 2013 International/Eldorado which is not eligible until 2021 (it was in a major accident, and pending resolution regarding repair or replacement), and then use the new buses to replace the two 1999 NABI coaches (leased from MTA, eligible in 2016), the 2004 Chevy C5500/Eldorado 290 AeroElite (eligible in 2012), and four of the n 2002 Gilligs. The remaining Gillig should also be retired, without replacement. This would bring the active fleet (for Howard services) down to 28 for fixed-route, with the next round of eligible replacements would be the eight International/Eldorado medium duty truck buses, which are eligible for replacement in 2018. If possible, replacing them with the same type of vehicle delivered in 2017 would help standardize the fleet both in terms of maintenance and capacity. With no fixed-route vehicles eligible until 2020, capital expenditures in 2019 could focus on expansion vehicles.

With regard to the paratransit fleet, again there are fifteen vehicles on the inactive list, and all but one are eligible for retirement. The one vehicle not eligible until 2020 is a Ford Fusion Hybrid sedan with only 5,207 miles on it, which is totaled and should be replaced by insurance. Going forward there are four sedans eligible in 2019 (or now, based on mileage), eight more vehicles in 2020, and eight in 2021.

Table 4-52: Howard County Fleet Inventory

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
RTA Fixed-Route Active										
Active	1	9520	2008	Gillig Hybrid	HCFR	HC/HC	Cummins	35	511,044	2020
Active	2	9521	2008	Gillig Hybrid	HCFR	HC/HC	Cummins	35	389,206	2020
Active	3	9525	2009	Gillig Hybrid	HCFR	HC/HC	Cummins	35	388,941	2021
Active	4	9534	2011	Gillig Hybrid	HCFR	HC/HC	Cummins	35	412,580	2023
Active	5	9535	2011	Gillig Hybrid	HCFR	HC/HC	Cummins	35	405,468	2023
Active	6	9536	2011	Gillig Hybrid	HCFR	HC/HC	Cummins	35	307,275	2023
Active	7	9526	2010	International/ Eldorado	HCFR	HC/HC	International	32	409,794	2018
Active	8	9527	2010	International/ Eldorado	HCFR	HC/HC	International	32	378,799	2018
Active	9	9528	2010	International/ Eldorado	HCFR	HC/HC	International	32	354,228	2018
Active	10	9529	2010	International/ Eldorado	HCFR	HC/HC	International	32	342,512	2018
Active	11	9530	2010	International/ Eldorado	HCFR	HC/HC	International	32	414,620	2018
Active	12	9531	2010	International/ Eldorado	HCFR	HC/HC	International	32	352,707	2018
Active	13	9532	2010	International/ Eldorado	HCFR	HC/HC	International	32	362,120	2018
Active	14	9533	2010	International/ Eldorado	HCFR	HC/HC	International	32	355,850	2018
Active	15	9538	2013	International/ Eldorado	HCFR	HC/HC	International	32	270,079	2021
Active	16	9539	2013	International/ Eldorado	HCFR	HC/HC	International	32	267,275	2021
Active	17	9540	2013	International/ Eldorado	HCFR	HC/HC	International	32	168,952	2021
Active	18	9541	2013	International/ Eldorado	HCFR	HC/HC	International	32	186,219	2021
Active	19	9542	2013	International/ Eldorado	HCFR	HC/HC	International	32	181,330	2021
Active	20	8902	1999	NABI	HCFR	HC/HC	Cummins	40	527,516	2016
Active	21	8903	1999	NABI	HCFR	HC/HC	Cummins	40	402,332	2016
Active	22	9550	2002	Gillig	CARFR	HC/HC	Cummins	35	547,946	2017
Active	23	9551	2002	Gillig	CARFR	HC/HC	Cummins	35	644,954	2017
Active	24	9552	2002	Gillig	CARFR	HC/HC	Cummins	35	565,667	2017
Active	25	9553	2002	Gillig	CARFR	HC/HC	Cummins	35	587,665	2017
Active	26	9554	2002	Gillig	CARFR	HC/HC	Cummins	35	542,439	2017

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Active	27	9703	2004	Chevy C5500/Eldorado 290 AeroElite	CARFR	HC/HC	Duramax	35	380,693	2012
Active	28	1701	2016	BYD	HCFR	HC/HC	N/A	35	563	2029
Active	29	1702	2016	BYD	HCFR	HC/HC	N/A	35	431	2029
Active	30	1703	2016	BYD	HCFR	HC/HC	N/A	35	693	2029
RTA Fixed-Route Inactive										
Inactive	1	7009	2006	Thomas	CARFR	HC/HC	Mercedes	30	191,894	2016
Inactive	2	7012	2006	Thomas	CARFR	HC/HC	Mercedes	30	263,044	2016
Inactive	3	9706	2009	International 3200 Champion	CARFR	MTA/HC	International	32	331,875	2017
Inactive	4	9707	2009	International 3200 Champion	CARFR	MTA/HC	International	32	262,100	2017
Inactive	5	7003	2006	Thomas	CARFR	HC/HC	Mercedes	30	288,484	2016
Inactive	6	7002	2006	Thomas	CARFR	HC/HC	Mercedes	30	221,240	2016
Inactive	7	7004	2006	Thomas	CARFR	HC/HC	Mercedes	30	224,128	2016
Inactive	8	9515	2006	Freightliner/Eldorado	HCFR	HC/HC	Caterpillar	32	264,227	2016
Inactive	9	9537	2013	International/ Eldorado	HCFR	HC/HC	International	32	215,957	2021
Inactive	10	7001	2006	Thomas	CARFR	HC/HC	Mercedes	30	216,419	2016
Inactive	11	7006	2006	Thomas	CARFR	HC/HC	Mercedes	30	260,930	2016
Inactive	12	9708	2009	International 3200 Champion	HCFR	HC/HC	International	32	341,165	2017
RTA Paratransit Active										
Active	1	8	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	139,264	2019
Active	2	9	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	149,658	2019
Active	3	10	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	129,890	2019
Active	4	11	2014	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	143,508	2019
Active	5	12	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	93,898	2020
Active	6	13	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	81,138	2020
Active	7	14	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	78,315	2020
Active	8	9543	2014	International/Eldorado	HCPT	HC/HC	International	32	180,174	2022

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Active	9	200	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	169,324	2020
Active	10	201	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	198,948	2020
Active	11	202	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	178,115	2020
Active	12	203	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	174,454	2020
Active	13	204	2014	Ford Phoenix	HCPT	HC/HC	Ford	26	193,668	2020
Active	14	205	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	94244	2021
Active	15	206	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	86053	2021
Active	16	207	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	95573	2021
Active	17	208	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	85735	2021
Active	18	209	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	94,900	2021
Active	19	210	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	78,245	2021
Active	20	211	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	83,426	2021
Active	21	212	2015	Ford Phoenix	HCPT	HC/HC	Ford	26	82,053	2021
RTA Paratransit Inactive										
Inactive	1	102	2009	Azure Hybrid	HCPT	HC/HC	Chevy	27	50,738	2015
Inactive	2	106	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	98,761	2015
Inactive	3	28	2006	Ford E450/Startrans	HCPT	HC/FSL	Ford	25	284,606	2014
Inactive	4	100	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	91,582	2015
Inactive	5	101	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	99,021	2015
Inactive	7	15	2015	Ford Fusion Hybrid	HCPT	HC/FSL	Ford	16	5,207	2020
Inactive	8	105	2009	Azure Hybrid	HCPT	HC/FSL	Chevy	27	120,600	2015
Inactive	9	7	2007	FORD E450	HCPT	HC/HC	Ford	24	283,990	2013
Inactive	10	22	2009	Ford E450/Coach Bus	HCPT	HC/FSL	Ford	25	344,228	2015
Inactive	11	9519	2007	Ford E450/Eldorado/240 Aerotech	HCPT	HC/HC	Cummins	25	387,166	2013
Inactive	12	6	2007	FORD E450	HCPT	HC/HC	Ford	24	332,950	2013
Inactive	13	9516	2007	Ford E450/Eldorado/240 Aerotech	HCPT	HC/HC	Ford	25	314,073	2014
Inactive	14	9517	2007	Ford E450/Eldorado/240 Aerotech	HCPT	HC/HC	Ford	25	284,806	2014
Inactive	15	9518	2007	Ford E450/Eldorado/240	HCPT	HC/HC	Ford	25	319,076	2014

Status		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
				Aerotech						
RTA Supervisor Active										
Active	1	S4	2004	Ford Explorer	Service	HC	Ford	15	108,000	TBD
Active	2	M2	1998	Chevy	Service	HC	Chevy	20	92,590	TBD
Active	3	M3	2017	Chevy	Service	HC	Chevy	20	1,500	TBD
Active	4	23	2009	Ford E450/Coach Bus	Service	HC/FSL	Ford	25	345,349	2015

Notes:

HCFR -Howard County Fixed-Route

HCPT - Howard County Paratransit

CARFR-Connect-a-Ride Fixed-Route (series 300 and 500 routes)

HC- Howard County

MTA-Maryland Transit Administration (state)

FSL- Federal, State, Local Funding

Anne Arundel County

Table 4-53 presents the Anne Arundel County owned fleet. The two medium duty buses are eligible for replacement in 2018. RTA assigns an additional six 2002 Gillig transit buses to Anne Arundel fixed-route service. These vehicles are owned by TMCM, and are eligible for replacement. The two RTA routes operated wholly within Anne Arundel, the 201J and the 202K, have a peak bus requirement of five buses, and Anne Arundel is proportionately 82% of the 502 route (3 buses) and 100% of the 504 (3 buses), for an equivalent peak fleet requirement of eleven. With a 20% spare ratio, that would be thirteen buses needed for service. Based on the RTA fleet inventory, the needs for additional vehicles beyond the two owned by the County and the six TMCM vehicles may be met out of the fleet assigned to “Connect-a-Ride” service, which is five vehicles owned by Prince George’s County (eligible in 2016), and five owned by Howard County (eligible in 2017). To summarize, Anne Arundel RTA services should be supported by thirteen vehicles—the county owns two, and all the vehicles assigned to these services are eligible for replacement.

Anne Arundel operates its services for the aging and persons with disabilities separately, and it has a 44 vehicle fleet maintained by the county’s fleet maintenance garage, which is not included in this discussion. ADA services on the Anne Arundel RTA routes are provided by RTA with the overall RTA paratransit fleet, and there are no dedicated paratransit vehicles for this purpose. There is one inactive paratransit vehicle listed as having provided Connect-a-Ride paratransit, so it would seem logical to consider that there is a need for one Anne Arundel RTA ADA paratransit vehicle or its equivalent.

Prince George’s County

As can be seen in Table 4-54, Prince George’s County owns five Thomas small heavy duty coaches operated by the RTA on the 301A and 302G routes, which together have a peak vehicle requirement of five. With an additional spare (one vehicle equals 20%), and another vehicle to support the county’s share of regional routes, the Prince George’s peak fixed route fleet requirement is estimated to be seven vehicles. The five buses owned by the county are all eligible for replacement based on years, and will be eligible shortly based on miles.

Table 4-53: Anne Arundel County Fleet Inventory

Statue		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Replacement Year
Active	1	9710	2010	International	AAFR	AA	International	32	190,289	2018
Active	2	9711	2010	International	AAFR	AA	International	32	162,750	2018

Table 4-53: Prince George's County Fleet Inventory

Statue		Fleet Number	Model Year	Vehicle Make	Service Type	Owner	Engine	Length	Current Life Miles as of 7/1/17	Fiscal Year Replacement
Active	1	7005	2006	Thomas	CARFR	PG	Mercedes	30	314,935	2016
Active	2	7007	2006	Thomas	CARFR	PG	Mercedes	30	315,166	2016
Active	3	7008	2006	Thomas	CARFR	PG	Mercedes	30	246,215	2016
Active	4	7010	2006	Thomas	CARFR	PG	Mercedes	30	233,636	2016
Active	5	7011	2006	Thomas	CARFR	PG	Mercedes	30	223,297	2016

Summary of Existing Fleet

The RTA possesses an overly large fleet with many inactive vehicles on the roster which should be eliminated through appropriate disposal procedures. In addition, much of the active fleet is beyond its expected life and should be retired or replaced. Beyond that, if one views the fleet as having three separate components, there is a need for a fleet management plan that provides for an adequate regional fleet and reflects that there are three separate grant applicants. If one examines the Howard County fleet and that county's investment in new vehicles, it is possible that the overage fleet could be substantially reduced within a relatively short time. It is less clear whether or how Anne Arundel and Prince George's Counties will invest in the fleet to support their services, which is a need. All of the vehicles operated on behalf of these jurisdictions are eligible for replacement or will be by 2018.

ORGANIZATION-REGIONAL TRANSPORTATION AGENCY

The organization of the RTA has evolved over a period of twenty years as different organizational structures evolved in response to the need for a mechanism to support both local and regional services in the region. As the operation of these services shifted from a private non-profit organization while a regional facility operations facility was planned and built, the goal of a regional transit authority has not been achieved, but elements of a regional entity have been developed.

Currently each of the three participating counties remains the grant subrecipient for state and federal transit funding, and so the legal responsibility for transit rests with the counties, as there is no regional transit authority that is a legal entity. The current organization is defined by a Memorandum of Understanding of the Central Maryland Transportation and Mobility Consortium" (MOU), which has been signed by Anne Arundel County, Howard County, Prince George's County and the City of Laurel. The MOU defines each entity as an equal partner in a cooperative effort to maintain an efficient and effective coordinated bus system in central Maryland.

As described in the MOU, Howard County, on behalf of the four jurisdictions, has contracted with a third-party private for-profit firm to manage and operate transit services in the region. Howard County is the contract manager. A somewhat unusual aspect of the arrangement is that the contractor has incorporated a for-profit corporation, Transit Management of Central Maryland (TMC), which is a wholly-owned subsidiary of First Transit. The intention was that this organization would take on most of the administration and management of the transit services, with the county staff role reduced to oversight of the funding, contract oversight and compliance.

The MOU creates a commission with representatives of the four jurisdictions to provide policy direction concerning the transit services. Each jurisdiction appoints two commissioners, none of which may be employed by the contractor. There is a Rider's Advisory

Council whose chair is a non-voting member of the commission. There are commission by-laws that set forth the mission of the commission as determining the mission and purpose of the RTA, reviewing and overseeing the performance of the RTA and the contractor, “ensuring effective organizational planning and adequate financial resources for the RTA, managing those financial resources effectively” while representing the interests of the parties. The commission is charged with annually approving a proposed budget for the RTA, which is then presented to the jurisdictions for their consideration. The MOU also calls for the commission to evaluate options for legislation to create a public transportation authority or similar organization.

For FY 2018 the MOU requires maintenance of effort in transit funding to the level provided in FY 2017, and calls for maintaining at least that level in future years. It does allow each party to independently evaluate purchasing options for “assets for Transit Services” provided under the MOU. The participants can (and do) lease individually-owned transit assets to TCM, and there are provisions for return of assets upon withdrawal or dissolution. The MOU contains a funding schedule setting amounts required from each party to maintain services through FY 2018, but the agreement holds those levels only through the first quarter of FY 2018, with revisions possible for the remainder of the year based on individual operating budgets. The MOU does not set forth the method of allocating costs though revenue is allocated based on hours times the average hourly fare revenue for the individual route.

TCM staff includes a General Manager, two Assistant General Managers, one for Operations and one for Maintenance and a Paratransit Manager. TCM staff provides grants management, planning, and finance functions. Operations staff include dispatch, operations supervision and the operators. Maintenance functions include purchasing and parts and supplies. Marketing and customer service staff also support the RTA.

Each of the jurisdictions has transportation program staff that coordinates with the RTA. On a day-to-day basis, contacts between the transit program staff of the parties is another aspect of the administration of the RTA beyond the more formal and less frequent contact provided through the commission.

The key aspects of the organizational structure that must be understood is that there are in reality four jurisdictions that are working together to share a common brand, a single service contractor, and a single maintenance facility. However, there is no legally constituted regional transit authority—each party remains a separate recipient of federal and state funding, each is responsible for compliance, and each has a separate policy board.

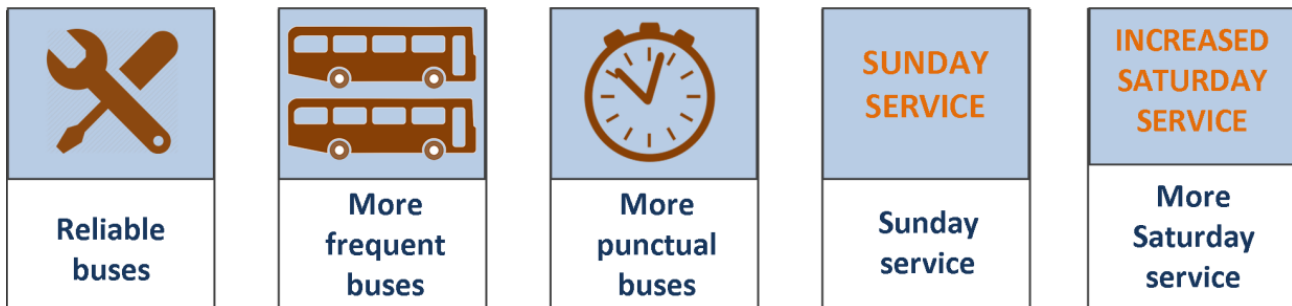
Chapter 5

Alternatives

DEVELOPMENT OF ALTERNATIVES

The TDP alternatives presented in this chapter were based on input collected through rider surveys, community surveys, online surveys, public meetings, Anne Arundel, Howard, Prince George's Counties, and the City of Laurel staff, and stakeholders representing local agencies and advocacy groups.

As documented in Chapter 4, the overwhelming demand was for the following:



Service alternatives were developed for each of the existing fifteen RTA fixed-routes as well as policy proposals to address the growing demand for RTA's General Paratransit Service (GPT). In addition, expansion route alternatives were developed to improve connections to employment and services in the region and to other regional operators such as MTA. The service alternatives attempt to address the following:

- Realign routes to meet current needs and changing land uses.
- Streamline or shorten routes to reduce the time for riders.
- Increase the frequency on many routes.
- Improve connections to jobs and vital services.
- Increase the level of service that is operated on the weekends.

ANNE ARUNDEL COUNTY

This section describes thirteen proposed service alternatives in Anne Arundel County. Three of the thirteen proposed service alternatives are either changes in the current routing and/or service characteristics such as span and frequency of service. The other ten service alternatives propose to expand service throughout the county.

Route 201J – Arundel Mills Mall to Freetown Village

Service Proposal:

- Eliminate service to ITT Tech which currently does not generate any ridership because the school has closed (change made during the course of the study) and extend route to serve the Walmart in Freetown.
- Increase frequency of service.

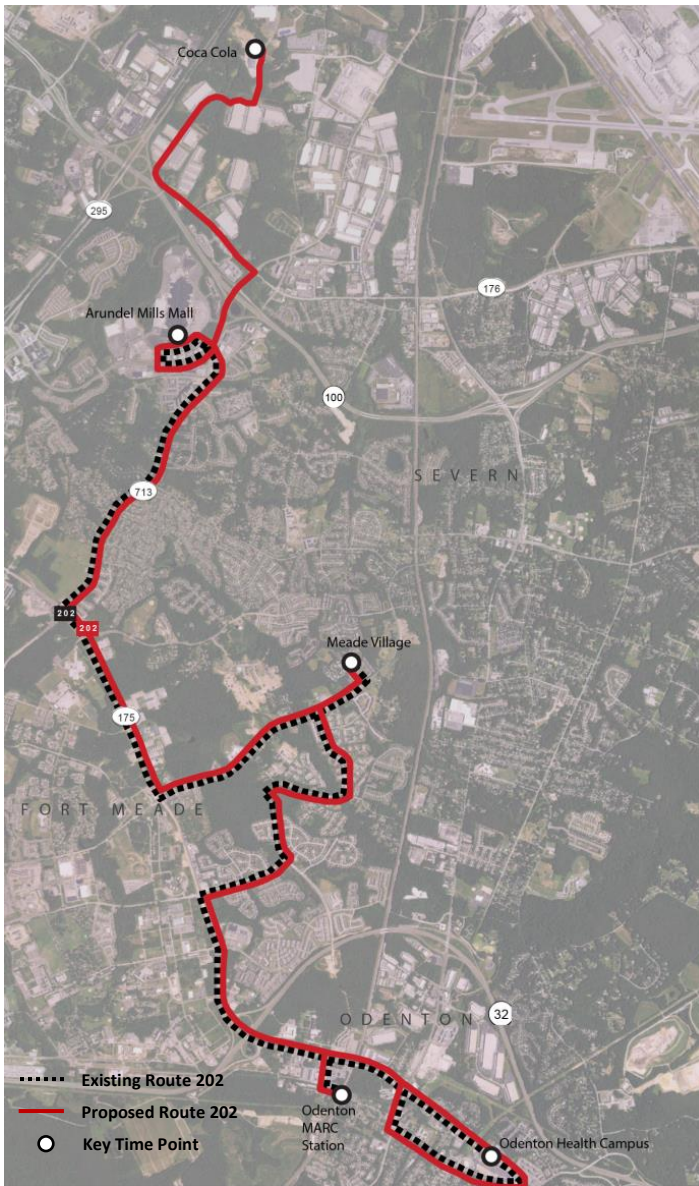


	Existing	Proposed
Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	6:30 am - 12:00 am	Same
Saturday	8:30 am - 11:00 pm	Same
Sunday	10:30 am - 7:20 pm	8:30 am - 7:20 pm
Frequency		
Weekday		
AM & PM Peak	45 min	30 min
Midday/ Evening	90 min	45 min
Saturday		
AM/Midday	90 min	60 min
Evening	150 min	90 min
Sunday		
AM/Midday	150 min	60 min
Evening	150 min	90 min

Route 202K – Arundel Mills Mall to Odenton

Service Proposal

- Extend route to serve the Coca Cola facility.
- Serve the Odenton MARC station on Saturday and Sunday.
- Increase frequency of service.

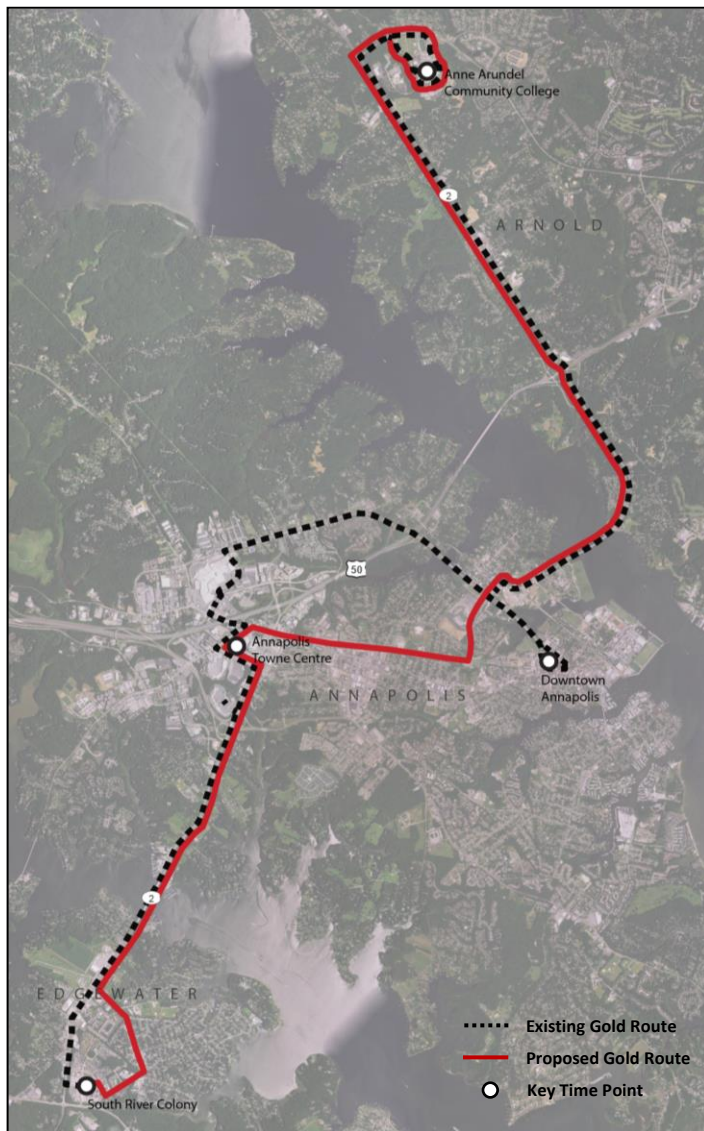


	Existing	Proposed
Service Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	6:15 am - 11:00 pm	Same
Saturday	8:00 am - 11:00 pm	Same
Sunday	9:00 am - 9:50 pm	Same
Frequency of Service		
Weekday		
AM Peak/Midday/ PM Peak	45 min	35 min
Evening	90 min	45 min
Saturday	90 min	60 min
Sunday	90 min	60 min

Gold Route – Edgewater to Arnold/Anne Arundel Community College (AACC)

Service Proposal

- Continue to serve Annapolis Towne Centre.
- Bypass Annapolis Mall and downtown Annapolis for more direct connection between Edgewater and AACC.
- Span and frequency of service would remain the same.

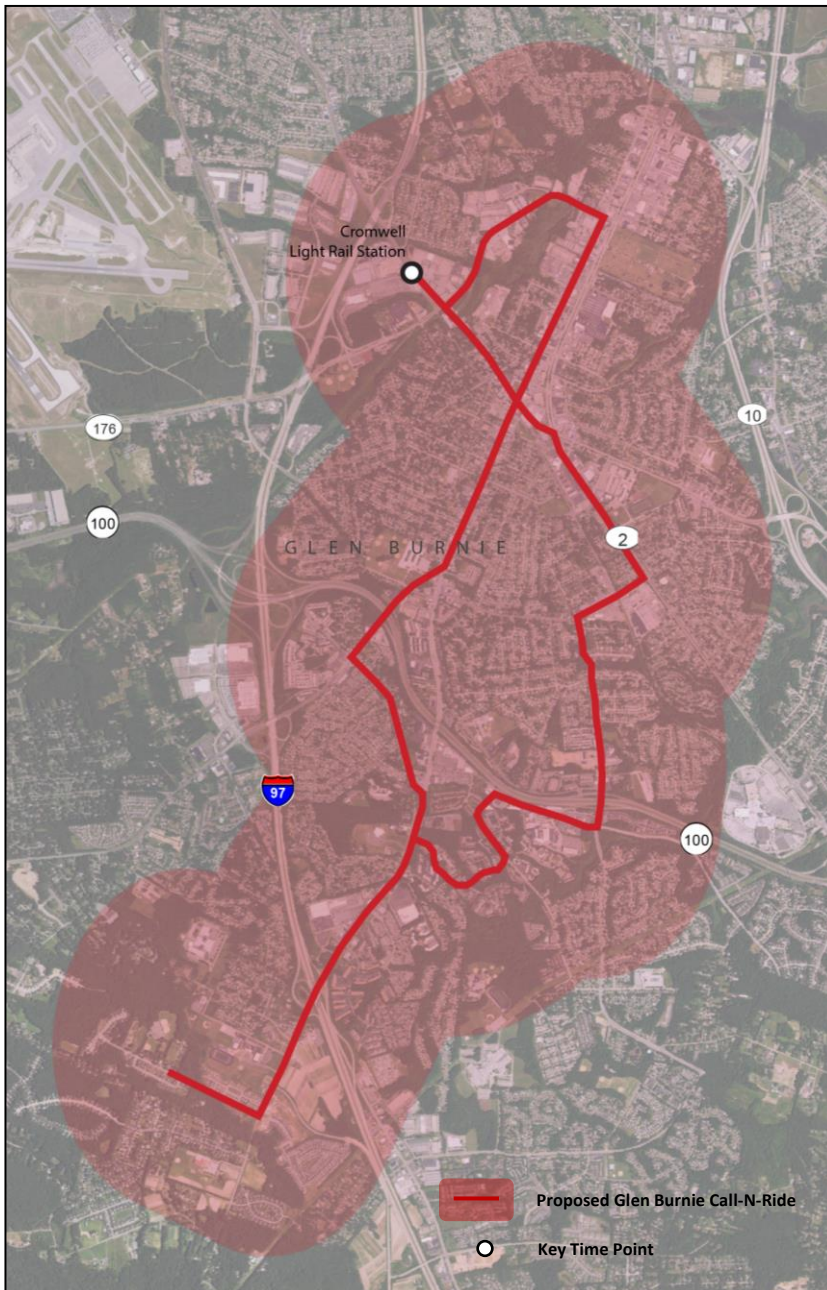


	Existing	Proposed
Service Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	6:00 am - 8:00 pm	Same
Saturday	8:00 am - 8:00 pm	Same
Sunday	8:00 am - 8:00 pm	Same
Frequency of Service		
Weekday	120 min	Same
Saturday	120 min	Same
Sunday	120 min	Same

Glen Burnie Call-N-Ride (Expansion)

Service Proposal

- Connect with Cromwell LRS.
- Route will deviate based on requests.
- Request for deviations will need to be made in advance.

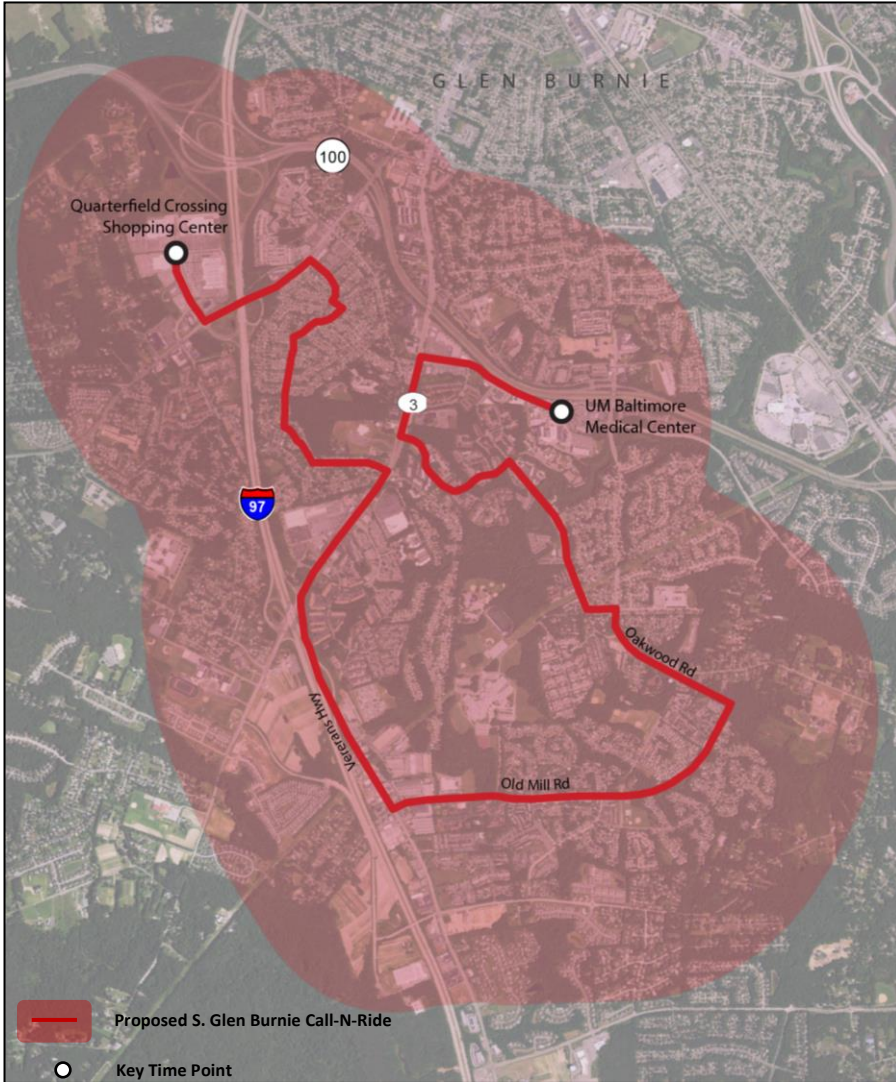


Proposed	
Service Days & Hours	
Days	M - Sun
Hours	
Weekdays	6:00 am - 7:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	10:00 am - 7:00 pm
Frequency of Service	
Weekday	45 min
Saturday	45 min
Sunday	45 min

South Glen Burnie Call-N-Ride (Expansion)

Service Proposal

- Serve Quarterfield Crossing Shopping Center and UM Baltimore Medical Center.
- Route will deviate based on requests.
- Request for deviations will need to be made in advance.

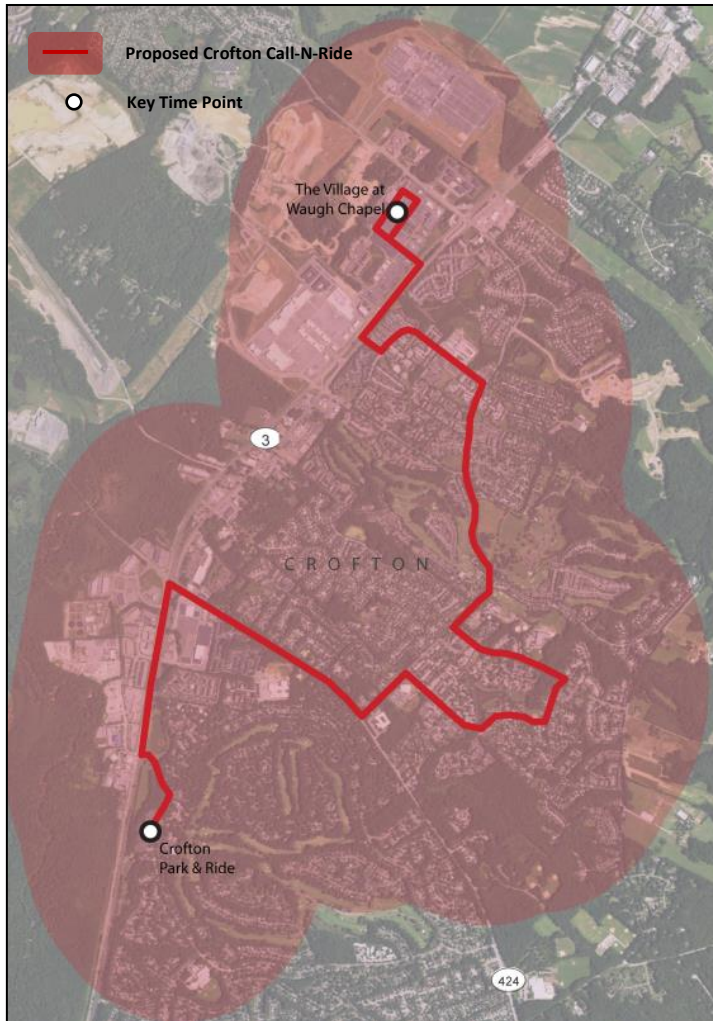


Proposed	
Service Days & Hours	
Days	M - Sun
Hours	
Weekdays	6:00 am - 7:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	10:00 am - 7:00 pm
Frequency of Service	
Weekday	45 min
Saturday	45 min
Sunday	45 min

Crofton Call-N-Ride (Expansion)

Service Proposal

- Local service connecting to The Village at Waugh Chapel and Crofton Park and Ride.
- Route will deviate based on requests.
- Request for deviations will need to be made in advance.



Proposed	
Service Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 7:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	-
Frequency of Service	
Weekday	30 min (peak)/60 min (off-peak)
Saturday	60 min
Sunday	-

Riviera Beach to UM Baltimore Washington Medical Center (Expansion)

Service Proposal

- Connect Riviera Beach and Pasadena with UM Baltimore Washington Medical Center and Marley Station Mall.
- Route-deviation service provided within a ¾ mile wide area on either side of the proposed route.
- Deviations would require advance reservation.
- Service to be marketed as Call N’Ride.

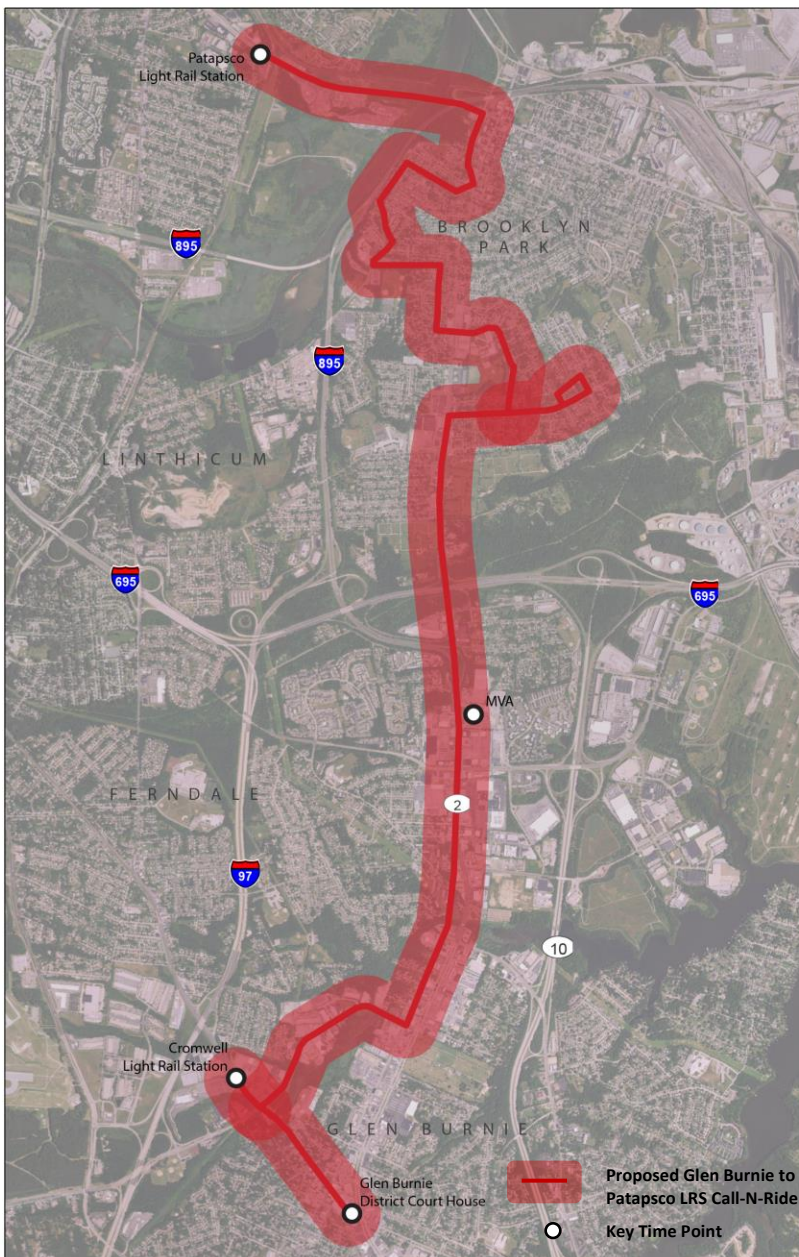


Proposed	
Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 7:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	-
Frequency	
Weekday	60 min
Saturday	60 min
Sunday	-

Glen Burnie to Patapsco LRS (Expansion)

Service Proposal

- Serve Brooklyn Park.
- Connect with District Court and MVA in Glen Burnie, Cromwell LRS, and Patapsco LRS.
- Route-deviation service provided within a ¾ mile wide area on either side of the proposed route.
- Deviations would require advance reservation.
- Service to be marketed as Call N’Ride.

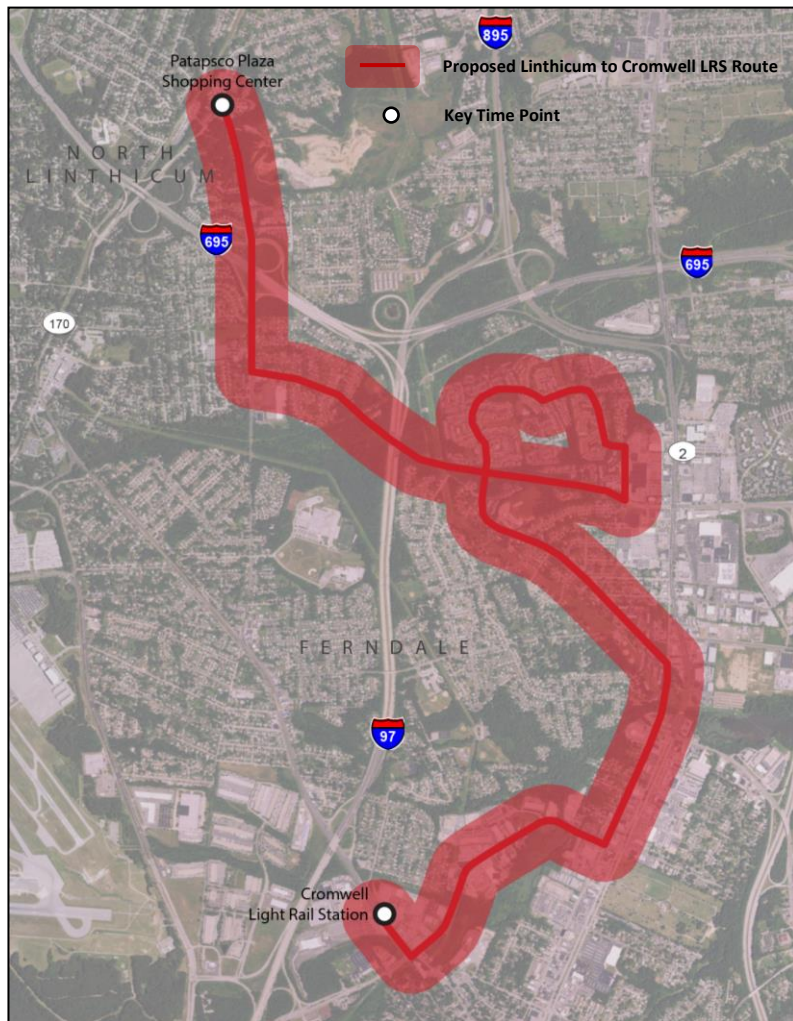


Proposed	
Service Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 7:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	-
Frequency of Service	
Weekday	60 min
Saturday	60 min
Sunday	-

Linthicum to Cromwell LRS (Expansion)

Service Proposal

- Serve the communities of Linthicum and Ferndale.
- Route-deviation service provided within a ¾ mile wide area on either side of the proposed route.
- Deviations would require advance reservation.
- Service to be marketed as Call N’Ride.

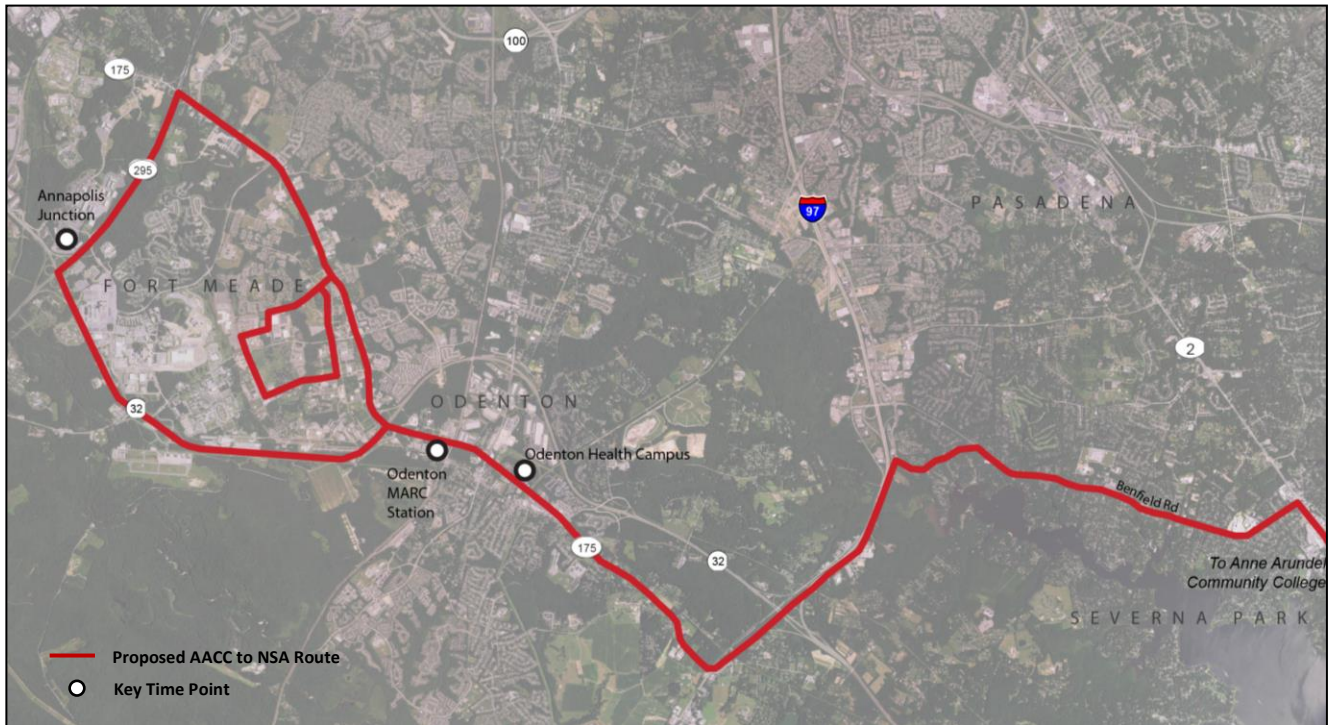


		Proposed
Service Days & Hours		
Days	M - Sun	
Hours		
Weekdays	6:00 am - 7:00 pm	
Saturday	8:00 am - 7:00 pm	
Sunday	10:00 am - 7:00 pm	
Frequency of Service		
Weekday	30 min	
Saturday	30 min	
Sunday	30 min	

Arnold/Anne Arundel Community College to NSA (Expansion)

Service Proposal

- Connects with Anne Arundel Community College, Odenton Health Campus, Odenton MARC Station, NSA and Annapolis Junction.
- Operate on weekdays only.



		Proposed
Days & Hours		
Days		M - F
Hours		
Weekdays		6:00 am - 7:00 pm
Saturday		-
Sunday		-
Frequency		
Weekday		45 min
Saturday		-
Sunday		-

Crofton to Annapolis Mall (Expansion)

Service Proposal

- Connect Crofton at Crofton Park and Ride to Annapolis Mall and Annapolis Towne Centre on weekdays and Saturdays.

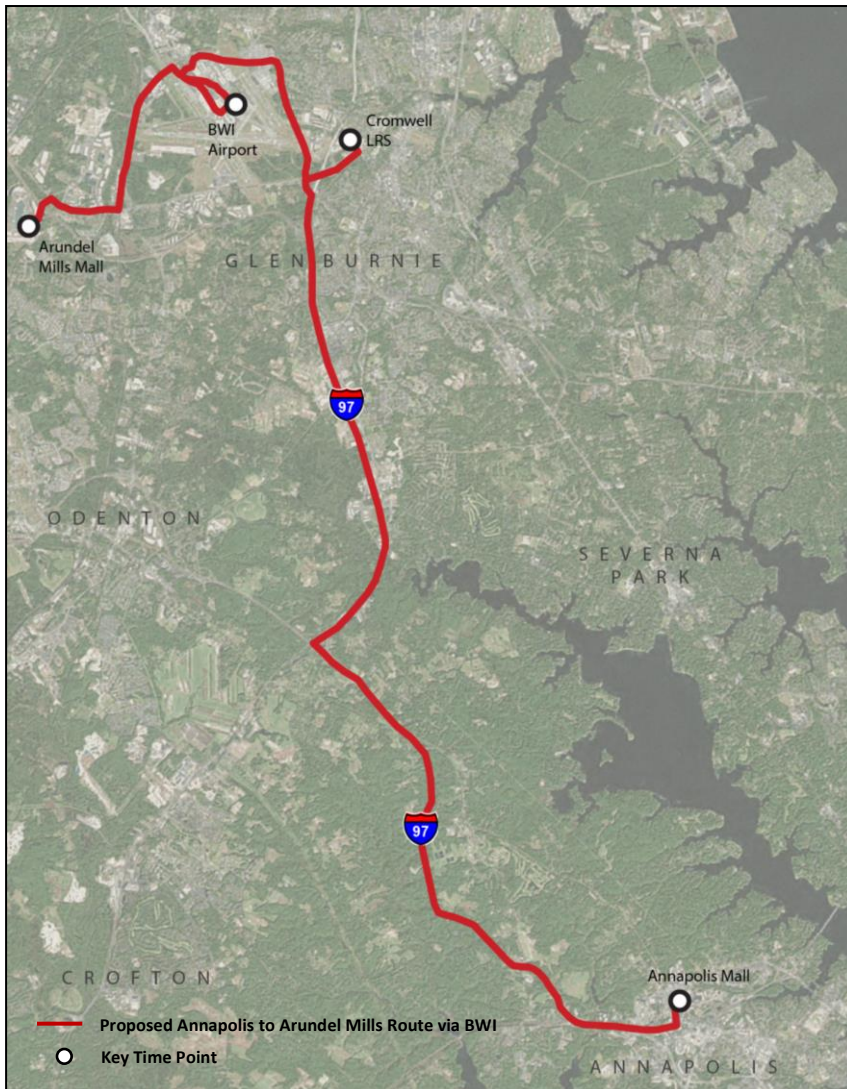


		Proposed
Days & Hours		
Days		M - Sat
Hours		
Weekdays		6:00 am - 7:00 pm
Saturday		8:00 am - 7:00 pm
Sunday		-
Frequency		
Weekday		30 min (peak)/60 min (off-peak)
Saturday		60 min
Sunday		-

Annapolis to Arundel Mills Mall via BWI (Expansion)

Service Proposal

- Connect Annapolis with Cromwell LRS, BWI Airport, and Arundel Mills Mall.

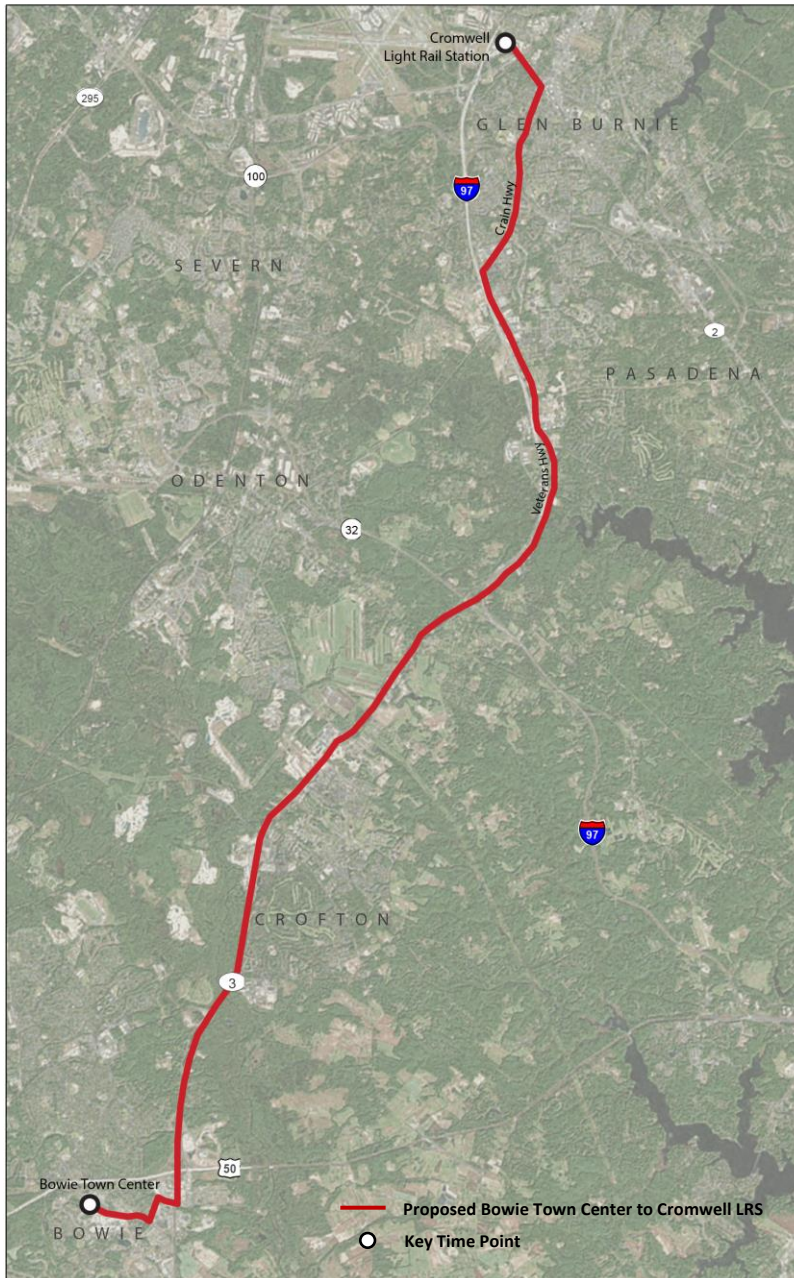


Proposed	
Service Days & Hours	
Days	M - Sun
Hours	
Weekdays	6:00 am - 10:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	8:00 am - 7:00 pm
Frequency of Service	
Weekday	60 min
Saturday	60 min
Sunday	60 min

Bowie Town Center to Cromwell LRS (Expansion)

Service Description

- Establish north/south line haul through the county.
- Operate primarily on Route 3 connecting Crofton, Odenton, Pasadena, and Glen Burnie.
- Terminate at Cromwell LRS.



Proposed	
Service Days & Hours	
Days	M - Sun
Hours	
Weekdays	6:00 am - 7:00 pm
Saturday	8:00 am - 7:00 pm
Sunday	10:00 am - 7:00 pm
Frequency of Service	
Weekday	60 min
Saturday	60 min
Sunday	60 min

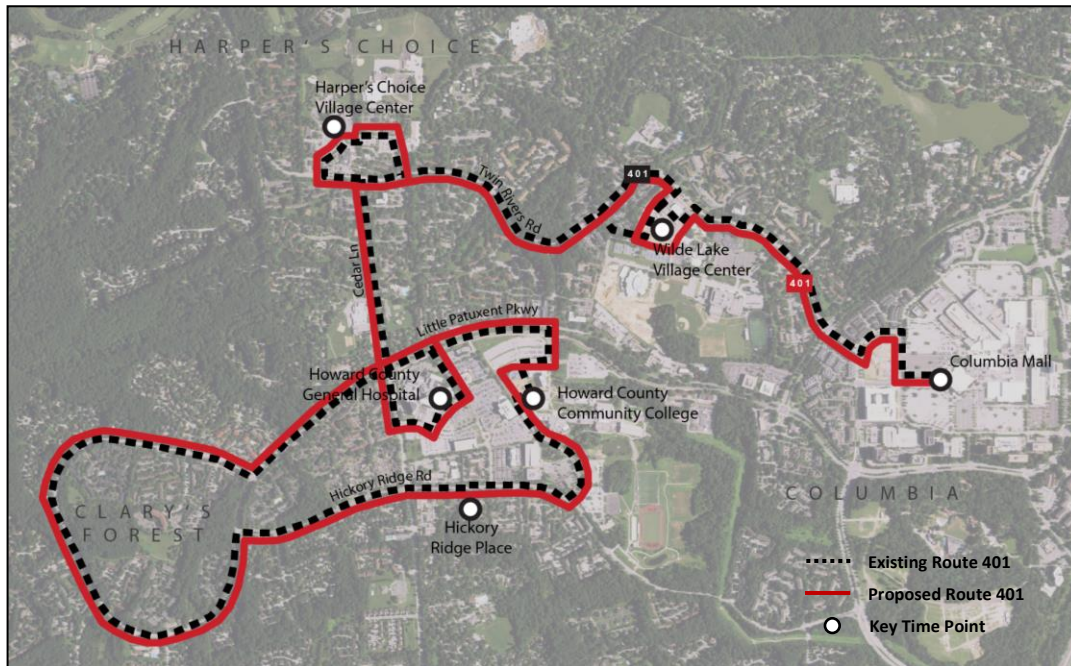
HOWARD COUNTY

This section describes the 14 proposed service alternatives in Howard County. Seven of the 14 proposed service alternatives are changes in the current routing and/or service characteristics such as span and frequency of service. As part of the restructuring of the existing routes in the county four new routes were developed to supplement the changes in the existing routes. Three expansion routes were also proposed to provide service in unserved areas such as Maple Lawn, Clarksville, and Turf Valley.

Route 401 – Columbia Mall to Clary’s Forest

Service Proposal

- Alignment remains primarily the same.
- Increase frequency of service.

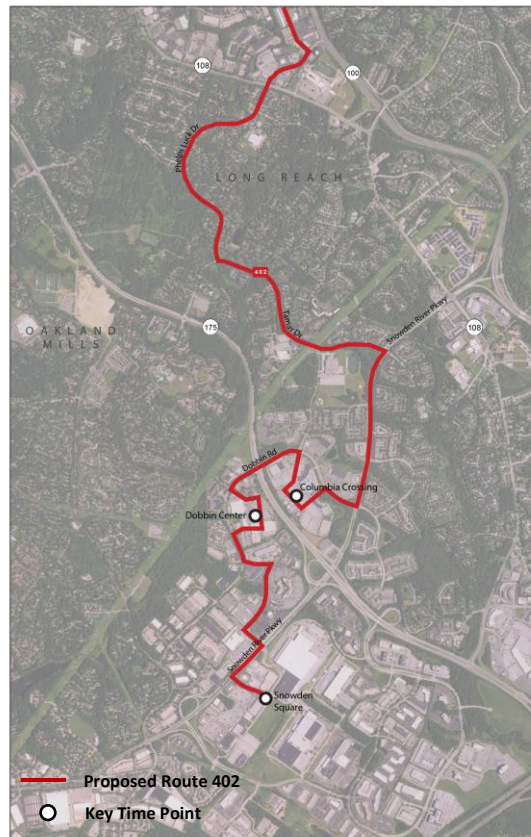
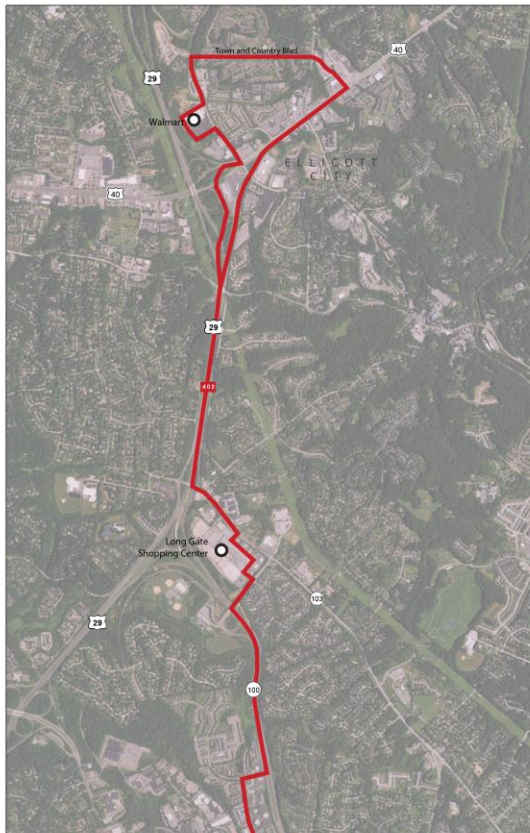


	Existing	Proposed
Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	5:40 am - 11:10 pm	5:30 am - 11:10 pm
Saturday	7:40 am - 10:10 pm	5:30 am - 11:10 pm
Sunday	9:00 am - 6:50 pm	7:30 am - 8:30 pm
Frequency		
Weekday & Saturday	M-F/Sat	M-F/Sat
AM Peak	30 min/60 min	Same/30 min
Midday	60 min/60 min	30 min/30 min
PM Peak	30 min/60 min	Same/30 min
Evening	60 min/60 min	Same
Sunday	60 min	Same

Route 402 – Ellicott City to Snowden Square (New)

Service Proposal

- Route 402 would be a new route from the Walmart in Ellicott City to Snowden Square.
- Serve the Walmart in Ellicott City, Long Gate Shopping Center, Columbia Crossing, Dobbin Center, and Snowden Square.

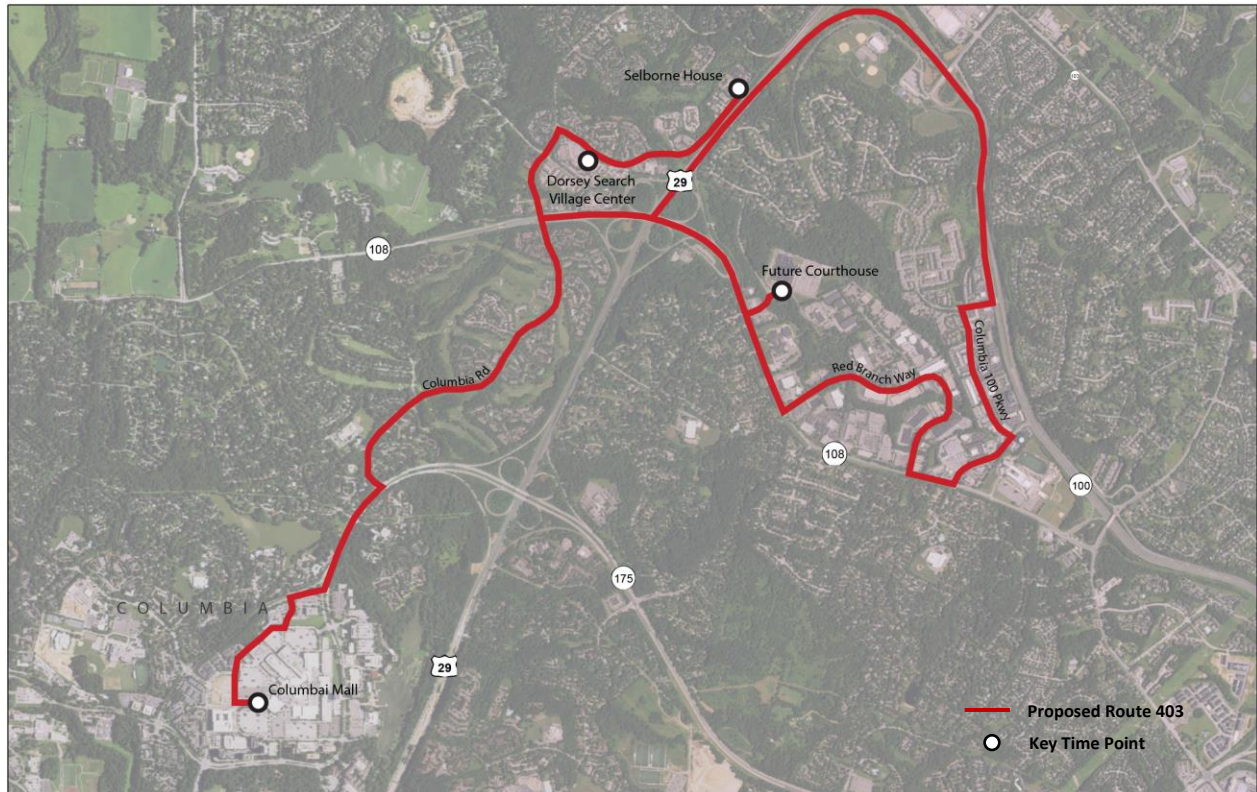


Proposed	
Days & Hours	
Days	M - Sun
Hours	
Weekdays	6:15 am - 7:30 pm
Saturday	6:15 am - 7:30 pm
Sunday	9:15 am - 7:30 pm
Frequency	
Weekday	60 min
Saturday	60 min
Sunday	120 min

Route 403 – Columbia Mall to Red Branch Way (New)

Service Proposal

- Serve Dorsey Search Village Center and Selborne House.
- Other portions of the current 405 route will have continued service on a different route.
- Serve the future site of new courthouse on Bendix Road once it is built.

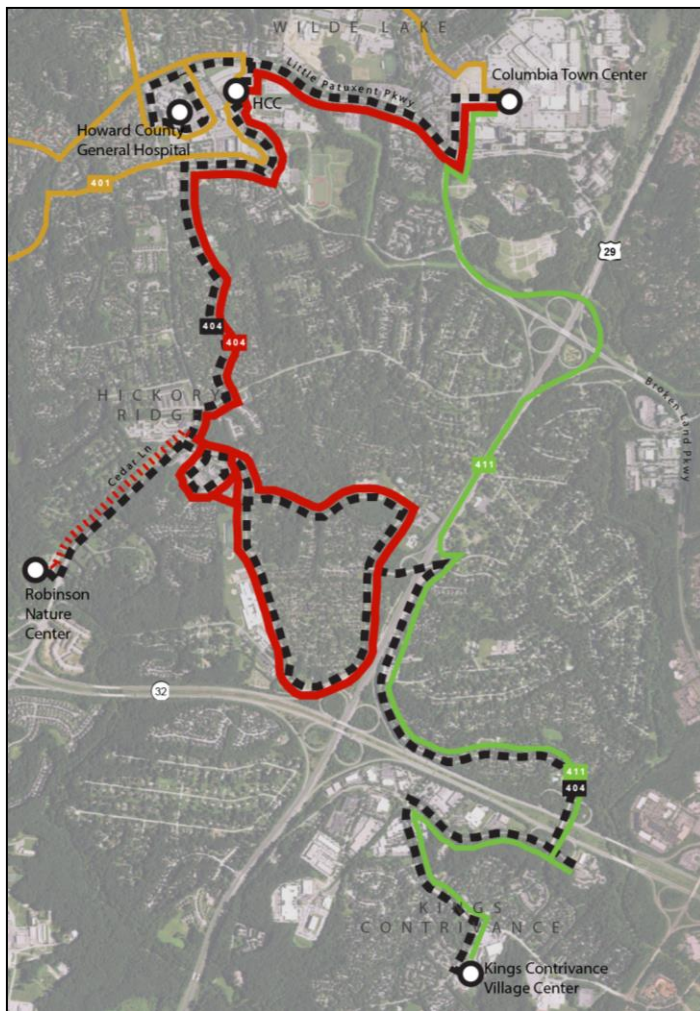


	Proposed
Days & Hours	
Days	M - Sun
Hours	
Weekdays	5:35 am - 11:12 pm
Saturday	7:35 am - 9:12 pm
Sunday	7:35 - 7:12 pm
Frequency	
Weekday and Saturday	
AM & Midday	60 min
PM	120 min
Sunday	120 min

Route 404 – Columbia Mall to Hickory Ridge

Service Proposal

- Service to Robinson Nature Center will be on weekends by request only.
- Route will no longer serve Kings Contrivance; Kings Contrivance will be served by Route 411.
- Route will no longer serve Howard County General Hospital; the hospital will be served by Route 401.



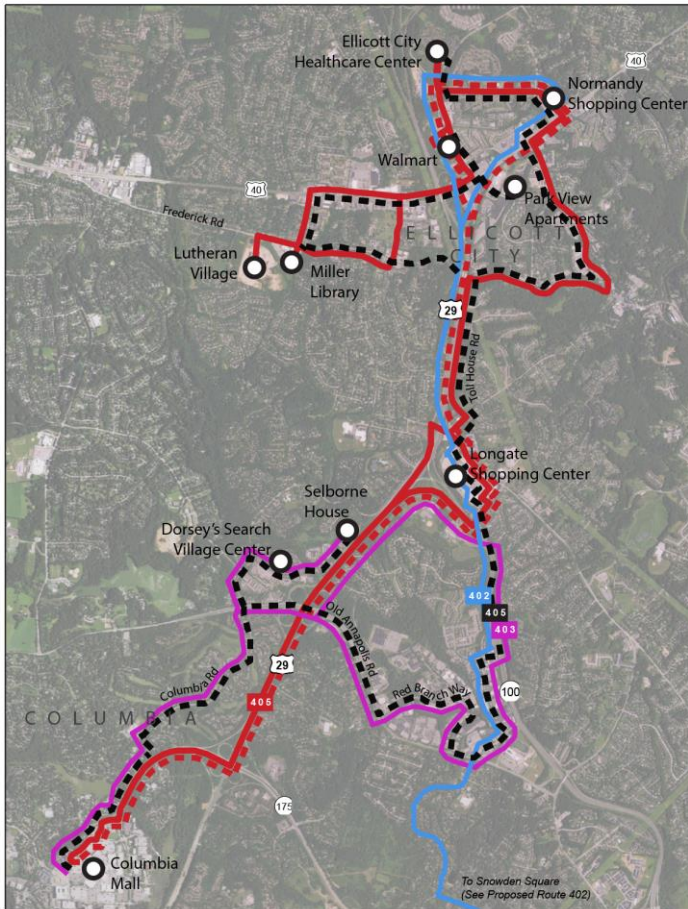
	Existing	Proposed
Service Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	6:09 am - 10:27 pm	6:00 am - 10:52 pm
Saturday	7:27 am - 8:23 pm	8:00 am - 8:52 pm
Sunday	9:00 am - 6:42 pm	8:00 am - 6:52 pm
Frequency of Service		
Weekday		
AM & PM Peak/Midday	60 min	Same
Evening	120 min	Same
Saturday	60 min	Same
AM & PM Peak/Midday	60 min	Same
PM	120 min	Same
Sunday	120 min	Same

- Existing Route 404
- Proposed Route 404
- - - Proposed Route 404 Weekends by Request
- Proposed Route 401
- Proposed Route 411
- Key Time Point

Route 405 – Columbia Mall to Ellicott City

Service Proposal

- Provide a more direct connection to Ellicott City. Dorsey’s Search Village Center, Selborne House, Executive Park Drive, and Red Branch Way will be served by Route 403.
- Operate on a modified routing weekday evenings, early Saturday morning, late Saturday evening, and Sunday. The modified routing does not include the Healthcare Center, Lutheran Village, and Miller Library.
- Add Sunday service.



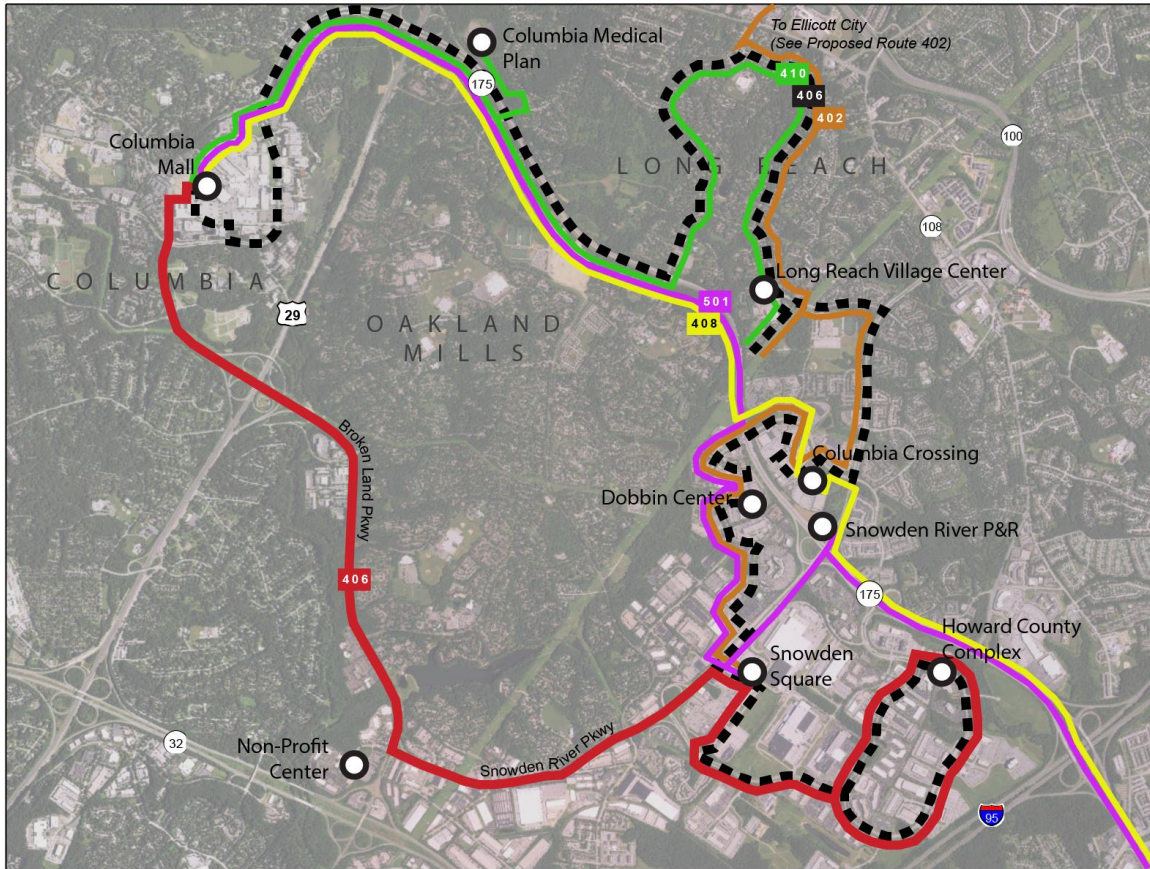
	Existing	Proposed
Service Days & Hours		
Days	M - Sat	Same
Hours		
Weekdays	6:00 am - 10:11 pm	Same
Saturday	7:45 am - 8:11 pm	Same
Sunday	-	8:00 am - 8:00 pm
Frequency of Service		
Weekday	60 min	Same
Saturday	60 min	Same
Sunday	-	60 min

- Existing Route 405
- Proposed Route 405
- Proposed 405 Evening, Early/Late Saturday and Sunday
- Proposed Route 402
- Proposed Route 411
- Key Time Point

Route 406 – Columbia Mall to Gateway

Service Proposal

- Provide a more direction connection from Columbia Mall to Gateway Business Park including the Howard County complex.
- Continue to serve Snowden Square.



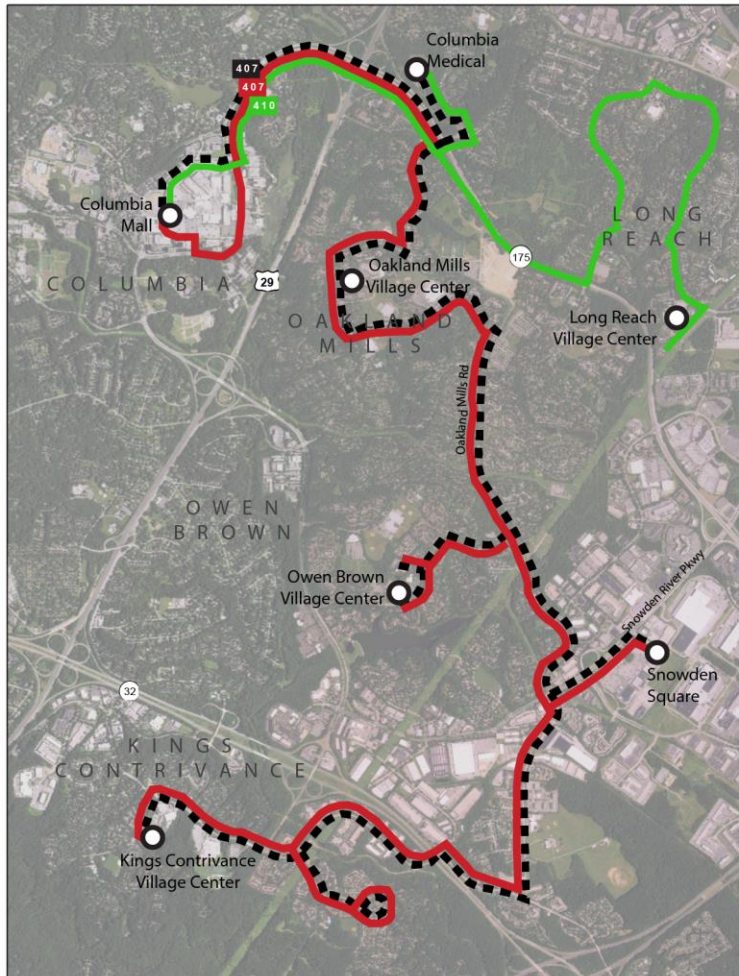
	Existing	Proposed
Days & Hours		
Days	M - Sun	M - Sat
Hours		
Weekdays	5:35 am - 11:19 pm	6:30 am - 6:00 pm
Saturday	7:37 am - 10:20 pm	8:30 am - 5:30 pm
Sunday	9:10 am - 6:21 pm	-
Frequency		
Weekday	30 min	Same
Saturday	60 min	120 min
Sunday	120 min	-

- Existing Route 406
- Proposed Route 406
- Proposed Route 402
- Proposed Route 408
- Proposed Route 410
- Proposed Route 501
- Key Time Point

Route 407 – Columbia Mall to Kings Contrivance

Service Proposal

- Similar to existing service with increased frequency of service between Columbia Mall and Owen Brown Village Center.
- Columbia Medical Plan will be served by Route 410.
- Not every bus will continue to Snowden Square and Kings Contrivance. Buses will turn around at Owen Brown Village Center every other run.



	Existing	Proposed
Service Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	5:30 am - 11:30 pm	Same
Saturday	8:00 am - 10:20 pm	5:30 am - 11:30 pm
Sunday	9:00 am - 6:45 pm	7:00 am - 8:50 pm

Frequency of Service		
Weekday		
AM & PM Peak/Midday	60 min	30 min/60 min*
Evening	60 min	60 min/120 min*
Saturday		
AM & PM Peak/Midday	60 min	30 min/60 min*
Evening	120 min	60 min/120 min*
Sunday	120 min	60 min/120 min*

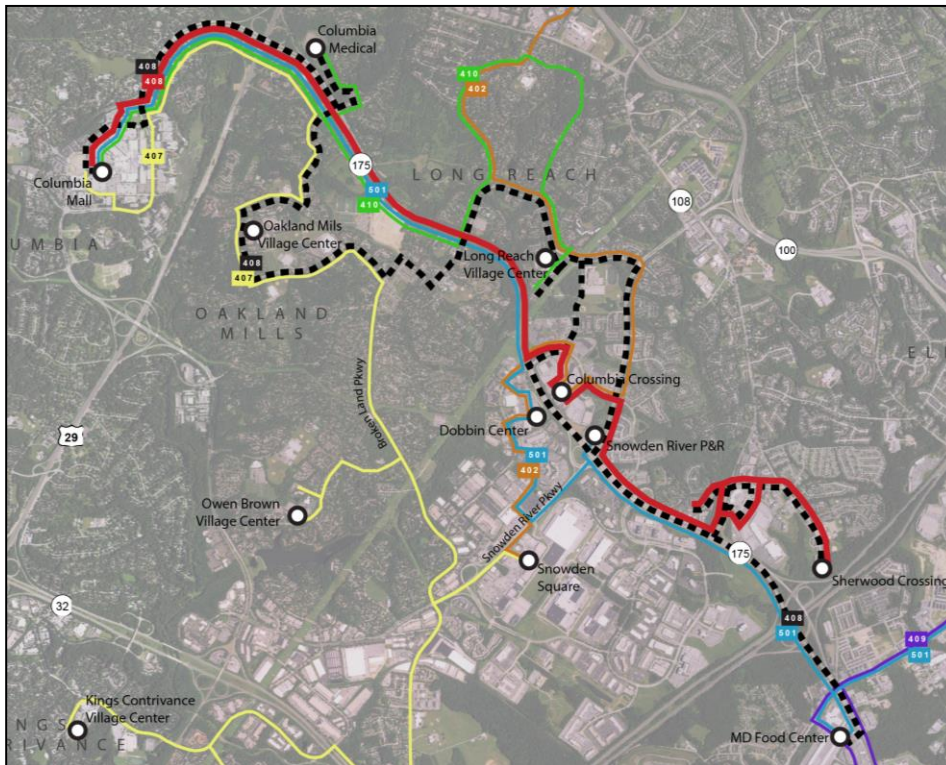
* Frequency of service south of Owen Brown Village Center. Every other bus will turn around at Owen Brown Village Center.

- Existing Route 407
- Proposed Route 407
- Proposed Route 410
- Key Time Point

Route 408 – Columbia Mall to Sherwood Crossing

Service Proposal

- Expand service to Sunday.
- Route will terminate at Sherwood Crossing instead of at MD Food Center.
- MD Food Center will be served by Routes 409 and 501.
- Oakland Mills Village Center and Long Reach Village Center will be served by Routes 402, 407, and 410.
- Increase frequency of service in the evenings and all day Saturday.



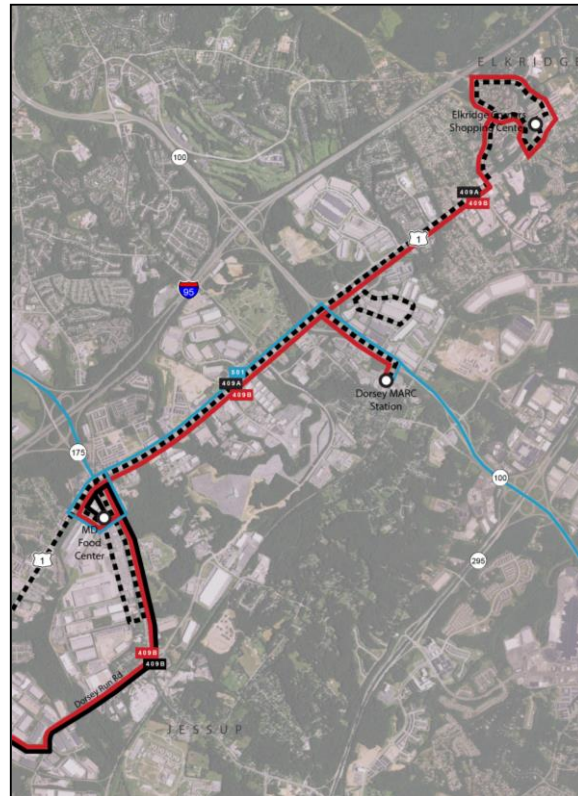
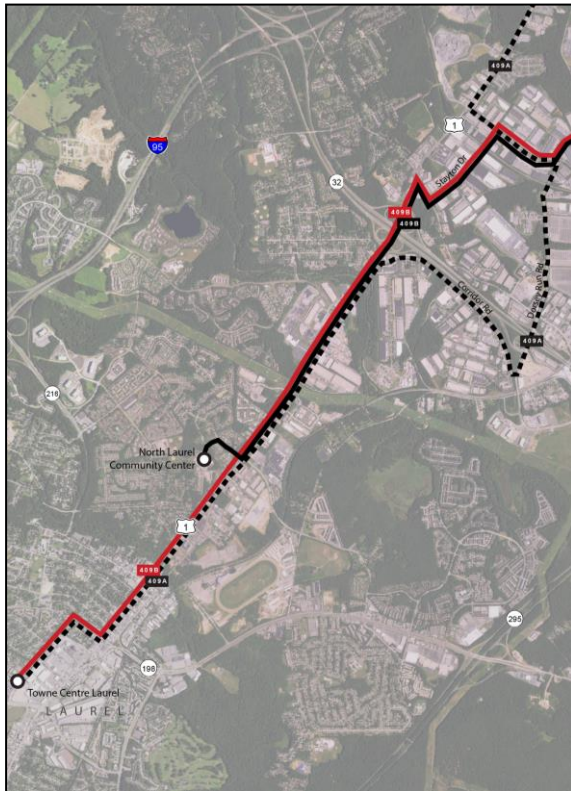
	Existing	Proposed
Days & Hours		
Days	M - Sat	M - Sun
Hours		
Weekdays	5:53 am - 10:17 pm	6:00 am - 11:00 pm
Saturday	7:53 am - 10:17 pm	6:00 am - 11:00 pm
Sunday	-	8:00 am - 8:00 pm
Frequency		
Weekday		
AM/PM Peak	60 min	Same
Midday/Evening	120 min	60 min
Saturday	120 min	60 min
Sunday	-	60 min

- Existing Route 408
- Proposed Route 408
- Proposed Route 402
- Proposed Route 407
- Proposed Route 409
- Proposed Route 410
- Proposed Route 501
- Key Time Point

Route 409 (409A and 409B)

Service Proposal

- Extend Route 409B to Towne Centre Laurel and Elkridge Shopping Center in Elkridge.
- Increase frequency of service in the evenings.
- Areas where Route 409A and 409B overlap will experience higher frequencies.



	Existing	Proposed
Days & Hours		
Days	M - Sat	Same
Hours		
Weekdays	6:00 am - 9:55 pm	Same
Saturday	9:00 am - 9:50 pm	Same
Sunday	-	-
Frequency		
Weekday	<i>(as of 10/1/2017)</i>	
AM/Midday/PM Peak	*30 min/60 min	Same
Evening	120 min	60 min
Saturday		
AM/Midday/PM Peak	*30 min/60 min	Same
Evening	120 min	60 min
Sunday	-	-

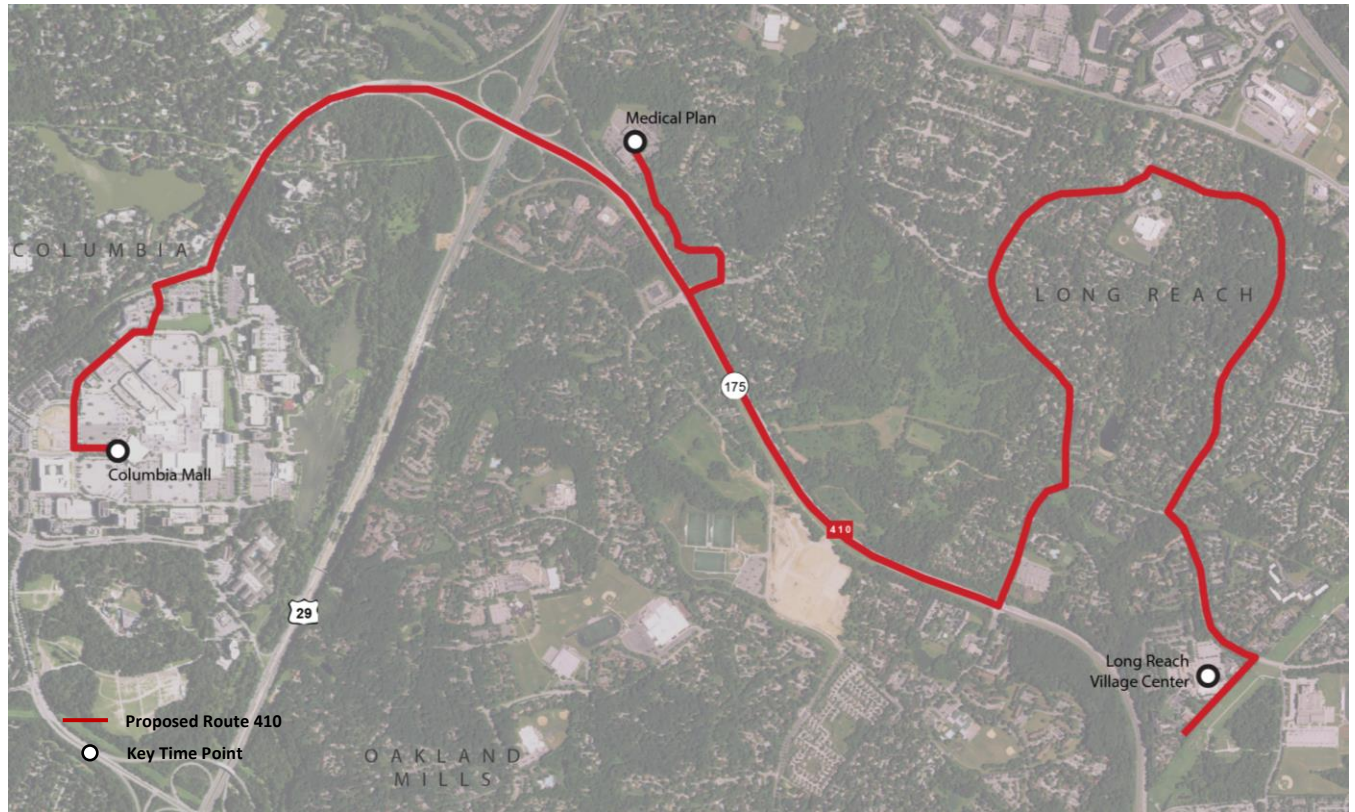
- Existing Route 409A (effective 10/1/2017)
- Existing Route 409B (effective 10/1/2017)
- Proposed Route 409B
- Proposed Route 501
- Key Time Point

* Frequency for segments where Route 409A and 409B overlap.

Route 410 – Columbia Mall to Long Reach Village Center (New)

Service Proposal

- Operate between Columbia Mall and Long Reach Village Center.
- Columbia Medical Plan will be served by the route.
- Pick up portions of existing routes.

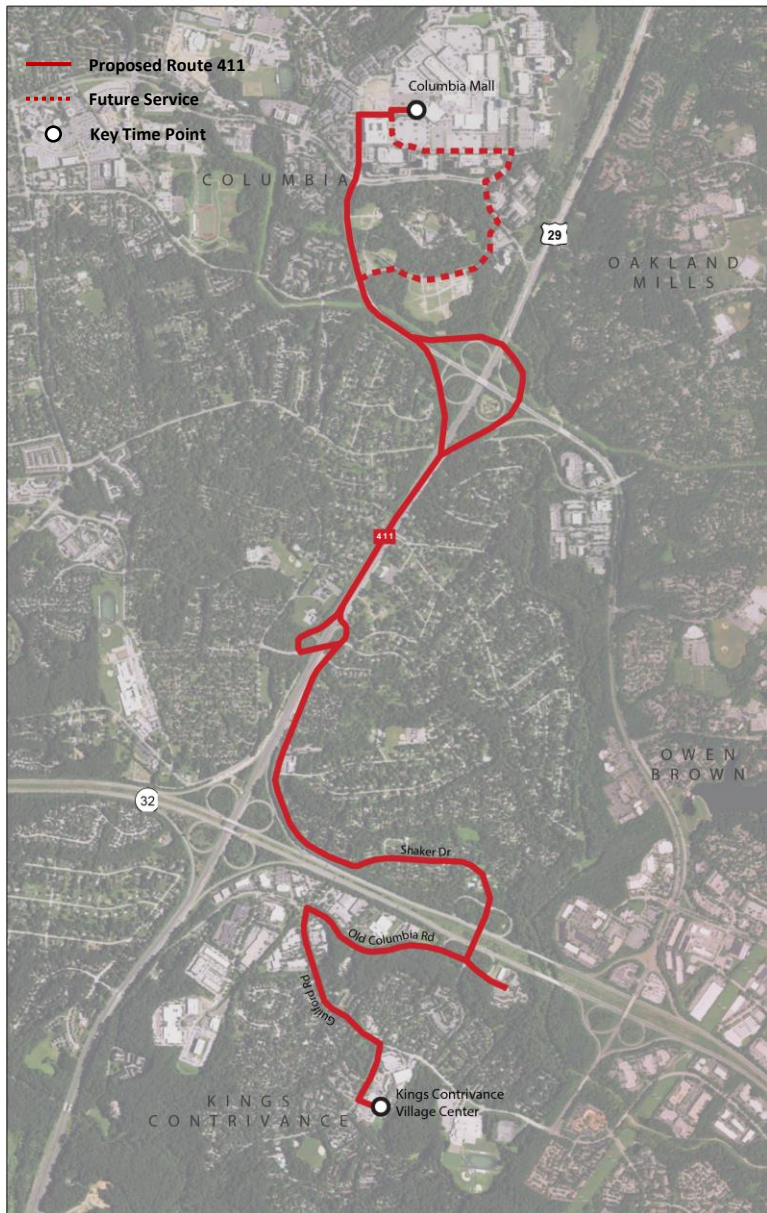


Proposed	
Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 6:00 pm
Saturday	8:00 am - 6:00 pm
Sunday	-
Frequency	
Weekday	60 min
Saturday	60 min
Sunday	-

Route 411 – Columbia Mall to Kings Contrivance (New)

Service Proposal

- Serve Kings Contrivance Village Center in addition to the 407.
- Alignment of the route will be adjusted as the Downtown Columbia-Crescent neighborhood is developed.



		Proposed
Service Days & Hours		
Days		M - Sat
Hours		
	Weekdays	6:00 am - 6:00 pm
	Saturday	8:00 am - 6:00 pm
	Sunday	-
Frequency of Service		
	Weekday	60 min
	Saturday	120 min
	Sunday	-

Route 412 – Columbia Mall to Clarksville (Expansion)

Service Proposal

- Provide service to Clarksville.
- Major locations served along the route will be Columbia Mall, Howard County Board of Education, and River Hill Village Center.

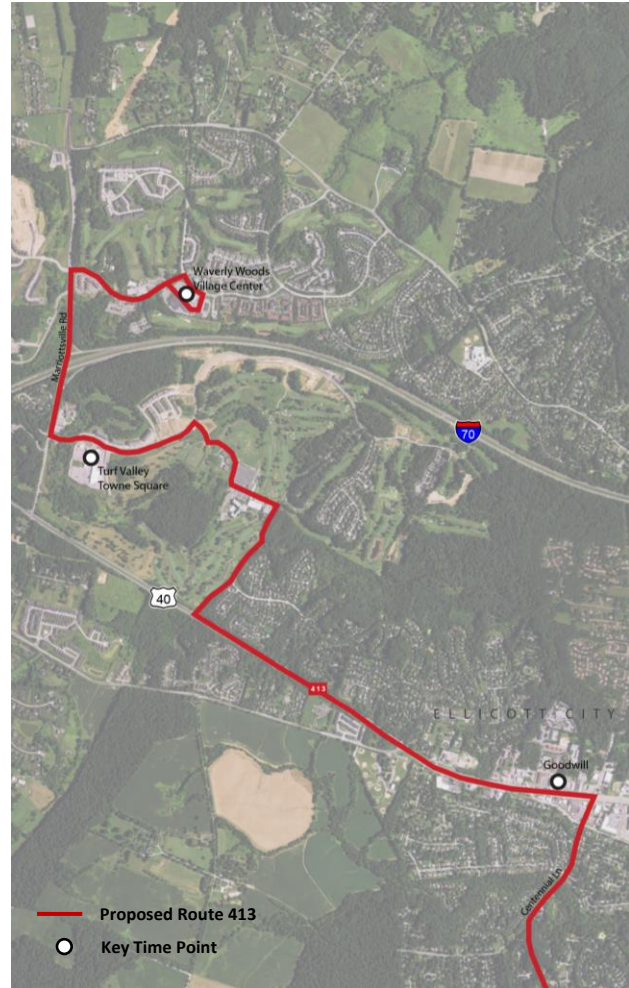
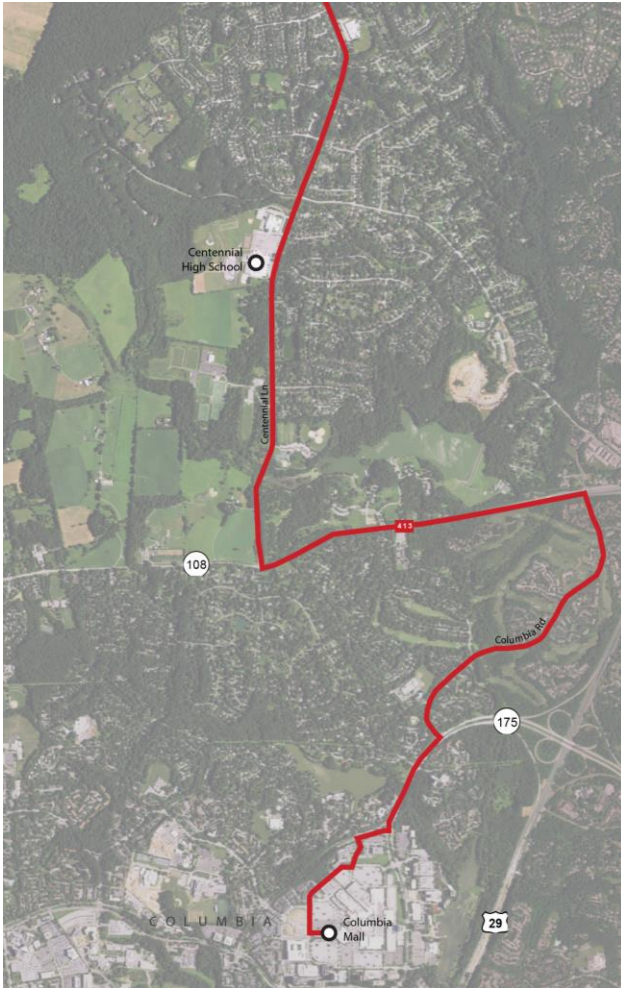


		Proposed
Days & Hours		
Days		M - Sat
Hours		
Weekdays		6:00 am - 6:00 pm
Saturday		8:00 am - 6:00 pm
Sunday		-
Frequency		
Weekday		60 min
Saturday		60 min
Sunday		-

Route 413 – Columbia Mall to Turf Valley/Waverly Woods (Expansion)

Service Proposal

- Serve the Turf Valley Village Center, Waverly Woods Village Center, US 40 (including Goodwill) and Centennial High School.

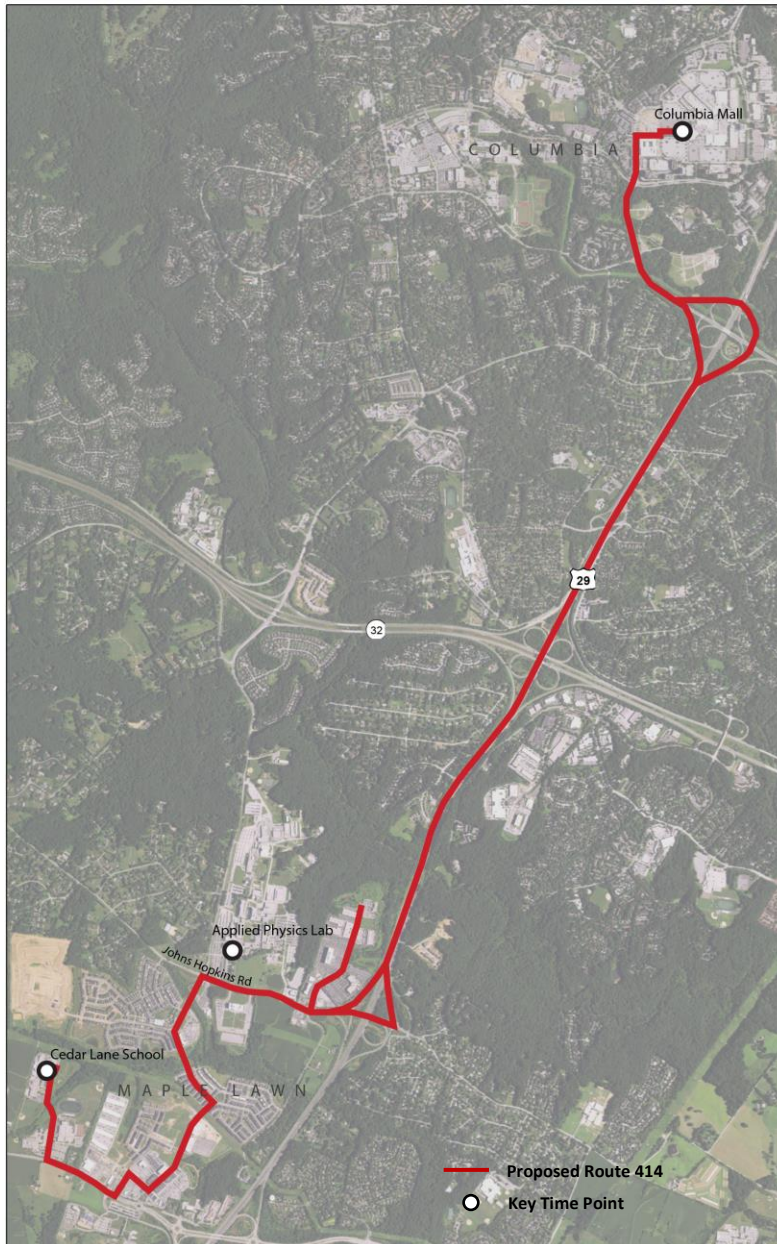


Proposed	
Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 7:20 pm
Saturday	7:30 am - 7:25 pm
Sunday	-
Frequency	
Weekday	90 min
Saturday	90 min
Sunday	-

Route 414 – Columbia Mall to Cedar Lane School via Maple Lawn (Expansion)

Service Proposal

- Provide service to the Maple Lawn area with major stops at Advance Physics Lab (APL), Maple Lawn Village Center, and Cedar Lane School.



Proposed	
Service Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 6:00 pm
Saturday	8:00 am –6:00 pm
Sunday	-
Frequency of Service	
Weekday	60 min
Saturday	60 min
Sunday	-

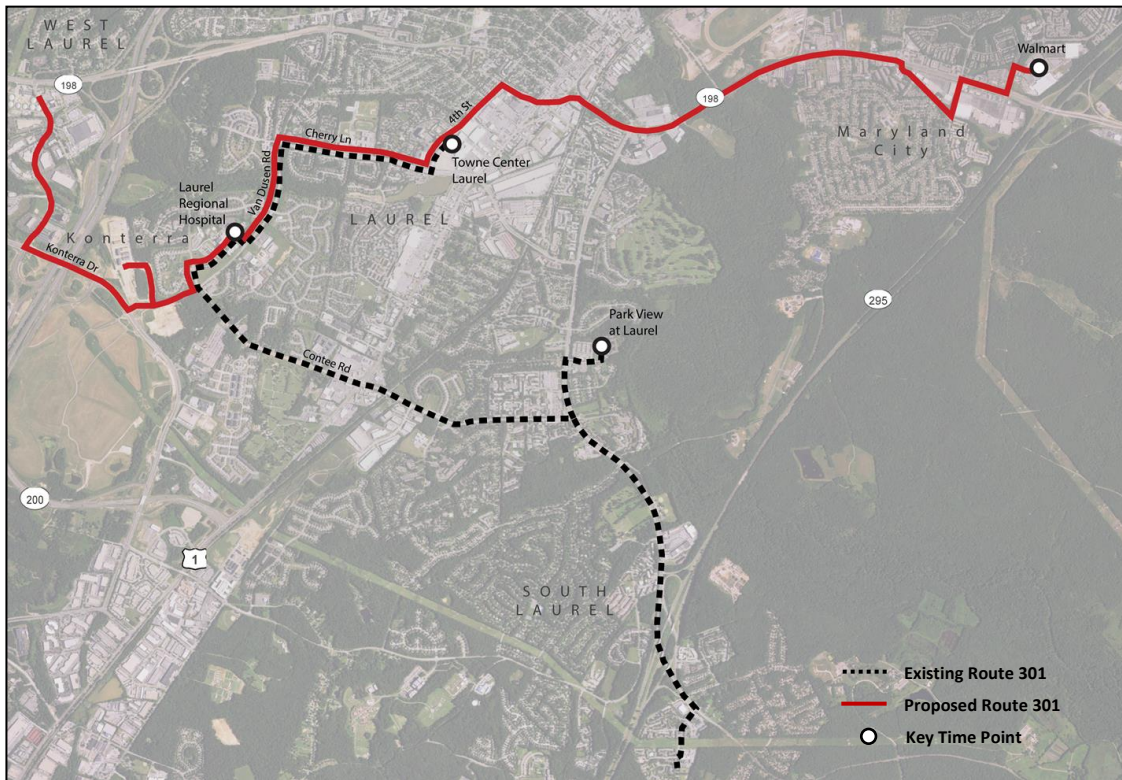
PRINCE GEORGE’S COUNTY/CITY OF LAUREL

This section describes the proposed service alternatives for the two routes in the City of Laurel. The two proposed service alternatives are changes in the existing routing to serve the new community of Konterra.

Route 301 – Konterra to Maryland City via Towne Center Laurel

Service Proposal

- Realign existing route to extend to serve Konterra and West Laurel on the west side, and Maryland City and Walmart on the east side.
- South Laurel would no longer be served by the route.

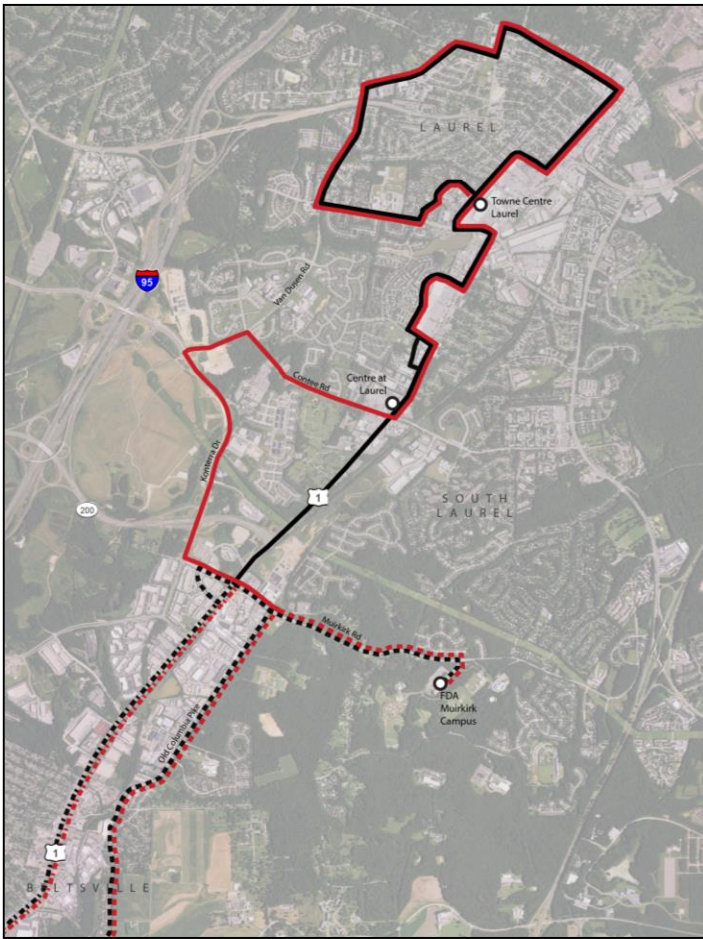


	Existing	Proposed
Service Days & Hours		
Days	M - Sat	Same
Hours		
Weekday	6:30 am - 7:20 pm	Same
Saturday	9:25 am - 7:20 pm	Same
Sunday	-	-
Frequency of Service		
Weekday	60 min	Same
Saturday	60 min	Same
Sunday	-	-

Route 302 – Towne Centre Laurel to College Park Metro Station

Service Proposal

- Extended to serve Konterra.
- Operate along Cherrywood Lane on weekdays and weekends.
- Greenbelt Metro Station will be served on weekends only.



	Existing	Proposed
Service Days & Hours		
Days	M - Sun	Same
Hours		
Weekday	6:00 am - 9:15 pm	Same
Saturday	9:00 am - 7:15 pm	Same
Sunday	10:00 am - 6:50 pm	Same
Frequency of Service		
Weekday	60 min	Same
Saturday	60 min	Same
Sunday	60 min	Same

- Existing Route 302 - Weekday Only
- Existing Route 302 - Weekday and Saturday
- · - Existing Route 302 - Weekend Only
- Proposed Route 302 – Weekday Only
- Proposed Route 302 - Weekday and Saturday
- · - Proposed Route 302 - Weekend Only
- Key Time Point

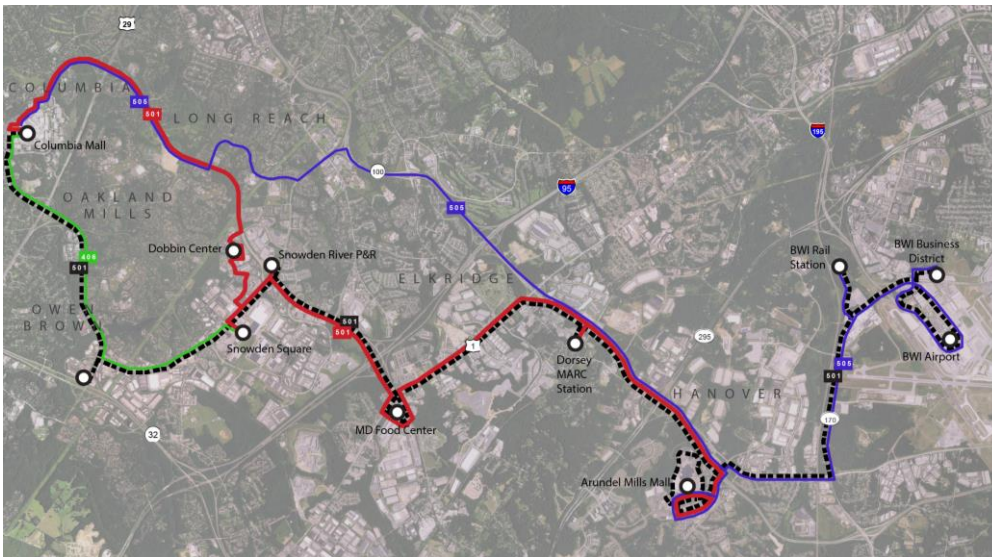
REGIONAL SERVICE

This section describes the six proposed regional service alternatives. Three of the six proposed regional service alternatives are changes in the current routing and/or service characteristics such as span and frequency of service. As part of the restructuring of the existing regional routes, one new route was developed to supplement changes in the existing regional routes. One expansion regional route is also proposed to connect with MTA local service in Catonsville.

Route 501 – Columbia to Arundel Mills Mall

Service Proposal

- Expand and increase frequency of service to Arundel Mills (as compared to service levels effective 10/1/17).
- No longer serve Owen Brown Village Center or BWI Airport.
- Owen Brown Village Center will be served by Route 407; BWI airport will be served by Route 505.



	Existing	Proposed
Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	5:28 am - 10:53 pm	6:00 am - 11:00 pm
Saturday	7:03 am - 10:53 pm	6:00 am - 10:00 pm
Sunday	-	8:00 am - 8:00 pm
Frequency		
Weekday		
AM Peak/Midday	60 min	30 min/60 min*
PM Peak/Evening	60 min	60 min/120 min*
Saturday		
AM Peak	60 min	60 min
Midday	60 min	30 min/60 min*
PM Peak/Evening	120 min	60 min/120 min*
Sunday	120 min	60 min/120 min*

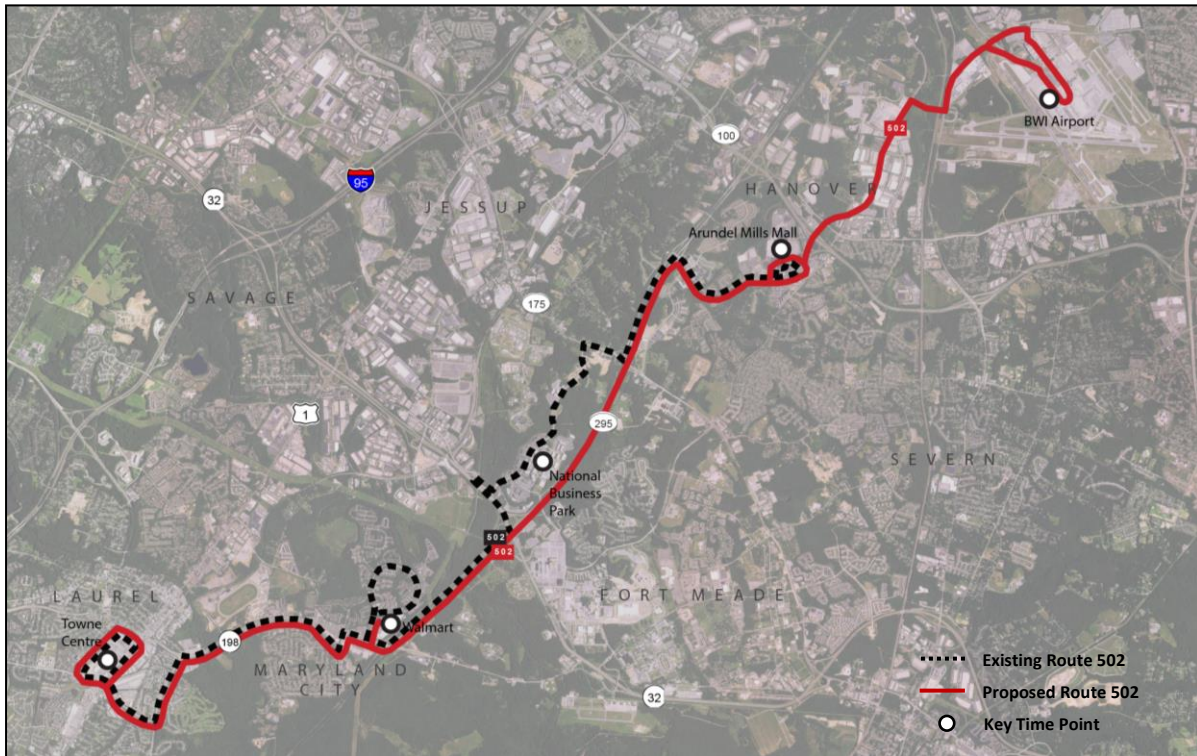
- Existing Route 501
- Proposed Route 501
- Proposed Route 406
- Proposed Route 505
- Key Time Point

* Service east of Snowden Square on Route 501.

Route 502 – Towne Centre Laurel to BWI Airport

Service Proposal

- Extended to serve BWI Airport
- No longer serve National Business Park.
- Service through Russett Green modified.

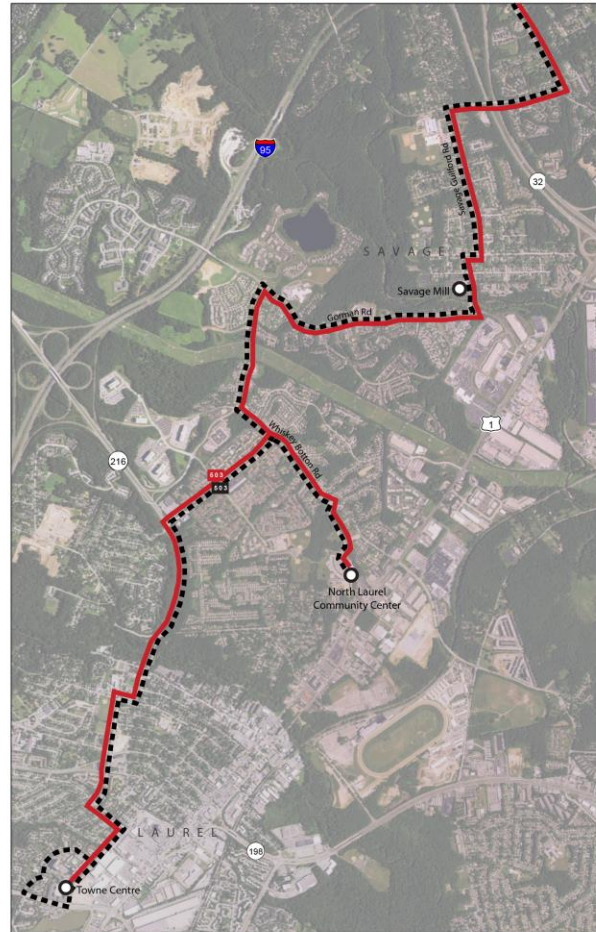
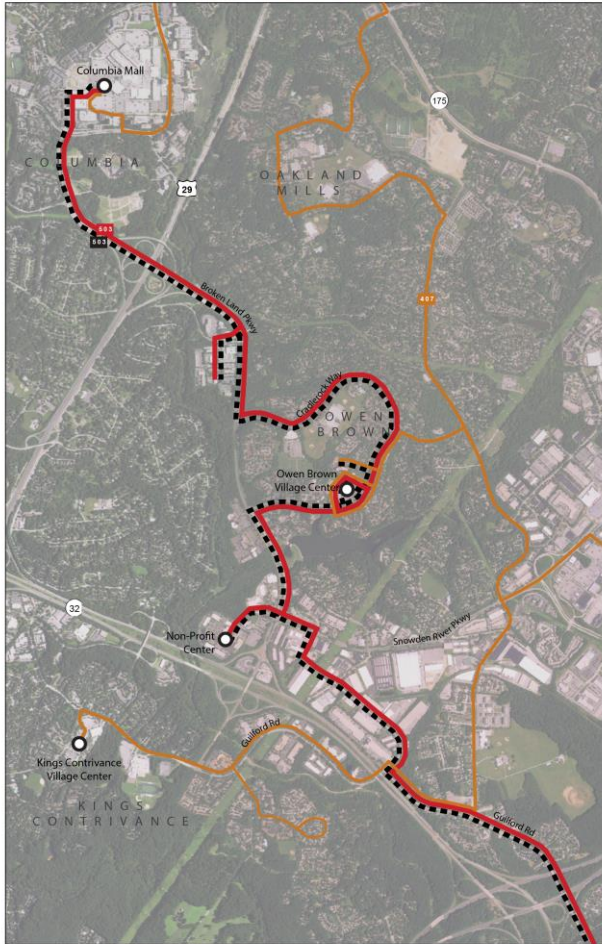


	Existing	Proposed
Days & Hours		
Days	M - Sun	Same
Hours		
Weekdays	6:00 am - 10:45 pm	Same
Saturday	9:00 am - 10:30 pm	Same
Sunday	10:00 am - 7:50 pm	Same
Frequency		
Weekday	60 min	Same
Saturday	120 min	Same
Sunday	180 min	Same

Route 503 – Columbia Mall to Towne Centre Laurel

Service Proposal

- No longer serve Park View at Columbia in Owen Brown due to lack of ridership.
- An alternative concept with the same coverage would split the route, with the two parts connecting at North Laurel Community Center. A through trip from Laurel to Columbia would require a transfer.



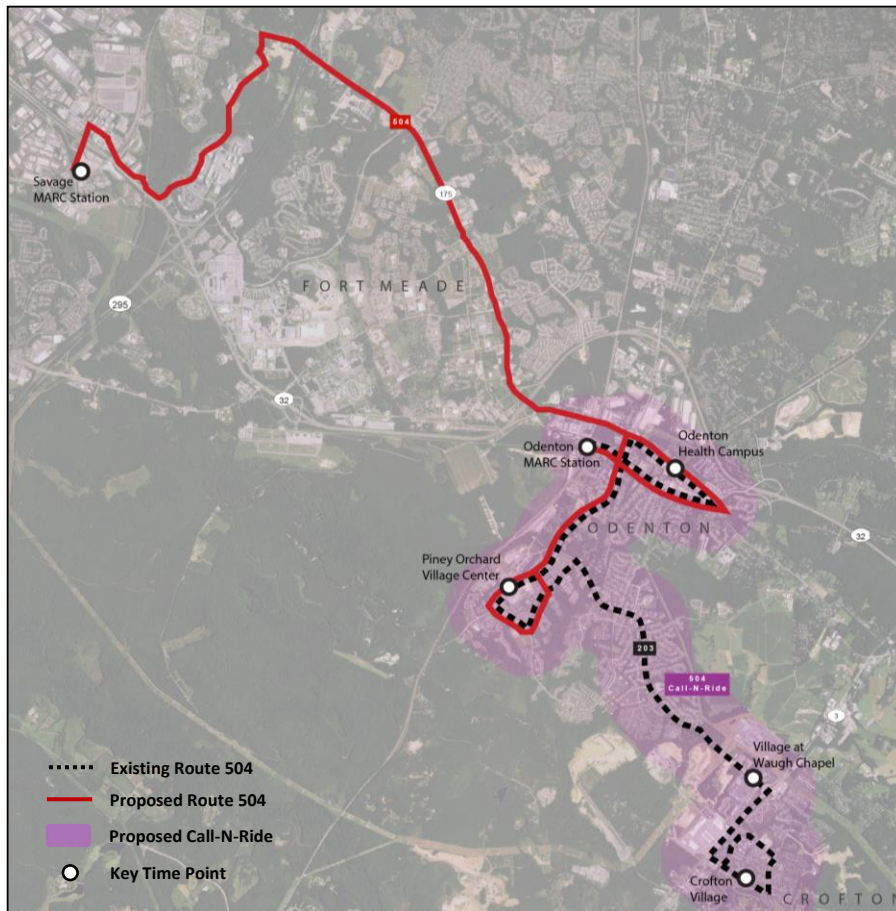
	Existing	Proposed
Days & Hours		
Days	M - Sat	Same
Hours		
Weekdays	5:30 am - 9:15 pm	Same
Saturday	8:30 am - 8:15 pm	Same
Sunday	-	-
Frequency		
Weekday	60 min	Same
Saturday	60 min	Same
Sunday	-	-

- Existing Route 503
- Proposed Route 503
- Proposed Route 407
- Key Time Point

Route 504 – Savage MARC to Crofton Village

Service Proposal

- Service was implemented on October 1, 2017 during the course of the study.
- Midday service between Odenton MARC, Piney Orchard Village Center, and Crofton Village will be served by a Call-N-Ride service.
- Fixed route service will operate during the AM and PM peak between Savage MARC, Odenton MARC, Odenton Health Campus, and Piney Orchard Village Center.

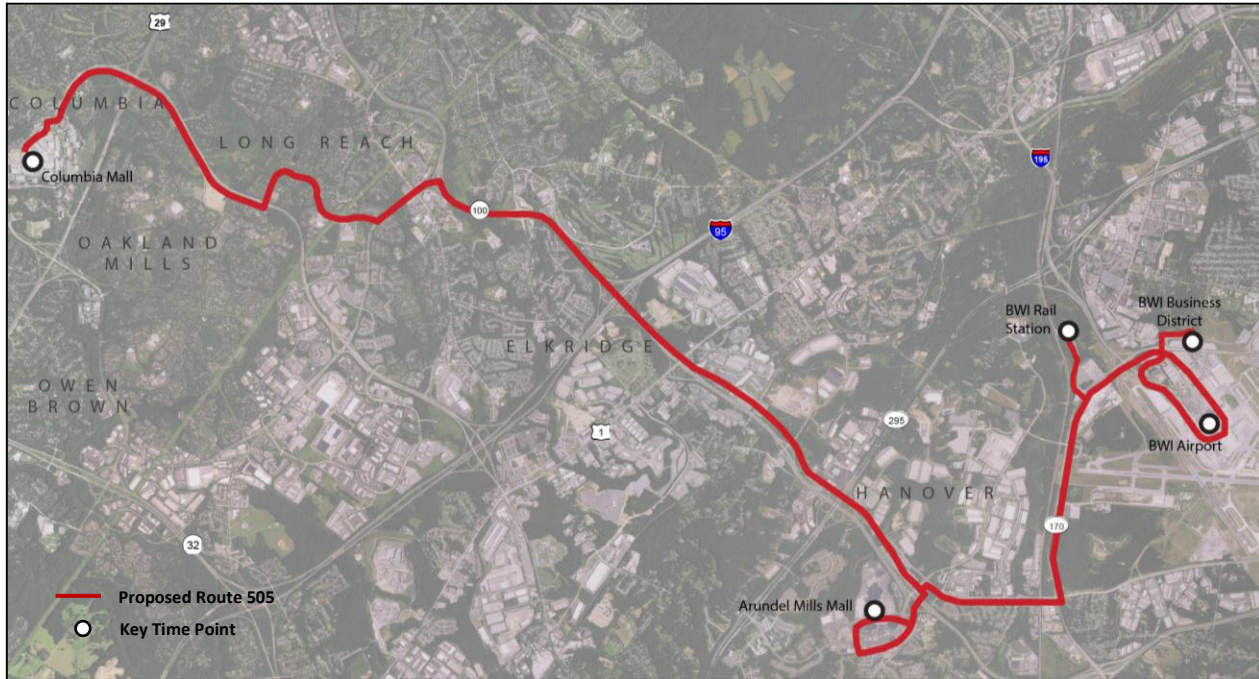


	Existing	Proposed
Service Days & Hours		
Days	M - F	Same
Hours		
Route 504	-	5:30 am - 10:30 am/ 3:00 pm - 6:30 pm
Route 504 Call-N-Ride (formerly Route 203M)	7:15 am - 7:30 pm	10:30 am - 3:00 pm
Frequency of Service		
Route 504	60 min	30 min
Route 504 Call-N-Ride (formerly Route 203M)	-	Call-N-Ride

Route 505 – Columbia Mall to BWI Airport (New)

Service Proposal

- Provide a more direct connection to BWI Airport.
- Serve Arundel Mills Mall.

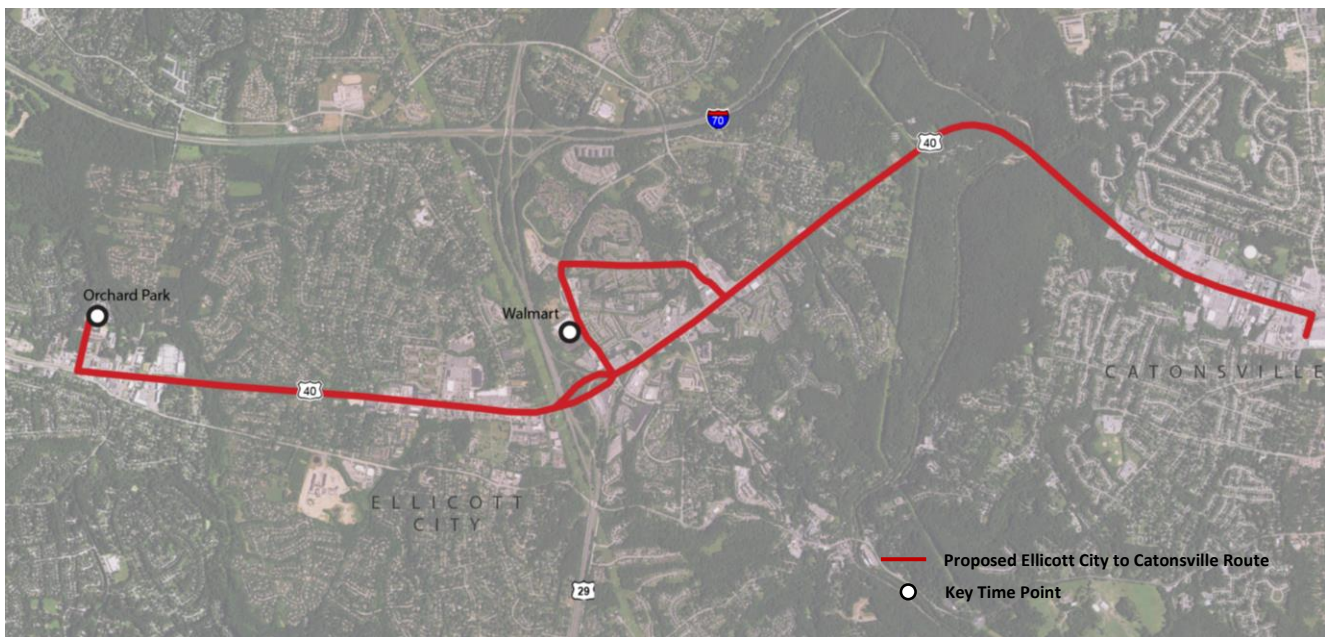


		Proposed
Days & Hours		
Days		M - Sat
Hours		
Weekdays		5:30 am - 11:00 pm
Saturday		5:30 am - 11:00 pm
Sunday		7:00 am - 9:00 pm
Frequency		
Weekday		60 min
Saturday		60 min
Sunday		60 min

Regional Route – Ellicott City to Catonsville (New)

Service Proposal

- New route that would connect Ellicott City with MTA routes on Rolling Road in Catonsville.
- Major destinations served on the route would include Orchard Park Apartments, Goodwill, Ellicott City Walmart, Town and Country Boulevard, and Normandy Shopping Center.
- Because service goes beyond the RTA jurisdictions’ boundaries, service would need support from MTA and Baltimore County.



Proposed	
Days & Hours	
Days	M - Sat
Hours	
Weekdays	6:00 am - 7:30: pm
Saturday	6:00 am - 7:30 pm
Sunday	-
Frequency	
Weekday	60 min
Saturday	60 min
Sunday	-

GENERAL PARATRANSIT OPTIONS

RTA currently operates General Paratransit (GPT) in Howard County. GPT is available to seniors and persons with a disability who live outside of an existing transit route. As documented in Chapter 4, the demand for GPT is increasing and the cost of the mobility service (ADA and GPT) is high with an average per trip delivery cost of \$51 in FY 2016, versus \$7.88 for fixed route trips. For FY 2018, Howard County assigns approximately 39% of its share of the RTA budget to mobility service (\$4.7 million of \$11.5 million) where mobility provides only approximately 5% of all overall trips. Of the 39% budget share, 15% is for ADA and 24% is for GPT.

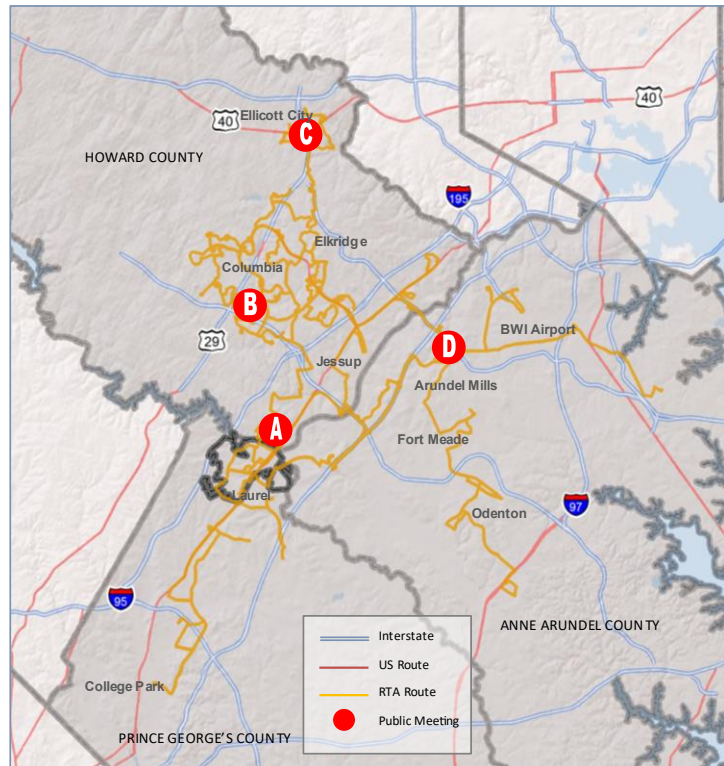
In order to ensure the viability of service and that it continues to be available for riders that need and depend on it most, a number of options are provided:

1. **Incentivize paratransit riders to use fixed route service:**
 - Free fixed route fares for seniors/disabled persons.
 - Better fixed routes
 - Better bus stop facilities
 - Flexible first-mile/last-mile local services
2. **Increase fares in Howard County, implement a fare in Anne Arundel County.**
3. **Raise senior age (from 60 to 65 in Howard County, and from 55 in Anne Arundel County).**
4. **Rider education — provide travel training in how to use the fixed-route system.**
5. **Service adjustments:**
 - Number of Trips – e.g., limit number of individual trips per month (currently one round-trip per day)
 - Redirect some trip types if fixed route is available
 - Origins and destinations, e.g., limit service in western Howard County, southern Anne Arundel
 - Hours: change hours of service (for example, in Howard County reduce GPT service hours from the current 8 a.m. to 5 p.m. to 9 a.m. to 4 p.m.—potentially affecting employment trips)
6. **Use taxi vouchers/subsidies in lieu of providing RTA trips.** Use on-demand /taxis for ridesharing.
7. **Improve service productivity (RTA operation).**

SUMMARY

The service and policy alternatives described in this Chapter were presented to the public at four public meetings. These public meetings were held at the following locations:

- A. North Laurel Community Center
August 21, 2017 –
6:30 pm to 8:30 pm
- B. Non-Profit Center of Howard County
September 13, 2017 –
6:30 pm to 8:30 pm
- C. George Howard Building
September 18, 2017 –
6:30 pm to 8:30 pm
- D. Anne Arundel Community College
September 12, 2017 –
6:30 pm to 8:30 pm



The alternatives were presented to the following Howard County boards and commissions:

- Multimodal Transportation Board
- Planning Board
- Commission on Aging
- Commission on Disability Issues
- Environmental Sustainability Board

Additional, input was provided by Anne Arundel, Howard, and Prince George's Counties/City of Laurel staff, the MTA and RTA. Based on input from the public, staff, MTA and RTA the service alternatives were revised.

The Transit Plan in Chapter 6 presents the recommended service alternatives based on feedback that was received. While some service alternatives remained unchanged in the plan, others had some modifications.

Chapter 6

Transit Plan

INTRODUCTION TO THE TRANSIT PLAN

This chapter presents the overall plan for locally-provided transit in the central Maryland region, including the area served by the RTA. It is divided into sections addressing the Operations Plan, Capital Plan (including the vehicle fleet and other capital needs), and Organizational Plan.

Operations Plan

Following the development of the service alternatives described in the previous chapter, a series of public meetings were held in the region to solicit public input on the proposals. The proposed routes were posted on the project website, accessible through the RTA website and from the individual county websites. Based on feedback at the meetings, through web response, and through county staff, the following changes were recommended in the proposed alternatives.

Howard County

- Route 401 - No change from proposed alternative
- Route 402 - No change from proposed alternative
- Route 403 - No change from proposed alternative
- Route 404 - No change from proposed alternative
- Route 405 - No change from proposed alternative
- Route 406 - No change from proposed alternative
- Route 407 - No change from proposed alternative
- Route 408 - No change from proposed alternative
- Route 409 A & B - No change from proposed alternative
- Route 410 - No change from proposed alternative
- Route 411 - Recommended change in wording to reflect ongoing development rather than completion of development
- Route 412 - No change from proposed alternative
- Route 413 - Revise route name to include “Turf Valley-Waverly Woods”
- Route 414 - Revise route name to include “via Applied Physics Laboratory (APL)-Maple Lawn”. Consider revising alternative to include two buses to serve an extension of the route to Laurel MARC station and Towne Centre. Eliminate service on Cedar Lane.

- Route 501 - Revise title of route to “Columbia to Arundel Mills” to reflect future role in which 505 provides a more express trip from Columbia to BWI Airport. Change text to include relationship in the plan between the 501 and 505.
- Route 503 - No change from proposed alternative
- Route 504 – Add weekend service for the Call-N-Ride to residents along the corridor with services and shopping in Odenton, Piney Orchard, Waugh Chapel, and Crofton and MARC service in Odenton.
- 505 - No change from proposed alternative
- Add concept map for potential service on U.S.40 to connection with MTA at Catonsville (potential recommendation for MTA service)

Mobility Services

This TDP does not make specific recommendations regarding mobility services. As documented in Chapters 4 and 5 the cost of paratransit services is unsustainable in the long term especially as demand is projected to increase. Chapter 5 includes several options designed to ensure that ADA and GPT services continue to be available for riders that need it most.

While these options were presented at the public meeting held on the TDP, there was insufficient time for the detailed engagement with the public that is necessary to fully assess the pros and cons of each of the options, and make more specific recommendations. A prerequisite for incentivizing paratransit riders to use fixed route service is having better fixed route service. Therefore, Howard County proposes to begin to implement improvements to the fixed route service while it engages with stakeholders on the paratransit service options.

Anne Arundel

Input from the meeting held at Arundel Mills and input from county staff included the following suggested revisions in the alternatives:

- Route 201 - Add later evening service to match last trips on the MTA light rail service (12:30 a.m.)
- Route 202 - Consider revising route to go from Meade Village east on MD 174, left on New Disney, right on Carriage, left on Severn, and then right on Ridge Road resuming the current routing. Check on potential for eliminating any overlap in coverage with the recently implemented 504 to avoid duplication.
- Anne Arundel Community College to Fort Meade - Consider adding extension to National Business Park, revising to reduce mileage driving around perimeter of Fort Meade.

- Crofton-Annapolis Mall - Consider revision if Crofton Park and Ride closes-Waugh Chapel to Annapolis. Evaluate if any MTA service offers an option of traveling from Crofton to Annapolis (there is no service making this link)
- Riviera Beach Call N Ride - No change from proposed alternative
- Bowie Town Center to Cromwell LRS - Low priority, but include in plan for out years
- Crofton Call N Ride - Add a loop (triangle) routing to provide coverage along MD 424 and 450
- Gold Route - Consider breaking route into two routes connecting at Annapolis Town Center, or making Edgewater end into a Call N Ride zone, or doubling the frequency to hourly service
- Patapsco Call N Rides - No change from proposed alternative
- Glen Burnie Call N Rides - No change from proposed alternative
- Glen Burnie District Court to Patapsco LRS - Add Sunday service
- Annapolis to BWI/Arundel Mills - Evaluate proposed frequency
- Consider public transit options for South County

Prince George's County

County staff input suggested the following revisions:

- Route 301 – Maintain proposed service to Konterra and West Laurel but reinstate segment from Laurel Towne Centre to south Laurel instead of going to Russett Green/Maryland City. Russett Green/Maryland City to Laurel Towne Centre to be served by Route 502, avoiding duplication of service.
- Route 302 - No change from proposed alternative. However, the service may be reduced by 50% in the near future.
- Route 502 - Will provide service on Route 198 to Baltimore-Washington Parkway, service into Fort Meade, and continuing past Arundel Mills to BWI Airport as proposed. Service into Fort Meade will be contingent on the transit bus being able to access the base with general public riders onboard.

These comments and proposed revisions were evaluated and the resulting changes have been incorporated into the individual route descriptions in the following section.

Planned Routes

The service plan includes a map of each proposed route showing the existing route and proposed changes, a Service Description, a graphic depicting the Service Days and Service Span (hours of service for each route) , a table showing Service Frequency by period and day of the week, and Number of Peak Vehicles.

This is followed by a Service Characteristics table displaying the number of buses required by time of day, estimated daily revenue hours, an adjustment factor for deadhead and report and clear time, number of annual days of service, estimated annual service hours, projected hourly costs, and estimated operating costs for the route as proposed in terms of frequency, service hours and days of service.

Following the description of the individual routes are summary tables that present the plan county by county, reflecting preferred phasing of implementation. A summary for the region is also included. It is assumed that the current RTA MOU cost allocation methodology would apply for regional services, with the exact allocation of costs based on revenue hours by jurisdiction. The cost allocation is not included in this plan, as these concepts may well be modified in response to budget constraints or public input prior to implementation.

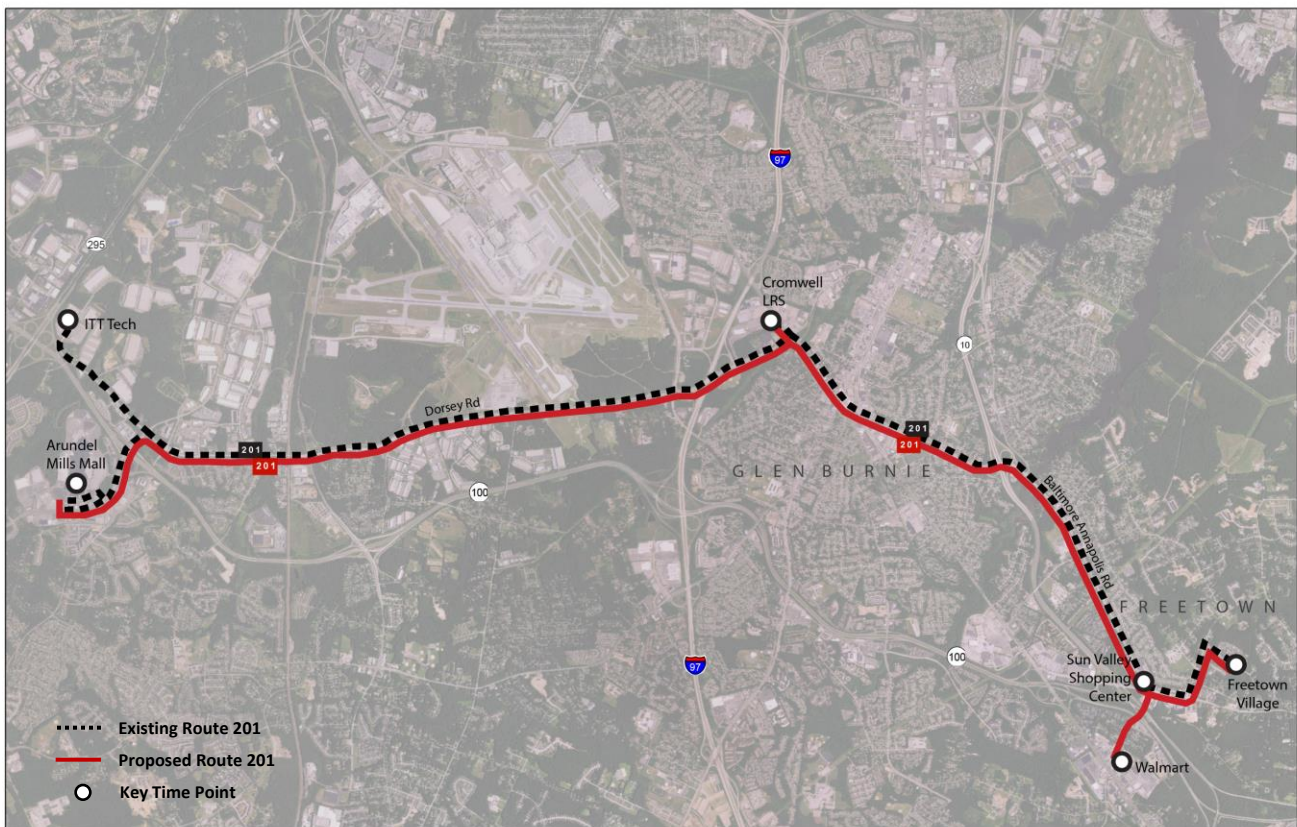
The individual routes are presented in numerical sequence from the 200 series through the 500 series.

ANNE ARUNDEL COUNTY

Route 201 – Arundel Mills Mall to Freetown Village

Service Description

- Service to ITT will be discontinued.
- Service to be extended to the Walmart in Freetown.
- Ride time from Arundel Mills to Freetown Village will be approximately 40 minutes.



Service Days



Service Span

AM													PM																						
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
													Monday - Friday																						
													Saturday																						
													Sunday																						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 30 minutes
Midday & Evening	every 45 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 90 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 90 minutes

Number of Peak Vehicles



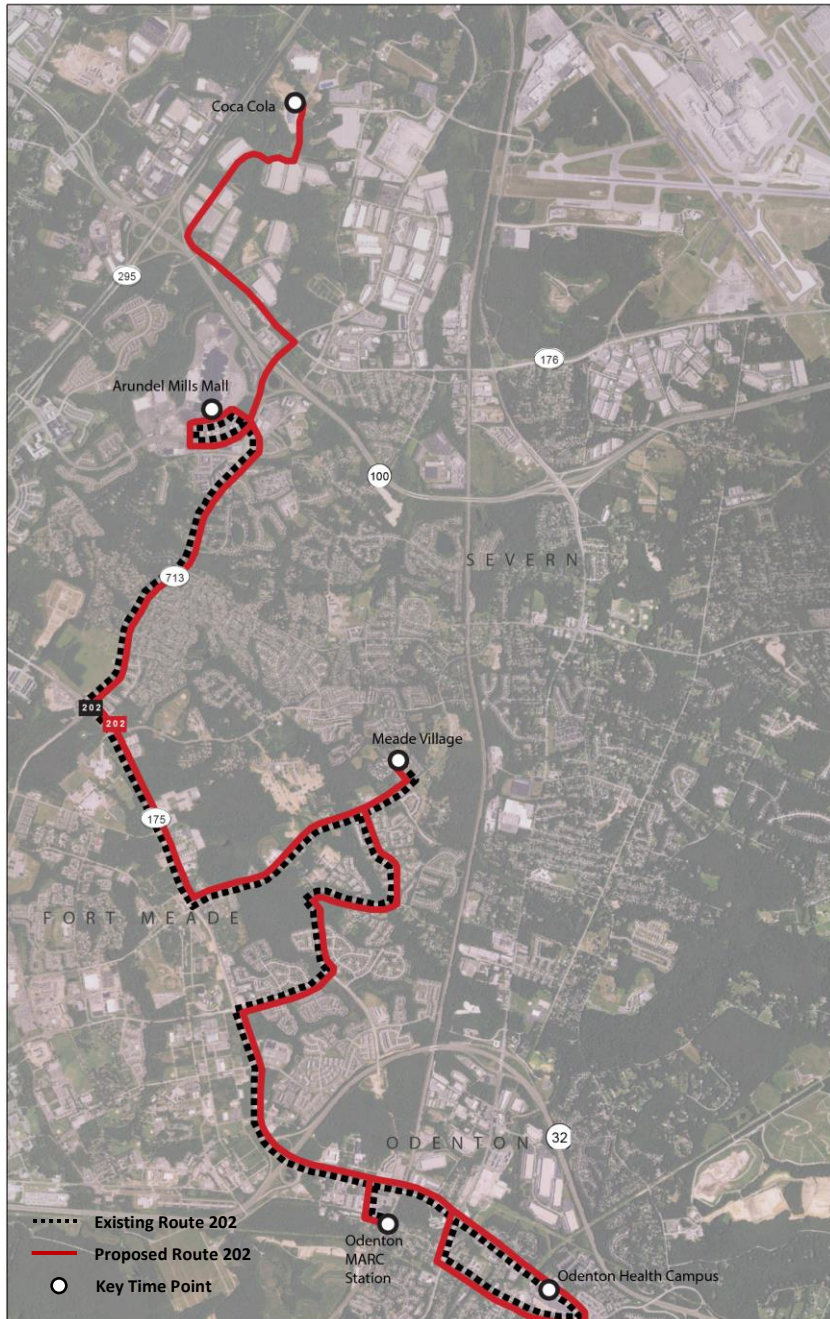
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Arundel Mills Mall- Freetown Village	Cromwell LRS, Walmart	3	6:00	0:30	18.5	2.2	20.72	255	12,852
Saturday									
Arundel Mills Mall- Freetown Village	Cromwell LRS, Walmart	2	8:30	0:30	15.0	1.8	16.80	52	1,485
Sunday									
Arundel Mills Mall- Freetown Village	Cromwell LRS, Walmart	2	8:30	19:30	10.0	1.2	11.20	55	1,140
Route 201 Total									15,477

Route 202 – Odenton to Coca Cola

Service Description

- Service to be extended to Coca Cola facility.
- Odenton MARC station will be served on every day of the week (Monday-Sunday).
- Ride time between Odenton MARC station and the Coca Cola facility will be approximately 50 minutes.



Service Days



Service Span

AM														PM																									
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 35 minutes
Midday & Evening	every 45 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 60 minutes

Number of Peak Vehicles



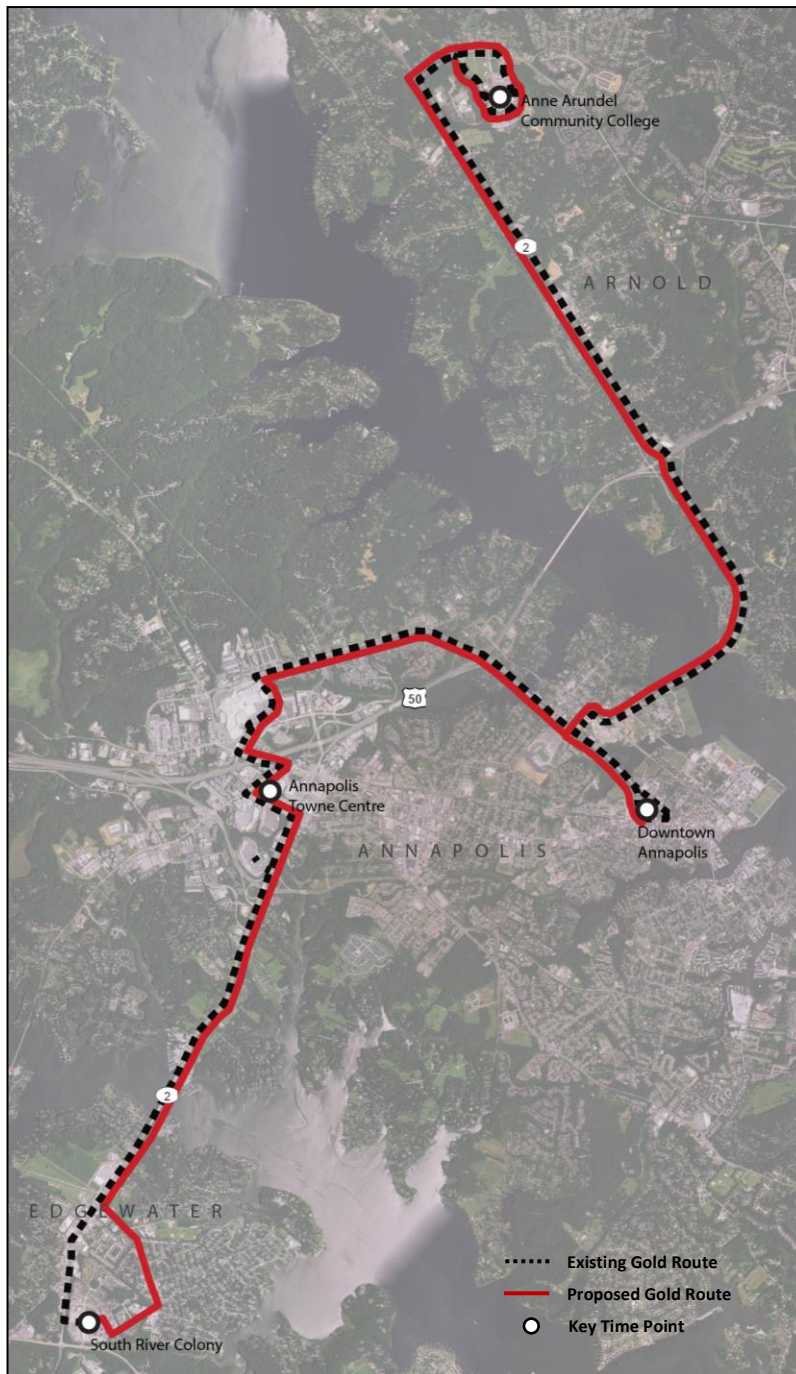
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Odenton - Coca Cola	Odenton MARC, Fort Mead, Arundel Mills	4	6:15	23:15	17.00	2.04	19.04	255	17,493
Saturday									
Odenton - Coca Cola	Odenton MARC, Fort Mead, Arundel Mills	2	8:00	23:00	15	1.80	16.80	52	1,747
Sunday									
Odenton - Coca Cola	Odenton MARC, Fort Mead, Arundel Mills	2	9:00	21:45	12.75	1.53	14.28	55	1,571
Route 202 Total									20,811

Gold Route – Edgewater to Arnold/Anne Arundel Community College

Service Description

- Service in Edgewater is at South River Colony.
- Service is currently operated through a contract with Annapolis Transit.
- Ride time from AACC to South River Colony is approximately 50 minutes.



Service Days



Service Span

AM														PM																											
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 120 minutes
Evening	every 120 minutes

Number of Peak Vehicles



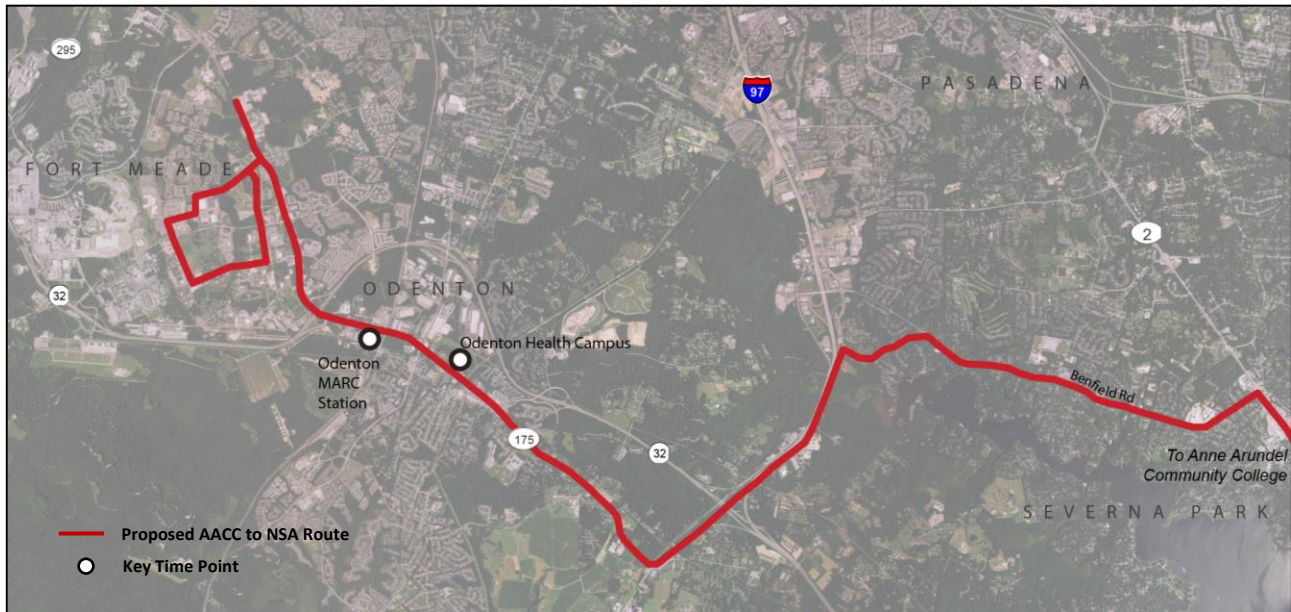
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Edgewater- Arnold/Anne Arundel Community College	Parole, Annapolis Mall, Church Circle	3	6:00	20:00	14	1.68	15.68	255	11,995
Saturday									
Edgewater- Arnold/Anne Arundel Community College	Parole, Annapolis Mall, Church Circle	3	6:00	20:00	14	1.68	15.68	52	2,446
Sunday									
Edgewater- Arnold/Anne Arundel Community College	Parole, Annapolis Mall, Church Circle	2	8:00	20:00	12	1.44	13.44	55	1,478
Gold Route Total									15,920

Anne Arundel Community College to Fort Meade/NSA

Service Description

- Connects with the Odenton Health Campus and Odenton MARC station.
- Ride time from AACC to Fort Meade is approximately 70 minutes.



Service Days



Service Span

AM											PM																											
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00			

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	-
Evening	-
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



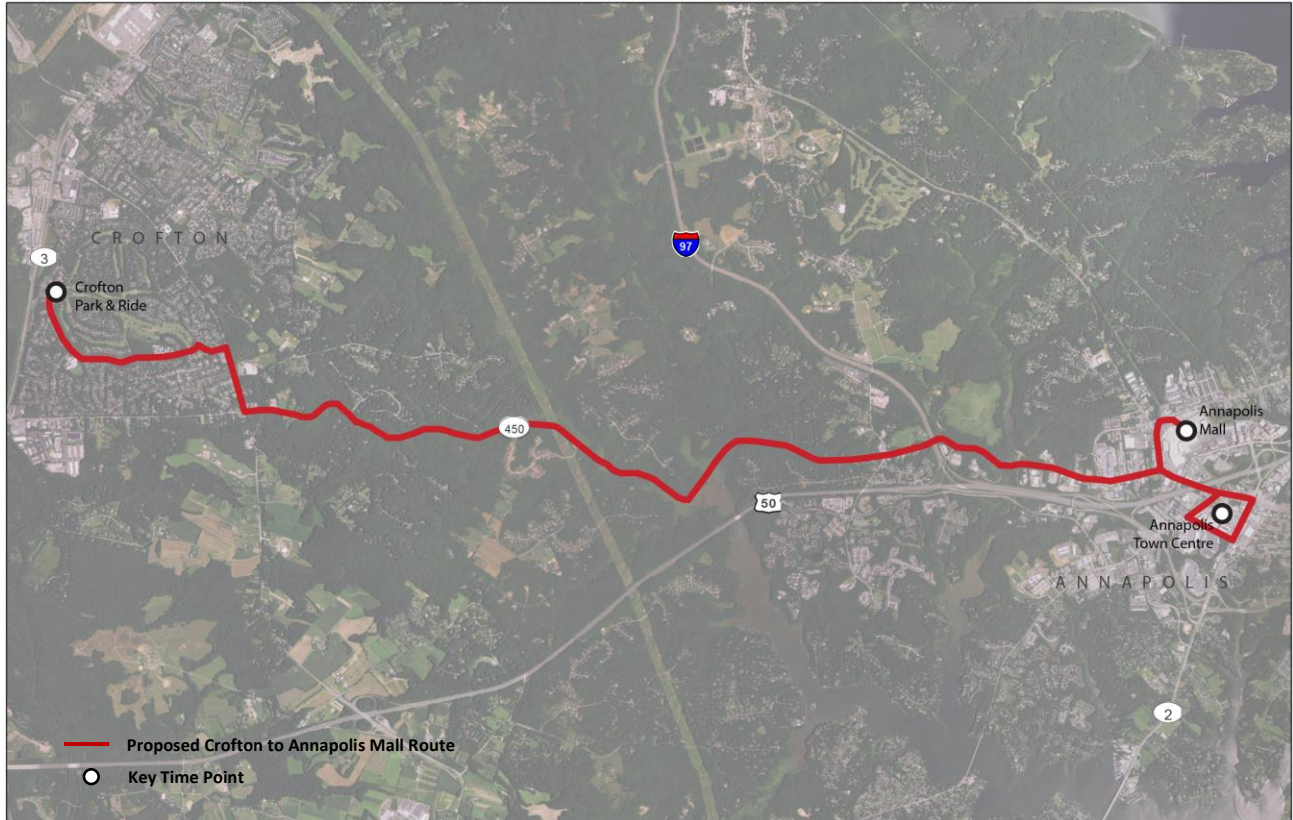
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Anne Arundel Community College- Fort Meade/NSA	Severn, Millersville, Odenton MARC	3	6:00	19:00	13	1.56	14.56	255	11,138
Anne Arundel Community College- Fort Meade/NSA Route Total									11,138

Crofton Park and Ride to Annapolis Town Center

Service Description

- Direct connection between Crofton and Annapolis.
- Ride time from Crofton to Annapolis Mall is approximately 50 minutes.



Service Days



Service Span

AM														PM																											
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Crofton Park and Ride- Annapolis Town Center	Annapolis Mall	4	6:00	19:00	13	1.56	14.56	255	10,853
Saturday									
Crofton Park and Ride- Annapolis Town Center	Annapolis Mall	2	8:00	19:00	11	1.32	12.32	52	1,281
Crofton Park and Ride to Annapolis Mall Route Total									12,134

Crofton Call N Ride

Service Description

- Deviations within the Call N Ride zone are provided upon request.
- Requests must be made in advance.



Service Days



Service Span

AM														PM																									
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 30 minutes
Midday	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



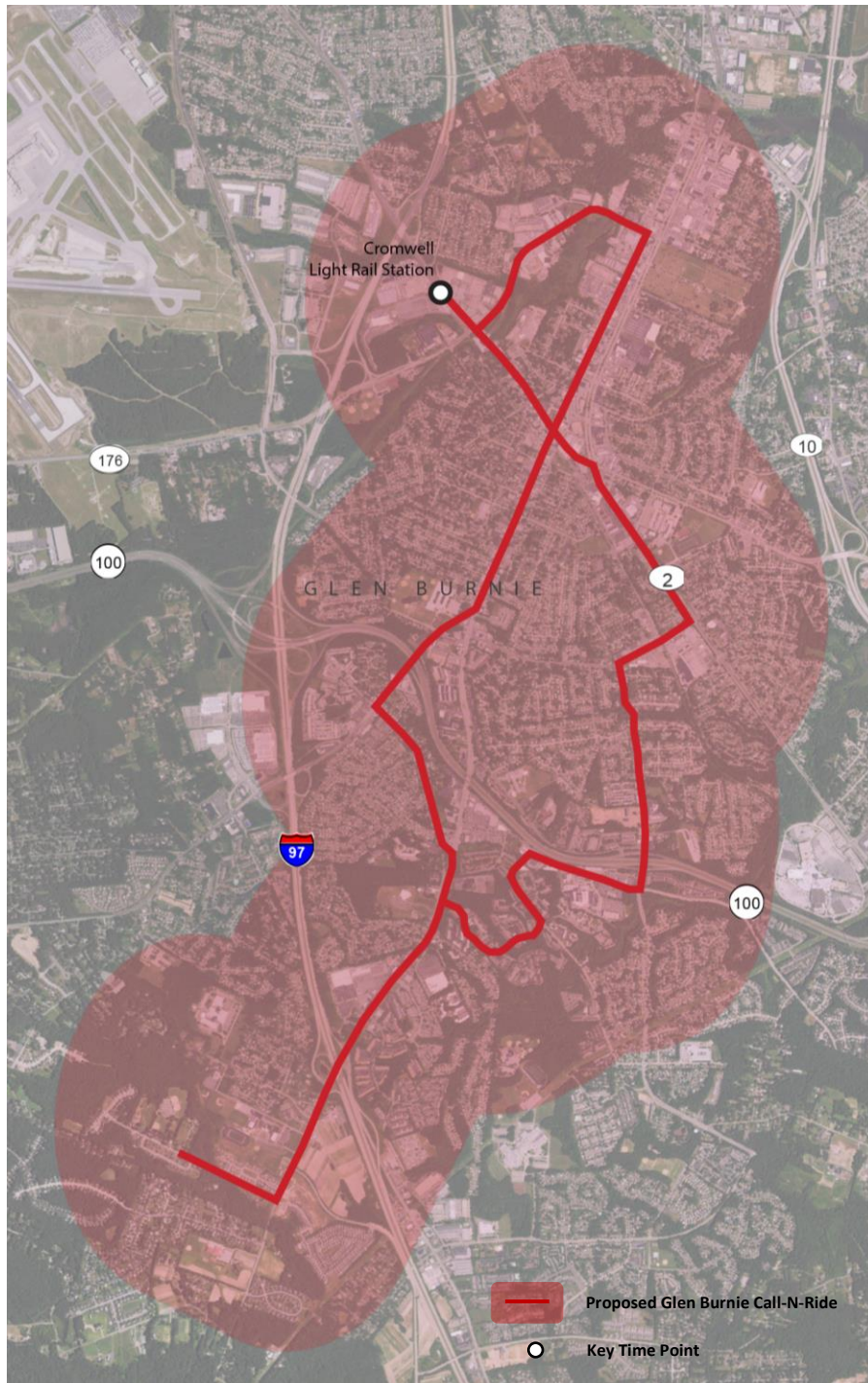
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Village at Waugh Chapel- Crofton Park and Ride	Crofton	2	6:00	19:00	13	1.56	14.56	255	7,426
Total Monday-Friday					13		14.56		7,426
Saturday									
Village at Waugh Chapel- Crofton Park and Ride	Crofton	2	8:00	19:00	11	1.32	12.32	52	1,281
Total Saturday					11		12.32		1,281
Crofton Call N'Ride Service Alternative Total									8,707

Glen Burnie to Cromwell LRS Call N Ride

Service Description

- Deviations within the Call N Ride zone are provided upon request.
- Requests must be made in advance.



Service Days



Service Span

AM														PM																							
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00		

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 45 minutes
Midday & Evening	every 45 minutes
Saturday	
Daytime	every 45 minutes
Evening	every 45 minutes
Sunday	
Daytime	every 45 minutes
Evening	every 45 minutes

Number of Peak Vehicles



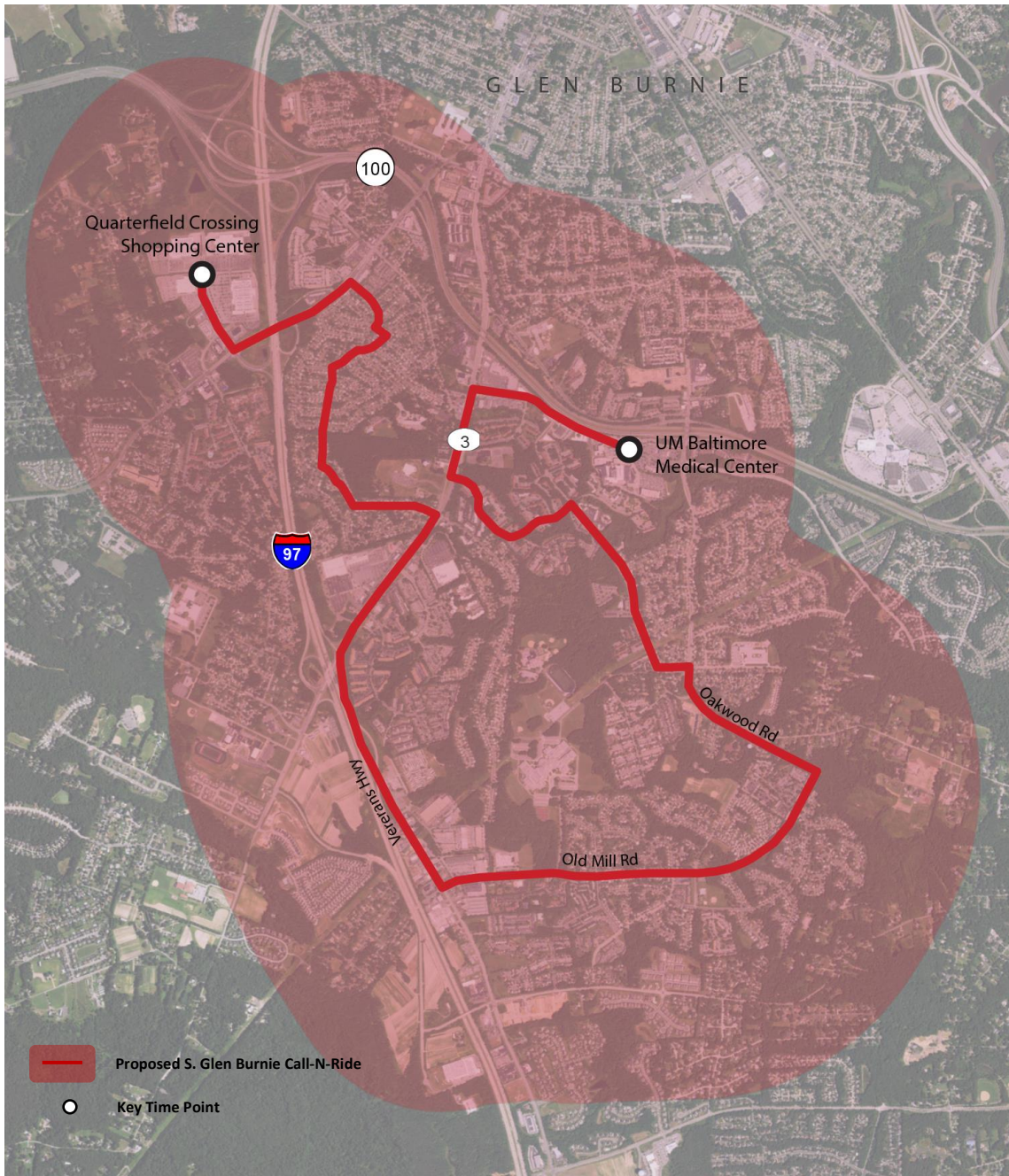
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Glen Burnie - Cromwell LRS	Glen Burnie, Glen Burnie Business Center, BW Medical Center	2	6:00	19:00	13	1.56	14.56	255	7,426
Saturday									
Glen Burnie - Cromwell LRS	Glen Burnie, Glen Burnie Business Center, BW Medical Center	2	8:00	19:00	11	1.32	12.32	52	1,281
Sunday									
Glen Burnie - Cromwell LRS	Glen Burnie, Glen Burnie Business Center, BW Medical Center	2	10:00	19:00	9	1.08	10.08	55	1,109
Glen Burnie Call N Ride Service Total									9,816

South Glen Burnie to UMBW Medical Center Call N Ride

Service Description

- Deviations within the Call N Ride zone are provided upon request.
- Requests must be made in advance.



Service Days



Service Span

AM													PM																						
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
													Monday - Friday																						
													Saturday																						
													Sunday																						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 45 minutes
Midday & Evening	every 45 minutes
Saturday	
Daytime	every 45 minutes
Evening	every 45 minutes
Sunday	
Daytime	every 45 minutes
Evening	every 45 minutes

Number of Peak Vehicles



Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
South Glen Burnie Shuttle Quarterfield Crossing - BW Medical Center	Glen Burnie Park, Rol-Park Village, Northway Shopping Center, Shetland Square	2	6:00	19:00	13	1.56	14.56	255	7,426
Saturday									
South Glen Burnie Shuttle Quarterfield Crossing - BW Medical Center	Glen Burnie Park, Rol-Park Village, Northway Shopping Center, Shetland Square	2	8:00	19:00	11	1.32	12.32	52	1,281
Sunday									
South Glen Burnie Shuttle Quarterfield Crossing - BW Medical Center	Glen Burnie Park, Rol-Park Village, Northway Shopping Center, Shetland Square	2	10:00	19:00	9	1.08	10.08	55	1,109
South Glen Burnie Call N'Ride Total									9,816

Riviera Beach to UMBW Medical Center Call N Ride

Service Description

- Provides connection to Marley Station Mall.
- Deviations within the Call N Ride zone are provided upon request.
- Requests must be made in advance.
- Ride time from Riviera Beach to the University of Maryland Baltimore Washington Medical Center will be approximately 45 minutes.



Service Days



Service Span

AM													PM																								
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00		

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



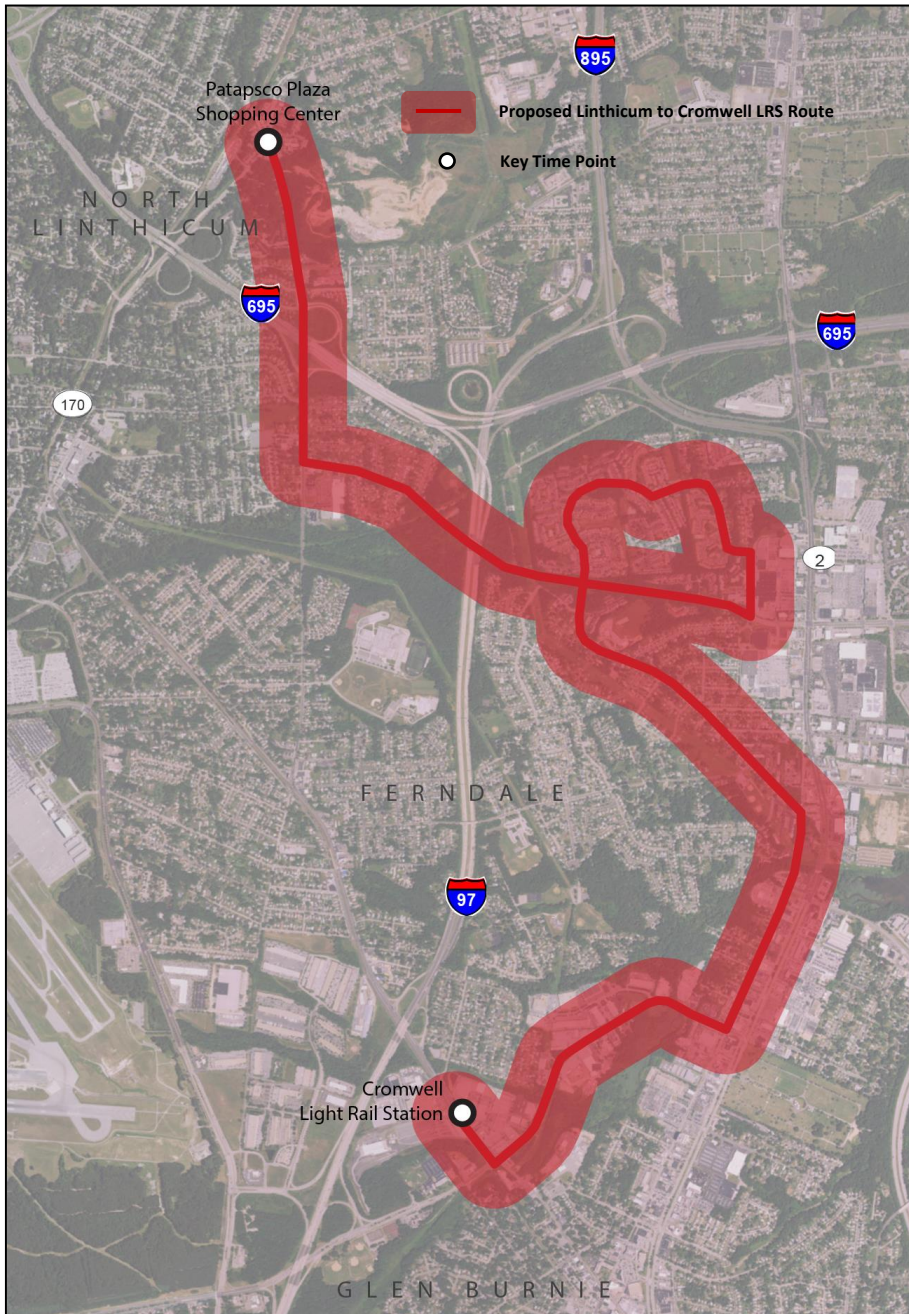
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Time Period	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday										
Riviera Beach- BW Medical Center	Pasadena, Harper's Choice, Marley Station Mall	2	All day	6:00	19:00	13	1.56	14.56	255	7,426
Saturday										
Riviera Beach- BW Medical Center	Pasadena, Harper's Choice, Marley Station Mall	2	All day	8:00	19:00	11	1.32	12.32	52	1,281
Riviera Beach Call N'Ride Total										8,707

Patapsco Plaza to Cromwell LRS Call N Ride

Service Description

- Provides service through North Linthicum and Ferndale.
- Deviations within the Call N Ride zone are provided upon request.
- Requests must be made in advance.
- Ride time between Cromwell LRS and Patapsco Plaza will be approximately 30 minutes.



Service Days



Service Span

AM													PM																						
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
													Monday - Friday																						
													Saturday																						
													Sunday																						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 30 minutes
Midday & Evening	every 30 minutes
Saturday	
Daytime	every 30 minutes
Evening	every 30 minutes
Sunday	
Daytime	every 30 minutes
Evening	every 30 minutes

Number of Peak Vehicles



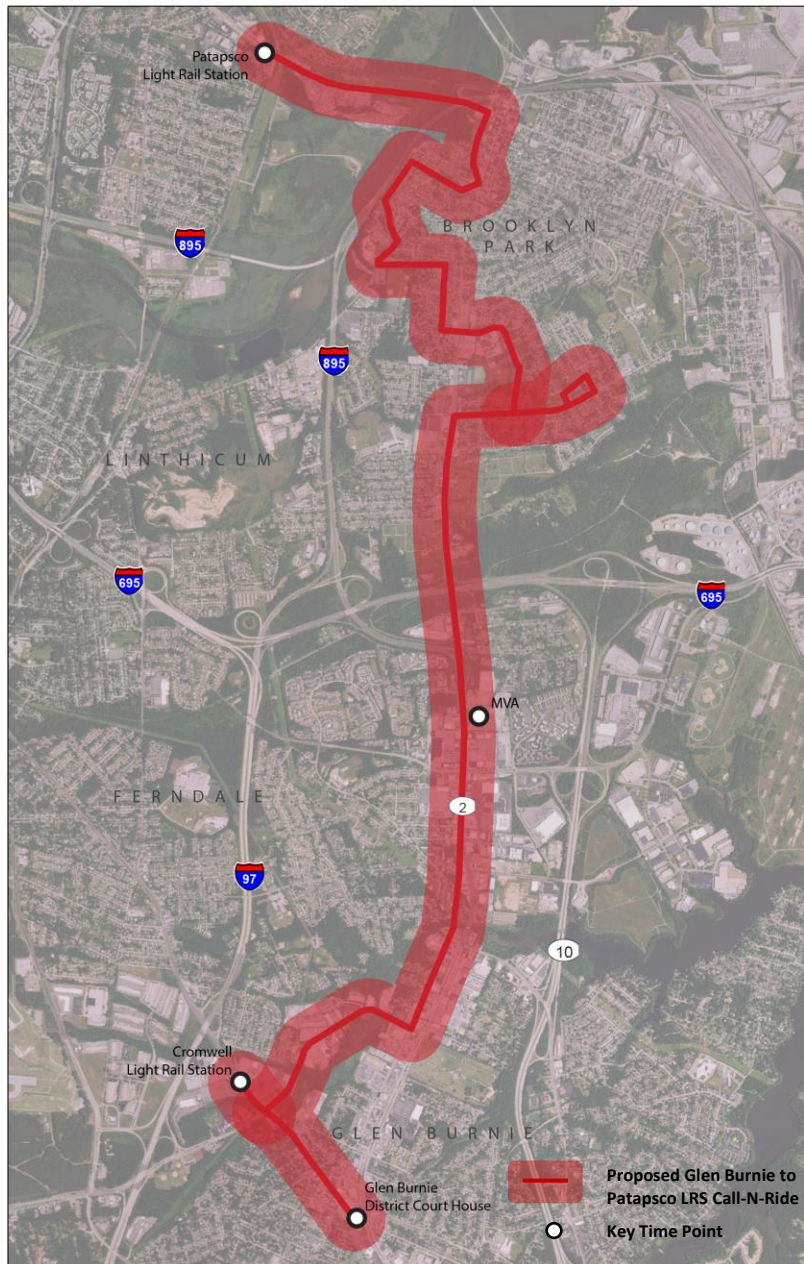
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Patapsco Plaza - Cromwell LRS	North Linthicum, Ferndale	2	6:00	19:00	13	1.56	14.56	255	7,426
Saturday									
Patapsco Plaza - Cromwell LRS	North Linthicum, Ferndale	2	8:00	19:00	11	1.32	12.32	52	1,281
Sunday									
Patapsco Plaza - Cromwell LRS	North Linthicum, Ferndale	2	10:00	19:00	9	1.08	10.08	55	1,109
Patapsco Plaza to Cromwell LRS Call N'Ride Total									9,816

Glen Burnie District Court to Patapsco LRS Call N Ride

Service Description

- Serves Ferndale and Brooklyn Park.
- Connects with the MVA in Ferndale.
- Deviations within the Call N Ride zone are provided upon request.
- Requests must be made in advance.
- Ride time from Brooklyn Park to Glen Burnie will be approximately 45 minutes.



Service Days



Service Span

AM												PM																																								
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00																	
																		Monday - Friday																																		
																				Saturday																																
																				Sunday																																

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



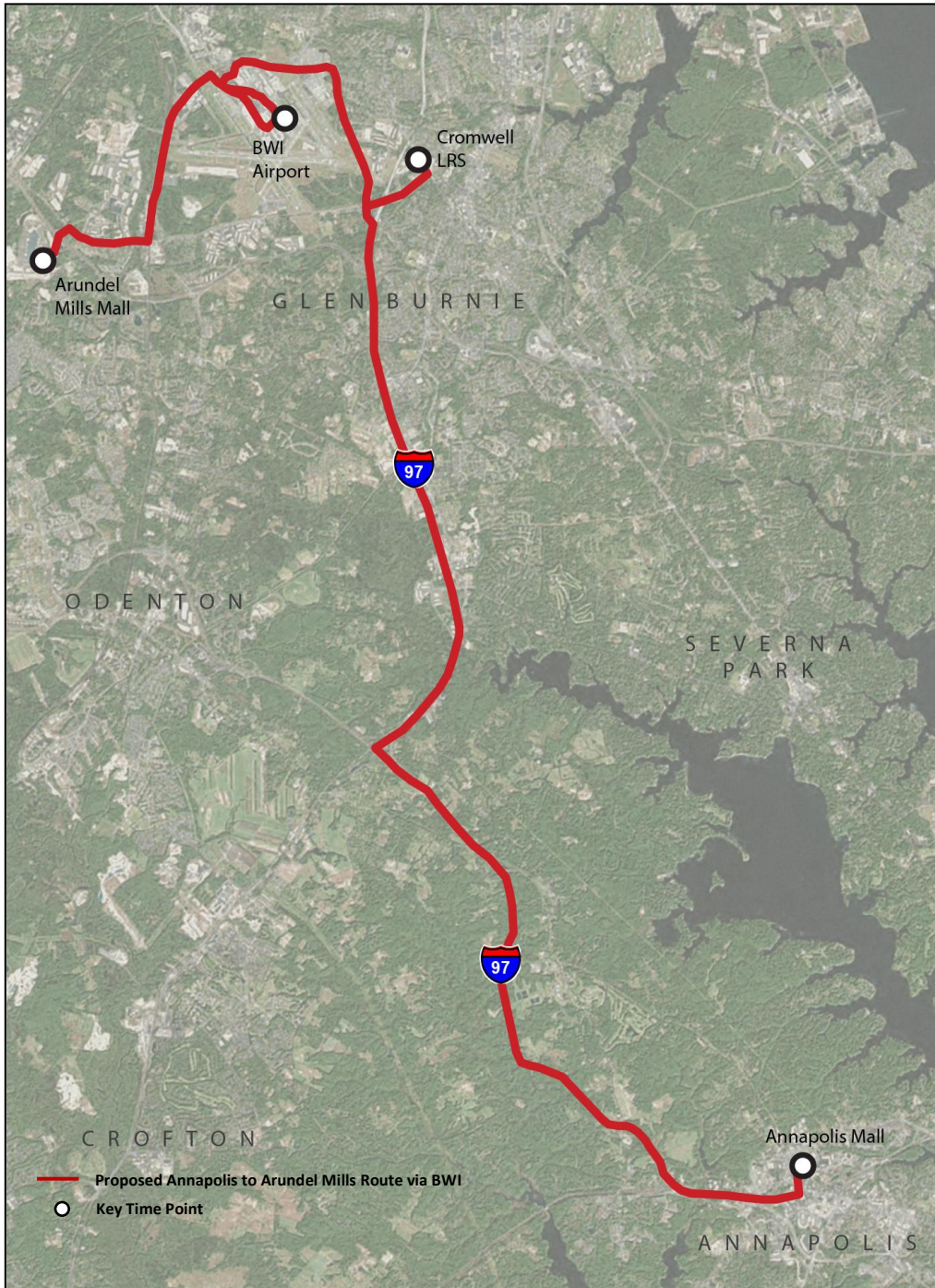
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Patapsco LRS- Glen Burnie District Court	Brooklyn Park, Ferndale MVA, Cromwell LRS, Glen Burnie	2	6:00	19:00	13	1.56	14.56	255	7,426
Saturday									
Patapsco LRS- Glen Burnie District Court	Brooklyn Park, Ferndale MVA, Cromwell LRS, Glen Burnie	2	8:00	19:00	11	1.32	12.32	52	1,281
Glen Burnie District Court - Patapsco LRS Call N'Ride Total									8,707

Annapolis to Arundel Mills Mall/BWI Airport

Service Description

- Will also connect with Cromwell LRS and Baltimore Washington International Airport.
- Ride time from Annapolis to BWI will be approximately 80 minutes.



Service Days



Service Span

AM												PM																											
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

Monday - Friday		
AM Peak & PM Peak	every 60 minutes	
Midday & Evening	every 60 minutes	
Saturday		
Daytime	every 60 minutes	
Evening	every 60 minutes	
Sunday		
Daytime	every 60 minutes	
Evening	every 60 minutes	

Number of Peak Vehicles



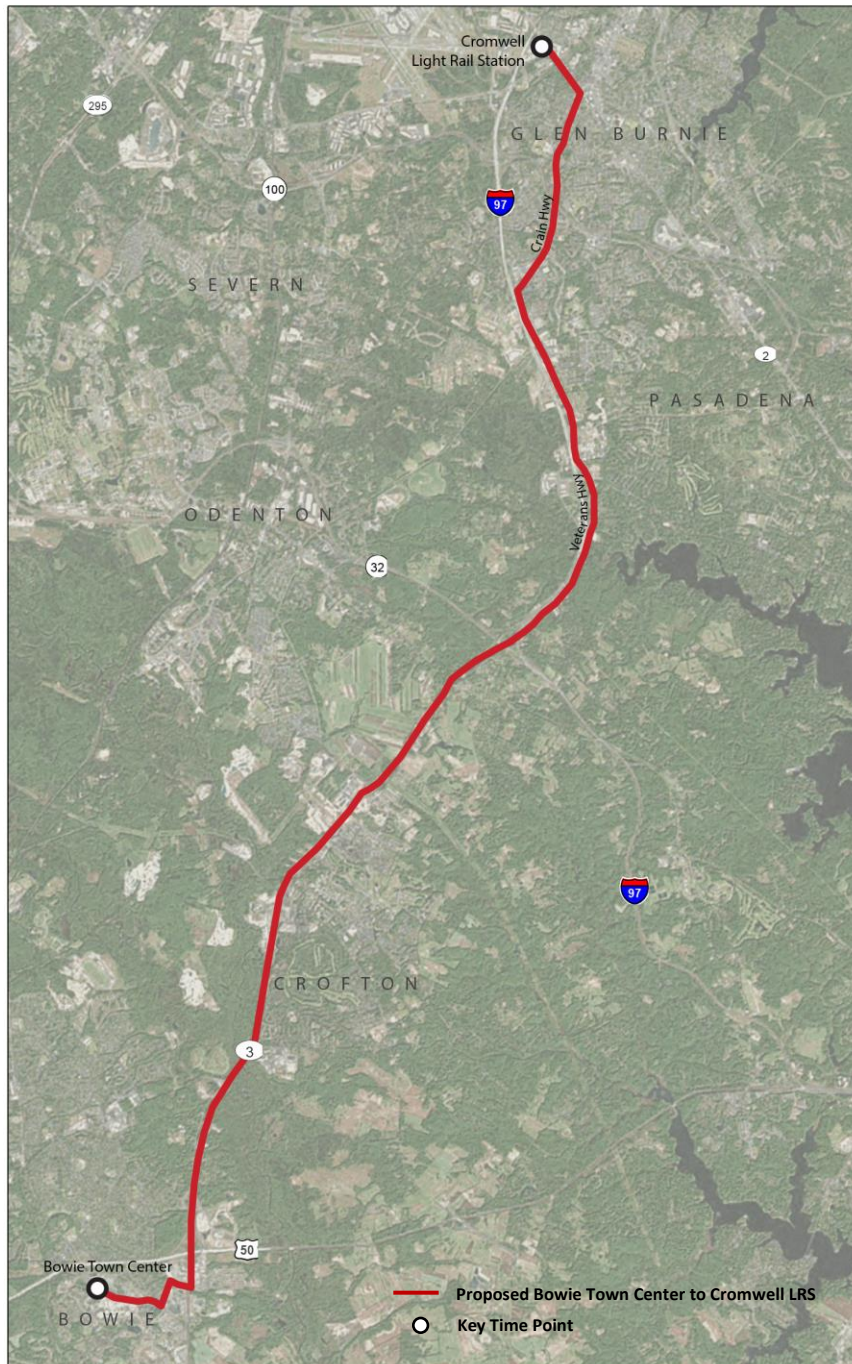
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Annapolis- Arundel Mills Mall/ BWI Airport	Anne Arundel Medical Center, Annapolis Mall, Cromwell LRS, BWI Airport	3	6:00	0:30	18.5	2.22	20.72	255	15,851
Saturday									
Annapolis- Arundel Mills Mall/ BWI Airport	Anne Arundel Medical Center, Annapolis Mall, Cromwell LRS, BWI Airport	3	8:00	0:30	16.5	1.98	18.48	52	2,883
Sunday									
Annapolis- Arundel Mills Mall/ BWI Airport	Anne Arundel Medical Center, Annapolis Mall, Cromwell LRS, BWI Airport	3	8:00	19:00	11	1.32	12.32	55	2,033
Annapolis-Arundel Mills Mall/BWI Airport Route Total									20,766

Bowie Town Center to Cromwell LRS

Service Description

- Connects with proposed local routes in Crofton, Pasadena, Odenton, and Glen Burnie.
- Ride time from Bowie Town Center to Cromwell LRS will be approximately 80 minutes.



Service Days



Service Span

AM													PM																						
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
													Monday - Friday																						
													Saturday																						
													Sunday																						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 60 minutes

Number of Peak Vehicles



Service Characteristics

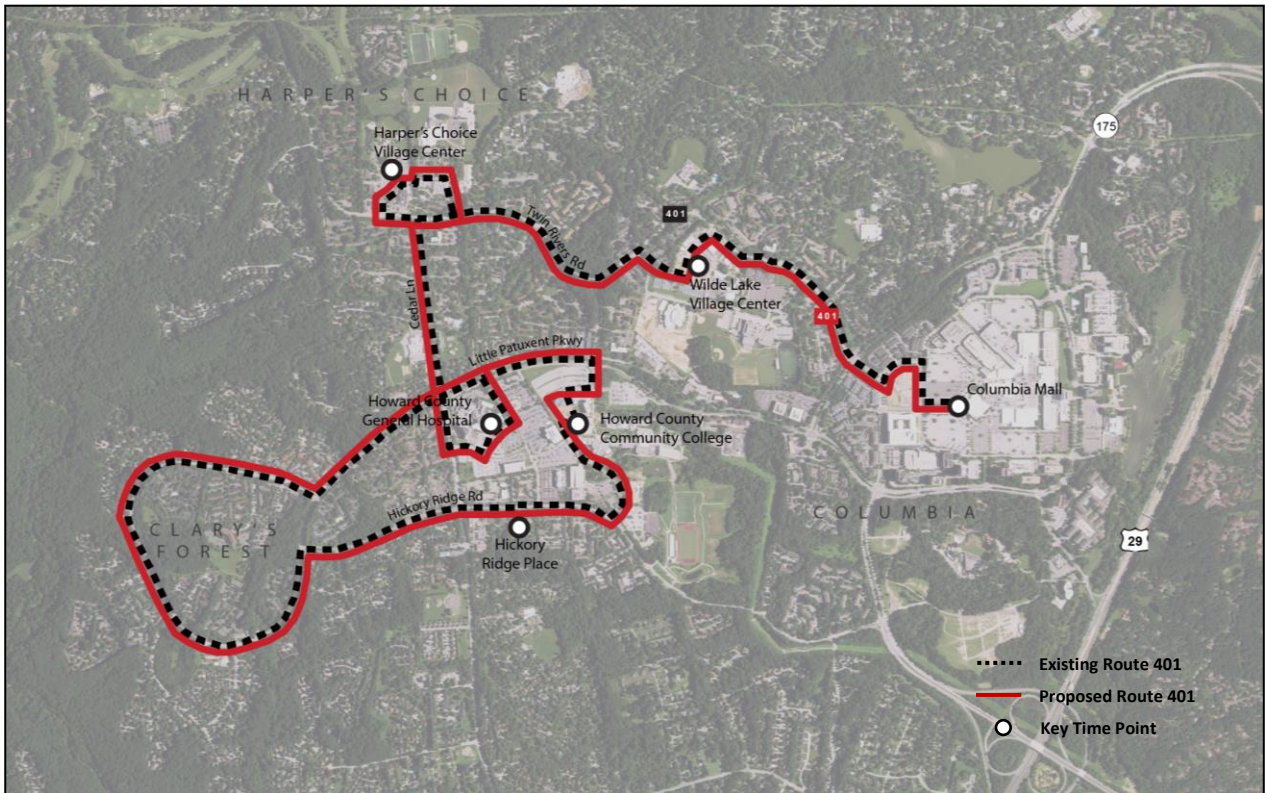
Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Bowie Town Center - Cromwell LRS	Bowie Retail at 301, Crofton, Villages at Waugh Chapel, Millersville, Dorrs Corner, Benfield Boulevard, Rol- Park Village	3	6:00	19:00	13	1.56	14.56	255	11,138
Saturday									
Bowie Town Center - Cromwell LRS	Bowie Retail at 301, Crofton, Villages at Waugh Chapel, Millersville, Dorrs Corner, Benfield Boulevard, Rol- Park Village	3	8:00	19:00	11	1.32	12.32	52	1,922
Sunday									
Bowie Town Center - Cromwell LRS	Bowie Retail at 301, Crofton, Villages at Waugh Chapel, Millersville, Dorrs Corner, Benfield Boulevard, Rol- Park Village	3	10:00	19:00	9	1.08	10.08	55	1,663
Bowie Town Center to Cromwell Light Rail Station Total									14,724

HOWARD COUNTY

Route 401 – Columbia Mall to Clary’s Forest

Service Description

- Frequency increases to every 30 minutes during the day on weekdays.
- Ride time from Columbia Mall to Howard Community College (HCC) will be approximately 20 minutes.



Service Days



Service Span

AM											PM																								
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
											Monday - Friday																								
											Saturday																								
											Sunday																								

Service Frequency

	Phase 1
Monday - Friday	
AM Peak & PM Peak	every 30 minutes
Midday	every 30 minutes
Evening	every 60 minutes
Saturday	
Daytime	every 30 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 60 minutes

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Clary's Forest	Wilde Lake, Harper's Choice, Howard County Hospital, Howard Community College	2	5:25	23:10	29.67	3.56	33.23	255	8,473
Saturday									
Columbia Mall- Clary's Forest	Wilde Lake, Harper's Choice, Howard County Hospital, Howard Community College	2	5:25	23:10	27.67	3.32	30.99	52	1,611
Sunday									
Columbia Mall- Clary's Forest	Wilde Lake, Harper's Choice, Howard County Hospital, Howard Community College	1	7:25	20:35	13.17	1.58	14.75	55	811
Phase 1: Route 401 Total									10,895

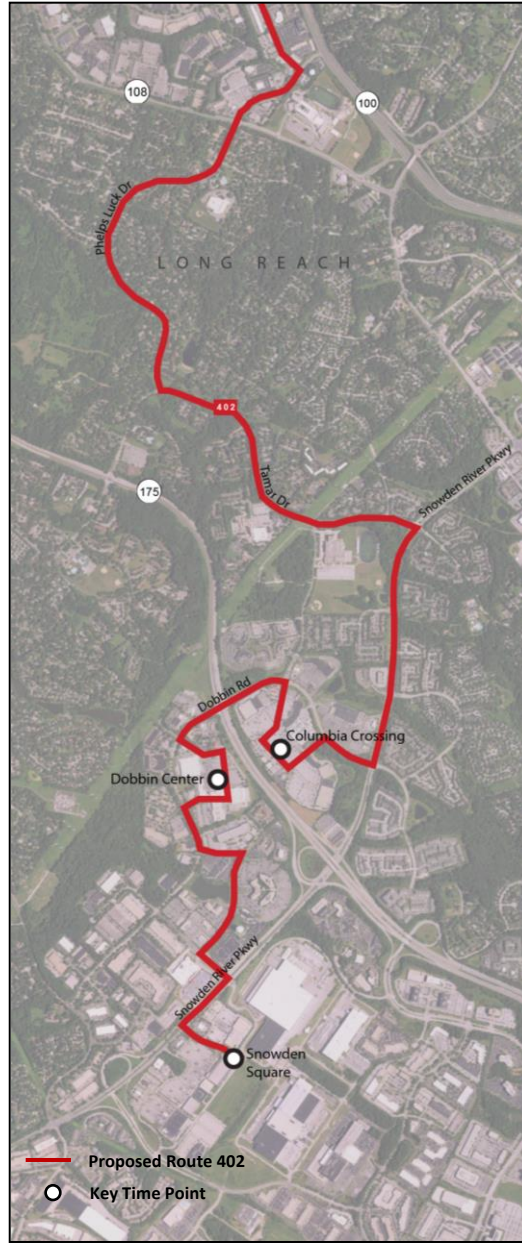
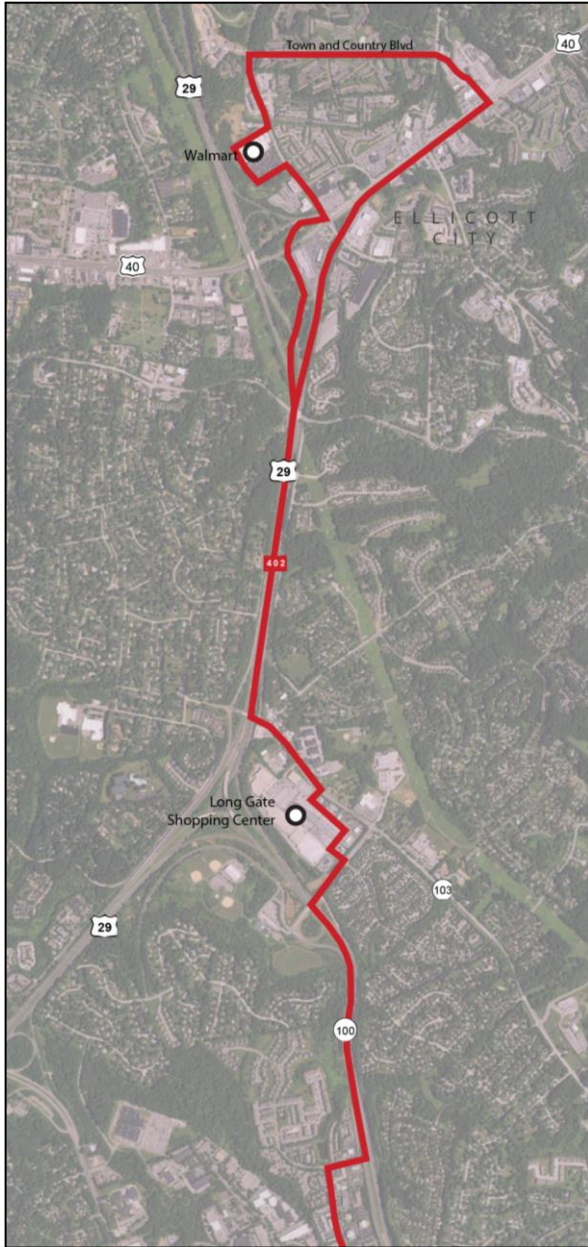
PHASE 2

Monday-Friday									
Columbia Mall- Clary's Forest	Harper's Choice, Howard County Hospital, Howard Community College	2	5:25	23:10	30.25	3.63	33.88	255	8,639
Saturday									
Columbia Mall- Clary's Forest	Wilde Lake, Harper's Choice, Howard County Hospital, Howard Community College	2	5:25	23:10	28.25	3.39	31.64	52	1,645
Sunday									
Columbia Mall- Clary's Forest	Wilde Lake, Harper's Choice, Howard County Hospital, Howard Community College	1	7:25	20:35	13.17	1.58	14.75	55	811
Phase 2: Route 401 Total									11,096

Route 402 – Ellicott City to Snowden Square

Route Description

- Provides a connection to Long Gate Shopping Center, Columbia Crossing, and Dobbin Center.
- Ride time from the Walmart in Ellicott City to Snowden Square will be approximately 45 minutes.



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Ellicott City- Snowden Square	Walmart, Long Gate Shopping Center, Columbia Crossing, Dobbin Center	2	6:20	19:25	25.83	3.1	28.93	255	7,378
Saturday									
Ellicott City- Snowden Square	Walmart, Long Gate Shopping Center, Columbia Crossing, Dobbin Center	2	8:20	19:25	21.83	2.62	24.45	52	1,272
Sunday									
Ellicott City- Snowden Square	Walmart, Long Gate Shopping Center, Columbia Crossing, Dobbin Center	1	9:20	19:25	10.08	1.21	11.29	55	621
Phase 1: Route 402 TOTAL									9,271

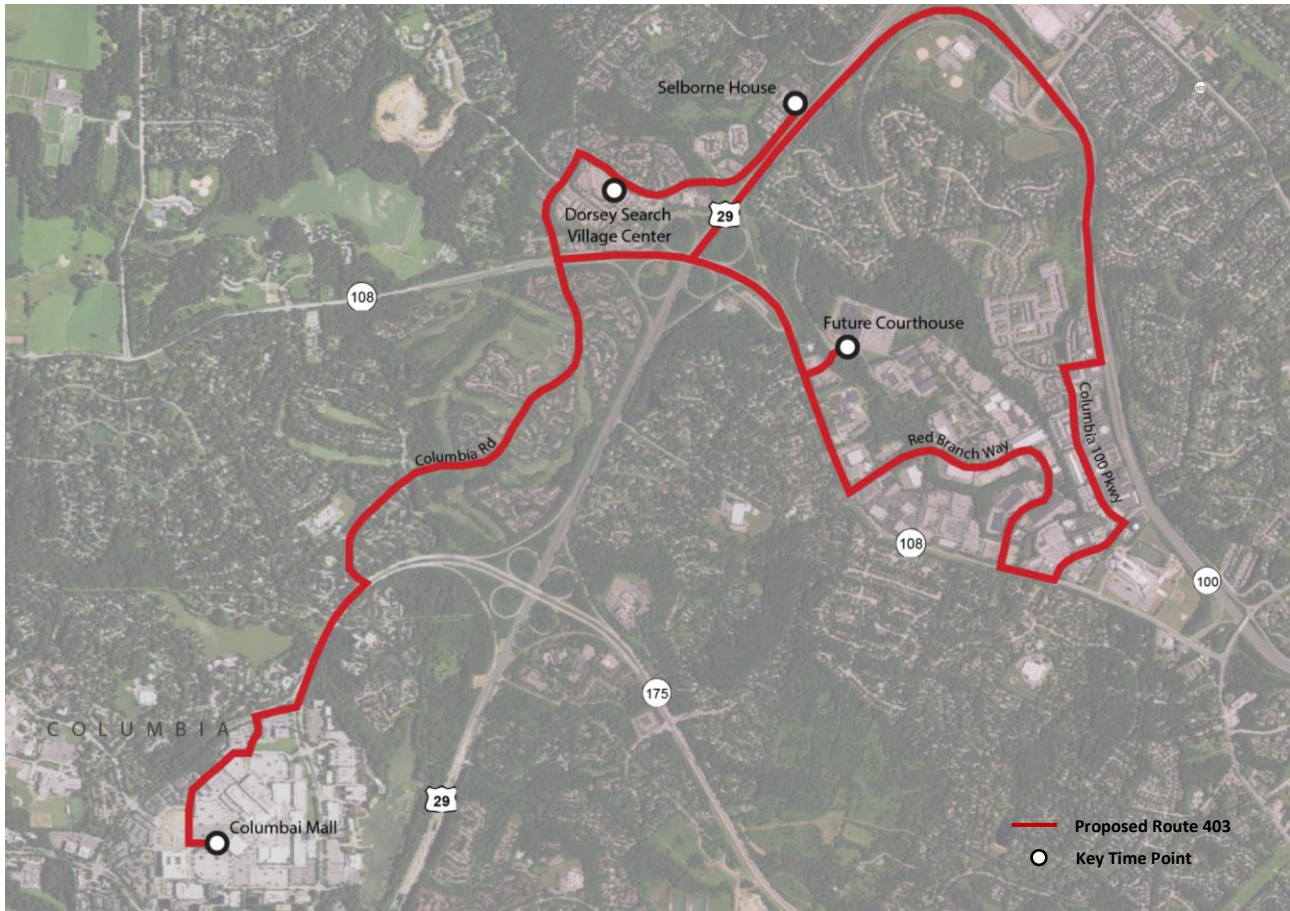
PHASE 2

Monday-Friday									
Ellicott City- Snowden Square	Walmart, Long Gate Shopping Center, Columbia Crossing, Dobbin Center	2	6:20	23:20	28.83	3.46	32.29	255	8,235
Saturday									
Ellicott City- Snowden Square	Walmart, Long Gate Shopping Center, Columbia Crossing, Dobbin Center	2	8:20	19:25	20.92	2.51	23.43	52	1,218
Sunday									
Ellicott City- Snowden Square	Walmart, Long Gate Shopping Center, Columbia Crossing, Dobbin Center	1	9:20	19:25	10.08	1.21	11.29	55	621
Phase 2: Route 402 TOTAL									10,074

Route 403 – Columbia Mall to Dorsey Search Village Center

Service Description

- Route will serve the future courthouse on Bendix Road.
- Will connect Dorsey Search Village Center with Selborne House and Red Branch Way.
- Ride time between Columbia Mall and Red Branch Way will be approximately 30 minutes.



Service Days



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Dorsey Search Village Center <i>(Evenings interlined with 404)</i>	Selborne House, Red Branch Way	1	5:35	21:10	15.17	1.82	16.99	255	4,332
Saturday									
Columbia Mall- Dorsey Search Village Center <i>(Evenings interlined with 404)</i>	Selborne House, Red Branch Way	1	7:35	21:10	12.17	1.46	13.63	52	709
Sunday									
Columbia Mall- Dorsey Search Village Center <i>(Interlined with 404)</i>	Selbourne House, Red Branch Way	1	7:35	19:10	11:35	1:23	12.97	55	357
Phase 1: Route 403 Total									5,397

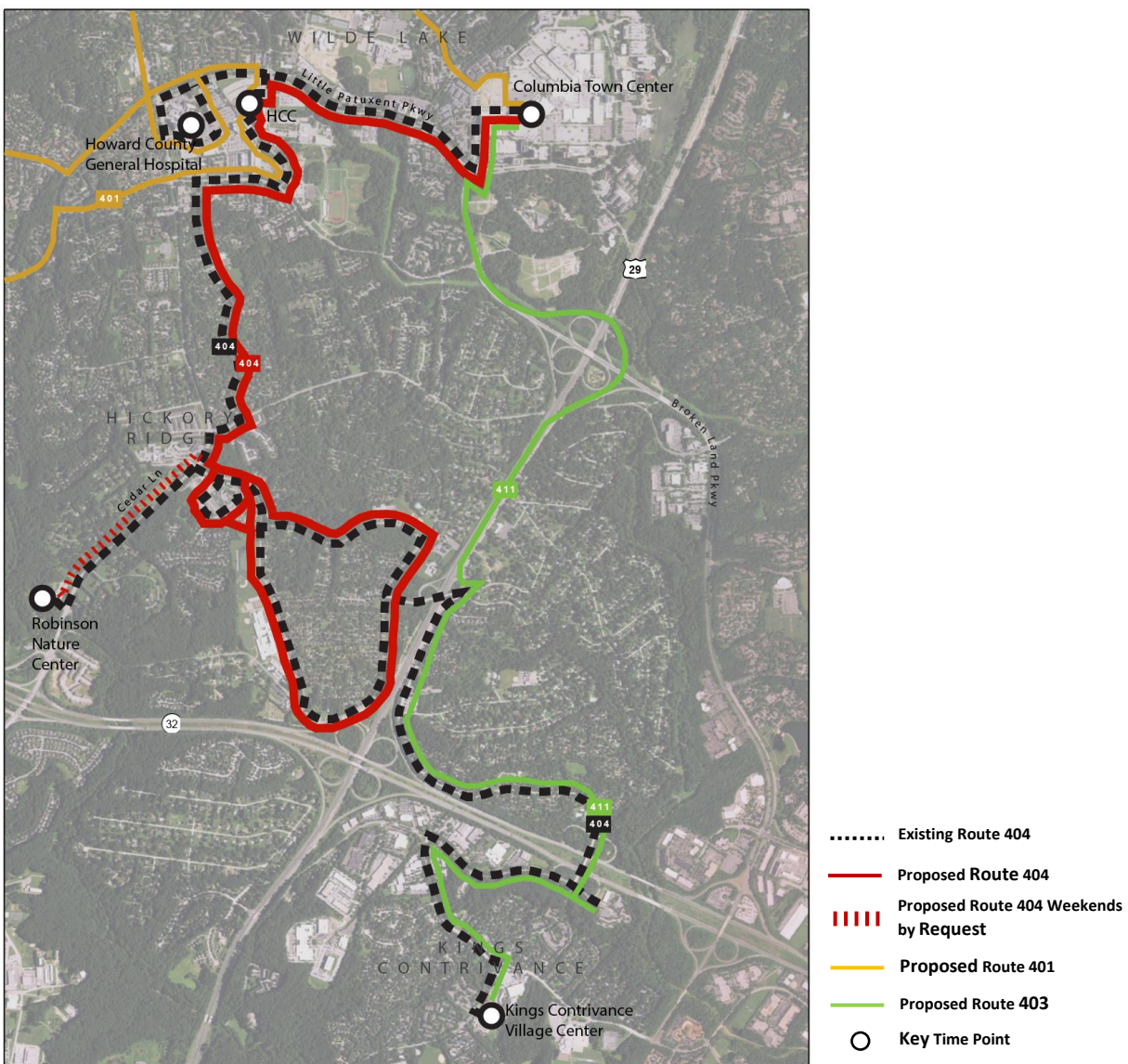
PHASE 2

Monday-Friday									
Columbia Mall- Dorsey Search Village Center	Selborne House, Red Branch Way	1	5:35	23:10	17.58	2.11	19.69	255	5,022
Saturday									
Columbia Mall- Dorsey Search Village Center	Selborne House, Red Branch Way	1	7:35	21:10	13.58	1.63	15.21	52	791
Sunday									
Columbia Mall- Dorsey Search Village Center	Selborne House, Red Branch Way	-	-	-	-	-	-	-	-
Phase 2: Route 403 Total									5,813

Route 404 – Columbia Mall to Hickory Ridge

Service Description

- Route is streamlined to reduce ride time for riders.
- Service to the Robinson Nature Center will be on weekends and by requests.
- Service to Kings Contrivance will be served by Route 411, providing faster and more direct service to Columbia Town Center.
- Howard County Hospital will be served on Route 401.
- Ride time between Columbia Town Center and Hickory Ridge Village Center will be approximately 30 minutes.



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Hickory Ridge <i>(Evenings interlined with 403)</i>	Howard Community College	1	6:00	21:10	14.42	1.73	16.15	255	4,117
Saturday									
Columbia Mall- Hickory Ridge <i>(Evenings interlined with 403)</i>	Howard Community College	1	8:00	21:10	11.42	1.37	12.79	52	665
Sunday									
Columbia Mall- Hickory Ridge <i>(Interlined with 403)</i>	Howard Community College	1	7:35	19:10	11:35	1:23	12.97	55	357
Phase 1: Route 404 Total									5,139

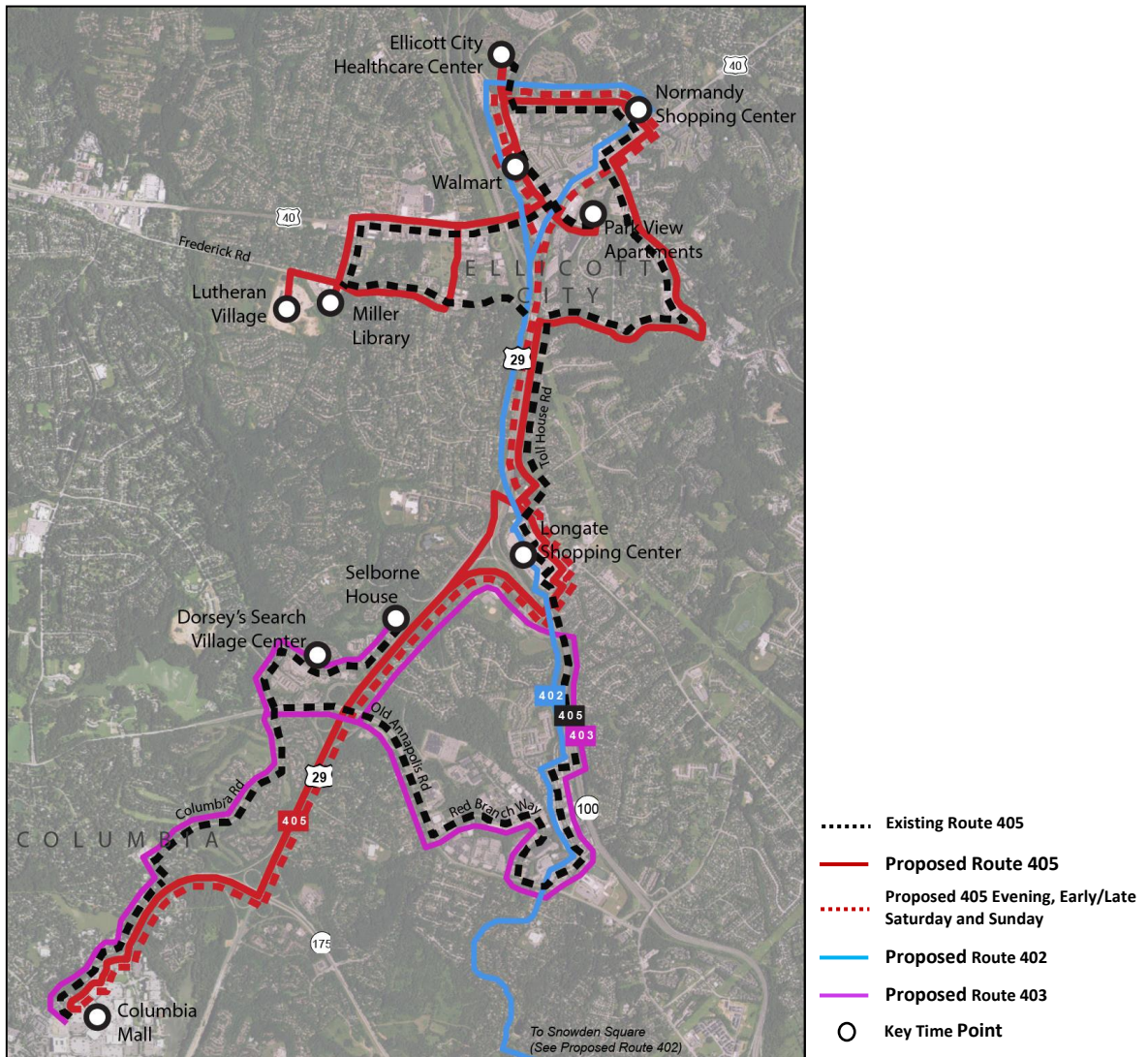
PHASE 2

Monday-Friday									
Columbia Mall- Hickory Ridge	Howard Community College	2	6:00	22:50	27.67	3.32	30.99	255	7,902
Saturday									
Columbia Mall- Hickory Ridge	Howard Community College	1	6:00	22:50	16.83	2.02	18.85	52	980
Sunday									
Columbia Mall- Hickory Ridge	Howard Community College	1	8:00	19:50	11.83	1.42	13.25	55	729
Phase 2: Route 404 Total									9,611

Route 405 – Columbia Mall to Ellicott City

Service Description

- Route is streamlined to reduce the ride time for riders traveling between Columbia and Ellicott City.
- Serves the Ellicott City Walmart, Long Gate Shopping Center, Normandy Shopping Center, Ellicott City Healthcare Center, Park View Apts., Lutheran Village and Miller Library.
- Dorsey Search Village Center, Selborne House, Executive Park Drive and Red Branch Way will be served by Route 403.
- Evenings, Saturday (early and late), and Sunday will have a shorter routing. The Ellicott City Healthcare Center, Lutheran Village, and Miller Library, will not be served with the shorter routing.
- Ride time from Columbia Mall to the Ellicott City Walmart will be approximately 35 minutes.



Days of Service



Service Span

AM													PM																										
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

	Phase 1
Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 60 minutes

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Ellicott City	Walmart, Long Gate Shopping Center, Dorsey Search, Red Branch Way	2	6:00	22:50	29.17	3.50	32.67	255	8,330
Saturday									
Columbia Mall- Ellicott City	Walmart, Long Gate Shopping Center, Dorsey Search, Red Branch Way	2	6:00	22:50	27.75	3.33	31.08	52	1,616
Sunday									
Columbia Mall- Ellicott City	Walmart, Long Gate Shopping Center, Dorsey Search, Red Branch Way	1	8:00	19:50	11.83	1.42	13.25	55	729
Phase 1: Route 405 Total									10,675

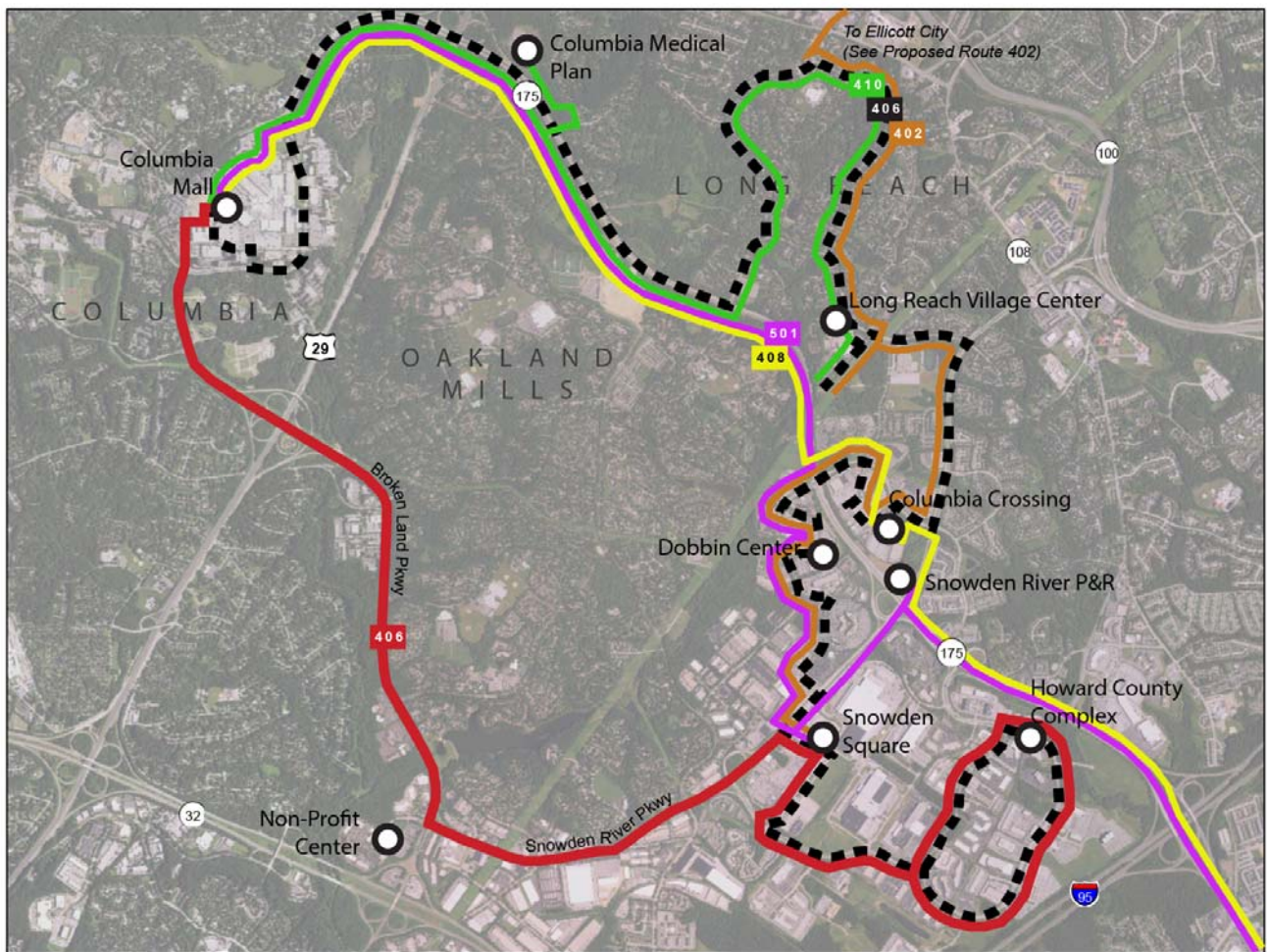
PHASE 2

Monday-Friday									
Columbia Mall- Ellicott City	Walmart, Long Gate Shopping Center, Dorsey Search, Red Branch Way	2	6:00	22:50	29.83	3.58	33.41	255	8,520
Saturday									
Columbia Mall- Ellicott City	Walmart, Long Gate Shopping Center, Dorsey Search, Red Branch Way	2	6:00	20:50	26.42	3.17	29.59	52	1,539
Sunday									
Columbia Mall- Ellicott City	Walmart, Long Gate Shopping Center, Dorsey Search, Red Branch Way	1	8:00	19:50	11.83	1.42	13.25	55	729
Phase 2: Route 405 Total									10,788

Route 406 – Columbia Mall to Columbia Gateway

Route Description

- Provides a more direct connection between Columbia Mall and Gateway.
- Service through Long Reach, Columbia Crossing, Dobbin Center, and Snowden Square will be served by Routes 402, 408, 410, and 501.
- No Sunday service.
- Ride time from Columbia Mall to the Howard County Complex will be approximately 25 minutes.



Days of Service



- Existing Route 406
- Proposed Route 406
- Proposed Route 402
- Proposed Route 408
- Proposed Route 410
- Proposed Route 501
- Key Time Point

Service Span

	AM											PM																														
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00							
Phase 2							Monday - Friday											Phase 1										Phase 2														
							Saturday												Phase 1 & 2																							
							Sunday												Phase 1 & 2																							

Service Frequency

	Phase 1	Phase 2
Monday - Friday		
AM Peak & PM Peak	every 60 minutes	every 60 minutes
Midday	every 60 minutes	every 60 minutes
Saturday		
Daytime	every 120 minutes	every 60 minutes
Evening	-	-
Sunday		
Daytime	every 120 minutes	every 120 minutes
Evening	-	-

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall - Columbia Gateway	Snowden Square	1	6:30	18:00	11.50	1.38	12.88	255	3,284
Saturday									
Columbia Mall - Columbia Gateway <i>(Interlined with 411)</i>	Snowden Square	1	8:00	17:50	9.83	1.18	11.01	52	286
Sunday									
Columbia Mall - Columbia Gateway <i>(Interlined with 411)</i>	Snowden Square	1	8:00	17:50	9.83	1.18	11.01	55	303
Phase 1: Route 406 Total									3,873

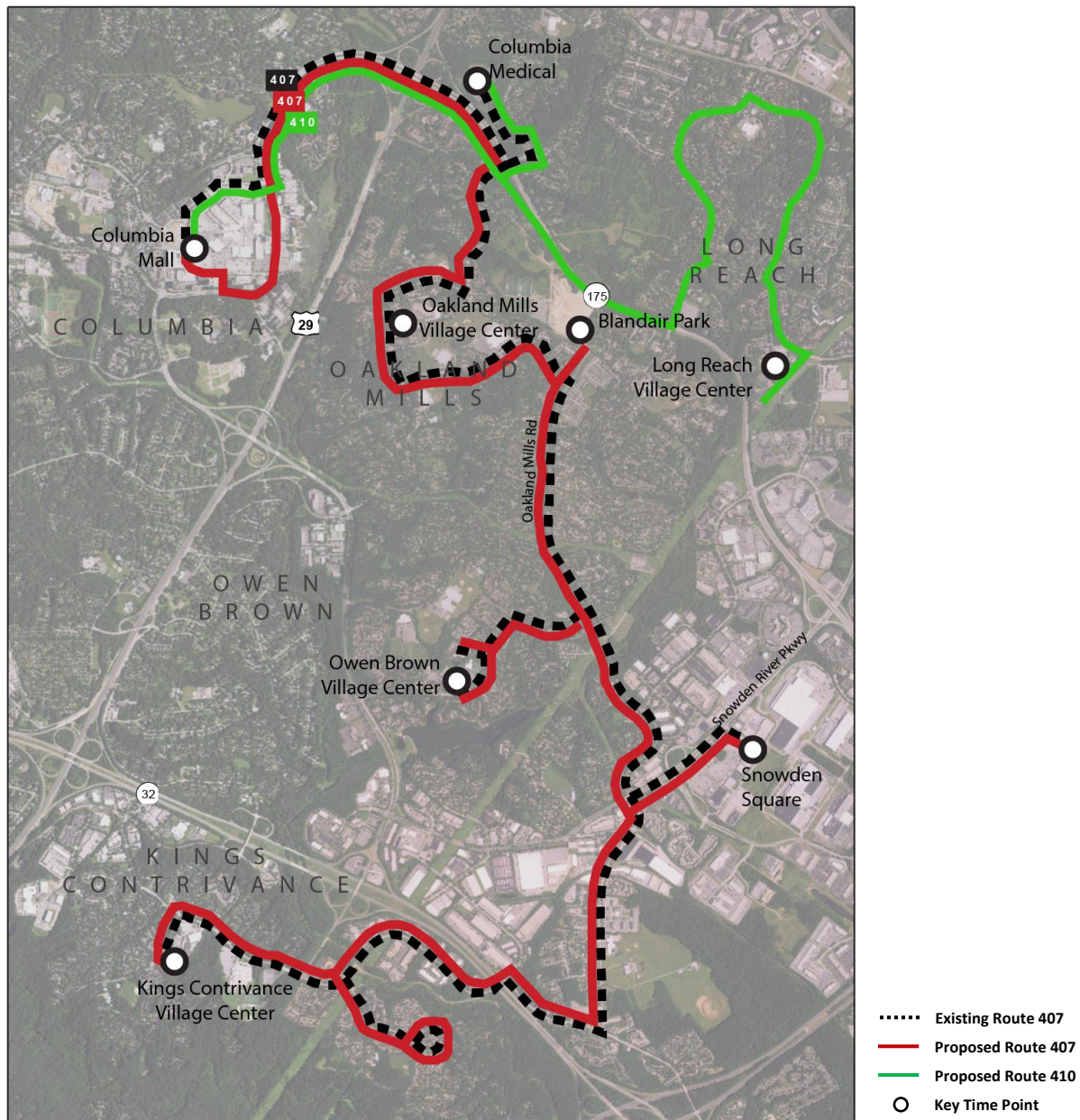
PHASE 2

Monday-Friday									
Columbia Mall - Columbia Gateway	Snowden Square	1	6:05	18:20	12.25	1.47	13.72	255	3,499
Saturday									
Columbia Mall - Columbia Gateway	Snowden Square	1	8:05	18:20	10.25	1.23	11.48	52	597
Sunday									
Columbia Mall - Columbia Gateway <i>(Interlined with 411)</i>	Snowden Square	1	8:05	18:20	10.25	1.23	11.48	55	316
Phase 2: Route 406 Total									4,411

Route 407 – Columbia Mall to Kings Contrivance Village Center

Service Description

- Route will no longer serve Columbia Medical Plan. Columbia Medical Plan will be served by Route 410.
- Not every bus will continue on to Snowden Square and Kings Contrivance. Buses will turn around at the Owen Brown Village Center on every other run.
- Ride time from Columbia Mall to Kings Contrivance Village Center will be approximately 52 minutes.



Days of Services



Service Span

AM													PM																						
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
													Monday - Friday																						
													Saturday																						
													Sunday																						

Service Frequency

	Phase 1		Phase 2
	Columbia Mall – Owen Brown	Owen Brown – Kings Contrivance	Entire Route
Monday - Friday			
AM Peak & PM Peak	every 30 minutes	every 60 minutes	every 30 minutes
Midday	every 30 minutes	every 60 minutes	every 30 minutes
Evening	every 60 minutes	every 120 minutes	every 60 minutes
Saturday			
Daytime	every 30 minutes	every 60 minutes	every 30 minutes
Evening	every 60 minutes	every 120 minutes	every 60 minutes
Sunday			
Daytime	every 60 minutes	every 120 minutes	every 60 minutes
Evening	every 60 minutes	every 120 minutes	every 60 minutes

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall-Kings Contrivance Village Center <i>(Interlined with 501)</i>	Columbia Mall-Kings Contrivance Village Center	3	5:30	22:50	43.79	5.26	49.05	255	12,507
Saturday									
Columbia Mall-Kings Contrivance Village Center <i>(Interlined with 501)</i>	Columbia Mall-Kings Contrivance Village Center	3	5:30	22:50	41.79	5.02	46.81	52	2,434
Sunday									
Columbia Mall-Kings Contrivance Village Center <i>(Interlined with 501)</i>	Columbia Mall-Kings Contrivance Village Center	1	7:00	20:50	19.79	2.38	22.17	55	1,219
Phase 1: Route 407 Total									16,160

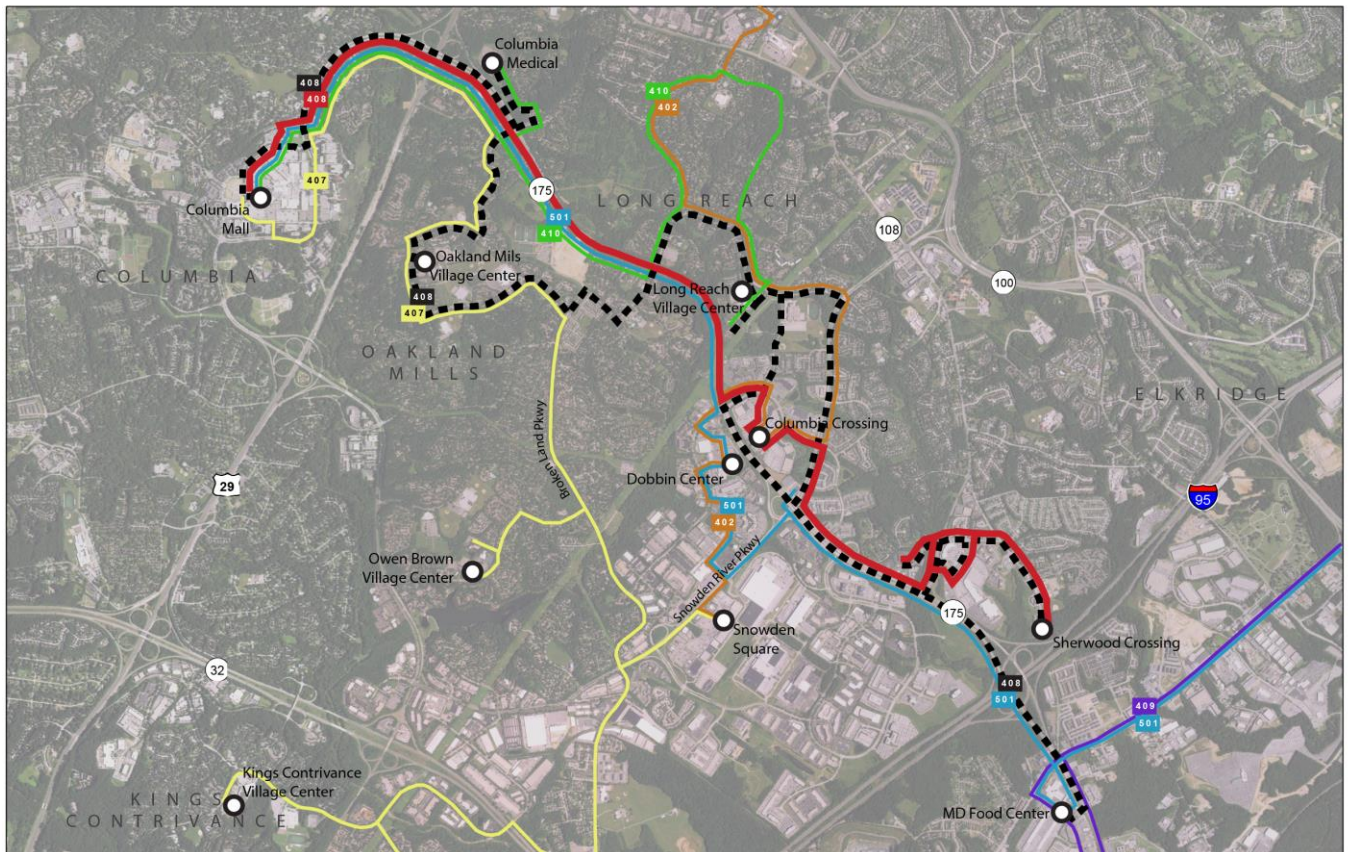
PHASE 2

Monday-Friday									
Columbia Mall-Kings Contrivance Village Center	Oakland Mills, Owen Brown Snowden Square	4	5:30	23:25	58.42	7.01	65.43	255	16,684
Saturday									
Columbia Mall-Kings Contrivance Village Center	Oakland Mills, Owen Brown Snowden Square	4	5:30	23:25	54.42	6.53	60.95	52	3,169
Sunday									
Columbia Mall-Kings Contrivance Village Center	Oakland Mills, Owen Brown Snowden Square	2	7:00	20:50	25.67	3.08	28.75	55	1,581
Phase 2: Route 407 Total									21,434

Route 408 – Columbia Mall to Sherwood Crossing

Service Description

- Service will be expanded to Sunday.
- Columbia Crossing will continue to be served on the route; Snowden Park and Ride will not be served.
- Service through Long Reach will be provided by Routes 402 and 410.
- Service through Oakland Mills will be provided by Route 407.
- Service to the MD Food Center will be provided by Routes 409 and 501.
- Ride time from Columbia Mall to Sherwood Crossing will be approximately 25 minutes.



- Existing Route 408
- Proposed Route 408
- Proposed Route 402
- Proposed Route 407
- Proposed Route 409
- Proposed Route 410
- Proposed Route 501
- Key Time Point

Service Days



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Sherwood Crossing	Columbia Crossing	1	6:00	22:50	16.83	2.02	18.85	255	4,808
Saturday									
Columbia Mall- Sherwood Crossing	Columbia Crossing	1	6:00	22:50	16.83	2.02	18.85	52	980
Sunday									
Columbia Mall- Sherwood Crossing	Columbia Crossing	1	8:00	19:50	11.83	1.42	13.25	55	729
Phase 1: Route 408 Total									6,517

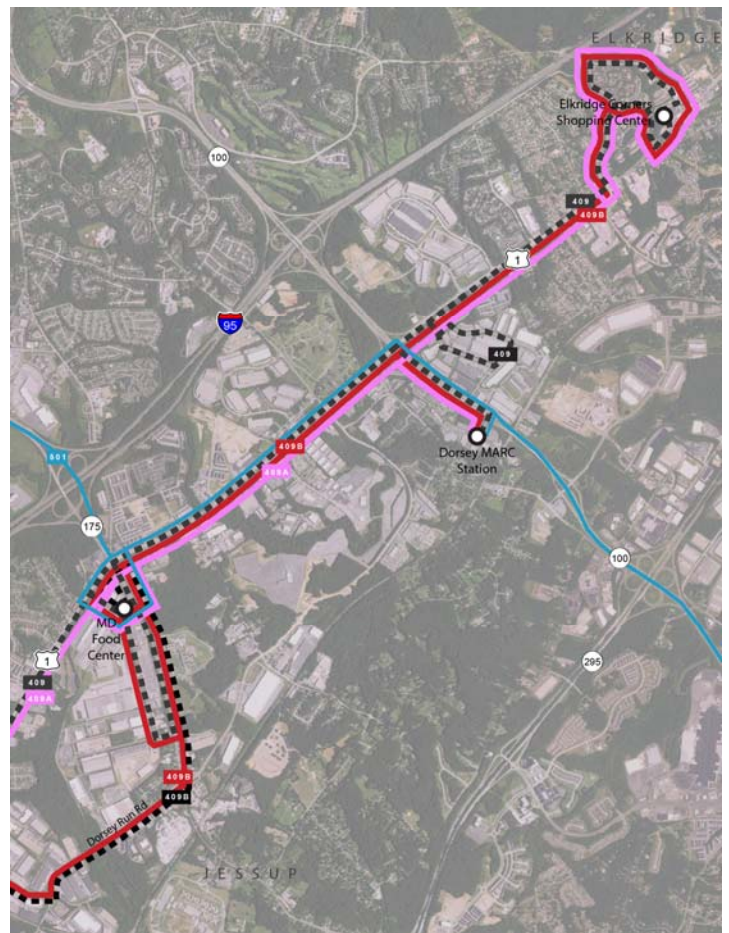
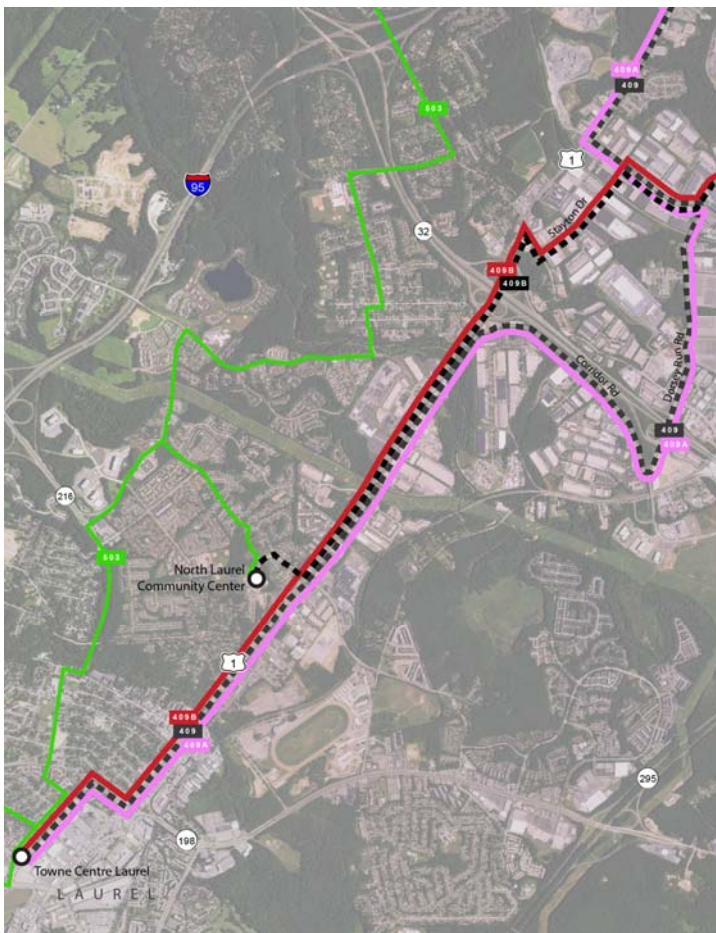
PHASE 2

Monday-Friday									
Columbia Mall- Sherwood Crossing	Columbia Crossing	1	6:00	22:50	16.83	2.02	18.85	255	4,808
Saturday									
Columbia Mall- Sherwood Crossing	Columbia Crossing	1	6:00	22:50	16.83	2.02	18.85	52	980
Sunday									
Columbia Mall- Sherwood Crossing	Columbia Crossing	1	8:00	19:50	11.83	1.42	13.25	55	729
Phase 2: Route 408 Total									6,517

Route 409 (409A and 409B) – Towne Centre Laurel to Elkridge Shopping Center

Service Description

- Route 409 will be renamed 409A and will no longer serve Route 100 Industrial Park.
- Route 409B will be extended to the Towne Centre Laurel and Elkridge Shopping Center.
- North Laurel Community Center will be served by Route 503.
- Ride time on Route 409B from the Towne Centre Laurel to Elkridge Shopping Center will be approximately 50 minutes.



- Existing Route 409 (effective 10/1/2017)
- Existing Route 409B (effective 10/1/2017)
- Proposed Route 409A
- Proposed Route 409B
- Route 501
- Route 503
- Key Time Point

Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Towne Centre Laurel-Elkridge Shopping Center	MD Food Center, Dorsey MARC Station	3	6:00	21:55	39.75	4.77	44.52	255	11,353
Saturday									
Towne Centre Laurel-Elkridge Shopping Center	MD Food Center, Dorsey MARC Station	3	8:00	20:50	32.50	3.90	36.40	52	1,893
Sunday									
Towne Centre Laurel-Elkridge Shopping Center	MD Food Center, Dorsey MARC Station	-	-	-	-	-	-	-	-
Phase 1: Route 409 Total									13,245

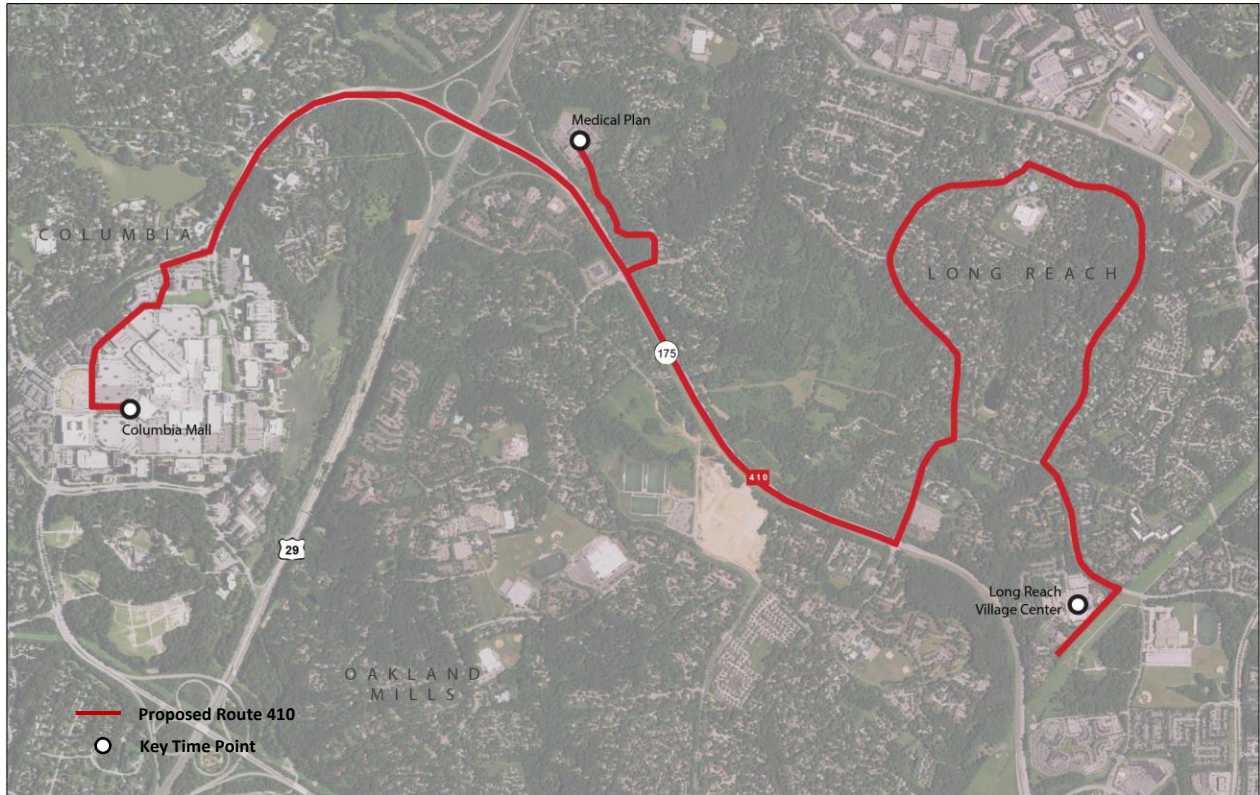
PHASE 2

Monday-Friday									
Towne Centre Laurel-Elkridge Shopping Center	MD Food Center, Dorsey MARC	4	6:00	22:55	57.67	6.92	64.59	255	16,470
Saturday									
Towne Centre Laurel-Elkridge Shopping Center	MD Food Center, Dorsey MARC	4	6:00	22:55	53.67	6.44	60.11	52	3,126
Sunday									
Towne Centre Laurel-Elkridge Shopping Center	MD Food Center, Dorsey MARC Station	-	-	-	-	-	-	-	-
Phase 2: Route 409 Total									19,595

Route 410 – Columbia Mall to Long Reach Village Center

Service Description

- Serves the Columbia Medical Practice Medical Plan (Medical Plan) and Long Reach Village Center.
- Ride time from Columbia Mall to Long Reach Village Center will be approximately 30 minutes.



Service Days



Service Span

	AM											PM																												
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00					

Service Frequency

	Phase 1
Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Long Reach Village Center	Columbia Medical Practice Medical Plan	1	6:00	18:00	12.00	1.44	13.44	255	3,427
Saturday									
Columbia Mall- Long Reach Village Center	Columbia Medical Practice Medical Plan	1	8:00	18:00	10.00	1.20	11.20	52	582
Sunday									
Columbia Mall- Long Reach Village Center	Columbia Medical Practice Medical Plan	-	-	-	-	-	-	-	-
Phase 1: Route 410 Total									4,010

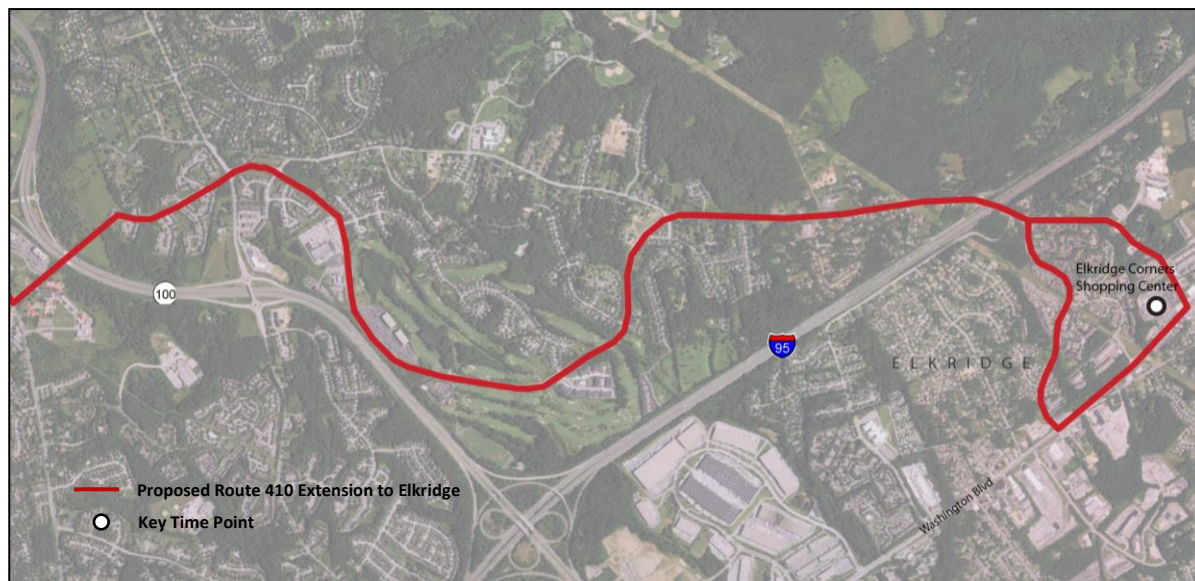
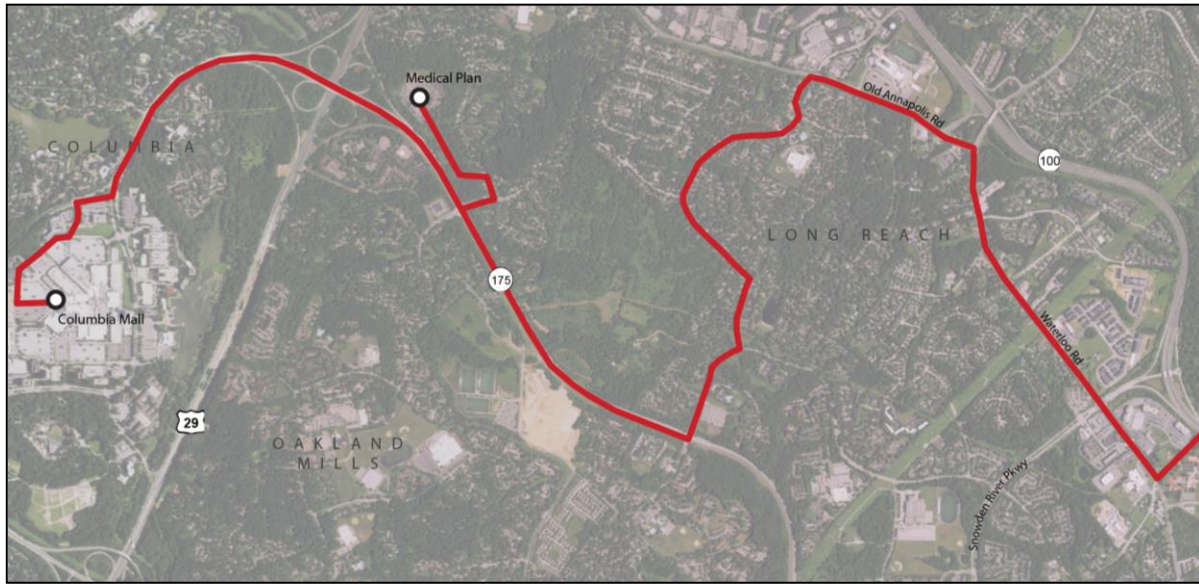
PHASE 2

Monday-Friday									
Columbia Mall- Long Reach Village Center	Columbia Medical Practice Medical Plan	1	6:00	18:00	12.00	1.44	13.44	255	3,427
Saturday									
Columbia Mall- Long Reach Village Center	Columbia Medical Practice Medical Plan	1	8:00	18:00	0.42	1.20	11.20	52	582
Sunday									
Columbia Mall- Long Reach Village Center	Columbia Medical Practice Medical Plan	-	-	-	-	-	-	-	-
Phase 2: Route 410 Total									4,010

Route 410 – Columbia Mall to Elkridge Corners Shopping Center (expansion route)

Service Description

- Provides for a connection to Elkridge from Columbia.
- Will connect with Route 409A and 409B at the Elkridge Corners Shopping Center.
- Ride time from Columbia Mall to Elkridge Corners Shopping Center will be approximately 40 minutes.



Service Span

AM											PM																													
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00					

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours *
Monday-Friday									
Columbia Mall - Elkridge	Columbia Medical Practice Medical Plan; Elkridge	2	6:00	18:00	23	2.76	25.76	255	6,569
Saturday									
Columbia Mall - Elkridge		2	8:00	18:00	19	2.28	21.28	52	1,107
Route 410 Expansion Total									7,675

* Represents the total annual hours of the route. The incremental hours for the expansion to Elkridge are 3,665 hours annually.

Route 411 – Columbia Mall to Kings Contrivance Village Center

Service Description

- Route will be adjusted as the Crescent develops.
- Ride time from Columbia Mall to Kings Contrivance Village Center will be approximately 20 minutes.



Service Days



Service Span

AM														PM																					
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
Monday - Friday														Phase 1 & 2																					
Saturday														Phase 1 & 2																					
Sunday														Phase 1 & 2																					

Service Frequency

	Phase 1	Phase 2
Monday - Friday		
AM Peak & PM Peak	every 60 minutes	every 60 minutes
Midday	every 60 minutes	every 60 minutes
Saturday		
Daytime	every 120 minutes	every 60 minutes
Evening	-	-
Sunday		
Daytime	every 120 minutes	every 120 minutes
Evening	-	-

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday - Friday									
Columbia Mall- Kings Contrivance Village Center	Crescent	1	6:00	17:50	11.83	1.42	13.25	255	3,380
Saturday									
Columbia Mall- Kings Contrivance Village Center <i>(Interline with 406)</i>	Crescent	1	8:00	17:50	9.83	1.18	11.01	52	286
Sunday									
Columbia Mall- Kings Contrivance Village Center <i>(Interline with 406)</i>	Crescent	1	8:00	17:50	9.83	1.18	11.01	55	303
Phase 1: Route 411 Total									3,969

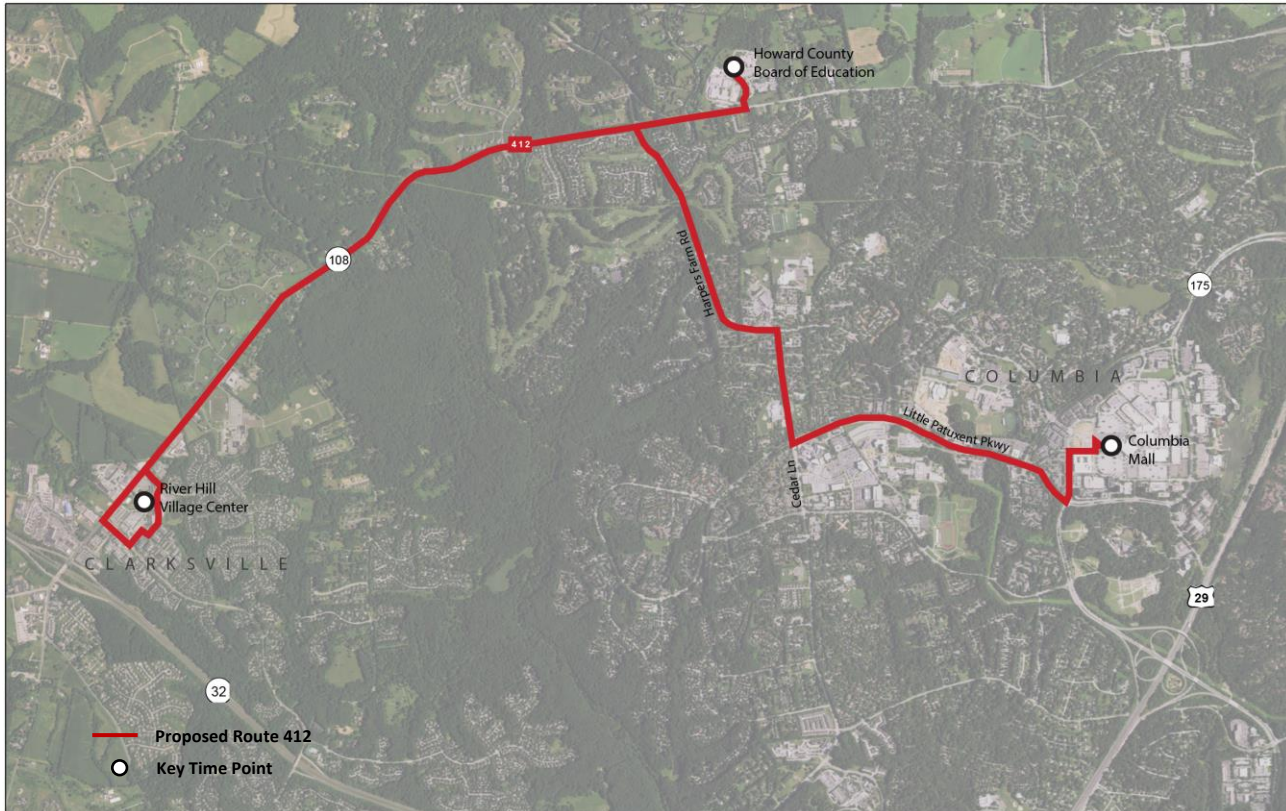
PHASE 2

Monday - Friday									
Columbia Mall- Kings Contrivance Village Center	Crescent	1	6:00	17:50	11.83	1.42	13.25	255	3,380
Saturday									
Columbia Mall- Kings Contrivance Village Center	Crescent	1	8:00	17:50	9.83	1.18	11.01	52	573
Sunday									
Columbia Mall- Kings Contrivance Village Center <i>(Interline with 406)</i>	Crescent	1	8:00	17:50	9.83	1.18	11.01	55	303
Phase 2: Route 411 Total									4,255

Route 412 – Columbia Mall to Clarksville (expansion route)

Service Description

- Will also serve the Howard County Board of Education.
- Ride time from Columbia Mall to River Hill Village Center will be approximately 30 minutes.



Service Days



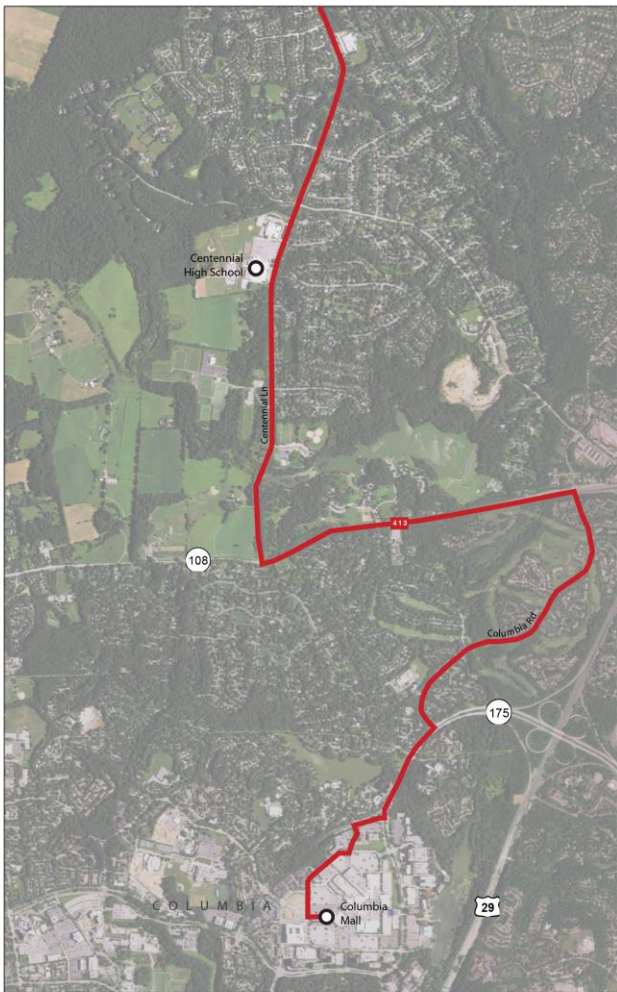
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Clarksville	Howard County Board of Education, River Hill Village Center	1	5:55	22:00	16	1.92	17.92	255	4,570
Saturday									
Columbia Mall- Clarksville	Howard County Board of Education, River Hill Village Center	1	8:00	17:55	10	1.20	11.20	52	582
Route 412 Total									5,152

Route 413 – Columbia Mall to Turf Valley/Waverly Woods (expansion route)

Service Description

- Waverly Woods Village Center, Turf Valley Towne Square, Goodwill, and Centennial High School will be served along the route.
- Ride time between Columbia Mall and Waverly Woods Village Center will be approximately 35 minutes.



Service Days



Service Span

AM													PM																										
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 90 minutes
Midday & Evening	every 90 minutes
Saturday	
Daytime	every 90 minutes
Evening	every 90 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



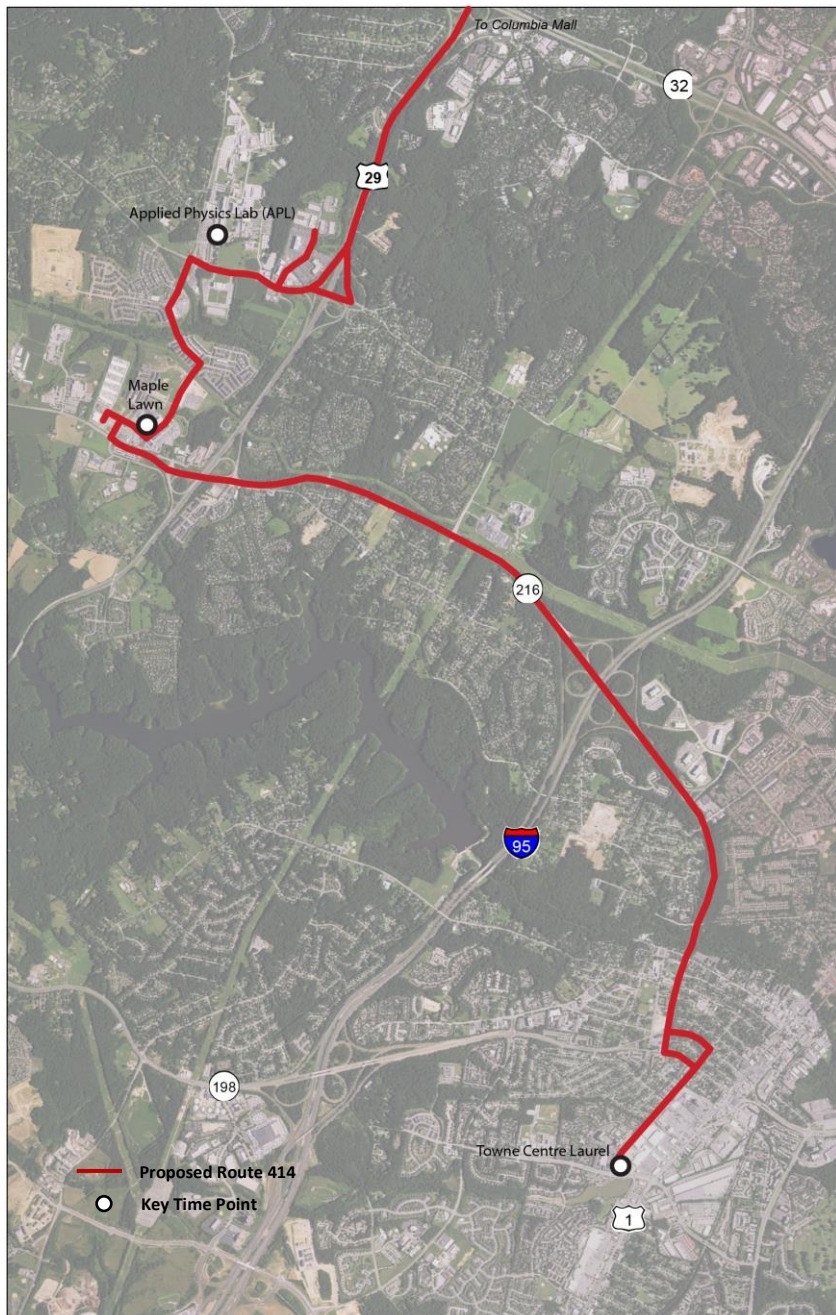
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall-Turf Valley/Waverly Woods Village Center	Goodwill, Centennial High School	1	6:00	19:20	13.33	1.60	14.93	255	3,808
Extension - Saturday									
Columbia Mall-Turf Valley/Waverly Woods Village Center	Goodwill, Centennial High School	1	7:30	19:20	11.83	1.42	13.25	52	689
Route 413 Total									4,497

Route 414 – Columbia Mall to Towne Centre Laurel via Maple Lawn (expansion route)

Route Description

- Serves APL and employment along Montpelier Rd. and Maple Lawn.
- Ride time from Columbia Mall to Towne Centre Laurel through Maple Lawn will be approximately 50 minutes.



Service Days



Service Span

AM														PM																						
5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
														Monday - Friday																						
														Saturday																						
														Sunday																						

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall - Towne Centre Laurel	MCIH, APL	2	6:05	20:00	28.00	3.36	31.36	255	7,997
Saturday									
Columbia Mall - Towne Centre Laurel	MCIH, APL	2	8:05	17:55	19.66	2.36	22.02	52	1,145
Route 414 Total									9,142

PRINCE GEORGE'S COUNTY/CITY OF LAUREL

Route 301 – West Laurel/Konterra to South Laurel via Town Centre Laurel

Service Description

- Service to be extended to Konterra and West Laurel.
- Ride time between West Laurel and the Villages of Montpelier will be approximately 45 minutes.



Service Days



Service Span

AM														PM																										
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00					

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 45 minutes
Midday & Evening	every 45 minutes
Saturday	
Daytime	every 45 minutes
Evening	every 45 minutes
Sunday	
Daytime	every 45 minutes
Evening	every 45 minutes

Number of Peak Vehicles



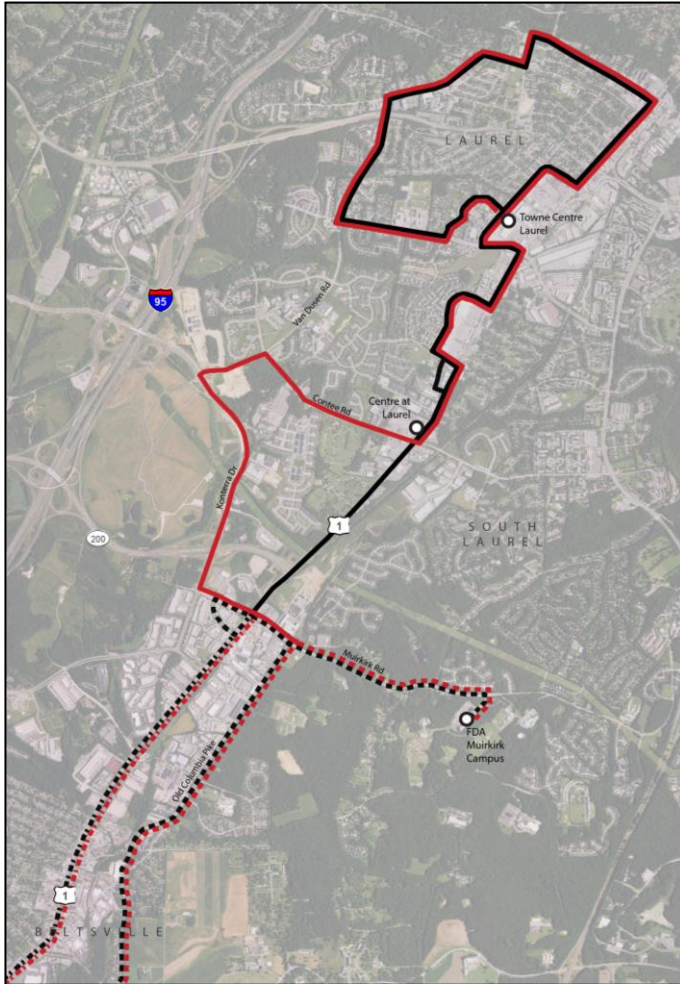
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
South Laurel- West Laurel	Park View at Laurel, Towne Center Laurel, Laurel Regional Hospital, Konterra, Switzer Lane	2	6:00	19:00	13	1.56	14.56	255	7,426
Saturday									
South Laurel- West Laurel	Park View at Laurel, Towne Center Laurel, Laurel Regional Hospital, Konterra, Switzer Lane	2	8:00	19:00	11	1.32	12.32	52	1,281
Sunday									
South Laurel- West Laurel	Park View at Laurel, Towne Center Laurel, Laurel Regional Hospital, Konterra, Switzer Lane	2	8:00	19:00	11	1.32	12.32	55	1,355
Route 301 South Laurel to West Laurel Total									10,062

Route 302 – Towne Centre Laurel to College Park Metro Station

Service Description

- Service will be extended to Konterra.
- Greenbelt Metro Station will be served on weekends only.
- Ride time from Towne Centre Laurel to College Park Metro Station will be approximately 45 minutes.



Service Days



Service Span

AM													PM																										
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 60 minutes

Number of Peak Vehicles



Service Characteristics

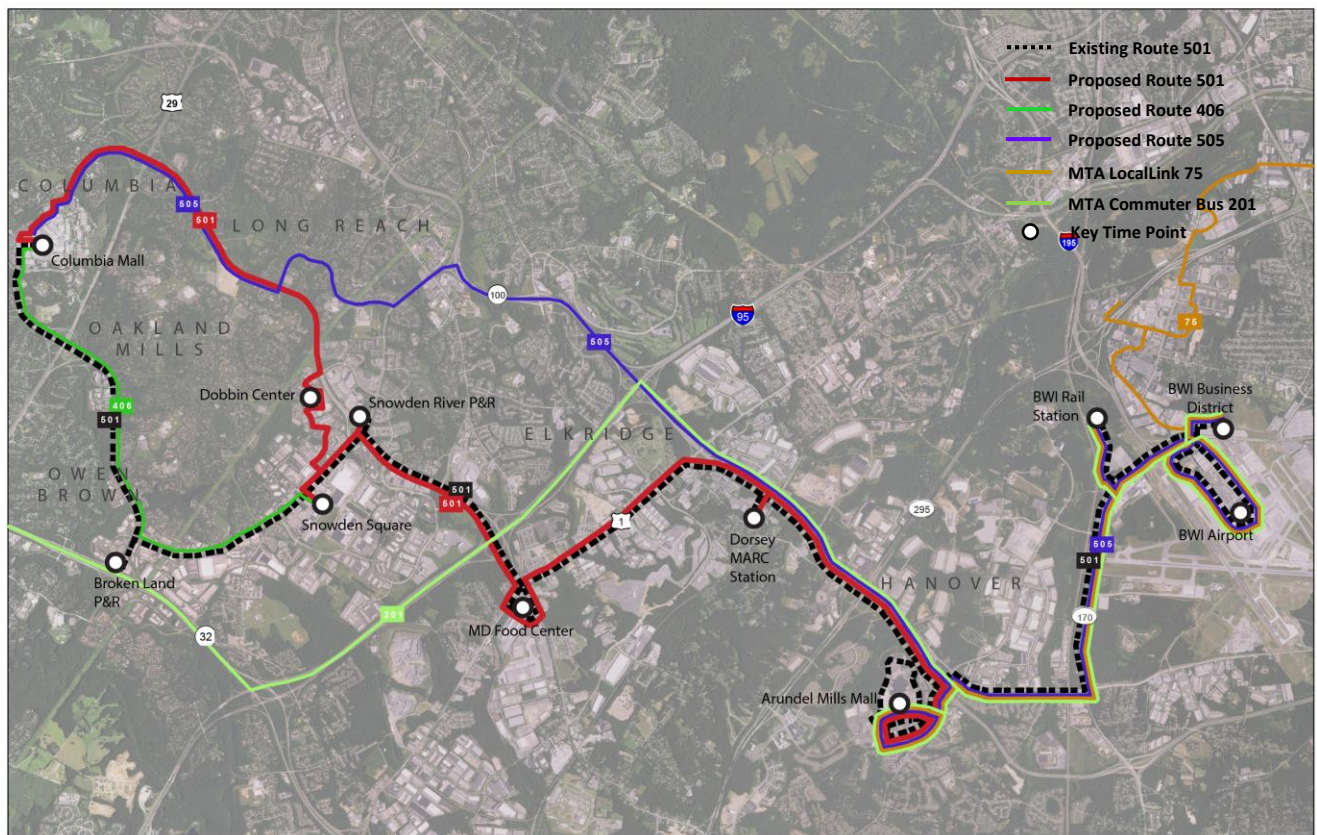
Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Towne Centre Laurel- College Park Metro Station	Laurel Lakes Centre, Contee Crossing, Konterra, FDA Muirkirk Campus, Muirkirk MARC, USDA	3	6:00	21:15	15.25	1.83	17.08	255	13,066
Saturday									
Towne Centre Laurel- College Park Metro Station	Laurel Lakes Centre, Contee Crossing, Konterra, FDA Muirkirk Campus, Muirkirk MARC, USDA, Greenbelt Metro Station	3	9:00	19:15	10.25	1.23	11.48	52	1,791
Sunday									
Towne Centre Laurel- College Park Metro Station	Laurel Lakes Centre, Contee Crossing, Konterra, FDA Muirkirk Campus, Muirkirk MARC, USDA, Greenbelt Metro Station	2	10:00	18:45	8.75	1.05	9.8	55	1,078
Route 302 Towne Centre Laurel to College Park Metrorail Station Total									15,935

REGIONAL SERVICE

Route 501 – Columbia Mall to Arundel Mills Mall

Service Description

- Route 501 will no longer serve BWI airport.
- Not every bus will continue on to Arundel Mills Mall. Buses will turn around at the Snowden Square on every other run.
- Service to BWI airport from Columbia Mall will be served by Route 505.
- Ride time from Columbia Mall to Arundel Mills Mall will be approximately 50 minutes.



Service Days



Service Span

	AM												PM																							
	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00

Service Frequency

	Phase 1		Phase 2
	Columbia Mall to Snowden Square	Snowden Square to Arundel Mills Mall	Entire Route
Monday - Friday			
AM Peak & PM Peak	every 30 minutes	every 60 minutes	every 30 minutes
Midday	every 30 minutes	every 60 minutes	every 30 minutes
Evening	every 60 minutes	every 120 minutes	every 60 minutes
Saturday			
Morning	every 60 minutes	every 120 minutes	every 60 minutes
Midday	every 30 minutes	every 60 minutes	every 30 minutes
Evening	every 60 minutes	every 120 minutes	every 60 minutes
Sunday			
Daytime	every 60 minutes	every 120 minutes	every 60 minutes
Evening	every 60 minutes	every 120 minutes	every 60 minutes

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- Arundel Mills Mall (Interlined with 407)	Dobbin Center, Snowden Square, MD Food Center, Dorsey MARC Station	3	5:55	22:55	42.54	5.11	47.65	255	12,150
Saturday									
Columbia Mall- Arundel Mills Mall (Interlined with 407)	Dobbin Center, Snowden Square, MD Food Center, Dorsey MARC Station	3	5:55	22:55	40.54	4.87	45.41	52	2,361
Sunday									
Columbia Mall- Arundel Mills Mall (Interlined with 407)	Dobbin Center, Snowden Square, MD Food Center, Dorsey MARC Station	1	8:00	19:55	17.88	2.15	20.02	55	1,101
Phase 1: Route 501 Total									15,612

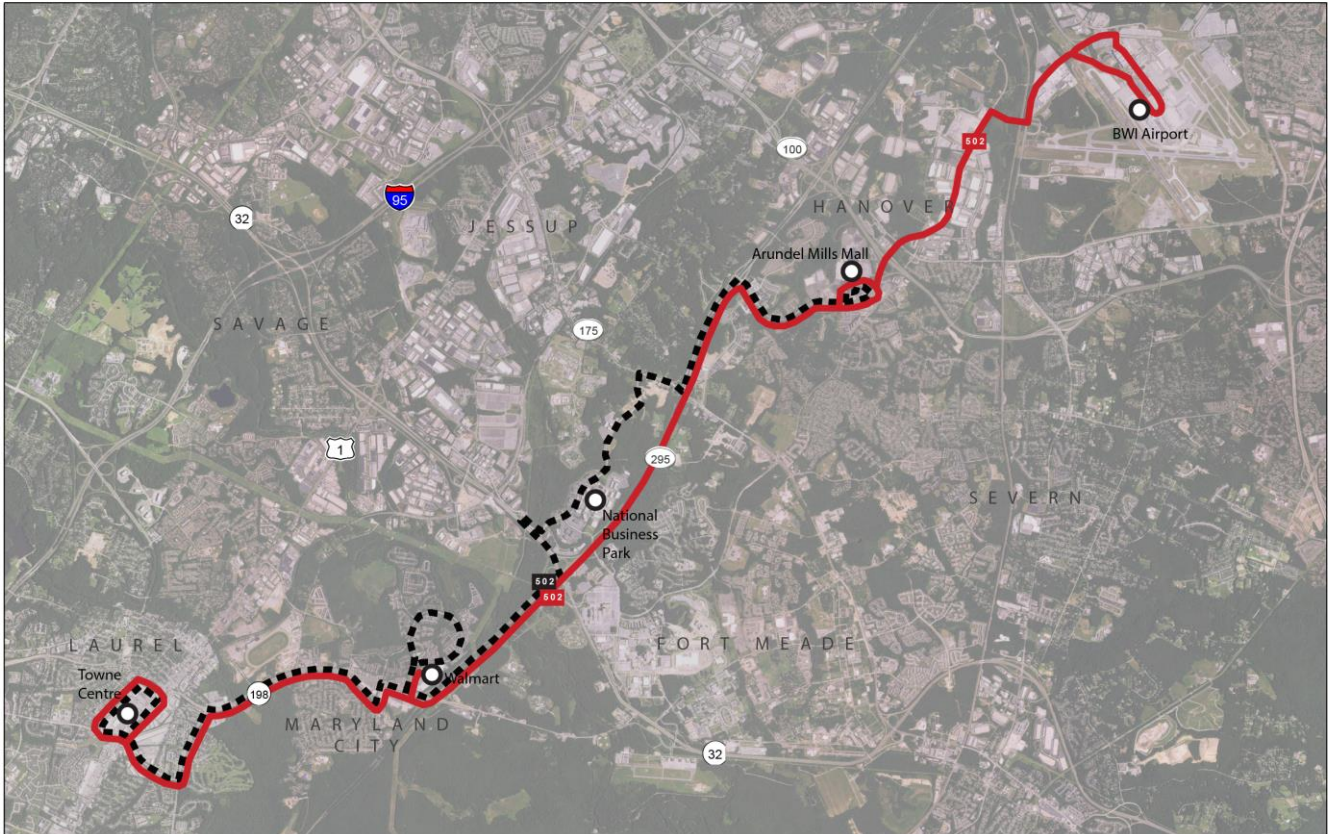
PHASE 2

Monday-Friday									
Columbia Mall- Arundel Mills Mall	Dobbin Center, Snowden Square, MD Food Center, Dorsey MARC Station	4	5:55	22:55	57.67	6.92	64.59	255	16,470
Saturday									
Columbia Mall- Arundel Mills Mall	Dobbin Center, Snowden Square, MD Food Center, Dorsey MARC Station	4	5:55	22:55	53.67	6.44	60.11	52	3,126
Sunday									
Columbia Mall- Arundel Mills Mall	Dobbin Center, Snowden Square, MD Food Center, Dorsey MARC Station	2	7:55	19:55	23.83	2.86	26.69	55	1,468
Phase 2: Route 501 Total									21,063

Route 502 – Towne Centre Laurel to BWI Airport

Service Description

- National Business Park will no longer be served.
- Loop around Russett Green will no longer be served.
- Route 502 will be extended to BWI Airport.
- Ride time from Towne Centre Laurel to BWI airport will be approximately 80 minutes.



- Existing Route 502
- Proposed Route 502
- Key Time Point

Service Days



Service Span

AM													PM																										
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

	Phase 1
Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 120 minutes
Evening	every 120 minutes
Sunday	
Daytime	every 180 minutes
Evening	every 180 minutes

Number of Peak Vehicles



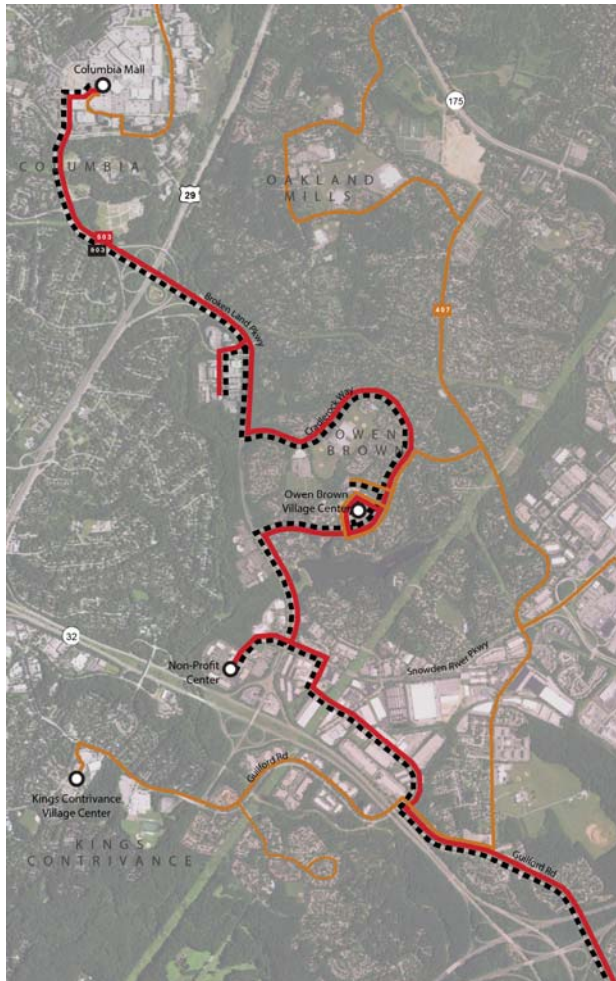
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Towne Centre Laurel- BWI Airport	Maryland City, Fort Meade, Arundel Mills, BWI MARC/Amtrak	3	6:00	22:45	16.75	2.01	18.76	255	14,351
Saturday									
Towne Centre Laurel- BWI Airport	Maryland City, Fort Meade, Arundel Mills, BWI MARC/Amtrak	2	9:00	18:00	9	1.08	10.08	52	1,048
Sunday									
Towne Centre Laurel- BWI Airport	Maryland City, Fort Meade, Arundel Mills, BWI MARC/Amtrak	1	10:00	19:45	8.75	1.05	9.8	55	539
Route 502 Towne Centre Laurel to BWI Airport Route Total									15,939

Route 503 – Columbia Mall to Towne Centre Laurel via Savage

Service Description

- Park View at Owen Brown will no longer be served by Route 503. It will be served by Route 407.
- Ride time from Columbia Mall to Towne Centre Laurel via Savage will be approximately 1:15 minutes.



Service Days



Service Span

AM											PM																								
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
											Monday - Friday																								
											Saturday																								
											Sunday																								

Service Frequency

	Phase 1
Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



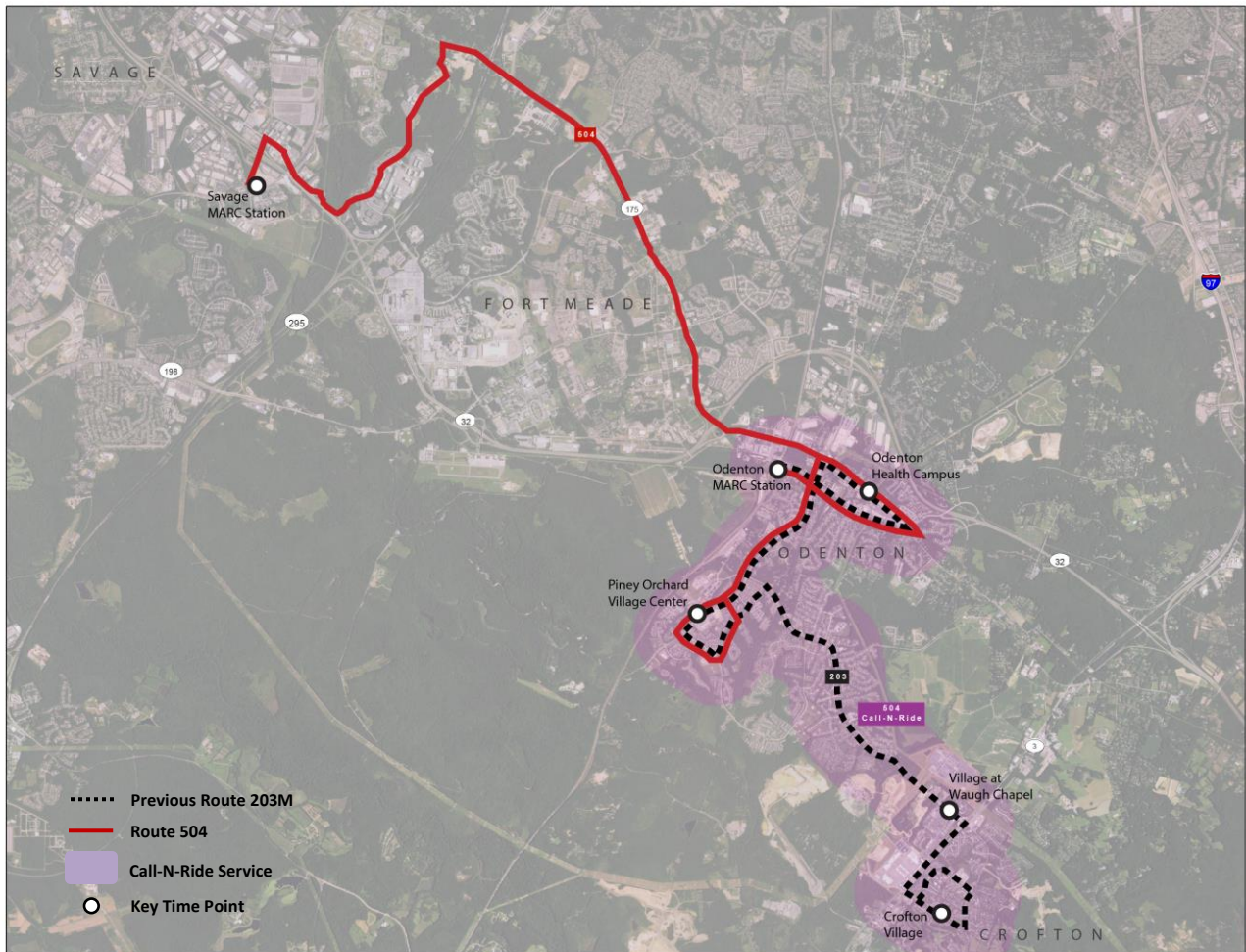
Service Characteristics

PHASE 1									
Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall-Towne Center Laurel	Owen Brown, Savage Mill	3	5:30	21:15	44.25	5.31	49.56	255	12,638
Saturday									
Columbia Mall-Towne Center Laurel	Owen Brown, Savage Mill	3	7:30	21:15	38.25	4.59	42.84	52	2,228
Sunday									
Columbia Mall-Towne Center Laurel	Owen Brown, Savage Mill	-	-	-	-	-	-	-	-
Phase 1: Route 503 Total									14,865
PHASE 2									
Monday-Friday									
Columbia Mall-Towne Center Laurel	Owen Brown, Savage Mill	5	5:30	23:15	62.25	7.47	69.72	255	17,779
Saturday									
Columbia Mall-Towne Center Laurel	Owen Brown, Savage Mill	5	7:30	21:15	58.25	6.99	65.24	52	3,392
Sunday									
Columbia Mall-Towne Center Laurel	Owen Brown, Savage Mill	2	8:00	20:00	24	2.88	26.88	55	1,478
Phase 2: Route 503 Total									22,649

Route 504 (Formerly 203M) – Savage MARC to Crofton Village

Service Description

- Previous Route 203M is replaced with a mid-day Call-N-Ride service. Service between Odenton, Piney Orchard, and Crofton will be served by the Call-N-Ride.
- Service between Odenton MARC and Piney Orchard Village Center is served by Route 504.
- Ride time between Savage MARC station and Piney Orchard Village Center will be approximately 50-55 minutes.



Service Days



Service Span

AM											PM																								
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00
											Mid-day Call-N-Ride											Monday - Friday													
											Mid-day Call-N-Ride											Saturday													
											Mid-day Call-N-Ride											Sunday													

Service Frequency

	504
Monday - Friday	
AM Peak & PM Peak	every 30 minutes
Midday (Call-N-Ride
Saturday	
Daytime	Call-N-Ride
Evening	-
Sunday	
Daytime	Call-N-Ride
Evening	-

Number of Peak Vehicles



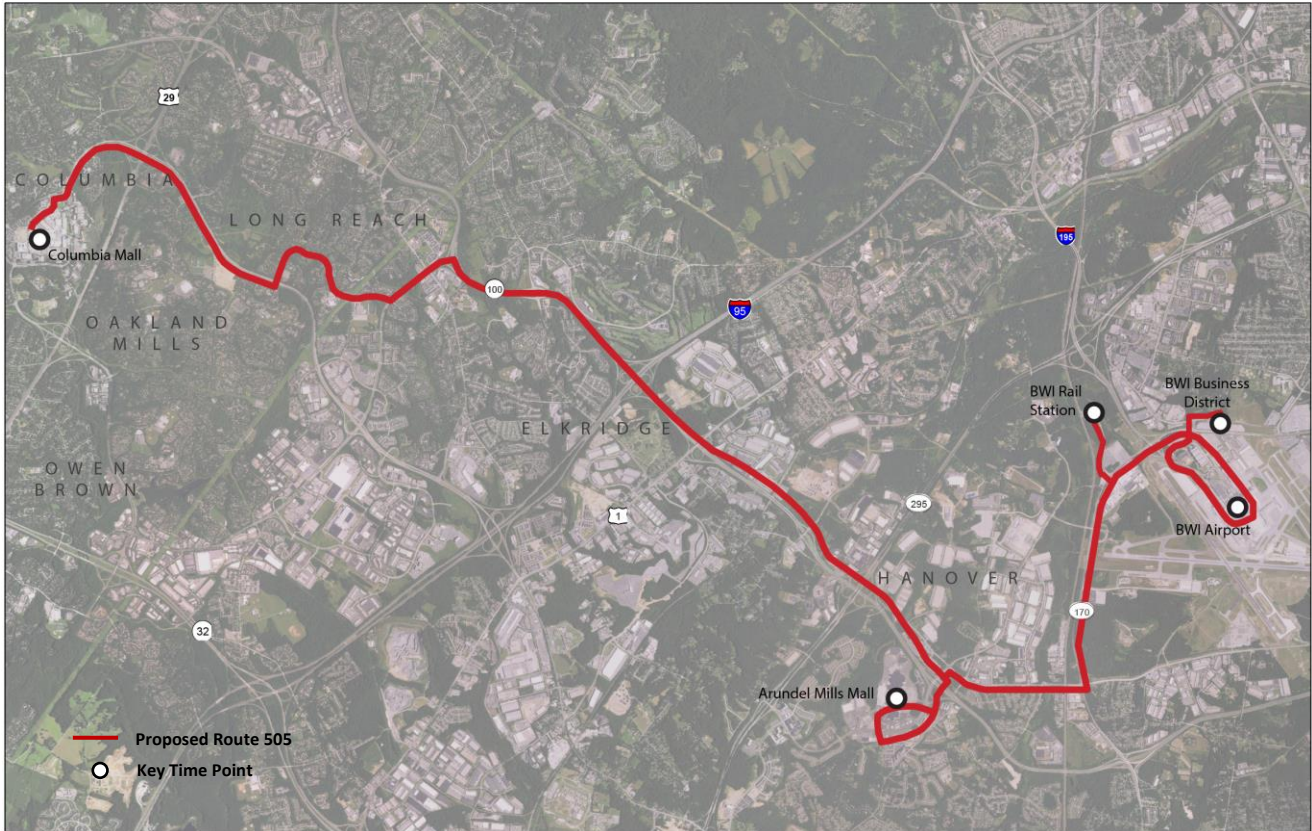
Service Characteristics

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Piney Orchard- Savage MARC	Odenton MARC, Fort Meade, National Business Park	4	5:43	10:30	4.78	0.57	5.36	255	5,464
		4	14:43	18:30	3.78	0.45	4.24	255	4,322
Odenton-Waugh Chapel	Piney Orchard, Odenton MARC	2	10:00	16:00	6	0.72	6.72	255	3,427
Saturday									
Odenton-Waugh Chapel	Piney Orchard, Odenton MARC	2	10:00	19:00	9	1.08	10.08	52	1,048
Sunday									
Odenton-Waugh Chapel	Piney Orchard, Odenton MARC	2	10:00	19:00	9	1.08	10.08	55	1,109
Route 504 Totals									15,371

Route 505 – Columbia Mall to BWI Airport

Service Description

- Provides a more direct connection to BWI airport.
- Ride time from Columbia Mall to BWI airport will be approximately 50 minutes.



Service Days



Service Span

AM													PM																							
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30
													Monday - Friday																							
													Saturday																							
													Sunday																							

Service Frequency

	Phase 1
Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday	every 60 minutes
Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	every 60 minutes
Evening	every 60 minutes

Number of Peak Vehicles



Service Characteristics

PHASE 1

Origin/ Destination	Major Intermediate Points	Peak Number of Buses	Proposed Start (A)	Proposed End (A)	Number of Proposed Hours (B)	Deadhead (12%)	Daily Hours	Days of Operation	Annual Hours
Monday-Friday									
Columbia Mall- BWI Airport	Long Reach Village Center, Arundel Mills Mall, BWI Rail Station	2	5:40	23:15	34.42	4.13	38.55	255	9,829
Saturday									
Columbia Mall- BWI Airport	Long Reach Village Center, Arundel Mills Mall, BWI Rail Station	2	5:40	23:15	34.42	4.13	38.55	52	2,004
Sunday									
Columbia Mall- BWI Airport	Long Reach Village Center, Arundel Mills Mall, BWI Rail Station	2	7:05	19:55	25.67	3.08	28.75	55	1,581
Phase 1: Route 505 Total									13,415

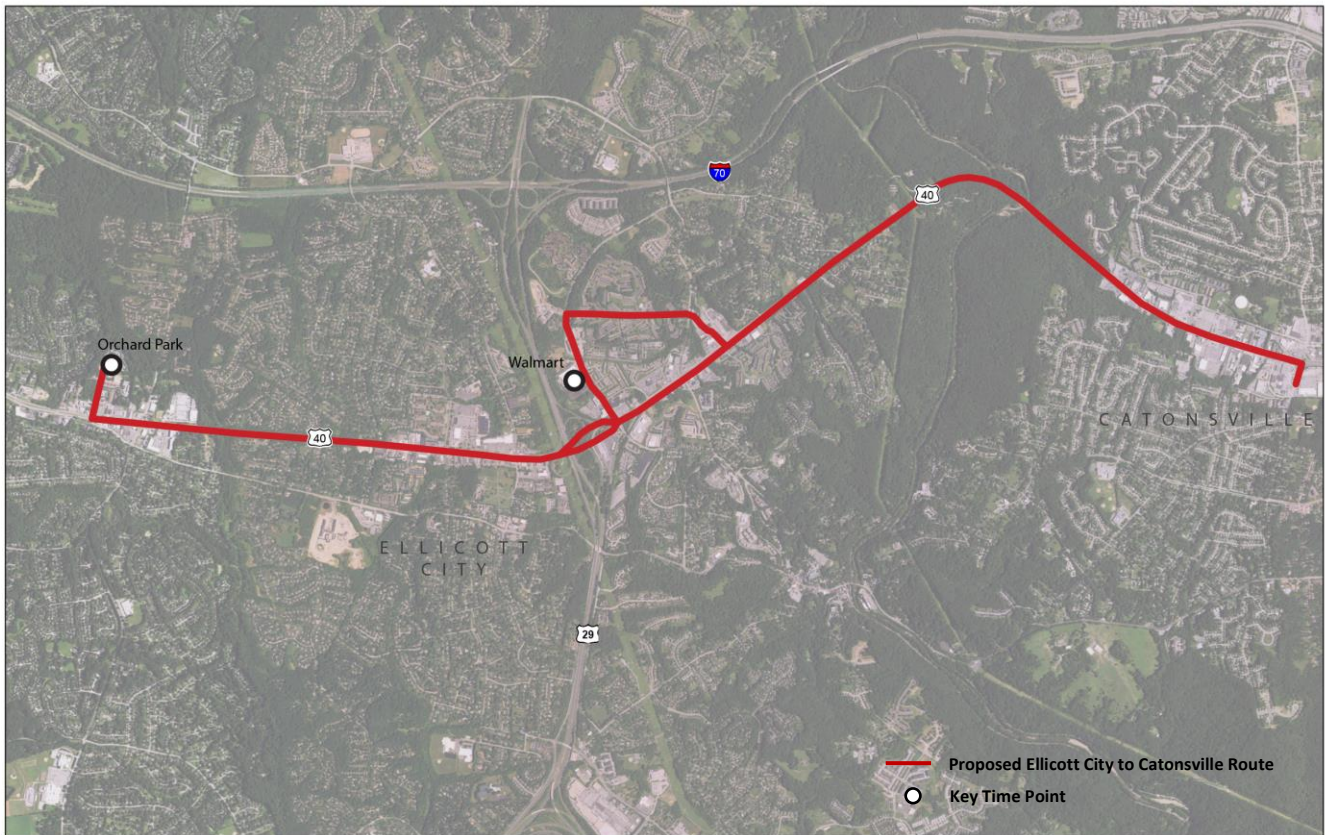
PHASE 2

Monday-Friday									
Columbia Mall- BWI Airport	Long Reach Village Center, Arundel Mills Mall, BWI Rail Station	4	5:40	23:55	57.50	6.9	64.40	255	16,422
Saturday									
Columbia Mall- BWI Airport	Long Reach Village Center, Arundel Mills Mall, BWI Rail Station	4	5:40	23:55	53.50	6.42	59.92	52	3,116
Sunday									
Columbia Mall- BWI Airport	Long Reach Village Center, Arundel Mills Mall, BWI Rail Station	2	7:05	20:55	25.67	3.08	28.75	55	1,581
Phase 2: Route 505 Total									21,119

Ellicott City to Catonsville*

Service Description

- Serves the Walmart in Ellicott City, Orchard Park, Normandy Shopping Center, and Town and Country.
- Connects with MTA bus service in Catonsville.
- Ride time from Orchard Park in Ellicott City to Catonsville is approximately 30 minutes.



* Potential MTA route. Because the service goes beyond the RTA jurisdictions' boundaries, service would need support from MTA and Baltimore County.

Service Days



Service Span

AM													PM																										
5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00	11:30	12:00	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00	5:30	6:00	6:30	7:00	7:30	8:00	8:30	9:00	9:30	10:00	10:30	11:00				

Service Frequency

Monday - Friday	
AM Peak & PM Peak	every 60 minutes
Midday & Evening	every 60 minutes
Saturday	
Daytime	every 60 minutes
Evening	every 60 minutes
Sunday	
Daytime	-
Evening	-

Number of Peak Vehicles



PHASED IMPLEMENTATION

The individual route proposals constitute the basic building blocks of the TDP, but there is a need to combine them into a phased implementation plan that reflects the interdependencies among the routes and services, and is potentially implementable in terms of funding. Under the current organizational structure, each of the jurisdictions is a separate grant recipient, responsible for grants management and compliance. Each jurisdiction has a different history of providing funding for transit in the central Maryland region, and each will have its own budget for transit in the coming years. For that reason, the phased implementation is presented here as separate phased implementation plans for each jurisdiction. A combined regional table is also presented, although it should be noted that inclusion in the regional table does not necessarily mean that the service would be operated by the RTA.

Howard County

The fixed-route plan for Howard County is presented as two phases, and in addition there are four potential expansion routes. Phase I is a comprehensive restructuring of the routes currently providing coverage in the County, with a goal of shortening routes and increasing frequencies, largely by having multiple routes serve many of the same stops on schedules that are offset to provide higher frequencies (interlining). Because of the use of the interlining and increased transfer opportunities that allow coverage with fewer long meandering routes, it would be most efficient and understandable to the public to implement this phase at one point in time. It will require an increase in operating funds, and the fixed-route fleet will need to be expanded by three vehicles. The capital costs of fleet replacement and expansion are addressed later in this chapter. Phase II builds upon the first phase, adding service. The four expansion routes are essentially independent projects, and the timing of implementation is dependent on local needs and funding availability.

Phase 1: Restructuring: Buses and Hours

Table 6-1 summarizes the number of buses and the estimated service hours required to implement the Phase 1 fixed-route changes that need to be implemented concurrently. The number of buses is the total required for each route. The revenue hours needed to operate each route are taken from the individual route plans presented earlier in this chapter.

Table 6-1: Howard County Phase 1 Buses Required and Service Hours by Route

Route	Origin-Destination	Total Buses Required	Total Annual Hours
401	Columbia Mall - Clary's Forest	2	10,895
402	Ellicott City - Snowden Square	2	9,271
403	Columbia Mall – Dorsey Search Village Center	1	5,397
404	Columbia Mall - Hickory Ridge	1	5,139
405	Columbia Mall - Ellicott City	2	10,675
406	Columbia Mall - Columbia Gateway	1	3,873
407	Columbia Mall - Kings Contrivance Village Center	3	16,160
408	Columbia Mall – Sherwood Crossing	1	6,517
409	Towne Centre Laurel to Elkridge Shopping Center	3	13,245
410	Columbia Mall - Long Reach Village Center	1	4,010
411	Columbia Mall - Kings Contrivance Village Center	1	3,969
501	Columbia Mall - Arundel Mills Mall	3	15,612
503	Columbia Mall – Towne Centre Laurel via Savage	3	14,865
505	Columbia Mall - BWI Airport	2	13,415
Total			133,043

Phase 2: Frequency and Span Improvements: Buses and Hours

The Phase 2 improvements as a package represent the build-out of the current plan for the existing Howard County service area. As can be seen in Table 6-2, the service hours by route vary considerably from the Phase 1 level, with major increases in the service hours for Routes 404, 407, 409, 501, 503 and 505, representing frequency improvements. The increase to 171,788 service hours represents a 30% increase in service levels over Phase 1.

Some of these expansions could be implemented as incremental improvements, once the Phase 1 restructuring has been completed. However, this would depend on budget availability in subsequent years.

Table 6-2: Howard County Phase 2 Buses Required and Hours by Route

Route	Origin-Destination	Total Number of Buses	Total Annual Hours
401	Columbia Mall-Clary's Forest	2	11,096
402	Ellicott City-Snowden Square	2	10,074
403	Columbia Mall – Dorsey Search Village Center	1	5,813
404	Columbia Mall - Hickory Ridge	2	9,611
405	Columbia Mall - Ellicott City	2	10,788
406	Columbia Mall – Columbia Gateway	1	4,411
407	Columbia Mall - Kings Contrivance Village Center	4	21,434
408	Columbia Mall – Sherwood Crossing	1	6,517
409	Towne Centre Laurel – Elkridge Village Center	4	19,595
410	Columbia Mall - Long Reach Village Center	1	4,010
411	Columbia Mall - Kings Contrivance Village Center	1	4,255
501	Columbia Mall - Arundel Mills Mall	4	21,063
503	Columbia Mall – Towne Centre Laurel via Savage	5	22,649
505	Columbia Mall - BWI Airport	4	21,119
Total			172,435

Howard County Expansion Routes: Buses and Hours

Four routes have been proposed for new coverage in Howard County:

- 410 Columbia Mall to Elkridge (expansion of 410 Columbia Mall to Long Reach)
- 412 Columbia Mall to Clarksville
- 413 Columbia Mall to Turf Valley/Waverly Woods
- 414 Columbia Mall to Laurel MARC/Towne Centre via APL and Maple Lawn

Prioritization and phasing will need to be determined based on funding availability. The more direct connection between Columbia and Elkridge is supported by the relatively high level of regional commuting evident in the BMC demand model results; the Clarksville route is the return of a linkage that previously existed and responds to interest in transit from the Village of River Hill and Howard County Public Schools; the Turf Valley route serves a residential and employment growth area. The 414 would provide the first transit link to the County's largest employer, the Johns Hopkins Applied Physics Laboratory (APL), and to the Maple Lawn mixed-use community, which is close to buildout and includes a substantial residential population, much of it at higher densities. APL participated in several TDP meetings and is very interested in transit alternatives to service its campus. The extension of this route to connect with the MARC Camden Line in Laurel would provide enhanced commuting opportunities in both directions.

Table 6-3 presents the number of buses required and the service hours for each of the expansion routes. It includes a line that is a place-holder for the associated ADA paratransit service requirements. Unlike the Phase 1 and Phase 2 expansions which essentially serve areas that already have ADA complementary paratransit, the expansion areas are new coverage, and there is a need to serve the ADA eligible population within $\frac{3}{4}$ of a mile of these new fixed-routes with complementary paratransit. Estimating paratransit demand for small areas, at an undefined point in the future is difficult, so to err on the side of caution an additional 15% in service hours is included and used in the subsequent estimate of costs.

Table 6-3: Howard County Expansion Routes Number of Buses and Service Hours

Route	Origin-Destination	Number of Buses	Annual Fixed-Route Hours	15% ADA Hours
410	Columbia Mall –Long Reach: Extension to Elkridge	2	3,665 (Incremental)	550
412	Columbia Mall - Clarksville	1	5,152	773
413	Columbia Mall – Turf Valley/Waverly Woods	1	4,497	675
414	Columbia Mall – Towne Centre Laurel /MARC via Maple Lawn	2	9,142	1,371
Total Hours			22,456	3,369

Estimated Costs—Howard County

Table 6-4 presents the estimated operating costs in 2017 dollars. For the base service, the costs are presented using projected FY 2018 RTA fully-allocated average cost rates of \$75.43 per service hour for fixed route service. The hours shown include the 12% allowance for deadhead and pre/post trip inspections as shown in the individual route tables above. These base rates include the management fee spread over the number of FY 2018 service hours.

However, because the management structure is already in place, and has the capacity to administer the additional fixed-route service, the appropriate cost for the new services beyond the base is the incremental average hourly rate for fixed-route service of \$58.06. In Table 6-4 the incremental hours of the planned services (above and beyond existing service) are separated and costed at the \$58.06 per hour rate to present an estimate of the incremental costs of the TDP proposed expansions. The initial Phase 1 restructuring has an incremental annual operating cost of \$1,367,081 for a total annual fixed-route operating budget of \$9,626,439. Full implementation of Phase 2 adds \$2,287,100 resulting in a total fixed-route operating budget of \$11,913,539. The expansion routes are each presented separately, along with additional ADA service hours are included for the expansion routes at the current

average cost per hour of \$91.15. Three additional paratransit vehicles are included in the capital plan to address this potential need. All of these operating costs are the full cost, and do not include any potential federal/state grant funding.

It should be noted that under the RTA MOU, the 409, the 501, the 503 and the 505 routes cross-jurisdictional lines, and the operating costs would be shared based on the revenue hours in each jurisdiction, so the actual incremental costs would not be quite as high.

Table 6-4: Howard County Fixed-Route Operating Costs

	Total Service Hours	Incremental Expansion Hours	Hourly Rate	Incremental Cost	Incremental ADA for Expansion Routes ¹	Expansion Route Costs	Total Cost: Base Plus Incremental
Existing Base Service Costs	109,497	n/a	75.43	n/a			\$8,259,359
Phase I Incremental Costs (over Base Service)	133,043	23,546	58.06	\$1,367,081			\$9,626,439
Phase 2 Incremental Costs (over Phase 1)	172,435	39,392	58.06	\$2,287,100			\$11,913,539
Expansion Route Costs							
Columbia Mall-Elkridge		3,665	58.06	\$212,790	\$38,605	\$251,395	
Columbia Mall-Clarksville		5,152	58.06	\$299,125	\$54,257	\$353,382	
Columbia Mall-Turf Valley/Waverly Woods		4,497	58.06	\$261,096	\$47,378	\$308,474	
Columbia Mall-Town Centre Laurel via APL/Maple Lawn		9,142	58.06	\$530,785	\$96,230	\$627,015	
Sub-Total: Expansion Routes		22,456	58.06	\$1,303,795	\$236,470	\$1,540,265	
Total Potential Cost: Phase 1, Phase 2 and Expansion Routes							\$13,453,804

(1) Calculated based on 15% additional hours times estimated incremental cost of RTA ADA paratransit of \$70.19 per service hour.

Anne Arundel County

TDP recommendations for Anne Arundel County address improvements in the existing RTA routes with regard to frequency and span of service, some revisions in routing on those routes, and a substantial amount of proposed new service to provide new connections between communities in the County. Because much of the County is developed at relatively low densities, a new kind of service is proposed to provide local community access within communities and at the same time provide first-mile/last-mile connections to MTA, RTA and proposed new fixed-route links.

Demand-Response Zones—Call N'Rides

The new services, named Call N'Rides, are community-based demand-response services, each operating in a limited area. Through telephone requests and phone apps transit riders would be able to summon a ride from their residence or place of employment to a stop where they could connect to fixed-route trunk lines, or to local jobs, shopping and medical services. The service design will vary somewhat in each Call N'Ride service area—some will be pure demand-response, while others will follow a basic route but deviate to pick up and drop off passengers. These services will be individually designed to connect to MTA, RTA and new fixed-routes.

The new county linkages are designed to complement the existing MTA and RTA services, primarily by providing new internal connections between activity centers: Annapolis to BWI and Arundel Mills; Anne Arundel Community College/Severn to Odenton and Fort Meade; Crofton to Annapolis, Glen Burnie and Bowie. The overall vision is the creation of a connected network that would allow transit users access to employment and services.

South County

Currently the South County is served by the demand-response van services now operated by the Office of Transportation. This service is provided to persons age 55 and above, and to persons with disabilities age 18 and above. The service is weekday only, and is arranged by calling the County to schedule trips. Priority is given to medical trips and access to Senior Centers. There is no fare, and all vehicles are accessible. Seniors may also use the County's taxi voucher program to purchase taxi trips at a discounted rate, though the rural nature and long distances of trips serving the southern part of the County may make that a less feasible option than in the more densely populated areas.

In previous TDPs recommendations were made to operate route deviation services in the south County, using rural transit funding provided by the MTA. A vehicle was purchased specifically for this service, but there was very limited ridership and the service was discontinued. In this TDP several areas of the south county were identified as having populations with transit needs, primarily in the Deale, Shadyside and Wayson's Corner areas.

Based on both the density and percentage of persons with transportation needs, the relative need score for these areas is considered low compared to the rest of the County. This area also lacks employment centers.

Given the low density and relatively low need, the approach taken in this TDP is to continue to implement demand-response service, marketing its availability to south County residents, monitor ridership, and based on evidence of usage potentially open up the service to the general public for a fare in a later phase. If a pattern of use is identified, a south county Call N'Ride area or flexible route could potentially be developed as the County gains experience with the Call N'Rides in the more densely populated parts of the County.

Anne Arundel County: Phases 1 to 5

The proposed phasing (Table 6-5) is designed to spread the cost of developing this transit network over at least five phases, though it could actually become a ten-year plan by splitting the phases. The initial phase is designed to improve the existing RTA services funded by the County, followed by implementation of a number of Call N'Ride zones that will connect to existing MTA services including light rail. The third phase implements the connection between Annapolis and BWI/Arundel Mills, along with a connecting Call N'Ride in the south Glen Burnie area. The fourth phase is a cross-county connection from the Anne Arundel Community College to Fort Meade, and the final phase links Crofton to Annapolis, Glen Burnie and Bowie, supported by a local Crofton Call N'Ride.

For the new fixed-route service areas, there will be an increase in the service for which ADA complementary paratransit is required. The existing routes are already served by RTA ADA complementary paratransit, and the Call N'Ride areas are considered demand-response services not requiring ADA complementary paratransit, so there is no additional ADA budgeted for the first two phases. The ADA service cost is estimated as potentially requiring additional service hours equal to 15% of the fixed-route total.

Table 6-5: Anne Arundel County Implementation Phasing by Route and Hours

Route	Peak Buses	Annual
Phase 1: Improve Existing Services		Hours
Route 202 Service Alternative	3	20,811
Route 504 Service Alternative	4	15,371
Route 201 Service Alternative	3	15,477
Phase 1: Sub Total		51,659
Phase 2: Call N'Rides		
Riviera Beach Call N'Ride Service Alternative	2	8,707
Patapsco Light Rail Station to Glen Burnie District Court Call N'Ride Service Alternative	2	8,707
Patapsco Plaza-Cromwell Light Rail Station Call N'Ride Service Alternative	2	9,816
Glen Burnie Call N'Ride Service Alternative	2	9,816
Phase 2: Call N'Rides		37,046
Phase 3: New Route Connections		
Annapolis to Arundel Mills/BWI Route Alternative	3	20,766
South Glen Burnie Call N'Ride Service Alternative	2	9,816
ADA Service-15% of hours of New Fixed-Route Service		3,115
Phase 3: New Route Connections		33,696.90
Phase 4: New Route Connections		
Anne Arundel Community College-NSA Route Service Alternative	3	11,138
Gold	3	15,920
ADA Service-15% of hours of New Fixed-Route Service		4,059
Phase 4: New Route Connections		31,117

Phase 5: Crofton/Waugh Chapel Connections		
Crofton Park and Ride to Annapolis Mall Route Service Alternative	4	12,134
Crofton Call N'Ride Service Alternative	2	8,707
Bowie Town Center to Cromwell Light Rail Station Route Alternative	3	14,724
ADA Service-15% of hours of New Fixed-Route Service		4,029
Phase 5: Crofton/Waugh Chapel Connections		39,594
TOTAL: All Phases		193,113

Anne Arundel Operating Costs

Table 6-6 presents an estimate of the operating costs associated with the five phase plan for transit development in Anne Arundel County. The phasing corresponds to that presented above. The existing level of fixed-route service is presented as the base case, with the estimated hourly cost of \$75.43, based on the fully-allocated RTA FY 2018 estimated operating cost for fixed-route service. Costs for new service hours beyond the current base are estimated at an incremental cost of \$58.06 per service hour for fixed-route service, based on data provided by the RTA that reflects the capacity of the existing management staff to operate additional services. For the Call N'Ride services and additional ADA, an incremental cost per hour of \$70.19 is used in the table. This figure is based on the same ratio of incremental to fully-allocated cost that exists for the fixed-route estimates. The actual cost of these services may be higher or lower, depending on the operator chosen by Anne Arundel County—if operated by the Office of Transportation demand response program, based on current contract costs, they could have a lower hourly cost. If operated by the RTA at its current fully-allocated paratransit rate, the costs per service hour could be higher. If operated by another contractor to the County, they could also differ depending on the bid process. In any event they are likely to be in this range, given that such demand-response services not only have the costs of the operator and the vehicle operation, but also the call center, reservations and dispatch staff.

Table 6-6: Anne Arundel County Fixed-Route Operating Costs

	Existing Base Service Hours	Incremental Expansion Hours	Hourly Rate	Incremental Operating Cost	Total Operating Cost: Base Plus Incremental
Existing Base Service Costs	24,083	n/a	\$75.43	n/a	\$1,816,581
Phase I: Costs (over Base Service)					
Fixed-Route		27,576	\$58.06	\$1,601,063	
Call N'Ride					
ADA Paratransit					
Phase 1 Sub-Total				\$1,601,063	\$3,417,643
Phase 2: Incremental Costs (over Phase 1)					
Fixed-Route					
Call N'Ride		37,046	\$70.19	\$2,600,259	
ADA Paratransit					
Phase 2 Sub-Total				\$2,600,259	\$6,017,902
Phase 3: Incremental Costs (over Phase 2)					
Fixed-Route		20,766	\$58.06	\$1,205,674	
Call N'Ride		9,816	\$70.19	\$688,985	
ADA Paratransit		3,115	\$70.19	\$218,642	
Phase 3 Sub-Total				\$2,113,301	\$8,131,203
Phase 4: Incremental Costs (over Phase 3)					
Fixed-Route		27,058	\$58.06	\$1,570,987	
Call N'Ride					
ADA Paratransit		4,059	\$70.19	\$284,901	
Phase 4 Sub-Total				\$1,855,889	\$9,987,092
Phase 5: Incremental Costs (over Phase 4)					
Fixed-Route		26,858	\$58.06	\$1,559,375	
Call N'Ride		8,707	\$70.19	\$611,144	
ADA Paratransit		4,029	\$70.19	\$282,796	
Phase 5 Sub-Total				\$2,453,315	\$12,440,407

Prince George's County

The RTA services provided in Prince George's County have also been included in the plan, as there are proposed changes to the three routes. Phasing has been proposed for these services, though it is recognized that the County is doing its own separate transit plan, and that could result in different proposed services and/or different priorities for implementation based on the County's assessment of all of its routes including The Bus and Metrobus.

Prince George's County Implementation Phasing

Table 6-7 presents the proposed Prince George's County routes, the changes are potentially implementable in two phases. Though it is a regional route with a majority of its length in Anne Arundel County, the 502 is included in the Prince George's list because it provides local service along Route 198, and then functions to link the Laurel area to Arundel Mills with few opportunities for boarding and alighting at other locations in Anne Arundel County. In an initial phase, the 502 is extended to BWI, providing a link to the airport from Laurel. Under the MOU between the jurisdictions, this service would be funded jointly by Anne Arundel and Prince George's, based on the service hours in each jurisdiction. Initially the current 301 and 302 routes are continued. A second phase includes some minor rerouting of the 302, and adds service to the 301 to provide a route from Laurel Towne Centre to Konterra and then on Switzer Lane to West Laurel. Combined with the existing 301 this offers an east-west connection across Laurel with connections to the north-south services at the Laurel Towne Centre transfer point. Implementation of this change could wait until there is additional development at Konterra.

Table 6-7: Prince George's County Hours and Costs by Route and Phase

Phase	Route	Origin-Destination	Number of Peak Buses	Annual Hours
1	502	Towne Centre Laurel – BWI Airport	3	15,909
2	302	Towne Centre Laurel – College Park Metrorail Station	3	15,876
2	301	South Laurel - West Laurel	2	9,988
Total				41,774

Prince George's County Operating Costs

Table 6-8 presents an estimate of the operating costs to implement the proposed changes. The existing base service includes the 301 service to South Laurel, the 502 to Arundel Mills, and the 302 to College Park. These base hours are shown at the current RTA estimated FY 2018 hourly cost of \$75.43 per service hour. The extensions of the 302 and the 502 are included at the incremental cost of \$58.06. No additional ADA hours are included because of the existing RTA ADA coverage, and the existing Metro Access ADA service area—a very limited portion of the west Laurel route is beyond the existing $\frac{3}{4}$ mile service area.

Table 6-8: Prince George's County Operating Costs

	Existing Base Service Hours	Incremental Expansion Hours	Hourly Rate	Incremental Operating Cost	Total Operating Cost: Base Plus Incremental
Existing Base Service Costs	24,436	n/a	\$75.43	n/a	\$1,843,207
Fixed-Route		17,338	\$58.06	\$1,006,644	
Total Operating Cost All Routes					\$2,849,852

CAPITAL PLAN

The Fleet

Previous chapters have documented that the large number of overage vehicles in the fleet has contributed to unreliable service, and that users want better buses and reliable service. Howard County has funded seven new heavy duty buses which are scheduled for delivery in December 2017. However, the lack of a complete Fleet Management Plan has hampered the ability of the RTA and the counties to be in compliance with state and federal requirements, or to obtain the funding needed to address this problem. While grant funding has helped the paratransit fleet, the last grant funding received for the fixed route fleet was in FY 2012.

In Chapter 4, an inventory of the RTA fleet was used as the basis for a description of the fleet in terms of ownership of the vehicles. Under the RTA's current organizational structure the four partners each have assets used by the system. Each is a separate grant recipient, and MTA compliance monitoring treats each as a separate jurisdiction. Under the MOU signed by all the partners, each jurisdiction can lease its assets to the RTA, replace them through mechanisms outside the RTA, or withdraw them. Consequently, in this TDP the fleet inventory and the fleet replacement and expansion plans are developed separately by jurisdiction, based on ownership, and assessed in terms of the number of peak vehicles needed to provide the services in or on behalf of that jurisdiction.

Despite the separate presentation, the partners could potentially meet the identified needs for the services they obtain from the RTA by sharing in the costs of a unified fleet that would be procured by a single entity, most likely Howard County. Cost shares can be based on the percentage of system service hours operated in each jurisdiction, as proposed by Howard County. However, there are some potential issues. It is not clear how Anne Arundel County, for example, could apply for grant funding for a share of a fleet titled to Howard County—as the RTA is not a legal entity it could not hold title or apply for the grants itself. Also, if an entity decided to leave the RTA, or withdraw its assets, it could be difficult to determine which assets had been funded by that entity—would it take some vehicles? Or would the other partners need to buy them out and retain the vehicles?

Fleet Plans—Replacement of Existing Vehicles and Expansion Vehicles

In the following sections, there are two tables for each jurisdiction. Each table uses data from the RTA Master Fleet inventory regarding the current fleet, ownership, service type, and projected year of eligibility for replacement. The replacement years are based on the MTA minimum life cycle for that type of vehicle:

- Heavy Duty Bus: 12 years or 500,000 miles,
- Medium Duty Bus: 8 years or 250,000 miles,

- Cutaway: 6 years or 200,000 miles, and
- Sedans: 5 years or 100,000 miles.

The format of the tables is based on the vehicle plan format developed for use in MTA procured fleet management plans. The shaded area covers vehicles that are eligible for replacement based on MTA guidelines, those not shaded are not yet eligible. There are two tables for each jurisdiction—one that deals with the replacement of the existing fleet, and the other shows the fleet plan that could potentially be used to replace existing vehicles and implement proposed expansions. These are illustrative—none of the partners has made a commitment to a particular level or order of expansion. This second table shows the level of resources that would be needed for full implementation—i.e. the investment required to replace all overage vehicles and initiate all the service proposals.

Howard County Fleet Plan

Table 6-9 presents the fleet replacement plan for the existing Howard County owned fleet, including both fixed-route and paratransit vehicles. The table is based on a 2017 draft Fleet Management Plan (FMP), but adjusted to reflect:

- The need for 23 vehicles for the peak, including the three needed for the 503. The 503 connects Columbia Mall and Towne Centre Laurel, and is 90% in Howard County.
- County acquisition (using county funds for a lease/purchase plan) of 7 heavy-duty buses (due for delivery at the end of CY 2017), and 8 cutaways for paratransit—these were not included in the draft FMP.
- Howard County proposed purchase of 6 heavy duty buses in FY 2019 under a lease/purchase plan using county funds.
- A desire to achieve the required maximum 20% spare ratio in the near term.
- The active paratransit fleet of 21 vehicles.

As can be seen, the proposed plan calls for a significant elimination of overage vehicles as the county-funded FY 2018 and FY 2019 vehicles are added to the fleet. This allows a significant reduction in the percentage of vehicles eligible for retirement, from 33% in FY 2017 to 0% in FY 2021, after an increase in FY 2018 as some additional vehicles age.

Table 6-9: Recommended Vehicle Replacement Plan for the Howard County Fleet-Existing Service

Fixed-Route Active Fleet (Howard County Owned)										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
1999	NABI	40	Heavy Duty	2	0	0	0	0	0	0
2002	Gillig	40	Heavy Duty	5	0	0	0	0	0	0
2004	Chevy C5500/Eldorado	30	Medium Duty	1	0	0	0	0	0	0
2006	Thomas	30	Heavy Duty	5	0	0	0	0	0	0
2008	Gillig	35	Heavy Duty	2	2	2	0	0	0	0
2009	Gillig	35	Heavy Duty	1	1	1	1	0	0	0
2010 (1)	International/Eldorado	30	Medium Duty	8	8	2	0	0	0	0
2011	Gillig	40	Heavy Duty	3	3	3	3	3	3	3
2013	International/Eldorado	30	Medium Duty	5	5	5	5	5	0	0
2017	BYD	40	Heavy Duty-E (2)	3	3	3	3	3	3	3
2018	TBD	30	Heavy Duty (3)		7	7	7	7	7	7
2019	TBD	35	Heavy Duty (4)			6	6	6	6	6
2020	TBD	30	Medium Duty				5	5	5	5
2021	TBD	35	Heavy Duty						3	3
2022	TBD	30	Medium Duty						3	3
2023	TBD	40	Heavy Duty							0
Total				35	29	29	30	29	30	30
Peak Vehicle Requirement-Base (includes 503)				23	23	23	23	23	23	23
Spare Ratio				34.29%	20.69%	20.69%	23.33%	20.69%	23.33%	23.33%
Number Eligible for Retirement				21	8	2	1	5	0	3
Percentage Eligible for Retirement				60%	28%	7%	3%	17%	0%	10%

(1) Eligible for Retirement based on mileage over 250,000.

(2) Delivered-In Service

(3) Ordered, on assembly line

(4) Budgeted

**Table 6-9: Recommended Vehicle Replacement Plan for the Howard County Fleet- Existing Service
(continued)**

Paratransit										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2014	Ford Fusion	16	Sedan	4	4	4	0	0	0	0
2014	International	32	Medium Duty	1	1	1	1	1	1	0
2014	Ford Phoenix	26	Cutaway	5	5	5	5	0	0	0
2015	Ford Fusion	16	Sedan	3	3	3	3	0	0	0
2015	Ford Phoenix	26	Cutaway	8	8	8	8	8	0	0
2016										
2017	Ford Phoenix	26	Cutaway	8	8	8	8	8	8	8
2018										
2019										
2020	TBD	16	Sedan				4	4	4	4
2021	TBD	16	Sedan					3	3	3
2021	TBD	26	Cutaway					5	5	5
2022	TBD	26	Cutaway						8	8
2023	TBD	32	Medium Duty							1
Total				29	29	29	29	29	29	29
Peak Vehicle Requirement-Base				24	24	24	24	24	24	24
Spare Ratio				17.24%	17.24%	17.24%	17.24%	17.24%	17.24%	17.24%
Number Eligible for Retirement				0	0	4	8	8	1	8
Percentage Eligible for Retirement				0.00%	0.00%	13.79%	27.59%	27.59%	3.45%	27.59%



 Vehicles in shaded areas are eligible for replacement.
 Blank cells mean no vehicles need to be purchased in that year.
 UNK: Unknown

Table 6-10 presents a fleet plan that encompasses the proposed expansions, beginning with Phase 1 in FY 2019, incremental additions to support Phase 2 (or for the expansion routes) between FY 2019 and FY 2022, with full implementation of Phase 2 in FY 2022, and then implementation of the expansion routes in FY 2023. The expansion routes could be implemented in the interim period, with Phase 2 at the end, but the end of period fleet size would be the same.



Table 6-10: Recommended Vehicle Replacement/Expansion Plan for Howard County Fleet-Phase 1, Phase 2, and Expansion

Fixed-Route Active Fleet (Howard County Owned)										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
1999	NABI	40	Heavy Duty	2	0	0	0	0	0	0
2002	Gillig	40	Heavy Duty	5	0	0	0	0	0	0
2004	Chevy C5500/Eldorado	30	Medium Duty	1	0	0	0	0	0	0
2006	Thomas	30	Heavy Duty	5	0	0	0	0	0	0
2008	Gillig	35	Heavy Duty	2	2	2	1	0	0	0
2009	Gillig	35	Heavy Duty	1	1	1	1	0	0	0
2010	International/Eldorado	30	Medium Duty	8	8	8	0	0	0	0
2011	Gillig	40	Heavy Duty	3	3	3	3	3	3	3
2013	International/Eldorado	30	Medium Duty	5	5	5	5	5	0	0
2017	BYD	40	Heavy Duty-E	3	3	3	3	3	3	3
2018	TBD	30	Heavy Duty		7	7	7	7	7	7
2019	TBD	35	Heavy Duty			6	6	6	6	6
2020	TBD	30	Medium Duty				9	9	9	9
2021	TBD	35	Heavy Duty					8	8	8
2022	TBD	30	Medium Duty						5	5
2023	TBD	40	Heavy Duty	0						7
Total				35	29	35	35	41	41	48
Peak Vehicle Requirement (1)				23	23	28	28	32	34	39
Spare Ratio				34.29%	20.69%	20.00%	20.00%	21.95%	17.07%	18.75%
Number Eligible for Retirement				21	8	8	1	5	0	3
Percentage Eligible for Retirement				60%	28%	23%	3%	12%	0%	6%

(1) FY 2018 is base existing service level, FY 2019 is Phase 1, 2020-2022 ramp up to full Phase 2, and FY 2023 is four expansion routes.

Table 6-10: Recommended Vehicle Replacement/Expansion Plan for Howard County-Paratransit Fleet-Phase 1, Phase 2, and Expansion (continued)

Paratransit										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2014	Ford Fusion	16	Sedan	4	4	4	0	0	0	0
2014	International	32	Medium Duty	1	1	1	1	1	1	0
2014	Ford Phoenix	26	Cutaway	5	5	5	5	0	0	0
2015	Ford Fusion	16	Sedan	3	3	3	3	0	0	0
2015	Ford Phoenix	26	Cutaway	8	8	8	8	8	0	0
2017	Ford Phoenix	26	Cutaway	8	8	8	8	8	8	8
2020	TBD	16	Sedan				4	4	4	4
2021	TBD	16	Sedan					3	3	3
2021	TBD	26	Cutaway					5	5	5
2022	TBD	26	Cutaway						8	8
2023	TBD	32	Medium Duty							1
2023	TBD	26	Cutaway							6
Total				29	29	29	29	29	29	35
Peak Vehicle Requirement-Base				24	24	24	24	24	24	29
Spare Ratio				17.24%	17.24%	17.24%	17.24%	17.24%	17.24%	17.14%
Number Eligible for Retirement				0	0	4	8	8	1	8
Percentage Eligible for Retirement				0.00%	0.00%	13.79%	27.59%	27.59%	3.45%	22.86%

 Vehicles in shaded areas are eligible for replacement.
 Blank cells mean no vehicles need to be purchased in that year.
 UNK: Unknown

Anne Arundel County

With fewer routes, and only two county-owned vehicles in the RTA fleet, the existing service fleet replacement table for Anne Arundel is much shorter as can be seen in Table 6-11. It includes replacements for six vehicles used in Anne Arundel service that are owned by Transit Management of Central Maryland (the RTA). Both sets of vehicles are eligible for retirement. The RTA provides ADA complementary paratransit for the RTA routes in Anne Arundel, and so a single paratransit vehicle is included to ensure that the Anne Arundel portion could meet its ADA obligations if the active RTA paratransit fleet (which is all owned by Howard County) was in use elsewhere.

The second table for Anne Arundel County presents the fleet requirements for a phased implementation of all the proposed TDP services. Table 6-12 assumes a phased implementation over five years. A combination of heavy duty and medium duty buses is proposed for the fixed-routes, and a substantial number of cutaways for the Call N Ride zone implementation. Because the new fixed-routes include an ADA obligation, and serve areas that currently have no transit, additional ADA paratransit vehicles are included in the out years when the new fixed-routes would be implemented. Depending on the integration and

utilization of the fleet used for seniors and persons with disabilities services, these additional ADA vehicles may or may not be needed.

Prince George's County

Table 6-13 presents a replacement plan for the five RTA vehicles owned by Prince George's County. They are eligible for retirement, and that has been included in FY 2019. With a peak vehicle requirement of five vehicles for the 301, 302 and 502 routes, a sixth vehicle provides a single spare. This keeps the spare ratio under the desired 20%, but it demonstrates the advantage of a combined fleet in that there may be occasions where a second spare is needed to maintain service. No ADA paratransit vehicles are included because Prince George's County does not own any of the RTA paratransit fleet, and because of the overlap with Metro Access ADA service.

However, in the expansion table for Prince George's, Table 6-14, additional vehicles are included for extending the 502 from Arundel Mills to BWI Airport (the miles are in Anne Arundel, but the purpose is to link Laurel to BWI), and for extension of the 301 from Laurel Towne Centre to Konterra and West Laurel.

Table 6-11: Recommended Vehicle Replacement/Expansion Plan for Anne Arundel County-Fixed Route and Paratransit Fleet-Base Service

Fixed-Route										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2002	Gillig	30	Heavy Duty	6	2	0	0	0	0	0
2010	International	32	Medium Duty	2	2	0	0	0	0	0
2017	TBD									
2018	TBD	30	Medium Duty		4	4	4	4	4	4
2019	TBD	35	Heavy Duty			3	3	3	3	3
2020	TBD	30	Medium Duty							
2021	TBD	35	Heavy Duty							
2022	TBD	30	Medium Duty							
2023	TBD	40	Heavy Duty							
Total				8	8	7	7	7	7	7
Peak Vehicle Requirement-Base				6	6	6	6	6	6	6
Spare Ratio				25.00%	25.00%	14.29%	14.29%	14.29%	14.29%	14.29%
Number Eligible for Retirement				8	4	0	0	0	0	0
Percentage Eligible for Retirement				100%	50%	0%	0%	0%	0%	0%
Paratransit										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2017	TBD									
2018	TBD	26	Cutaway	0	1	1	1	1	1	1
2019	TBD									
2020	TBD									
2021										
2022	TBD									
2023	TBD									
Total				0	1	1	1	1	1	1
Peak Vehicle Requirement-Base				1	1	1	1	1	1	1
Spare Ratio				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Number Eligible for Retirement				0	0	0	0	0	0	0
Percentage Eligible for Retirement				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%


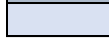
 Vehicles in shaded areas are eligible for replacement.
 Blank cells mean no vehicles need to be purchased in that year.
 UNK: Unknown

Table 6-12: Recommended Vehicle Replacement/Expansion Plan for Anne Arundel County-Fixed Route Fleet-Base Service plus Phased Expansions

Fixed-Route										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2002	Gillig	30	Heavy Duty	6	2	0	0	0	0	0
2010	International	32	Medium Duty	2	2	0	0	0	0	0
2017	TBD									
2018	TBD	30	Medium Duty		4	4	4	4	4	4
2019 (1)	TBD	35	Heavy Duty			8	8	8	8	8
2020 (2)	TBD	24	Cutaways				10	10	10	10
2021 (3)	TBD	24	Cutaways					3	3	3
2021 (3)	TBD	35	Heavy Duty					3	3	3
2022 (4)	TBD	30	Medium Duty						3	3
2023 (5)	TBD	35	Heavy Duty							4
2023 (5)	TBD	24	Cutaways							2
Total				8	8	12	22	28	31	37
Peak Vehicle Requirement-Base				6	6	10	18	23	26	30
Spare Ratio				25.00%	25.00%	16.67%	18.18%	17.86%	16.13%	18.92%
Number Eligible for Retirement				8	4	0	0	0	0	0
Percentage Eligible for Retirement				100%	50%	0%	0%	0%	0%	0%

- (1) Improved 201 and 202
- (2) Expansion-Four Call N'Rides
- (3) Expansion-Annapolis-Arundel Mills/BWI, South Glen Burnie Call N'Ride, Gold Route Frequency Improvement
- (4) Expansion-Anne Arundel Community College-Fort Meade
- (5) Expansion-Crofton Call N'Ride, Bowie-Crofton-Glen Burnie route, Crofton-Annapolis route.

Table 6-12: Recommended Vehicle Replacement/Expansion Plan for Anne Arundel County-Fixed Route Fleet-Base Service plus Phased Expansions (continued)

Paratransit (Not including former DOAD vehicles)										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2021	TBD	16	Cutaway					2	2	2
2022	TBD	16	Cutaway						2	2
2023	TBD	16	Cutaway							2
Total				0	0	0	0	2	4	6
Peak Vehicle Requirement-Base				0	0	0	0	2	3	5
Spare Ratio								0.00%	25.00%	16.67%
Number Eligible for Retirement								0	0	0
Percentage Eligible for Retirement								0.00%	0.00%	0.00%

Vehicles in shaded areas are eligible for replacement.
 Blank cells mean no vehicles need to be purchased in that year.
 UNK: Unknown



Table 6-13: Recommended Vehicle Replacement/Expansion Plan for Prince George's County-Fixed Route Fleet-Base Service

Fixed-Route										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2006	Thomas	30	Heavy Duty	5	5	0	0	0	0	0
UNK										
2017	TBD									
2018	TBD									
2019	TBD	30	Heavy Duty			6	6	6	6	6
2020	TBD	24	Cutaways							
2021	TBD	24	Cutaways							
2022	TBD	30	Medium Duty							
2023	TBD	35	Heavy Duty							
Total				5	5	6	6	6	6	6
Peak Vehicle Requirement-Base				5	5	5	5	5	5	5
Spare Ratio				0.00%	0.00%	16.67%	16.67%	16.67%	16.67%	16.67%
Number Eligible for Retirement				5	5	0	0	0	0	0
Percentage Eligible for Retirement				100%	100%	0%	0%	0%	0%	0%

 Vehicles in shaded areas are eligible for replacement.
 Blank cells mean no vehicles need to be purchased in that year.
 UNK: Unknown

Table 6-13: Recommended Vehicle Replacement/Expansion Plan for Prince George's County-Fixed Route Fleet-Base Service Plus Phased Expansions (continued)

Fixed-Route										
Model Year	OEM	Length	Type	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
2006	Thomas	30	Heavy Duty	5	5	0	0	0	0	0
2017	TBD									
2018	TBD									
2019	TBD	30	Heavy Duty			6	6	6	6	6
2020	TBD	30	Heavy Duty				2	2	2	2
2021	TBD									
2022	TBD									
2023	TBD									
Total				5	5	6	8	8	8	8
Peak Vehicle Requirement-Base plus phased Expansion				5	5	5	6	7	7	7
Spare Ratio				0.00%	0.00%	16.67%	25.00%	12.50%	12.50%	12.50%
Number Eligible for Retirement				5	5	0	0	0	0	0
Percentage Eligible for Retirement				100%	100%	0%	0%	0%	0%	0%

 Vehicles in shaded areas are eligible for replacement.
 Blank cells mean no vehicles need to be purchased in that year.
 UNK: Unknown

Estimated Costs

Vehicle costs used in projecting fleet costs were taken from the MTA grant application for medium-duty and cutaway buses, from the Howard County heavy-duty bus procurement, and an estimate of \$25,000 was used for sedans. The estimated costs used in the tables are based on:

- Heavy Duty Bus: \$360,764 + Genfare Farebox \$15,000 = \$375,764
- Medium Duty Bus: \$218,972 including \$15,000 Genfare Farebox
- Cutaway: \$83,363 + Genfare Farebox \$15,000 in vehicles used in fixed-route or Call N Ride service = \$98,363
- Sedan: \$25,000

These prices were inflated by 4% per year over the planning period to allow for cost increases. The bus prices are based on vehicles using current standard diesel technology, as alternative fuel vehicles are currently significantly more expensive and potentially have maintenance and reliability issues. The current demonstration project involving electric buses will provide an experience base at the RTA for such vehicles, and it is possible that in the later years of the plan alternative fuel vehicles will become cost competitive (both capital and operating). However, at this point in time there is a need to use the available capital to procure as many new vehicles as possible.

It should be noted that all future bus procurements have the cost of electronic registering fareboxes included. A separate line item will have to be developed for adding fareboxes to existing vehicles that have several years of use in them, and for cutaways used in fixed-route or Call N Ride service.

Table 6-15 presents the estimated costs for each jurisdiction for both the replacement-only scenario and the full service expansion scenario. It is quite likely that the expansion path for services in each jurisdiction will vary from that put forward in this table, and that this plan implementation might well stretch out over more years—but the tables do answer the question—What would it take to fix the fleet and implement all these changes over the five-year TDP period?

For Howard County, the estimated cost of vehicle capital to bring the fleet into a state of good repair for the existing service would require an additional \$5,050,480 over and above the amount funded in FY 2017 and 2018 (deliveries in FY 2018 and 2019) for 13 heavy-duty buses. The estimated \$5.1 million amount would be spread over four years. Vehicle capital for all the planned expansions would add \$7,448,083 over and above the replacement of the existing fleet (including the 13 buses already funded).

For Anne Arundel, most of the cost is related to the expansion of service. Fleet replacement for the existing vehicles would require \$1,218,279 (over and above the funds for the four FY 2018 medium-duty buses), while expansion vehicle costs for the entire plan would require an additional \$9,509,633 over the period FY 2019-2023.

Prince George's County's replacement of the in the RTA fleet that it owns would require \$2,438,558, and expansion as outlined in the plan would add \$845,367 in capital to operate the expanded routes.

Table 6-15: Summary of Fleet Plans - Howard County and Anne Arundel County

County	Base Unit Cost	2018		2019		2020		2021		2022		2023		Total for Years 2018-2023			
		Number	Price	Number	Price	Number	Price	Number	Price	Number	Price	Number	Price	Number	Price	Total	Total
Howard County																	
Base Replacement																	
Heavy Duty	\$375,764	7	\$390,795	\$2,735,562	6	\$406,426	\$2,438,558	\$422,683	\$0	\$439,591	\$0	3	\$457,174	\$1,371,523	\$475,461	\$0	
Medium Duty	\$218,972	\$0	\$227,731	\$0	5	\$246,314	\$1,231,569	\$256,166	\$0	\$256,166	\$0	3	\$266,413	\$799,239	\$277,069	\$277,069	
Cutaway + Farebox	\$75,139	\$0	\$78,145	\$0	\$0	\$81,270	\$0	\$84,521	\$0	\$87,902	\$439,510	8	\$91,418	\$731,345	\$95,075	\$0	
Cutaway	\$60,139	\$0	\$62,545	\$0	\$0	\$65,046	\$0	\$67,648	\$0	\$70,354	\$0	\$0	\$73,168	\$0	\$76,095	\$0	
Sedan	\$25,000	\$0	\$26,000	\$0	\$0	\$27,040	\$0	\$28,122	\$112,486	\$29,246	\$87,739	3	\$30,416	\$0	\$31,633	\$0	
Total Base Replacement			\$2,735,562			\$2,438,558		\$1,344,055		\$527,249			\$2,902,107			\$277,069	\$10,224,600
With Expansions																	
Heavy Duty	\$375,764	7	\$390,795	\$2,735,562	6	\$406,426	\$2,438,558	\$422,683	\$0	\$439,591	\$3,516,726	8	\$457,174	\$0	7	\$475,461	\$3,328,229
Medium Duty	\$218,972	\$0	\$227,731	\$0	\$0	\$236,840	\$0	\$246,314	\$2,216,823	\$256,166	\$0	5	\$266,413	\$1,332,065	1	\$277,069	\$277,069
Cutaway + Farebox	\$75,139	\$0	\$78,145	\$0	\$0	\$81,270	\$0	\$84,521	\$0	\$87,902	\$439,510	8	\$91,418	\$731,345	\$95,075	\$0	
Cutaway	\$60,139	\$0	\$62,545	\$0	\$0	\$65,046	\$0	\$67,648	\$0	\$70,354	\$0	\$0	\$73,168	\$0	\$76,095	\$456,570	
Sedan	\$25,000	\$0	\$26,000	\$0	\$0	\$27,040	\$0	\$28,122	\$112,486	\$29,246	\$87,739	3	\$30,416	\$0	\$31,633	\$0	
Total with Expansions			\$2,735,562			\$2,438,558		\$2,329,310		\$4,043,975			\$2,063,409			\$4,061,869	\$17,672,683
Anne Arundel County																	
Base Replacement																	
Heavy Duty	\$375,764	\$0	\$390,795	\$0	3	\$406,426	\$1,219,279	\$422,683	\$0	\$439,591	\$0	\$0	\$457,174	\$0	\$475,461	\$0	
Medium Duty	\$218,972	4	\$227,731	\$910,924	\$0	\$236,840	\$0	\$246,314	\$0	\$256,166	\$0	\$0	\$266,413	\$0	\$277,069	\$0	
Cutaway + Farebox	\$75,139	\$0	\$78,145	\$0	\$0	\$81,270	\$0	\$84,521	\$0	\$87,902	\$0	\$0	\$91,418	\$0	\$95,075	\$0	
Cutaway	\$60,139	\$0	\$62,545	\$0	\$0	\$65,046	\$0	\$67,648	\$0	\$70,354	\$0	\$0	\$73,168	\$0	\$76,095	\$0	
Sedan	\$25,000	\$0	\$26,000	\$0	\$0	\$27,040	\$0	\$28,122	\$0	\$29,246	\$0	\$0	\$30,416	\$0	\$31,633	\$0	
Total Base Replacement			\$910,924			\$1,219,279		\$0		\$0			\$0		\$0	\$0	\$2,130,203
With Expansions																	
Heavy Duty	\$375,764	\$0	\$390,795	\$0	8	\$406,426	\$3,251,411	\$422,683	\$0	\$439,591	\$1,318,772	3	\$457,174	\$0	4	\$475,461	\$1,901,845
Medium Duty	\$218,972	4	\$227,731	\$910,924	\$0	\$236,840	\$0	\$246,314	\$0	\$256,166	\$0	3	\$266,413	\$799,239	\$277,069	\$0	
Cutaway + Farebox	\$75,139	\$0	\$78,145	\$0	\$0	\$81,270	\$0	\$84,521	\$0	\$87,902	\$263,706	3	\$91,418	\$0	\$95,075	\$190,150	
Cutaway	\$60,139	\$0	\$62,545	\$0	\$0	\$65,046	\$0	\$67,648	\$0	\$70,354	\$140,708	2	\$73,168	\$146,337	\$76,095	\$0	
Sedan	\$25,000	\$0	\$26,000	\$0	\$0	\$27,040	\$0	\$28,122	\$0	\$29,246	\$0	\$0	\$30,416	\$0	\$31,633	\$0	
Total with Expansions			\$910,924			\$3,251,411		\$845,212		\$1,723,186			\$945,575			\$2,091,995	\$9,768,303

Table 6-15: Summary of Fleet Plans - Prince George’s County (continued)

County	Base Unit Cost	2018		2019		2020		2021		2022		2023		Total for Years 2018-2023	
		Number	Price	Number	Price	Number	Price	Number	Price	Number	Price	Number	Price		
Prince George’s County															
Base Replacement															
Heavy Duty	\$375,764	\$390,795	\$0	6	\$406,426	\$2,438,558	\$422,683	\$0	\$439,591	\$0	\$457,174	\$0	\$475,461	\$0	
Medium Duty	\$218,972	\$227,731	\$0	\$236,840	\$0	\$246,314	\$0	\$256,166	\$0	\$266,413	\$0	\$277,069	\$0		
Cutaway + Farebox	\$75,139	\$78,145	\$0	\$81,270	\$0	\$84,521	\$0	\$87,902	\$0	\$91,418	\$0	\$95,075	\$0		
Cutaway	\$60,139	\$62,545	\$0	\$65,046	\$0	\$67,648	\$0	\$70,354	\$0	\$73,168	\$0	\$76,095	\$0		
Sedan	\$25,000	\$26,000	\$0	\$27,040	\$0	\$28,122	\$0	\$29,246	\$0	\$30,416	\$0	\$31,633	\$0		
Total Base Replacement			\$0		\$2,438,558		\$0		\$0		\$0		\$0	\$2,438,558	
With Expansions															
Heavy Duty	\$375,764	\$390,795	\$0	6	\$406,426	\$2,438,558	2	\$422,683	\$845,367	\$439,591	\$0	\$457,174	\$0	\$475,461	\$0
Medium Duty	\$218,972	\$227,731	\$0	\$236,840	\$0	\$246,314	\$0	\$256,166	\$0	\$266,413	\$0	\$277,069	\$0		
Cutaway + Farebox	\$75,139	\$78,145	\$0	\$81,270	\$0	\$84,521	\$0	\$87,902	\$0	\$91,418	\$0	\$95,075	\$0		
Cutaway	\$60,139	\$62,545	\$0	\$65,046	\$0	\$67,648	\$0	\$70,354	\$0	\$73,168	\$0	\$76,095	\$0		
Sedan	\$25,000	\$26,000	\$0	\$27,040	\$0	\$28,122	\$0	\$29,246	\$0	\$30,416	\$0	\$31,633	\$0		
Total with Expansions			\$0		\$2,438,558		\$845,367		\$0		\$0		\$0	\$3,283,925	

Fare Collection

As a result of its history, the RTA has issues with fares that could be addressed in part if it had a modern electronic registering farebox system instead of using simple drop boxes.

The RTA has two distinct fare policies, as described in Chapter 4. This alone causes additional work for the operators, different revenue levels in different jurisdictions, and confusion for riders. Therefore, the RTA would like to settle on one fare structure. Modern fareboxes could potentially allow for new multi-ride options, including smart-phone payment or stored-value cards—potentially increasing customer convenience and ridership.

A significant related issue is that many RTA customers transfer to or from MTA services or WMATA services, and RTA does not have transfer arrangements with either system because they do not consider that drop boxes provide adequate accounting for any kind of shared revenue that would result from a transfer agreement. RTA policies vary for each system. There is no transfer agreement with WMATA, so users simply pay a second fare; there is a limited number of MTA/RTA shared stops where the RTA will accept display of an MTA Charm Card as a transfer, and accept a reduced fare. However, there is no sharing of revenue, and RTA riders transferring to MTA buses must pay a full second fare. A modern farebox system would allow negotiation of fare policies to facilitate transfers, as the revenue accounting function would be supported by farebox data collection.

Finally, there is a need to have accurate data about ridership and revenue if the RTA is to obtain policy-level buy-in from its partners. Modern electronic registering fareboxes would facilitate revenue accounting, which is difficult to achieve with the drop boxes and manual counters now used. Ridership counts and reconciliation with revenues would be possible, and if a working automatic passenger counting system was integrated with the system it would provide better data with less manual work.

For these reasons a \$15,000 estimated cost of new electronic registering fareboxes is included in the vehicle prices used for heavy duty and medium buses, and is added to cutaways required for the Call N Ride services. Depending on the dispatch technology used, these vehicles may not ultimately require fareboxes if the fares are paid through a smart phone or stored value card—a simple reader may be all that is needed. The \$15,000 unit cost is consistent with the amount used in MTA medium bus procurements.

Chapter 7

Future Transit Development

INTRODUCTION

This chapter presents information about future transit developments in the region that will likely take place beyond the time period covered by this TDP. The TDP plan addresses the current fleet issues, restructure and improve the local services in the region, and sets the stage for these next developments.

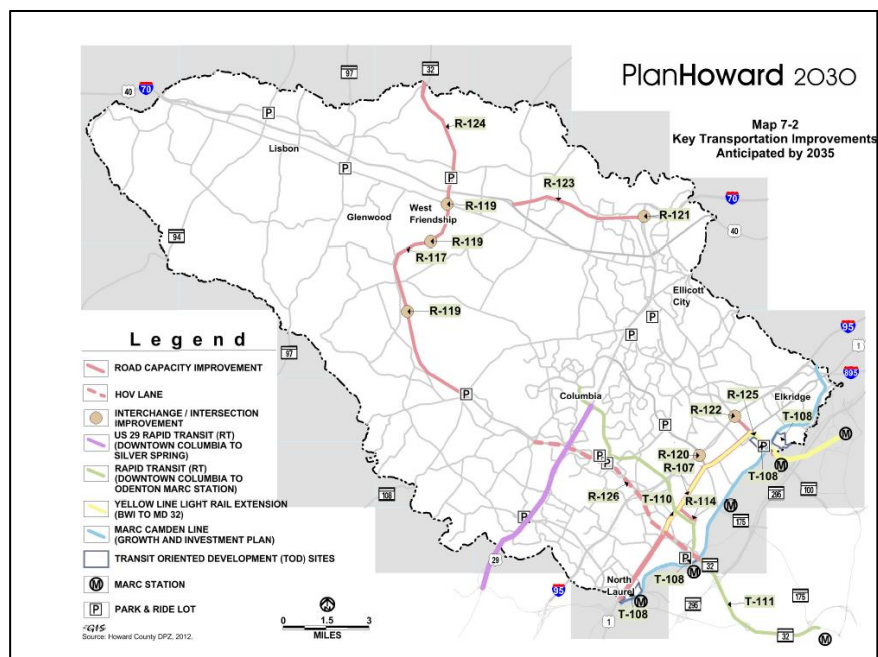
BUS RAPID TRANSIT - BRT

Introduction

In 2012, *Plan Howard 2030*, Howard County's general plan identified three rapid transit corridors for further study, as seen in Exhibit 7-1. These three corridors were identified to address three primary concerns:

- Addressing congestion on the US 29 Corridor
- Providing better regional transit along the county's commercial corridors
- Enhancing transportation connections between the county's major economic activity areas.

Exhibit 7-1: *Plan Howard 2030* Rapid Transit Corridors



The Plan Howard 2030 implementation section called for further study of the US 29, MD 32 and US 1 Corridors to test ridership and technical feasibility and based on this guidance, the Howard County has advanced the development of Bus Rapid Transit (BRT) via a series of planning and design studies.

What is Bus Rapid Transit?

Bus Rapid Transit is a bus-based transit system that delivers fast, comfortable, and cost-effective transit services along a spectrum of service levels and right-of-way treatments. Traditionally, bus rapid transit is the next step in a bus route's evolution, and is implemented when a route exceeds its carrying capacity and/or is so negatively impacted by traffic congestion, that travel time reliability and headways can no longer be maintained. Some potential elements of BRT are:

- Dedicated right-of-way along and busways on the whole corridor and/or in congested areas.
- Systems to allow buses to hold or advance traffic signals so they are not delayed at intersections.
- Off-board fare collection to minimize the amount of time it takes passengers to enter the bus.
- High frequency service with buses arriving every few minutes, at least during peak hours.
- Bus stations that are level with the bus floor to allow passengers to enter and leave quickly.
- Stops located in high demand locations.
- Larger buses to allow more passengers to board per bus.



Exhibit 7-2: BRT Bus and Station
(Las Vegas, Nevada)

Completed Planning Studies

A concept plan¹ for Bus Rapid Transit was the initial BRT study conducted for Howard County. It presented a very high-level plan and costs for a BRT system along a wide range of roads and corridors, but did not perform ridership analyses, develop a service plan or perform an operational analysis.

¹ [Howard County BRT—Concept Plans and Preliminary Cost Estimates for the Envisioned System](#), for the Howard County Office of Transportation, April 20, 2012.

Following the completion of the concept plan, the county developed a Phase I study². The purpose of the study was to evaluate a BRT network for the county, including linkages to multiple activity centers and transit systems. The study included ridership analysis and the impact on both transit and vehicle travel times on the routes, car trips diverted to transit, for the routes presented in the concept plan. The study was developed based on a best-case scenario, i.e., the system had all the characteristics a BRT system.

The study focused on four corridors:

1. US 29 between Mount Hebron and Silver Spring
2. Broken Land Parkway between Columbia Town Center and Savage MARC Station
3. MD 32 between Clarksville and Odenton Town Center
4. MD 216 between Scaggsville and Odenton Town Center

In a Phase II study³, the county expanded the previous Concept Plan and Phase I efforts with additional detail and rigor. The purpose of the Phase II study was to identify and evaluate the corridors and feasible alternatives to demonstrate the potential for attracting riders and receiving funding, and to develop alternatives to a level that could be carried forward to the next stage of right-of-way design, environmental impact and preliminary engineering. The Phase II effort focused on three corridors US 29, Broken Land Parkway, and US 1, and examined specific route alignment and stations, ancillary feeder transit services, landside services such as park and rides and pedestrian accessibility, preliminary operating costs, and land use plans to support high quality transit service within and between them.

The Phase I and II studies documented a significant travel market and demand for high quality BRT to/from and within Howard County for each of the three corridors should a high-quality BRT system be developed. Study modelling found that in the design year of 2035, a three route BRT system could:

- Generate 9,080 new transit trips from Howard county, and
- Generate new 12,579 new transit trips to Howard County.

Other important findings were:

- Significant demand from the northernmost stations due to their proximity to I-70, and the new travel markets that this opens up.

² Sabra, Wang & Associates, Inc., Howard County Bus Rapid Transit Phase I Study Technical Report, for the Howard County Office of Transportation.

³ Sabra, Wang & Associates, Inc., Howard County Bus Rapid Transit Phase II Study Technical Report, for the Howard County Office of Transportation, April 5, 2016

- The network connections and the “system” connectivity offered by tying the three corridors together to major activity centers and regional fixed-rail transit networks expand connectivity and open up new travel markets.
- Much of the demand is for the drive access/park and ride transit users which generates significant demand for park and ride lots.
- Local feeder routes and integration of MTA commuter routes are an important element supporting potential ridership.

What’s Next

Howard County’s consideration of BRT is now focused on the Route 29 Corridor and the opportunity presented to work with Montgomery County as it develops, plans and implements a BRT service on Route 29 between Burtonsville and Silver Spring.

Montgomery County BRT

Several years of planning for BRT in Montgomery County culminated in the 2015 development of a Preliminary Purpose and Needs Statement for BRT along the US 29 corridor, which was followed by the development of an application for Transportation Investment Generating Economic Recovery (TIGER) grant funding from the U.S. Department of Transportation. In 2016 Montgomery County included \$6.5 million in the capital budget for planning and design—with the goal of getting BRT on the Route 29 Corridor within four years.

The county’s proposal succeeded in obtaining the TIGER grant funding, and the county is now in the engineering and procurement phases of the implementation. The proposed service will run from the Burtonsville Park and Ride lot to Silver Spring, primarily using the existing bus-on-shoulder lanes on the northern portion of the route, operating in mixed-traffic on the southern portion of the route, and on local streets to access stops that are off US 29. Transit signal priority will be installed at up to fifteen intersections, with service from 6:00 a.m. to midnight seven days per week on 7.5 minute headways during the peak periods and 15 minutes off-peak. Stops will be at designated stations with easy access and amenities, and special buses with Wi-Fi and other amenities will be used.

Montgomery County is aiming to implement service operations by early 2020, and Howard County will continue to support their efforts in moving forward while evaluating the impact of extending the currently proposed service.

Howard County BRT

Howard County sees many of the same advantages for BRT as anticipated by Montgomery County in terms of providing improved transit travel times, increased reliability, increased frequency—and addressing the continuing growth of traffic on the US 29 Corridor. BRT would also support the plans for the redevelopment of Downtown Columbia, with its increase in both residents and employment. BRT has been included in the planning for the new Downtown Columbia Transit Center, where two bays have been reserved in the conceptual plan, and access concepts for Downtown Columbia includes lanes linking the BRT with Downtown Columbia. Earlier implementation of BRT could affect the need for development of the Transit Center, or the need for an interim transfer center to link RTA, BRT and MTA commuter services.

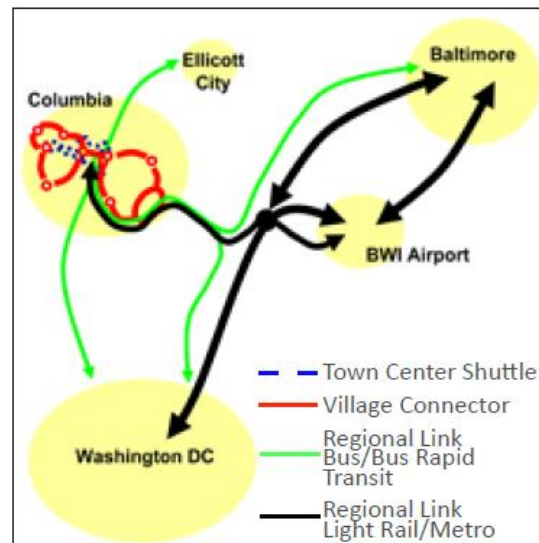
Howard County and Montgomery County are currently coordinating efforts around the development of an extension of the Montgomery BRT (now branded as “Flash”). There are issues in terms of defining the services—the Phase II BRT study for Howard County calls for stops at MD 216, Columbia, Long Gate/Ellicott City and Mt. Hebron. Montgomery County is moving ahead with vehicle procurement, and one scenario could have Howard County purchasing vehicles for its service as options on that procurement, or providing a capital contribution to a combined fleet.

Other issues yet to be addressed include the manner in which the extensive MTA commuter bus service from Howard County would be integrated with the BRT. Currently the MTA pays the cost of these services, and MTA commuter buses utilize existing bus-on-shoulder lanes in Montgomery County. Service planning will need to determine how these services might be integrated into BRT.

The impact of BRT development in Montgomery County is that this vision for high quality, high frequency transit in the US 29 Corridor may be able to come to fruition sooner, rather than later, in tandem with the development of Downtown Columbia. In addition, the development of the BRT corridor in Howard County would be a first step toward the continued development of high-frequency transit within the county on a proposed east-west transitway emerging from the Bridge Columbia initiative, as discussed in the following section.

BRIDGE COLUMBIA EAST-WEST TRANSITWAY CONCEPT

This TDP recommends a complementary transit concept for a high-frequency east-west transit corridor within Howard County, linking the Howard County General Hospital, Howard Community College, Downtown Columbia, and Snowden Square and the Gateway employment area. As proposed, it would connect most of higher density residential and employment locations in Howard County. It would connect with the BRT, local RTA routes, and MTA services at the new Downtown Columbia Transit Center. In terms of the overall regional connectivity concept presented in Exhibit 7-3, this concept corresponds to the Village Connector shown in red, although the actual route would be different.



Future Connectivity Diagram, Region

Exhibit 7-3: Future Regional Connectivity Concept

Background

Although not widely known, the original Final Development Plans for Columbia included a designated right-of-way for a separate “Minibus” transit network separated from the street network. These rights-of-ways are owned by the Columbia Association, and many are currently improved with the paved bicycle/pedestrian pathways. Friends of Bridge Columbia (Friends), a citizen’s group formed to advocate for a signature bridge over US 29 also called for using this transitway for a separate busway network that would connect east- and west-Columbia with a transit bridge over US 29. The proposed transitway was intended to avoid automobile traffic and improve transit speeds and reliability, support Village Centers on its route, support Downtown Columbia and Gateway redevelopment, and provide service that would be usable by the growing senior population.

Analysis of the concept revealed that the proposed corridor location addressed many of the Friends’ goals, particularly considering projected population and employment concentrations⁴. As the Downtown Columbia plan is implemented and Gateway redevelopment occurs, the conceptual transitway would serve the existing areas of residential and employment density, key origins and destinations, and several of the Village Centers. It is the corridor entirely within the county most likely to support high-frequency transit. However, even in projections for 2040 the densities do not reach thresholds⁵ justifying a

⁴ See separate report prepared concurrently with the TDP – [Bridge Columbia Transitway Study](#).

⁵ Planning guidelines call for 15 housing units per acre and/or 75 employees per acre as thresholds for busway feasibility.

separate busway. In addition, the right-of-way that was set-aside for the busway network is 40 to 50 feet wide. Under today's standards, it would be completely occupied by a two-way busway with no buffer to adjoining properties. Because of the likely environmental damage, the proximity to existing housing, the likely high cost, and the current and projected level of transit ridership, the notion of a separate transitway network in its entirety is not justified for the foreseeable future.

Concept

While a separate transitway network is not warranted, the identified corridor is appropriate for the future development of *improved* transit. The transitway analysis showed that surface streets and highways can be used for most of the route. Current and future congestion on Route 175 between Dobbin Center Parkway past Tamar Drive could require transit priority measures such as bus-on-shoulder queue-jumper lanes and signal priority. An alternative routing that could service Oakland Mills could be implemented if the “third interchange” bridge were built across US 29⁶. Studies for this bridge include options that would link east and west Columbia as well as provide access from US 29. Including a transit lane or transit priority on the bridge would support faster and more reliable transit. Figure 7-1 presents two conceptual routes for the Downtown to Gateway corridor utilizing different bridge options.

Continued development of this concept should add the other elements typically found in BRT like services—enhanced shelters, stops, special branding, real-time schedule information at stops—along with other locations where signal priority or other priority treatments would be advantageous. In addition the implementation of fully-electric buses on the 401 which began in 2017 (see Exhibit 7-4) sets a precedent for using specialty buses with separate branding on this route.

⁶ Howard County, Maryland, Downtown Columbia Plan: A General Plan Amendment, February 1, 2010; and Wallace Montgomery, Draft Feasibility Study for Downtown Columbia Transportation Improvements-Little Patuxent Parkway/U.S.29 Interchange, January 2012.

Figure 7-1: East-West Transitway Concepts: Using Proposed Third Interchange Bridge or Transit/Bicycle/Pedestrian Replacement Bridge

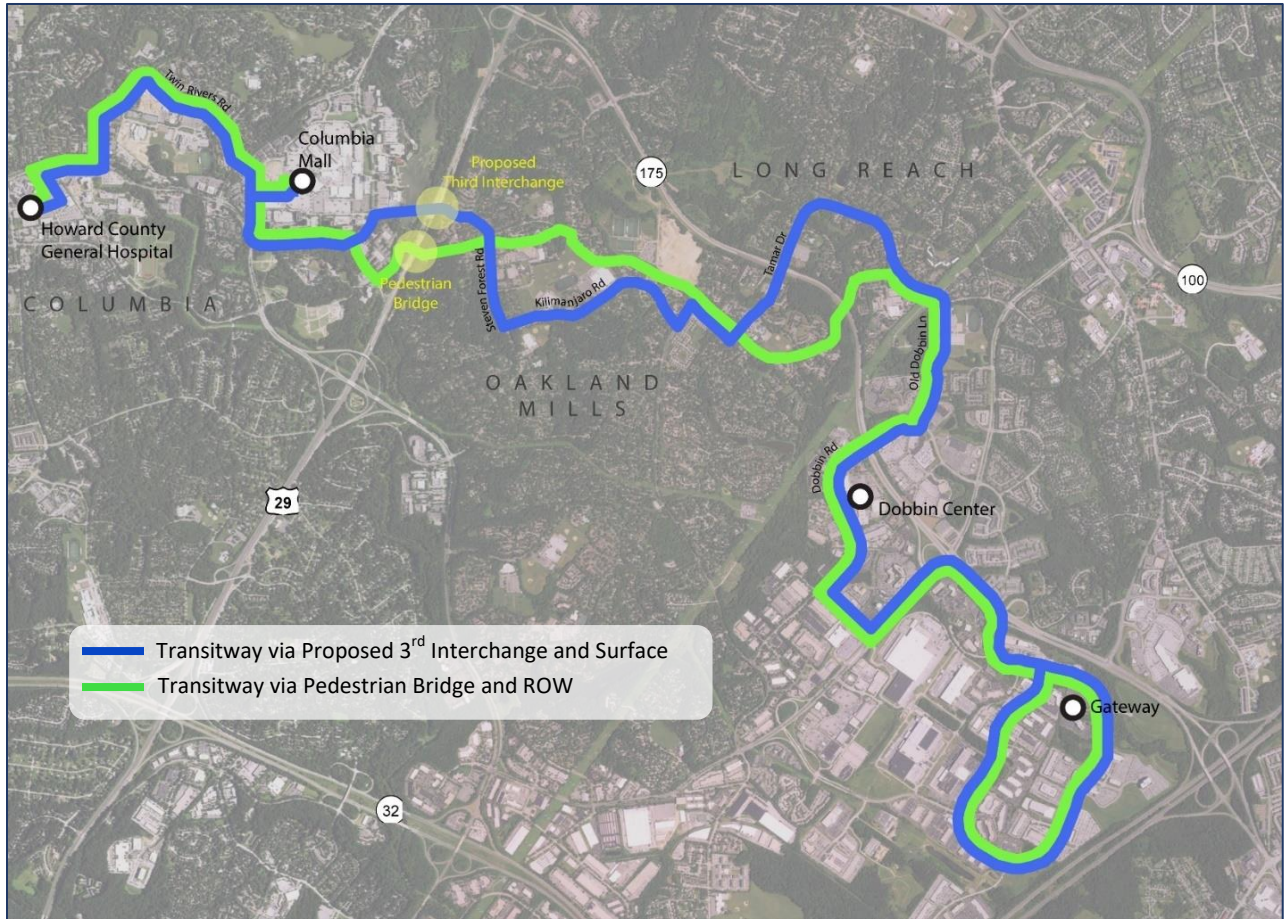


Exhibit 7-4: Electric Bus Used on RTA 401 Service

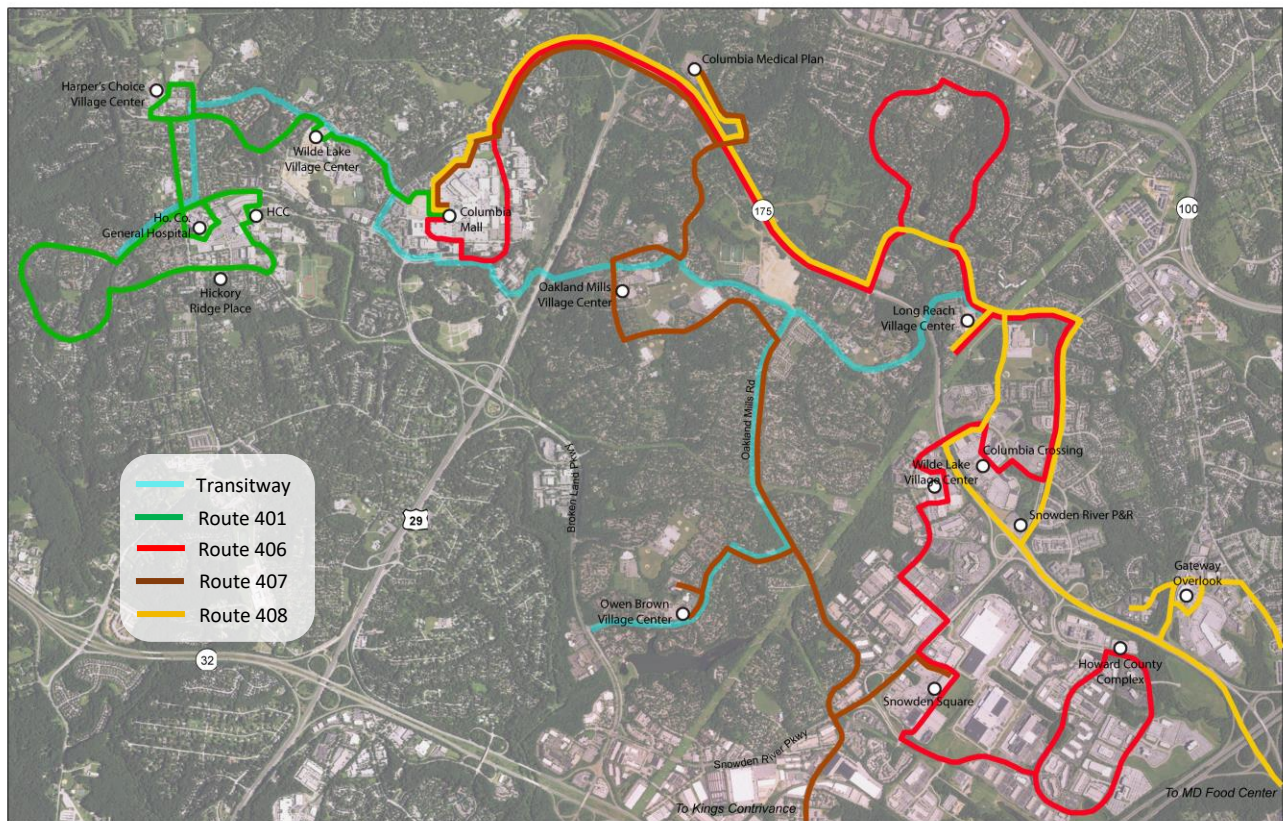


Source: RTA of Central Maryland

Building on Existing Services

Currently there are four RTA routes that operate in the area served by the Corridor—the 401, 406, 407 and 408, as shown in Figure 7-2. The 401, the 407 and the 408 are proposed to operate at 30 minute headways in the Plan. The long-range concept for the east-west transitway service would combine the 401 and the 406 into a single route, operating at higher frequencies as ridership increases with the growth of Downtown Columbia and the redevelopment of Gateway.

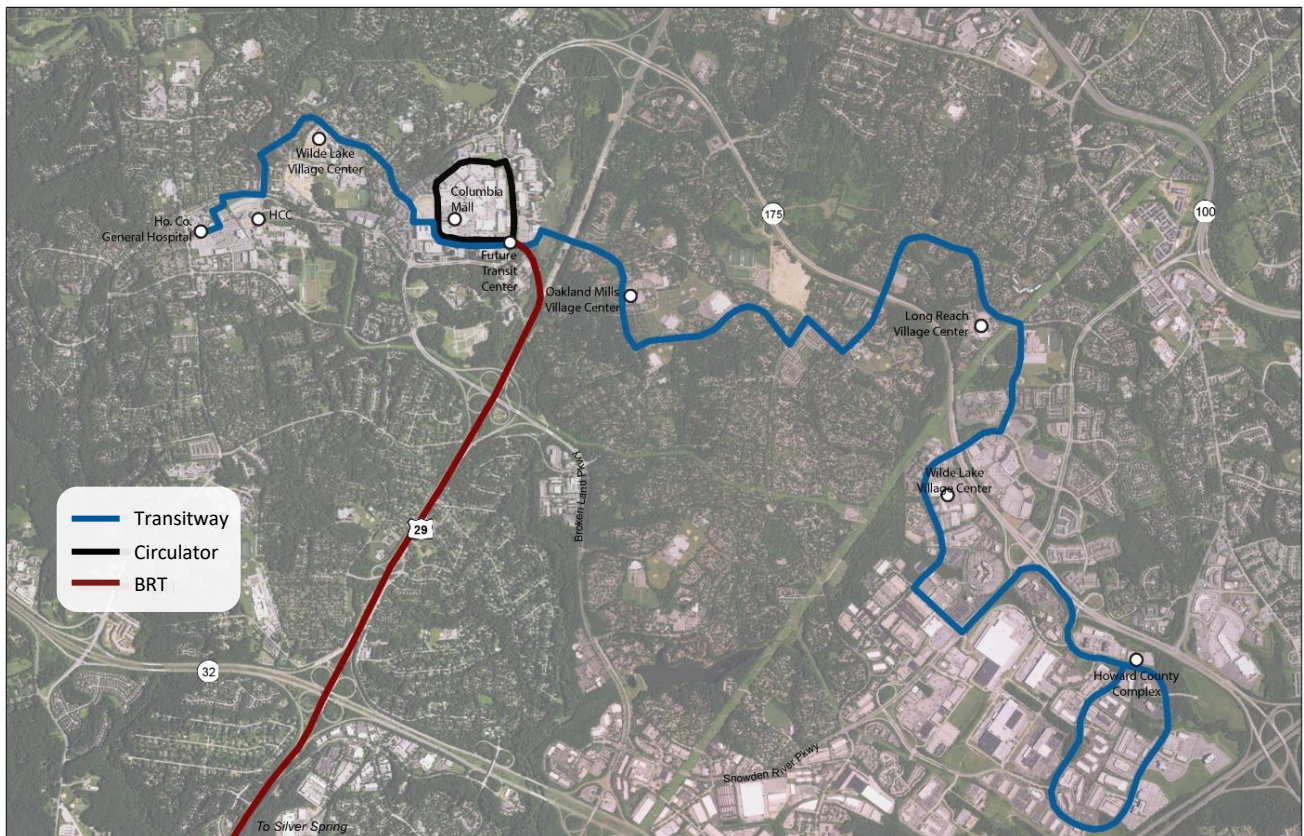
Figure 7-2: Existing RTA Services and the Transit right-of-way.



Connecting with Future Services

As noted above, this proposed new east-west route would connect with the future Downtown Columbia circulator shuttle at the new Downtown Columbia Transit Center. It would also connect with the future BRT on US 29. Figure 7-3 presents a map of these proposed high-frequency transit services.

Figure 7-3: Howard County's Future High Frequency Transit Services



If operated at planned Montgomery County frequencies, it would operate at 7.5 minute headways in the peak, and 15 minute headways off-peak. An east-west transit service operating at similar headways could effectively extend the impact of the BRT to much of Columbia, particularly the major activity centers.

Timing

The potential timing of implementation is linked to the future implementation of a number of elements. The Montgomery County BRT is slated to begin service from Burtonsville in 2020. The timing of an extension to Columbia is not known, but likely be later. The Downtown Columbia Transit Center is estimated for construction in eight to ten years. The Third

Interchange Bridge is included in the Downtown Columbia plan, but there is no estimate of the date when it will be warranted. The redevelopment of the Gateway area will take a number of years, perhaps achieving most of its growth by 2040.

The development of the East-West Transitway high-frequency bus service will not likely occur during the period covered by this TDP, but it is potentially a part of the next one. At that point the basic combined east-west route could be evaluated, and perhaps implemented at current frequencies using the existing roads, perhaps with priority treatments. By then BRT service and the need for the third interchange bridge will be better understood, and there may be more certainty about the potential routing.

DOWNTOWN COLUMBIA CIRCULATOR

Howard County's 2010 Downtown Columbia Plan recommends a circulator shuttle to reduce Downtown Columbia traffic as residents, employees and visitors "park once," then walk or take the shuttle to other destinations in Downtown Columbia. Under the Plan's Community Enhancement, Program and Public Amenity (CEPPA) #23 requirements GGP (now Howard Hughes) must provide \$1,000,000 towards the initial funding of a Downtown Circulator Shuttle prior to issuance of a building permit for the 5 millionth square foot of development. Issuance of a building permit for the 1.3 millionth square foot of development is expected in late 2017 or early 2018. Due to market conditions it is uncertain when a permit for the 5 millionth square foot of development will be issued but it will likely be in at least four or five years towards the end of the life of this TDP.

CEPPA #5 required a study of the shuttle to evaluate and determine appropriate levels of service and phasing in of service at various levels of development. Howard Hughes completed this study in 2011⁷. The study's key recommendations were (in summary):

- A Downtown Columbia circulator should begin operations when there are enough new residents in Downtown Columbia seeking such service, as determined through the results of monitoring surveys.
- A transportation demand management plan should be established for Downtown Columbia with a periodic monitoring program that can establish a clear metric(s) for when a circulator shuttle is appropriate.
- The short-term circulator should utilize existing mall and surrounding roads with approximately six stops near existing buildings and the mall. The circulator should operate on a fixed schedule, departing the transit center every 20-minutes.

⁷ [Downtown Columbia Downtown Transit Center and Circulator Shuttle Feasibility Study.](#)

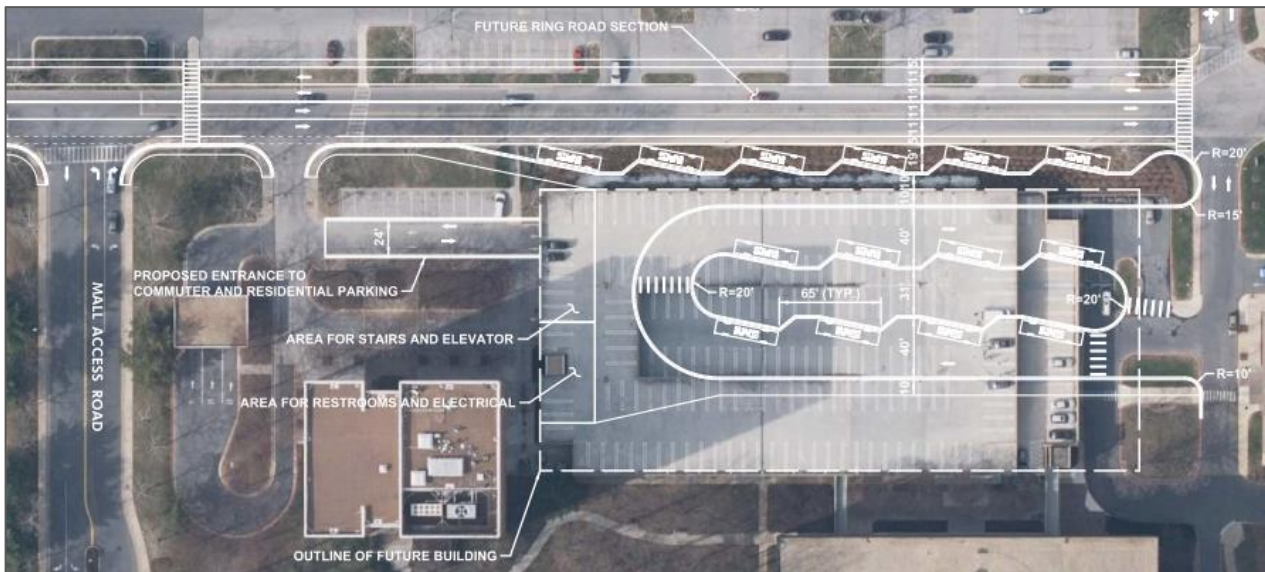
- In the long-term, the circulator should extend its route to the Crescent area when new development in that area is occupied and reporting a need through the monitoring program's surveys. Frequencies should increase to 15- minutes.

DOWNTOWN COLUMBIA TRANSIT CENTER

As noted in Chapter 6, planning is underway for a new Downtown Columbia Transit Center to serve as the central station for the BRT, RTA routes, MTA commuter bus, the Downtown Columbia shuttle. The facility will be centrally located in Downtown Columbia.

An alternatives analysis conducted for Howard County evaluated several sites, and the recommended site (known as Site 3) is located on the southside of Mall Ring Road along Little Patuxent Parkway (near Union Jacks Pub/Restaurant)⁸. The analysis call for fourteen bus bays—eight for existing RTA routes, two for RTA growth, two for MTA, and two for BRT routes. It will have sheltered waiting areas, bicycle parking, a transit information booth, facilities for driver break time (including restrooms), real-time transit information, and commuter parking for MTA routes. The facility is intended to be part of a mixed-use, mixed-income residential project developed by the Howard County Housing Commission.

Figure 7-4: Downtown Columbia Transit Center Concept



Source: Downtown Columbia Transit Center Location and Site Analysis Study

The Transit Center portion of the project will be funded from the Downtown Columbia property tax increment.

⁸ [Downtown Columbia Transit Center –Location and Site Analysis Study, October 2017](#)

The Downtown Columbia Plan requires General Growth Properties, (now Howard Hughes Corporation) to provide the site prior to issuance of a building permit for the 1.3 million square foot development, however, the timing may be changed to coincide better with the planned redevelopment of the chosen site. As a result the implementation of the new transit center is likely to be in the eight to ten year time frame.

SHARED-MOBILITY SERVICES

This TDP has included the development of shared-ride, community-based demand-response services as the recommended model for new local coverage in Anne Arundel County. These are included in recognition of the emergence of a new model of transit service that is disrupting the conventional models of taxi and public transit service. Collectively these new service models are being described as shared mobility services, because they involve sharing a ride. The overall concept of shared-mobility includes:

- **Ride-hailing:** Typically a phone-based app platform where individuals can hail (call) for a ride (individual) provided by a paid driver using his/her own vehicle—the driver is “sharing” the vehicle—Uber and Lyft are examples.
- **Shared Ride-Hailing:** Similar to ride-hailing, but the customer may share the ride with others having similar routes/destinations—usually involves a lower fare than dedicated individual service.
- **Microtransit:** App-based service similar to shared ride-hailing, but on larger vehicles (vans or small buses) serving more passengers, which may be routed dynamically in real-time or in response to crowd-sourcing. The routing may be between stops that are near but not at a customer’s actual location—i.e. they might have to walk to a designated stop. Services may follow a general route and deviate in response to customer requests, or be entirely flexible. Fares are lower than ride-hailing but higher than subsidized public transit.

Technology applications and market arrangements are currently undergoing rapid development and change, and so this framework is likely to change during the course of the TDP. For the most part such services are currently provided by the private sector without subsidies, and often outside the current public regulatory structure.

Ride-hailing and microtransit are already having an impact on the taxi industry, and on some public transit modes. In large, dense urban environments it appears that ride-hailing types of

services are both creating ridership and drawing ridership from bus and light rail services. To date research has identified the loss of bus ridership at 6 percent, and light rail's loss at 3%.⁹

Public transit systems have initially reacted to the development of such services by seeking to contract with them for local area services in lower density areas, particularly providing first-mile/last mile connections to line-haul transit. The goal is to obtain lower cost service (than their own demand-response service), and meet customer preferences for the smartphone app customer interface, payment options, and quick response. Other transit efforts to work with ride-hailing providers have involved contracting for them to provide ADA complementary paratransit services.

In both cases a major issue has been the fact that ride-hailing services that do not have a fleet utilize vehicles which are not wheelchair accessible, and the operators are not trained to provide accessible service. This poses a significant equity issue that may prevent the use of public funds, as does the use of smartphones to hail the services, as not all members of the public have or use smart phones.

Over the next five years it is likely that many different models will evolve combining alternative technologies and organizational models. In high density areas the private market will drive these developments. In lower density areas transit providers may find that these options a cost-effective alternative to low-productivity fixed route transit service. Already there are efforts to have firms with the technological platforms provide the customer interface for vehicles operated by transit systems or their contractors.

This TDP has provided a place in the plan for the potential development and implementation of such options in Anne Arundel County areas where it is likely that any new bus transit would likely have low productivity and be less useful to potential riders due to schedule and route limitations. These service areas are intended to be connected by new line-haul routes. It is likely that the County will develop several different models over the implementation period. In Howard County and Prince George's County the TDP continues to call for fixed-route transit improvements because there is already a comprehensive network – but the experience of Anne Arundel should be instructive for the development of service options in the next TDPs for the region.

ARUNDEL MILLS-BWI MARSHALL HIGH-FREQUENCY SHUTTLE

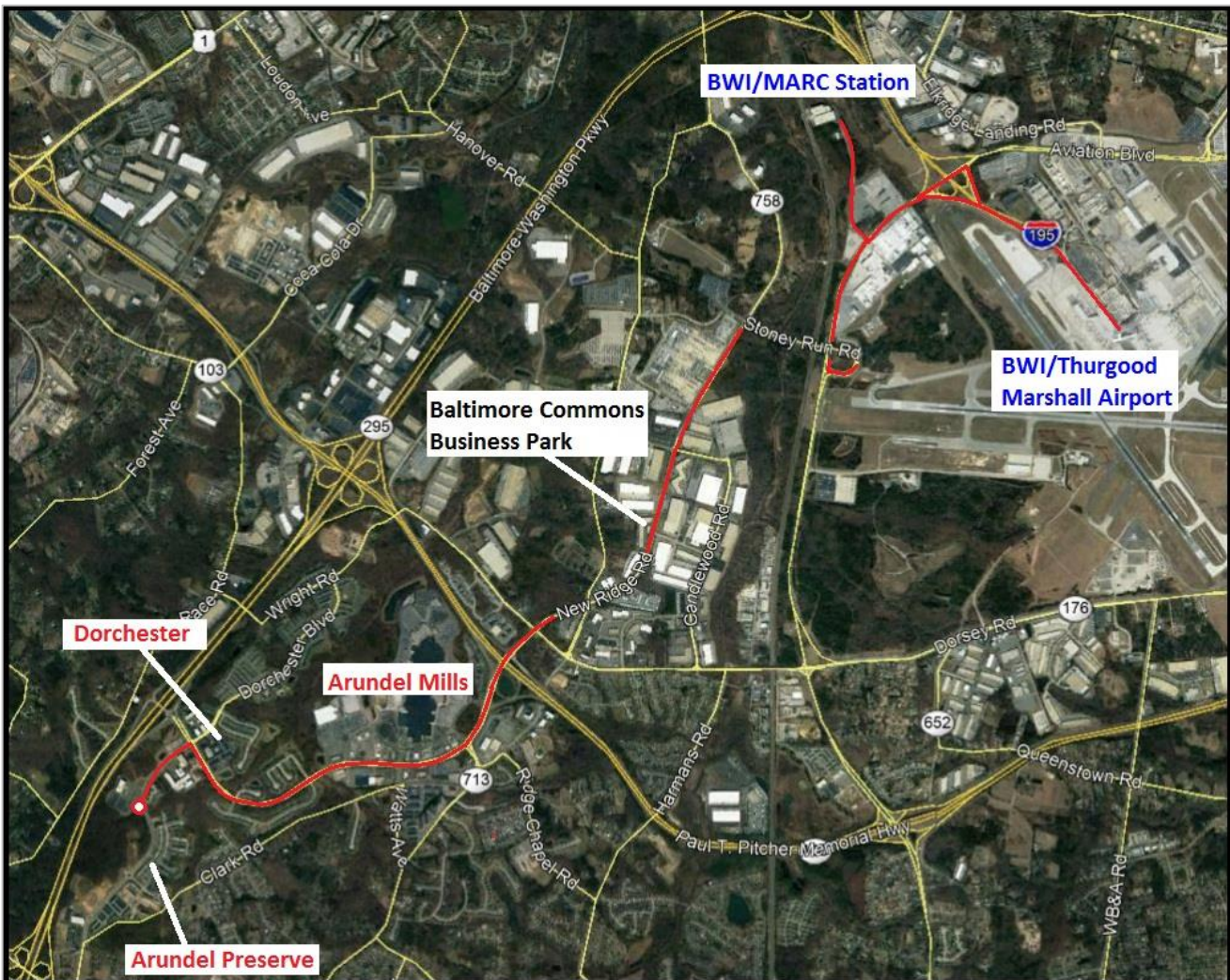
In this TDP there are individual route plans for multiple routes that include service between Arundel Mills and BWI Marshall Airport. The proposed 505 from Columbia, the proposed 502 from Laurel, and the proposed Annapolis-BWI-Arundel Mills services all include service between those two points, with the same stops. In addition, the MTA LocalLink 75 and MTA

⁹ Regina R. Clewlow and Gouri Shankar Mishra; [Disruptive Transportation: The Adoption, Utilization, and Impacts of Ride-Hailing in the United States](#); Institute of Transportation Studies, University of California at Davis; Davis, California; Research Report UCD-ITS-RR-17-07; October 2017.

Commuter Bus 201 provide service between the airport and Arundel Mills, and there are plans for the WMATA Metrobus B30 to service both points. BWI Marshall and Arundel Mills are two major regional destinations that are in close proximity, and there is a need for service to both of them from a number of points in the region.

An alternative to operating all of these routes to both points is to provide a higher frequency shuttle between Arundel Mills and BWI Marshall, allowing each of the longer distance routes to serve one or the other while passengers needing to travel to the other key destination can catch the shuttle. Figure 7-5 presents a conceptual version of this route, which could initially operate at half hour headways with a future vision of higher frequency. The span of service would need to include seven day per week service, from early morning to the closing of the MTA light rail services at midnight.

Figure 7-5: Arundel Mills-BWI Marshall Airport High Frequency Shuttle Route



ANNE ARUNDEL COUNTY PREFERRED TRANSIT NETWORK

In addition to the near-term focus on the shuttle between Arundel Mills and BWI Marshall Airport, Anne Arundel County has adopted plans that support longer-term development of improved transit in a number of corridors. The 2012 Corridor Growth Management Plan (CGMP) identified preferred transit alternatives for a number of key corridors based on a planning horizon year of 2035. These include:

- US 50 Corridor: HOV Lanes from the Prince George's County line to I-97, with premium bus transit from Annapolis to downtown Washington, D.C.
- I-97: Premium bus transit from Parole Town Center to BWI and Arundel Mills
- MD 2 North: Premium bus transit from Annapolis to downtown Baltimore
- MD 2 South: No transit recommendation
- MD 100: Premium bus transit from Marley Station to Ellicott City
- MD 32: HOV Lanes from I-95 to I-97, no transit improvement recommended
- MD 3: Premium transit from BWI to Bowie
- Fort Smallwood: Magothy Bridge: Extension of local bus service to Chesterfield Plaza

Figure 7-6 presents a map of the preferred transit network for Anne Arundel County. The definition of premium bus service varies by corridor, but generally refers to 10-minute peak hour headways and 20-minute off-peak headways, with limited stops. Of note is that this TDP, which focuses on a five-year planning horizon, includes proposals to initiate or expand on some of the services identified in this CGMP, such as bus transit from Parole/Annapolis to BWI and Arundel Mills, and bus transit from Bowie to Glen Burnie (with connections to BWI and Arundel Mills). Existing transit in other corridors, such as US 50 and MD 2 North, would need to be enhanced to meet demand, though recent MTA improvements in commuter bus service have initiated that process through express service from Annapolis to downtown Baltimore.

Figure 7-6: Anne Arundel County Preferred Transit Network



Source: Anne Arundel County Corridor Growth Management Plan, p. 5-3.

Additional transit corridor evaluations were included in the Major Infrastructure and Important Facilities plan of June 2016. Transit alternatives including bus rapid transit, promotion of transit (with priority treatments), and paratransit were included in the toolbox of strategies for corridor improvements. Some transit recommendations for the corridors evaluated include:

- College Parkway: Extend Annapolis Transit Gold Route from Anne Arundel Community College to MD 179, promote County paratransit
- Forest Drive: Extend existing MTA commuter bus service from Riva Road Park and Ride to Bay Ridge Avenue, improve transit amenities and sidewalk connections
- MD 173: Promote County paratransit service
- MD 177: Implement local transit
- MD 214: No transit recommendation
- MD 256 and MD 468: No transit recommendation
- MD 665: No transit recommendation

The CGMP also includes improved pedestrian connections to transit stops with enhanced amenities are envisaged as part of the plan. Anne Arundel County's 2013 Pedestrian and

Bicycle Master Plan identifies improvements in pedestrian and bicycle access countywide, though it does not identify linkages to particular improved transit stops. Another County planning document, Complete Streets Guidance, calls for the consideration of transit improvements along with pedestrian and bicycle roles in the development of plans for improvements of streets and boulevards in the County.

CONCLUSIONS

This TDP calls for a significant restructuring and expansion of transit services in Central Maryland, including:

- Howard County: Restructuring of Howard County services to short routes, cut travel times, and improve frequencies, followed by expanded frequencies and hours of service, new connections, and expansion of coverage to three new areas.
- Anne Arundel County: Expansion of existing services in terms of hours and frequencies, a high-frequency shuttle between Arundel Mills and BWI Marshall Airport, creation of Call-N-Ride last-mile/first-mile demand-response service in community zones, and a number of new connecting routes to link these communities.
- New service in northern Prince George’s County to link new development (Konterra) with Laurel.

It also includes a plan for bringing the region’s local transit services fleet to a point where no active vehicles are operated beyond their expected lifetimes. The goals are to provide safe, reliable service, meeting the needs of persons who wish to use transit to connect to employment in the region, to access medical care, or for shopping or social trip purposes.

These improvements in the local transit services set the stage for the next round of improvements that have been presented in this chapter—BRT on US 29, a Howard County East-West Transitway, a new Downtown Columbia Transit Center, a Downtown Circulator Shuttle for Columbia, shared-mobility services in Anne Arundel County (and potentially elsewhere), a high-frequency shuttle between Arundel Mills and BWI, and future cross-county transit corridors for Anne Arundel County.

APPENDICES

Appendix A

Stakeholders Interviewed

Appendix A

Stakeholders Interviewed

STAKEHOLDERS INTERVIEWED

Anne Arundel County

- Anne Arundel Department of Aging
- Anne Arundel Workforce Development Corp
- County Administration

Howard County

- Athelas Institute, Inc.
- Central Maryland Transportation Alliance
- Columbia Association
- General Growth Properties
- Howard Community College
- Howard County Administration
- Howard County Board of Education
- Howard County City Council
- Howard County Commission on Aging
- Howard County Commission on Disability Issues
- Howard County Council Members
- Howard County Department of Social Services, Housing Authority
- Howard County Economic Development Authority
- Howard County General Hospital
- Howard County Office on Aging and Independence
- Howard County Public Library
- Howard County Public Schools
- Humanim
- Johns Hopkins Applied Physics Lab
- Neighbor Ride
- Public Transportation Board
- Regional Transportation Agency
- The Arc of Howard County
- Winter Growth

Prince George's County

- Prince George's County Department of Public Works and Transportation

Appendix B Rider Survey



Central Maryland Transit Development Plan Customer Survey

Help us to serve you better! The RTA, in partnership with Anne Arundel County, Howard County, the City of Laurel and Northern Prince George's County, wants your input on public transit services in Central Maryland. Your insights will inform the Central Maryland Transit Development Plan by highlighting travel patterns, popular destinations by transit and other transit needs in our community. For additional information about the Transit Development Plan or to complete this survey online, please visit: <http://www.kfhgroup.com/centralmd/transitplan.html>

Please **complete this survey** and **give it to the driver** when you get off the bus. Thank you for taking time to give us your comments! If you have already filled out a survey, you do not need to fill this out again.

1. What bus route are you **currently** riding?

RTA Howard Transit

- 401/Green
- 405/Yellow
- 407/Brown
- 409/Purple
- 404/Orange
- 406/Red
- 408/Gold
- 501/Silver

RTA Connect-A-Ride

- 301/A
- 503/E
- 201/J
- 203/M
- 502/B
- 302/G
- 202/K

2. **Where did your trip start?** Please indicate the street address, intersection, building, or landmark. *For example, if your trip started at home, please put your address or a close intersection.*

3. **What is your final destination?** Please indicate the street address, intersection, building, or landmark. *For example, Arundel Mills Mall or Oakland Mills.*

4. Did you or will you have to **transfer** to another bus in order to complete this trip?

- Yes, one transfer
- Yes, two transfers
- No transfers

5. If you are transferring on this trip, **what service did you transfer from or will you be transferring to?**

- RTA (Connect-A-Ride/Howard Transit)
- MTA Commuter Bus
- MARC Train Camden Line
- WMATA Metrorail
- Annapolis Transit
- MTA Local/Express Bus
- MARC Train Penn Line
- WMATA Metrobus
- Neighbor Ride
- MTA Light Rail (Hunt Valley-BWI)
- Amtrak from BWI
- Other: _____

6. Are there specific **destinations** you need to go to on a regular basis that transit does not serve? Yes No
If Yes, please describe: _____

7. What is the **purpose** of your bus trip today? You may check more than one.

- Work
- Medical
- Shopping
- School
- Social/Recreation
- Dining
- Government Service Agency
- Other: _____

8. How **often** do you ride the bus?

- 5 days/week or more
- 1-4 days/week
- Less than 1 day/week

Over, Please ☞☞☞



9. Please rate RTA's service in the following areas:

	<u>Strongly Satisfied</u>	<u>Satisfied</u>	<u>Neutral</u>	<u>Dis-satisfied</u>	<u>Strongly Dis-satisfied</u>
a. Frequency of Bus Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Hours of Bus Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Areas Served by Bus Routes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Bus Running On-Time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Saturday Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Sunday Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Availability of Schedule Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Cost of Bus Fare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Sense of Security on Buses/at Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Cleanliness of Buses and Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Courtesy/Friendliness of Bus Drivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Customer Service and Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Reliability and Condition of Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Overall Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Do you have a car? Yes No If Yes, was a car available for this trip? Yes No

11. Do you have a driver's license? Yes No

12. Please indicate your age:

17 or under 18-24 25-49 50-64 65 or older

13. Which of the following best describes your current employment status? You may check more than one.

- Employed, full-time Student, full-time Unemployed
 Employed, part-time Student, part-time Other: _____
 Retired Homemaker

14. What is your annual household income?

- \$20,000 or less \$21,000 to \$40,000 \$41,000 to \$60,000
 \$61,000 to \$80,000 \$81,000 to \$100,000 More than \$100,000

15. How would you classify yourself? Please check all that apply.

- Caucasian/White African American/Black Asian
 American Indian/Alaska Native Native Hawaiian/Other Pacific Islander

16. Are you of Hispanic or Latino origin? Yes No

17. Do you speak a language other than English at home? Yes No

If Yes, what is this language? _____ *For example, Spanish, Korean, Chinese.*

If Yes, how well do you speak English? Very Well Well Not Well Not at All

18. Please provide any comments you may have concerning public transportation in Central Maryland:

19. If you would like to receive updates about the Transit Development Plan, please provide your contact:

Name: _____ Email: _____

Appendix C

Rider Survey Comments

Appendix C

Rider Survey Comments

Reliability 165 Comments
408 Gold bus is not reliable
All you need to do is let the bus service run on a regular basis.
Almost lost employment due to lateness.
Always be on time! Put up a website so customer can know the buses location
Always breaking down/ Never on time
At least once or twice a week buses are a no show
Be on time!!!
Be on time.
Because of unreliable buses, am late for work, and sometimes have to take a cab.
Being on time, faster routes
Bus is always late and never on time.
Bus is always late.
Bus often late, leave 1 hour early to ensure will arrive at work on time (a 15 minute commute).
Bus schedule is unpredictable, especially weekends. Need more connecting trips and new buses.
Bus should be on time
Buses are frequently late and sometimes either really early or not at all.
Buses are frequently late.
Buses are late a lot with no notification.
Buses are old and need repair. 2-3 times a week buses do not show up.
Buses aren't reliable. Takes too long to get where I need to go, doesn't go where I need to go, and Sunday service is very poor.
Buses break down a lot and are not reliable.
Buses break down too much, need new buses and the drivers need to be on time.
Buses running on schedule is the key in this kind of business.
Buses should be on time every day. If a bus has a problem, they should provide another extra bus, and the extra bus should arrive 15 minutes later.
Buses should be serviced and not break down everyday
Buses should run on time they are always running late.
Coming from a major metropolitan area, this service sucks. Especially when the buses break down...I've literally lost a job because of it.
First bus on Saturday and Sunday do not start on time. Buses do not ride smoothly -- break down and an hour or more wait – occasionally.

Reliability 165 Comments
Fix it. Don't change the times for Silver and not tell anyone.
Fix the yellow bus that comes at 6 am at the Mall.
Fix your drivers laziness and politeness. Fix your lateness/earliness. Update bus schedules.
He was late one time.
I catch the bus Mon-Sun. I have to leave out 2 hours prior to the time I have to be at my destination. The buses are either late or have technical issues. Get new buses, every route should run every 15-30 minutes.
I enjoy the driver on the 203M in the morning, but can't rely on the services in the evening.
I feel that the bus needs to be on time and also come when they are supposed to. We are working and have to be on time.
I have caught the yellow bus for two years and it was the worst. It was never on time and the drivers were very nasty. The orange is now what I catch and it should have a better schedule to service people on the weekends. TERRIBLE SERVICE.
I have experienced RTA buses leaving and coming before their designated times. If I look on my RTA bus schedule and the time it arrives says 12:34 pm, I shouldn't see my bus coming at 12:22 pm and then leave. I do not think that is fair.
I honestly hate it. Some drivers are nice, but the buses break down too often, are late, and not consistent. I am force to drive because you can't depend on public transit.
I just need bus ride just need to get here on time and care about customers that have somewhere to go and don't want to be late.
I only have concerns with the outdated buses, because when they break down it causes delays. It would also be helpful to track the buses. Speedstop doesn't work
I think bus drivers do good, but sometimes the bus is late. Some of the buses aren't in good condition.
I usually take the Red bus because the Gold bus just doesn't run often enough. It runs every 2 hours sometimes and is often late or it doesn't show. If it was reliable, it would be the most convenient line for me.
I would like to say that the RTA bus is somewhat reliable but at times can be unreliable.
If a bus driver arrives at a bus stop earlier than the time on schedule, they should wait to leave. I have missed the bus plenty of times because of this.
It is behind and not adequate. Too many delays.
It is much better as compared to the previous transportation company. You try to do more especially when it comes to break down. There should be another bus to respond immediately.
It is terrible! The buses don't run on time. They break down constantly. At least once a week I am late to work because of the bus.
It seems to be more or less.
It's get me upset how bad transit is getting as the years passed. Dispatchers don't care, are rude and don't like to help. Buses don't work and schedules are bad at night.
It's very good and punctual.
I've seen the M bus break down multiple times a quarter.
Just fix the hours and the lateness
Just want the bus to be coming on time.

Reliability 165 Comments
K Route does not meet up with the J at Arundel Mills. There should be a way for one bus to connect with the next bus at Arundel Mills without waiting another 45 minutes to 1 hour for a bus.
K Route needs to be on time.
Maintenance is horrible, too many buses break down.
Monday it took 4 HOURS to get to work. First Silver bus was early, second skipped the BWI Business District stop, and we nearly missed the Brown. I was 2 hours late to work. It sucks in the evening because if I miss the Silver connection from the Brown, I won't get home until 10 pm, when I left at 7 pm.
My concern is the bus trying to run on time considering it doesn't run as often as the MTA buses. If I miss the bus or the bus is late, I'm not where I have to be.
My only concern is when the first bus doesn't show up or is damaged. They don't send another bus and that cost more money for me and go late to my work and that affects me and my attendance.
My orange bus does not show up at all sometimes. The riders are not warned and the bus drivers never confess to knowing anything about the missing bus. "Dishonest"
Need more buses. It would be helpful if the buses ran every half hour because many people rely on it for work. Sometimes if we miss the bus, we miss work. Overall great service.
Need more reliable transportation services and friendly customer service from the bus drivers, especially the "female" drivers.
Need to be more on time, new or better buses & more stops & more times/ longer times.
Needs to be reliable concerning time schedule.
New buses a must!!! Have to leave 2-3 hours earlier for appointments because buses are breaking down frequently, miss connecting bus.
No good service. Too long a wait for the bus and its getting cold.
Not on time, running late five days a week
On Friday evening the Brown bus is always late which makes me unable to catch the yellow bus for work.
Only problem I have is if I have to go to work and the Cromwell train comes, I miss it and wait for the BWI train because the Silver takes my MTA pass and the J does not.
Only with the RTA bus drivers is where most of my dissatisfaction occurs. Bus run late most of time and then have very negative attitudes.
Overall very good service -- but schedule time is lax sometimes and there is confusion at the hub at the mall, particularly with Red/Brown bus.
Overall, honestly this transportation service has to be the worst service in Maryland! Truthfully Yellow bus and Red has to be the worst route.
Passengers must be transported on time and need to get to point A to B.
Please set the timing correct, add facilities to buses.
Poor in time management and lack of buses.
Reliability and weekend schedules are really pretty bad.
Repeated delays and no explanations, apologies or information to rectify the issue.
Routes take too long which delay the bus doesn't run consistently/frequently enough/buses are too old and keep breaking down.

Reliability 165 Comments
RTA bus service in Columbia is notoriously unreliable. Buses are frequently rerouted and the public is never informed of any changes, so why bother publishing bus schedules? Negligence of RTA's management results in waste of resources and money. In particular, the Brown route in Columbia is always late. I have talked to many of fellow riders who complain about how the Brown bus service is so unreliable it negatively impacts travel to work. Brown route bus drivers are notably rude. I have observed first hand they drive aggressively in the Stevens Forest neighborhood school zone.
Safety. Bus on time. More locations
Schedule needs improvement. Need better buses (RTA). On-time service is very poor (needs improvement)
Service in the AM is not good, buses frequently break down to the point that you use vans?? Not good.
Service is extremely hit or miss.
Should not have to leave 2-3 hours early to get to doctor appointments or other appointments, and not leave stop earlier than posted.
Slow, break down, some of the drivers are bad
Some buses are not reliable as well as bus schedule times not being correct online.
Some of the buses are never on time.
Sometimes in the evening the buses are really late at College Park station.
Sometimes the Brown (407) bus doesn't show up at all. Many of the drivers are rude.
Sometimes the bus schedule for arrival is out-of-service because of mechanical problems. Sometimes the bus is delayed.
Sometimes the buses are late, then that throws us off schedule with other buses we have to catch.
Sometimes the buses at 4th St (Laurel) are very late at running on time. They are from 5-15 late
Sometimes they do not stop and it does not happen every half hour as they say.
Terrible service, buses break down, not reliable at all. Note enough service Saturday night and Sunday evening.
That the buses are on time of the. Everything else is fine.
The 2:41 Brown/407 bus is late at least 3 times a week or sometimes just doesn't show or comes earlier than scheduled, causing me to be late to work!
The 501 bus from Arundel Mills to Columbia Mall schedule to leave at 5pm is always early which causes customers to have to wait an hour for another bus.
The B bus always has problems. The B transit needs to get it together!
The Brown bus is always late. Most of the time it gets to the mall when the other buses are gone. Something needs to be done.
The bus breaks down at least once a day making everything fall behind and the drivers (not all) are rude and can care less if that makes us late for our jobs. The red bus always seems to have the worst driver!! The Red seems to always be late.
The bus during work days causes me to miss scheduled train departures.
The bus in the winter time (Brown) doesn't come in the back by clock tower, and they never call the bus when I ask them.
The bus is also late and the drivers are disrespectful.
The bus is ALWAYS LATE or NO SHOW. BUY NEW BUSES.

Reliability 165 Comments
The bus is always late. Need new bus!!! And when I go back to work I will take the bus and have to leave my house 2 hours early to be at work on time.
The bus is usually unpredictable.
The bus just stopped while I'm on it. Sounds horrible, jerks/shakes, old and slow!
The bus must be on time.
The bus needs to be more clean, and properly functioning well. Due to the fact that these buses are old, they always break down, which delays some people.
The bus needs to be on time, am and pm.
The bus running on time on a daily basis is really the most annoying part.
The bus system is terrible. Always late. Forgets to stop at my bus stop. Leaving Owen Brown, going to Mall, I stand on Cradlerock. Sometimes the bus gets in far lane, does not even stop.
The buses are never on time and the conditions of the buses are never dependable.
The buses are old and are usually late. That's bad for working people and for those who have doctor's appointments.
The buses are trash and you want me to pay you're never on time always breaking down and no air conditioning and you charge us.
The buses breaking down, lateness, some unfriendly bus drivers.
The buses do not come and then we have to wait a whole hour longer. Buses are usually late, which means I'm late for work 2-3 times a week! Buses break down too often!
The buses need to be cleaner and on-time.
The buses need to be fixed. They break down and are late very often.
The company needs to come up with better incident management strategies, money in case buses breakdown.
The drivers should not pick and choose when to go to Broken Land Pkwy and assume there are not passengers there. If a bus breaks down another should be sent to replace it. A rider should not be delayed 2 hours to wait for the next hourly bus.
The E bus from Columbia Mall that leaves at 5 pm always leaves late. She comes and leaves people to stand out in the cold and she will be on the phone while we are waiting on her.
The gold bus is very unreliable during the week.
The Gold is always late!
The Gold is the hell. It's never on time, not reliable. I was miserable this morning going to Costco from the Columbia Mall. I was late.
The guy with the hat for 502/B needs to get himself on-time.
The overall bus service could be more time efficient and friendly. RTA seems as though they do not care about their customers.
The reason for low amount of riders is that you are not reliable anymore.
The service is unreliable on the 501/Silver
The Yellow buses are always late and why don't they have services on Sundays.
There have been quite a few times the bus has been late/had to wait for next one and sometimes hasn't showed up at all. I rely greatly on this bus service every day. Thank you!

Reliability 165 Comments
There's always room for improvement overall: timeliness, the drivers being more courteous, respect level, and just consistency! Some days are good, others aren't.
They are late a lot. Some of the bus drivers are very rude.
They are out of expectations. They don't satisfy us. Never on time.
This bus be late as hell
This bus service does not take the customer's need into account. There should be multiple drivers driving multiple runs so the service is more reliable. Though the morning driver is often reliable, the evening drivers are late 80% of the time. If the bus was reliable, more people would ride the bus.
This service needs an upgrade in its vehicles, and also needs to be on time more frequently.
This system is a joke! Lots of work is needed to gain respect from your riders. Please, please, please do BETTER.
To keep up with regularity and on time service.
Transferring from Silver to Brown and vice versa is stressful because you never know if the transfer bus is waiting or if they have already left.
Unreliable
Update 202K bus to sync up with the real-time update. 202K sporadically breaks down or does not run all routes on occasion.
Use newer buses and hire nicer employees.
Very unsettled in scheduled time of bus.
We have issues Friday nights on the Brown bus in Oakland Mills. It always comes late and we miss our second bus.
We need better working buses on the G bus line
We need buses every 30 or 15 minutes. Sometime the bus is late and I miss the next. Example "K" is always late. I pay \$2 only for 7 minutes every day Route "K".
We need more buses on each route that are reliable. The buses cost too much, what ever happened to transfers. We should not have to wait so long between transfers. Our drivers deserve buses that won't break down.
We want the arrival time to be correct
When the bus doesn't come on time I'm late for work. This has happened too many times. Then you have to wait another hour which is bad for the company
When the bus is on time, I feel like I am in heaven.
Whenever the bus is late or doesn't show up all the reason given is that it broke down.
Why is there no other bus running when there is a bus broken down. You have to wait another hour.
Worthless, need new working buses.
Y'all need more buses and lines. Almost 1 hour 30 min wait if I miss one bus
Yellow on Mondays not on time!!!
yes it's a convenient trip but sometimes it's mean. Overall is a bless
You need to rebuild customer's trust again because is lacking.
Don't run long hours
more routes

Reliability
165 Comments

Moving slowly

Need to get rid of ITT tech stop.

We need a good transportation system out here, especially the purple bus.

Vehicles
111 Comments

A better fleet of buses.

All the buses are some shit, need new buses tired of them breaking down

Better bus

Better buses

Better buses (newer, bigger).

Better buses. More drivers with customer service.

Bus constantly breaks down

Bus is regularly broke down, which causes you to wait for the next bus. Also, this past summer, the AC was broken down on the hottest day. I felt bad for the driver, who was miserable on the whole trip.

Bus is very old. They break down too much.

Bus needs to checked, always a break down, and should run until 12:00 am

Buses always are broke down.

Buses always filthy dirty and smell. Have broken on a regular bus. The worst form of public transportation!

Buses are old and unreliable.

Buses are old/slow/always breaking down or not showing at all.

Buses could be in better shape.

Buses need air in the summertime and heat in the winter. Need new buses.

Buses need to be replaced!

Buses not in best condition (break down, need to shout for stop).

Buy new buses

Buy new buses and increase frequency

Cleaner and newer buses

Condition of bus -- not heat, no air at times.

Condition of buses -- repairs needed

Conditions of the buses are horrible and break down often.

Drivers catch a lot of sh*t and disrespect from passengers when vehicle (bus) has issues causing delays. It unnecessary for bus drivers.

During summer, most buses are not well equipped with AC.

Get better buses.

Vehicles 111 Comments
Get new buses.
Get some new buses where they don't break down so much. More buses on the road.
Get your buses fixed, they always break down!!!
Have better running buses. Have them run on time. Thank you.
Howard County can do much better. The buses should be spotless.
Howard transit buses break down frequently and have broken bells, heaters, etc.
I am satisfied with the service. Need to clean the buses.
I don't always have a good feeling when I ride the bus and get shaken a lot (38 weeks pregnant)
I just think they need more buses.
I would like to see the RTA update their buses. Every day one of the buses break down.
If you can't run a consistent set of similar vehicles, at least give your current ragtag fleet the same paint job. G is often served by ex-The Bus vehicles still in the PG livery which is confusing to riders.
Just making sure the bells work to stop the bus.
Main concern is the cleanliness and functionality of buses. Some seem like they need some work.
Maybe one day you guys will get new buses that work.
Montgomery County Would Not Allow This!!! These buses are in poor condition, that's not practicing safety.
More buses needed ASAP. Drivers work more and always under pressure. The buses are less in number.
Need 3 buses for a route.
Need at least 3 buses to every route. New buses.
Need better air/heat on bus without fumes. Maybe more updated buses.
Need buses when one breaks down, to replace it.
Need more buses
Need more buses
Need more buses.
Need more buses.
Need more buses.
Need new bus if you want top dollar.
Need new buses
Need new buses
Need new buses -- sometimes no heat/air. Most of drivers are nice and respectful. Buses always breaking down.
Need new buses, buses always breaking down
Need new buses, buses are hot in the summertime and cold in the winter
Need new buses. Current ones break down too frequently.
Need new reliable buses, need to give drivers a/c when hot and breaks!
Need some new seats on buses- it's a disgrace and need to clean all the bus seats.
New buses.

Vehicles 111 Comments
New buses!
New buses!!! (Hybrid)
New buses.
New buses. Many are ruined.
Newer buses.
Overall service, reliability and customer service of drivers is great. Need new buses though... Many of the buses are falling apart.
Please clean the buses and fix the buses so that the bell will work. Also so they won't break down.
Please fix the buses.
Please fix the buses.
Please obtain reliable buses or maintain those you have, and put more bus lines on Sunday.
Please provide buses that are new and that will not break down and interfere with my commute.
RTA buses need replacements due to buses constantly breaking down/malfunctions. Need larger ones
Several buses need to be replaced
Some buses are untidy with torn seats. Buses need to be maintained better because some smoke or leak.
Some buses are very old/ could be in better shape.
Sometimes the buses are smoking or dirty inside. Some buses have bad smells on them and just look trashy. They need new buses.
Thanks for air conditioning the last two years.
That very few of the drivers are kind and do not pay attention to the passengers and that the buses are extremely dirty and bad.
The bells-- why do they not work about 1/3 of the time? Why should I have to look for a working bell when I get on the bus when the bell is a key feature of the bus?
The bus always smokes.
The bus seats should be cleaned on a regular basis, the A bus usually stinks.
The buses are all 2nd or 3rd hand trash and the truck buses should all be junked!
The buses are in horrible conditions. They need to be cleaned and well maintained.
The buses are in very bad condition
The buses are very dirty, old, smell very bad and are very old
The buses don't seem safe; they shake and rattle way too much.
The buses need to be upgraded to newer buses. (Too old)
The buses on this line need to be updated!!!
The cleanliness of the buses is horrible. The reliability and condition of the buses is the worst experience I've ever had while taking public transportation. New buses are imperative! When you pay for a service, you expect it to be reliable and safe for patrons and drivers. Safety first!!!
The condition of the yellow bus I ride is not safe. There is a hole in the floor in the very last seat.
The conditions of the buses' safety for drivers and passengers.
The RTA buses should be cleaned more than they do.

Vehicles 111 Comments
There is no reason for the bus to break down and have to use a van to transport people. Fix the buses!!
They need air conditioning buses that run
They need new buses
They need new buses, with lifts.
This bus is very old compared to other buses used from Arundel Mills Mall to other destination
This bus route provides highly unmaintained buses. As a result, there are frequent breakdowns and this problem needs to be attended to, ASAP. I am strongly dissatisfied with all conditions of the buses running this route.
This bus service is fairly reliable. However, it would be more beneficial if the buses undergo a scheduled maintenance check regularly to minimize the amount of breakdowns and overall displeased customers/passengers.
Tired of buses breaking down
Totally dissatisfied with conditions of buses in use. They are unsafe and poorly maintained.
We need more buses; the bus always smells of smoke.
We need new buses. They are falling apart. Some are smoking. Some have really bad fumes.
When it's cold, drivers must turn the AC off. Try to fix security camera on the bus and the bell.
You give us old buses that break down, have no air, and start on fire.
You need new buses, these are old and run down
A bus literally caught on fire.
Should have bike racks on all buses!

Schedule Frequency 66 Comments
1 hour should be half daily not enough.
Double transportation; 1/2 the transit time
302G should be running ever after every 30 mins
At least 2 buses an hour.
Bus does not run often enough and does not run in all areas on the weekend.
Bus service needs to be improved on the Silver route (frequency) and on Sundays buses need to run at least hourly and not be stopped at 6 pm.
Bus services should be available at least every 1/2 hour for all buses. New, clean buses are needed. An all-day bus pass should be available.
Buses need to run more frequently.
Buses should run more frequently. Change Sunday hours.
Buses should run more frequently. They should run longer on weekends being as how places are open 24 hours now. Better buses.

Schedule Frequency 66 Comments
Can the Brown #407 & other buses run more frequently. Yellow service to Court House is horrible. What happened to Yellow Express bus?
Can we please get more Yellow service, at least every 1/2 hour. Fix all buses before winter
Drivers have too long break. That makes it hard to time lost due to traffic conditions, invalid, the children, etc.
Every bus should have a 1/2 hour bus. Those chart things that tell you when bus should be arriving.
For \$2 we should get a better service, we need more buses for this route 2 bus not enough it takes me 1 hour to get to work, the 7 am bus is always on time (kudos), the evening bus is terrible 4-5 pm always late or don't show up then am late for my appointments
Go back to every hour on the hours. Bus ride every 30 min.
Have buses come every half hour.
Have the buses come every 30 mins.
Have to wait so long for a bus on Contee Road. Across from Shoppers once you miss one.
Hours of waiting at bus stops is too long, 1 hour interval
Howard County has gotten big. We need more buses on the routes. Longer times, 5 am-2 am
I believe that the bus should run like every 15 minutes instead of every 45 minutes.
I couldn't find a schedule; the bus to bus duration was over one hour. The extent of the route was very convenient, but the time that I had to wait was absurd.
I think the times of the bus should run every half hour. I have waited two hours many times for a bus to show. Sometimes they would see you and drive off. Sometimes they would have you stand in the rain, cold, snow, while they just sit there. Not all, but the ones in the past.
I think you should work with Metro and have more buses running and change the hour of the bus.
I wish it was less than 1 hour, because if you miss one there's not another one until 1 hour then you have to wait at stop for 1 hour until next bus
I wish they ran every half hour like they used too!
I would like this bus to go more often
I would like to see buses run every half hour.
I would like you to think about the Brown in the afternoon, please. Because I always get to school very late. I missed my test. Thank you.
If possible, can you have trips every 30 min instead of hour. Can G bus come to College Park early, 6 am.
Improvement in service/timing and efficiency Increase frequency of service times Improve quality of buses
In the Russet Green area (Laurel, MD) it would be much more convenient for the 502B bus to stop at the Walmart going both ways and on weekdays as well as weekends. Also, I ride both 302G and 502B bus regularly and it would be helpful if the G bus leaving College Park Metro connected with the B bus at Laurel shopping center in a more timely manner. Thank you!
Laurel is a bustling city and while there are many routes to get to places the frequency of the routes is appalling.
more bus on the silver bus
More buses and they need to be on time
More buses running twice an hour would be great.

Schedule Frequency 66 Comments
More buses, more times
More frequency in bus schedule. In one hour, only a single bus coming is quite inconvenient
More frequency of bus departure and arrival.
More open times, more availability, more reliable bus drivers.
More schedules. Should run on time.
Need to increase routes -- every 30 minutes especially on the Yellow Bus. Need Sunday Service. Need to run buses to match County Government Meeting Times... Can't attend current meetings due to lack of transportation.
Need to run every 30 mins
Need to run more often
Need to run more often.
Needs an overhaul! Frequency needs to increase.
Old buses, few in number, route should be longer, website clearly does not specify senior age limit, drivers must be informed, more rest is needed for drivers.
One thing I don't like, the bus comes every hour and they are rude, no compassion for others. Have more buses running. Try to work with Metro
Prefer if buses could run more frequently and throughout more parts of the Anne Arundel County.
Routes are too long
Run every 30 minutes
Run later and more frequently during week. Add more weekend services.
Running the buses more often would help alleviate the issues of them breaking down as often as they do.
Some buses should run every 30 minutes
The best improvement was adding half hour routes for 401 and 406
The bus doesn't run frequently enough, the routes are extremely short, there's no bus tracker, and customer service never answers.
The buses need to run more frequently and on schedule. Once an hour is too long.
The buses should be upgraded & run more frequently.
The buses should run more frequent and longer hours.
The Yellow bus needs to be every half hour
There could be more buses than 1 hour.
There got to be more running. Have running every 1/2 hour instead of every hour.
These buses need to run every half hour than every hour. Longer hours.
Time is too long between buses, especially on weekends. Buses stop running too early.
Would like to see more availability.
501 BWI needs to stop at Snowden River Park and Ride after 7:30 on weekdays like it shows on maps.
Mrs. Brenda is Great, always nice and on time.
Almost impossible to commute from Baltimore to Howard County.
Buses do not start early and the buses stop too early.

Schedule Frequency 66 Comments
Bus service for Crofton needs to extend to the 5:50 pm time period. Commuters returning home have to wait till 6:55 pm in order to catch the bus returning to Crofton.
Bus service hours should be better.
Columbia seems very disconnected transit-wise. I have lived here for 1.5 years; will probably not stay much longer.
Concerned about possible ride in bus fare would like more bus routes that go to common landmarks ex. the gym or libraries.
Doesn't start early enough, in evening only every 90 minutes.
Earlier & later hours going to Laurel and from Laurel
Earlier hours for J bus, earlier start time.
Earlier start to the morning service would fit my work schedule.
Earlier times
Early morning shuttles before 7:30 strongly needed.
Expansion is continuously needed.
Extend time of running to midnight, 24/7, instead of closing at 7:00, like A bus and some other buses, Baltimore services are fantastic.
Get buses to ride all over Anne Arundel County all week and weekends, with buses running every 30 minutes.
Hours need to be extended (more time).
Hours of service are inconvenient.
I am from NYC where there is 24 hours transportation; it's crazy that all buses meet at the mall for connections. To transfer you have to go around town just to get to your stop. More transfer locations need to be set up. More connections please.
I am overall satisfied but I'd like to see a route to Furnace Branch Rd.
I have lived in other cities both domestic and international (San Francisco, Vancouver, BC Canada, Paris, France) whose public transportation (buses and trains) I took regularly to/from work and home. MD Transit in my particular AA County community (Arden/Harold Harbor) is not present. I would appreciate having at least bus service to the New Carrollton Metro station for my DC trips.
I think that the yellow route should go to or near Normandy Woods Drive because I take a long walk to the bus stop and some time I miss the bus in i have to go shopping on the bus have to come home with bags.
I think we just need more stops serving other counties and more frequent stops.
I wish the bus ran a little earlier in the morning
I wish the buses ran 24/7
I wish you still serviced the Clarksville shopping center and easier transfers to the Annapolis area were available
I would like for the hours of the G bus to extend. 8:35 pm is too early.
It is almost a mile walk from work 'peapod' to the stop. The J bus goes right by but has no stop close by!
It is sad that most Maryland cities are not connected.
It would be nice if the buses started before 2:30 am and we have more options before 1:30 am. And it would be nice if the bus time tables are in sync with the MARC train services.

Schedule Frequency 66 Comments
Longer day service.
Many people move out of Laurel because their buses do not service up to 9 pm. There are even some areas -for example, Muirkirk Road – there was no bus as from 7:20 pm. people work for hours after that time.
More routes.
My only real issue is that the bus sometimes limits my work schedule. The bus does not run later at night, and I regularly have to take expensive car rides home.
Need longer hours, new buses and more stops.
Need more bus destinations, longer and more frequent hours, more buses. Fewer breakdowns and late buses.
Need more of it.
Need the buses to run from 6 am - 12 am. Need a bus to connect at Baltimore National Pike
Need to run a little earlier.
Need to run earlier and stop later. Times need to be better.
Needs to stop at Elkridge temporary library at Montgomery.
New buses, Run more hours daily
Please try to extend service east, towards Gibson Island or further down Mountain Rd. Will be appreciated!
Purple route, have new job without car. Need to operate before 9 am
Run later in the evening
Service could be earlier in the morning.
Should offer extended business hours for those with night jobs.
Start a service that goes to Annapolis from BWI thru Arundel Mills
The B bus does not go directly to public transportation (the light rail or MARC). I think that should be changed. It is inconvenient to transfer to another bus to get to the MTA transit. There are no tracking devices in the buses. There used to be, but it was taken away. Also, there is not transfer capability from the B bus to other buses. You have to pay an additional fare. That should be changed.
The Regional Transportation Agency buses should be running and active for 24 hours a day and 7 days a week. In addition, There should be five new routes to add to the RTA system. These routes are the Blue route or Route 101 which travels from the Columbia Mall to Daybreak Circle in Clarksville, the Pink route or Route 103 which travels from the Columbia Mall to Maple Lawn in Fulton, the Black route or Route 104 which travels from the Columbia Mall to the Waugh Chapel Town Centre in Crofton, the White route or Route 403 which travels from the Columbia Mall to the Corridor Marketplace, and the C route or Route 303 which serves from the Laurel Town Centre to Kings Contrivance. All of the RTA routes including the proposal five new routes should be 24 hours a day/ seven days a week because the population is growing faster. Also, bus drivers should be more friendly and on time.
There are workers who get off at a certain time and RTA is shut down for the night.
There are basically no buses in Pasadena. I am talking about the area by Edwin Reynor Blvd. I can't go anywhere or do anything because of it. I don't have a car and my son has a lot of doctor appointments in Downtown Baltimore. I even believe an extension of the light rail to Pasadena would be wonderful.

Schedule Frequency 66 Comments
There should be early AM service provided on all routes and with increased frequency to every 30 minutes.
Van Dusen Road has no bus pass through Old Sandy Spring Rd, Laurel.
Would also suggest a route from BWI to Glen Burnie (Hospital, Town Center) Millersville (Old Mill)
Would like to have some service northbound 170, also to southern end of Crofton shopping center (Wegmans).
Almost never can get your transferring bus. The times are too close. Some leave early.
Better timing.
Different schedules give multiple times for the same stops. No transfers on the J bus? Makes no sense I can use a transfer on any other bus, but not the one that is closest to me.
Scheduled times and the MARC train
The bus times. When I get off the K bus I have to wait 45 mins for the J bus. And the same if I'm going the other way.
The drivers pass through all the stops because some you see do not happen and they leave you in other stops that are far away and not good.
Transfers need to align
We need to run all buses the same times, 7 days a week.
Why doesn't the E bus meet the B bus? There are some stops for the E bus that may not be necessary.
Would like bus to go to MARC station stop and Carroll County exchange and White Marsh Park and Ride.
The silver leaves before the train gets there at 6:37. The silver should wait till the train gets there.
There needs to be more routes/buses with access to WMATA transit, and schedules should run in conjunction with WMATA for DC/VA commuters.
I think there should be an express bus to Downtown Baltimore.
I would like an express bus to go to Walmart in Dobbin Center of Walmart in Ellicott City. I am willing to pay more bus fare.
Need 3-4 transfers to go to Anne Arundel Community College. Costly and time consuming.
Need from DC to Ellicott City/Columbia. Express service - may be by MTA - Revise commute.
Need to have an express bus route on weekends, need to change time schedule to allow breaks and able to catch purple bus by 10 minutes.
There should be an express bus to BWI, maybe stop at Arundel Mills, MD Food, & BWI. Current trip is too long.
Would like Laurel-Columbia Mall express route.

Weekend Service 90 Comments
I never ride on Sunday, early Saturday, 8:00 am. People need to go to work on weekends.
Also, since many people (including myself) work weekends, there should be extended hours on weekends AND availability of certain buses that run on Sundays that currently do not.
Better service on the weekend.
Bus services should be available to run a little later and be available on Saturdays and Sundays because I work the weekends. It should be like during the week. (South Laurel Area)
Buses could run until 7 on Sundays since mall closes at 6 and a lot of people work at the mall and have to walk home.
Can we get Sunday Service for E bus, because I have to take a cab to work on Sunday. That would be very appreciated, thanks.
Consider running buses on Sat until 11 pm (i.e. Building n col and other areas)
E Bus route, Laurel to Columbia on Sunday.
every 30 minutes, later times on sat and Sunday
Full service on Sundays.
Good, but can do a lot better, especially on weekends.
Have to take cab every Sunday I have to take a cab which cost 18. we should have a bus on Sunday people have to go to work and cabs are expensive
I had to work Saturdays and it was no service.
I love that it is available to me. I hope the service becomes available for the weekend and extend the hours of operation.
I rely on it, have gotten used to the service. Rough on some weekends. We need more direct routes.
I think the addition of weekend service is a necessity for me and for other citizens who don't have a car or have a car but prefer to ride the bus.
I think the time on weekends should be extended for the A (South Laurel Route). All the new buildings, food/movie/shopping, those without a car have to way to enjoy.
I was advised that weekend service for B bus is being revisited for changes.
I wish that the 301/A would run on Sundays so that my family could get to work and church without having to walk 2 miles to get to the closest bus stop with bus service.
I work Monday-Saturday. On Saturday, the 302G does not come to Muirkirk and Ellington Drive- so I have to walk to Muirkirk and Route 1 to catch the bus.
I would like for there to be a better time for Sunday schedule. Not every place closes at 6 pm.
I would like on weekend more service and extended hours. Also have service that goes to Laurel Race Track.
I would like to see enhancement with service for RTA Disability riders. I would like to be able to attend my church home at least two Sundays per month as well as church activities/events a few times, which is located in Baltimore County.
Improve the service on Sundays.
In fact, B bus to Arundel Mills comes very late. A bus should run on Sundays.
Increase Sunday Service.

Weekend Service 90 Comments
It needs to run more often. The yellow bus especially. People work on Sunday and it is an inconvenience. I would suggest running every half hour.
It would be nice to have local service on Sundays so I do not have to get a taxi, Uber, or Lyft
It would be nice to have service on Sundays
Later pick-ups and drop offs on weekend for people close.
Longer hours on Sunday.
More buses on weekends. More buses between 11 am and 4 pm.
More stops on Furnace Branch Rd and more Sunday hours.
Need Saturday bus running. Would help out.
Need services longer on weekends.
Need the Yellow bus (405) on Sundays.
Need to run more often and later, including Sundays.
No reasonable bus service between Columbia and Baltimore/DC on weekends.
No service on Sundays.
No Sunday service in my neighborhood; may need to wait 45 minutes for connecting buses. Saturday is every 2 hours.
No Sunday service on Yellow routes :(
No yellow bus on Sundays.
People that work weekends need more buses. If the weekend schedule was the same as the week, it would help a lot of people. A lot of us rely on RTA fully to commute.
People work the weekends, so the bus needs to run as if
Please give us a Yellow on Sunday-- A lot of seniors need to get around.
Please start a Sunday route and work on some bus drivers customer service skills.
Really need to run the E bus from Laurel on Sundays, and see how many people will ride it.
Run longer hours on Saturday and Sunday
Saturday and Sunday schedule, K bus and Laurel
Saturday and Sunday service and frequency to Baltimore must be added. Frequency of E bus & Yellow and Gold is needed.
Saturday and Sunday service is very bad and the time is not too good. We want it to move like another day.
Saturday and Sunday should at least have one way.
Saturday and Sunday should have at least one way.
Saturday and Sunday should have the same weekly schedules as the weekdays because of church service.
Saturday, Sunday and to commuters stop nearby must be added. To downtown Silver Spring schedule must be added.
stops 6:25 too early no service on Sunday
Sunday service is abysmal. Two drivers are VERY unpleasant: Glasgow & Copper.
Sunday service needed

Weekend Service 90 Comments
Sundays I have to be at work 10:00 am. The buses don't come until 10:30. My boss is not happy when I'm late.
Sundays the bus should run till 8:00 pm.
The 302 CT bus should run more often and be available on Saturdays and Sundays because there aren't any more bus
The bus could go earlier on Saturday and later on Saturday and Sunday.
The buses should run every hour on Sundays and continue to run until 9:00 pm.
The E route should run later and a Sunday service would be extremely helpful.
The only comment I have to make concerning about Saturday and Sunday, bus don't run regularly, that is the serious problems I have
The service on Sunday could really serve the public more if it is made regular. This is because people carryout similar activities like weekdays.
The Sunday and Saturday schedules need to change. The bus should run earlier and make stops at the regular stops instead of making selected stops.
The walk on Saturday and Sunday is a headache. It's so much easier for the bus just to turn into the train station and create a closer stop.
The weekend schedule is not good or flexible, very limited.
There needs to be a Sunday bus service on the E route and an etiquette class on how to react on the bus.
There should be more Saturday/Sunday service, especially in the morning.
Transportation in Maryland is not great, especially on weekends.
Want to add weekend service - more schedule time until 930 PM every day! - Good DRIVER.
We cannot leave Columbia on Sunday, we need service.
Weekend bus could run more than the time they are currently running.
Weekend service is inadequate on 302G route.
Weekend service starts too late in the morning.
weekends need more early
Would like E bus on Sunday. Fix huge pothole near mall in Columbia
Would like to have Sunday service on the yellow route.
Would like to see more frequent service on weekends for 201J.
Would really love to see Saturday/ Sunday service.
Yellow bus needs Sunday route.
Yellow needs to ride Sunday. Brown evening and yellow schedule way too tight.
You need to start having E and G buses every hour on Saturday and Sunday. And E bus on Sundays. Stop having buses stop so far, so you won't have to do a lot of walking like the Purple and B bus.
Better schedule on weekends.
Better/ more times on weekends.
Buses should run later on weekends
E buses need to run on Sundays.

**Weekend Service
90 Comments**

I depend on this service for going to work. But it is far too much to wait for the long times of waiting for service on weekends.

**Drivers
71 Comments**

A handful of drivers are wonderful! Too many are rude, disrespectful, ignorant of the RTA system and unwilling or unable to be helpful. Their behavior is consistently negative. If they hate their jobs so much they should NOT be working with the public. On 10-30-16 the early driver bypassed the green stops at the college + hospital because (he said) of a marathon race. However, the marathon was in DC - not Columbia! He just didn't want to work so he changed the schedule to suit himself. That sort of thing is not uncommon.

Also control your nasty bus drivers and those who speed.

And some of the bus drivers are very nasty and rude.

After putting \$1 in, I have been told to exit the bus.

Bus driver is very rude.

Bus drivers aren't willing to give information or help with exception of a few. Some are rude and nasty and some are nice and friendly.

Bus drivers' attitudes need to improve.

Bus drivers need lessons on courtesy/people skills.

Customer Service and Driver/Rider interactions are terrible. I have had many negative interactions with Drivers (rude, unprofessional, and impolite) over the years and it is something that should be addressed.

Drivers don't know how to speak to people and they have no customer service skills.

Drivers need to wait for passengers before they start driving, because it can cause injury

Drivers on buses are nasty.

Drivers opening doors while driving on the road and blowing horn at other cars for no reason.

Drivers shout at customers.

female bus driver on 302 G route (black female mid 50s) sometimes yells at passengers

Get all bus drivers training on how to react with the public.

I am very dissatisfied with the bus over all - always impatient skip stops and lie about it to dispatcher

It will be great for the bus drivers to be a little more polite, friendly, and respectful of ALL PASSENGERS YOUNG AND OLD. Please and thank you.

It's ok. Some of the bus drivers have nasty attitude.

Key problems with a particular individual I encounter refusing student passes at stops, Smart Trips. Another driver sexually harassing my fiancé. I will press charges to all involved, including company. I will personally take care of sexual harassment individual if you don't. I mean it.

Light skinned fat bus driver, I put \$20 in box, mistake. She was training and told me she would not help me!

Many drivers are rude.

Drivers
71 Comments

Many of us seniors feel many drivers are disrespectful because RTA won't discipline once we make contact. The following dates and times I have caked to report negative behavior of drivers. This lady was horrible on both dates: Brown bus, 9/28/16 11:58. Same person 9/29/16 green bus 5:42

Most drivers are kind, but you have some real nasty bus drivers.

Most of the bus drivers are extremely rude and disrespectful. There are a few exceptions. The 10:30 G bus and 12 pm B bus driver are always professional and nice.

Need more drivers.

Often, bus drivers take "alternate" routes assuming there would be no passengers at certain stops. Also, some stops are poorly lit, causing buses to miss would-be passengers.

Overall drivers not friendly, always late.

Please help the bus system. The bus drivers are mean and have attitudes. It hurts people feelings including me.

Public transit is terrible! While most drivers are courteous some are extremely rude.

RTA service for Howard has rude bus drivers. They need training in customer service. Most drivers do not speak, have attitudes and don't like questions about the route he/she is driving.

Some are very poor. Some drivers are not friendly to the passengers, and the elderly.

Some bus drivers are rude even to the elderly. Need customer service training.

Some bus drivers are unreasonable.

Some bus drivers are very nasty.

Some bus drivers need to be retrained on customer service.

Some drivers are excellent! Many are not. One in particular does not ever stop at stop signs on the hospital or HCC campuses. I always feel like my life is in danger.

Some drivers are nice- others not nice. They need to be trained about speaking to customers. Stop at each stop for passengers

Some drivers are nice. But some are so rude like the purple bus and the 6 bus stink and dispatchers are mean and rude. We need late night buses running.

-Some drivers are respectful and some are not. -

Some drivers are rude

Some drivers are rude

Some drivers are very helpful and some are very angry and unhappy people.

Some female driver are very unfriendly

Some of the bus drivers are really rude and disrespectful.

Some of the bus drivers need to learn how to speak to adults correctly. I always have a problem with the guy that drives the G bus.

Some of the drivers are not friendly and some can be very nasty.

Some of the drivers are ok, most are very rude with extreme attitudes.

Some of the drivers are rude, no customer service at all.

Some of the drivers are rude, not pleasant at all.

Some of the Drivers are rude.

Some of the drivers are so rude.

Drivers 71 Comments
Some of the drivers are very bad in their conduction.
Some of the drivers are very friendly while some mean, treat passengers anyhow.
Some of the drivers are very mean to riders and give the ones in need little to no favor.
Some of the drivers drive too fast.
Some of the drivers good, but you have one lady driver is a b----. Don't know her name, cause I sure would tell you.
Some of the drivers take their own time getting to the mall and when leaving.
The 302 is not a good service and some drivers are racist just because we are Hispanic.
The driver of the 7 pm Laurel to College Park bus is extremely unfriendly. Other drivers are fine.
The drivers need to be a little more courteous not rude almost every time when just asking a question.
The transportation system here is very poor, the drivers are rude, very disrespectful, especially the women. I think more needs to be done.
The yellow bus 7:00 AM Tuesday driver is very rude. She will not wait for you even though she sees you coming.
There are some non-cordial drivers that are not good
Two buses should run per hour for each route. Pay the employees more, maybe they'll be a little more professional & kind. The older black lady that drives the purple bus around 6 pm/7 pm (weekdays) is HORRIBLE!! Worst attitude ever.
You need reliable bus drivers.
You people need to talk to the bus driver on how to treat people on the bus, because they talk to people anyway they like.
You say good morning to some drivers and they don't speak.
Your bus service is horrible. Your bus drivers are rude and not respectful.
Your female drivers are rude.
Your morning 20sM driver is awesome, after that it's all downhill. If I had a car, I would not utilize your services.
99% of drivers are excellent and professional.
All the bus drivers, they do their job and are really appreciated.
Awesome driver, friendly and courteous.
Brenda is the best in the business!!
Della Blanks is the most wonderful driver for this company. Camille is the worst.
Della the bus driver is one of the best in a long time, very customer friendly and made my commute a great one.
Driver was very courteous and professional.
Drivers are always courteous, professional, and friendly. Thank you!
Drivers are wonderful on B line always.
Good drivers need more buses on route.
Good driving
Morning drivers are nice

**Drivers
71 Comments**

Mr. William is a very nice driver. He is very respectful, knows how to talk to you, full of jokes.

Please give the bus driver of the Orange bus a raise.

Since Mr. Joe Douglas has been driving 501 Silver, he has been the best driver and kindest driver I have met.

Some bus drivers are very sweet, some have attitudes.

Some of the drivers are very professional and courteous, while a selected few have been downright rude and unprofessional.

The bus drivers Mr. Graves and former driver Joseph are always very professional and courteous.

The driver we call cookie is the best and so friendly. The rest of them should be like her. Keep her on the K202

The service is a blessing, however some of the drivers could be much nicer. Della is the nicest driver! Cordell is a nice driver.

This bus driver is very nice and courteous, she waits on Monday nights because I have class on the other side of the mall and it gets out at 9. Also, loving monthly bus passes for students.

This lady Della is a very nice lady. We need more people like her to drive the bus. Have good manager, respectful

Very few drivers are good. Kathy Brenda Camille is good.

You have good personnel.

**General
41 Comments**

All is fine.
All is well and I am grateful for my fortunate access to a beneficial public service. Thank you all.
Comfortable so far.
Everything is ok
For me it's a very excellent service.
Good
GOOD
I am grateful for this transportation option. This is a much needed service.
I am satisfied for all RTA bus service
I don't often use RTA, but I am comfortable with its service when I do.
I enjoy riding the public transportation in Maryland.
I have been taking the K bus for 14 years and I have seen some changes and improvements over the last year that are great.
I like it.
I like transportation.
I like your service. I hope that it is going on the future.
I love it. I live in the City and I can get to work in Columbia until I can drive.
I love the B bus, most drivers are nice
I ride the bus daily and I am satisfied.
I think RTA is under new management because the buses are running on time and actually show up. Whatever you did, please keep it up. The E bus is so much better than it was two years ago.
If it was not for RTA I would still be walking very good service thank you very much
I'm pretty satisfied with this system of public transportation, after using it for the past year and half.
I'm satisfied
I'm sure you are doing the best you can. Thanks.
It's good right now.
It's OK
Just keep up the good work.
Let's come together and make this bus service great. It can be done. Thank you.
My experience has been a pleasant one. Thank you!
No concerns at all. Keep up the good work.
None, love the way it works.
Our public transportation is very good. Fully satisfied. Thank you.
Public transportation in Central Maryland is OK but can still improve.
Satisfied
Thank You
Too much to write, but looking forward to improvements all over. Grateful for buses and drivers. Blessings

**General
41 Comments**

Transportation is very good, good, good, but too much witchcraft mashing up the country.
Very good
Very good.
Very good.
Very pleasing indeed!
Very thankful to the county for the service.
Don't you see the world is upside down. Can't you all see the stupidity going down in the country, oh my god. The important thing is to help the country, it is going down. Too much b***ches and witchcraft mashing up the country. Only god can help us with all the witchcraft workers in this beautiful country. Help us lord god. Send earth quake for all of us.
Abysmal - No service on Sunday. Poor service Monday-Saturday. No after county council meeting service. No service to county office building. Poor service to Ellicott city/Savage Gary Arthur Center, etc. Filthy bus stops-smoking, trash.
Bed bugs bit my bottom on Silver Bus. 85% of drivers have rotten attitudes. Hung up on and put off bus when I complained.
Dissatisfied, especially Howard County
I need better transportation!
I strongly believe much needs to be done to improve the quality of service. Schedule, cleanliness, courtesy needs to get better.
I think the service is horrendous.
I wish the buses are new and always on time. I'm tired of speaking to the machine when I called.
Improve the bus running hours, clean the bus, hire friendly bus drivers.
It could be better
It is very important that they continue working the buses so that there is something. No problem for those who have a car.
It stinks. Look nasty
It sucks!
Much needed improvements all areas
This is a bunch of BS.
This service needs a lot of improvements.
We don't have much.

Bus Stops 23 Comments
Also offer more bus stops in more neighborhoods. Add lighting to stops will help at night. More shelters for rainy days.
And need more bus stops.
Better bus stops
Bus stops are never clean.
Bus stops are sometimes dirty, buses are usually clean.
Bus stops need light.
Change Silber bus/ Shelter at Lincoln stop, safer.
Clean up the bus stops.
I would like to know if you are going to have a bus stop by Safeway by the Arundel Mill Mall.
Need a bench at the stop.
No light at bus stops, not protection at night, I have to walk in the dark by the woods. Last Wed I fell on the last step coming off the bus on my knee. Bald headed black bus driver asked if I was ok, I said yes, I lay on concrete in the dark.
Please consider a stop in Clarksville (possibly Village Center) There is no bus service serving Clarksville and Harpers Farm
PLEASE put a bus shelter at Odenton station on the south bound side.
Several times requested to have bus stop in the Broken Land Pkwy in front of Gramercy Pl (10611) to pick up and drop. RTA supervisors were shoned.
Sign at one bus stop broke off during snowstorm in January, has been leaning against a tree since then. Public transit is clearly not a priority in Howard County.
The bus 520B to Arundel Mills Mall, bust stop at Walmart needs a bench and trashcan there. People violate the environment of the bus stop.
The bus stop at Walmart on the other sides needs a bench and a trash can.
There are bus stops that need replacing in between Industrial Dr.
There are too few bus stops on the Dorsey Rd (J Bus) near Old Telegraph Rd. in which I have to walk 1/2 a mile or more 0.82 miles from the bus to my job.
There is no bus stop to cover Route 108 also there is no bench at most of the stops.
There needs to be a bus stop where Peapod is, it's very hard crossing the street.
Why aren't bus stops cleaned more?
Would like a bus stop up Route 170 to the airport.
Bus stops need to be commuter friendly with sidewalks to make them accessible, 2especially when it's raining or snowing.
I catch the bus on Samuel Morse at the top of the hill. There are not sidewalks. It would be good to at least have a stop somewhere on a sidewalk

Customer Information 20 Comments
Availability of schedule information
Buses need to run faster and information or a schedule should be present at all times.
Correct the bus schedule online
Drivers have limited info on other bus routes.
Make available the map showing all routes in color (Found inside some bus shelters). Inside the Howard County transit information booklet would be a good place.
Old times on post at a lot of bus stops.
Schedules are never available, and can't access online schedules.
That the schedules are kept more current.
What number or website should be used to plan a trip via RTA buses?
Your website and customer service are useless! It should be easy to plan a trip, but the website makes it very difficult to pick a specific day and time to travel. Customer service has actually hung up on me or transferred me into a mailbox that is full! I've also spoken with reps who admitted to having no idea how to get somewhere. If you solved those issues it would make life a lot easier!
Buses should post destinations when engine is off at the mall.
I believe there are things that are improving, but there needs to be a mandatory meeting on the customer service response of the drivers, and a clear understanding of the stops and safety precautions.
I often don't know if buses are running on holidays.
Improvement of the communication on times when buses aren't available.
It would be a great help if the RTA had a service similar to the MTA's website that could alert you if a bus has been delayed or broken down. The Silver seems to break down a lot.
Please identify bus by putting the name above.
Provide info. When buses break down and provide alternatives.
Put up a large sign in English/Spanish telling people to use headphones when they are conversating on their phone
I am from NY and it is very difficult to find some of these bus stops. Also it's very frustrating going in circles just to get to your destination.
The 302G bus works out wonderfully for my destinations and is for the most part reliable. Occasionally the bus has been 10+ minutes late and there is no way, that I've found, that provides this sort of arrival information reliably. There is one driver who is consistently unfriendly and exhibits lots of road rage, female driver who drives the more updated 302G bus in the early evenings.

**Technology
17 Comments**

Accept SmarTrip/CharmCard. You are the only agency in this area not to and it's infuriating.
Also GPS tracking for riders especially during bad weather.
Another thing is when calling RTA the people should be able to pinpoint where the bus is.
better payment options
Have a more updated texting service, because the gold route doesn't show up in the text so I don't know exactly when the bus comes.
I think it should be a fare box that shows how much money customers pay on the bus.
It is absolutely ridiculous that you don't have Smart trip-capable fare boxes.
It should be able to accept all MTA passes
It would be better if RTA/Connect-A-Ride hooked up with Metro so we could use our smart cards and similar buses. I would not mind paying more!
Please make sure people with a smart trip pay one dollar.
RTA Transit does not take MTA Monthly Passes
Smart Card technology is needed. Transfer system is outdated and the cost is too high for the quality of service. Buses should be updated as well.
Smart trip card needed vs. transfers
Wish you'd have an app -- real-time and schedule-- like Metro's
Would be much better if could use MTA cards/ better Maryland integration.
Would like ability to track my bus especially in inclement weather (GPS).

**Customer Service
12 Comments**

Customer service is very poor.
Customer service needs improving, no one calls back when a complaint is called in.
Every time I call customer service I get the same woman who answers my question with "I don't know". Your staff should be more informed.
Information provided by customer service is usually inaccurate or false
Phone dispatch service operators do not do their job. I have been "hung up on" and transferred back and forth several times when inquiring about bus arrival.
Poor service when contacting dispatch or customer service.
Replace 90% of your dispatchers, retrain all of them
Rude drivers, broken down buses, missed schedules, rude dispatchers, dirty buses. This is Columbia, what's wrong?
rude female dispatcher
The buses are nasty and unsafe, cost too much, most of the drivers are rude. I have 3 complaints, 2 from last year and 1 two months ago and no one calls back. All they do is transfer you from one number to the next to shut you up.

**Customer Service
12 Comments**

The customer service needs to exist in more than name. I have tried to call them many times and have never talked to a person.

The customer service representatives are horrible towards customers, extremely rude as well. Some drivers are nice but the females tend to be too aggressive. The males are friendly.

**Transfers
12 Comments**

Be able to transfer to the next bus.

Can't transfer to same bus, not good.

Have an all-day transfer that connects to all buses

Howard County monthly pass is cheaper. No Sunday service. Bus stops running too early. Why is it different in Howard County - costs/transfers. All fees should be the same.

I disagree with how transfers work. You should be able to use the same transfer for the same bus, like the MTA. Its already expensive living in Columbia.

I liked it better when you could use transfer longer in the day.

I was wondering if they can lower bus transfer price. Because of financial problems.

It should be all day transfer (ride all day for one price any bus)

My concern is on transfers, which expire in only two hours. If it could last for a shift of eight hours at least. I may walk to the mall in order to save for to and from Cradlerock and walk from the mall to home.

No transfer

No transfers to same bus--STUPID

Transfer cost, should be one fee.

Fares 12 Comments
Although you have a day pass, you still have to pay \$2.00
Come up with an all week pass for \$20.
How come everybody can't get a bus pass?
I am mostly dissatisfied with the lack of a college student bus fare, I pay almost \$80 a month riding RTA and MTA services, and a discounted rate would be gladly appreciated.
I realize to help minimize the costs for customers, but being on a fixed income, there should be a pass for all transportation service instead of purchasing a pass for Howard County, MTA, MARC, Etc.
Need a senior bus pass
Need to have all day bus passes for all the buses that are connected to RTA. Not just the ones in Columbia.
No discount monthly passes
No ten day passes
The bus pass system is bad. No information on how it works. It's different with each driver, no set system.
You should be able to get an all-day pass.
Your bus passes cost more than MTA and they stop running late.
Everything is good. The only thing is they charge for the children.
I think the bust costs too much money.
Keep the fare at \$1
Lower fare.
Paying \$2 for the level of service this bus has is too much
Reduce the fare for transportation
Too expensive.

**Administrative
11 Comments**

Drivers need to be paid more money they have to live too!!!

I strongly suggest that this company regulate its goals, screening process for its drivers, and write grants or ask the government for funds for new buses. Too management needs to be trained. Also, focus on hiring better drivers and being on time.

I the schedule on which the drivers run should be more closely monitored. Also more preventative maintenance on buses.

MTA should be the Maryland Transit Administration-all of MD where transit is needed. MD is not a farm state any more MTA needs to treat central MD like they treat Baltimore and DC areas

MTA takeover

MTA takeover, please hire black people that understand life of bus riders.

Need more drivers. I think RTA needs to hire non CDL drivers and train them.

Need to change management

Please allow another company to provide services for this area. For many years this company has done a poor job.

The closing of the library meant that no senior/disabled books of tickets were available in Columbia and info was erroneous, such as taking the discontinued purple.

customer safety

Drivers should let passengers board in bad weather.

I would humbly, kindly request in case it's raining heavily or too much snow, let the drivers at Columbia mall allow us to enter the bus. Have a heart, I beg you. Teach some drivers to talk to people when asked questions, to answer well, not rudely.

The supervisors over the radio are unprofessional.

**ADA/Seniors
4 Comments**

And also accommodating missed trips for people in wheelchairs that have to be at work.

Not adequate for seniors.

Not appropriately wheelchair accessible. Made promises, but doesn't change. Not ADA compliant. Buses not all ADA compliant. Safety. They only care about money, not clients.

Service is fine, but could be improved for elderly, like myself.

Appendix D

RTA Paratransit Rider Survey



Central Maryland Transit Development Plan

RTA Mobility (ADA & General Paratransit)

Customer Survey

Help us to serve you better! The RTA, in partnership with Anne Arundel County, Howard County, the City of Laurel and Northern Prince George's County, wants your input on public transit services in Central Maryland. Your insights will inform the Central Maryland Transit Development Plan by highlighting travel patterns, popular destinations by transit and other transit needs in our community. For more information about the Transit Development Plan or to complete this survey online, please visit:

<http://www.kfhgroup.com/centralmd/transitplan.html>

Please **complete this survey** and mail it back to us using the pre-addressed envelope. You may choose to **give it to the driver** the next time you take a trip. Thank you for taking time to give us your comments! If you have already filled out a survey, you do not need to fill this out again.

- | | |
|---|--|
| <p>1. What type of rider are you?</p> <p><input type="checkbox"/> Americans with Disabilities Act (ADA) rider</p> <p><input type="checkbox"/> General Paratransit (GPT) rider</p> <p><input type="checkbox"/> Both</p> <p>2. What do you normally use this service for?
<i>You may check more than one.</i></p> <p><input type="checkbox"/> Work <input type="checkbox"/> School</p> <p><input type="checkbox"/> Medical <input type="checkbox"/> Social/Recreation</p> <p><input type="checkbox"/> Senior Center <input type="checkbox"/> Government Service Agency</p> <p><input type="checkbox"/> Shopping/Errands <input type="checkbox"/> Other: _____</p> <p>3. What fare do you normally pay for a one-way trip?</p> <p><input type="checkbox"/> \$2.00 <input type="checkbox"/> \$2.50 <input type="checkbox"/> \$4.00 <input type="checkbox"/> RTA Mobility ticket</p> <p>4. How often do you ride this service?</p> <p><input type="checkbox"/> 5 days/week or more</p> <p><input type="checkbox"/> 1-4 days/week</p> <p><input type="checkbox"/> Less than 1 day/week (e.g., few times a month)</p> | <p>5. How long have you been using this service?</p> <p><input type="checkbox"/> 0 - 6 months <input type="checkbox"/> 1 - 2 years</p> <p><input type="checkbox"/> 6 - 12 months <input type="checkbox"/> More than 2 years</p> <p>6. Do you use any other transportation services that operate in the region?</p> <p><input type="checkbox"/> RTA Fixed Routes (Connect-A-Ride/Howard Transit)</p> <p><input type="checkbox"/> Annapolis Transit <input type="checkbox"/> Neighbor Ride</p> <p><input type="checkbox"/> MTA Commuter Bus <input type="checkbox"/> WMATA Metrobus</p> <p><input type="checkbox"/> MTA Local/Express Bus <input type="checkbox"/> WMATA Metrorail</p> <p><input type="checkbox"/> MTA Light Rail <input type="checkbox"/> WMATA MetroAccess</p> <p><input type="checkbox"/> MTA Mobility/Paratransit <input type="checkbox"/> Amtrak from BWI</p> <p><input type="checkbox"/> MARC Train <input type="checkbox"/> Other: _____</p> <p>7. Are there specific destinations you need to go to on a regular basis that transit does not serve?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes, please describe: _____</p> <p>_____</p> |
|---|--|

8. Please rate the RTA Mobility paratransit service in the following areas:

	<u>Strongly Satisfied</u>	<u>Satisfied</u>	<u>Neutral</u>	<u>Dis-satisfied</u>	<u>Strongly Dis-satisfied</u>
a. Trip Scheduling Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Telephone Customer Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Phone Wait Time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. On-Time Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Saturday Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Sunday Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Cost of the Fare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Sense of Security on Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Cleanliness of Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Reliability and Condition of Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Courtesy/Friendliness of Drivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Overall Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix E

RTA Paratransit Rider Survey

Appendix E

RTA Paratransit Rider Survey

Expand Service 33 Comments

Bring on Sunday service to Columbia Mall from Laurel. Extend the 503 hours.

Central/Western Howard County has no scheduled bus transportation. There will come a time soon when we older folks will need it.

Full Service needs to extend to the Hanover (Howard County portion) Oxford Square Community.

I am a renal patient who receives dialysis treatment in Ellicott City at 6am every Monday, Wednesday, and Friday. I have been advised by RTA officials that because I reside in Glenwood I cannot be provided with transportation at that time. Thus, I am being denied lifesaving treatment because of where I reside in Howard County. This is extremely unfair and unconscionable. I am being penalized because of my place of residency yet I pay among the highest property taxes in the county.

I am completing this for my husband - who was in a wheelchair and died 6/30/16. Great service but frustrated about difficulty getting into city or other counties.

I enjoy your services around Howard County, but I need help to find drivers down to Johns Hopkins (Bayview Center) where most of my doctors are. I need rides down to Johns Hopkins Hospital for special tests.

I need it for everything and it definitely does not serve everything I do. Need cheaper transportation for St. John the Evangelist Catholic Church. Need to be able to get to Columbia Medical Campus and Charter Drive Medical Buildings at all hours and days. Transportation from my residence in Columbia, MD to my sister's residence in Laurel, MD needed on holidays and all days and extending from morning to into the evening. Need transportation including grocery transportation into my residence all days and extending from morning to into the evening from my residence in Columbia, MD to Dorsey Search Village Giant Store and return.

I wish if you had outside Howard County for Deaf Event. Since I'm deaf and ASL. I would love to have outside Howard County to be available for me to join deaf event would be nice. Let me know about available paratransit that provide outside Howard County. Thanks Brain Buckley

I wish that it was easier to visit my sister, whom lives in the heart of Catonsville. There is no regular service from Ellicott City/Columbia to Baltimore County. I am very happy with the telephone staff and the drivers. They are all very kind to me. Thank you for all you do, RTA/Paratransit.

I would be nice to get transport to go to other counties for medical appointments & worship centers. Sometimes I have to go to Kaiser Permanente at Security Blvd, Towson, or Halthorpe for specialist appointments. Also it would be nice to get a ride on the same day request id necessary.

Expand Service

I would like to have transport facility to attend Columbia Association's world languages Café Meeting on 3rd Tuesday of every month at 6600 Cradlerock Way in Owen Brown at the premises of East Columbia Library between 6:30 pm and 9:00 pm. I will appreciate your help if this service is provided to me in the evening time.

I would love to be able to get to & from Frederick City from Howard County occasionally to visit, shop, use their library-- or once a week. Cost not a problem.

In August I needed a ride to Rolling Road for a doctor's appointment. I was told the service did not go that far. But I have seen the bus out there. So I have to find another way.

It is really difficult in Howard County to get around, unless you are going to the mall.

It would be nice to have longer hours on Saturday for curb to curb services. Maybe time to look into running curb to curb service on Sunday. It would be nice to be able to get a hold of the dispatcher during all hours of curb to curb service runs. It would be nice to make sure the driver gets me to my job on time.

Need buses and drivers.

Need to improve overall coverage of the city of Laurel and improve the frequency of current routes.

Needed: Reliable vehicles, increased service frequency and better connectivity

Public transportation is not adequate to meet the needs of those who cannot drive. I am legally blind. I am very limited in looking for jobs and traveling around the area by the bus system, it does not have enough routes and there are not frequent enough pickups. It often requires transfers and takes all day to do simple errands. I wish we had a connection to DC/MD metro stations.

Really need to have transportation available on Saturday and Sunday. There is no other transportation available on Sat and Sun. Awesome service!!!!

RTA has a bus witch stops near my neighborhood. My plan is to park at Atholton Village (7/8 miles) from my home and catch bus to mall. Or park at son's house near Martin Road stop - going to mall. Are the old green buses carrying the RTA logo part of the RTA system? Public transportation is most useful to us senior citizens when driving or parking in certain areas becomes a problem. Neighbor Ride seems a more cumbersome choice for rides to appointments. I have used RTA car service 3 times to chiropractor and found it satisfactory. Any small glitches in service were my own fault - not using system wisely. Thanks RTA

Some drivers are especially considerate and concerned! Thank you for your service. I wish I could use it for a haircut. Sometimes my daughter's schedule makes it difficult to work everything in. I would also like to go to some affairs at church. Neighborhood ride is difficult to schedule.

Starting in January I will be using RTA more often. Right now I cannot afford to see all my doctors.

Thank you for the great service! I love Howard County & what is available I need to go to Walmart once a month. Please help me.

Expand Service

The 3/4 mile rule for ADA clients has been extremely restrictive to places I go, otherwise I would use public transportation more. If moving toward a regional service, then fares should be adjusted for such, as in a zone fare for the number of zones one would travel through since the area is so large. Part of the reason why a younger client base is not seen using public transportation in the area is because the coverage is horrible. Wait times for pickups for paratransit has improved, but there still are many times they have been late. I provided answers based on my current situation, however is not typical of my 13 years in the Columbia area - specifically regarding employment.

The limitations on crossing county lines in paratransit living in Howard County severely limits ability to go to work opportunities when I can't go to Baltimore County on paratransit to be useful, there needs to be more flexibility. Also, their windows are so large as to not be useful for part-time employment. Not reliable enough for start and end times.

Too far for me to get to it, nothing comes off the interstate. It's hard for me to walk more in the winter.

We would love expansion of the service. Autistic young lady. Want transport to CCBC & Soldiers Delight Park.

Well like I said in #7, I am 79 and work part time at UPS in Laurel MD and would love for them to start taking me back to UPS. UPS is closer than Giant where they take me now it takes me longer to get to work then it what hours that I work. They take me to Giant then I get a ride to work. Which is Burtonsville, MD gave and old lady a break gave me a ride to work please. Thank you Imogene Fling

West Laurel is not a service area. Dianna is dropped off in Laurel at a specific place, and another person must meet her there and drive her to her home. Inconvenient as done on a regular basis - 4 days per week. Would appreciate a continuous route to get her completely home, instead of only partially.

Wish they would have Sunday service.

You may be able to get somewhere by public transportation, however, depending on when you leave your destination, you may have to get a ride back from another source.

You will not take me any place except doctor or senior centers. You say I am out of the district. I am in Howard County. I am a registered person in Howard County - MD. Other people are taken anywhere. I need to go out for things like everyone else. I pay my taxes etc. Does not seem fair. I am tired of being in looking at the four walls. I only need to go out about one time a week or every other week. I am crippled with arthritis - both kind and seatica. And a very bad heart and PB problem. I don't think this is fair!

General 28 Comments
All is good service.
As I have indicated, the RTA is a lifesaver for me. Due to my vision loss I HAD to stop driving. I have found the phone people, order takers, dispatch people, drivers to be of the highest quality. I have observed the kindness of the drivers toward wheelchair bound individuals, which goes way beyond just basic kindness. And much shown to me as well. Thank you all!
Good and very helpful service for persons who have disabilities.
HT ride is a great service. The drivers are awesome, especially Bridget and Carolyn! And Robert! It would be nice to make reservations online.
I am very pleased with your service. My husband who is actually the rider has early dementia and is never upset or nervous about the ride.
I currently only use RTA for Medical appointments. I am retired, but may seek employment in 2017. I have noticed on a couple occasions that the navigational systems were not effective and had taken the driver thru Main Street in Ellicott City, which is blocked off because of the flood. Your drivers are courteous and helpful.
I grew up in the Navy - all over the US. And you all should be very proud of your org. It's the best I've experienced. Now that my car "died" (of electrical problem) 21/2 years ago - I'm so glad that I have you all to depend upon. Thanks, Lynne L. Signor DOB 01-29-39
I have used your services since my arrival in MD (Sept. 2012) and I have been impressed with each ride. The drivers have for the most part been friendly and caring. My sister, Stephanie Kalin, and I would like to take advantage of "the shopping experience" and we recently received forms for such an occasion. There are too many questionnaires to fill out, so we will hold back on returning them. I am very thankful for your services and do appreciate my connecting with you. Thank you, thank you!
I just moved to Odenton from Baltimore County where I've lived all my life. For the last 2 years I've been disabled, so I've been having to use MTA Mobility for ride to everywhere I need to go because I'm also wheelchair bound. When I moved to Odenton 4 months ago I now use TRA (ADA) and they have been awesome to me. They are always on time. I had to take the GPT one time and I could barely get on because they are too small, very out dated, I couldn't even turn around because it was too small so I had to back off.
I really appreciate you always being on time to take me places. Thank you
I think your service is awesome! You are doing a great job. Thank you for your service.
It is a very good service. I am happy.
It is good here, based on my experience.
It is great help in getting me to my medical appointments.
Only that it is wonderful. I don't know how I would get around if it wasn't for them. I am in a wheel chair and riding with RTA gives me a sense of control and security. Thank God for them.
Public transportation is terrible
RTA is one of the best county supplemented services in Howard County. Service is reliable, drivers go out of their way to be helpful.

General

RTA Mobility always makes sure that I get home safely even when once a driver failed to pick me up. The dispatcher sent another and waved my fare, which I felt was caring and fair.

So far the service has been great!

The drivers are intelligent, friendly and caring. I appreciate that very much.

The RTA is good.

The transportation is poor--The drivers do not know where to pick up fully-- they are gone too long not knowing when or where they should pick up. Really poor drivers, can't and wouldn't show. RTA-- very unsatisfactory.

This service is a "God-send" for ADA riders and elderly.

Transportation by RTA & Neighbor Ride meets almost all my needs for Howard County.

Very good service.

Very good.

Very satisfied

Yellow line is very poor, do not come to stops when needed on stops, bus pass you by. Keep going, do not go where it should.

Scheduling 25 Comments

* More knowledgeable operators

* Trips to surrounding counties - Baltimore County, City, esp. except for limited transportation to University Hospital.

*Later cut off to schedule trips.

*Too few outlets to buy tix books, let drivers carry them too. I have had to go back to work for as long as I can. Mainly to get a car, I can't continue to be stressed by lack of dependable service.

1) Have been left at doctor's office with no pick up or notification someone would not arrive. Took a cab home. RTA was to reimburse \$35 and it never happened.

10/18/16 I made reservations for -: 10/19/16 - 10/21/16-10/21/16-10/22/16. No ride showed up 10/21/16. I called the dispatcher she said no ride was scheduled for me on 10/21/16. Ms. Denise's error cost me \$32.00. I need to be reimbursed. Thank you.

2) Assigned times do not coordinate or align with times requested.

Arrival at destination too early. When appointment is short in time, difficult to get early ride. Sometimes have to wait 1-2 hours for return ride.

I have tried to use ADA for years; however it has been a trial getting places on time, as well as the scheduling of trips. Too restricted and inflexible- this service should be free, most seniors are on fixed limited incomes.

I have trouble going to places like "Giant" because I may have to wait 1 and 1/2 hours to be picked up from the store. I have trouble knowing when and where the buses will go.

Scheduling

I need this service- have had few problems- everyone I have spoken to is very nice- and drivers have been great. Scheduling needs a bit of work- on pickups- I find you to be beyond early- but I am always on time for doctors is a plus. My only other question is how to get someone on the phone. When you need to press #2 sometimes not available, it's a message many times.

I would like to see a better scheduling service, maybe a same day service. Thank you George King

I'm given an hour earlier pick up than my appointment, even though my destination is in mostly five minutes from my home. I cannot be called the evening before because I have a captioned phone. I am called when driver is outside. I'm on the 2nd floor, down a long hall. Your service is important to me.

It would be great to be able to schedule trips online. And to get an automated call or text when the bus is actually on the way/leaving last destination

It would be very helpful if we could schedule the rides online rather than having to call.

More accurate wait time. They tell you example: pick up 1:30 they tell you your pick up is around the 12:30 hour. So long to stand outside and wait. The return time is okay. With people in wheelchairs should call them, when not out waiting, especially in the winter, should give more wait time for people in wheelchairs. It takes time to get them outside and in wheelchair and out to bus. And people with wheelchairs need bus not car, too hard to put wheelchair in trunk.

Most drivers are on time, certain drivers (Bridget) are always late. I wish they could be on time.

RTA is excellent service except I need 2-3 days in advance notice.

Telephone recording for night before could be simplified. Repeats initial information when messages left (mobility), often not returned.

The wait time is too long. I have classes at HCC until 6:00 pm but have to leave class at 5:30 pm to wait for bus. Sometimes the wait is almost 30 minutes long. Also, I live within 1.5 miles from the school but sometimes I don't get dropped off until about 15 - 20 minutes after pick-up.

Too much time is wasted waiting for a pickup. Schedule is not reliable. Drivers with wheelchair clients are not given enough time to pick up and secure. When a problem is called in the attitude is poor. Many times the problem is not addresses or call is not returned. Care takers do not have hours to waste.

Very poorly run operation

When my husband call in for a rides. They give him a confirmation number and when bus comes the bus driver has a different time that they were given. Bus drivers are great.

Wish could book HT online. Wish HT can tell time in 15 minute time frame. When we get reminder from HT a day before, if they can tell appointment time of pick up.

Scheduling

Would be very interested in an on line scheduling as an option. Very pleased and very thankful for this service and all the employees. I can't imagine how challenging it must be to pull it all together!

Driver 16 Comments

- Drivers should be kind towards clients

- Drivers should be patient in waiting until the client gets out of the doctor's office in case of a medical appointment.

- Helpers who accompany disabled clients should not pay transportation fares.

- Pick up times should be respected

- The small cab is not fit for seniors and disabled transportation

Drivers are great.

I do not feel secure as a passenger in Columbia Cab. There was a incident where the driver was on the highway speeding and being aggressive behind the wheel. He was driving in and out of traffic on the highway. I was afraid for my life. I don't like riding in cabs now as a result of this. I am disabled with depression and anxiety.

I enjoy talking to the friendliness of the drivers. I am happy for the bus service. I am happy with the cost of the fare.

If a driver has other pickups in addition to I on the same bus or curb, he or she should notify the first pick up so that he or she is aware of what is up.

It would be nice if the drivers told the riders if they were picking up other passengers along the trip. It would be common courtesy for the drivers to let us know what is going on.

Most of the time RTA Mobility is great. However, I do not like that driver's do not help me with my home's door, they do not knock like they are supposed to even though I have requested it multiple times and I know they can, and I have missed a bus a couple times because the call didn't go through on my phone even though I had perfect service area. Because of my weak muscles and using a power chair I really struggle with doors, so they should be able to help you with hospital and work doors, even when there are 2 sets of double doors, they should let me in the second set of doors. They also should be able to help with my home's front door to unlock it and open the door. They do not need to shut it or enter the house, but assistance with the door would be really nice. And having the driver knock on the door.

Overall your drivers are wonderful; they should get a raise. There is a class at 8950 Route 108 on Sunday nights that I wish you could take me to, but your customer service representatives told me there is no service in that area on Sunday evenings. Sometimes a cab is sent; often the cab is dirty inside. Also I sometimes receive negative comments from some cab drivers about having my service dog in the car. A few of the drivers refused service for my service dog & I had to argue with them.

Driver

Some drivers are nasty. We need yellow bus on Sunday. 120 apartments in our building. All old people. Thank you.

Some drivers don't open door when person is running for bus & very close to door & still has a minute. Has to wait an hour for another bus. Some drivers don't speak when spoken to and are not pleasant.

Some of your drivers need more training. If they need a laminated schedule to see their route, they are NOT ready to be turned loose alone. Some drivers are excellent, but do not get credit for it. Pickup scheduling is too close together.

They are great drivers, and kind.

Reliability 11 Comments

All in all I'm satisfied except for a few times I had to miss some of my appointments because my ride didn't come. And if there is any way there would be buses for Sunday to take worshipers to church, that would be wonderful. So, thank you, I am grateful to you all.

Central public transport in Central MD could be improved; buses could a little more regular. The drivers could be a bit more courteous.

Dependability would be nice--on time

Drivers are excellent- but never sure if I will reach my destination on time.

Great service except for unreliability of delivery time--I am sometimes late for work because my ride is late.

I have had to wait over an hour once for a pickup!

My only complaint is that several times (at least 3), my ride doesn't show up and I am told that my ride was cancelled. I never cancelled the rides, but a new driver is sent to pick me up generally within 15 minutes.

My rides are regularly late. I use public transportation to get to work. The lateness may cost me my job.

Schedule pick-up time when getting more than one rider - really early. Then return is erratic/unreliable.

Was "stood up" in early October.

Well sometimes they come late-- some drivers can be frustrated and will not talk nicely--I think the fare should be \$2.50 one way for some of us with limited income. But its a great opportunity for some people like me that have no means of getting around. Thanks for your service and may our God keep blessing you all and families.

**Customer Service
10 Comments**

I need to know if I was employed, would the bus pick me up in the morning and bring me back home at the end of the working day.

I would like a copy of the system-wide bus map. I would like to know the procedure to connecting systems. RTA fixed routes to MTA Laurel/Express bus, WMATA Metro buses. I don't know which buses connect to different systems in order to make a continuous trip from one system to a different connecting system. Do I need to apply for senior discount fares for each local/counties, etc? I live in Howard County and would like to travel to Catonsville, etc. Do I need to apply for separate fares for discounts?

Need a bus for shopping 2 times a week.

Need a fixed route from Waverly Woods/Woodstock to Columbia. What do I need to do to qualify for all rides to social/shopping/errands. I use an electric scooter & have no other means of transport other than HT Ride Paratransit.

No response to complaints about service. Dispatch does not always tell truth about status of ride when I still have time to call alternate transport (at my own expense). If the bus will be 30 minutes late & I have an appointment, I might want to call a cab (at my cost) but I have been told that they will be there any minutes now (Columbia) when the driver was in Beltsville! Overall, Paratransit/ADA works well but when I have a bad trip, it is an awful, terrible, horrible experience that often results in me missing a doctor's appointment even if I scheduled my arrival time significantly before my appointment time.

Overall, it is a decent system. But whenever problems happen it is notoriously difficult to have these problems resolved in a timely manner. First of all, it has been horribly hard to ever reach someone on the phone. Problems therefore take forever to fix. One notable exception has been whenever Victor is involved! I have known Victor for many years and he always provides assistance whenever I call his cell phone! If only all of your other folks were as reliable and timely as Victor is.

There are lots of situations which occur involving your transportation system that go unnoticed. In fact, some things are necessary and can be avoided by a little insight and concern on the part of your company.

Though a few of your employees have demonstrated respect and courtesy towards the clients, most of them do not respect their positions. I have had an experience which was extremely mind blowing to me. Needless to say, I am referring to only one of many bad experiences. I was transported to Bridge Way Community Church, I had scheduled a return ride, but my driver was a no show. When I called RTA to inform that my driver did not arrive. The representative tried to speak to the supervisor Andrew about the matter, but at that point the phone was disconnected. I continued to call for about twenty minutes or so, but each time, my call was sent to voice mail. I complained to Robin about the matter. She is of the best weakness of your company.

Three separate times paid full cab fare!! Complained, never got call-back.

Customer Service

We've been using RTA's services since 2014 sporadically. Since we were very dissatisfied with your services we have started relying more on Neighbor Ride. They are more expensive, but for our peace of mind, we depend on them for most of our trips. Over the last year we've had drivers that didn't know the route, didn't seem competent to drive, at one point a taxi driver showed up in an old vehicle and told us he'd been asked to step in! Trip scheduling and telephone customer service puts one on hold and are rude at times.

Miscellaneous 6 Comments

I am happy that you are providing public transportation for it was difficult for me when my children were in school. But the bus depots where people have to wait for buses are grossly neglected. They need cleaning and constant care. The bus depot at Jessup (Purple Bus, Silver and Gold connections) need police protection. I am afraid to wait there for a connecting ride because it seems to be a place where alcoholics and drug addicts hang out. It would be nice to be able to use public transportation to attend church on both Saturday and Sunday.

I may be going to a senior center on a regular basis in the future.

I would be interested in attending meetings. Was a member of WMATA AAC for over 4 years.

Really unclean mobility buses for long periods of time. Like weeks at a time same trash and spills on bus.

The cars with dog hair. I understand that people have needs and the service for the people is wonderful, is there a solution for this issue? Attitudes. Yes we all have them; prayerfully we can work together in unity. Resolve the issue, understanding, and not cause more confusion/situations. I thank you for your services and time. God bless.

The cost of the trip sometimes is hard to come up with, even at \$5 a trip (back and forth). I have waited up to 45 minutes for a return ride home and at least 30 minutes for a ride to come. There has been times that have 3 different times for a pick up. I'm always 15 minutes early (as I was told to be)

Taxis
2 Comments

RTA mobility is a very convenient service for my needs. However, the customer service of American taxi is very substandard. About a week ago, a dispatcher was extremely aggressive, rude, and very nasty to me on the phone while I was waiting for the cab driver at Walmart to pick me up. I am a legally blind client and was in the store paying for my items when they called me and he was yelling at me and told me that the driver had been waiting 20 minutes for me and if I didn't come out in 1 minute that I would be left. Turns out that the driver was at the wrong door, and the dispatcher hung up on me after saying " We are GONE!"

Sometimes RTA would send a taxi cab, the taxi would come very late and sometimes not at all. When I started a real part-time job, RTA does not always come on time to pick me up and I cannot go to school afterwards.

Appendix F Community Survey



Central Maryland Community Transportation Survey

Anne Arundel County, Howard County, the City of Laurel and Northern Prince George's County are developing a Transit Development Plan for Central Maryland. The Transit Development Plan will serve as a guide for the local transit system, providing a roadmap for implementing service and organizational improvements during the next five years. To inform this effort, we are conducting a Community Transportation Survey to better understand travel patterns and transit needs in Central Maryland. For additional information on the plan or to complete this survey online, please visit <http://www.kfhgroup.com/centralmd/transitplan.html>

Please help us learn more about the transit needs of your region by completing this survey.

1. What is your **primary** mode of transportation?
(Please check only one.)
 Car Taxi Walk Bicycle Uber/Lyft
 Public transportation
 A friend or family member drives
 Other: _____
2. Are you aware of the services provided by the Regional Transportation Agency (RTA), previously known as Connect-A-Ride and Howard Transit?
 Yes No
 Please rate your overall impression of RTA's services?
 Positive Neutral Negative
3. Do you use any of the following public transportation services? (Please check all that apply.)
 RTA (Connect-A-Ride/ Howard Transit)
 Annapolis Transit Neighbor Ride
 MTA Commuter Bus MTA Local/Express Bus
 MTA Light Rail (Hunt Valley - BWI Line)
 WMATA Metrobus WMATA Metrorail
 MARC Camden Line MARC Penn Line
 Amtrak from BWI Vanpools or carpools
 Taxis Uber/Lyft Other: _____
4. If you do currently use public transportation services, how frequently do you use them?
 5 days/week or more
 1-4 days/week
 Less than 1 day/week
5. Are there specific destinations you need to go to on a regular basis that transit does not serve?
 Yes No
 If yes, where: _____
6. What is your zip code? _____
7. Do you have a driver's license? Yes No
8. Do you have a car available to drive on a regular basis?
 Yes No
9. Please indicate your age:
 17 or under 18-24 25-49
 50-64 65 or older

10. If you **DO NOT** currently use public transportation, what improvements would be needed for you to ride public transportation? (Please check all that apply.)
 Better service availability from _____ to _____ (Provide specific locations.)
 More frequent service Shorter travel time
 Longer hours of service Fewer transfers
 Better service reliability Improved information
 Safer vehicles Less crowded vehicles
 Guaranteed ride home for emergencies/overtime
 Additional park and ride facilities
 Other: _____
11. How would you prefer to receive information about public transportation? (Please check all that apply.)
 Website Bus Stops Brochure
 Email Direct Mail City/County Office
 TV Social Media Smartphone
 Radio Newspaper Friends/Family
 Outdoor Ads Other _____
12. Which of the following best describes your current employment status? (You may check more than one.)
 Employed, full-time Employed, part-time
 Student, full-time Student, part-time
 Retired Homemaker
 Unemployed Other _____
13. What is your annual household income?
 \$20,000 or less \$21,000 to \$40,000
 \$41,000 to \$60,000 \$61,000 to \$80,000
 \$81,000 to \$100,000 More than \$100,000
14. How would you classify yourself? (Please check all that apply.)
 Caucasian/White African American/Black
 Asian American Indian/Alaska Native
 Native Hawaiian/Other Pacific Islander
15. Are you of Hispanic or Latino origin? Yes No
16. Do you speak a language other than English at home?
 Yes No
 If yes, what is this language? _____
 (For example: Spanish, Korean, Chinese)
 If yes, how well do you speak English?
 Very Well Well Not Well Not at All

Appendix G

Community Survey Responses to Question Number 5

Q5- Are there specific destinations you need to go to on a regular basis that transit does not serve?

Appendix G

Community Survey Responses to Question Number 5

Q5- Are there specific destinations you need to go to on a regular basis that transit does not serve?

Comment	Destination
1. National business parkway	Annapolis
2. Annapolis, Pasadena, Sykesville, Burtonsville, Maple Lawn	Annapolis
3. Annapolis downtown, Annapolis mall	Annapolis
4. Northern Anne Arundel County	Anne Arundel
5. Arden/Herald Harbor Community of AA County	Anne Arundel
6. Anne Arundel Community College	Anne Arundel
7. Anne Arundel Community College	Anne Arundel
8. Pasadena and Annapolis to Arundel Mills	Arundel Mills
9. Arundel Mills area	Arundel Mills
10. UMBC	Baltimore
11. I work in Baltimore, but there is no efficient way to get to my workplace by public transit. I consider it the main disadvantage to living in Howard County. I work in the Roland Park area of Baltimore. Even just going into Baltimore I'd have to drive to BWI and take the light rail or other rail line, and time-wise I might as well just drive in general.	Baltimore
12. Howard County with Baltimore County	Baltimore
13. Howard county to Baltimore	Baltimore
14. Getting into and out of Downtown Baltimore continues to be a challenge. A bus-pool option may be a potential solution if planned properly.	Baltimore
15. direct service 6am-1am 7 days a week from downtown Columbia to downtown Baltimore	Baltimore
16. Columbia Downtown, Laurel Downtown, Baltimore	Baltimore
17. Baltimore South / Kaison	Baltimore
18. Baltimore and DC safely with small kids	Baltimore
19. An express bus from northern Baltimore to Columbia	Baltimore
20. All-day reasonable connections to BWI, Baltimore and at least DC Metro	Baltimore
21. additional areas of Baltimore City that do not require using multiple modes of public transportation	Baltimore
22. Hopewell neighborhood (from Supreme Sports); Broken Land Park & Ride	Broken Land Park and Ride

Comment	Destination
23. RTA to Broken Land P/R lot; I must drive now, as it's hourly bus, and goes to mall before heading to P/R lot, which is way out of my way. Now, a 5 min drive.	Broken Land Park and Ride
24. Broken Land P&R Should stop on every trip.	Broken Land Park and Ride
25. Olney, BWI	BWI
26. BWI	BWI
27. Catonsville	Catonsville
28. Clarksville, Maryland	Clarksville
29. University of Maryland, College Park	College Park
30. University of Maryland College Park	College Park
31. 5830 University Research Court, College Park, MD	College Park
32. Too many to mention concerning appointments even from village to village in Columbia is unpredictable.	Columbia
33. Our home on/ near Dellwood Ave in Columbia	Columbia
34. Washington, D.C.	DC
35. Washington, D.C. via Metro train	DC
36. Washington, D.C. - more quickly than the commuter bus	DC
37. Rapid bus service to Union Station in D.C., train unreliable with times that don't work for me, and Metro is a mess.	DC
38. More ways to get to Baltimore and DC with small kids to avoid parking from Ellicott City	DC
39. Express buses down 29 to DC Metro Area 7 days/week all day, Shuttles old E.C. to Columbia Town Center; Buses to Annapolis, Gateway Overlook, Clarksville,	DC
40. DC, Greenbelt during NON-peak hours	DC
41. connections to Washington Metro	DC
42. Annapolis to Washington DC	DC
43. Ellicott City neighborhoods	Ellicott City
44. Ellicott City	Ellicott City
45. NSA Canine Rd., Ft. Meade MD	Ft. Meade
46. Ft. Meade	Ft. Meade
47. Ft. Meade	Ft. Meade
48. Ft Meade, Baltimore	Ft. Meade
49. Ft Meade, Annapolis, various local areas	Ft. Meade
50. Ft Meade, Annapolis Junction, National Bus Pkwy AND Downtown Annapolis!	Ft. Meade
51. Ft Meade, Access to MARC, light rail, Downtown Columbia,	Ft. Meade
52. Fort Meade and the NSA at Fort Meade	Ft. Meade
53. Fort Meade	Ft. Meade
54. Glenmont Metro station	Glenmont Metro Station
55. DC, Columbia Mall, Greenbelt Metro	Greenbelt Metro Station
56. Greenbelt Metro Station from commuter parking lot	Greenbelt Metro Station
57. Greenbelt Metro Station	Greenbelt Metro Station
58. Greenbelt Metro	Greenbelt Metro Station

Comment	Destination
59. Downtown DC, Greenbelt Metro Station	Greenbelt Metro Station
60. Hanover, MD	Hanover
61. Jessup - Montevideo Rd and Dorsey Run.	Jessup
62. Jessup	Jessup
63. Johns Hopkins Applied Physics Laboratory	Johns Hopkins
64. JHU/APL	Johns Hopkins
65. Maple Lawn, River Hill, Centennial Park, Long Gate Shopping Center, Lynwood shopping center, courthouse from Elkridge not through Columbia mall	Maple Lawn
66. Dialysis	Medical
67. Various	Miscellaneous
68. Gold fish swim	Miscellaneous
69. I need to go to MTA commuter bus stops during the morning and evening rush	MTA
70. NASA Goddard	NASA
71. Goddard space flight center	NASA
72. None for me	None
73. None	None
74. MTA Bus doesn't go where I want. It has its limits.	None
75. Work: Odenton from Laurel	Odenton
76. have the existing metro lines come farther into MD	Rail connections
77. Cities in the central Maryland area should be connected by a transit network (Rail, Bus Rapid Transit, Express Bus) that serves the population centers with local buses connecting the rest of the city and surrounding suburb to the transit stop.	Rail connections
78. Better access to metro and marc	Rail connections
79. Sunday church services	Religious Services
80. Rockville	Rockville
81. Areas along the Route 29 corridor	Route 29
82. MY NEIGHBORHOOD and The entire Rote 40 corridor and other business and shopping	Route 40
83. High schools in Howard County	Schools
84. 55+ existing communities	Senior residences
85. Pikesville, MD; Shepherdstown, WV	Shepherdstown, WV
86. Silver Spring, and Hyattsville	Silver Spring
87. Silver Spring	Silver Spring
88. Columbia to Silver Spring	Silver Spring
89. Turf Valley Resort area and new shopping center	Turf Valley

Appendix H Community Survey Comments

Appendix H

Community Survey Comments

Service 44 Comments
Our disabled young adults require transportation services to get them to/from their vocational and educational settings. In some cases, these folks cannot negotiate the ride without help - stops, times, sitting with seatbelt, etc. The bus system could help significantly the special needs community by having a support staff person who could help with on boarding, trip behaviors, and off-boarding at the correct stop to the person designated to take over care of the special needs individual.
Perception for Seniors is that transit is unsafe
Seniors need to be taught and given supervised experience in using public transportation as is recommended in the CA Comprehensive Plan for serving the adult community, particularly, Transit Travel Training and Guide recommendation, p 20.
Routes need to be more direct and frequent on major routes such as 29, 175, 32, 108, Snowden River Pkwy, 144, Route 40, 216, etc. Don't try to serve every building at the expense of utility of the overall system. Make more crosswalks, pedestrian bridges, tunnels to serve transit stops to increase utility of the system to neighborhoods.
Limited availability, non-attractive price, not eco-friendly
RTA bus service in Columbia, MD is atrocious. Buses are rarely on time. Most of its bus drivers are rude, and whenever I ride the bus it is frequently unpleasant.
There is a negative perception of the RTA's service. People are disappointed with the level of professionalism and the quality of service, and therefore do not utilize the system.
I believe that transportation systems in our region can be greatly improved by looking to best practices in transportation systems across the globe. The MTR in Hong Kong for example demonstrates the benefits in having a metro network built, managed, and paid for by a for-profit, privately run, partial government owned, corporation that uses Value Capture to subsidize the capital costs of the project. .
I think Howard County could like at the demographics of each village to determine the need of more public transportation.
Central Maryland is in need of good bus conditions that are reliable and run on time. They need to be able to drop people off at closer locations to their destination.
Clean up the bus stops!! Filthy!! No smoking within 50 feet! Enforce the rules at bus stops and on the bus. Buses are filthy and poorly maintained. Bus explosion on 10/24. Buses need to be on time> buses need to operate on Sundays and until midnight.
I haven't taken it much lately due to the barriers I noted. Waiting in the cold is a problem for the elderly. And dependability is a must.
It would be nice to have more parking and more transportation options at MARC stations. I wish the Odenton station had bike lockers so I could more securely ride my bike to the station. Additionally, the Odenton station needs an e-ticket kiosk!
Improving Odenton Marc station, Marc Service and bus routes to/from Odenton station would greatly encourage me to take public transit more.

Service 44 Comments
Need for hub in Downtown Columbia to WMATA metro with frequent service
System is not robust and existing systems do not connect well
There needs to be far better options to connect to Metro. Many of the residents of Russett (and surrounding communities) work in DC and take either MARC or drive to Metro. Would like to see a park-and-ride at the Wal-Mart that takes passengers nonstop to Greenbelt Metro.
We need better connection to the cities. Many people in Central MD need to get to DC or Baltimore, and unless your work schedule exactly matches the commuter buses, you have to drive.
We need more from Baltimore to Hanover and from Annapolis to Hanover.
Better and more regular service between Camden Dorsey Station and BWI Airport
Howard County has inadequate and substandard service. 90 to 120 minute layovers on WEEKDAYS? Service does not start early enough in the morning to connect you to the MTA park-and-ride lots, so I have to walk a long way just to catch the MTA 345. A SINGLE bus route for all of Ellicott City? Many places, even in Columbia, that have no bus route within walking distance. All routes should have the same level of service as the 406 at least. How can the 409, which is on Highway 1, a very busy corridor, have no Sunday service and 120 minute headways in the middle of the day on weekdays? Impossible to use RTA and WMATA to get to DC and back if you're not travelling the regular peak hours. And I've looked at the schedules for Anne Arundel County--an even bleaker situation. Almost 3 hour layovers on Sundays? We have a car and will use it for pretty much everything, but RTA should at least have service that enables you to commute to work. But also it should be adequate for people without cars--I remember what it was like when I didn't have a car and there's no way I could have survived in Howard County without one. Make the County cough up more money for transit, because they are contributing nowhere near enough. Thanks for your efforts.
I would like to be able to take public transportation rather than to drive alone. Job opportunities at Ft Meade and in Baltimore have no public transportation att. What transportation there is would take many transfers and over 3 hours, which is not practical.
I would like to see more special routes for large events such as concerts, ball games, etc. in Baltimore & DC.
I would like to see tickets in the Columbia Mall to make it easier for those with a handicap so it makes it easier for them to get. We need to go closer to the 3 doctors on Hickory Ridge Road possibly in so you don't have to cross the street.
It's in a sad state in Anne Arundel. Buses run once an hour on major job corridors like the 17 in the BWI area and the 14 on the Ritchie Highway corridor, connecting the state's major city the state's Capital.
Needs to cover more area to get workers to jobs especially in the Maple Lawn, River Hill and Turf Valley areas. Hours need to expand to get workers to and from work so it doesn't take 3 hours to get to work by bus. Service to Ellicott City from Elkridge needs to expand so the people living in Elkridge don't need to ride 3 buses (3 hours) to go 10 miles from their homes
Not bad in rush hour, but hopeless in evenings, weekends, and mid-day
Please think about the new Konterra development & integrating main attractions in the area (Laurel to Columbia to downtown Baltimore).
Reestablish the Blue route from Clarksville, MD.
Some are very good, but they do not go everywhere, like clinics and others and it better arrive on schedule.

Service 44 Comments
Sometimes I have to go to Wilmer Institute.
Would like rush hour / work-time busses to run down Rt. 97 from Glen Burnie or Walmart parking lot. One at 6:30 am, one at 7:00 am; one at 7:30 am.
I live only 20 miles from my work; but it takes almost three hours of my day to get there and back. It negatively affects my family and personal life, and adds extra stressors.
Faster, better, more frequent transportation to both Baltimore including Towson and for Washington DC as well upgraded frequency of buses in Columbia, Ellicott City and Elkridge.
Frequency is inconvenient & hours of operation are inconsistent with retail, particularly late night & weekends
I would use the system much more frequently, but it doesn't run often enough, it's difficult to connect with the commuter bus that I take, and it isn't reliable. The transfer system is confusing and riding can be expensive for the lack of service.
Inadequate, infrequent, does not serve many areas
Infrequent service, slow service, need fast connections to Baltimore and DC transit systems
More frequent service from Laurel Mall to Columbia Mall.
Occasional part-time work hours are 11pm - 7am often on weekends. Impossible to get from Columbia to Baltimore for that work schedule without spending 4+ hours in transit round trip using public transportation.
Would be great to have more frequent service - the bus could be an option for me but the service times are so infrequent that I can't use the bus to get to activities, shopping or work - it just takes too long or I get there and then can't get to my next destination or back in a timely manner.
The Dillon commuter busses are trash. Please buy new buses. I'm tired of sitting in rush hour waiting for a backup, wondering if I'm going to get to work on time or home to pick up my kids.
The inner city traffic problem has increased dramatically in the past 18 months. It routinely takes me an hour to an hour and 30 minutes to get either to or from my work -- exactly 18 miles away. The last mile into and out of Baltimore City are torturous and generally take 30 - 45 minutes. A solution that transports people from safe park and rides on the outskirts of the city would be an amazing solution for many people who live in the county and work in the city. I have been doing this for 23 years, and it's never been this bad. Plus, Excelon is about to open in Inner Harbor East, which will compound the issues in that area.
Where is the rapid bus lane on 29? I'd use that MTA bus to DC, but it's way slower than via 95/Beltway, though that route is out of my way. (I work on Westside of DC.)
Driving is hard and scary because people do not pay attention to the posted speed limits on 29, 175, and streets downtown.

**General
17 omments**

Busses drive though our street - Sunny Spring in Columbia, MD but rarely stop. Hardly anyone uses it on our street and we feel these busses should not be able to drive on a residential street. They often use Sunny Spring as a cut through instead of Cedar Lane. I've sent complaints but never receive a response.

Crofton seems far from accessing public transportation. Not sure if a bus in the area is a good solution rather than demolishing anymore wetlands in the area.

Everything is good, but don't run buses in apartment complexes because of pollution and noise.

I am concerned about more crime, trash, noise, traffic pic, exhaust

I rarely use public transportation. I don't think it a good idea to spend so much tax dollars on something very few would use anyway. It might be better to find other ways to help those who need it.

Public transportation for central Maryland is generally a waste of my tax money. Too few benefit to justify the expense. Other more cost effective alternatives should be considered such as ride sharing.

Public transportation if central Maryland is fine as it is, do not add to it.

We are not dense enough in most of Howard County to make convenient public transportation available at any reasonable cost. It is impractical except for certain very limited areas, and I feel it is consuming too much public money for the return in service it generates.

More information and programs for carpooling would be fantastic. We have one car so a carpool to my husband's work at APL would be ideal.

Glad you're doing this. The future is not so bright :-)

Good, it's a good service and it helps all of us that don't have a car.

I am hoping to live in an area with good public transportation as I age, and become unable to drive.

I am like most people, very dependent on my own vehicle to get around.

I think it is very important to have public transportation. I appreciate this study.

I would like to use public transportation, if it is economic and reliable.

Thank you!

They have better service and schedules. There are places that there is no bus.

Customer Information**7 Comments**

Surprised there was no schedule information in any of the bus depots at stops. Was asked by at least 5 people during my last trip what times stops were happening and what buses were stopping there (Hospital and HCC). There was no info posted at either in the stalls.

Did not know such a service existed. Seems well hidden

I have no clue how to access public transportation as far as local buses.

In general, I've found the Howard County Transit system to be very confusing with little available information about stops and arrival times. The MARC train is good and I've always has a decent experience while riding. Generally, I prefer to drive myself because I can arrive and leave my destination as I please without worrying about wait times.

The Howard Transit bus schedules are very difficult to figure out. The only time I took the bus, I had to wait hours for a bus and wasn't even sure it would take me where I needed to go.

The website is confusing and not easy to navigate. I had difficulty planning my trip and determining which stops I needed to accomplish my goals.

There does not seem to be a unified plan that connects the different regions. Not easy to figure out how to get from here to there when planning a trip. Rarely consider anything other than personal car, but there are too many cars on the roads and will increase substantially without better planning.

Bike and Pedestrian**4 Comments**

Arundel Mills area needs to be more bicycle friendly

Bike Path and sidewalks!!!! The ease of walking and riding a bike safely is limited. A more pedestrian/bike friendly area in Anne Arundel County would help with traffic. It would also add to the quality of life for the area. Broadneck Peninsula is a prime example. We live about one mile from the Middle School and it is not safe for my kid to ride a bike to school. That is sad. We live about 1.5 miles or so from a local grocery store/plaza and it is unsafe to walk or ride to them. I understand there are plans for a trail to connect to the B & A Trail from Cape St. Claire. That would be a great start, but more should be done through the Broadneck Area and other locations around the county.

I work 2 miles from home and drive, walk or ride my bike

I would like to see safer ways to walk and bicycle.

Rail**4 Comments**

Extend light rail from BWI to Howard county

I would like rail options in and out of Columbia.

I will prefer metro or light rail from Columbia to downtown DC. I also think that a designated bike road should be built from Columbia to DC.

Bring a DC metro Line up 95. Its more affordable and gives better hours of service

Appendix I

WikiMap Comments

Appendix I

WikiMap Comments

Existing Bus Stops		
Bus Stop Location	This bus stop needs the following	Comments
Lincoln Tech	Bench	
Ridge Road @ Thames River Drive		Please advise who this stop services. And why it is located in current location. Now that northbound Ridge Road has sidewalk up to Teague, if this stop is to remain, can it not be moved closer to Teague Road. There is already another stop that is just a few hundred feet away from this one; and I have noticed buses illegally using the turn-in/turn-out lane for Bear Paw Lane which is a major safety concern for my community.
Shaker Drive @ Seneca Farm Road	Sign	There was a bus stop sign here. But construction of putting in sound barriers was happening so the sign was removed by the construction crew and now this stop remains without a sign. When people want this stop, the driver will skip and drop people off at the next one which is Atholton Shopping Center.
Robinson Nature Park	Sign	Needs a bus stop sign.
Columbia Mall	Sign	Needs a new bus stop sign.
Walmart @ Russet Green East	Sign	There should be express weekday service to Greenbelt Metro.
Broken Land Pkwy Park and Ride		Silver Line, Bus 501 - make this a regular bus stop for rider boarding, not just exiting.
Snowden River Pkwy @ Minstrel Way	Bench, Waiting Area, Lighting, Shelter, Trash Cans	This site, along with many others, needs a shelter with a bench...
Broken Land Parkway Park and Ride		Requesting sidewalks toward Snowden River Pkwy for walkers along with adequate lighting.
Snowden Square	Lighting	Better lighting. Very dark at night time, doesn't feel very safe!!!

BWI Airport	Sign	Earlier and later pickup and drop off times. BWI employees working the 11 pm to 7 am shift don't have adequate times, especially Saturday night and Sunday morning and evening. The 7 am to 3 pm shift doesn't have bus service to start day and the 3 pm to 11 pm shift doesn't have bus service for end of shift, 7 days a week.
Greenbelt Metrorail Station		Need more frequent service between Columbia, Ellicott City and Greenbelt Station.
Broken Land Parkway Park and Ride		More connections are needed from the different routes to the Park N ride since it's a busy and safe location to pick up service. Most of the Howard County Routes no longer stop there even those that go right by.

New Bus Stops

Bus Stop Location	Why do you want a new bus stop here?	Comments
Langley Park Plaza	It could serve a new route	Our company and our neighbors have a lot of employees that live in the Langley Park and Hyattsville areas which need reliable mass transportation to the Jessup area.
Laurel, housing at Sandy Stream Rd and Crest Rd	It serves an existing route, It could serve a new route, Its more convenient for my travel	It seems like our community was somehow neglected for public transit. Which is a huge drawback of the county transit system: Most resident here are commuted to work.
Greenbelt Metro Station	It could serve a new route	Many residents of Russett take Metro. It would be good to provide a park-and-ride service from the Walmart lot in Russett to Greenbelt Metro.
Applied Physics Lab	It could serve a new route	
Maple Lawn, housing by Rt 29 and Rt 216	It could serve a new route	Come on man! Maple Lawn and APL need a few bus stops!
Clarksville	It could serve a new route	A central stop in an area with no existing bus service

New Routes				
Origin	Destination	Time Periods	Why do you want to make the trip?	If you want to provide additional information, please comment below.
Jessup, Lancaster Foods, 7700 Conowingo Avenue	Hyattsville, Langley Park Plaza, 8001 New Hampshire Ave	Before 9:30 am and after 4:30 pm	Work	
Columbia, The Mall in Columbia, 10300 Little Patuxent Parkway	Maple Lawn, housing, 11019 Chelsea Way	Between 9:30 am and 4:30 pm	Shopping and errands	Need at least some form of public transportation between Scaggsville/ Maple Lawn, the Johns Hopkins APL and Downtown Columbia. I am a senior who would prefer not to drive everywhere, but not yet mobility impaired.
Ellicott City	Giant Store, 6020 Marshalee Drive, Elkrige/ Elkrige Housing, Montgomery Woods	Before 9:30 am, Between 9:30 am and 4:30 pm, and after 4:30 pm	Work and shopping	
Applied Physics Lab	Laurel, Weis Market, 9270 All Saints Road	Before 9:30 am, Between 9:30 am and 4:30 pm, and after 4:30 pm	Work and shopping	
Ellicott City, Turf Valley Town Square, 11075 Resort Road	Ellicott City, Village Green Shopping Center, 9338 Baltimore National Pike	Before 9:30 am, Between 9:30 am and 4:30 pm, and after 4:30 pm	Work and shopping	
Columbia, River Hill	Columbia, Hickory Ridge	Before 9:30 am, Between 9:30 am and 4:30 pm, and after 4:30 pm	Work and shopping	
Columbia, Atholton Elementary School, 6700 Seneca Drive	Columbia, Honeywell Technology Soutions, 7000 Columbia Gateway Drive	Before 9:30 am	School	

New Routes				
Origin	Destination	Time Periods	Why do you want to make the trip?	If you want to provide additional information, please comment below.
Gambrills	Annapolis, Westfield Annapolis Shopping Mall, 2002 Annapolis Mall Road	Between 9:30 am and 4:30 pm	Shopping and errands	
Columbia, Broken Land Park and Ride East Lot	Columbia, River Hill	Before 9:30 am and after 4:30 pm	Work	Need service to/from a central location in River Hill like the Village Center since there is no public transportation here. Please consider linking up to the Park N Ride or other central locations like Mall to allow for more strategic linking up of routes.
Columbia, Hickory Ridge Village Center	Tysons Corner, Virginia	Before 9:30 am and after 4:30 pm	Work	
Broken Land Parkway Park and Ride				Silver Line, Bus 501 - make this a regular bus stop for rider boarding, not just exiting.

Appendix J

Stakeholder Input – New Services

Appendix J

Stakeholder Input – New Services

Category	Topic	Comment	Source	Notes
Employment	APL service	APL would very much like to expand employment base by having a reliable connection to MARC as well as giving employees transportation options during the day.	Rick Shultz, APL	
Employment	Commuting	John Hopkins APL wants more services for their employees. They have been in touch with Alison and given the zip codes of their employees.	10/20/16 public meeting	
Employment	APL service	No service to Johns Hopkins APL	10/27/16 public meeting	
Employment	Howard County	JHH has workforce access needs from residences or transit hubs to our hospital. And we have needs of patients accessing their homes or other facilities, such as skilled nursing facilities.	Stakeholder interview: David Nitkin, Chief of Staff, Johns Hopkins Hospital	
Employment	Employment	Transportation to employment is a priority, especially the corridor between BWI and Fort Meade.	Stakeholder interview: Brian O'Malley, Central Maryland Transportation Alliance (CMTA)	

Category	Topic	Comment	Source	Notes
Employment	Low Income Employment Transportation	The key transit issues in Anne Arundel County are getting low income people who live in Anne Arundel County to Jobs in Anne Arundel County. This study should look at the locations of underemployed and low income Anne Arundel County residents and the locations of employment and find bus routes that connect them.	Stakeholder meeting: Mark Hartzell, Chief Administrative Officer, Anne Arundel County Executive Branch, Ramond Robinson, Fred Fravel, Lucinda Shannon	
Employment	Jobs on Board (employment based route)	This office has researched a potential route to connect Owen Brown & Oakland Mills to the Route 1 employment corridor in Jessup. Oakland Mills and Owen Brown were chosen because according to 2010 US Census data, they are two areas of the county with a higher rate of poverty and a lower rate of vehicular access. The Route 1 corridor in Jessup was chosen based on the recommendation of staff from the Economic Development Authority. We anticipated a 14 mile route with a run time of approximately an hour. Two buses running 45 minute headways and drivers working eight hour split shifts to cover peak times results in 80 hours of operation/week. We therefore anticipate an annual operating cost of \$258,000 based on the RTA's average operational cost of \$62/hour (\$62/hour at 80 hours/week equals \$4,960/week or \$257,920/year) plus the cost to lease two vehicles. There is the potential for fare recovery based on a sliding scale of participation in the program as well as usage by the general public.	OOT staff	

Category	Topic	Comment	Source	Notes
Employment	Park and Rides	<p>For the regional transportation plan what I don't see is transportation to Ft Meade/NSA. Could you look into some sort of express bus service that would use the park and rides as hubs and semi express connections to the park and rides from high density housing areas?</p> <p>As an example a line from the mall area down Broken Land Parkway to the park and ride. Express to Ft Meade that runs along Route 32.</p>	12/2/16 email: from Tom Paxton to Clive Graham	
Location	Express Route	Direct line service from Laurel to Ellicott City-for travel to court and probation	Howard County Detention Center	
Location	More service	Direct bus line from Jessup/Columbia area to Ft. Meade (PG County and Baltimore County)	Howard County Detention Center	
Location	Hospital to Gateway	Hospital to Gateway route	10/19/16 public meeting	
Location	Downtown Columbia to MARC	Need direct route from Downtown Columbia to MARC	10/19/16 public meeting	
Location	Connections	Need more connections to DC and Baltimore	10/20/16 public meeting	These comments came from several participants at the meeting.
Location	DC to Baltimore	Want a rail line from DC to Baltimore	10/20/16 public meeting	
Location	more service	Route from Ellicott City to Baltimore and Howard County	10/20/16 public meeting	
Location	Kendall Ridge	Kendall Ridge off of 108 needs bus service	10/20/16 public meeting	
Location	Unserved areas	Need to reach out to areas that are not served and see what they need.	10/20/16 public meeting	

Category	Topic	Comment	Source	Notes
Location	Unserved areas	Need to reach out to people who are not using the services and find out what they need and how we could get them to start using transit.	10/20/16 public meeting	
Location	Piney Orchard in Odenton	I'm a resident of the Piney Orchard community in Odenton. I'm also the president of the Board of Directors for the Piney Orchard Community Association. Piney Orchard is a planned development with approximately 8-10,000 residents. Many are employed at Ft. Meade, in Washington DC, or Baltimore. One of the reason the MARC train station in Odenton is the busiest is because our residents are commuting to jobs in DC or Baltimore, and the current situation of little parking at Odenton, and clogged roads on routes 170 and 175 is because there is little dependable mass transit from our community to the MARC train station or onto Ft. Meade. Dependable bus service, with schedules linked to train schedules would go a long way to alleviating traffic, parking, and commuting times to and from work for our residents, and I urge you to keep these opportunities in mind as plans are developed and move forward. Secondly, reducing traffic, especially on route 175 could speed up emergency response times from the fire station nearby, and also increase safety for all.	Email: sent to Fred from Steven Randol, tevenrandol9@gmail.com	Fred replied to his email
Location	Access to Ellicott City	Need a better and more direct route to Ellicott City. From Elkridge to Court takes 3 hours.	10/27/16 public meeting: Grass Roots employee Kathy Piet	
Location	Maple Lawn and APL service	Need to serve Maple Lawn and APL area	10/27/16 public meeting: Grass Roots employee Kathy Piet	

Category	Topic	Comment	Source	Notes
Location	Service to Maple Lawn	Need service to Maple Lawn	10/27/16 public meeting	
Location	Howard County Public Schools	Howard County Public Schools has a large homeless population and it would be great if these students could access public transit as well. They need more bus stops near the schools and more service hours.	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools	
Location	Connecting to Baltimore and DC	Connecting multiple jurisdictions together would help the bus system. If RTA can connect DC to Baltimore that would be huge. We have service workers living in Baltimore and DC that have to commute into Howard County to work.	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools	
Location	Howard County Public Schools	There is a need for additional or improved public transportation services in Central Maryland. They need more service to the schools, especially the highs schools and the central office.	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools	
Location	Howard County Public Schools	Howard County Public School constituents need to go to the central office campus, but cannot currently access it by public transportation.	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools	

Category	Topic	Comment	Source	Notes
Location	Anne Arundel County	Pasadena, South County, West County need new and improved services.	Stakeholder Interview: Pam Jordan	
Location	Anne Arundel County	There is a need to expand the geographic region that is served by public transit (RTA).	Stakeholder interview: Pam Jordan	
Location	Anne Arundel County	We should be looking at how we get people to work and medical appointments. Transportation is the key to a healthy productive life. If you can't get to jobs, shopping, medical appointments then you are isolated from the community and its bad for all of us.	Stakeholder interview: Pam Jordan	
Location	Howard County	There is a need for additional public transportation services in Central Maryland, particularly rail between metro areas.	Stakeholder interview: David Nitkin, Chief of Staff, Johns Hopkins Hospital	
Location	Howard County	Howard County is underserved by rail and BRT, and could use better connections from rail stations to locations such as downtown Columbia.	Stakeholder interview: David Nitkin, Chief of Staff, Johns Hopkins Hospital	
Location	Anne Arundel County	The major destinations in Central Maryland that AAWDC's clients need to access include BWI, Arundel Mills Mall and Casino, Arundel Mills Live is building a new hotel, that is 500 jobs there. Plus there is a lot of TI in the area.	Stakeholder interview: Jeff Trice, AAWDC	
Location	Anne Arundel County	We need expanded services to BWI, Anne Arundel Mall and Casino, Fort Meade and connecting to Annapolis. We also need better public transportation from the airport to Annapolis.	Stakeholder interview: Jeff Trice, AAWDC	

Category	Topic	Comment	Source	Notes
Location	Anne Arundel County	People need to access to BWI, Anne Arundel Mall and Casino, Fort Meade and connecting Annapolis- the transit shuts down and people need it at more times. And there are too many transfers. And Southern Anne Arundel there is nothing.	Stakeholder interview: Jeff Trice, AAWDC	
Location	Howard County	Howard Community College's constituents need transit from home to campus, most people live in Howard County or Baltimore City. 1/4 of the employees live outside the county. Most students live inside the county. There are ~ 2,000 employees and 30,000 students.	Stakeholder interview: Bob Marietta, Howard Community College	
Location	Howard County	There is a high need for additional or improved public transportation services in Central Maryland. People need express service to the village centers, airport, rail station, county governments, large shopping centers, and employment centers.	Stakeholder interview: Bob Marietta, Howard Community College	
Location	TRIP Calls	The most frequently requested places that people cannot access via transit are: Fulton, Maple Lawn, Burtonsville, Woodland Job Corps Center, Severn/Glen Burnie, and Fort Meade. This is from the TRIP calls.	Stakeholder meeting with CMRT	
Location	House of Corrections Rail	I keep looking at rail. Here is a development idea based on rail. I'm assuming the House of Corrections has been closed. The rail split to Columbia is at the House of Corrections. If you put in a MARC or local Rail Station there all of a sudden that area is a developers dream. From a LEED view it would have a lot to offer for site selection points, the state owns the land already, surrounding land is cheap, and utilities are in place. Make it a 35 minute trip from DC and that is PRIME development property.	12/2/16: email from Tom Paxton to Clive Graham	

Category	Topic	Comment	Source	Notes
Mode	Micro-transit	Potential for micro transit to efficiently serve some areas? Different bus types for different geographies?	Clive Graham/ Astamay Curtis	Baltimore City exploring as part of Baltimore Link
Other	All Considerations	All aspects need to be considered when re-routing bus services. This would include bus stops, pathways to bus stops, lighting, and street crossings.	10/20 public meeting	
Scheduling	More service	Purple Bus runs every 2 hours after peak travel, too limited	Howard County Detention Center	
Scheduling	More service	More frequent buses to area shopping centers (Snowden Square, Columbia Crossing, Gateway Overlook etc.)	Howard County Detention Center	
Scheduling	Paratransit Expansion	Expand paratransit service to Sundays	10/19/16 public meeting	
Scheduling	Weekend	Need more weekend service	10/20 public meeting	These comments came from several participants at the meeting.
Scheduling	Weekend	More weekend service, in general and to Baltimore	10/20 public meeting	
Scheduling	More frequent service downtown	Main complaint is amount of time to get to and from campus. Need bus lanes to and from Downtown area. Frequency is needed; kids can't get to classes on time.	10/27/16 public meeting: Bob Marietta, HCC	
Scheduling	Howard County Public Schools	Howard County Public School students need more after school times and evenings and weekends.	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools	

Category	Topic	Comment	Source	Notes
Scheduling	Howard County Public Schools	It would be an improvement if the routes could align with the times of the schools, high school 7:25 a.m. to elementary 9:25 a.m., practices and clubs wrap up around 4:30 p.m. and 5 p.m. These times need more RTA services. And the Homewood school classes end at 8 p.m., they need bus services at this time and location, central services campus.	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools	
Scheduling	Anne Arundel County	There is a high demand to have increased hours and availability for the Anne Arundel DAD van service.	Stakeholder interview: Pam Jordan	
Scheduling	Howard County	There is a need to improve the days, hours, or frequency of the existing transit services.	Stakeholder interview: David Nitkin, Chief of Staff, Johns Hopkins Hospital	
Scheduling	Frequency	In our experience (CMTA), frequency comes up as an issue. When CMTA surveyed commuters on the corridor evening service on the Marc Commuter rail came up as a high need. Sunday morning service on the Central Light Rail in Northern Anne Arundel County. And the frequency of the bus service came up a lot.	Stakeholder interview: Brian O'Malley, Central Maryland Transportation Alliance (CMTA)	
Scheduling	Howard County	Howard Community College constituents need to go to religious centers on holidays and the Sabbath but cannot currently access them using public transportation.	Stakeholder interview: Bob Marietta, Howard Community College	
Scheduling	Howard County	Areas for improvement include more frequency. This would cut down to the wait times and access on the weekends to recreational destinations.	Stakeholder interview: Bob Marietta, Howard Community College	

Category	Topic	Comment	Source	Notes
Scheduling	Howard County	Shorter wait times and faster connections through the hospital and college campus would be the most important thing that could be done to improve transit services for Howard Community College constituents. Have a bus only road that connected the college parking lot to the hospital parking lot. This would be on campus property but they need motivation to implement it. This would make the bus service faster.	Stakeholder interview: Bob Marietta, Howard Community College	
Senior	Senior/50 Plus Centers	Possible to have a dedicated route that will serve these	Jen Terrasa	
Seniors	Need for Expanded Transportation Options	There is a need and desire for enhanced transportation options in addition to the private automobile, particularly to serve those who do not or cannot drive, including older adults. The current transit planning process should look for ways to expand transit service in Columbia today and in the future.	Jane L. Dembner, Director of Planning and Community Affairs, Columbia Association: letter to Clive Graham	
Seniors	Shuttle Services	Columbia Association funds a senior event shuttle, which provides small group curb-to-curb evening (after 4:30 p.m.) and weekend transportation shuttle service to cultural events throughout Howard County for groups of four or more seniors ages 60 and over. As the Transit Development Plan takes shape, we hope that the plan will consider expanded and additional shuttle services in our community. (See additional comments related to on demand transit services below.)	Jane L. Dembner, Director of Planning and Community Affairs, Columbia Association: letter to Clive Graham	

Category	Topic	Comment	Source	Notes
Seniors	Transit Routing for older adults	As part of the analysis and stakeholder process, we suggest that the Transit Development Plan process determine popular older adult destinations and then review bus routes and frequency levels to those destinations and recommend service changes to make hubs of older adult services and destinations more accessible by transit.	Jane L. Dembner, Director of Planning and Community Affairs, Columbia Association: letter to Clive Graham	

Appendix K

Stakeholder Input – Existing Services

Appendix K

Stakeholder Input – Existing Services

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
Walmart - Town and Country	Stop going into Walmart parking lot, stay on North Ridge Road to Town and Country Blvd, and make loop back to Route 40	405	RTA	Potential to better serve townhomes on Hamlet Court	Adopt ASAP, need to determine exact stop locations, put in pads/shelters	Approach Walmart regarding sidewalk from stop at Hamlet Court to front of store
Chatham Road	Eliminate turn onto Chatham Road and back off Route 40	405	RTA	Almost no ridership there	Adopt ASAP, move shelter down to Route 40	
Walmart - Dobbin Road	Try to find a way to avoid going into shopping center parking lot	405	RTA			
Dobbin Center/ Columbia Crossing	Get the buses out of the parking lot, stay on roadway	406	Operator discussion	They feel very dangerous, especially because so many people backing up in parking lot		
Snowden Square Diversion	Fix 407 diversion to Snowden Square, very time-consuming	407	Operator discussion	10-15 minutes to serve that one stop		
407 Route	Very tight on time, OTP problems, too full	407	Operator discussion	Operator comment: If we keep the route as is, add a bus and go to 90-minute trip.		

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
Shalom Square	Remove from 408	408	Operator discussion			
Business Parkway Loop	We could cut the Business Parkway Loop at Abindon Drive and save 5 minutes. Stop at MTA stop instead.	409	Operator discussion			
Greenfield Road	Like the Greenfield Road Plan - there are a lot of Route One riders heading to Greenfield.	409	Operator discussion			
Route 1/175 Intersection	Traffic really bad here at rush hour	409	Operator discussion			
Split 501	Columbia Mall to Food Center, Food Center to BWI. Or have a 501 Express	501	Operator discussion			
Service Expansion	Expand Ellicott City service to include Sundays	405/ Yellow	10/19/16 public meeting			
Normandy Shopping Center	What will happen to the bus stop when Normandy Shopping Center gets torn down and replaced?	405/ Yellow	10/19/16 public meeting			
406 Route	The 406 Red Route stops at different spots on different runs? It is confusing. The schedule is confusing to try and read.	406 Red	Stakeholder meeting with CMRT			
Medical Center Routes	Only 408 serves Medical Center, remove 407	407, 408	Operator discussion			

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
Medical Center Stop	Stop at end of driveway, no need to go all the way into center	407, 408		Operator estimate - from when they make the left turn off Rte 17, 10 minutes in and out		
Parkview at Owen Brown	Remove from 407 and let 503 cover it	407, 503	Operator discussion	Per drivers- no ridership there		
Missed Connections	<p>email to Fred from Darrell Bell: [bell.darrell079@gmail.com] Good evening, just to let someone know that this bus 409 purple bus is always late every day I get off of work. I'm off of work at 4:30 p.m. it takes me 5 minutes to walk to the bus stop. Everyday this bus is supposed to be at Free State and Washington Blvd going towards Laurel Mall at 4:45 pm. This bus doesn't come until 4:55-5:00 pm. Every day when this happens I miss my connecting bus 89 going towards Beltsville. Just like today the bus never showed up so me and a lady had to wait from 4:38 pm</p>	409 Purple and 89	Email to Fred Fravel	Forwarded to Mark, Andrew and Clive on 11/3/16		

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
	until 5:55 pm for another bus. This is unacceptable. When I called the dispatcher about the problem he hung the phone up. Tried to call back but no one answered the phone. This is an ongoing problem. Can someone help please?					
Howard County Public Schools	RTA works off the hub system, so you have to transfer. This can be a strength or weakness. It can make the trip longer. The frequency of the buses is too low. It does not meet the needs of the school system.	All	Stakeholder interview: David Ramsay, Director of Transportation, Howard County Public Schools			
Bus Not On Time	The bus operates outside of the schedule mostly on the E and Purple Routes	E, Purple	Stakeholder meeting with CMRT			
ICC Bus MTA Route 201	Gaithersburg to BWI- Could it make one stop in Howard County, other than at Dorsey MARC?	MTA 201	Ron Hartman			
Orange Route	The Orange bus should not stop at the Nature Center, no one gets off there and it is a waste of time.	Orange	10/20/16 public meeting			

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Red and Brown	The Red and Brown shuttles are confusing and don't work. The old Red and Brown routes used to work, and they are not real shuttles.	Red, Brown	10/20/16 public meeting	Three people made similar comments on these routes.		
Missed Transfers	When you are operating on a pulse system, maintaining schedules is critical or riders will miss their connections.	Yellow, Purple, 302G	Stakeholder meeting with CMRT	People report missing transfers on the Yellow, Purple and 302G routes.		
501 Saturday Evening Service	Only one bus in service on the 501 after 6:00 pm on Saturday.		Operator Discussion	Lots of ridership from the casino. People are not expecting two-hour headways		
Yellow Route	Poor, inefficient		Jen Terrasa			
Earlier Service	Bus route on the Purple Line before 7 am		Howard County Detention Center			
More Service	Improving local transportation from the jail on Route 175 to Columbia Mall; Adding at least hourly schedules on Sundays and running later hours		Howard County Detention Center			

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MTA Baltimore to Howard County	MTA Route 320 goes from Baltimore -Jessup- Columbia. Is it meeting needs? Potential for expansion/addition? Particular interest to serve businesses in US 1 corridor		10/14/16 Howard County Economic Development CEO breakfast		Discuss with MTA. Get a better sense of needs from Howard County business, especially along US 1	
Bus frequency	Hour headways are awful		10/19/16 public meeting			
confusing routes	The busses should all run with 30 minute headways, all on the same schedule so people will know how to use them. It is confusing the way it is now.		10/20/16 public meeting			
Weekends	Need more Sunday service and Saturday in Ellicott City		10/20/16 public meeting			
Howard County Public Schools	The current transit system doesn't reach as many schools as Howard County Public Schools would like it to. The bus schedule does not meet the needs of students who stay after for activities. Or have to go to work after school.		Stakeholder Interview – David Ramsay, Director of Transportation, Howard County Public Schools			

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Anne Arundel County	<p>The Anne Arundel County Department of Aging and Disability Services contracts with First Transit for Curb to Curb on demand paratransit for older adults, PWD and caregivers, the DAD van service. To allow people to live in their homes longer. They can take limited trips to doctor appointments, dialysis, chemotherapy, shopping, senior centers.</p> <p>The DAD van service provides about 600 one way trips a day. The service is only available weekdays during normal business hours.</p>		Stakeholder Interview			
Anne Arundel County	People are supportive of keeping the DAD Van Service		Stakeholder Interview- Pam Jordan			

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
Anne Arundel County	A lot of the Department of Aging and Disability Services clients do not live within 3/4 of a mile of a fixed route, so they can't use Metro Access. There is a huge need for more widespread transportation for people with disabilities and older adults.		Stakeholder Interview- Pam Jordan			
Anne Arundel County	The RTA transit service is more flexible than the DAD van service provided by Anne Arundel County in terms of hours of availability. The DAD van service only runs during normal business hours.		Stakeholder Interview- Pam Jordan			
Anne Arundel County	The existing transit services in Anne Arundel County does not cover enough areas in the county.		Stakeholder Interview- Pam Jordan			
Anne Arundel County	People in Pasadena and South County have no transportation at all when the DAD van service is not available to them.		Stakeholder Interview- Pam Jordan			

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
Anne Arundel County	<p>The DAD van service helps people who live in or need to travel to places not currently served by RTA. However, the DAD van service is limited, only 3 trips per week to senior centers and they only take you to the senior center closest to your home. Medical is one per day.</p>		Stakeholder Interview- Pam Jordan			
Anne Arundel County	<p>Because of routing, people who are frail might be on the DAD vans a long time and that is a problem.</p>		Stakeholder Interview- Pam Jordan			
Central Maryland Transportation Alliance	<p>CMTA also did a more detailed study of the jobs corridor (between BWI and Fort Meade), they found that even if transit was making the connection it was in efficient, for example the trip took longer than driving due to transfers.</p>		Stakeholder Interview – Brian O'Malley, Central Maryland Transportation Alliance (CMTA)			

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Anne Arundel County	People don't use public transit because they have vehicles and others don't know that it is there. Also, the routes might not meet their needs and Buses are not frequent enough or at the right times and there are too many transfers. It takes too long.		Stakeholder Interview- Jeff Trice, AAWDC			
Anne Arundel County	The time schedules going to the airport are not working. Especially for the night shift working at the airport, food services have to stay open till the last flight arrives and they have to stay late and then they have to wait for the morning to take the morning bus. People can't get home from working at BWI.		Stakeholder Interview- Jeff Trice, AAWDC			
Anne Arundel County	For the people who do use transit to commute, they report that it helps with the commute and they can nap on the way to work.		Stakeholder Interview- Jeff Trice, AAWDC			

Comment Name	Description	Route	Source of Input	Notes	Resolution/ Recommendation Short Term	Resolution/ Recommendation Long Term
Anne Arundel County	People who don't use public transit to commute report that the routes take too long, there are too many transfers and the buses don't go where people need them to go.		Stakeholder Interview- Jeff Trice, AAWDC			
Anne Arundel County	The routes need to have longer service hours, start earlier and end later. They also need more weekend and holiday hours. People working service jobs have to work on weekends and holidays, they need transit 24/7.		Stakeholder Interview- Jeff Trice, AAWDC			
Annapolis Transit	Annapolis Transit is under leveraged		Stakeholder meeting – Mark Hartzell, Chief Administrative Officer, Anne Arundel County Executive Branch, Ramond Robinson, Fred Fravel, Lucinda Shannon			

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Frequent and Reliable	Transit service needs to be frequent and reliable. Right now there is no public trust in the system.		Stakeholder meeting – Mark Hartzell, Chief Administrative Officer, Anne Arundel County Executive Branch, Ramond Robinson, Fred Fravel, Lucinda Shannon			
Mode Meets Need	The service level or mode needs to match the service needs.		Stakeholder meeting – Mark Hartzell, Chief Administrative Officer, Anne Arundel County Executive Branch, Ramond Robinson, Fred Fravel, Lucinda Shannon			

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Howard County	Riders would like the ability to stop on demand and get off between stops, where possible. Sometimes the bus goes right by where they are going and they have to wait to get off at the bus stop and walk back to their destination.		Stakeholder Interview – Bob Marietta, Howard Community College			
Shift Work	Transit needs to expand hours to cover early and late shift workers		Stakeholder meeting - CMRT			
	Buses are not on time		Stakeholder meeting - CMRT			
	One of their customer's shifts starts at 1pm but the buses are so unreliable that she takes an earlier bus and gets to work site at 11am so she will not be late.		Stakeholder meeting - CMRT			