

Anne Arundel County Transit Development Plan

Draft Final Plan – January 2024



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Chapter 1

Introduction

A Transit Development Plan (TDP) is a planning process that should be undertaken on a periodic basis by every transit system. The TDP process builds upon and formulates 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. The completed TDP will then serve as a guide for implementing service and/or organizational changes, improvements, and/or potential expansion.

The Maryland Department of Transportation - Maryland Transit Administration (MDOT MTA) requires the Locally Operated Transit Systems (LOTS), such as Anne Arundel County Transit, to conduct a TDP every five years. The LOTS use their TDPs as a basis for preparing their Annual Transportation Plans (ATPs), which serve as their grant applications for transit funding. The TDP planning process builds on or formulates the county'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.

In 2018 a TDP was completed for the Central Maryland area that included Anne Arundel County (except for the City of Annapolis). Prior to that Anne Arundel County had its own separate TDPs, and this is a return to that model.

Anne Arundel County Office of Transportation

The Office of Transportation administers Anne Arundel County Transit services that are operated through a contract with a private vendor. Services are funded by the Federal Transit Administration (FTA) as well as state grant programs administered by MDOT MTA, as well as by local sources. The Office of Transportation is responsible for applying for and administering all grant funds, including completing the ATP application and submitting it to MDOT MTA and completing necessary reports.

The vision of the Anne Arundel County Office of Transportation is:

"To promote and establish multi modal transportation networks throughout Anne Arundel County, which will provide the necessary infrastructure to make Anne Arundel County an economically vibrant community enhancing the quality of life for the citizens by advising the County Executive and the County Council on the coordination and development of government policies, programs, services, and allocations of resources for citizens regarding transportation."

The Mission Statement for the Office of Transportation involves:

- *Maintaining a comprehensive transportation development program that identifies the Anne Arundel's long-range transportation needs.*
- *Recommending on an annual basis a Transportation Improvement Program for the six fiscal years next ensuing.*
- *Recommending priorities for project requests that are to be submitted for funding through state, regional and local transportation funding programs.*
- *Recommend the development of innovative local and regional transit options.*
- *Recommend quality pedestrian and bicycle accommodations.*
- *Recommend priorities for all its citizens, regardless of age or ability, with accessibility and mobility.*
- *Receiving reports and findings on transportation project development studies and recommending follow up actions.*
- *Recommending transportation projects for addition to or deletion from the metropolitan planning organization and regional long-range transportation plans.*
- *Recommending such amendments may be necessary or desirable to the transportation chapter of the Anne Arundel's adopted Master Plan.*
- *Preparing periodic reports on Anne Arundel's progress in implementing its long-range transportation plan.*

Anne Arundel County Transit Services

Anne Arundel County Transit provides a variety of services to meet mobility needs in the county region that are detailed in Chapter 2 of this TDP:

- Fixed route services
- On-demand services
- Americans with Disabilities Act (ADA) complementary paratransit for people with disabilities unable to use fixed route services
- General paratransit services that go beyond the ADA requirements

TDP Project Kick-off Meeting

A project kick-off meeting was conducted with Office of Transportation staff and MDOT MTA at the outset of the TDP process. This meeting offered the opportunity for the Office of Transportation to provide an update that included:

- Discussion of current services, including that services continue to be fare free.
- Plans to transition to a new scheduling software platform and to test Wi-Fi capabilities on transit vehicles.
- Previous and current plans and studies that need to be considered as part of the TDP process.
- Status of the contract with the current vendor.
- Status of the Parole Transit Center.
- Outreach efforts that would be the most conducive for obtaining customer, community, and key stakeholder input.
- Status of current funding sources.

TDP Priorities

An important first step in the development of the TDP is to discuss key objectives for the planning process. Through the project kick-off meeting the Office of Transportation identified the following priorities for the TDP:

- Build upon “Move Anne Arundel!”, Anne Arundel County’s Transportation Functional Master Plan, as well as other previous and current planning efforts.
- Incorporate policies proposed through the draft Zero Emissions Bus Transition Plan that include purchasing only Zero-Emission buses and Hybrid-Electric buses from 2023 and beyond.
- Identify additional options to expand on-demand microtransit services.
- Assess east-west gaps in public transportation that exist despite recent service expansions.
- Analyze current and future population patterns and job centers.
- Consider new infrastructure improvements that involve the building of the Parole Transit center and a new garage at the Odenton MARC station.

- Take advantage of Transit Oriented Development (TOD) designations and Light Rail options in the County, and priority funding areas.
- Assess opportunities to expand feeder services to existing transit services.

Overview of the Plan

The chapters that follow present the results of the planning process:

- **Chapter 2: Review of Existing Conditions** provides a detailed review of Anne Arundel County Transit services, including route profiles and a performance assessment. It also documents the routes and services provided by MDOT MTA and their role in the County's transportation network. This chapter also includes a review of other available public transit, human services transportation, and private transportation available in Anne Arundel County.
- **Chapter 3: Transit Needs Assessment** identifies transit needs in Anne Arundel County based on input received through outreach efforts, with a particular focus on feedback from current customers, key stakeholders, and the broader community.
- **Chapter 4: Review of Demographics and Land Use** provides an analysis of demographic data, land use, and travel patterns to identify major trip generators and underserved/unserved locations.
- **Chapter 5: Service and Organizational Alternatives** presents possible service and organizational alternatives to improve current services, providing a menu of potential transit improvements.
- **Chapter 6: Transit Service Plan** provides final recommendations, including budgeting and implementation considerations over the next five years.

Chapter 2

Review of Existing Conditions

Introduction

This chapter provides a review of existing conditions that was conducted early in the planning process and served as the foundation for the overall TDP effort. It details the current Anne Arundel County Transit organizational structure and services, discusses other public transit systems that operate in the County along with private and human service transportation providers, and summarizes previous and current transportation plans and studies relevant to the study.

The review of existing conditions provides a fundamental understanding of current and former transportation trends and priorities in Anne Arundel County. Along with the needs assessment that is detailed in the next chapter, this information was used to develop possible service alternatives for improving mobility.

The information and data included in this chapter was obtained through a variety of sources, primarily:

- Anne Arundel County's annual grant application and reports to MDOT MTA
- Discussions and follow-up with the Anne Arundel County Office of Transportation staff
- Interviews with other key transportation providers in Anne Arundel County
- Previous and ongoing planning efforts
- Online research

While the focus of the TDP is on Anne Arundel County Transit, there are a variety of public transportation providers that operate routes and services in the county. An overview of these services is provided following the review of Anne Arundel County Transit. A further analysis of these services in relation to routes operated by Anne Arundel County was also considered in the development of potential service alternatives presented in Chapter 5 of this TDP.

It should also be mentioned that the TDP process was initiated during a time as the recovery from the impacts of COVID-19 was occurring, and as appropriate specific information and data affected by the pandemic are noted.

Anne Arundel County Transit

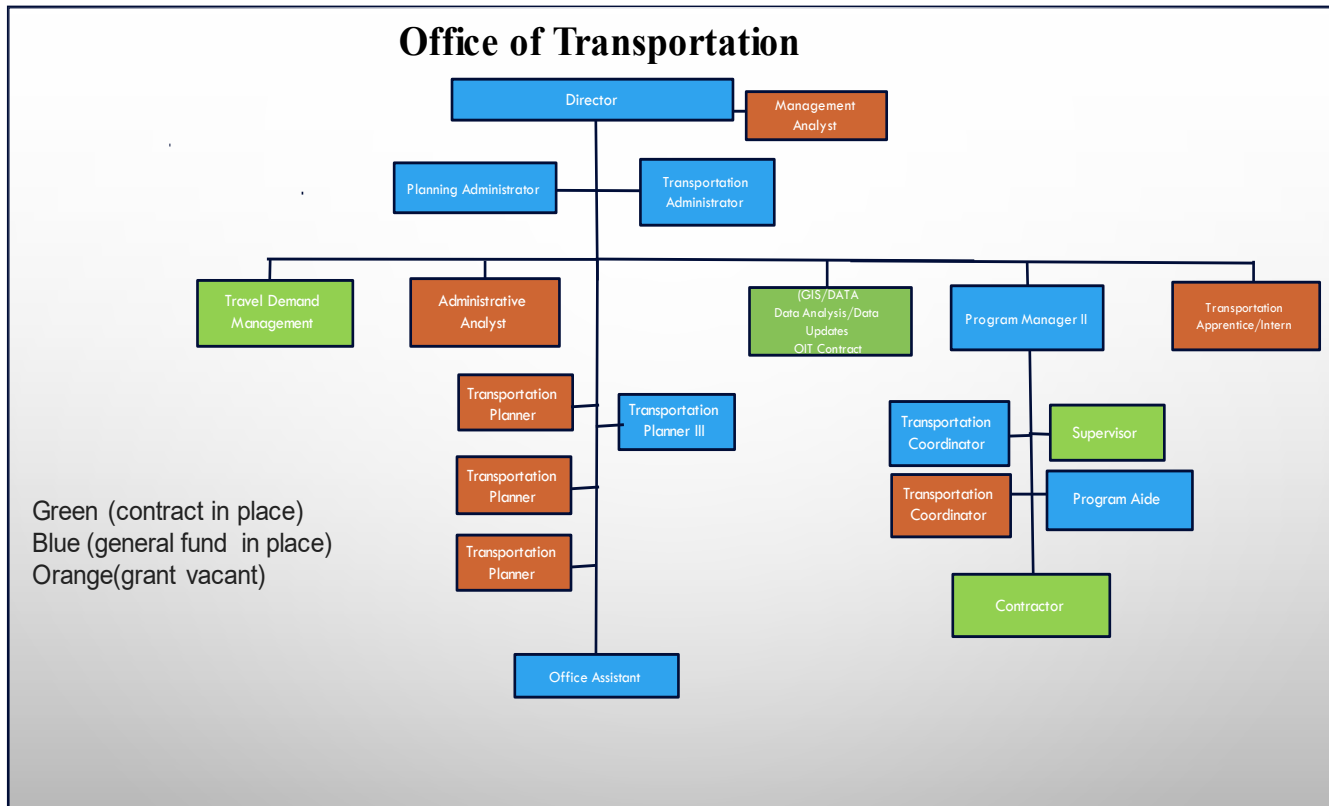
Management and Organizational Structure

Transit services in Anne Arundel County are administered by the Office of Transportation. This office also provides guidance on behalf of Anne Arundel County in planning and engineering studies conducted by the Maryland State Highway Administration for improvement or new construction of the state-maintained roadway network, and planning assistance to Anne Arundel County's Department of Public Works for roadway, bicycle and pedestrian facilities that are owned and maintained by the County. The Office of Transportation also coordinates with the Office of Planning and Zoning Development Division regarding road right-of-way, transit accessibility design, pedestrian and bicycle facilities and recommendations involving highway modifications resulting from the transportation adequate public facilities requirements.

Transit services are funded by Federal Transit Administration (FTA) and state grant programs administered by MDOT MTA, as well as local sources. The Office of Transportation is responsible for applying for and administering all grant funds, including completing the ATP application and submitting it to MDOT MTA and completing necessary reports.

Anne Arundel County Transit staff are currently located into two locations. Administrative staff are located at the Anne Arundel County Government Heritage Complex in Annapolis, while operations personnel staff are located in a building on the County's Glen Burnie complex. Anne Arundel County Transit services are provided through First Transit, a private vendor also located at the Glen Burnie site. First Transit then subcontracts out some services to another private vendor, MyCity Transportation, that operates the South County Call N' Ride and the Gold Edgewater, Gold Line Extension, and Yellow routes discussed later in this chapter. The Glen Burnie location is also where most vehicles are housed, and where vehicle maintenance is provided.

Figure 2-1 shows an organizational chart provided by the Office of Transportation that depicts the administrative staff on the left and the operations on the right. This chart also indicates how each position is funded as noted by the Office of Transportation.

Figure 2-1: Anne Arundel County Office of Transportation - Organization Chart

SOURCE: ANNE ARUNDEL COUNTY OFFICE OF TRANSPORTATION

Transportation Commission of Anne Arundel County

The mission of this commission is to:

- Study the planning, design, delivery and operation of transportation services and facilities in Anne Arundel County,
- Value the cost-effective, safe, and efficient movement of people and goods in a manner that protects and enhances natural environments and quality of life,
- Promote the County's regional competitiveness in transportation, and
- Provide near- and long-term recommendations to the County Executive regarding the county's current transportation program and future transportation planning and programs.

There are currently thirteen board members that serve on the Transportation Commission and include representatives from the community as well as Anne Arundel County governmental departments who work with people that may have transportation needs or challenges. This includes the Department of Aging and Disabilities and the Housing Commission. Several board members were interviewed as part of the stakeholder and community engagement that is documented in Chapter 4 of this plan.

Transportation Services

Through the TDP process Anne Arundel County Transit implemented several changes to their services. The following section provides a review of the current public transit services:

- Fixed route services
- On-demand services
- Americans with Disabilities Act (ADA) complementary paratransit for people with disabilities unable to use fixed route services
- General paratransit services that go beyond the ADA requirements

Fixed Routes

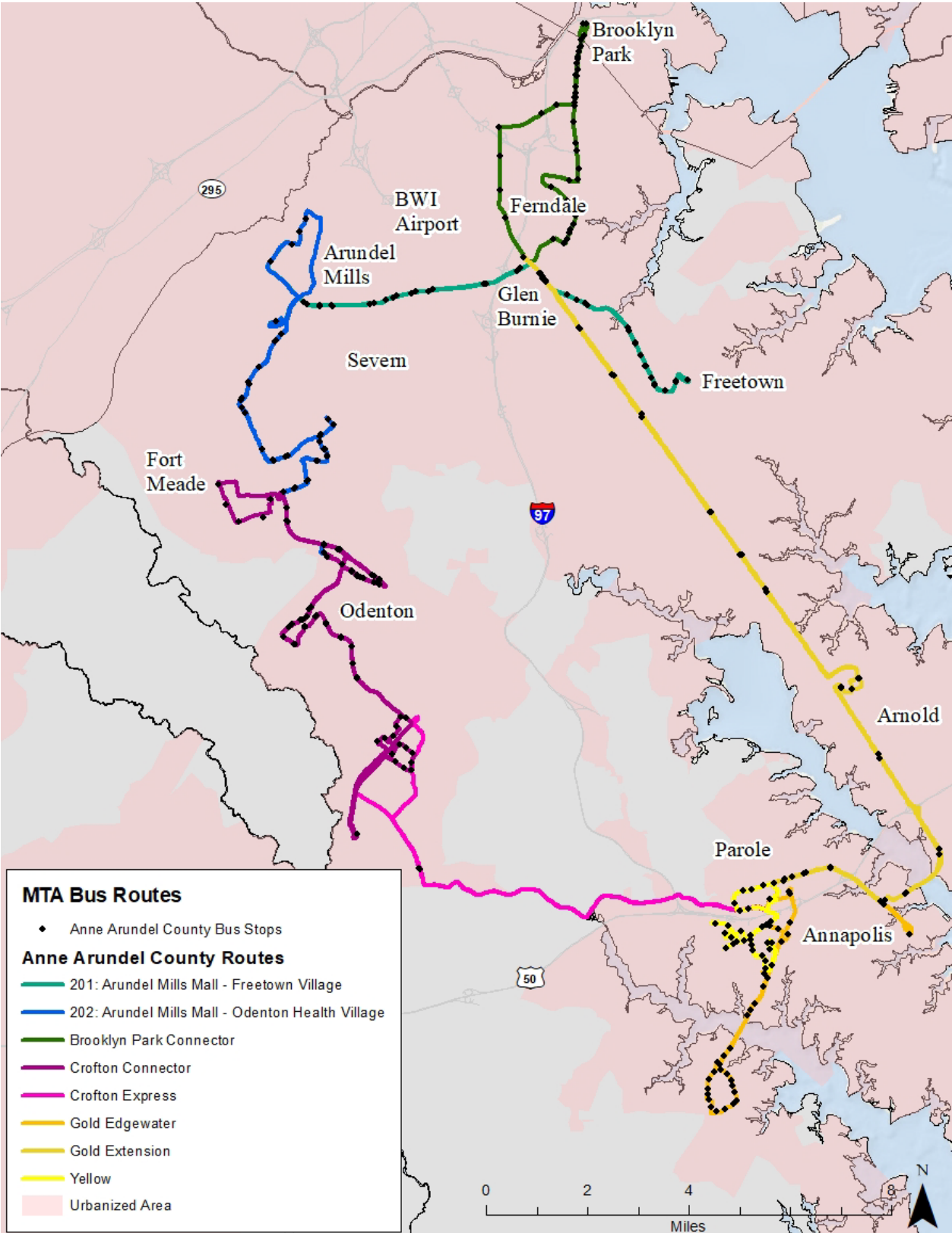
A map with an overview of the following Anne Arundel County Transit's routes and services is provided in Figure 2-2 on the next page, followed by a profile for each grouped by specific service type:

- AA-201 Arundel Mills Mall – Freetown Village
- AA-202 Arundel Mills Mall – Odenton Health Village
- Gold Line - Edgewater
- Gold Line - Extension
- Yellow Route
- Brooklyn Park Connector
- Crofton Connector
- Crofton Express

Fare Policies

In the past Anne Arundel County Transit did charge a fare for their services. However, currently all routes are fare free.

Figure 2-2: Anne Arundel County Transit - Fixed Routes



Route Profiles

This section profiles current services, grouping relevant routes together. The profiles include specific data as reported by Anne Arundel County for FY 2021 and FY 2022 through the *Form 2a: Service Performance Summary* that is submitted to MDOT MTA quarterly. As noted earlier, services during this timeframe were significantly impacted by the COVID-19 pandemic. However, the route profiles depict the increase in ridership between the two years as recovery from the pandemic took place.

As appropriate each profile provides:

- Service Days and Hours
- Headways
- Annual One-way Passenger Trips
- Annual Service Miles
- Annual Service Hours
- Annual Operating Cost
- Operating Cost per Hour
- Operating Cost per Mile
- Operating Cost per Passenger Trip
- Passenger Trips per Hour

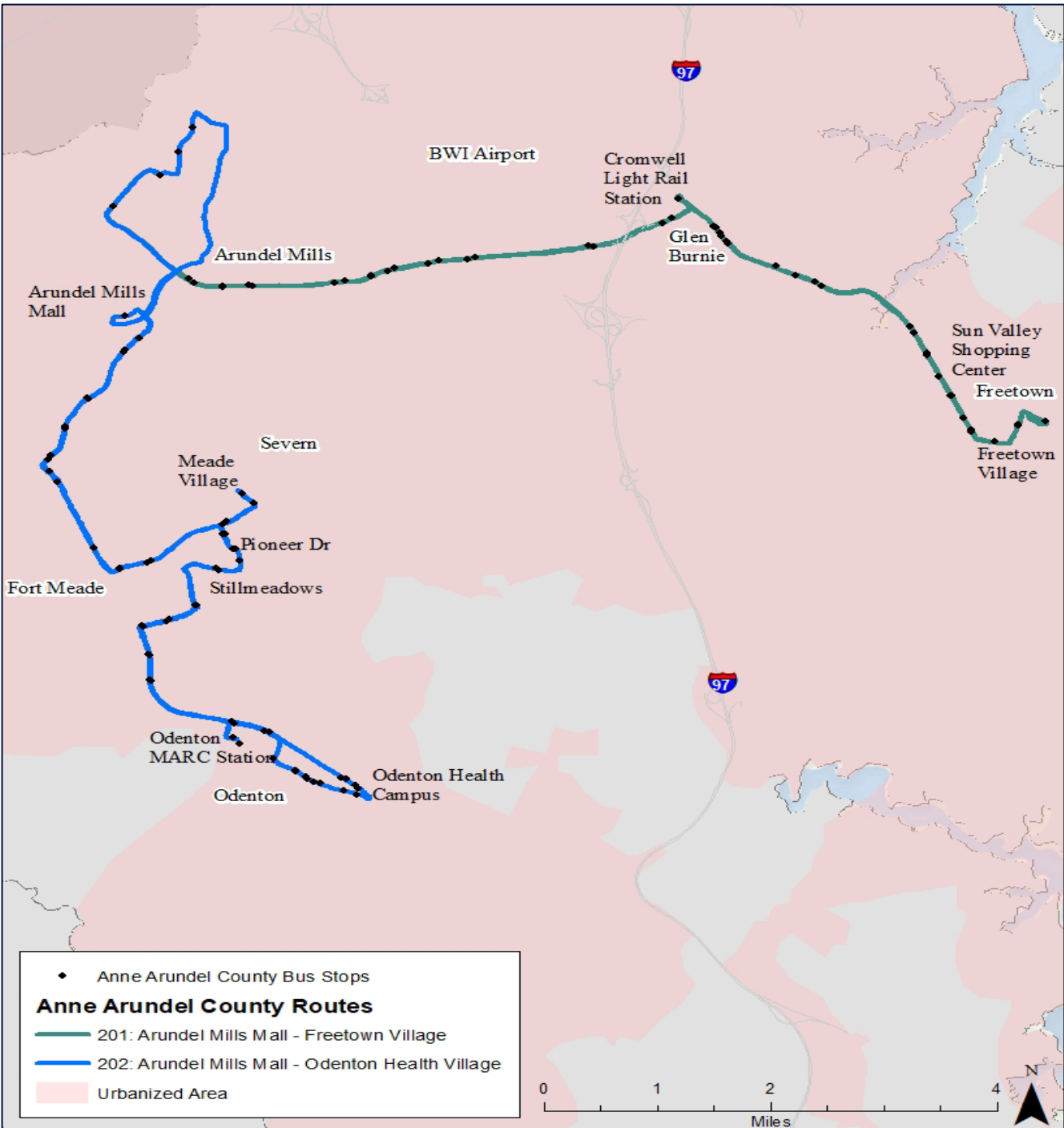
Each profile presents a map with major origins and destinations on the route. The current route schedules are provided in Appendix A.



AA201 and AA-202

Shown together in Figure 2-3, AA-201 operates between Arundel Mills Mall and Freetown Village and AA-202 runs between Arundel Mills Mall and the Odenton Health Center.

Figure 2-3: AA-201 and AA-202



Service Description: AA-201

Service Days	Monday-Sunday
Service Hours	M-F: 5:50 a.m. – 12:39 a.m., Sat: 7:00 a.m. – 12:50 a.m., Sun: 9:10 a.m. – 11:20 p.m.
Headways	Vary between 15 and 95 minutes

Operating Statistics: AA-201

	FY 2021	FY 2022
One-Way Trips	25,798	43,050
Total Service Miles	177,681	178,905
Total Service Hours	10,604	10,624
Total Operating Costs	\$477,180	\$478,080
Operating Cost/Hour	\$45.00	\$45.00
Operating Cost/Mile	\$2.69	\$2.67
Operating Cost/Passenger Trip	\$18.50	\$11.11
Passenger Trips/Mile	.15	.24
Passenger Trips/Hour	2.43	4.06

Service Description: AA-202

Service Days	Monday-Sunday
Service Hours	M-F: 6:15 a.m. – 12:12 a.m., Sat and Sun: 8:00 a.m. – 12:24 a.m.
Headways	Vary between 15 and 95 minutes
Notes	M-F: Serves Preston Gateway on five morning runs and seven afternoon/evening runs

Operating Statistics: AA-202

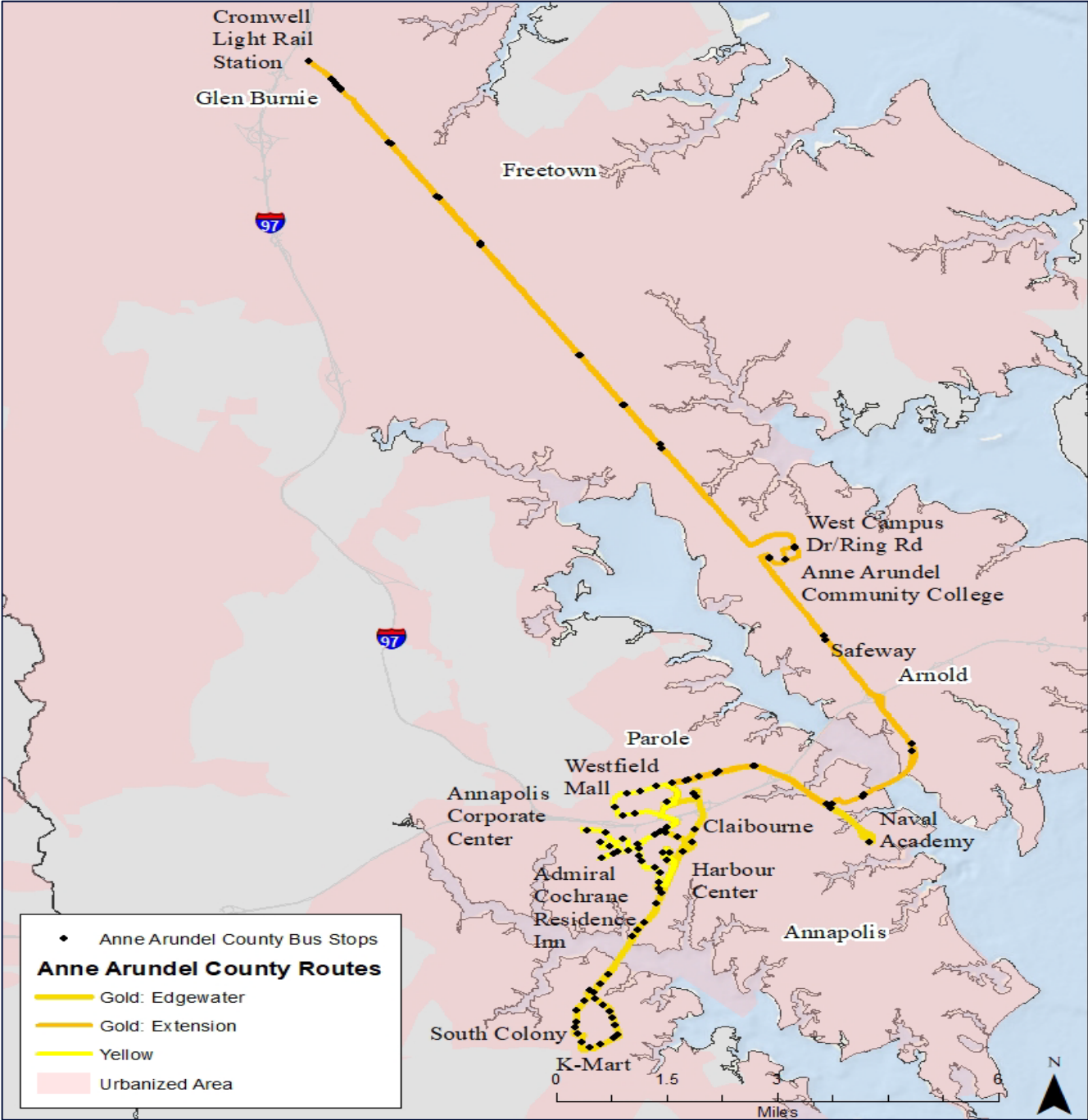
	FY 2021	FY 2022
One-Way Trips	25,798	40,292
Total Service Miles	177,681	144,208
Total Service Hours	10,604	10,860
Total Operating Costs	\$477,180	\$488,700
Operating Cost/Hour	\$45.00	\$45.00
Operating Cost/Mile	\$3.37	\$3.39
Operating Cost/Passenger Trip	\$15.66	\$12.13
Passenger Trips/Mile	.22	.28
Passenger Trips/Hour	2.87	3.71



Gold Edgewater, Gold Extension, and Yellow

As seen in Figure 2-4, Gold Edgewater operates between South Colony and Westfield Mall, the Gold Extension Route runs from Westfield Mall to Cromwell Light Rail Station, and the Yellow Route operates between Westfield Mall and Riva Road/Claibourne.

Figure 2-4: Gold and Yellow Routes



Service Description: Gold Edgewater

[Redacted]	
Service Days	Monday - Sunday
Service Hours	M-Sun: 6:00 a.m. - 8:57 p.m.
Headways:	60 minutes

Service Description: Gold Extension

[Redacted]	
Service Days	Monday - Sunday
Service Hours	M-Sun: 6:00 a.m. - 9:56 p.m.
Headways	60 minutes

Operating Statistics: Gold Edgewater and Gold Extension

	FY 2021	FY 2022
One-Way Trips	6,425	8,023
Total Service Miles	384,155	390,852
Total Service Hours	10,896	21,609
Total Operating Costs	\$490,320	\$972,405
Operating Cost/Hour	\$45.00	\$45.00
Operating Cost/Mile	\$1.28	\$2.49
Operating Cost/Passenger Trip	\$76.31	\$121.20
Passenger Trips/Mile	0.02	0.02
Passenger Trips/Hour	0.59	0.37

Service Description: Yellow Route

[Redacted]	
Service Days	Monday - Saturday
Service Hours	M-F: 6:00 a.m. - 6:52 p.m.; S: 8:00 a.m. - 5:52 p.m.
Headways	60 minutes

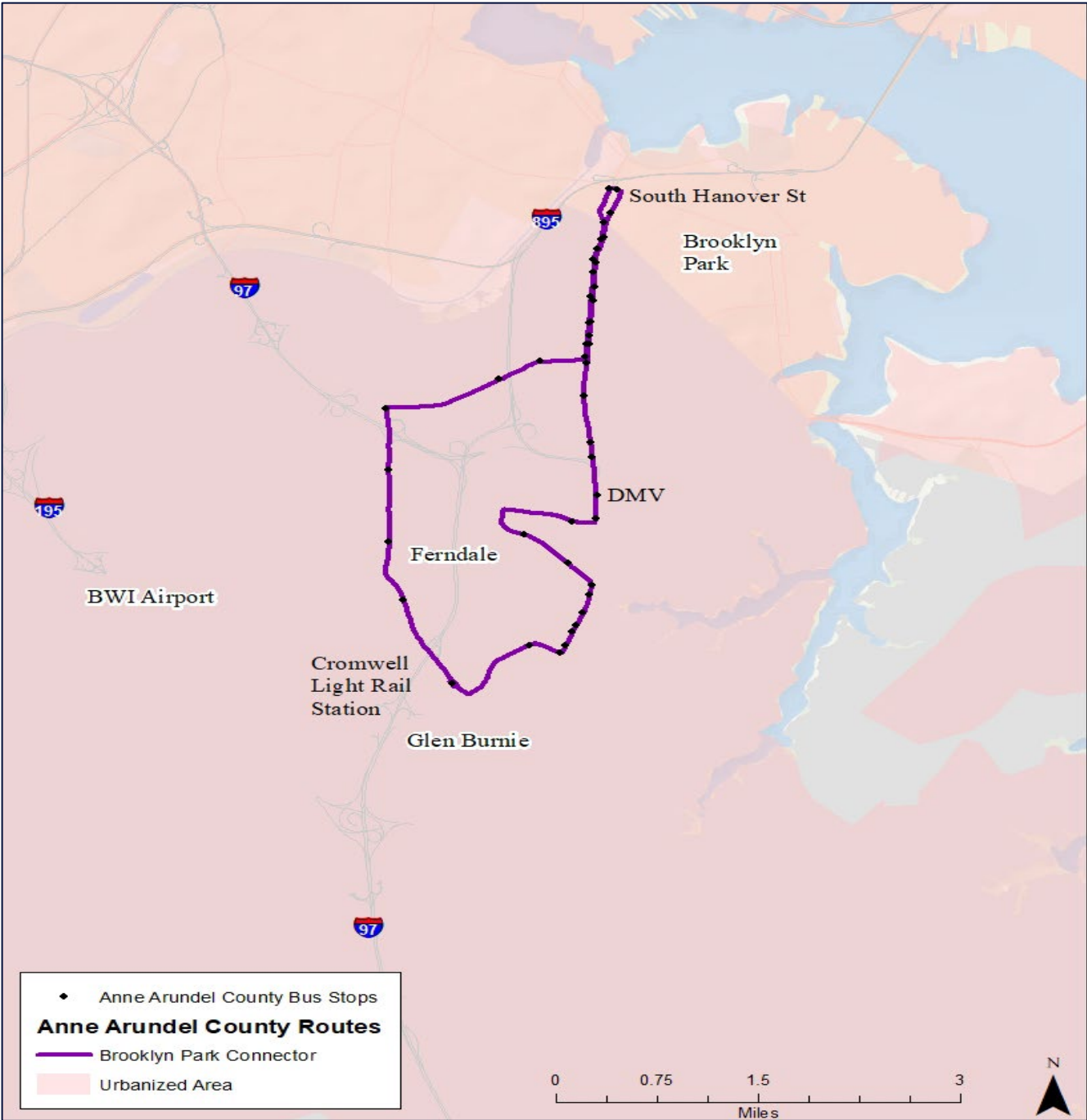
Operating Statistics: Yellow Route

	FY 2021	FY 2022
One-Way Trips	6,487	7,787
Total Service Miles	46,964	47,016
Total Service Hours	3,672	3,808
Total Operating Costs	\$165,240	\$171,360
Operating Cost/Hour	\$45.00	\$45.00
Operating Cost/Mile	\$3.52	\$3.64
Operating Cost/Passenger Trip	\$25.47	\$22.01
Passenger Trips/Mile	0.14	0.17
Passenger Trips/Hour	1.77	2.04

Brooklyn Park Connector

The Brooklyn Park Connector, shown in Figure 2-5, travels on a loop that starts and ends at the Cromwell Light Rail Station.

Figure 2-5: Brooklyn Park Connector



Service Description: Brooklyn Park Connector

Service Days		Monday - Saturday
Service Hours	M-F: 6:00 a.m. - 6:12 p.m.; Sat: 8:00 a.m. - 6:02 p.m.	
Headways	51 to 54 minutes	
Notes	1/2 mile deviation off route within Connector Zone	

Operating Statistics: Brooklyn Park Connector

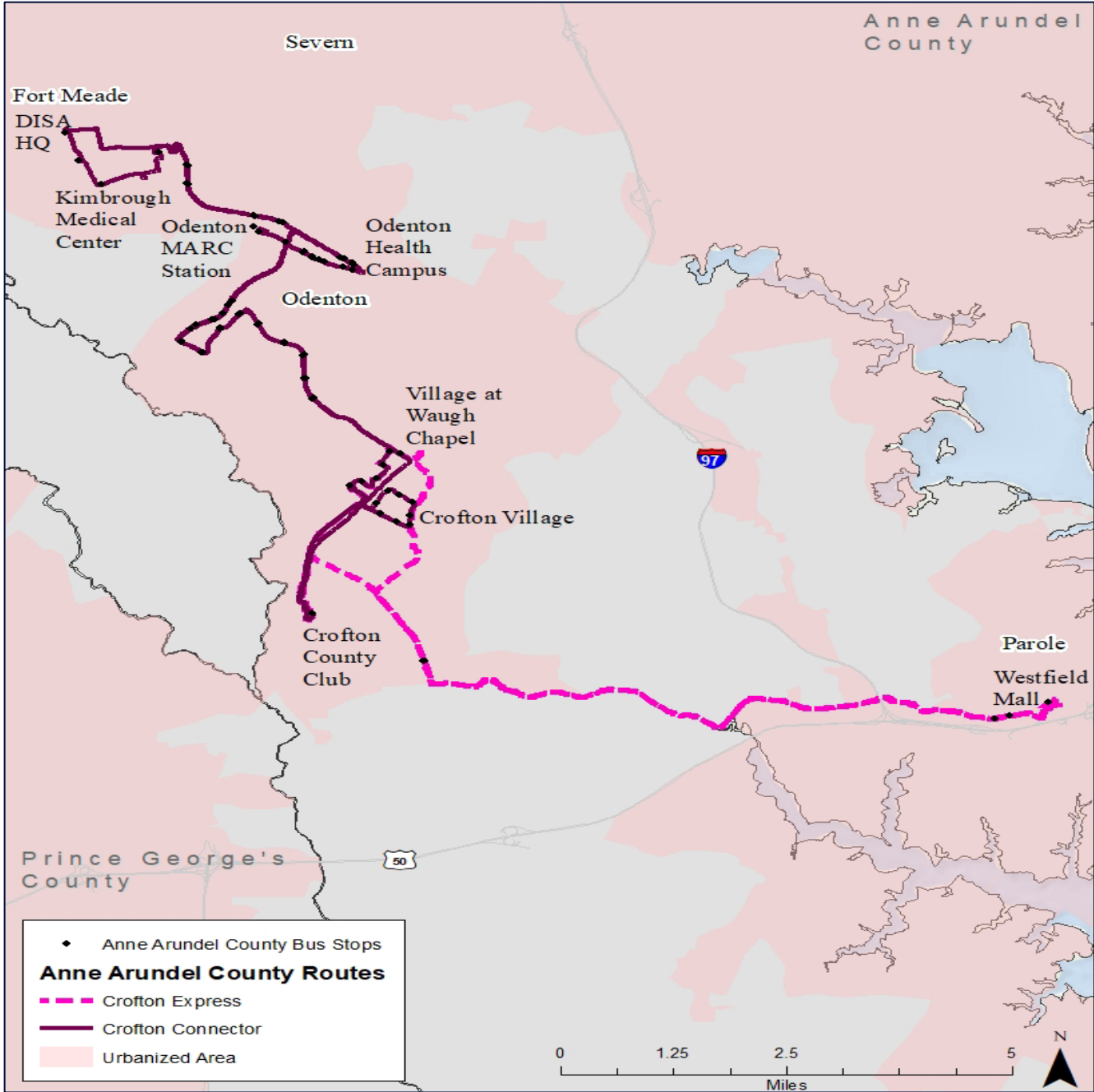
	FY 2021	FY 2022
One-Way Trips	5,851	14,109
Total Service Miles	32,893	65,535
Total Service Hours	6,749	10,000
Total Operating Costs	\$303,705	\$450,000
Operating Cost/Hour	\$45.00	\$45.00
Operating Cost/Mile	\$9.23	\$6.87
Operating Cost/Passenger Trip	\$51.91	\$31.89
Passenger Trips/Mile	0.18	0.22
Passenger Trips/Hour	0.87	1.41



Crofton Connector / Crofton Express

The Crofton Connector operates between the Odenton MARC Station and the Crofton Country Club. The Crofton Express Route runs on a loop that begins and ends at the Westfield Annapolis Mall, stopping at the Crofton County Club, giving access to the transfer to the Crofton Connector. Both routes are shown in Figure 2-6.

Figure 2-6: Crofton Connector and Crofton Express Routes



Service Description: Crofton Connector

Service Days	Monday - Friday
Service Hours	M-F: 5:45 a.m. - 6:56 p.m.
Headways	35 minutes
Notes	Special credentials required within Fort Meade; on-demand service provided mid-day to Odenton MARC to Piney Orchard with 1/2 mile deviation

Service Description: Crofton Express

Service Days	Monday – Friday
Service Hours	M-F: 7:00 a.m. - 7:00 p.m.
Headways	35 minutes
Notes	3/4 mile deviation within Connector Zone

Operating Statistics: Crofton Routes

	FY 2021	FY 2022
One-Way Trips	924	2,390
Total Service Miles	100,760	102,100
Total Service Hours	5,932	6,048
Total Operating Costs	\$266,940	\$272,160
Operating Cost/Hour	\$45.00	\$44.12
Operating Cost/Mile	\$2.65	\$2.67
Operating Cost/Passenger Trip	\$288.90	\$113.87
Passenger Trips/Mile	0.01	0.02
Passenger Trips/Hour	0.16	0.40



South County Call N' Ride Service

The South County Call N' Ride Service provides on-demand transit service in four zones that connect south county residents to the south county service areas. The overall service area from the Anne Arundel Transit website is shown in Figure 2-7. This on-demand service operates Monday through Friday from 7:00 a.m. to 7:00 p.m., excluding holidays. Riders must request pick-up two hours in advance and last call for same day pick-up is 5:30 p.m.

The South County Call N' Ride service connects to the AA-Gold Edgewater route, but does not cross over into Annapolis. Currently, Anne Arundel County Transit reported a mutual interest with The Routing Company (TRC) to deploy TRC's Pingo solution for the South County Call N' Ride, noting that the upgrade in technology would provide residents and riders with cutting-edge solution for requesting and performing rides. They also mentioned that Anne Arundel County Transit's dispatchers and operators will benefit from the Dashboard and its extensive management functionality. Additional information on this technology will be included in subsequent versions of this document.

Figure 2-7: South County Call N' Ride Zone



Service Description: South County Call N' Ride

Service Days	Monday – Friday
Service Hours	M-F: 7:00 a.m. - 7:00 p.m.
Headways	On-demand
Notes	<p>Service Area:</p> <ul style="list-style-type: none"> • Edgewater/Mayo/Shady Side • Lothian/Galesville/Deale/South Colony • Bristol/Harwood/West River • Owensville - Sudley/Tracy's Landing • Services do not operate outside of Anne Arundel County

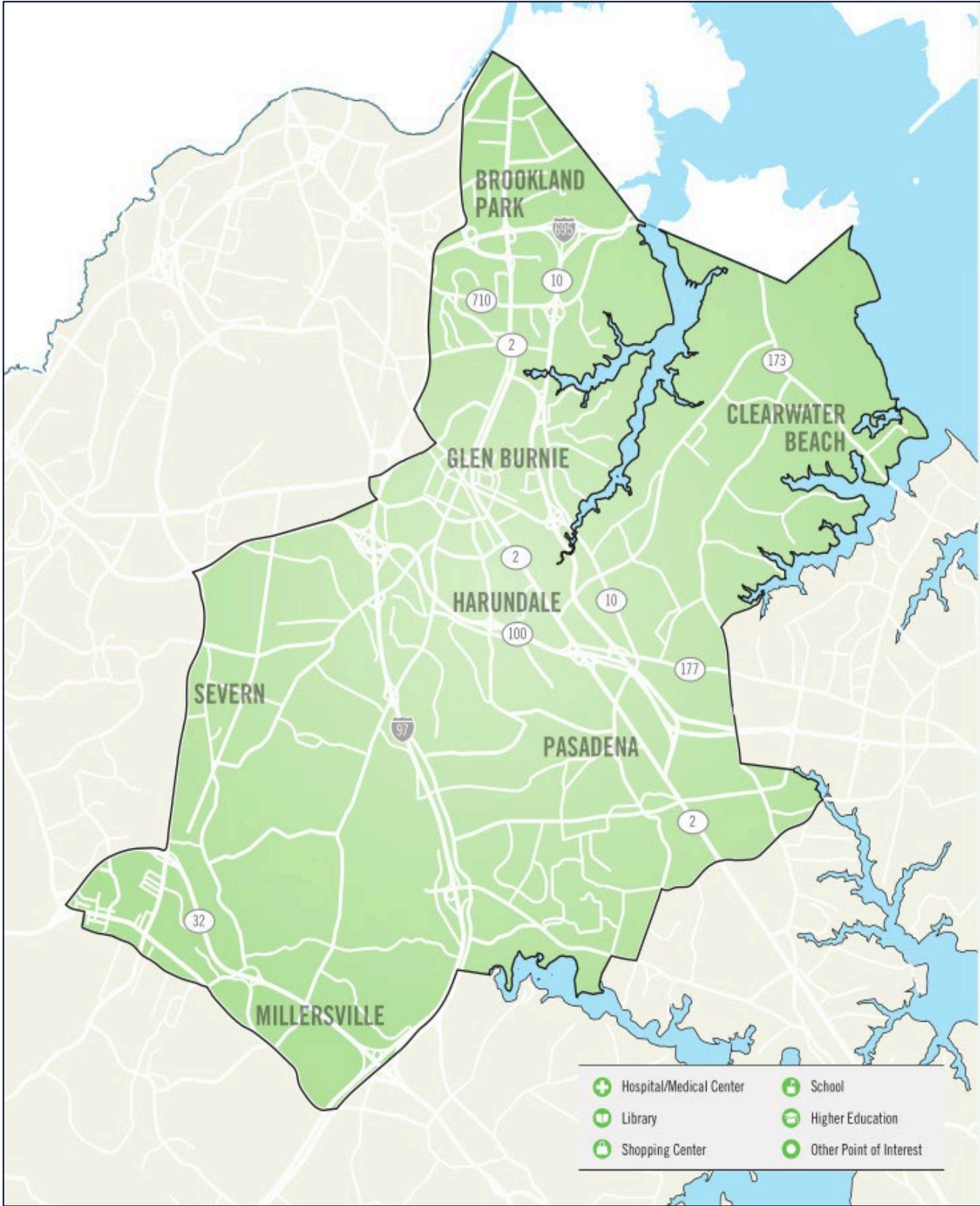
Operating Statistics: South County Call N' Ride

	FY 2021	FY 2022
One-Way Trips	3,081	3,072
Total Service Miles	105,840	108,940
Total Service Hours	18,144	18,144
Total Operating Costs	\$816,480	\$816,480
Operating Cost/Hour	\$45.00	\$45.00
Operating Cost/Mile	\$7.71	\$7.49
Operating Cost/Passenger Trip	\$265.00	\$220.55
Passenger Trips/Mile	0.03	0.03
Passenger Trips/Hour	0.17	0.20

North County Call N' Ride Service

Most recently Anne Arundel County Transit implemented the North County Call N' Ride which provides on-demand service connecting residents to services within the zone. The service operates Monday through Saturday between 7:00 a.m. and 7:00 p.m., excluding holidays. Riders must request a pickup two hours in advance, and last call for same day service is 5:30 p.m. Figure 2-8 shows the service area for the North County Call N' Ride service.

Figure 2-8: North County Call N' Ride Service Zone



Service Description: North County Call N' Ride

Service Days	Monday – Friday
Service Hours	M-F: 7:00 a.m. - 7:00 p.m.
Headways	On-demand
Notes	Service Area: <ul style="list-style-type: none"> • Brooklyn Park • Clearwater Beach • Glendale • Harundale • Millersville • Pasadena • Severn

ADA Paratransit

Anne Arundel County Transit provides complementary ADA paratransit service for individuals who are unable to use fixed route bus service due to a disability. As noted by Anne Arundel County Transit, as a comparable service complementary paratransit service transports customers to and from locations that are within 3/4 mile of existing local fixed routes and during the same days and hours of fixed route services. Points of origin-to-destination beyond this ¾ mile corridor are not eligible for Complementary paratransit service, but are eligible for General paratransit service (discussed in the next section). Reservations for ADA complementary paratransit are taken up to the close of business the day before travel and up to seven days in advance.

General Paratransit

General paratransit services are provided for eligible customers who have a disability that prevents them from making some or all of their trips on fixed route services. This service is provided with lift-equipped vehicles, or it may be provided by an accessible taxi that has been scheduled through the Anne Arundel County Department of Aging and Disabilities office as part of their Taxi Voucher program.

Anne Arundel County Transit notes that general paratransit services are operated throughout the county, and encourages customers to contact their office to confirm eligibility that according to their website involves:

- 18 and older with a disability
- 55 and older
- Resident of Anne Arundel County

Reservations must be made two days, and up to seven days, in advance. Trips can be scheduled for any purpose.

Operating and Performance Data

Anne Arundel County reports operating and performance data to MDOT MTA by individual route and service through the *Form 2a: Service Performance Summary*, and the following services collectively by funding program (Section 5307):

- AA-201
- AA-202
- Yellow
- Gold
- Crofton Service
- Call 'N Ride
- Brooklyn Park Connector
- Demand Response

ADA paratransit services are reported separately through Form 2a.

Tables 2-1 and 2-2 provide operating and performance data summary for Anne Arundel County Transit services for FY 2021 and FY 2022 as reported to MDOT MTA.

Table 2-1: Anne Arundel County Transit FY 2021 Operating and Performance Data

Operating/Performance Category	Large Urban (Section 5307)	ADA Paratransit
Total Passenger Trips	117,156	39,288
Total Service Miles	1,279,973	90,000
Total Service Hours	94,645	31,856
Total Operating Costs	\$4,537,745	\$1,911,360
Total Farebox Receipts	--	--
Cost/Hour	\$47.94	\$60.00
Cost/Mile	\$3.55	\$21.24
Cost/Trip	\$38.73	\$48.65
Passenger Trips/Mile	0.09	.44
Passenger Trips/Hour	1.24	1.23

Table 2-2: Anne Arundel County Transit FY 2022 Operating and Performance Data

Passenger Trends	Large Urban (Section 5307)	ADA Paratransit
Total Passenger Trips	165,502	39,288
Total Service Miles	1,331,294	90,000
Total Service Hours	112,949	31,856
Total Operating Costs	\$5,401,265	\$1,911,360
Total Farebox Receipts	--	--
Cost/Hour	\$47.82	\$60.00
Cost/Mile	\$4.06	\$21.24
Cost/Trip	\$32.64	\$48.65
Passenger Trips/Mile	0.12	.44
Passenger Trips/Hour	1.47	1.23

As indicated in the data, Anne Arundel County Transit experienced a rebound in overall ridership between FY 2021 and FY 2022, as impacts from the COVID-19 pandemic subsided. With an increase in ridership cost per trip and passenger trips per mile and hour improved between the two years, though cost per mile did increase in FY 2022 when compared to the previous year.

The review of initial data for FY 2023 indicates that ridership continues on an upswing, with all routes and services demonstrating an increase during the first quarter of FY 2023 when compared to FY 2022.

MDOT MTA Performance Measures and Evaluation

Transit services are typically evaluated for both efficiency (doing things right) and effectiveness (doing the right things):

- Efficiency is usually analyzed by operating cost per hour, mile, and passenger trip.
- Effectiveness, emphasized by passenger productivity, is usually analyzed by passenger trips per mile and hour. The most useful single measure is the passenger trips per hour, as it reflects usage concerning the amount of service provided. Generally speaking, the majority of transit operating costs are hourly (wages and benefits), so higher values of trips per hour reflect better use of resources.

The MDOT MTA established performance standards for the Locally Operated Transit Systems (LOTS) within the state to analyze and evaluate services by their productivity, efficiency, and effectiveness. Services are rated "successful," "acceptable," and "needs review" based on their performance in different operating measures. The MDOT MTA performance standards were developed according to previous industry research, industry experience, and peer reviews updated October 2019, and are provided in Appendix B.

The following operating measures form MDOT MTA performance evaluation process for the LOTS:

- Operating cost per hour
- Operating cost per mile
- Operating cost per passenger trip
- Farebox recovery (not applicable)
- Passenger trips per mile
- Passenger trips per hour

While as noted earlier Anne Arundel County Transit -- like most transit providers in Maryland and the rest of the United States -- was experiencing the impacts of the COVID-19 pandemic on transit capacity and demand during the FY 2022 timeframe, the use of these measures can help to provide an assessment of current services. The Suburban / Small Urban Fixed Route performance measures were used to evaluate the specific routes shown in Table 2-3 that fall into this category, with performance data shown in green if meeting or exceeding standards, and those not meeting performance measures in red.

Table 2-3: Anne Arundel County Transit FY 2022, Operating Data Analysis

Route	Operating Cost Per Hour	Operating Cost Per Mile	Operating Cost Per Passenger Trip	Passenger Trips Per Mile	Passenger Trips Per Hour
AA 201	\$45.00	\$2.67	\$11.11	0.24	4.05
AA 202	\$45.00	\$3.39	\$12.13	0.28	3.71
Yellow	\$45.00	\$3.64	\$22.01	0.17	2.04
Gold	\$45.00	\$2.49	\$121.20	0.02	0.37
Crofton Service	\$45.00	\$2.67	\$113.87	0.02	0.40
Brooklyn Park Connector	\$45.00	\$6.87	\$31.89	0.22	1.41

A review of this FY 2022 data indicates the following:

- Anne Arundel County Transit met the MDOT MTA performance measures for operating cost per hour, as the County reports costs based on contracted rate (discussed in the next section that provides details on the Anne Arundel County Transit budget).
- All routes except for the Brooklyn Park Connector met the MDOT MTA performance measures for operating cost per mile.
- With the impacts of the COVID-19 pandemic on transit capacity and demand, Anne Arundel County Transit has experienced lower ridership. As a result operating cost per passenger trip, passenger trips per mile, and passenger trips per hour are below performance measures for these categories. In particular the operating cost per trip were significantly above established measures for the Gold Routes and the Crofton service.

Not included in this assessment is the South County Call 'N Ride and North County Call 'N Ride services. This is a new service model that allows the general public to travel on-demand, and a combination of traditional metrics and a new class of performance measures for similar on-demand mobility services may be used in the future to assess these services.

Operating Budget

Anne Arundel County's proposed FY2023 operating budget that was submitted to MDOT MTA through the ATP process is shown in Table 2-4. This budget served as the basis for financial plan for the five-year TDP timeline that is provided in Chapter 6 of this plan

Table 2-4: Anne Arundel County Proposed FY2023 Operating Budget

Description	Total Program	Large Urban	ADA	SSTAP
Vehicle Operations Expenses				
Driver Salaries	\$5,825,000	\$3,800,000	\$2,025,000	\$-
Dispatcher Salaries	\$485,000	\$360,000	\$125,000	\$-
Fringe Benefits	\$750,000	\$550,000	\$200,000	\$-
Fuel and Oil	\$345,000	\$260,000	\$85,000	\$-
Vehicle Insurance	\$233,750	\$233,750	\$-	\$-
Vehicle Depreciation	\$185,000	\$-	\$185,000	\$-
Vehicle Lease	\$766,800	\$766,800	\$-	\$-
Operations Training	\$37,500	\$-	\$37,500	\$-
Subtotal Operations	\$8,628,050	\$5,970,550	\$2,657,500	\$-
Purchased Services	\$2,264,566	\$2,204,566	\$60,000	\$-
Maintenance Expenses				
Mechanics Salaries	\$965,550	\$765,550	\$200,000	\$-
Mechanics Aids Salaries	\$215,000	\$165,000	\$50,000	\$-
PM-Capital Expense	\$1,170,000	\$670,000	\$500,000	\$-
Tubes & Tires	\$141,500	\$81,500	\$60,000	\$-
Fringe Benefits	\$220,000	\$175,000	\$45,000	\$-
Materials & Supplies (parts)	\$375,000	\$195,000	\$180,000	\$-
Maintenance Training	\$45,000	\$-	\$45,000	\$-
Subtotal Maintenance	\$3,132,050	\$2,052,050	\$1,080,000	\$-
Administrative Expenses				
Administrator Salary	\$75,000	\$-	\$-	\$75,000
Fringe Benefits	\$13,500	\$-	\$-	\$13,500
Taxi Vouchers/Uber	\$245,996	\$-	\$-	\$245,996
Subtotal Administration	\$334,496	\$-	\$-	\$334,496
Total Expenses	\$14,359,162	\$10,227,166	\$3,797,500	\$334,496

Capital Budget

Anne Arundel County's FY 2023 capital project submitted to MDOT MTA included a request for five small cutaway buses and two medium buses. As demonstrated in Table 2-5, this request requires a 10 percent local funding match to secure federal and state funds. Additional information on capital needs are discussed in Chapter 6 of this TDP.

Table 2-5: Anne Arundel County Public Transportation's FY 2023 Capital Budget

Fleet of Vehicle Being Replaced	Type	Total FY23 Project Cost	PTP Fed/State	PTP Local
Small Cutaway	Small Cutaway	\$89,602	\$80,642	\$8,960
Small Cutaway	Small Cutaway	\$89,602	\$80,642	\$8,960
Small Cutaway	Small Cutaway	\$89,602	\$80,642	\$8,960
Small Cutaway	Small Cutaway	\$89,602	\$80,642	\$8,960
Small Cutaway	Small Cutaway	\$89,602	\$80,642	\$8,960
Medium Bus	Medium Bus	\$91,582	\$82,424	\$9,158
Medium Bus	Medium Bus	\$91,582	\$82,424	\$9,158
Total		\$631,174	\$568,058	\$63,116

SOURCE: ANNE ARUNDEL ANNUAL TRANSPORTATION PLAN FOR FISCAL YEAR 2023 (C-4)

Vehicle Fleet

Table 2-6 provides information on Anne Arundel’s current fleet, showing 45 active vehicles. This inventory served as the basis for the capital plan included in Chapter 6.



Table 2-6: Anne Arundel Active Vehicle Inventory

Agency Asset ID	Model Year	Make	Model	Vehicle Type	Seating Capacity		Fuel Type	Current Condition	Mileage	Useful Life Minimum Years/Miles		Earliest Possible Replacement Year
					Ambulatory	Wheelchair				Miles	Year	
172301	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	215,613	200,000	6	2019
172302	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	209,381	200,000	6	2019
172303	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	209,296	200,000	6	2019
172304	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	209,719	200,000	6	2019
172305	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	191,045	200,000	6	2019
172306	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	166,003	200,000	6	2019
172307	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	217,049	200,000	6	2019
172310	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	271,768	200,000	6	2019
172401	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	196,742	200,000	6	2021
172402	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	230,806	200,000	6	2021
172403	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	198,132	200,000	6	2021
172404	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	181,110	200,000	6	2021
172405	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	212,261	200,000	6	2021
172406	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	250,864	200,000	6	2021
172505	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	211,419	200,000	6	2021
172506	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	254,763	200,000	6	2021
172507	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	209,363	200,000	6	2021
172508	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	231,784	200,000	6	2021
172712	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	122,171	200,000	6	2024
172713	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	191,486	200,000	6	2024
172714	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	165,318	200,000	6	2024
172715	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	112,521	200,000	6	2024
172716	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	151,872	200,000	6	2024
172717	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	159,128	200,000	6	2024
172718	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	131,465	200,000	6	2024
172806	2018	FORD	E-450	Accessible Van	2	2	Gasoline	5	67,856	150,000	4	2023
172807	2018	FORD	E-450	Accessible Van	2	2	Gasoline	5	89,536	150,000	4	2023
172808	2018	FORD	E-450	Accessible Van	2	2	Gasoline	5	87,618	150,000	4	2023
172900	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	95,664	200,000	6	2025
172901	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	103,176	200,000	6	2025
172902	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	94,735	200,000	6	2025
172903	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	84,306	200,000	6	2025
172904	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	89,559	200,000	6	2025
172910	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	50,568	200,000	6	2027
172911	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	65,743	200,000	6	2027

Facilities

As noted earlier Anne Arundel County Transit staff are located into two locations. The administrative office is located at 2664 Riva Road in Annapolis, while operations and personnel staff are located at 7409 Baltimore Annapolis Boulevard in Glen Burnie in the County's complex. This is also primary location where vehicles are housed and maintenance is completed.



Facility Feasibility Study

There are plans to redevelop the area where the current operations and maintenance is housed in Glen Burnie, and therefore Anne Arundel County is moving forward with a study to build a permanent operations facility for the transit system. Several sites are under review, though currently no specific locations for this facility have been identified. Additional information on the feasibility study and potential sites for the new facility are provided in Chapter 6 of this TDP.

Parole Transportation Center

Anne Arundel County has plans to build a multi-modal public transportation center at Westfield Mall in Annapolis. The Parole Transportation Center Transit will be designed to provide access for buses serving the area, as well as employees of the mall and nearby businesses. Anne Arundel County notes that improvements are also planned to accommodate pedestrians, bicycle traffic and parking, and additional vehicle parking. The project will take place at the Southeast corner of the intersection of Bestgate Road and Generals Highway, on the Westfield Mall. Additional information on the feasibility study and potential sites for the new facility are provided in Chapter 6 of this TDP.

Technology

At the outset of the TDP process Anne Arundel County Transit was using Routematch software, however through the development of this plan the system has transitioned to Passio GO that provides an app for customers to see real-time bus locations, schedules, estimate arrival times, and current passenger load on the vehicle. All buses are equipped with complementary WiFi.

As noted earlier, the Office of Transportation is also in contract discussions with The Routing Company to provide app-based software to be used for the North and South County Call N' Ride services.

Pedestrian and Bicycle Access

Anne Arundel County's Office Of Transportation has created bicycle and pedestrian planning goals to create and maintain safe, user-friendly bicycle and pedestrian networks to encourage bicycling and walking as modes of transportation. The County website has an interactive tool that will show the user bicycle and walking routes from your origin to your destination, including bus stops. The website also shows an interactive tool that shows the locations of bicycle rack around the County.

Marketing

Transit services are marketed through a variety of efforts that include:

- A transit page on the Anne Arundel County website that depicts the overall system, provides route maps and schedules, and offers tips for using the system. The website is available at -- <https://www.aacounty.org/departments/transportation/transit>
- Outreach efforts include distribution of brochures via Senior Centers, public library system, shopping malls, doctor's offices and churches. Vehicle operators also have printed maps and outreach brochures for distribution as needed.
- In cooperation with the Office of Transportation the Anne Arundel County Department of Aging and Disabilities conducts public outreach presentations to older adults held at Senior Activity Centers and Nutrition Sites across the county. The Office also coordinated with the Department of Aging and Disabilities on the Taxi Voucher Program are made to the to assist the participant with the application and information.



Currently Anne Arundel County Transit is going through the process to wrap their buses with the "Move Anne Arundel" branding, pictured to the right, This effort will help to ensure a consistent brand for the system, as through the review of the current services and outreach efforts different names for the system appeared in marketing materials, on the website, or in route brochures.

Other Transportation Providers Serving Anne Arundel County

BWI Business Partnership – County Connector

The County Connector is a free daily shuttle service operated 365 days a year by the BWI Business Partnership. As shown in Figure 2-10, this service connects the BWI Light Rail Station with key locations in the area, including Arundel Mills. BWI Business Partnership contracts the service out through a procurement process, and Dream Management has been the provider and was selected again through a solicitation in April, 2022.

The County Connector operates from 5:30 a.m. to 11:15 p.m. Monday – Friday, 7:15 a.m. - 11:20 p.m. on Saturday, and 8:15 a.m. to 10:05 p.m. Sundays and holidays. Two vehicles are used in peak service, and one vehicle at other times of the day. The current schedule is shown in Figure 2-11. The April, 2022 solicitation for a vendor noted that 8,463 annual operating hours would be the maximum service level.

Ridership on the County Connector provided by the BWI Business Partnership showed that it peaked in FY 2020 when 100,939 passenger trips were provided. In FY 2022 the service provided 71,025 trips, an average of 194 daily trips. The decrease in ridership was attributed to the impacts of the COVID-19 pandemic, as well as improved service on the MDOT MTA LocalLink 75 route (discussed later in the MDOT section of this chapter).

FY 2022 ridership data by stop indicated that the vast majority of passenger trips are between the BWI Light Rail Station and Arundel Mills, as 47.5% of passenger boardings were at the Light Rail station and 45.1% were at the mall.

Table 2-7 provides a summary of ridership data between FY 2019 and FY 2022.

Figure 2-10: County Connector Service Map

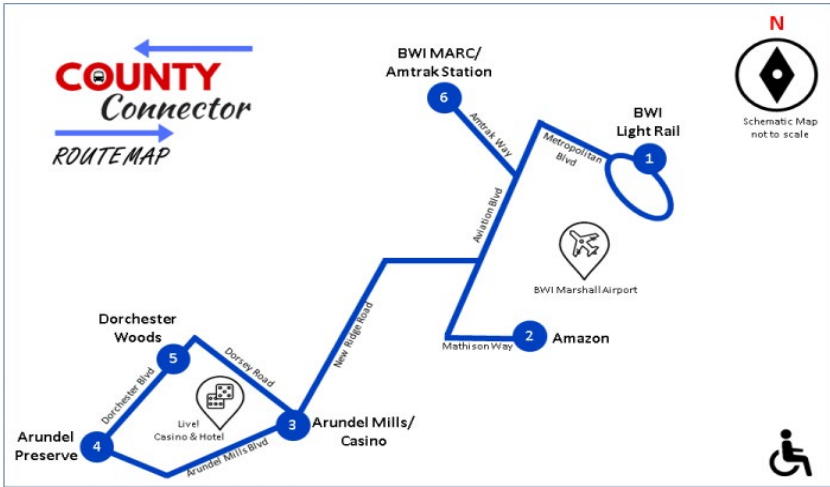


Figure 2-11: County Connector Schedule

NEW SCHEDULE APRIL 19, 2021

MONDAY- FRIDAY						SATURDAY						SUNDAY & HOLIDAYS					
BWI Light Rail	Mathison Way (Bldg H)	Arundel Mills/ Casino	Arundel Preserve	Dorchester Woods	BWI MARC/ Amtrak	BWI Light Rail	Mathison Way (Bldg H)	Arundel Mills/Casino	Arundel Preserve	Dorchester Woods	BWI MARC/ Amtrak	BWI Light Rail	Mathison Way (Bldg H)	Arundel Mills/ Casino	Arundel Preserve	Dorchester Woods	BWI MARC/ Amtrak
5:30 AM		5:30 AM	5:33 AM	5:34 AM	5:45 AM	7:15 AM		7:40 AM	7:43 AM	7:44 AM	7:55 AM	8:15 AM		8:40 AM	8:43 AM	8:44 AM	8:55 AM
5:55 AM		5:55 AM	5:58 AM	5:59 AM	6:10 AM	8:10 AM		8:35 AM	8:38 AM	8:39 AM	8:50 AM	9:10 AM		9:35 AM	9:38 AM	9:39 AM	9:50 AM
6:00 AM		6:25 AM	6:28 AM	6:29 AM	6:40 AM	9:05 AM		9:30 AM	9:33 AM	9:34 AM	9:45 AM	10:05 AM		10:30 AM	10:33 AM	10:34 AM	10:45 AM
6:25 AM		6:50 AM	6:53 AM	6:54 AM	7:05 AM	10:00 AM		10:25 AM	10:28 AM	10:29 AM	10:40 AM	11:00 AM		11:25 AM	11:28 AM	11:29 AM	11:40 AM
6:55 AM		7:20 AM	7:23 AM	7:24 AM	7:35 AM	10:55 AM		11:20 AM	11:23 AM	11:24 AM	11:35 AM	11:55 AM		12:20 PM	12:23 PM	12:24 PM	12:35 PM
7:20 AM		7:45 AM	7:48 AM	7:49 AM	8:00 AM	11:50 AM		12:15 PM	12:18 PM	12:19 PM	12:30 PM	12:50 PM		1:15 PM	1:18 PM	1:19 PM	1:30 PM
7:50 AM		8:15 AM	8:18 AM	8:19 AM	8:30 AM	12:45 PM		1:10 PM	1:13 PM	1:14 PM	1:25 PM	1:45 PM		2:05 PM	2:08 PM	2:09 PM	2:20 PM
8:15 AM		8:40 AM	8:43 AM	8:44 AM	8:55 AM	1:40 PM		2:05 PM	2:08 PM	2:09 PM	2:20 PM	2:35 PM	2:45 PM	2:55 PM			
8:45 AM						2:35 PM	2:45 PM	2:55 PM				3:10 PM	3:20 PM	3:30 PM			
9:10 AM		9:35 AM	9:38 AM	9:39 AM	9:50 AM	3:10 PM	3:20 PM	3:30 PM				3:45 PM		4:10 PM	4:13 PM	4:14 PM	4:25 PM
10:05 AM		10:30 AM	10:33 AM	10:34 AM	10:45 AM	3:45 PM		4:10 PM	4:13 PM	4:14 PM	4:25 PM	4:40 PM		5:05 PM	5:08 PM	5:09 PM	5:20 PM
11:00 AM		11:25 AM	11:28 AM	11:29 AM	11:40 AM	4:40 PM		5:05 PM	5:08 PM	5:09 PM	5:20 PM	5:35 PM		6:00 PM	6:03 PM	6:04 PM	6:15 PM
11:55 AM		12:20 PM	12:23 PM	12:24 PM	12:35 PM	5:35 PM		6:00 PM	6:03 PM	6:04 PM	6:15 PM	6:30 PM		6:55 PM	6:58 PM	6:59 PM	7:10 PM
12:50 PM		1:15 PM	1:18 PM	1:19 PM	1:30 PM	6:30 PM		6:55 PM	6:58 PM	6:59 PM	7:10 PM	7:25 PM		7:50 PM			
1:45 PM		2:05 PM	2:08 PM	2:09 PM	2:20 PM	7:25 PM		7:50 PM				8:05 PM		8:30 PM			
		2:35 PM	2:38 PM	2:39 PM	2:50 PM	8:05 PM		8:30 PM				8:45 PM		9:10 PM			
2:35 PM	2:45 PM	3:00 PM	3:03 PM	3:04 PM	3:15 PM	8:45 PM		9:10 PM				9:25 PM		9:50 PM			
3:05 PM	3:15 PM	3:25 PM				9:25 PM		9:50 PM				10:05 PM					
3:30 PM		3:55 PM	3:58 PM	3:59 PM	4:10 PM	10:05 PM		10:30 PM									
3:40 PM		4:05 PM	4:08 PM	4:09 PM	4:20 PM	10:45 PM		11:05 PM									
4:25 PM		4:50 PM	4:53 PM	4:54 PM	5:05 PM	11:20 PM											
4:35 PM		5:00 PM	5:03 PM	5:04 PM	5:15 PM												
5:20 PM		5:45 PM	5:48 PM	5:49 PM	6:00 PM												
5:30 PM		5:55 PM	5:58 PM	5:59 PM	6:10 PM												
6:15 PM		6:40 PM	6:43 PM	6:44 PM	6:55 PM												
6:25 PM		6:50 PM	6:53 PM	6:54 PM	7:05 PM												
7:10 PM																	
7:20 PM		7:45 PM															
8:00 PM		8:25 PM															
8:40 PM		9:05 PM															
9:20 PM		9:45 PM															
10:00 PM		10:25 PM															
10:40 PM		11:00 PM															
11:15 PM																	

READING THE SCHEDULE & RIDING THE SHUTTLE

1. Find the schedule for the day of the week you are traveling.
2. Find your closest boarding stop at the top of the schedule. Order of destinations are always read from **LEFT to RIGHT**.
3. Read down the column of the time you want to board. Timepoints are **ESTIMATED DEPARTURE TIMES, depending on optimal road and traffic conditions.**
4. Be at your stop **5-10 minutes early** so we don't miss you!

Source: BWI Business Partnership Website

Table 2-7: FY19 County Connector Ridership Data

Funding Year	Total Ridership
2019	89,338
2020	100,939
2021	59,111
2022	71,025

SOURCE: BWI BUSINESS PARTNERSHIP

The County Connector service is funded through the Local Development Council (LDC) that serves in an advisory capacity to Anne Arundel County with the expenditure of local impact grant funds through the Maryland Live! Casino located at Arundel Mills. LDC's Community Grants are derived from these revenues, and support community and nonprofit organizations located generally within a three mile radius of MD Live! BWI Business Partnership applies annually for funds through this program to operate the County Connector. For FY 2023 the BWI Business Partnership requested: \$741,563, and the LDC recommended funding for this same amount.

Currently the County Connector uses DoubleMap technology to provide customers with real-time information on current services. However, the BWI Business Partnership is currently transitioning to Passio Go software that will provide this information.

Annapolis Transit

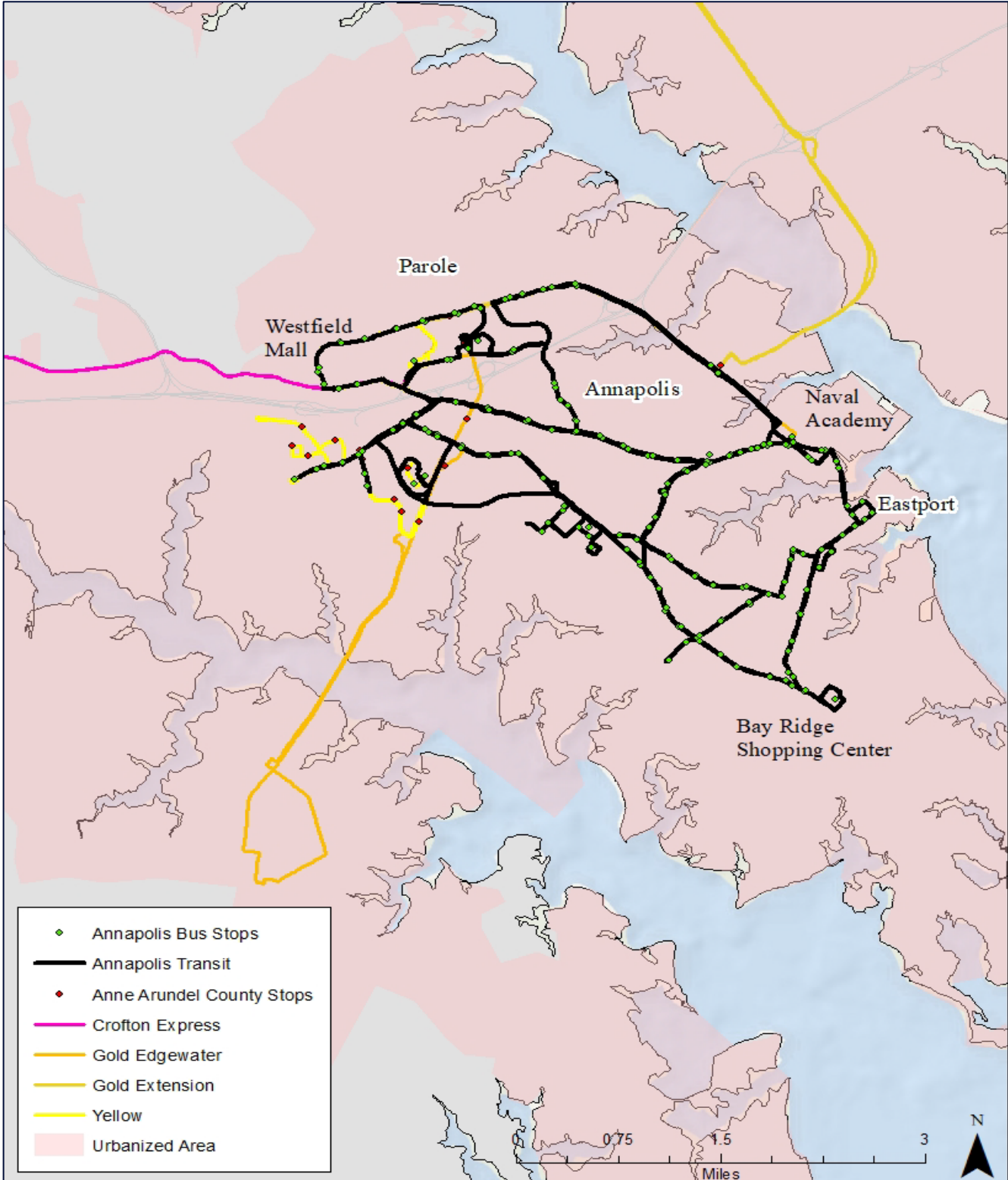
Annapolis Transit is a division of City of Annapolis government that provides public transportation services, manages city owned parking garages and residential parking programs, enforces on-street parking, licenses, inspections and regulation of taxicabs, and participates on regional, state and federal levels to develop plans and programs to improve local and regional transportation. The mission of the Annapolis Transportation Department is to provide the highest possible level of reliable, safe, interconnected, customer-focused, affordable, accessible, and efficient public transportation throughout the Annapolis area to enhance quality of life, support the environment and economic development.

Annapolis Transit provides public transportation services through regular fixed-routes, shuttle and ADA complementary paratransit services. All transit vehicles are wheelchair accessible. Individual portable oxygen tanks are acceptable on all transit vehicles. The Annapolis Transit service area is approximately 23 square miles including the City of Annapolis and the adjacent Anne Arundel County areas. The Annapolis Transit Routes include:

- Red Route (Westfield Mall to Eastport Shopping Center via Admiral Drive)
- Purple Route – South (Westfield Mall to Eastport Shopping Center via Annapolis Towne Center)
- Purple Route – North (Westfield Mall to Eastport Shopping Center via Annapolis Towne Center)
- Brown Route (Westfield Mall to Eastport Shopping Center via Forest Drive)
- Orange Route (Downtown Annapolis to Forest Drive via Spa Road)
- Green Route (Westfield Mall to Eastport Drive via West Street)

Figure 2-12 depicts the Annapolis Transit routes in relation to the Anne Arundel Transit routes.

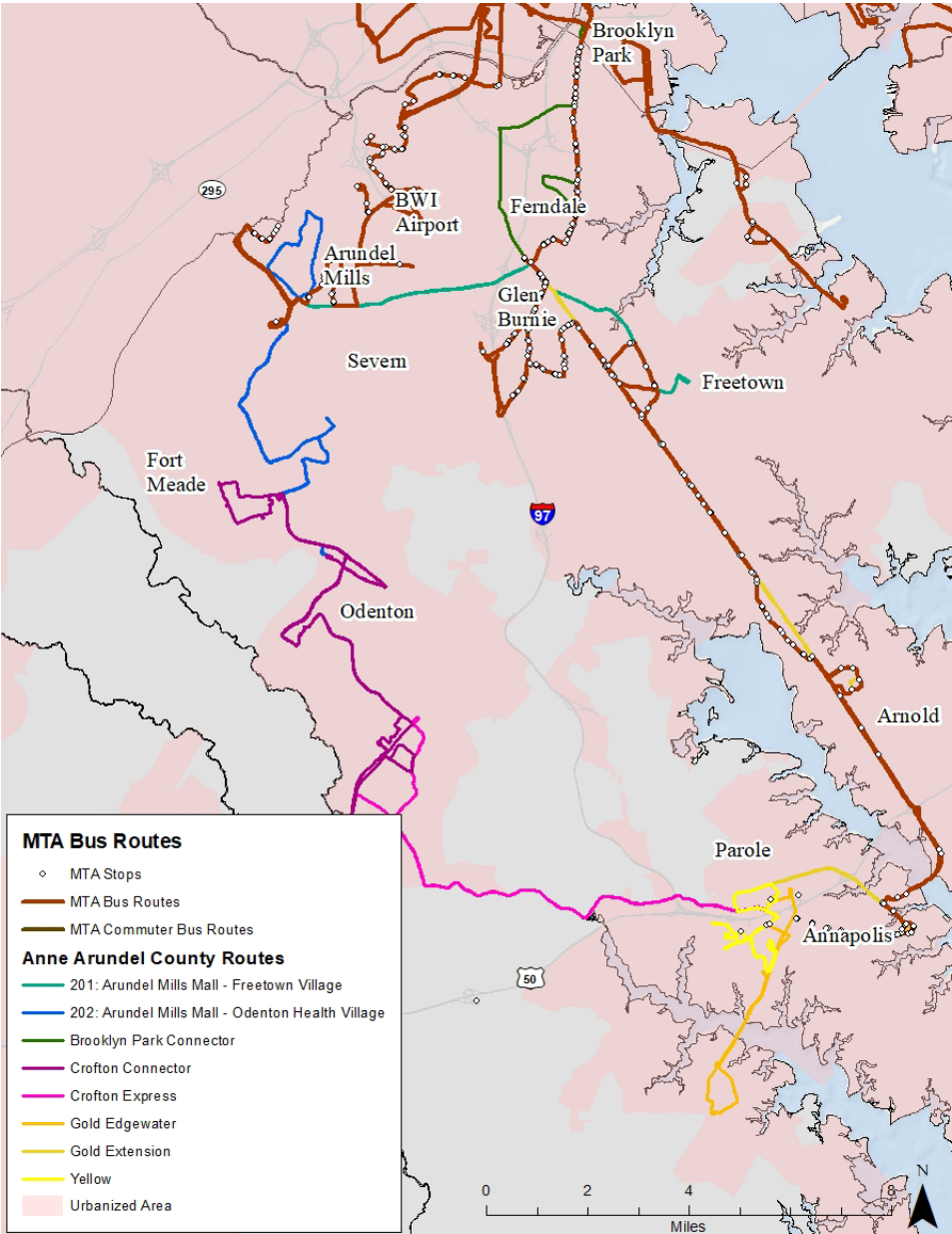
Figure 2-12: Annapolis Transit Services in Anne Arundel County



Maryland Transit Administration (MDOT MTA)

MDOT MTA is a division of the Maryland Department of Transportation and operates one of the largest multi-modal transit systems in the nation. The MDOT MTA service network is comprised of Local Bus, Metro Subway, Light Rail, MARC Train, Commuter Bus, Mobility Paratransit, and Call-A-Ride subsidized taxi and sedan service. Figure 2-13 displays the different MDOT MTA commuter bus and light rail services that provide service within Anne Arundel County.

Figure 2-13: MDOT MTA Services in Anne Arundel County



Light Rail

MDOT MTA's Baltimore Light RailLink is a north-south connector that connects Baltimore's outlying suburbs to the downtown core, with some stops in Anne Arundel County. Seven light rail stations are located in Anne Arundel County. These stations are shown in Table 2-8.

The Light Rail system operates from 4:00 a.m. to 1:00 a.m. on weekdays, 4:30 a.m. to 1:00 a.m. Saturdays, and 10:00 a.m. to 9:30 p.m. Sundays. Trains operate every 15 minutes and 30 minutes on branches.

Table 2-8: Anne Arundel County Light Rail Stations

Anne Arundel County Light Rail Stations		
Name	Address	Parking Spaces
Nursery Road	6825 Baltimore Annapolis Blvd, Linthicum Heights	37
North Linthicum	436S N Camp Meade Rd, Linthicum Heights	NA
Linthicum	595 Camp Meade Rd, Linthicum Heights	NA
BWI Business District	678 Elkridge Landing Rd, Linthicum	3,187
BWI Airport	7050 Friendship Rd, Baltimore	3,187
Ferndale	10 Broadview Blvd, Glen Burnie	NA
Glen Burnie	7378 Baltimore-Annapolis Rd, Glen Burnie	795

Commuter Bus

MDOT MTA contracts for the operation of some 37 commuter bus routes designed to transport commuters to jobs in Baltimore, Washington, D.C., and other major employment destinations in Anne Arundel, Montgomery, and Prince George's Counties. The eight commuter bus routes that make stops in Anne Arundel County are:

- Route 201: Gaithersburg – BWI Business District
- Route 210: Kent Island – Annapolis/Baltimore
- Route 215: Baltimore – Annapolis
- Route 220: Annapolis – Washington, D.C.
- Route 230: Severna Park & Annapolis – Washington, D.C.
- Route 240: Kent Island – Washington, D.C.
- Route 250: Kent Island & Davidsonville – Washington, D.C.
- Route 260: Severna Park & Davidsonville – Washington, D.C.

One-way fares for these Commuter Bus routes are \$6.00 general public. Fares are a dollar off for seniors and people with disabilities.

MARC Train

MARC Train is a commuter rail system whose service areas span from Perryville, MD to the east, Martinsburg, WV to the west, and Washington, D.C., to the south. One line travels through Anne Arundel County, which operates from Penn Station to Washington, DC, stopping at BWI Airport.

The MARC Penn Line operates weekdays from 4:45 a.m. to 11:55 p.m., providing bi-directional service between Washington, DC and Perryville. MARC fares vary by distance traveled. Seniors and people with disabilities ride for half fare.

MobilityLink

MobilityLink is MDOT MTA's paratransit service for people who, because of a disability, are functionally unable to use MDOT MTA's Local Bus, Metro Subway, or Light Rail service. To use this service, individuals must go through a certification process to determine to what extent (if any) the individual would be able to ride fixed route service. Eligibility can be conditional if the individual is able to use fixed route service for some of their trips.

To meet ADA requirements Mobility operates during the same days and hours as the fixed route services. The geographic service area is within $\frac{3}{4}$ mile of any Local Bus route in Baltimore City and Anne Arundel and Baltimore counties, as well within $\frac{3}{4}$ of a mile radius of an MDOT MTA Light Rail or Metro Subway station. Reservations are accepted during normal business hours seven days a week.

The one-way fare is \$2.10 for eligible riders and their guests. A Personal Care Attendant (PCA) traveling with an eligible individual rides for free with the individual. A maximum of two children under the age of six may ride free of charge; people over six pay the adult fare of \$2.10.

Regional Transportation Agency of Central Maryland (RTA)

The Regional Transit Agency of Central Maryland (RTA), with operational facilities and offices located in Savage, provides fixed route and paratransit services in Central Maryland. As shown in Figure 2-14 this includes two routes that serve portions of Anne Arundel County. Table 2-9 provides ridership data on these two routes.

Along with Howard County, Prince George's County, and the City of Laurel, Anne Arundel County is a member of the Central Maryland Transportation and Mobility Consortium (CMTMC). A Memorandum of Understanding (MOU) between the members in their common goal to maintain a coordinated transit system for Central Maryland through the RTA. The CMTMC provides policy and direction for the services operated by the RTA and it provides oversight of the third-party contractor that provides these services. A copy of this agreement for FY 2022-FY 2023 is provided in Appendix C, and as shown in the MOU it is projected that for FY 2023 there will be 11,638 hours of service in Anne Arundel County at fully loaded rate of \$115.92 per hour.

Figure 2-14: RTA Services in Anne Arundel County

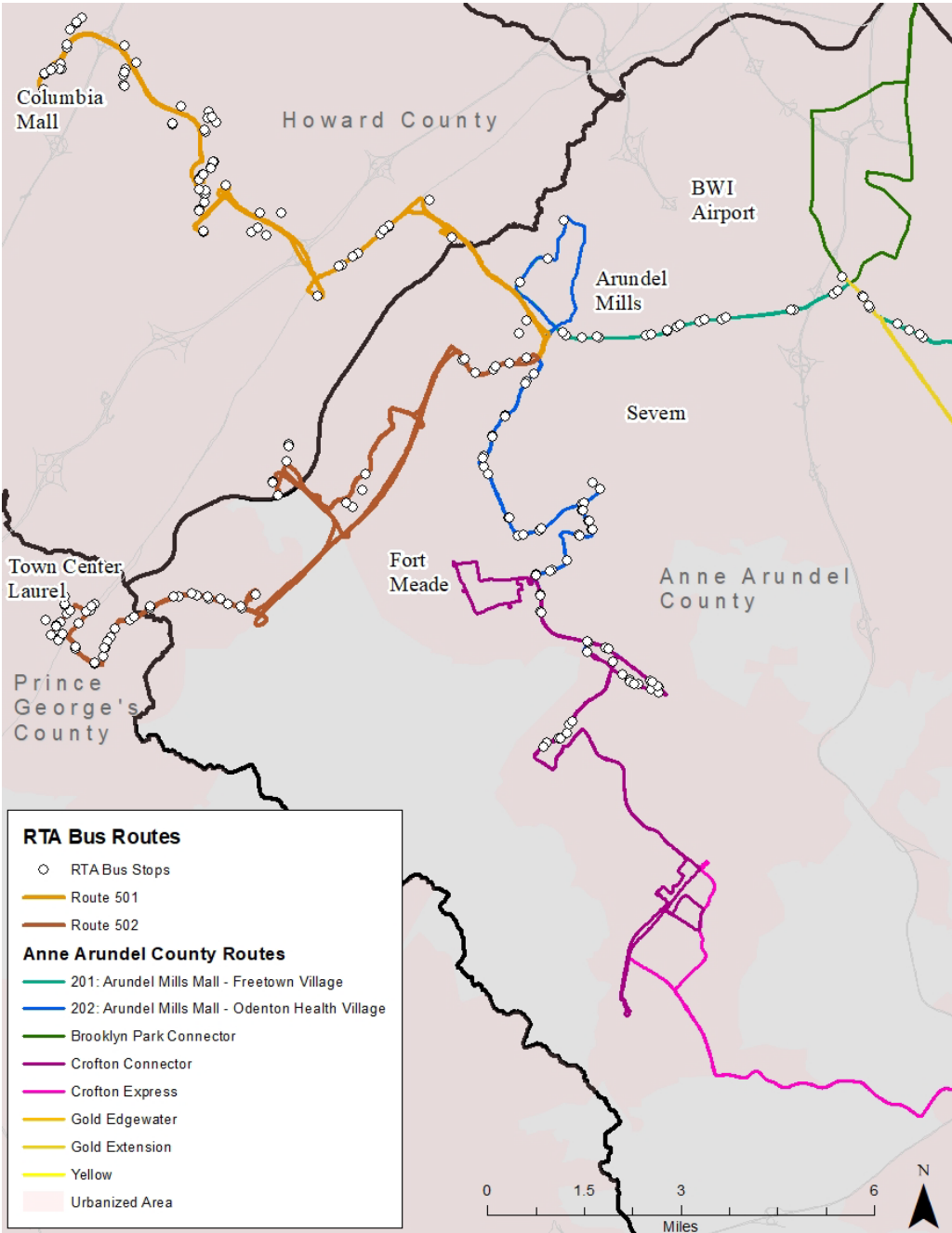


Table 2-9: FY 21 RTA Ridership Data

Route	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Total 2021
501	18,966	23,751	17,729	19,065	79,511
502	14,300	15,581	12,947	13,702	56,530

Anne Arundel County Department of Aging and Disabilities

The Statewide Special Transportation Assistance Program (SSTAP) is a State funded program to provide general purpose transportation to elderly individuals and individuals with disabilities. These funds are annually apportioned to the counties in Maryland based on a formula. Funds can be used for operating and capital with a local share required, a minimum of 25% percent for the net operating deficit and 5% for capital projects.

In Anne Arundel County SSTAP funds are administered by the Department of Aging and Disabilities, that works closely with the Office of Transportation to ensure program efficiency. In addition to providing coupons for a taxi voucher program to Anne Arundel County residents with disabilities over 18 years of age and residents over 55 years of age, the Department of Aging and Disabilities also provides resource navigation for an array of service needs through Options Counseling. Each book costs \$5.00 and is worth a value of \$10.00 and each approved resident is entitled to purchase up to 15 books per month.

Through discussions with the department, they noted a potential rebranding of the existing taxi voucher program. More information on these efforts will be included in updated versions of his document.

Nonprofit and Human Service Transportation Providers

Angel Wheels to Healing

Angel Wheels to Healing is a non-profit organization that provides non-emergency medical transportation to low-income patients and is a program of Mercy Medical Angels. They provide gas cards, reimbursement for commercial ground transportation and utilize volunteer drivers to assist with medical transportation.

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.

Athelas Institute, Inc.

The Athelas Institute, Inc. provides residential, employment, and educational services to adults with cognitive disabilities. They serve parts of Anne Arundel County. They provide door-to-door transportation to day programs, 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 development 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 a location that serves Anne Arundel County. Care Connections helps identify and obtain transportation options for clients, reimburses staff for use of personal vehicles, and occasionally uses agency-owned vehicles to transport clients.

Humanim

Humanim provides employment, behavioral health, psychosocial and medical rehabilitation services to older adults, people with disabilities, people with low incomes, and veterans.

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.

Omni House - Sheppard Pratt

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 and was recently acquired by Sheppard Pratt. They provide their clients with rides to their day program, medical, and community activities in Anne Arundel County.

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. Partners in Care has a location in Anne Arundel County with Ride Partners, which utilizes volunteers that will ensure safe transportation to/from destinations, such as medical/dental appointments, shopping, etc. Volunteers will 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 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. They provide transportation to employment, vocational training, community activities in Anne Arundel County.

Woods Adult Day Services

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

Taxicab Companies

- Annapolis City Taxi Service serves Annapolis, Arnold, Crofton, Deale, Edgewater, and Severna Park
- AA Cab Connection serves all of Anne Arundel County
- ABC Green Taxi Cab Service operates in Annapolis, Arnold, Cape St. Claire, and the surrounding areas
- Annapolis Bay Area Taxi Company serves all of Anne Arundel County
- Annapolis Yellow Cab Company serves Annapolis, Severna Park, and Edgewater
- Checker Cab Company of AA County operates throughout all of Anne Arundel County
- Glen Burnie Taxi Service operates in Glen Burnie, Pasadena, Millersville, Gambrills, Curtis Bay, Linthicum Heights, Ferndale and Severn
- Pasadena Passenger Service operates in Pasadena
- Yellow Cab of AA County serves all of Anne Arundel County

Ridehailing

Ridesharing or ridesourcing services are provided by Transportation Network Companies (TNCs) such as Uber and Lyft. These services use smartphone apps that connect passengers with drivers who typically use their personal, non-commercial vehicle. Uber and Lyft services are available throughout Anne Arundel County.

Ridesharing: Carpools, Vanpools

Anne Arundel County utilizes carpooling through their website and mobile app with Commuter Connections. Commuter Connections is an app that will help identify potential carpool partners that live near your home, that also work near your place of business, who have similar schedules. Commuter Connections also utilizes a vanpool system with pool rewards that offers up to a \$200 monthly subsidy to newly formed van or carpools. Anne Arundel County Office of Transportation is also the recipient of the Ridesharing/Commuter Assistance Program grant. The Commuter Crew coordinates the program to reduce traffic congestion and improve the air quality. The CMAQ Rideshare funds are administered by MDOT MTA.

Other Transportation Services

National Security Agency (NSA)

NSA provides the following shuttle services for their employees:

- The Friendship Annex (FANX) North/BWI MARC/Light Rail Shuttle operates between 7:00 a.m. and 6:00 p.m., with service every 10-20 minutes.
- The Odenton MARC Shuttle connects that station with NSA headquarters, with services timed with the MARC train schedules. Shuttle serves both the Penn and Brunswick lines.
- Internal shuttles connect locations within the NSA campus, with service operating every ten minutes.
- NSA also provides a bike share program.

Plans and work are underway for a new Visitor Center that will replace a dated facility and expand capacity and accommodate future growth. NSA notes that the new Visitor Center will provide the opportunity for an external location that could be used for transit coordination.

Review of Previous and Current Plans and Studies

The following section reviews recent plans and current initiatives addressing public transportation in Anne Arundel County. The reviewed plans include those specific to transportation, as well as those covering broader issues and planning efforts.

2018 Central Maryland Transit Development Plan

In the Central Maryland Transit Development Plan (TDP), the partners included Anne Arundel County, Howard County, Northern Prince George's County, City of Laurel, Regional Transportation Agency of Central Maryland (RTA), and Maryland Transit Administration. The Plan consisted of the demographics and land use of the study area, public and stakeholder input, a review of existing services, service alternatives, a transit plan, and future transit development.

The key takeaways included connecting residents to jobs and education, improving service reliability, increasing frequency of services, expanding weekend service, developing new local services and cross-county routes that connect the activity centers. In Anne Arundel, the strategies included expanding the frequency and span of services, developing Call N' Rides, and developing new cross-county routes, which were planned to be handled in five phases. The TDP also lays out the capital requirements for Anne Arundel County, which included a cost of \$2,130,203 for fleet replacement.

Connecting Our Future: A Regional Transit Plan for Central Maryland

The MDOT MTA created the Central Maryland Regional Transit Plan, which presents goals, objectives, and initiatives to enhance transit service, support the economy, and reduce impacts to the environment for the region by 2045. The main six objectives in the plan includes providing faster, more reliable service, improving the customer experience, growing the ridership, being more equitable, increasing access to jobs and opportunities, and preparing for the future. The plan utilized input from the public through pop-ups, presentations, regional open houses, commission meetings, inter-agency meetings, and online surveys. The overall themes from the public were to increase efficiency and reliability of transit services, improve access to jobs and schools, address personal safety and security concerns, maintain transit vehicles, stations, and stops, make it easier to transfer between different modes and systems, focus on current riders and people who are dependent on transit, reduce emissions, and explore additional funding sources.

Some of the deliverables for customers include:

- Improving on-time performance
- Increasing service on the most congested bus routes
- Rail and bus fleet replacement, including the advancement of a zero emissions bus program
- One fare platform for all transit providers in the region
- Full ADA accessibility of all bus stops and rail stations

Specific recommendations for Anne Arundel County included:

- Improvements to fixed-route transit services, including peak, off-peak and weekend services in:
 - Arundel Mills
 - Brooklyn Park
 - Crofton
 - Fort Meade/Odenton (except Weekend service)
 - Glen Burnie
 - Maryland City
 - Parole (Annapolis Mall), and
 - Severn
- New Local or Express Bus Services:
 - Between Arundel Mills and Fort Meade,
 - Between Arundel Mills and Ellicott City,
 - Crofton and points north, including Glen Burnie and Baltimore City,
 - Local bus service in the Fort Meade/Odenton area, including services to Laurel, Crofton, Arundel Mills, and internal circulation need on the Fort Meade Campus,
 - Local bus service for circulation in the Glen Burnie/Cromwell area
- Shared Mobility services were recommended for:
 - Fort Meade/Odenton,
 - Glen Burnie/Cromwell,
 - Parole, and
 - Pasadena
- A Small Area Plan was also recommended for the Fort Meade/Odenton area.

The Plan identified transit hubs in Anne Arundel County at Arundel Mills, BWI Airport, Glen Burnie/Cromwell and Parole (Annapolis Mall). Transit-oriented development was recommended for the BWI Business District, the BWI Rail Station area, Glen Burnie/Cromwell and Odenton.

Move Anne Arundel! County Transportation Master Plan

In December 2019, the Move Anne Arundel! was created as the county's first Transportation Functional Master Plan, which was recommended in the 2009 General Development Plan. The overall goals for the Move Anne Arundel Plan include creating:

- A safe transportation system,
- A multimodal transportation system with practical and reliable transportation choices and connections
- A resilient transportation system that protects the environment
- A well maintained transportation system

Currently, Anne Arundel is served by five transit operators, including MDOT MTA, Annapolis Transit, Regional Transportation Agency of Central Maryland, Anne Arundel County Office of Transportation, and Washington Metropolitan Area Transit Authority. The plan discusses traffic congestion and travel times throughout Anne Arundel County. The five priority investments of the plan include:

- Making communities more walkable
- Building a connected bicycle network
- Advancing new models of transit
- Upgrading county corridors and strengthening community cores
- Improving regional corridors and making commutes more reliable

Zero Emissions Bus Transition Plan 2023-2033

In March 2022, Anne Arundel County drafted the Zero Emissions Bus (ZEB) Transition Plan that provides strategic goals to transition their fleet to Zero Emission Hybrid buses to achieve emissions reductions over the next decade and to increase the resiliency of Anne Arundel County's community to the effects of climate change. This plan was recognized by FTA, and is included on their website as part of their environmental programs.

Anne Arundel County has committed to purchasing only zero-emission buses and hybrid-electric buses (HEBs) from 2023 onward. In 2023, Anne Arundel County will begin purchasing Battery Electric Buses (BEBs) to achieve the duty cycles of longer routes and blocks with larger energy demands than the

current battery electric buses that are available in the current market. Anne Arundel County is committed to achieving a blended fleet by 2033 with the combination of BEBs and HEBs. The plans also lay out the necessary facilities and infrastructure modifications required, including charging stations.

In a related area, a July 2020 memorandum the Anne Arundel County Executive detailed policy changes that will enable the county to immediately reduce greenhouse gas emissions while responsibly transitioning its fleet to electric vehicles over the next two decades.

Baltimore Metropolitan Council's Bus Stop Assessment for the Locally Operated Transit Systems (LOTS)

In 2022, the Baltimore Metropolitan Council (BMC) completed a bus stop assessment study for all Baltimore area LOTS, including Anne Arundel County. The goal of the study was to strengthen the region's transit network, identifying where bus stop improvements would provide the greatest benefits, and develop a holistic approach to improving bus stops within the BMC region.

Study objectives included:

- Develop a thorough inventory of all bus stops maintained and operated by the LOTS within the region.
- Identify the specific locations of each bus stop and existing amenities.
- Determine American with Disabilities Act (ADA) compliance for each of the bus stops.
- Evaluate multimodal connections and existing passenger amenities at each bus stop.
- Prepare recommendations and cost estimates for bus stop improvements.

The study located 256 active bus stops in Anne Arundel County; however, Anne Arundel County bus stop signs were only found at 113 of the stops. Since the completion of the study, the county has undergone a bus stop signage redesign effort where new signs have been installed throughout the service area. Based on the study data, 70% of bus stops are along a sidewalk but only 33% of those stops have an ADA compliant landing pad. Whereas shelters and seating are provided at 1 out of 5 stops. A summary of the Anne Arundel County bus stop data is provided in Table 2-10.

Table 2-10: Anne Arundel County Bus Stop Statistics from the Bus Stop Assessment

ADA Landing Pad	Sidewalk Connection	Shelter	Seating	Lighting	Route/Schedule Information	Waste Bin
33%	70%	18%	20%	52%	7%	14%

The study's recommendations include developing an improvement hierarchy for bus stops, categorizing stops as transit centers, enhanced service stops, and basic bus stops. This hierarchy category would set the standard for the level of passenger amenities at the stop. All bus stops should include a sign, ADA landing pad, and sidewalk connection. Amenities such as seating, information cases, and lighting would be determined based on the stop classification and specific sight needs (e.g., senior center). The study also recommends setting an average daily boardings standard for installing shelters at bus stops. Cost estimates are provided for stop improvements and a GIS dashboard was created to assist with developing cost estimates for improvement projects.

Transit Oriented Development (TOD) Studies

Anne Arundel County has conducted recent TOD studies that assess opportunities to integrate public transportation options and relatively dense mixed-use development. The following section provides a synopsis from the TOD studies in regard to potential locations in the county.

Savage Station MARC

The study area for the Savage Station MARC TOD study includes the Anne Arundel County General Development Plan (GDP) Transit-Oriented District (TOD), which is largely undeveloped. The plan discusses the overview of land use within the study area, as well as the open space, natural features, and trails. One finding included that the Deep Run Creek flows through the study area which means development is limited due to floodplain and wetlands. Another major finding was the lack of connected streets, which creates difficulty for vehicles and drivers.

Parole Westfield Mall

The study area for the Parole Westfield Mall is focused on the area surrounding the Westfield Mall Bus Transit Center. Currently, the only developed properties within close proximity to the station include the BWI MARC parking garages and the Maryland Aviation Administration building. The study found that the large area that is controlled by Westfield Mall provides the opportunity to create a new community with a mixed used neighborhood center.

Marley Station Light Rail

The Marley Station Light Rail study area is focused on a half mile radius from the center of the existing mall. Within the half mile radius there are currently single-family detached homes, a shopping center, and an environmental corridor. The adjacent land is developed in a traditional suburban neighborhood pattern, which created dead-ends, cul-de-sacs, and turnarounds. At the time of the study, Marley Station did not have rail transportation, but was positioned for a future extension of the Light RailLink. There are two buses that stop near or in the study area, including Route 69 and Route 70.

Linthicum Station Light Rail

The study area for the Linthicum Light Rail Station project is focused on the half mile radius from the light rail station. The area within a ¼ mile of the station is currently residential with a small conglomerate of retail. The Light RailLink runs through the study area from Hunt Valley to Cromwell/Glen-Burnie. Currently, there are no bus stops in the study area, but there is a shuttle running from the BWI Airport to the Linthicum Station.

Dorsey Station MARC

The Dorsey MARC Station Study Area is focused on the Anne Arundel County General Development Plan Transit-Oriented District. Currently, the street network surrounding Dorsey Station consist of major roads that connect adjacent properties. However, there is a lack of connectivity for vehicles and pedestrians. Dorsey station is served by the MARC Camden line, which runs from the Camden Station in Baltimore to Union Station in Washington, DC. On the Howard side, the station is currently only served by bus. Specifically, the 501 Silver Bus, which runs from Columbia, MD to the BWI Airport Terminal.

Cromwell – Glen Burnie

The Cromwell Light Rail Station Study Area focuses on a half mile radius from the light rail station. However, the area within a ¼ mile from the station consists of parking lots and large commercial and industrial buildings. The Cromwell Light Station is the last stop on the Light Rail line, as well as the location of the Light Rail Maintenance Facility. The rest of the study area consists of Single-Family

Detached Residential homes. Cromwell Light Rail station is located along the Light RailLink line. The station is also serviced by the AA-201, 215, 70, and 69 bus routes.

BWI MARC

The study area (1/2 mile radius) is largely undeveloped land, other than the BWI MARC Parking Garage. The MARC station is currently accessed via Amtrak Way, which dead ends at the garage. The study area is served by the MARC Penn Line, which runs between Baltimore and Washington, DC. The BWI MARC station serves as both a park-and-ride for commuters and airport parking for traveling passengers. Currently, a shuttle service runs between the station and the BWI Marshall Airport. The station is also served by the MTA Route 201 from BWI Marshall Airport to the Gaithersburg Park and Ride.

Superconducting Magnetic Levitation (SCMAGLEV) System -- Draft Environmental Impact Statement and Draft Section 4(f) Evaluation

In January of 2021, the USDOT prepared a draft environmental impact statement to assess the potential environmental impacts from implementing the proposed Superconducting Magnetic Levitation (SCMAGLEV) system between Baltimore, MD and Washington, DC. The SCMAGLEV project is a high-speed rail technology that runs on a grade-separated, fixed guideway powered by magnetic forces at speeds over 300 miles per hour. The project includes two terminal stations (Washington, DC and Baltimore, MD) and one intermediate station at the BWI Airport. The system requires additional facilities to operate, including one trainset maintenance facility (TMF), two maintenance of way (MOW) facilities, and other various smaller ancillary facilities. The project study area is roughly bound by I-95 on the west and includes portions of Baltimore City, Baltimore County, Howard County, Anne Arundel County, Prince George's County and Washington, DC.

The SCMAGLEV project affected environment for neighborhood and community facilities is defined as the area within a 500-foot buffer around the proposed Build Alternatives alignments and within a quarter-mile buffer around stations and trainset maintenance facilities locations. Within the study area, the minority populations comprise 69.6 percent of the total population and the low-income populations make up 12.7 percent.

DC to Baltimore Loop Project

The Washington D.C. to Baltimore Loop Project was proposed and funded by The Boring Company. The Loop Project consists of the construction of a set of parallel, twin tunnels that transport passengers in high-speed, autonomous, battery-powered electric vehicles. The project has proposed tunnels that would run in parallel beneath the public right-of-way of US 50/New York Avenue Northwest, the Baltimore-Washington Parkway, MD 295, and Russell Street for approximately 35.3 miles.

MD 32 Enhanced Bus Feasibility Study

With a grant from the Baltimore Regional Transportation Board's Unified Planning Work Program, the Anne Arundel County Office of Transportation was tasked with leading a study to determine the feasibility of bus rapid transit or enhanced bus service in the MD 32 corridor between Annapolis and Clarksville. Enhanced bus services include express bus, commuter bus, and bus rapid transit. A key takeaway regarding existing transit services in the area is that the most transit service operates between BWI Airport and BWI MARC Station and between Columbia Mall and East Columbia/Gateway. The major trip generators and targeted growth areas include Parole Town Center, Odenton Town Center, BWI Airport/Business District, Arundel Mills, Fort Meade, National Business Park, US 1 Corridor, Columbia Gateway, and Downtown Columbia. The study laid out four alternative segments, which included Columbia to US 1, US 1 to Odenton, Odenton to MD 3, and MD 3 to Annapolis/Parole. The study also discusses the benefits, drawbacks, and estimated travel times for each segment.

Anne Arundel County Transportation Center

In January 2020, Whitman Requardt Associates (WRA) and KFH Group completed a feasibility report for the Baltimore Metropolitan Council (BMC). It identified the Westfield Annapolis Mall site as a preferred location for the Parole Transportation Center. Currently, the mall is serviced by five pass throughs and five terminal bus routes. The proposed center would serve Annapolis Transit, Anne Arundel County Transit, MTA Commuter Bus and intercity bus services, as seen as page 2-30.

Parole Transportation Center Schematic Design Report

Following the selection of the Westfield Annapolis Mall site for the proposed Parole Transportation Center the County initiated design studies for that site. Under contract to Anne Arundel County, KCI Technologies, Inc. evaluated three options for a proposed site layout and building architecture. KCI met with various stakeholders within the county government to obtain feedback regarding the layout, architecture, service level, and other factors. The Schematic Design included three distinct design options and all existing features, plans, preliminary cross sections, preliminary R/W and cost estimates.

College Parkway Corridor Study

During the TDP process Anne Arundel County initiated a study of the College Parkway corridor for possible transit services between Anne Arundel Community College and Broadneck High School. More information will be included in this section as it becomes available through the TDP process.

MDOT MTA Bus Mode and Locally Operated Transit Systems Fort Meade/Odenton Area Small Area Plan

The Fort Meade/Odenton Small Area Plan is one of five Small Area Plans meant to complement the Regional Transit Plan for Central Maryland completed in 2020. The plan focuses on identifying opportunities to improve transit services in the study area. The key recommendations include:

- Focus fixed-route service on the corridors and destinations with the greatest transit potential, including the Jacobs Road/Meade Village Area, the Arundel Mills Mall area, and the Annapolis Road corridor
- Consolidate the three AAC routes in the study area into two interlined routes offering higher frequencies and streamlined one-seat service to key ridership generators like Walmart, the Odenton MARC Station, Giant, and the Odenton Medical Pavilion
- Overlay fixed-route service with app-based demand response service known as microtransit, to expand local transit coverage and complement the regional transit network through first- and last-mile connections

Chapter 3

Needs Assessment

Introduction

This chapter summarizes the community outreach process and the input that was received during the development of the TDP. Through this process feedback was obtained on current Anne Arundel County Transit services, and importantly on potential improvements that would help expand mobility. Input ranging from the community's perception of existing transit services to future transit priorities was collected and is summarized.

These findings are combined with the results of other TDP tasks to identify issues and opportunities to be addressed in the development of alternatives for the plan. Overall, this information will assist in the identification of underserved and unserved areas and populations that should be considered for future service improvements and expansions.

Overall, this chapter is divided into the following sections:

- **Community Survey** – Summary of a survey that provided the opportunity to gather opinions from the general public.
- **Rider Survey** – A review of the feedback received from local stakeholders regarding the existing transportation services and priorities for the future.
- **Stakeholder Interviews** – A review of the feedback received from local stakeholders regarding existing transit services and priorities for the future.

Community Survey

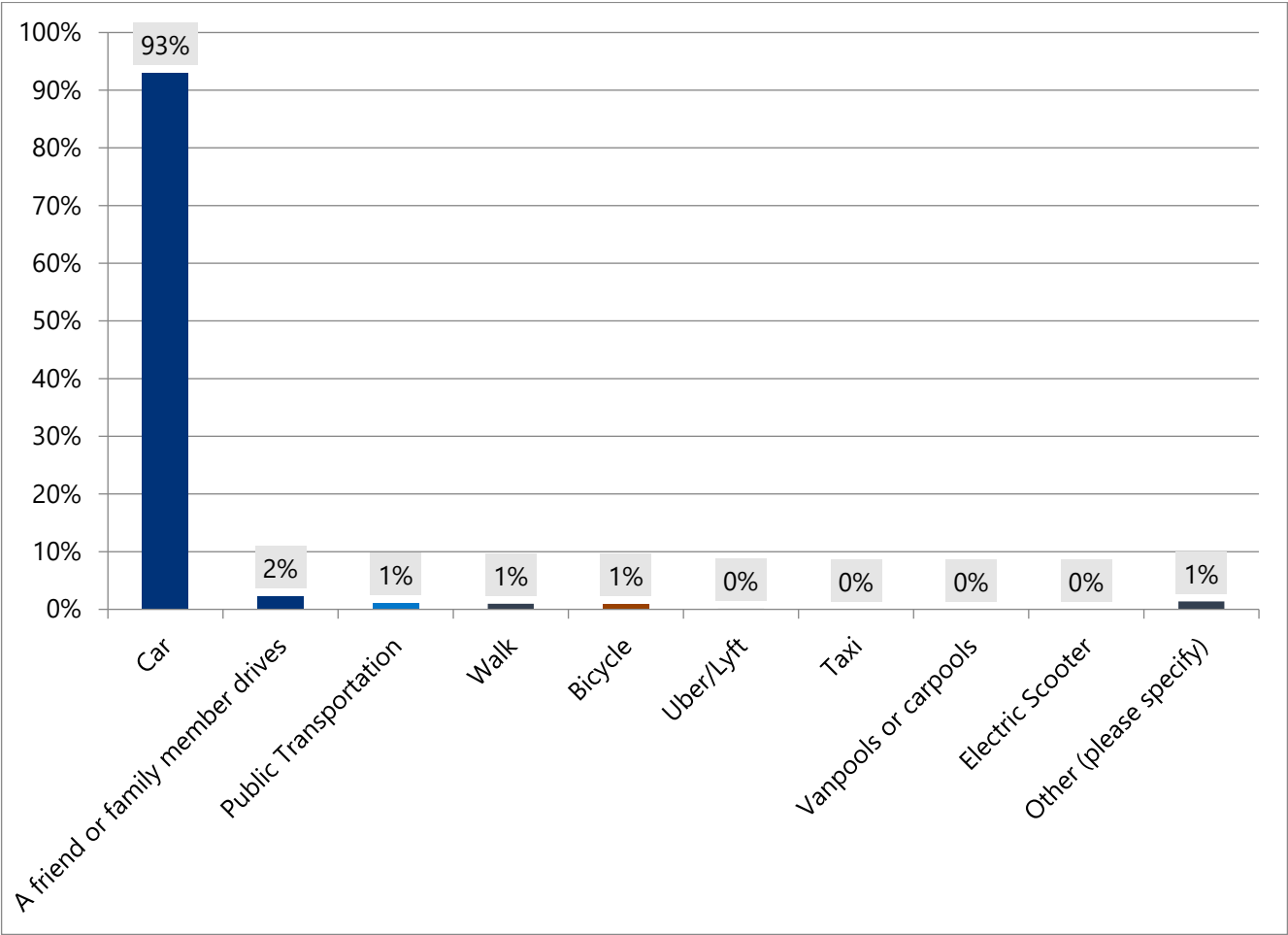
The community survey was launched on September 1, 2022, and was closed on November 18, 2022. Due to the ongoing impacts of the COVID-19 pandemic the community survey was conducted online. Marketing for the survey was also primarily based online, including through the Office of Transportation and Anne Arundel County government's community network. The project team also promoted the community survey through discussions with key stakeholders (discussed later in this chapter). A copy of the survey, that was available in both English and Spanish, is included in Appendix D.

A total of 943 responses were collected through the online survey. The community survey covered a range of topics including transportation choices, the impression of public transportation, typical travel patterns, desired transportation improvements and demographic questions. The following section provides a review of key survey results.

Primary Mode of Transportation

Among the nearly 943 community members who answered the question, 93% of them stated that their primary mode of transportation was a car, as seen in Figure 3-1. Other transportation options included being driven by a friend or family member (2.3%), public transportation (1.2%), walking (0.9%), biking (0.9%), using an Uber/Lyft (0.1%), and other (1.4%). Some of the options provided by respondents who checked other included GoGoGrandparents taxi service, gasoline powered scooter, school bus, and by Opportunity Builders Inc. staff.

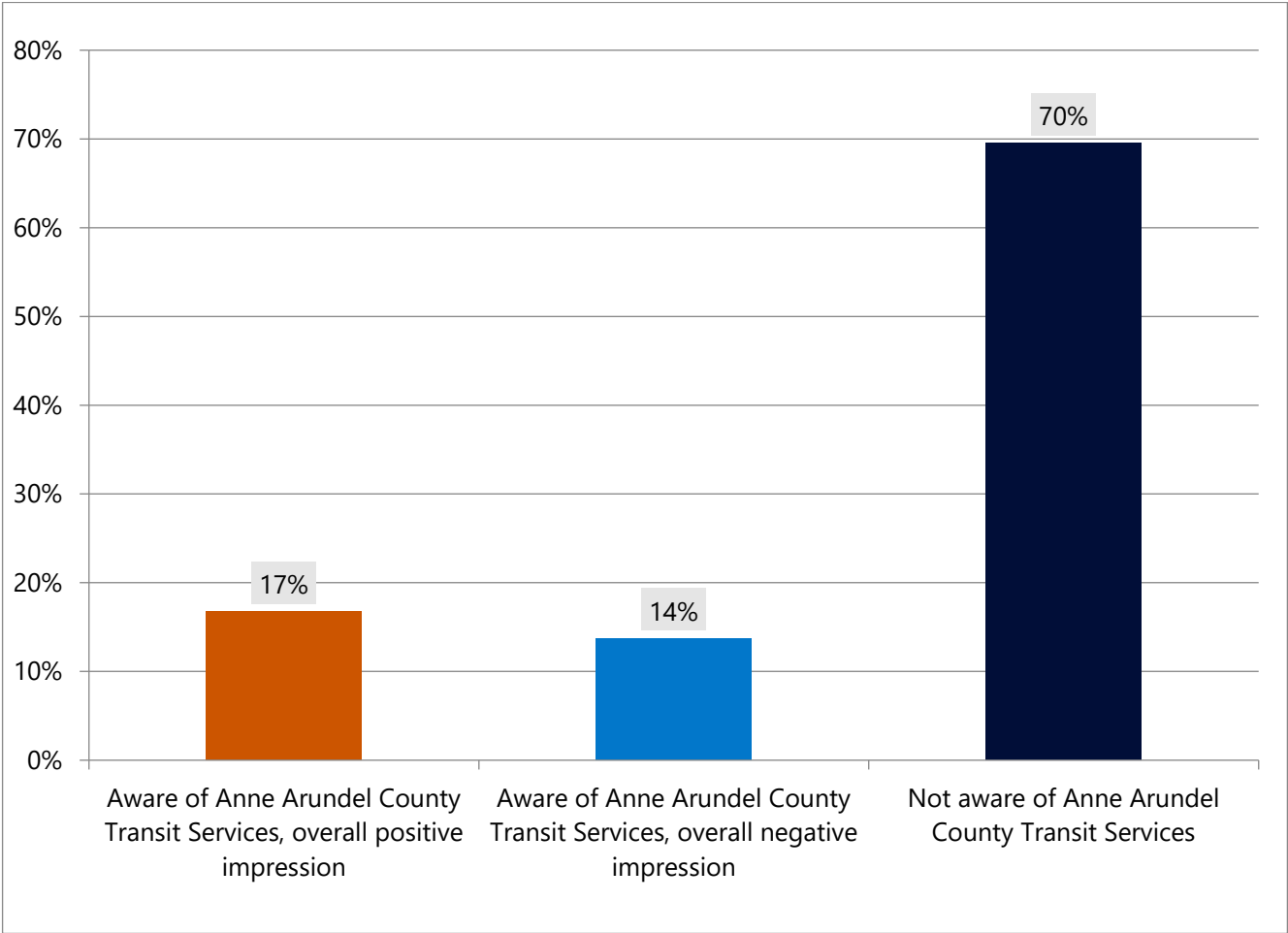
Figure 3-1: Primary Mode of Transportation



Awareness of the Transit Services Provided / Impression of Services

Overall, a majority of respondents were not aware of Anne Arundel County Transit services (69.5%). Of the 30.5% that stated that they are aware of the system, 16.7% of respondents had an overall positive impression of the services while the remainder reported having a negative opinion. Results from this survey question are shown in Figure 3-2.

Figure 3-2: Awareness and Impression of Anne Arundel County Transit Services



What Services are Used

As seen in Figure 3-3, the majority of people who answered the survey do not use the public transportation services that are provided within Anne Arundel County (93.2%). Shown in Figure 3-4, of the respondents who do use public transportation, a majority use Anne Arundel County services less than once a month (62.8%). Figure 3-5 shows the variety of reasons, which range from work, social/recreation, shopping, errands, etc. The top three reasons for utilizing public transportation included work (52%), social/recreation (33.3%), and shopping (27%).

Figure 3-3: Use of Public Transportation in Anne Arundel County

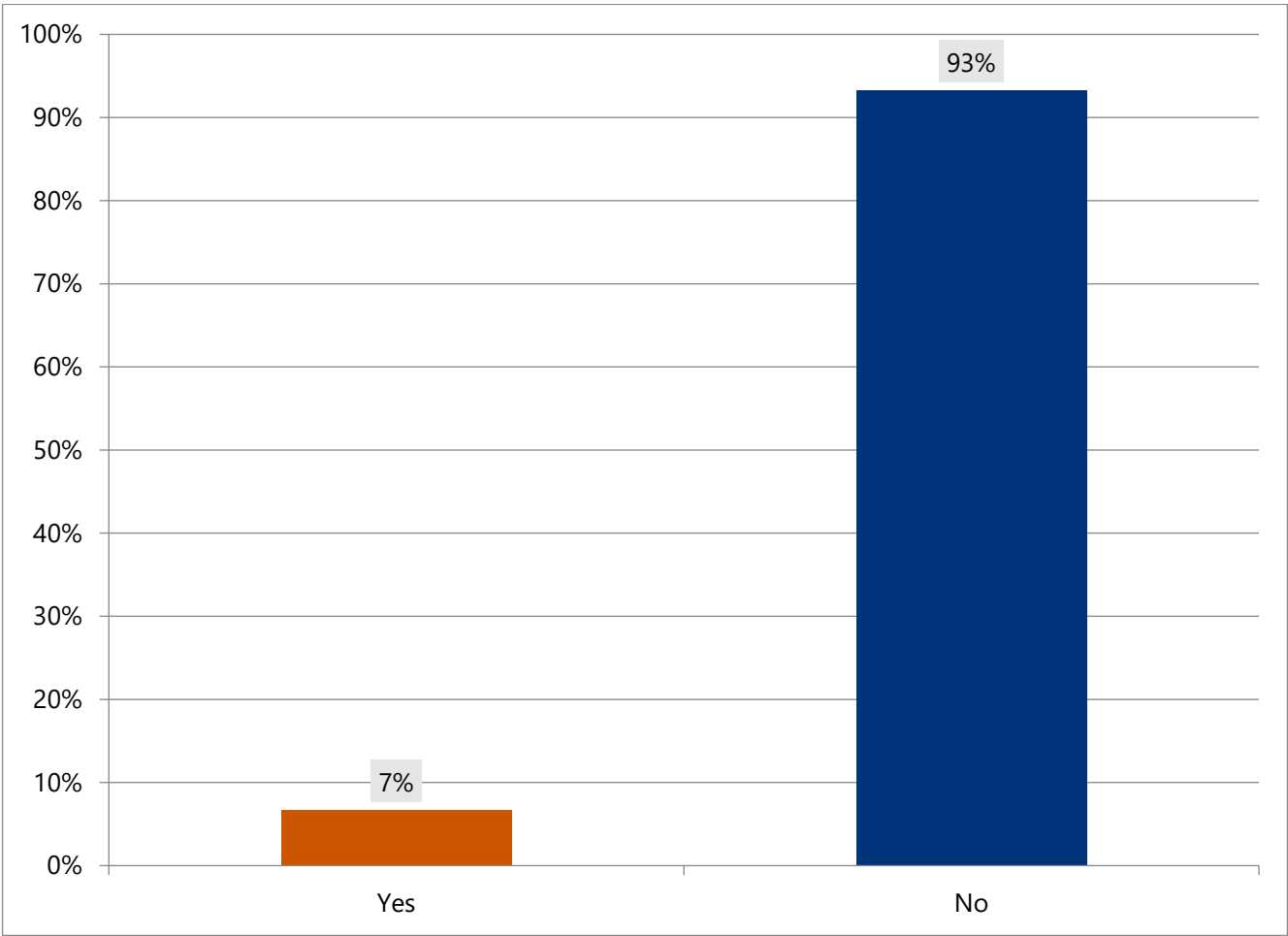


Figure 3-4: Frequency of Use of Public Transportation Users

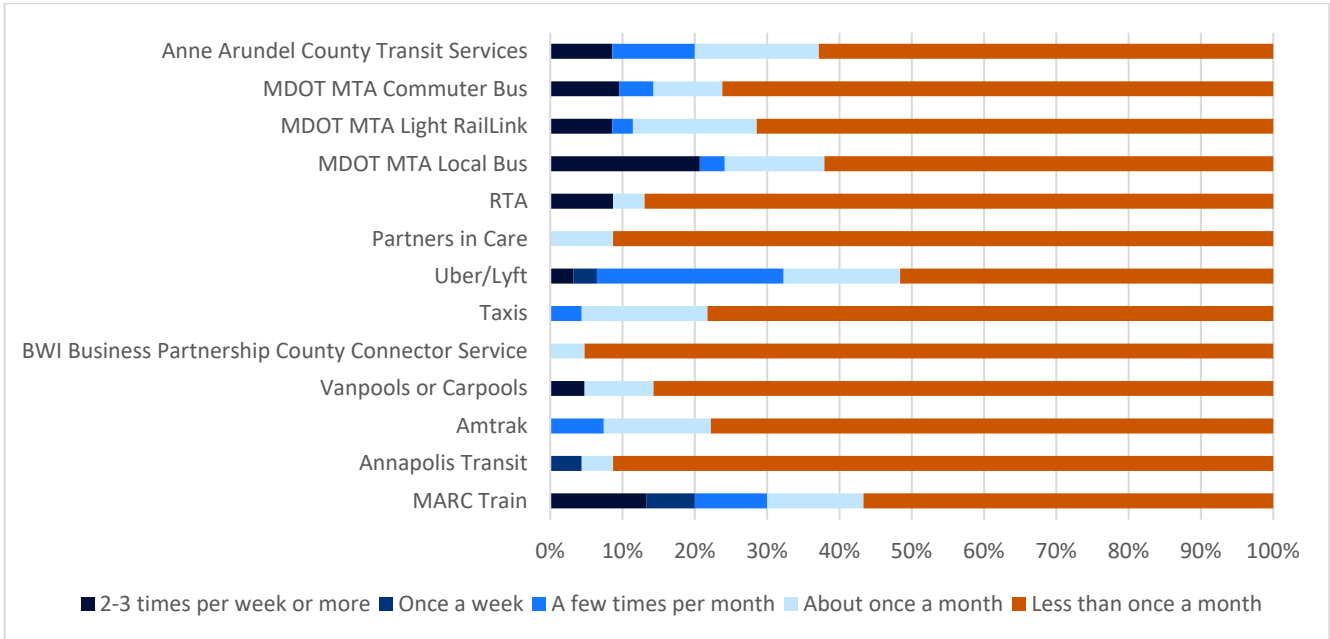
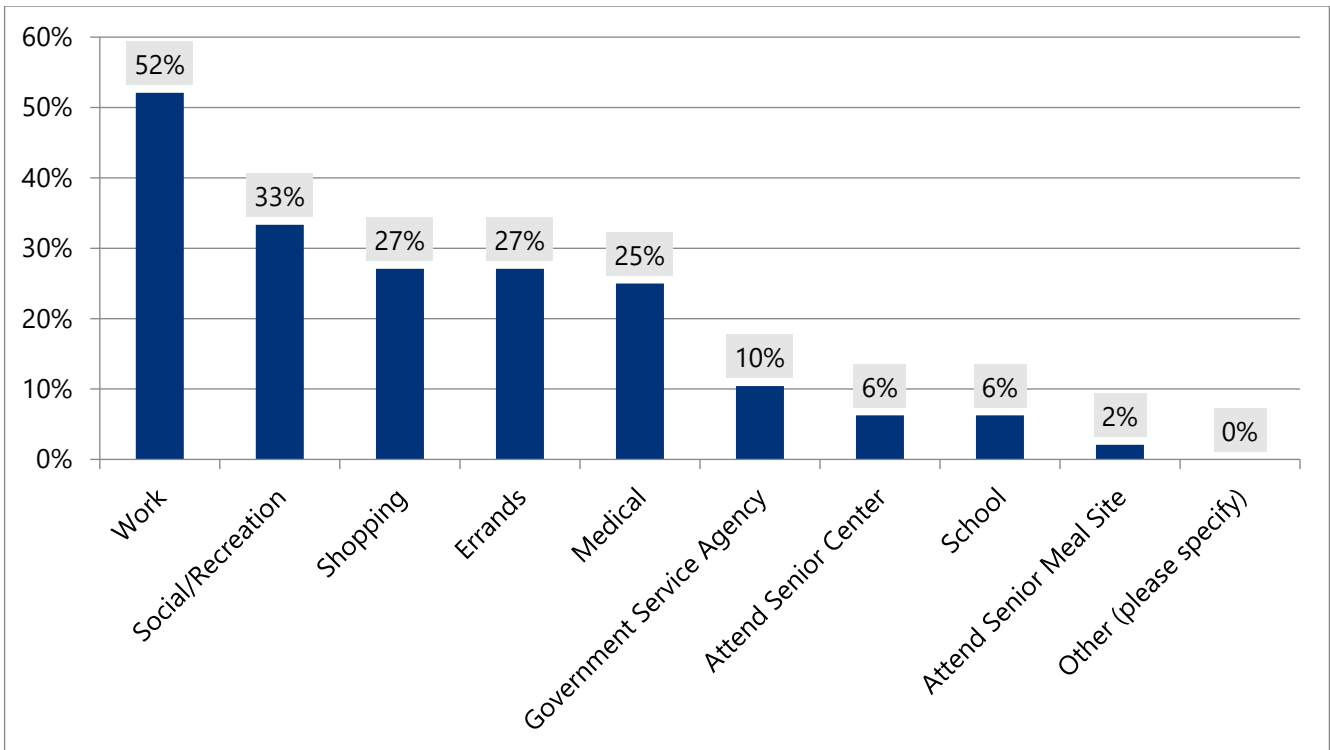


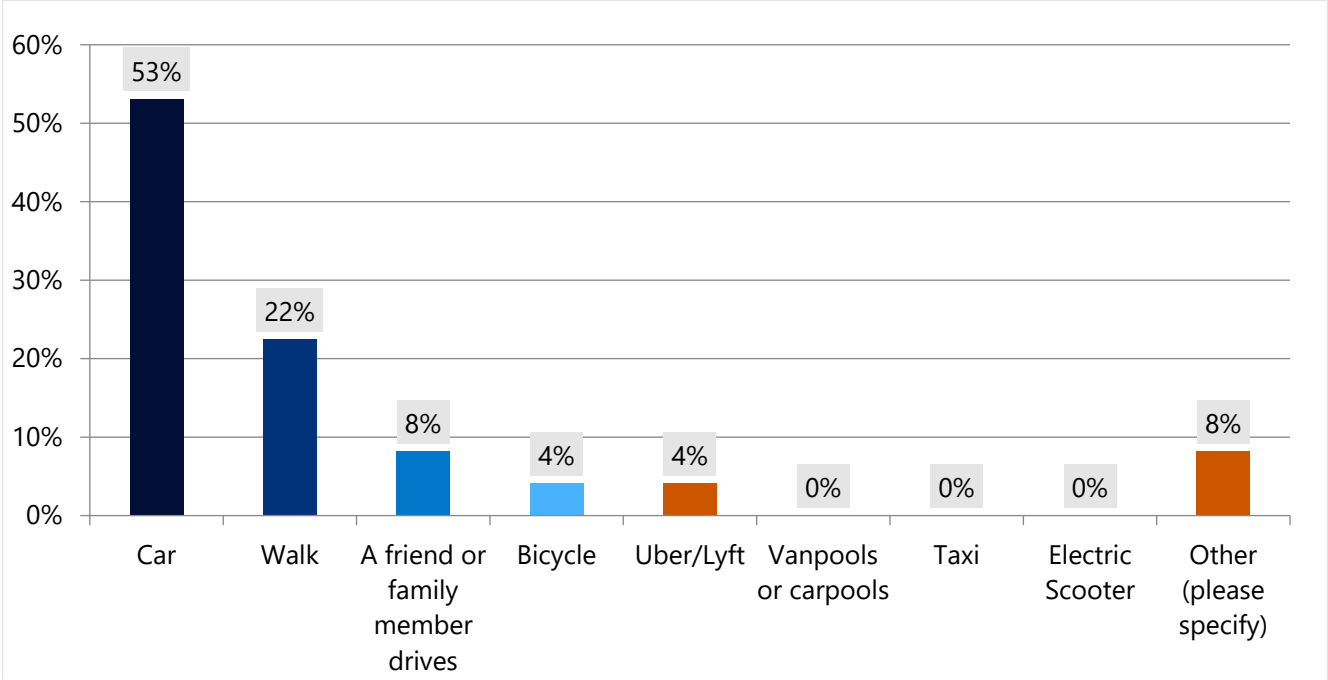
Figure 3-5: Public Transportation User's Trip Purpose



Travel to the Bus Stop or Park & Ride

Of those who use the public transportation services provided in Anne Arundel County, a majority of them either drove by themselves or walked to get to their bus stops or the park & rides, as seen in Figure 3-6. None of the respondents stated that they use vanpools/carpools, taxis or electric scooters.

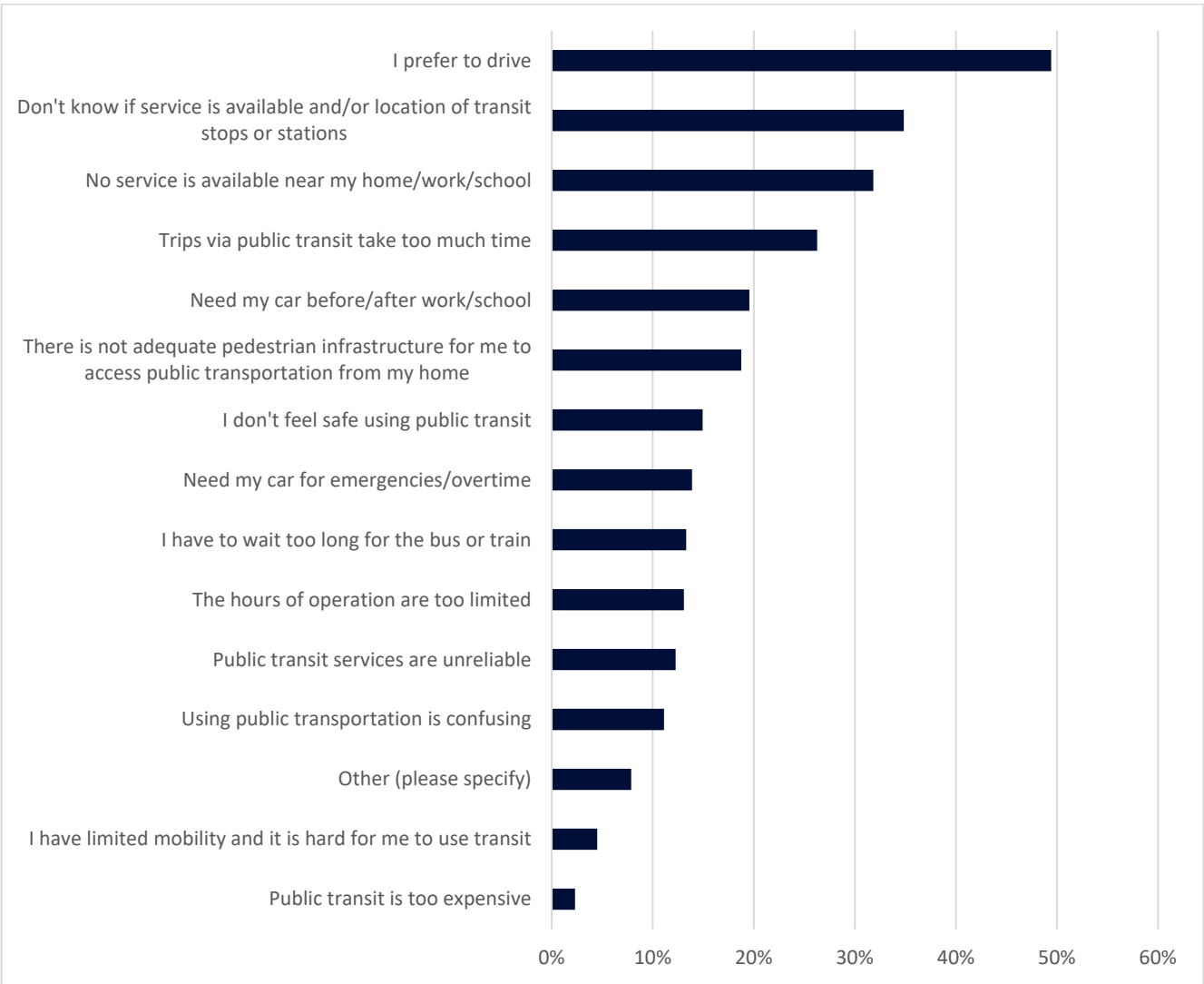
Figure 3-6: Method of Transportation to Access Public Transportation



Reasons for Not Using Public Transportation

Out of the 943 respondents that answered the survey, about 870 respondents stated that they do not utilize the public transportation services available in Anne Arundel County. Overall, the respondents had a variety of reasons for not utilizing the services, which ranged from preferring to drive, having no available service near them, needing a car, etc., as seen in Figure 3-7. The top three reasons for not using public transportation include preferring to drive (49.3%), not being aware if service is available and/or location of transit stops or stations (34.7%), and no service available near my home/work/school (31.8%).

Figure 3-7: Why Respondents Do Not Use Public Transportation



Service Improvements and Travel Needs

While the majority of community survey respondents do not use public transit service in Anne Arundel County, it is significant to note that a majority stated that there is a need for additional or improved public transportation in the county, as seen in Figure 3-8 (83%). The respondents were then asked about the types of improvements that are needed in Anne Arundel County, shown in Figure 3-9. The top three improvements included new service that would connect communities or key destinations, local service within my community, and expanded transportation services designed for older adults and people with disabilities.

Some of the communities or key destinations that respondents stated include Downtown Baltimore, direct service to Metro and MARC trains, Odenton, Bowie, Heritage Harbor, Generals Highway, Arnold Station, Southern Anne Arundel County, Broadneck Peninsula, and Edgewater. Some of the key destinations that respondents stated needed connections included vaccine clinics, libraries, MAYO clinic, Annapolis Mall, Anne Arundel Community College Arnold Campus, Waugh Chapel Shopping Center, VA clinics, and NSA.

Figure 3-8: Do You Think There Is a Need For Additional or Improved Public Transportation in Anne Arundel County?

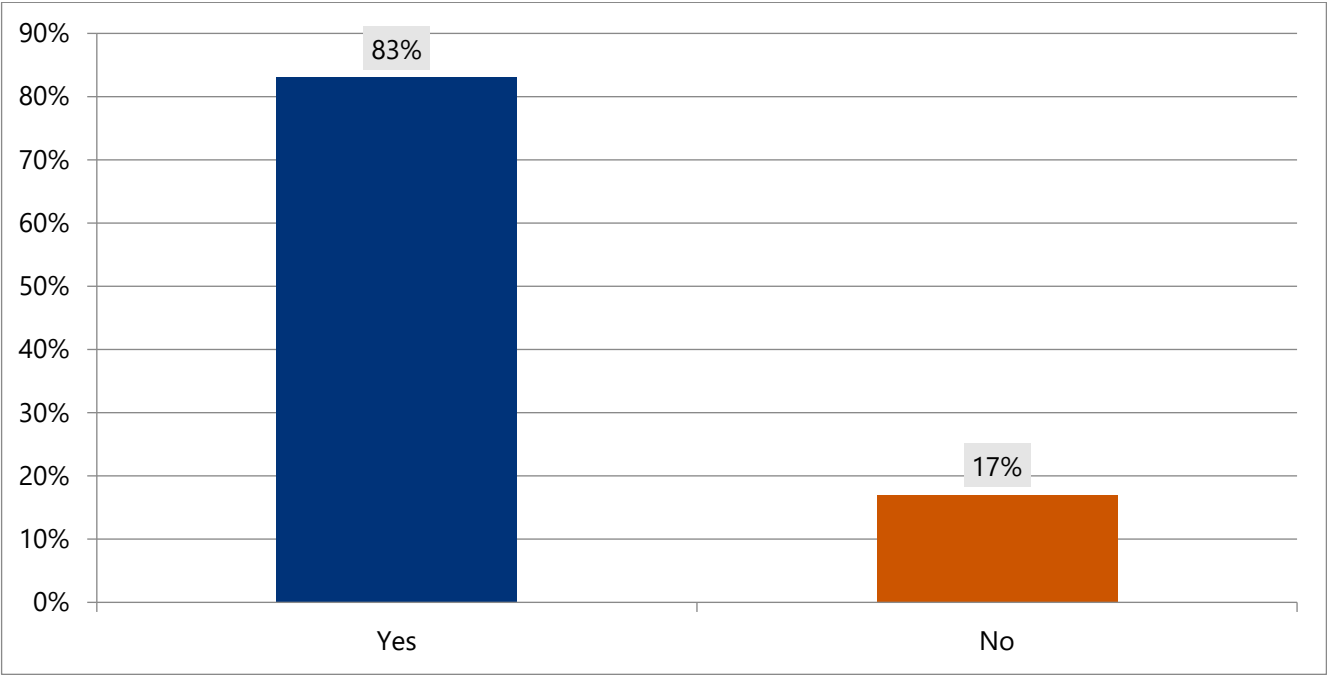
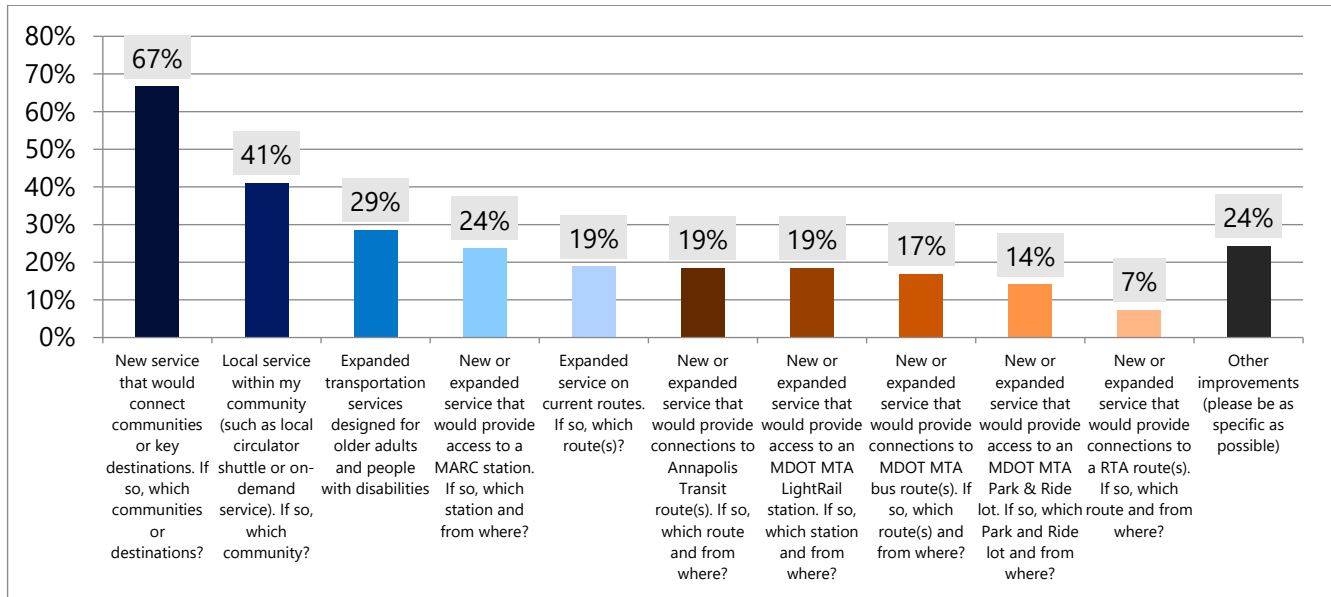


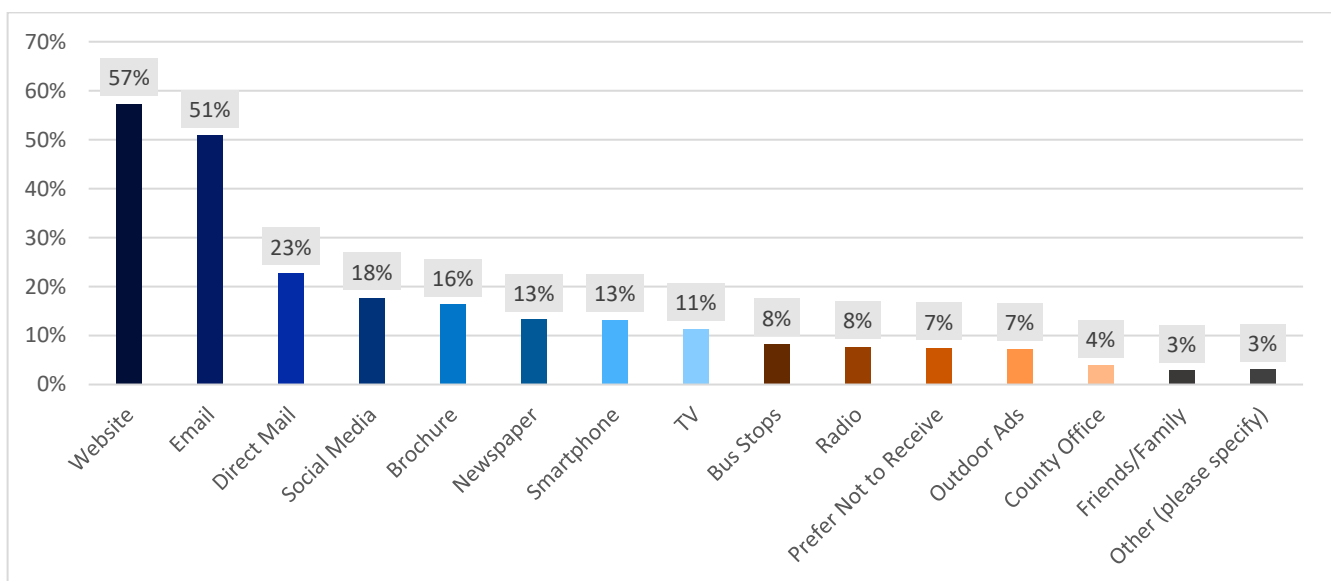
Figure 3-9: What Transit Service Improvements are Needed to Encourage Usage



Receiving Transit Information

A majority of respondents stated that they would prefer to receive information about public transportation from Anne Arundel County’s website and through emails (57% and 51%). A few respondents mentioned wanting to gain information through a transportation app, public libraries, electric signs at bus stops, and the Anne Arundel Workforce Development Cooperation, as shown in Figure 3-10.

Figure 3-10: Preferences for Information Dissemination



Community Survey Respondent Profile

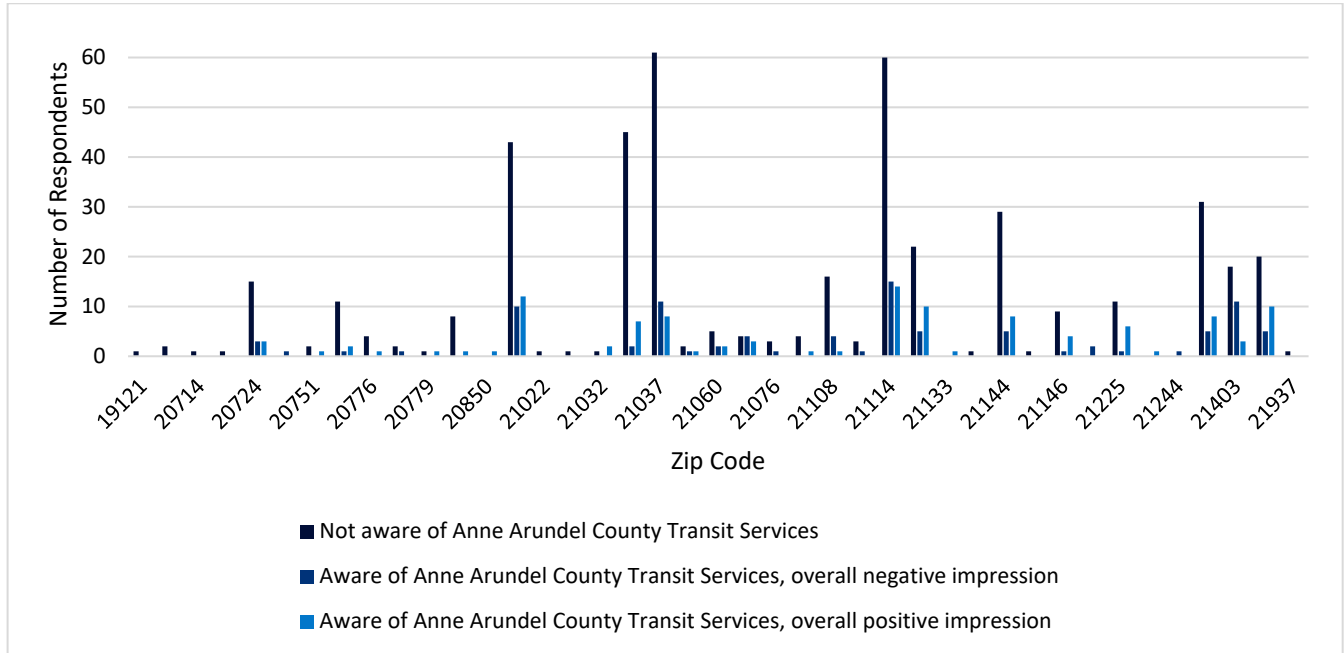
The survey asked multiple questions regarding basic demographics of the survey respondents. Table 3-1 provides list of the respondents by zip code.

Table 3-1: Community Survey Respondent Location

Zip Code	# of Respondents	Community
21114	89	Crofton
21037	80	Edgewater
21012	63	Arnold
21035	53	Davidsonville
21401	44	Annapolis
21144	42	Severn
21122	39	Pasadena
21409	35	Annapolis
21403	33	Eastport
21108	21	Millersville
20724	20	Laurel
21225	19	Brooklyn
20764	15	Shady Side
21146	14	Severna Park
21061	11	Glen Burnie
20794	10	Jessup
21060	9	Glen Burnie
20776	5	Harwood
21090	5	Linthicum Heights
21054	4	Gambrills
21076	4	Hanover
21113	4	Odenton
20751	3	Deale
20778	3	West River
21032	3	Crownsville
20711	2	Lothian
20779	2	Tracys Landing
21224	2	Dundalk
20714	1	North Beach
20715	1	Bowie
20733	1	Churchton
21022	1	Brooklandville
21025	1	Baltimore
21226	1	Curtis Bay
21244	1	Milford Mill
21937	1	Great Mills

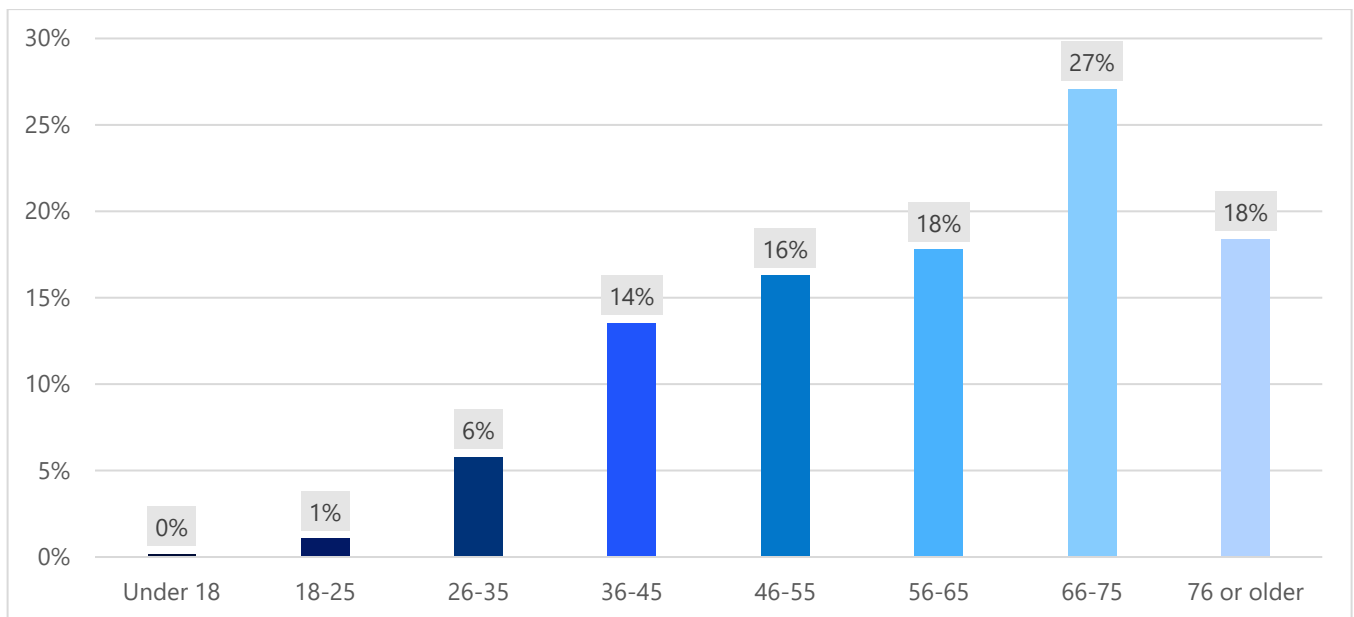
Figure 3-11 shows the awareness of Anne Arundel County Transit Services in each zip code.

Figure 3-11: Number of Respondents and Overall Awareness of Services



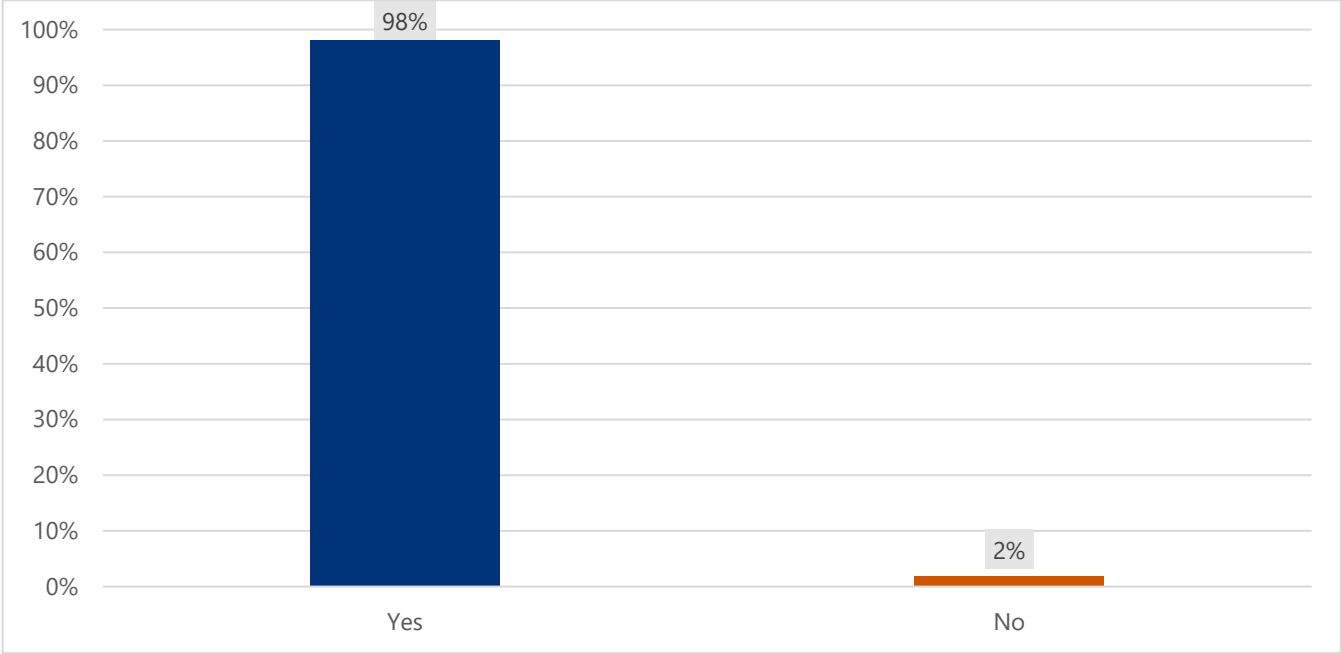
A majority of respondents were between the ages of 66 and up, with the highest range being 66 to 75 years old (27%), as shown in Figure 3-12.

Figure 3-12: Age Range of Respondents



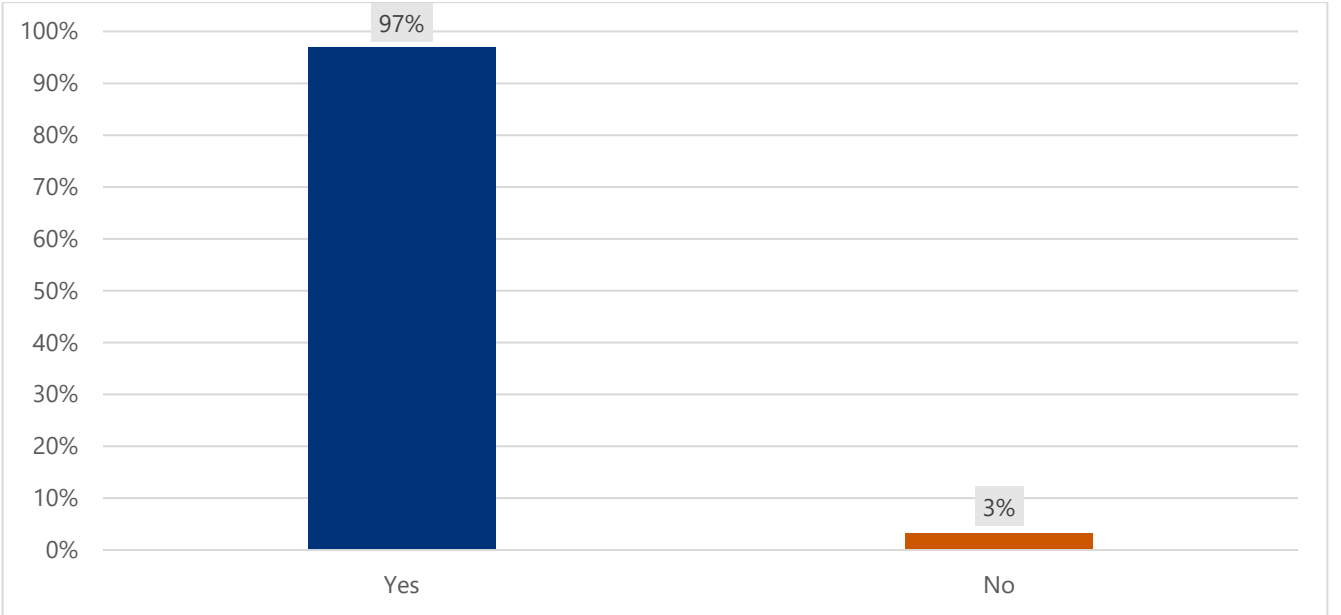
As seen in Figure 3-13, 98% of the respondents for the community survey stated that they have a valid driver's license.

Figure 3-13: Do you Have a Driver's License?



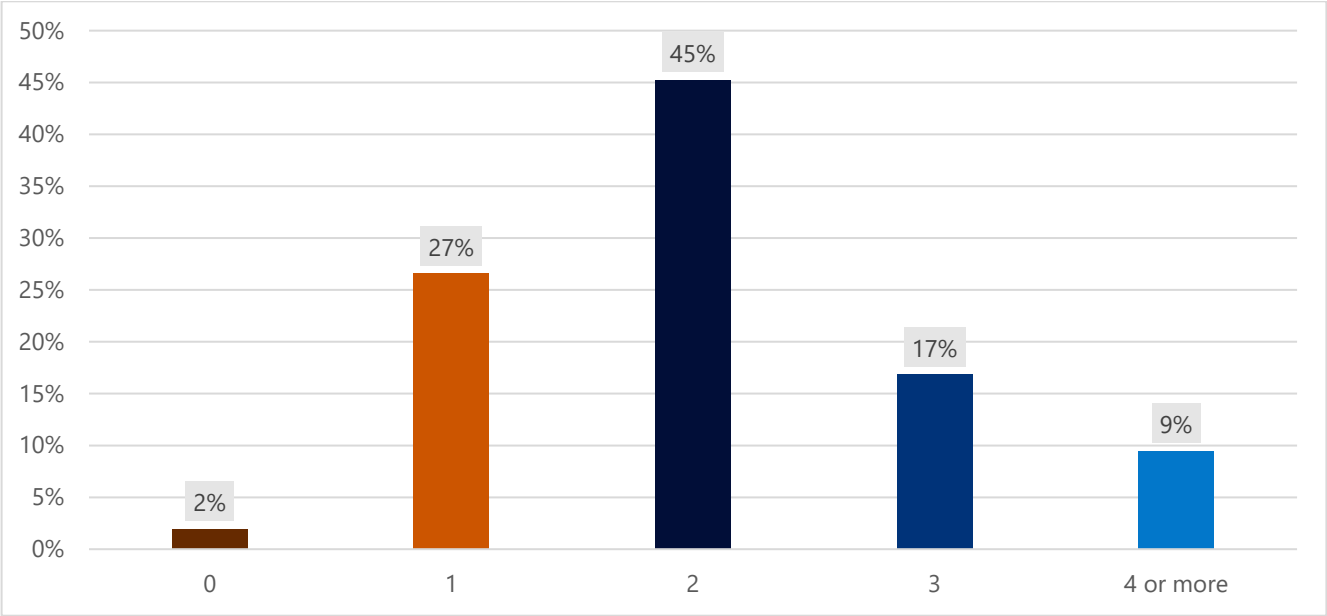
When asked about their access to a personal vehicle on a daily basis, 97% of respondents stated they do have access, as seen in Figure 3-14.

Figure 3-14: Access to A Personal Vehicle on a Daily Basis



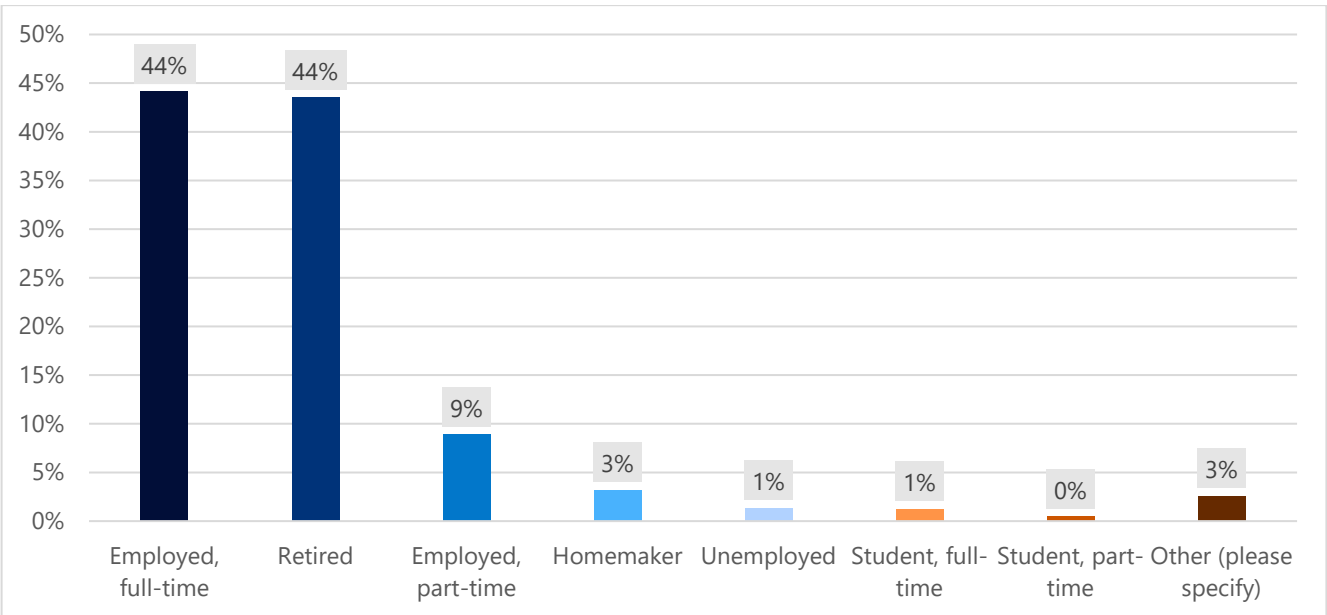
Respondents were asked about the number of working vehicles in their household, as shown in Figure 3-15. A majority of respondents (45%) stated that they have 2 working vehicles. Only 2% of respondents stated that they have zero working vehicles, while 9% stated they have 4 or more.

Figure 3-15: How Many Working Cars/SUVs/Motorcycles are in Your Household?



When asked about their current employment status, a majority of respondents stated that they were either employed full-time or retired (44% and 43%), as shown in Figure 3-16.

Figure 3-16: Current Employment Status of Respondents



Additional Comments

Finally, respondents were asked to leave additional comments regarding public transportation in Anne Arundel County. Many respondents provided comments regarding potential changes to the current transportation system. Some themes included:

- The need to further coordinate the different transit services operated by the different city, county, and state.
- Service on Mountain Road to reduce the number of vehicles and give transportation options to older adults.
- Service along recreational trails and to Annapolis with bike racks and stops at cultural areas.
- Increased information to new home buyers or renters on public transportation services in the county.

Other comments noted that the system is not used to its full capacity because it is not timely and is confusing. Greater communication, outreach, availability, and convenience were also noted.

Respondents mentioned specific locations that are currently missing or lacking connectivity:

- Millersville Road
- Annapolis Road
- Mountain Road
- East Coast Greenway, the National Memorial Trail, and the American Discovery Trail
- Senior Centers

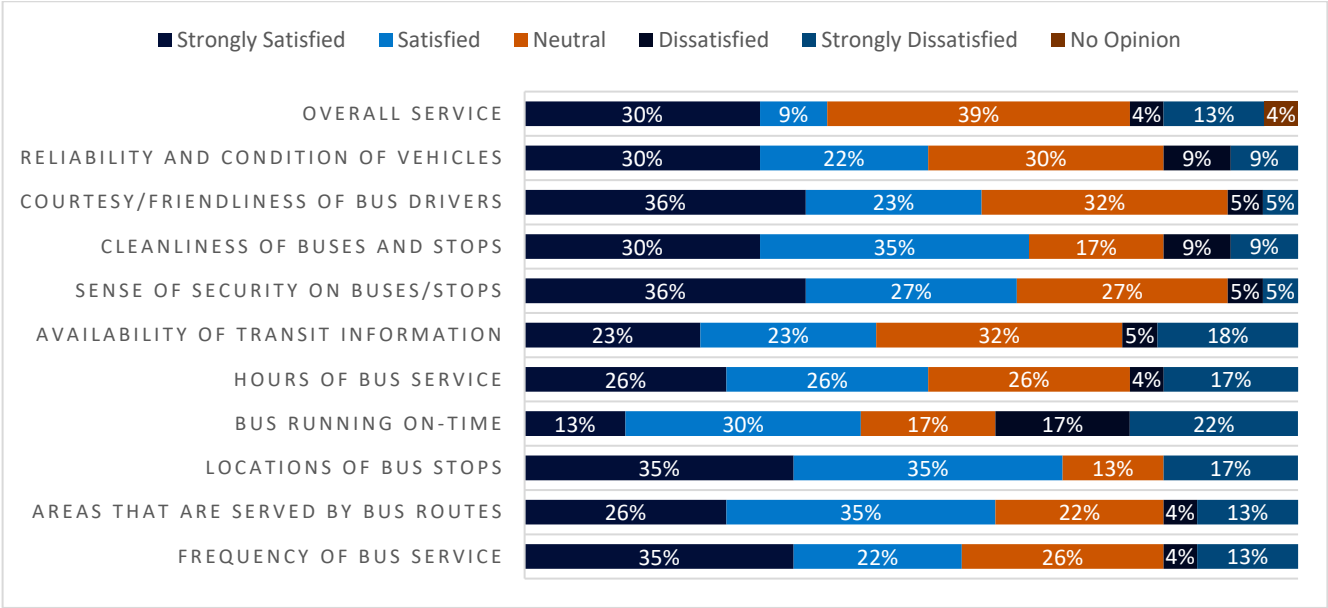
Rider Survey Results

Through the TDP process, customers were provided the opportunity to provide their input through a survey process. While results from this survey were minimal, as a total of 25 rider surveys were collected, they are summarized and were considered in the development of the service alternatives. The rider survey covered several topics, including trip characteristics, typical travel patterns, desired service improvements, satisfaction levels, and basic demographic questions. A copy of the survey, that was available in both English and Spanish, is included in Appendix E.

Satisfaction with Anne Arundel County Transit Services

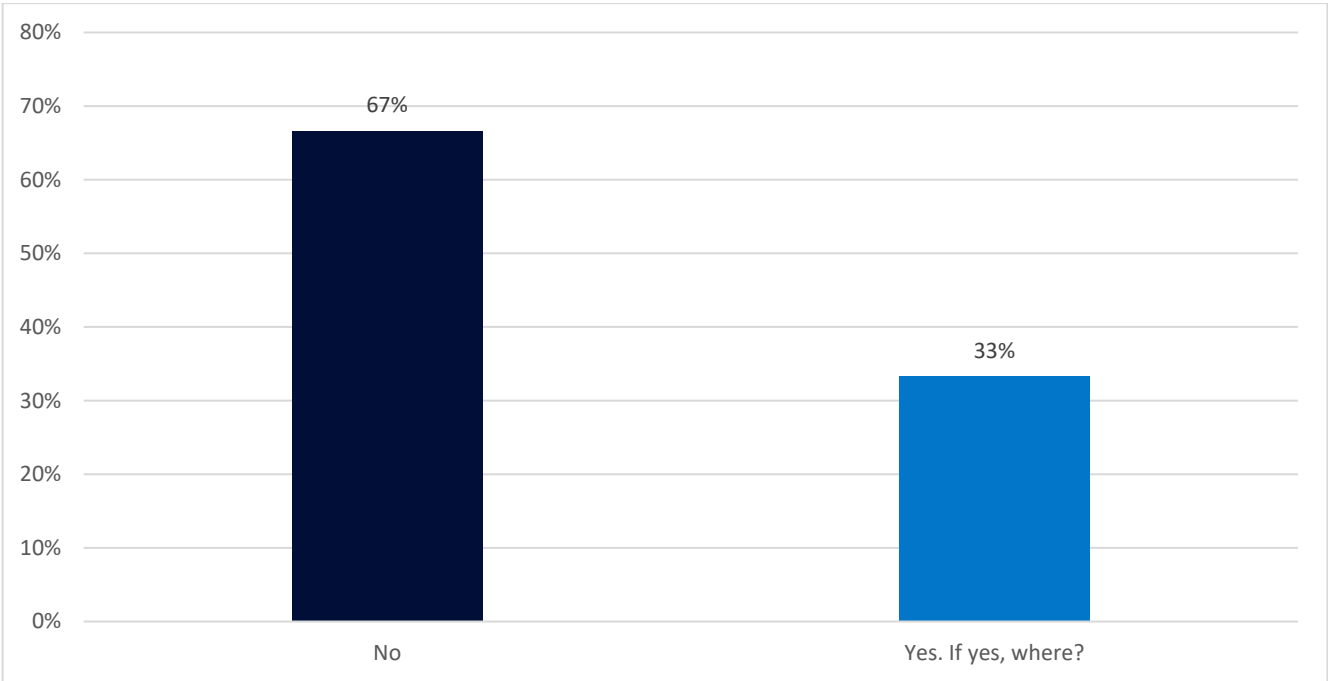
Most people were either strongly satisfied or neutral about the overall services (30% and 39%), as seen in Figure 3-17. Riders were strongly satisfied with the courtesy/friendliness of bus drivers, sense of security on buses/stops, the locations of the bus stops, and the frequency of bus service (36%, 36%, 35% and 35%, respectively). Many riders were satisfied with the cleanliness of the buses and stops, locations of bus stops, and areas that are served by the bus routes (35%).

Figure 3-17: Satisfaction with Anne Arundel County Transit Services



Respondents were asked about locations that currently are not served by Anne Arundel County Transit but that need services. As seen in Figure 3-18, a majority of respondents stated no (67%), and of the 33% that responded yes, some of these locations include Crofton, Glen Burnie, Telegraph Road, Walmart, Old Quarterfield Drive, and Mountain Road.

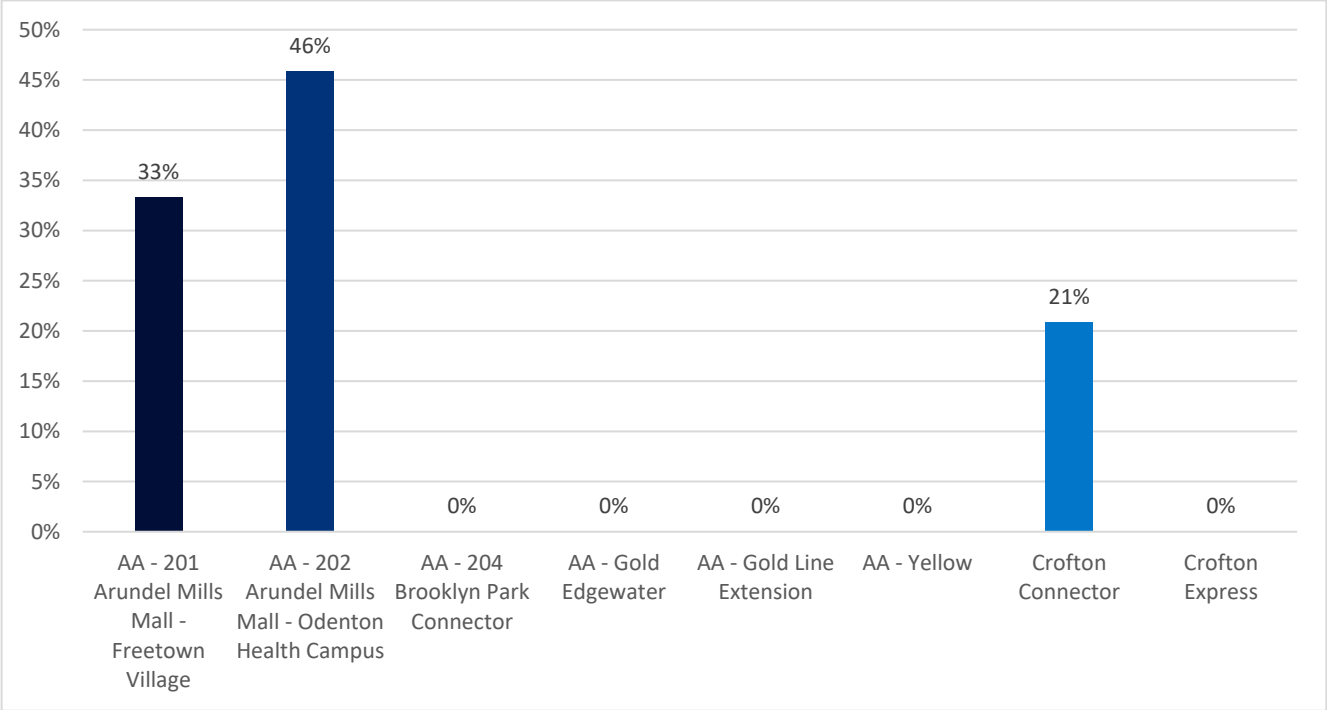
Figure 3-18: Locations Not Served by Anne Arundel Transit Services



Bus Routes, Purpose, and Frequency

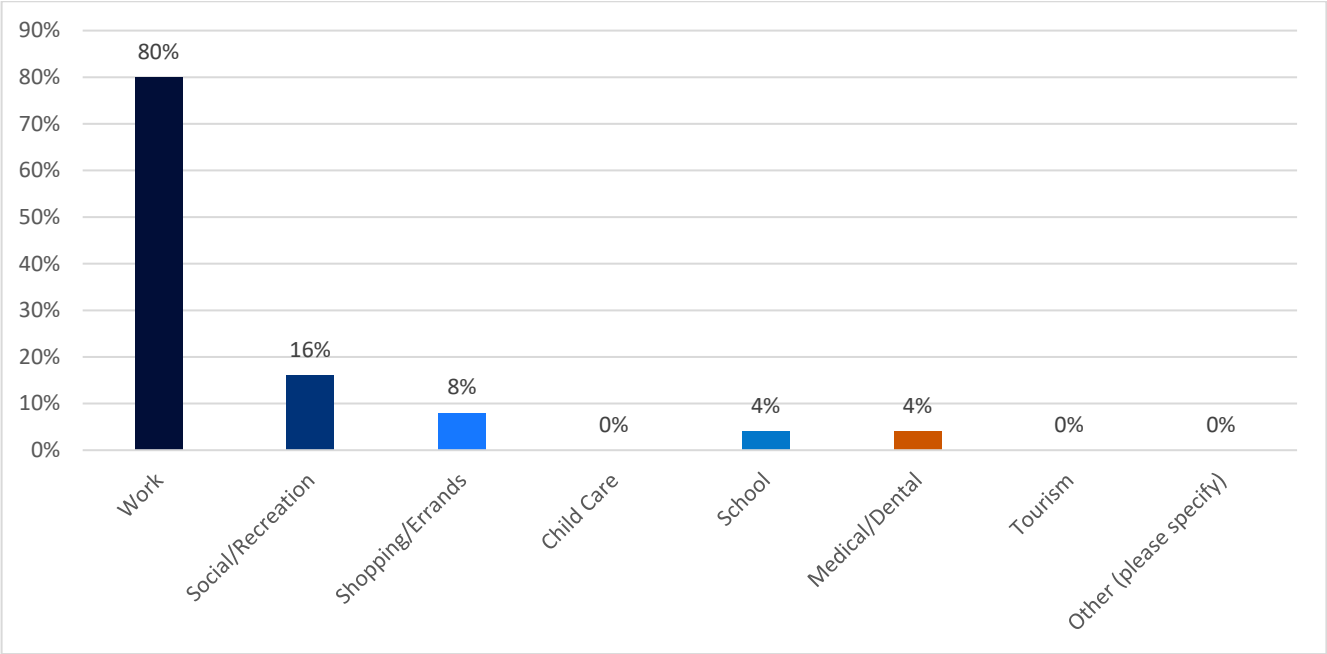
A majority of riders were using the AA - 202 Arundel Mills Mall – Odenton Health Campus route (46%). The other two routes that were utilized by respondents were the AA – 201 Arundel Mills Mall – Freetown Village and the Crofton Connector (33% and 21% respectively), shown in Figure 3-19.

Figure 3-19: Bus Routes Used by Survey Respondents



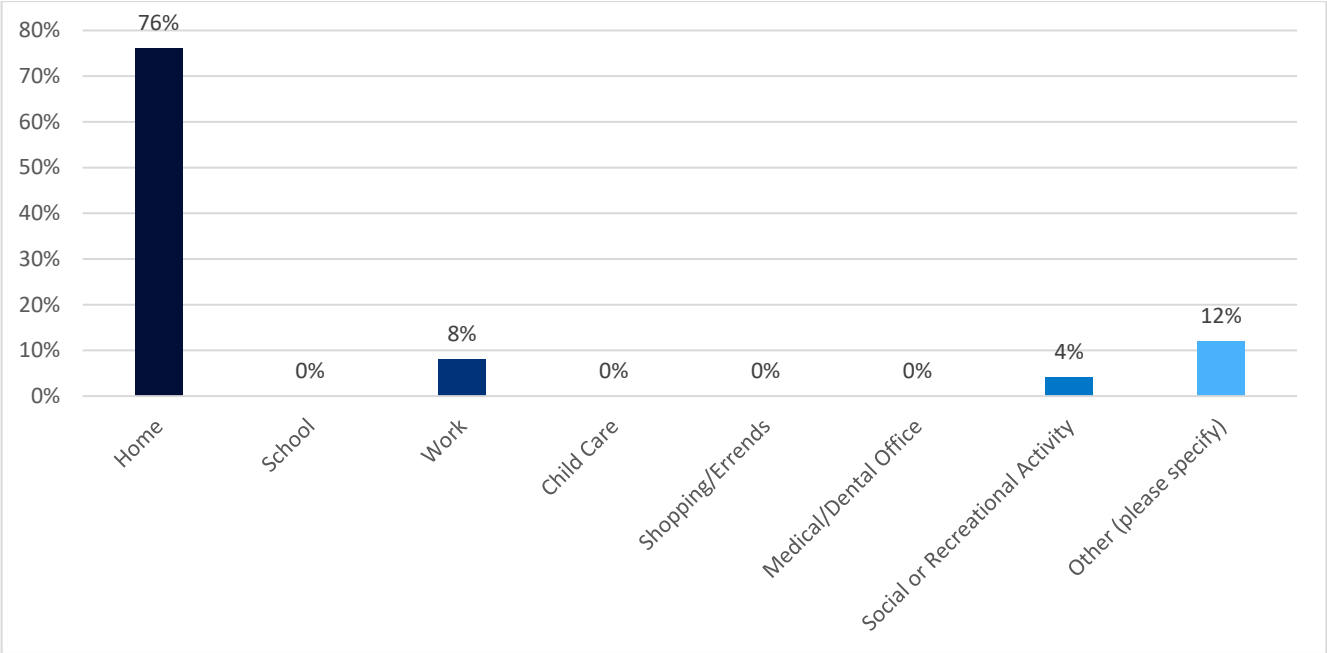
When asked about the purpose of their trip, a majority of respondents stated that they were using the bus to get to work (80%), shown in Figure 3-20. Other respondents stated they were using the services to reach social/recreation events/areas, shopping/errands, school, or medical/dental services.

Figure 3-20: Trip Purpose



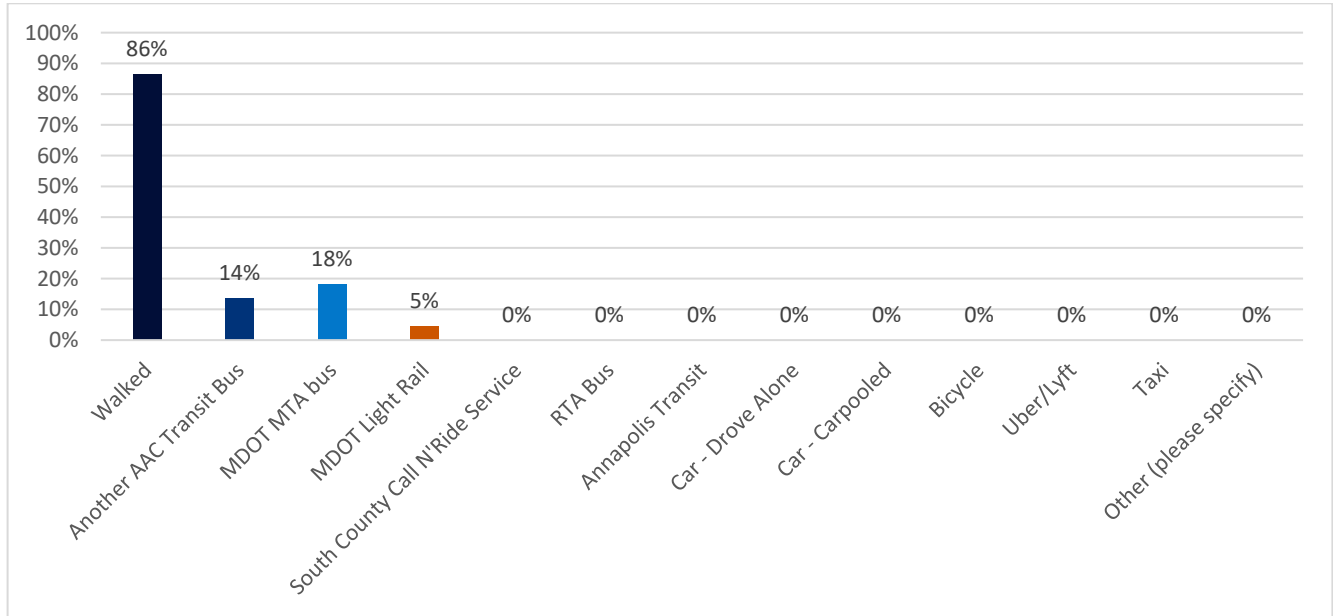
As seen in Figure 3-21, respondents were also asked about their starting location and a majority of riders were starting from their home (76%). Only a few riders got onto a bus from either work, a social or recreational activity, or another transit location.

Figure 3-21: Trip Starting Point



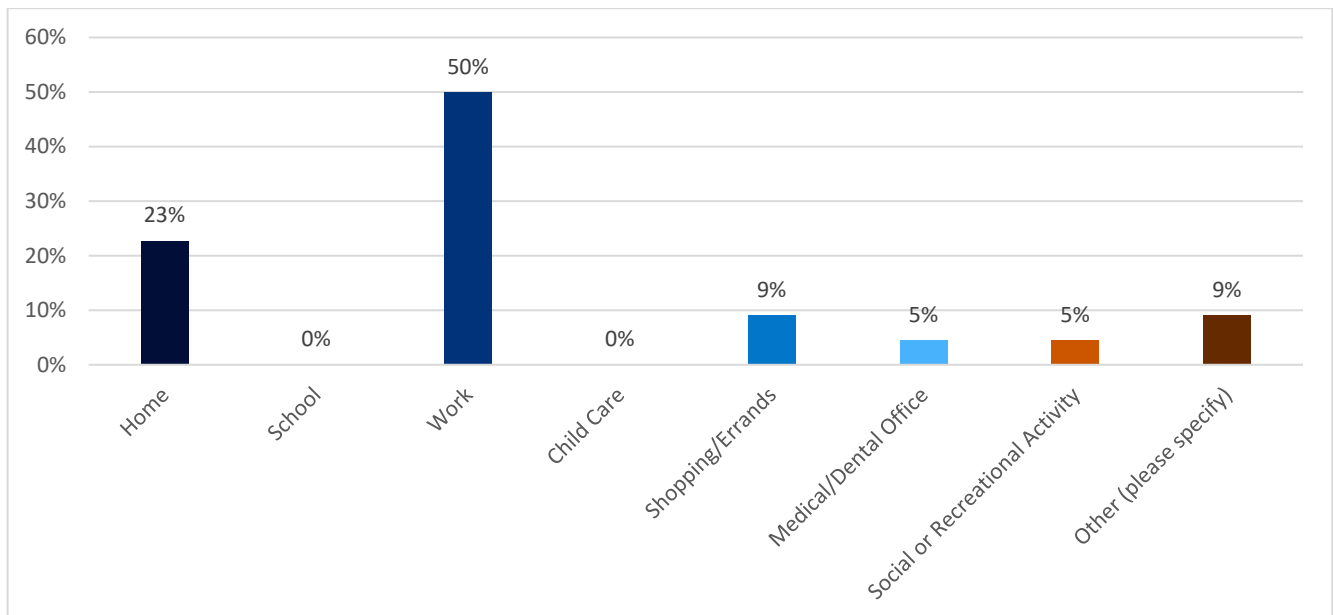
When respondents were asked how they accessed the bus stop, a majority of respondents stated that they had walked (86%), seen in Figure 3-22. Other respondents stated that they had used another AAC Transit Bus, MDOT MTA buses, or MDOT Light Rail.

Figure 3-22: Access to Bus Route



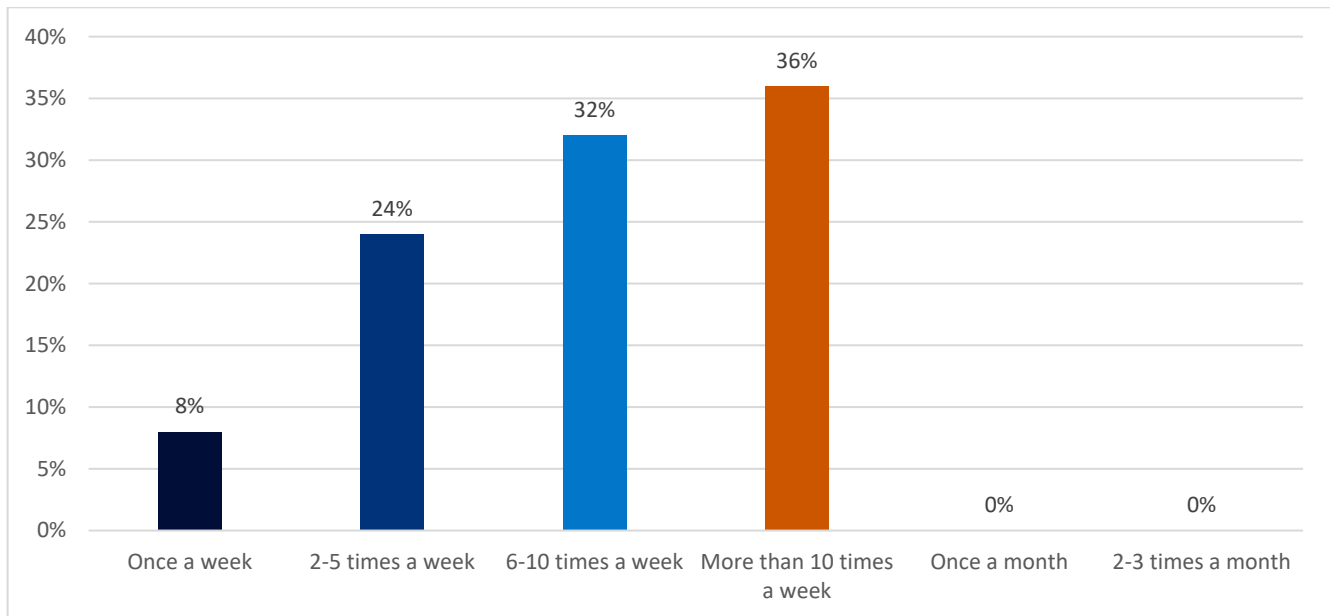
As shown in Figure 2-23, respondents were asked about their final destination while using the bus service and a majority of riders stated that their final destination was work (50%). The second highest location was home (23%).

Figure 3-23: Access to Final Destination



As seen in Figure 2-24, riders were asked about how often they typically ride Anne Arundel County Transit Services and a majority of riders stated more than 10 times a week and 6 – 10 times a week (36% and 32% respectively). No respondent answered once a month or 2-3 times a month.

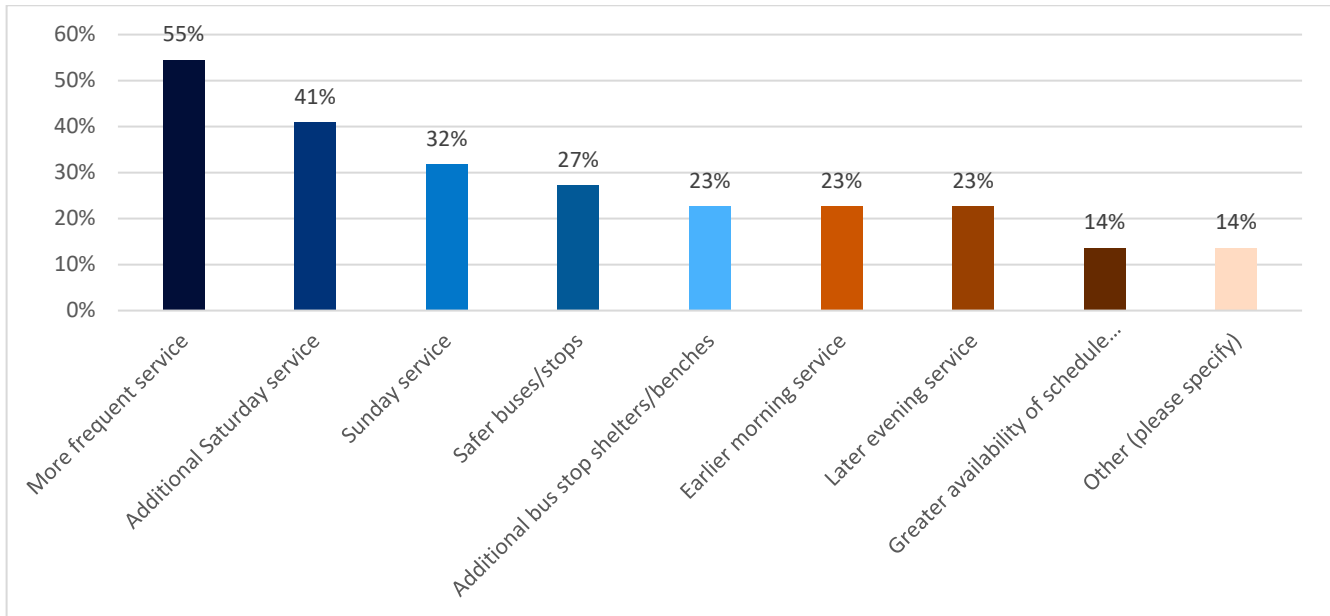
Figure 3-24: Frequency of Public Transportation Use



Possible Transportation Service Improvements

Respondents were asked to rate their top three choices for most useful improvements for Anne Arundel County Transit, shown in Figure 3-25. The top three choices included more frequent service, additional Saturday service, and Sunday service (55%, 41%, 32%). Respondents were then asked which would be their top choice, and a majority of riders stated more frequency and reliability as their top improvement choices.

Figure 3-25: Top Three Desired Improvements

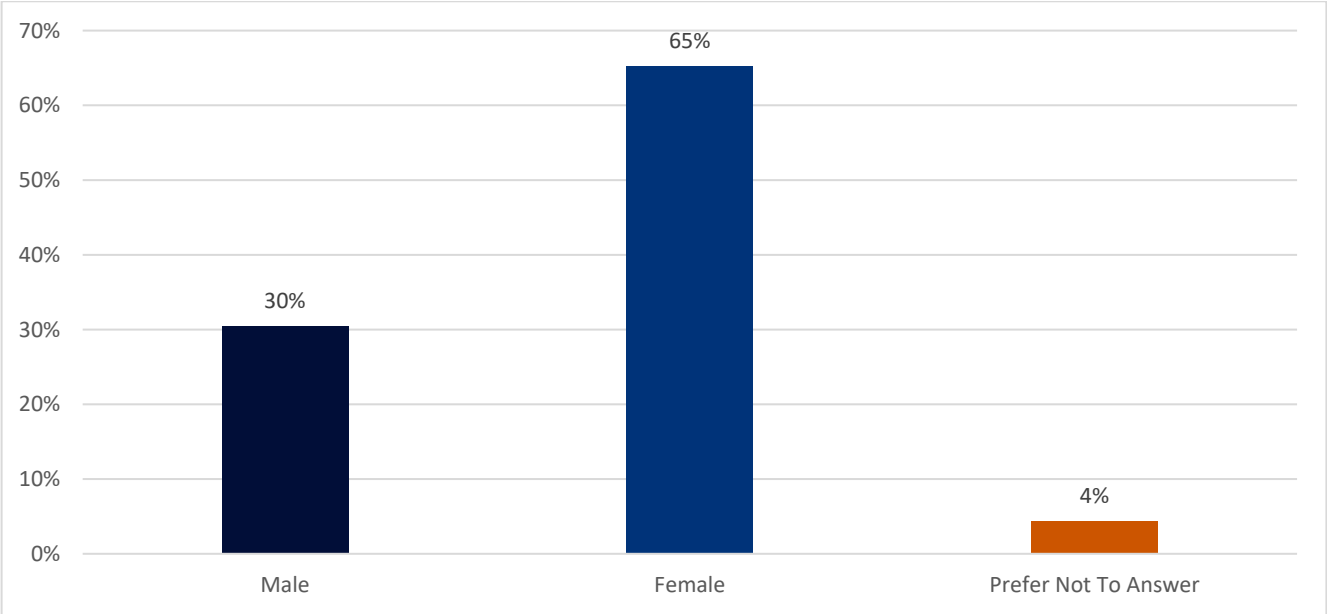


Rider Information

As seen in Figure 3-26, respondents were asked about their gender. A majority of riders stated that they are female (65%) and a lower number said that they are male (30%).

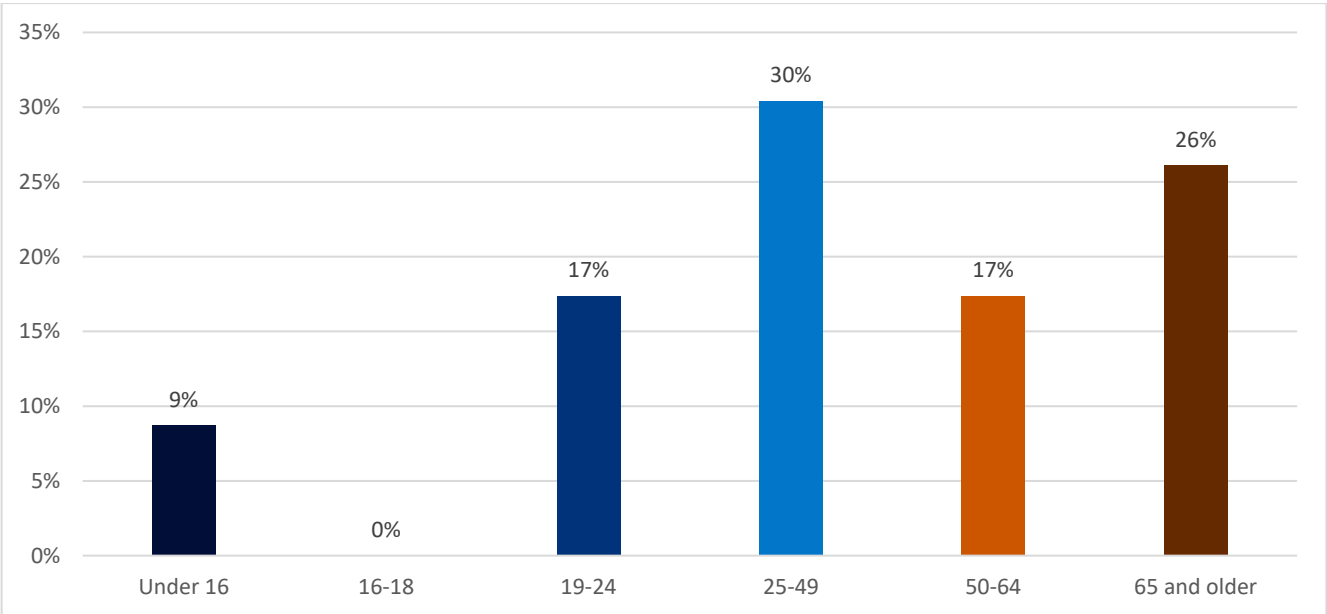
Zip Code	# of Respondents
21122	4
21113	5
21144	8
20032	1
21132	1
20737	1
21061	1

Figure 3-26: Gender of Respondents



Respondents' ages ranged from under 16 years old to 65 and older, with the majority of riders being between 25 – 49 years old (30%), as seen in Figure 3-27.

Figure 3-27: Age Group of Respondents



Respondents were also asked whether they have a valid driver’s license and a majority of riders stated that they did not (61%), shown in Figure 3-28.

Figure 3-28: Valid Driver’s License

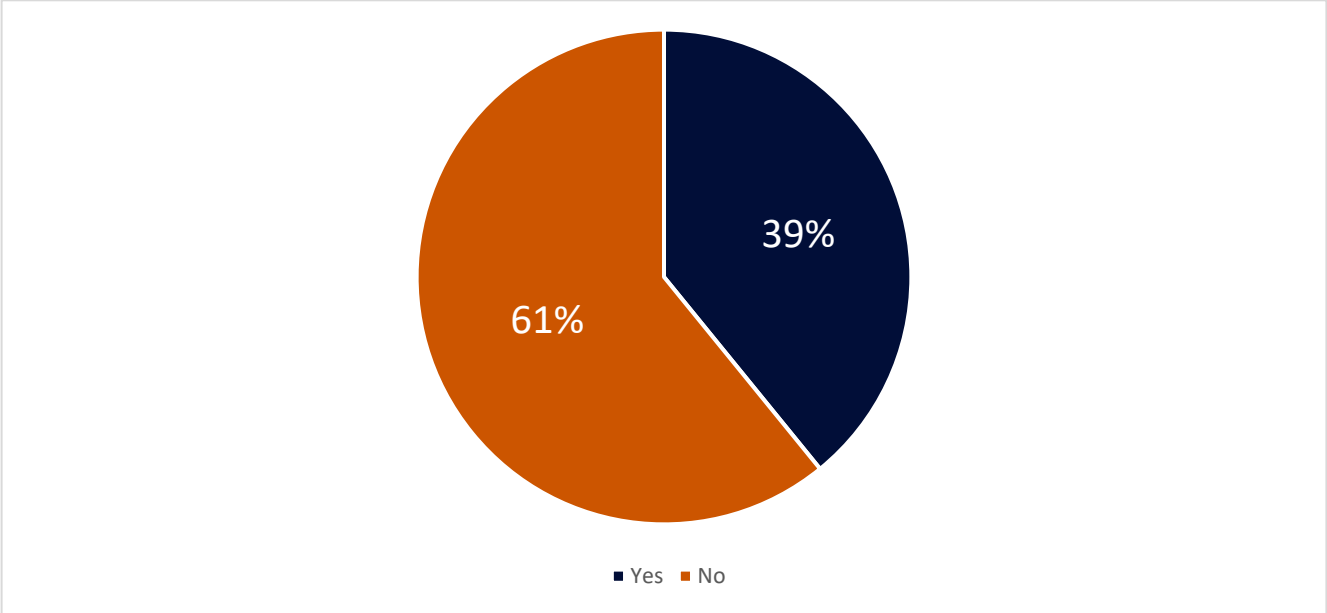
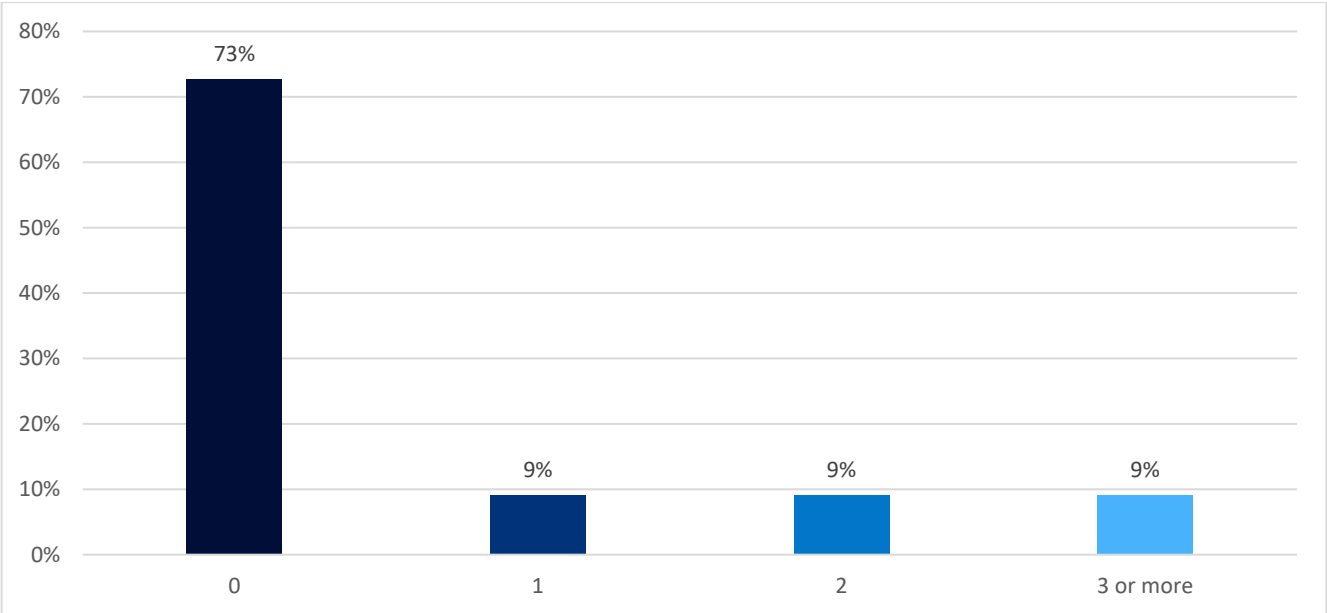


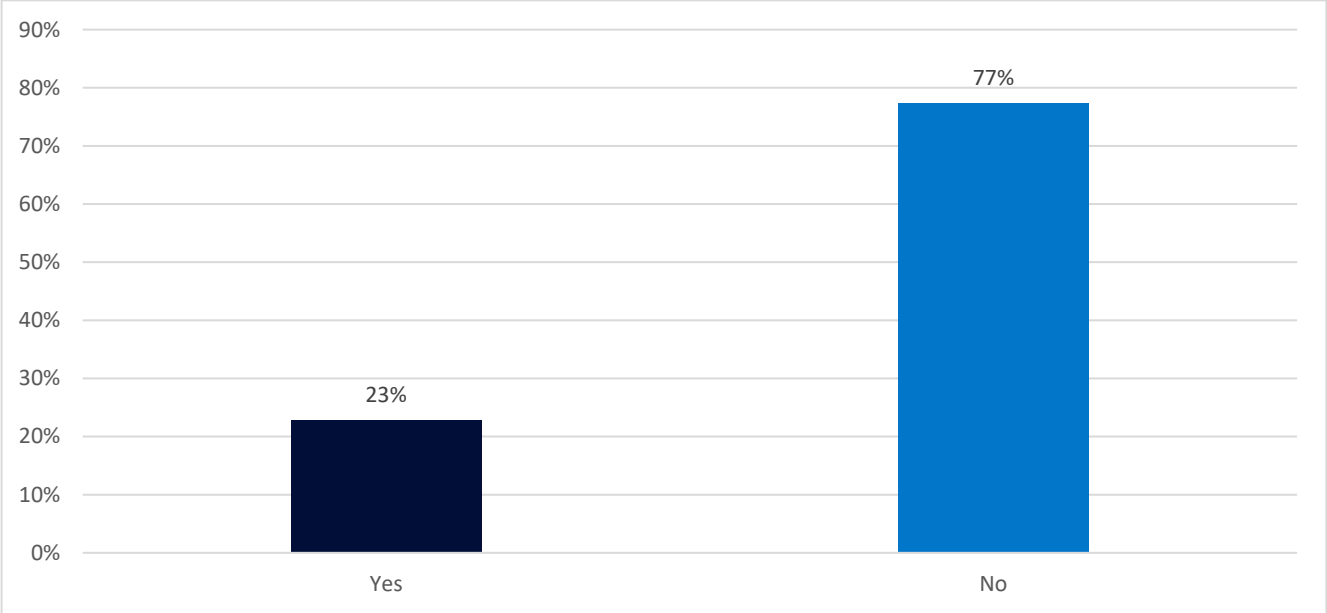
Figure 3-29 shows the total number of cars in each household. A majority of respondents stated that there are zero cars in their household (73%).

Figure 3-29: Number of Cars in Household



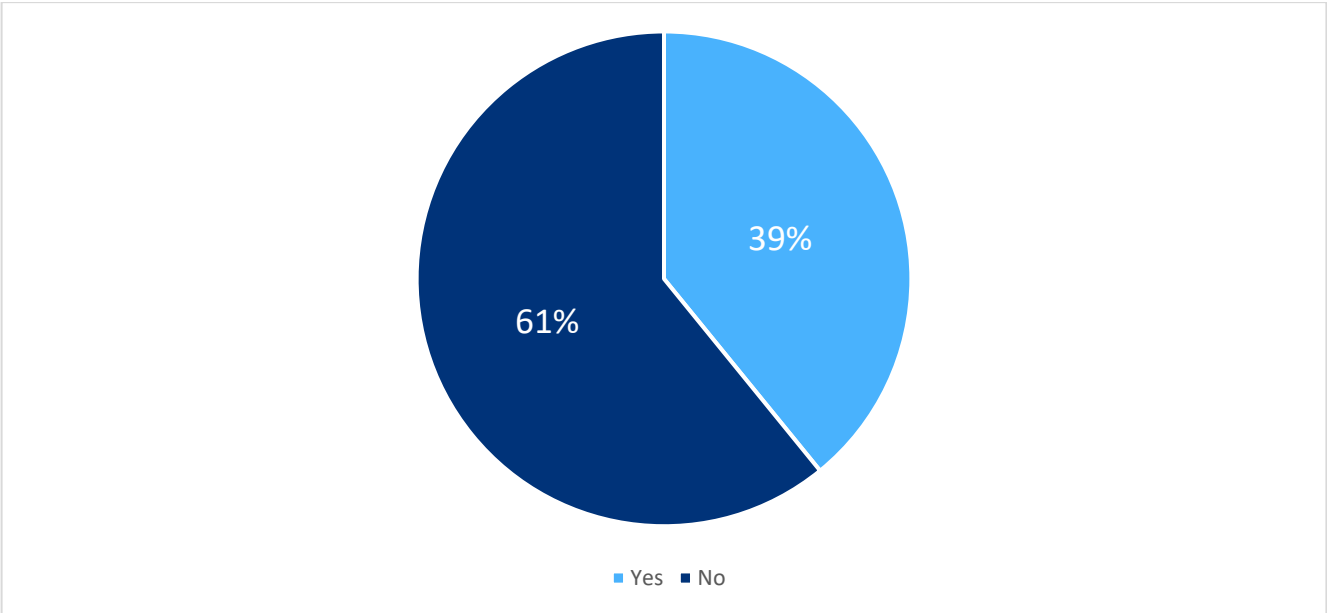
Respondents were then asked about the availability of a car for the current trip they were taking, and 77% stated that a car was not available, as seen in Figure 3-30.

Figure 3-30: Availability of a Car for Current Trip



Riders were also asked about their usage with the Anne Arundel County Transit Service App. As seen in Figure 3-31, 61% of respondents stated that they had not used the app before.

Figure 3-31: Used Anne Arundel County Transit Service App



Respondents were asked about their current employment status and a majority of respondents stated that they are employed full time or employed part-time (57% and 35% respectively), as seen in Figure 3-32.

Figure 3-32: Current Employment Status of Respondent

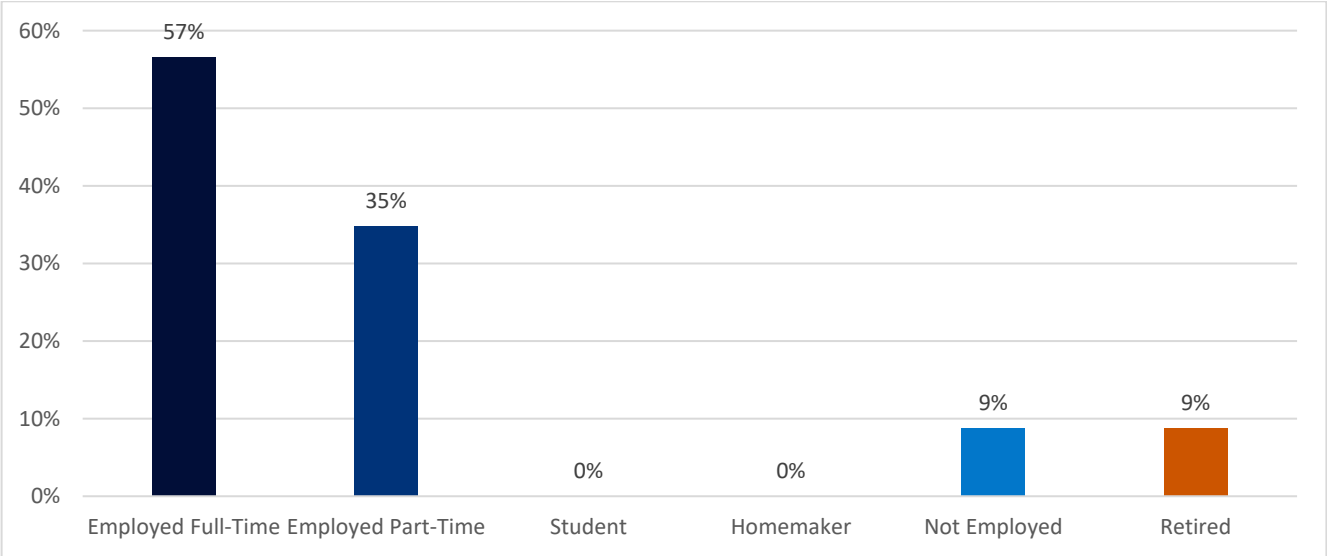
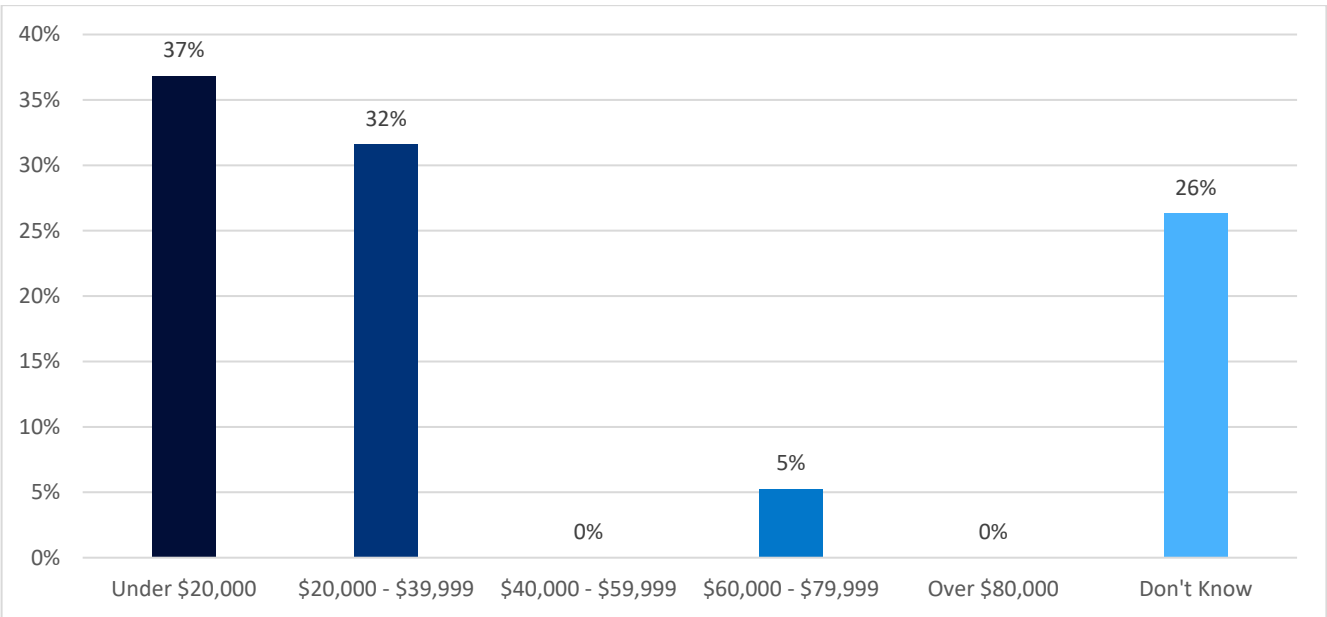


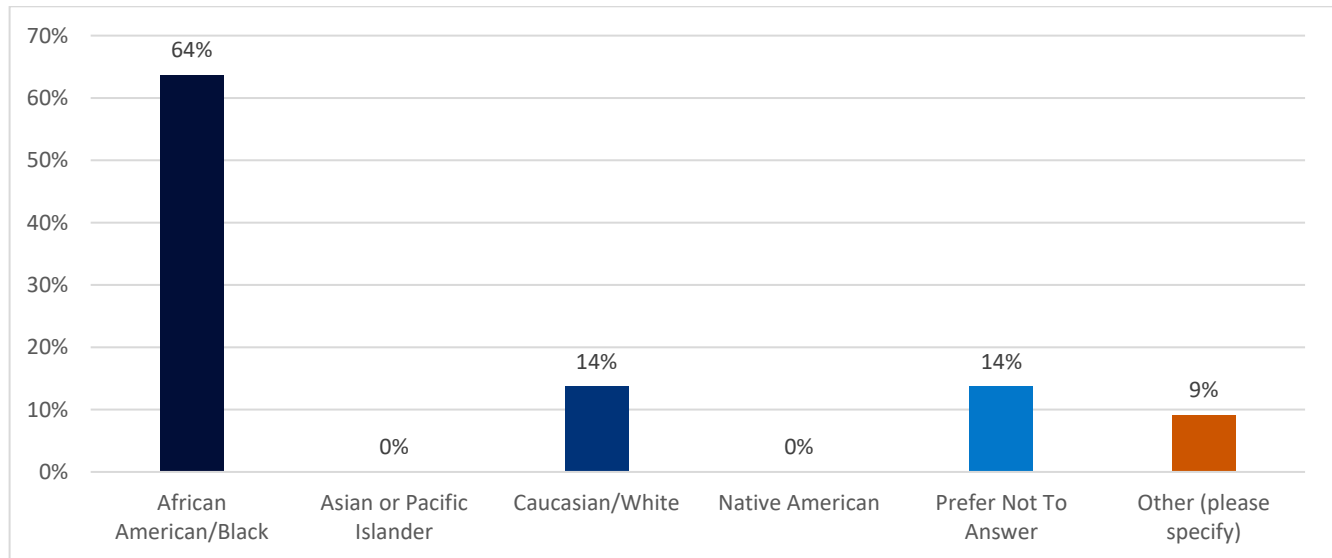
Figure 3-33 shows the total annual household income for the respondents. A majority of respondents stated that their annual household income is either under \$20,000 or between \$20,000 and \$39,999 (37% and 32% respectively).

Figure 3-33: Total Annual Household Income



Respondents were also asked to classify themselves, as seen in Figure 3-34. A majority of respondents stated that they classify themselves as African American/Black (64%).

Figure 3-34: Classification of Respondent



Additional Comments

Finally, respondents were asked to leave additional comments regarding their current trip or transit services in general. The comments primarily involved compliments or complaints of specific drivers.

Stakeholder Interviews

An important task with the TDP process is soliciting perspectives from local stakeholders. In consultation with the Office of Transportation a variety of stakeholders were identified, and then were contacted via email to schedule a brief interview or to complete a questionnaire. This outreach was aimed at getting a sense of public transportation challenges and opportunities in the county. Representatives from the following organizations and agencies provided their input through this process:

- Anne Arundel Department of Aging and Disabilities
- Anne Arundel County Transportation Commission
- BWI Airport – Ground Transportation
- BWI Business Partnership
- Community Alliance of South County
- Housing Commission of Anne Arundel County
- National Security Agency (NSA)
- Regional Transportation Agency (RTA) of Central Maryland
- UM Baltimore Washington Medical Center

The following section provides a summary of the input provided by these stakeholders.

Lack of Knowledge Regarding the Availability of Services

Many stakeholders noted that there is a lack of knowledge and understanding of the Anne Arundel County Transit services. A major demographic population that was noted by stakeholders that are unaware of the transportation services were older adults, especially considering they generally do not utilize cellphones or the internet. Therefore, current marketing for Anne Arundel County Transit services may not be reaching these individuals.

More Frequent and Direct Services

Stakeholders mentioned many different issues regarding timing, locations, and availability of the current services, including:

- Transit riders have to spend a lot of time on buses.
- Riders can spend around two hours commuting with multiple transfers.
- Locations of bus stops are not always accessible, especially for older adults or individuals with disabilities.

Geographic Issues

Although it is not a direct issue with Anne Arundel County Transit, stakeholders noted that Anne Arundel County is a very car-centric county, which acts as a barrier for the system. Another problem that Anne Arundel County Transit faces is the challenging geography of a large county that includes both extensive urbanized and rural areas. For example, the rural southern portion of the county is unable to support a fixed-route system, which creates a lack of transportation options for those residents.

Chapter 4

Review of Demographics and Land Use

Introduction

An important step for the TDP process is to assess current and future transit needs through analysis of demographic and land use data. As part of the broader needs assessment that includes stakeholder and community input discussed in the previous chapter, this analysis helps to guide the development of potential alternatives to improve and expand public transportation services.

The review of demographics and land use includes a general population profile for Anne Arundel County, identification and evaluation of population subgroups who often depend on public transportation services; a review of the demographic characteristics pertinent to a Title VI analysis¹; and assessment of major trip generators. Data sources include the 2020 Census and American Community Survey (ACS) 2014-2019 5-year estimates.

Population Analysis

The following section provides a general population profile for Anne Arundel County, examining historical numbers and future projections.

Population

As shown in Table 4-1, as of the 2020 Five Year ACS Census, Anne Arundel County's population was 588,261, more than a 9% increase from 2010. While Maryland's population grew significantly between 2010 and 2020, Anne Arundel County's population growth exceeded the state's percentage increase.

¹ Title VI is a federal statute that provides "that no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI has been broadened by related statutes, regulations and executive orders, and now includes requirements that transit agencies receiving federal funds must ensure their programs and services do not disproportionately cause adverse impacts on minority populations, low-income populations and limited English proficient (LEP) persons.

Table 4-1: Historical Populations for Anne Arundel County

Place	2010	2016	2020	2010-2016 Percent Change	2016-2020 Percent Change	2010-2020 Percent Change
Anne Arundel	539,198	559,737	588,261	3.81%	5.10%	9.10%
Maryland	5,785,982	5,959,902	6,177,224	3.01%	3.65%	6.76%

SOURCE: ACS 2020 5 YEAR ESTIMATES, TABLE B01003

Population Forecast

Projections developed by the Maryland Department of Planning, shown in Table 4-2, estimate that Anne Arundel County's population will continue to grow, about 9.7% over the next 25 years (to 645,190) in 2045. This is a little less than the projected growth rate of Maryland overall (11.3%).

Table 4-2: Population Projections for Anne Arundel County

Place	2035	2040	2045	Percent Change 2020 - 2045
Anne Arundel	620,350	632,200	645,190	9.67%
Maryland	6,588,760	6,739,410	6,873,330	11.26%

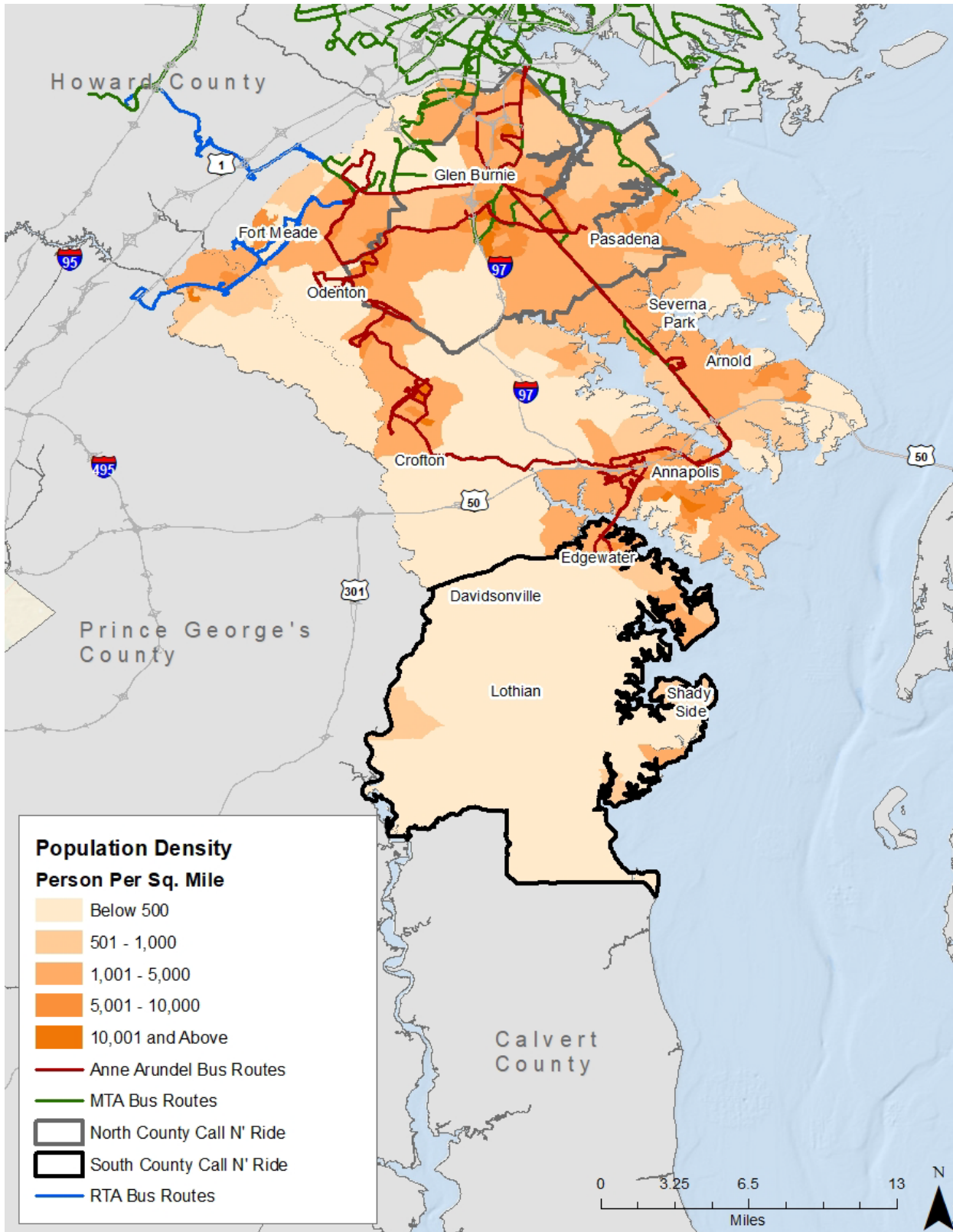
SOURCE: MARYLAND DEPARTMENT OF PLANNING

Population Density

Population density is often an effective indicator of the types of public transit services that are most feasible within a study area. While exceptions always 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 this threshold may be better suited for deviated fixed route, demand response, or on-demand services.

Figure 4-1 portrays the population density for Anne Arundel County at the census block group level. The highest population densities are concentrated in northern Anne Arundel County, with a few clusters of census block groups greater than 10,000 persons per square mile in Annapolis, Fort Meade, Glen Burnie, and Odenton. Conversely, southern Anne Arundel County is rural in nature and much of this region has the lowest percentage of people per square mile. This figure (along with others provided subsequently in this chapter) depicts routes and services operated by Anne Arundel County Transit, as well as routes operated in Anne Arundel County by MDOT MTA and the RTA. As shown most of the areas with the highest population density are served by a current public transit route.

Figure 4-1: Population Density



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Transit Dependent Populations

Public transportation needs are defined in part by identifying the relative size and location of those segments within the general population that are most likely to use transit services. These transit dependent populations include individuals who may not have access to a personal vehicle or are unable to drive themselves due to age or income status. Determining the location of these populations assists in the evaluation of current transit services and the extent to which the services meet community needs.

The Transit Dependence Index (TDI) is an aggregate measure displaying relative concentrations of transit dependent populations. Five factors make up the TDI calculation:

- Population density
- Autoless households
- Elderly populations (ages 65 and older)
- Youth populations (ages 10-17)
- Below poverty populations.

The factors above represent specific socioeconomic characteristics of residents in the region. For each factor, individual block groups were classified according to the prevalence of the vulnerable population relative to the County average. The factors were then put into the TDI equation to determine the relative transit dependence of each block group.

As illustrated in Figure 4-2, the relative classification system utilizes averages in ranking populations. For example, areas with less than the average transit dependent population fall into the “very low” classification, where areas that are more than twice the average will be classified as “Very High.” The classifications “Low, Moderate, and High” all fall between the average and twice the average; these classifications are divided into thirds.

Figure 4-2: Transit Dependent Populations Classification System

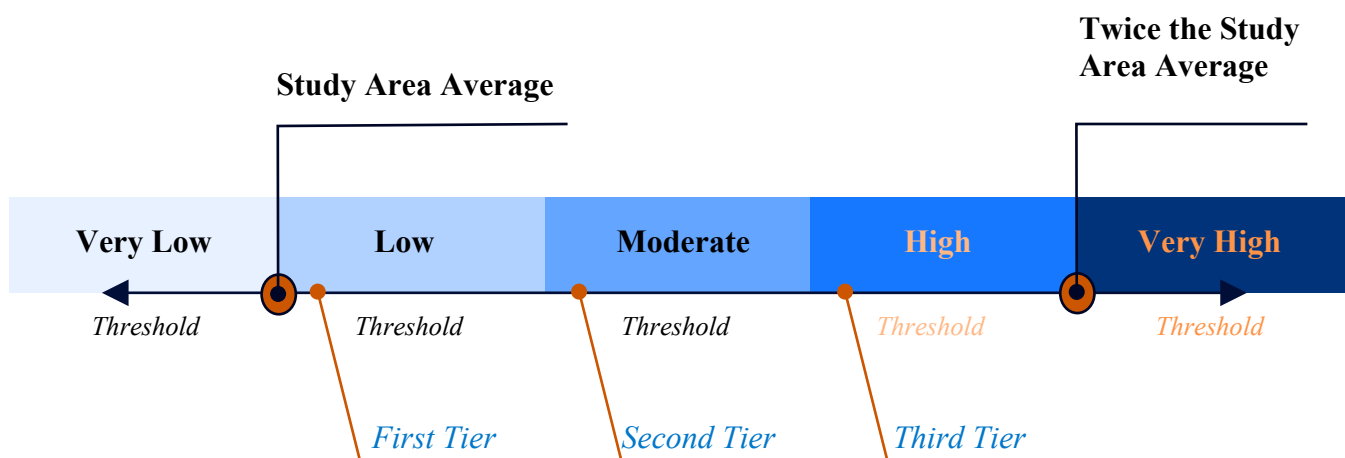


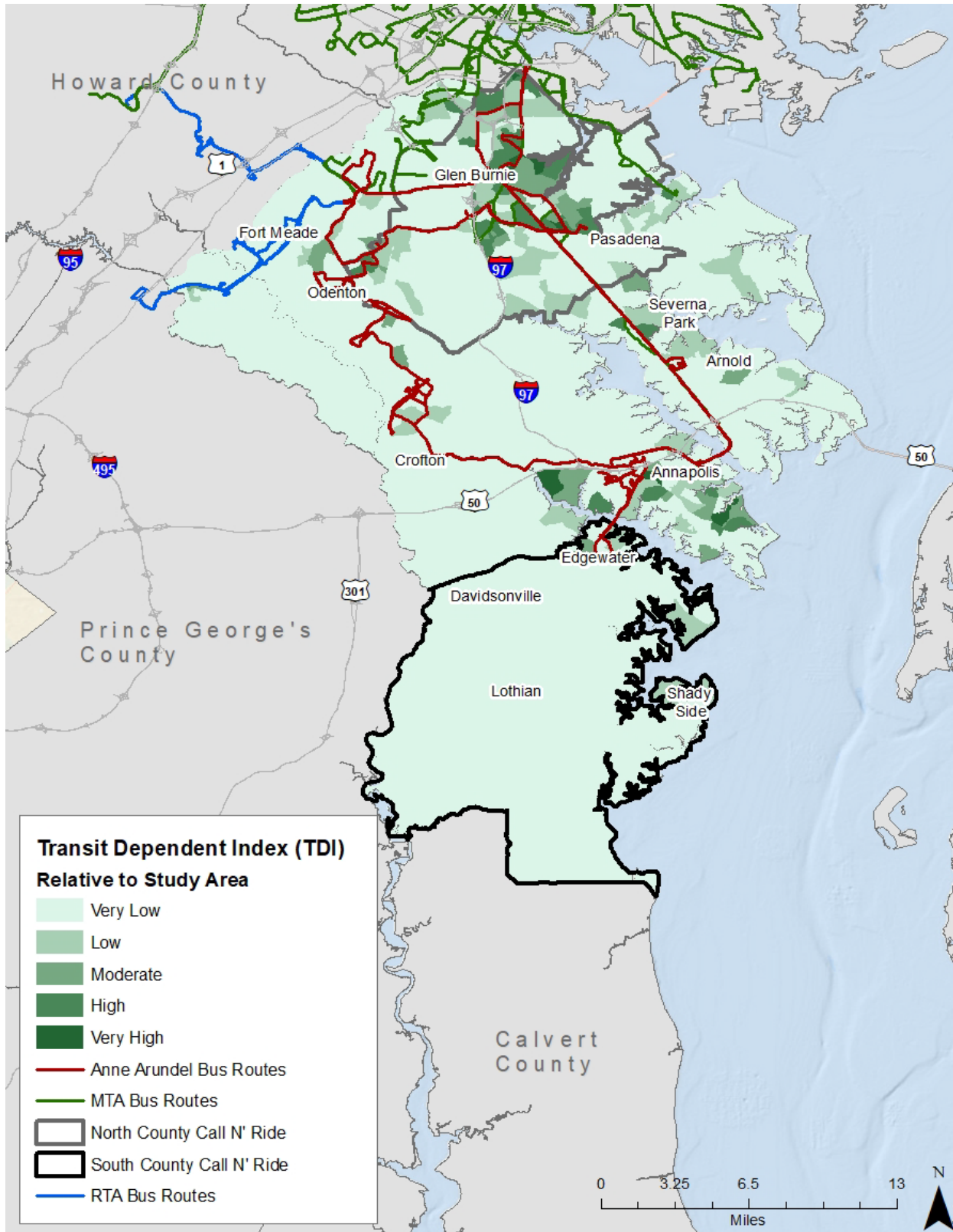
Figure 4-3 displays the TDI rankings for Anne Arundel County. There are a few clusters of census block groups with very high transit dependence concentrated around Annapolis, Edgewater, and Glen Burnie. Areas with “High Need” are located around these three communities, as well as Fort Meade and Severna Park. Overall, the TDI to generally matches the population density pattern.

Most areas with a higher density of persons with a potentially greater need for public transportation are served by a current route. However this does not account for frequency of service and proximity to a bus stop, only that the area has some basic service.

The Transit Dependence Index Percent (TDIP) provides a complementary analysis to the TDI measure. It is nearly identical to the TDI measure except for the exclusion of population density. 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.

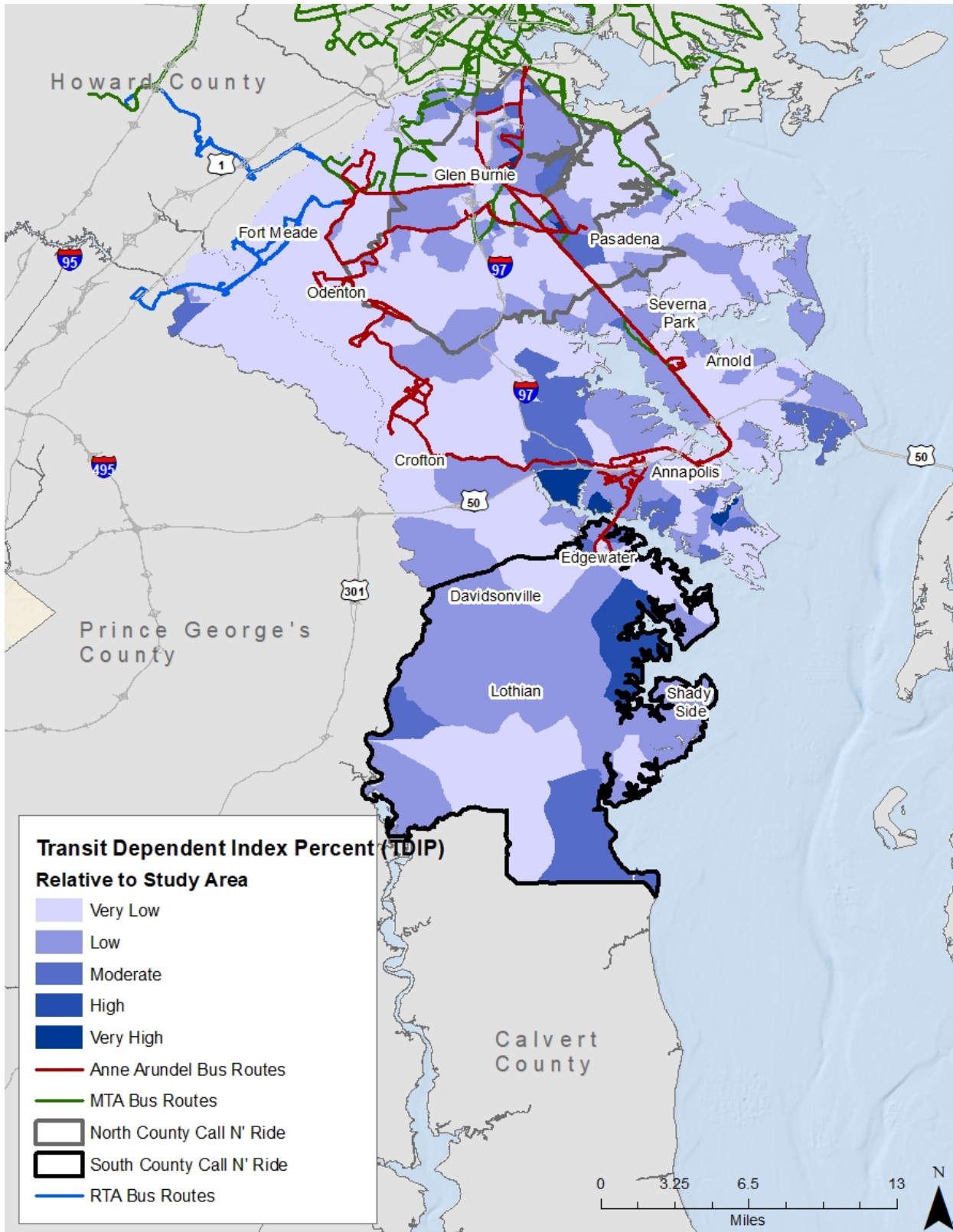
As shown in Figure 4-4, areas with “Very High Needs” are concentrated near Annapolis and Glen Burnie. Areas with “High Needs” are concentrated near Edgewater in an area not served by a current route but through the South County Call N’ Ride service.

Figure 4-3: Transit Dependence Index



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Figure 4-4: Transit Dependence Index Percentage



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Autoless Households

Households without at least one personal vehicle are more likely to depend on the mobility offered by public transit than those households with access to a car. Although autoless households are reflected in both the TDI and TDIP measures, displaying this segment of the population separately is important since most land uses in Anne Arundel County are at distances too far for non-motorized travel.

Figure 4-5 displays the relative number of autoless households. The areas of "Very High" needs are located around Annapolis, Davidsonville, Glen Burnie, Fort Meade, Lothian, Odenton, and Shady Side. The areas with high needs that do not fall near the current Anne Arundel County Transit bus routes include Davidsonville, Lothian, and Shady Side in the southern portion of the county where there is less population and population density, and where the South County Call N' Ride service operates.

Senior Adult Population

A second socioeconomic group analyzed by the TDI and TDIP indices is the senior population. Individuals ages 65 and older may scale back their use of personal vehicles as they age, leading to greater reliance on public transportation compared to those in other age brackets. Figure 4-6 displays the relative concentration of seniors in Anne Arundel County. The block groups classified as "Very High" are located around Annapolis, Glen Burnie, and Edgewater; and in the southernmost portion of Anne Arundel County that is the only area that does not fall along a current bus route but is served by the South County Call N' Ride service.

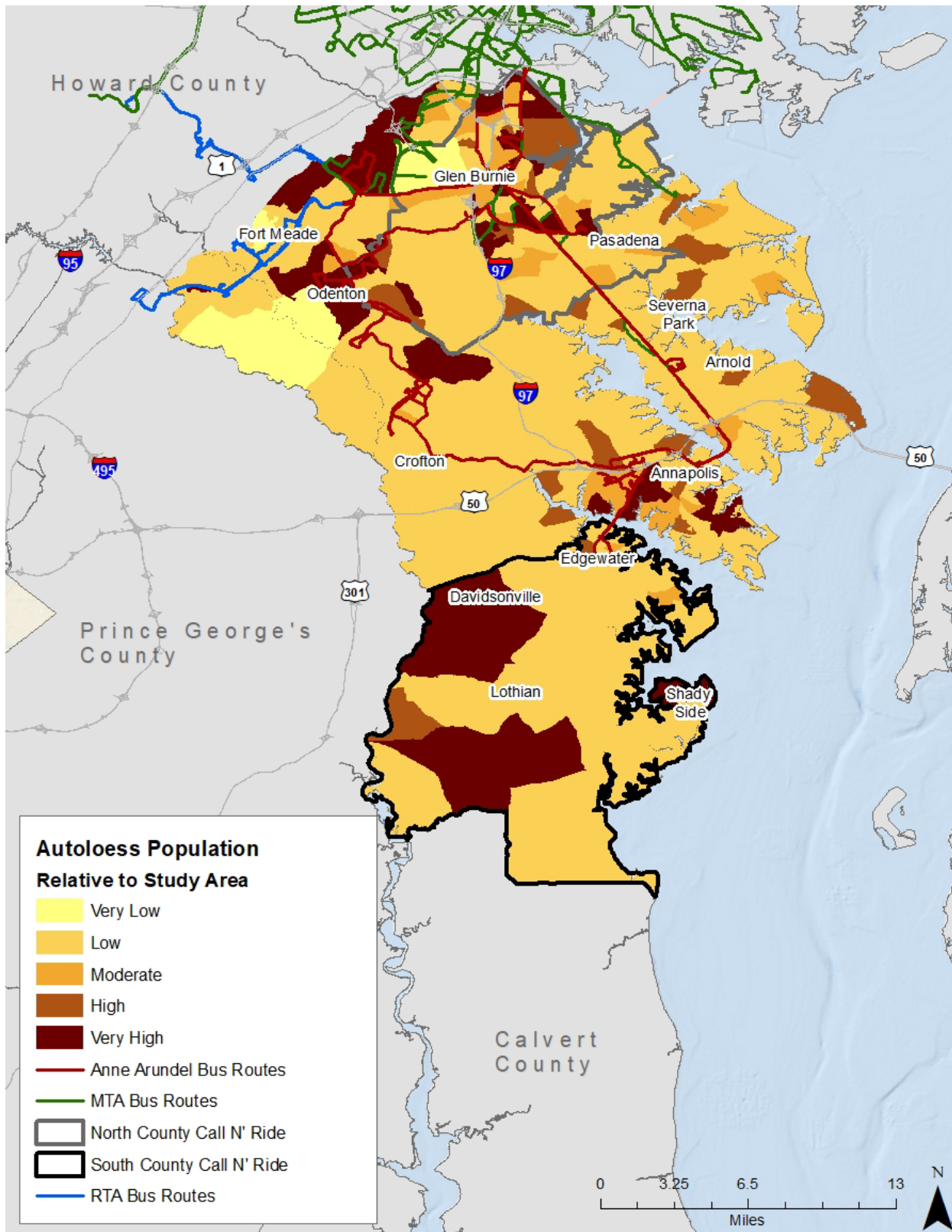
Youth Population

Youths and teenagers, ages 10 to 17 years, who cannot drive or are just beginning to drive but do not have an automobile available, appreciate the continued mobility from public transportation. Areas labeled as "Very High" are concentrated near Edgewater, Odenton, and Pasadena, areas served. Figure 4-7 illustrates the population breakdowns of youth populations in Anne Arundel County, indicating that most areas with higher youth populations are served by a route or through one of the on-demand services.

Individuals with Disabilities

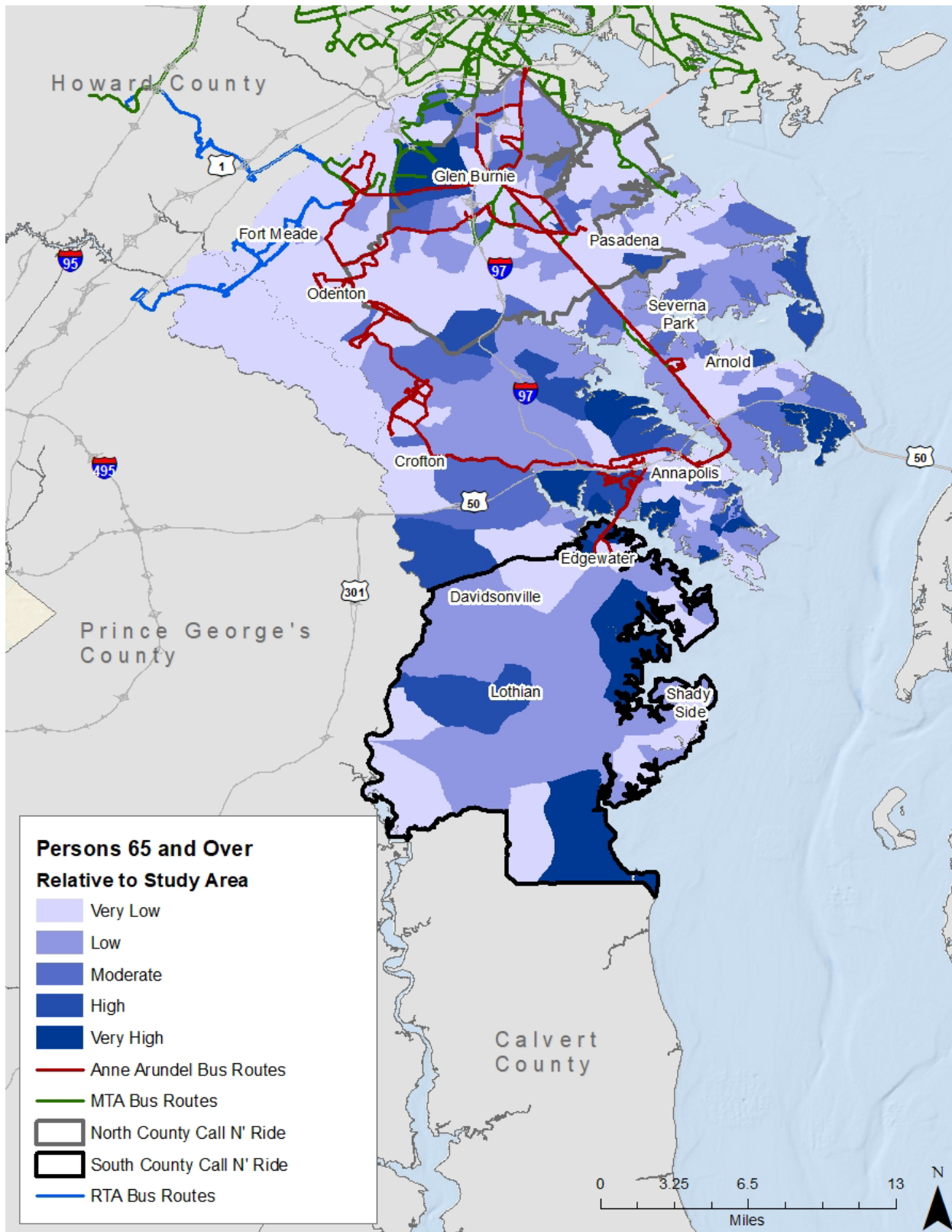
Individuals with disabilities may be unable to operate a personal vehicle and consequently are more likely to rely on public transportation. As shown in Figure 4-8, block groups near Annapolis and Glen Burnie have "Very High" needs for individuals with disabilities. The block groups classified with "High" needs are located near Annapolis and Glen Burnie where current routes operate, or in the Shady Side area that is part of the South County Call N' Ride service area.

Figure 4-5: Autoless Households in the Study Area



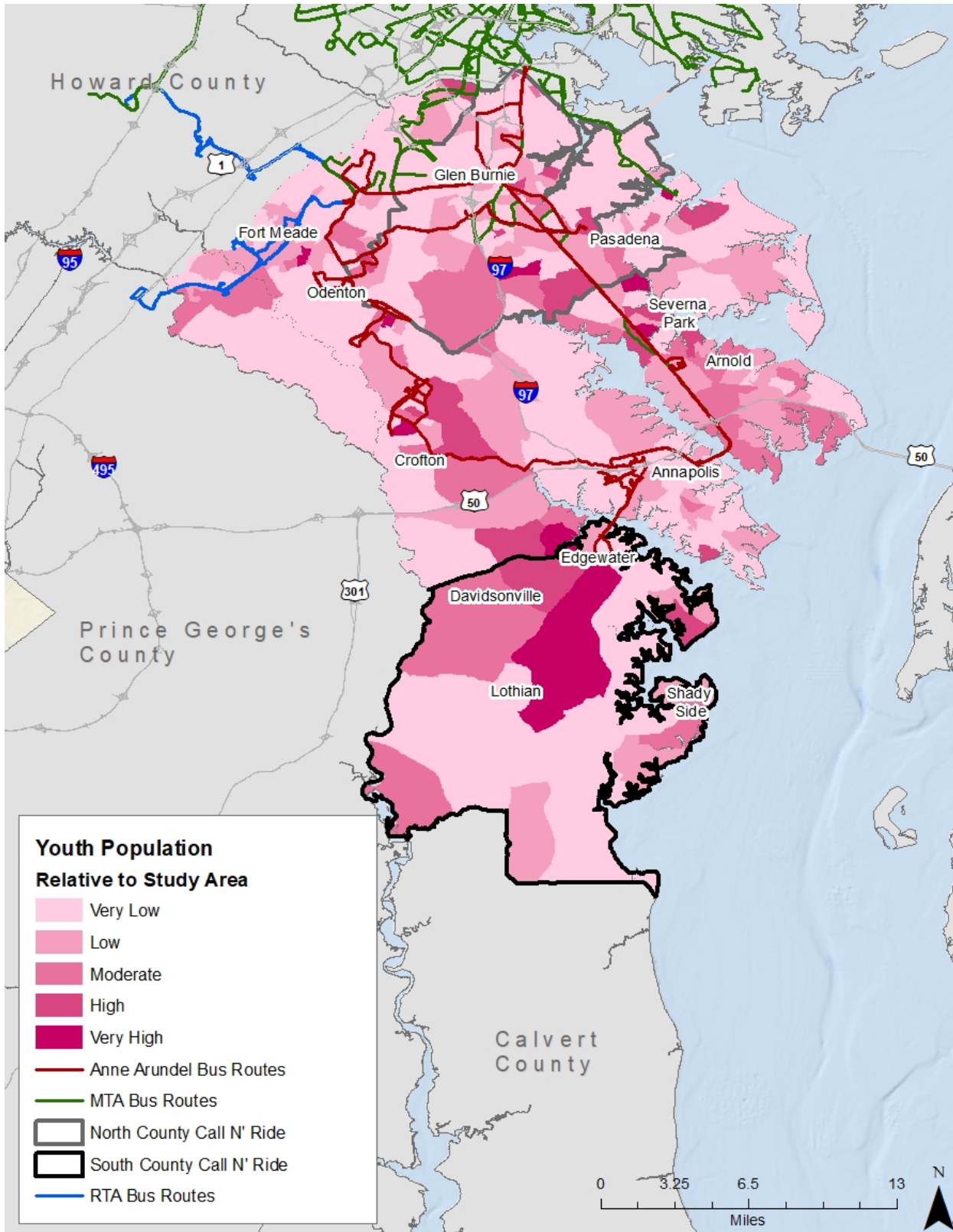
AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Figure 4-6: Senior Adult Population in the Study Area



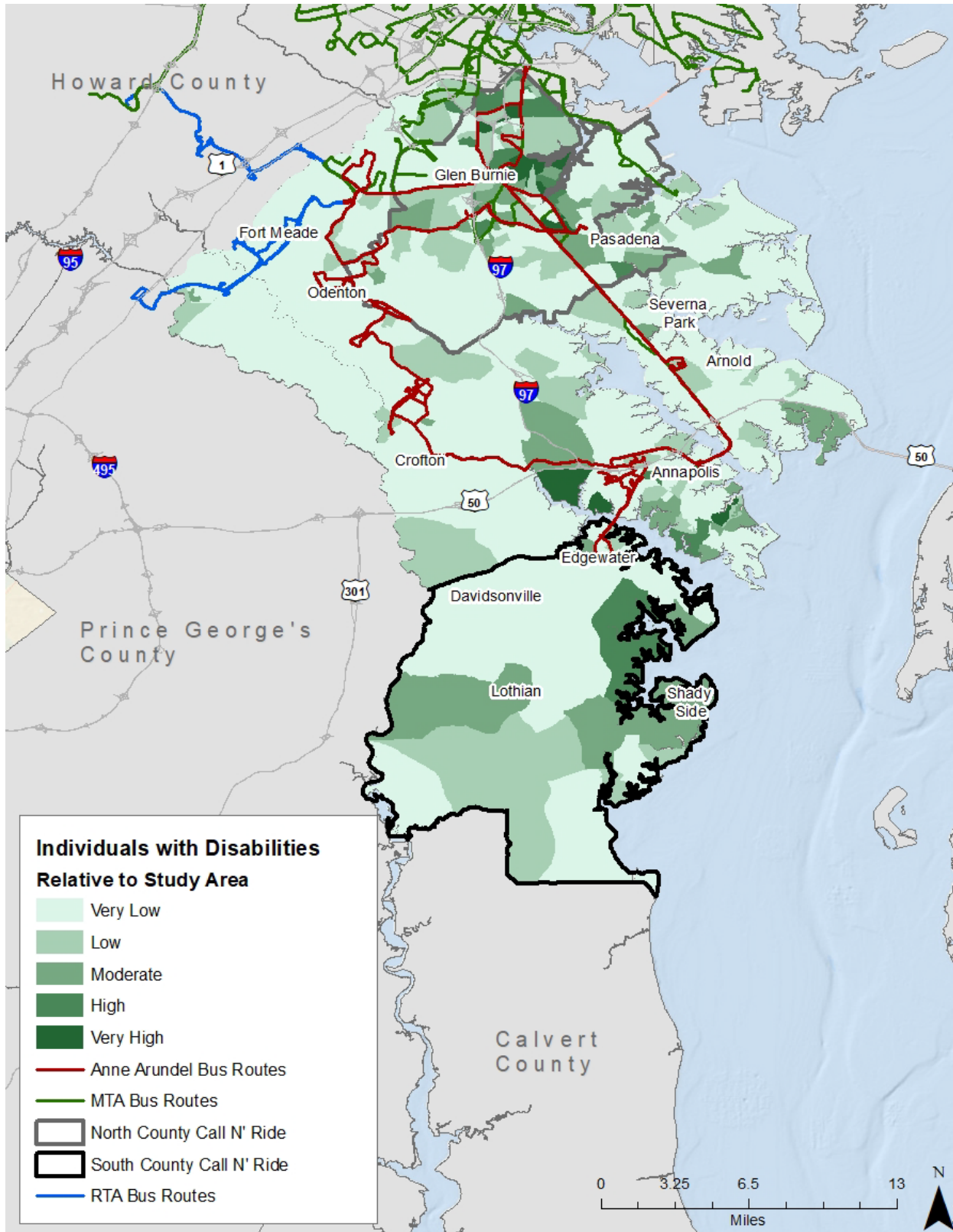
AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Figure 4-7: Youth Population in the Study Area



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Figure 4-8: Individuals with Disabilities in the Study Area



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Title VI Demographic Analysis

As part of the Civil Rights Act of 1964, Title VI prohibits discrimination based on race, color, or national origin in programs and activities receiving federal subsidies. This includes agencies providing federally funded public transportation. The following section examines the minority and below poverty populations within Anne Arundel County. It then summarizes the prevalence of residents with Limited-English Proficiency (LEP).

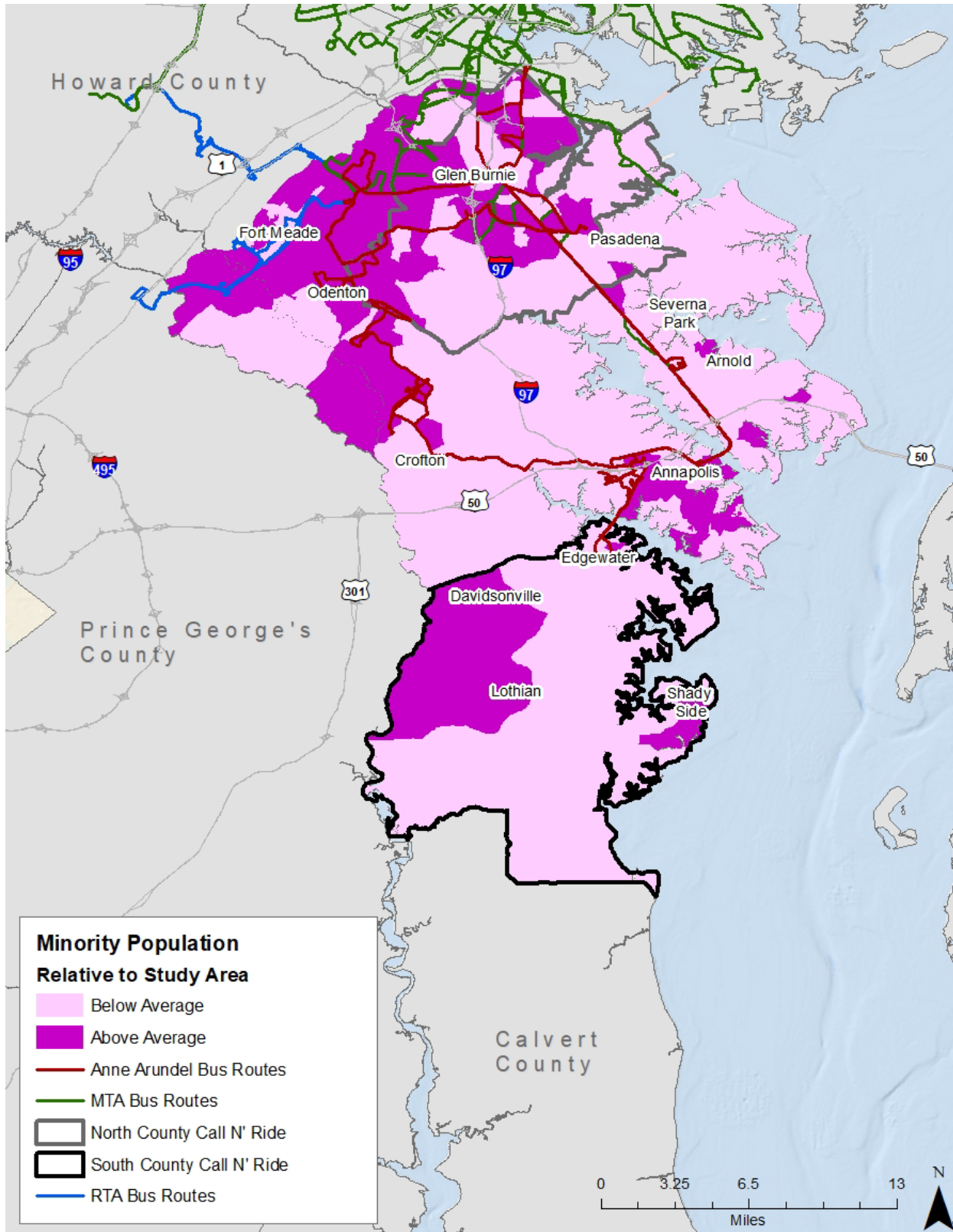
Minority Population

It is important to ensure that areas with an above average percentage of racial and/or ethnic minorities are not disproportionately impacted by any proposed alterations to existing public transportation services. Figure 4-9 depicts the percentage of minority persons per block group in Anne Arundel County. A majority of the block groups are clustered within the northwestern area of Anne Arundel, as well as scattered around Annapolis, Davidsonville, Pasadena, and Severna Park, all areas with basic transit services or located in areas with on-demand services.

Below Poverty Level Population

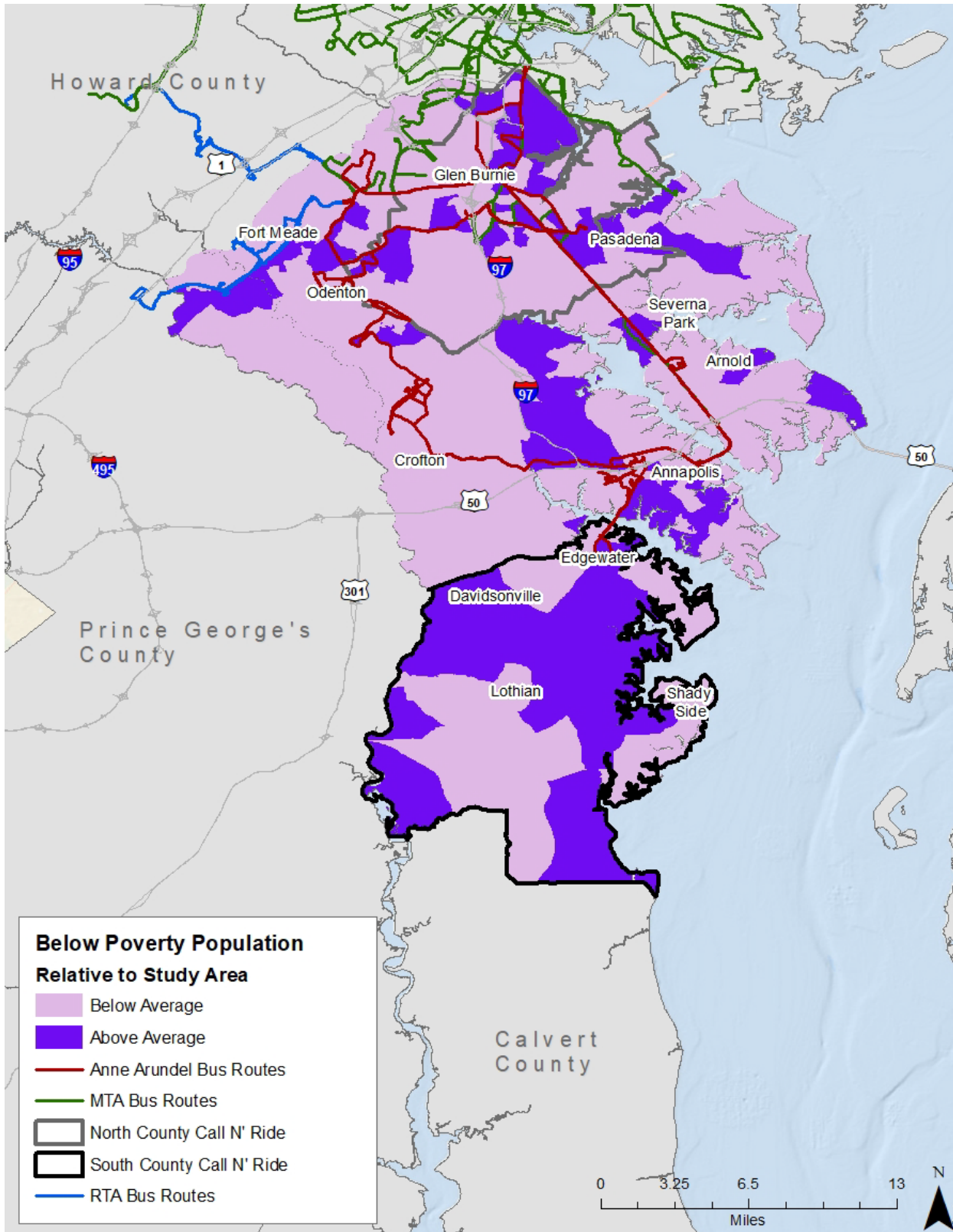
The second socioeconomic group included in the Title VI analysis represents those individuals who earn less than the federal poverty level. These individuals face financial hardships that may make the ownership and maintenance of a personal vehicle difficult. In such cases, they may be more likely to depend on public transportation. Figure 4-10 depicts the percentage of below poverty individuals per block group. The block groups that have a below poverty population are greatly dispersed throughout the county, with some in areas not currently served that can be further analyzed through the development of service alternatives.

Figure 4-9: Minority Individuals in the Study Area



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

Figure 4-10: Individuals Below Poverty in the Study Area



AMERICAN COMMUNITY SURVEY (ACS) 5 YEAR SAMPLE – 2018 TO 2022

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. Limited English Proficiency (LEP) population is a count of people who do not speak English as their primary language and their ability to speak English is less than “very well.” Title VI’s Safe Harbor Provision stipulates that recipients of federal funding must provide written translations of all “vital documents” for each language group with an LEP population that makes up 5% or 1,000 persons (whichever is less) of the total population of the service area.

As shown in Table 4-3, Anne Arundel County residents predominately speak English (89.45%). Spanish is the next most prevalent language (5.02%).

Table 4-3: Limited English Proficiency for Anne Arundel County

Anne Arundel County	Total Population	Percent of County Population	Estimated LEP Population	Percent of LEP County Population
Total Population 5 years and over	519,917			
Language Spoken - Total Population 5 years and older				
English only	465,069	89.45%		
Spanish or Spanish Creole	26,124	5.02%	9,852	1.89%
French (incl. Patois, Cajun)	2,154	0.41%	315	0.06%
French Creole	202	0.04%	139	0.03%
Italian	728	0.14%	129	0.02%
Portuguese or Portuguese Creole	880	0.17%	137	0.03%
German	1,994	0.38%	317	0.06%
Other West Germanic Languages	145	0.03%	40	0.01%
Scandinavian Languages	82	0.02%	0	0.00%
Greek	737	0.14%	78	0.02%
Russian	723	0.14%	181	0.03%
Polish	509	0.10%	156	0.03%
Serbo-Croatian	249	0.05%	60	0.01%
Other Slavic Languages	433	0.08%	72	0.01%
Armenian	74	0.01%	0	0.00%
Persian	406	0.08%	41	0.01%
Gujarati	468	0.09%	151	0.03%
Hindi	627	0.12%	271	0.05%
Urdu	1,032	0.20%	321	0.06%
Other Indic Languages	1,397	0.27%	794	0.15%
Other Indo-European Languages	519	0.10%	83	0.02%
Chinese	2,103	0.40%	673	0.13%

Anne Arundel County	Total Population	Percent of County Population	Estimated LEP Population	Percent of LEP County Population
Japanese	457	0.09%	58	0.01%
Korean	2,751	0.53%	1557	0.30%
Mon-Khmer, Cambodian	241	0.05%	122	0.02%
Thai	193	0.04%	108	0.02%
Laotian	84	0.02%	0	0.00%
Vietnamese	1,205	0.23%	687	0.13%
Other Asian Languages	1,461	0.28%	377	0.07%
Tagalog	2,810	0.54%	863	0.17%
Other Pacific Island Languages	284	0.05%	108	0.02%
Navajo	49	0.01%	0	0.00%
Other Native North American Languages	8	0.00%	0	0.00%
Hungarian	99	0.02%	0	0.00%
Arabic	551	0.11%	280	0.05%
Hebrew	341	0.07%	34	0.01%
African Languages	2,387	0.46%	348	0.07%
Other and Unspecified Languages	341	0.07%	215	0.04%

SOURCE: AMERICAN COMMUNITY SURVEY, FIVE-YEAR ESTIMATES (2011-2015), TABLE B16001.

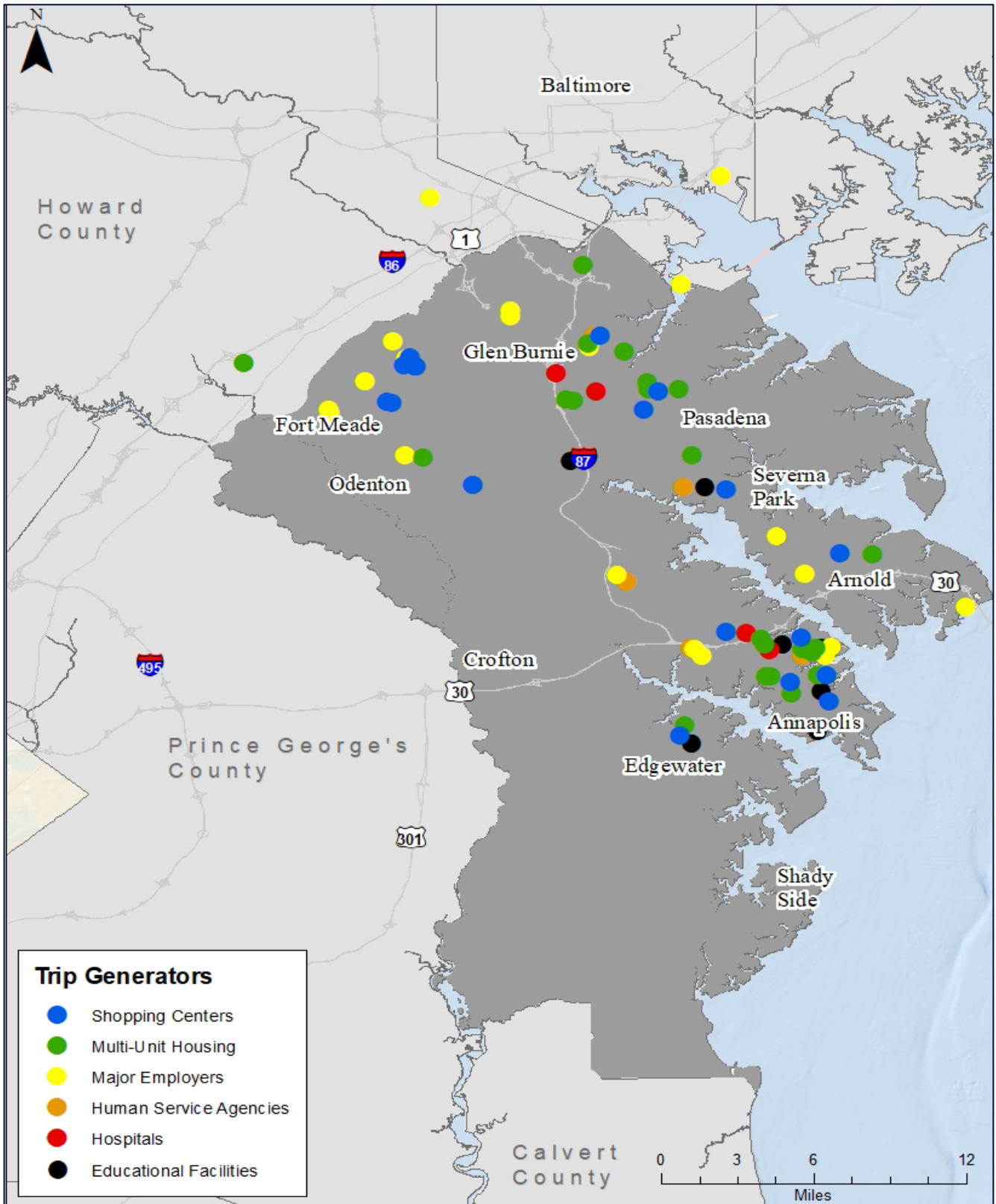
Land Use Profile

Major Trip Generators

Identifying land uses and major trip generators in Anne Arundel County complemented the above demographic analysis by indicating where transit services may be most needed. Trip generators attract transit demand and include common origins and destinations, like multi-unit housing, major employers, medical facilities, educational facilities, non-profit and governmental agencies, and shopping centers, as seen in Figure 4-11.

A detailed list of all major trip generators by category is provided in Appendix F, and will be supplemented by new or planned developments, housing, or employment centers known to the county that may impact planning for transit services in the future.

Figure 4-11: Major Trip Generators



Employment Travel Patterns

In addition to considering the location of Anne Arundel County's major employers, it is also important to account for the commuting patterns of residents working inside and outside of the counties. According to the 2019 ACS five-year estimates, 59.8% of Anne Arundel County workers work at locations within the county. As shown in Table 4-4, this level of in-county commuting is higher than for Maryland overall. About 30.9% of residents work outside Anne Arundel County and 9.16% work outside the state.

Table 4-4: Journey to Work Patterns

Place of Residence	Maryland		Anne Arundel County	
Workers 16 Years and Older	3,047,112		302,608	
Location of Employment	Number	Percent	Number	Percent
In State of Residence	2,559,866	84.01%	274,904	90.84%
In County of Residence	1,686,564	55.35%	181,231	59.89%
Outside County of Residence	873,302	28.66%	93,673	30.96%
Outside State of Residence	487,246	15.99%	27,704	9.16%
Means of Transportation to Work	Number	Percent	Number	Percent
Car, Truck, or Van - Drive Alone	2,196,630	72.09%	236,723	78.23%
Car, Truck, or Van - Carpooled	262,550	8.62%	21,993	7.27%
Public Transportation	226,646	7.44%	10,072	3.33%
Walked	64,877	2.13%	5,357	1.77%
Taxicab, Motorcycle, Bicycle, Other	49,186	1.61%	3,380	1.12%
Worked at Home	247,223	8.11%	25,083	8.29%

SOURCE: ACS, FIVE-YEAR ESTIMATES (2015 - 2019), TABLE B08130

Another source of data that provides an understanding of employee travel patterns is the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) dataset. Figures 4-12 and 4-13 illustrate the results of this analysis. As of 2019, the top five employment destinations for Anne Arundel County residents include Baltimore City, Parole, Washington DC, Annapolis City, and Glen Burnie, as seen in Figure 4-13. Figure 4-12 shows where Anne Arundel Workers live, and the top five residence areas include Baltimore City, Glen Burnie, Annapolis City, Severna Park, and Severn.

The Justice40 Initiative, signed into Executive Order in 2021, aims to deliver 40% of the overall benefits of federal investments in climate and clean energy, which includes sustainable transportation. Figure 4-14 shows the disadvantaged communities that are covered under the Justice40 grant program. Although the disadvantaged communities are scattered throughout Anne Arundel County, a high number are located in the southern portion of the county. This area is currently served through the on-demand services.

The RAISE grant program states that in order to be defined as an area of persistent poverty, the census tract needs to have a poverty rate of at least 20 percent, which is measured by the 2014-2018 5-year data series. Anne Arundel County only has a single census tract near Annapolis that qualifies as an area of persistent poverty, as seen in Figure 4-15.

Figure 4-12: Where Anne Arundel Workers Live

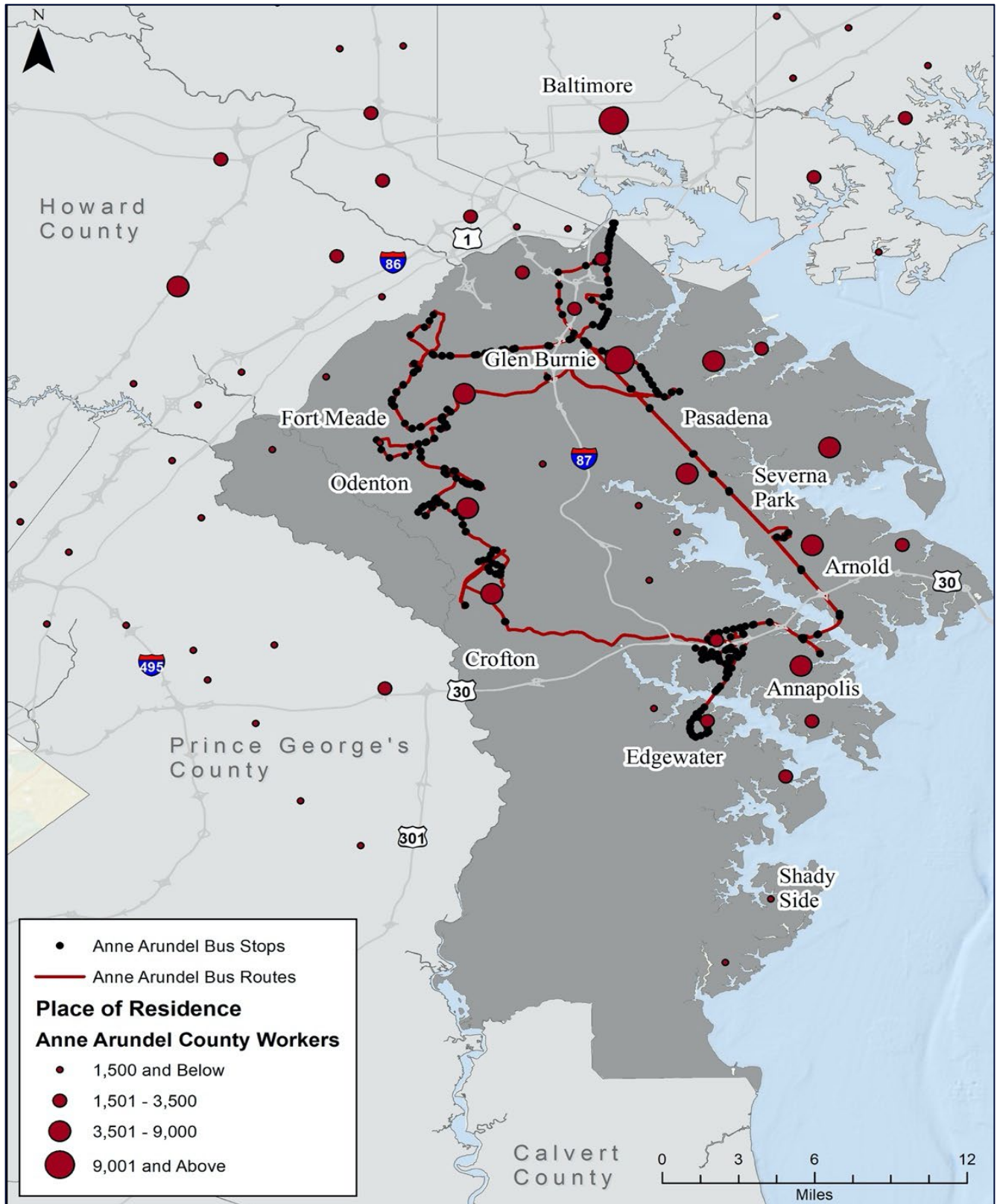


Figure 4-13: Where Anne Arundel Workers are Employed

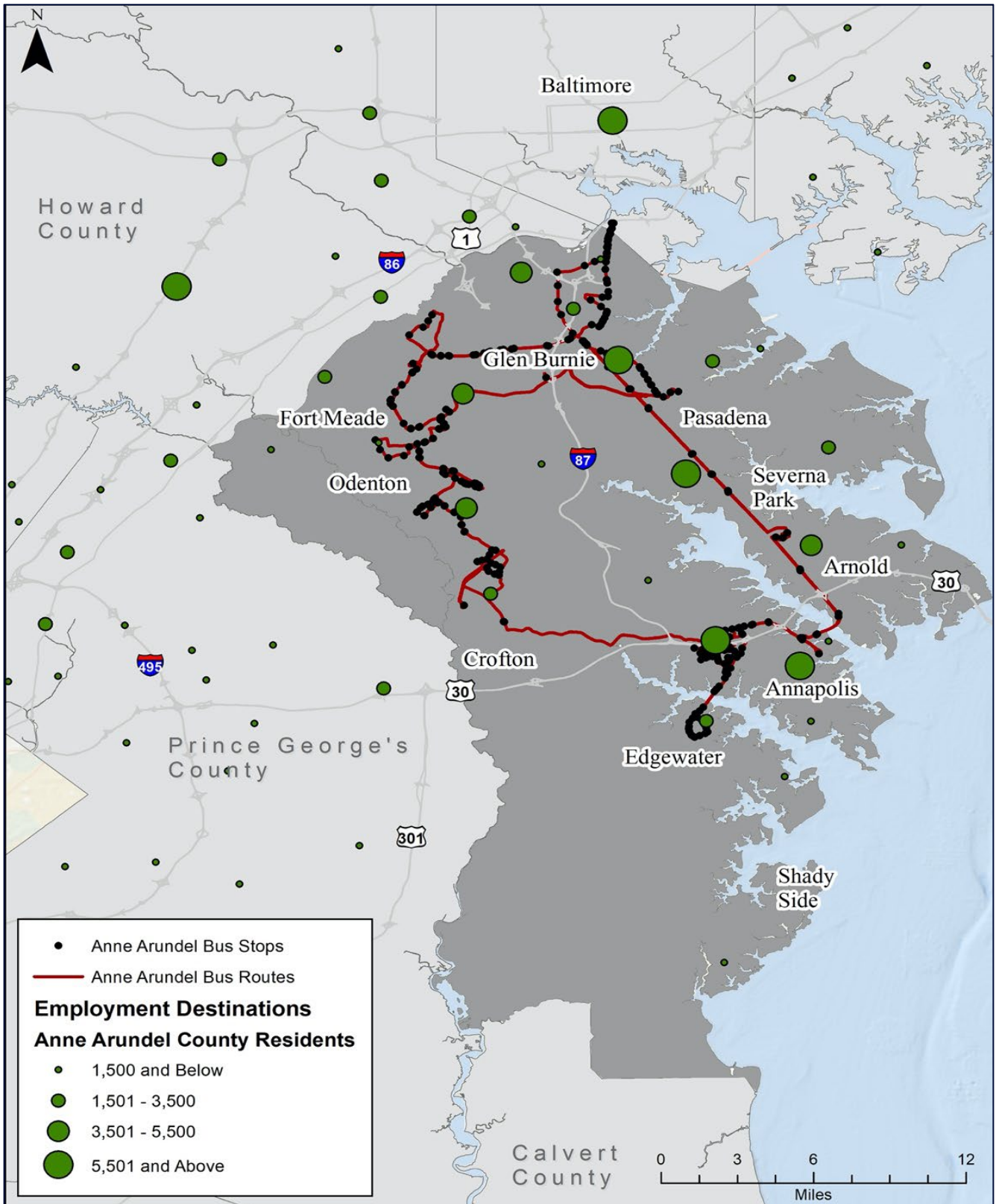


Figure 4-14: Anne Arundel Justice40

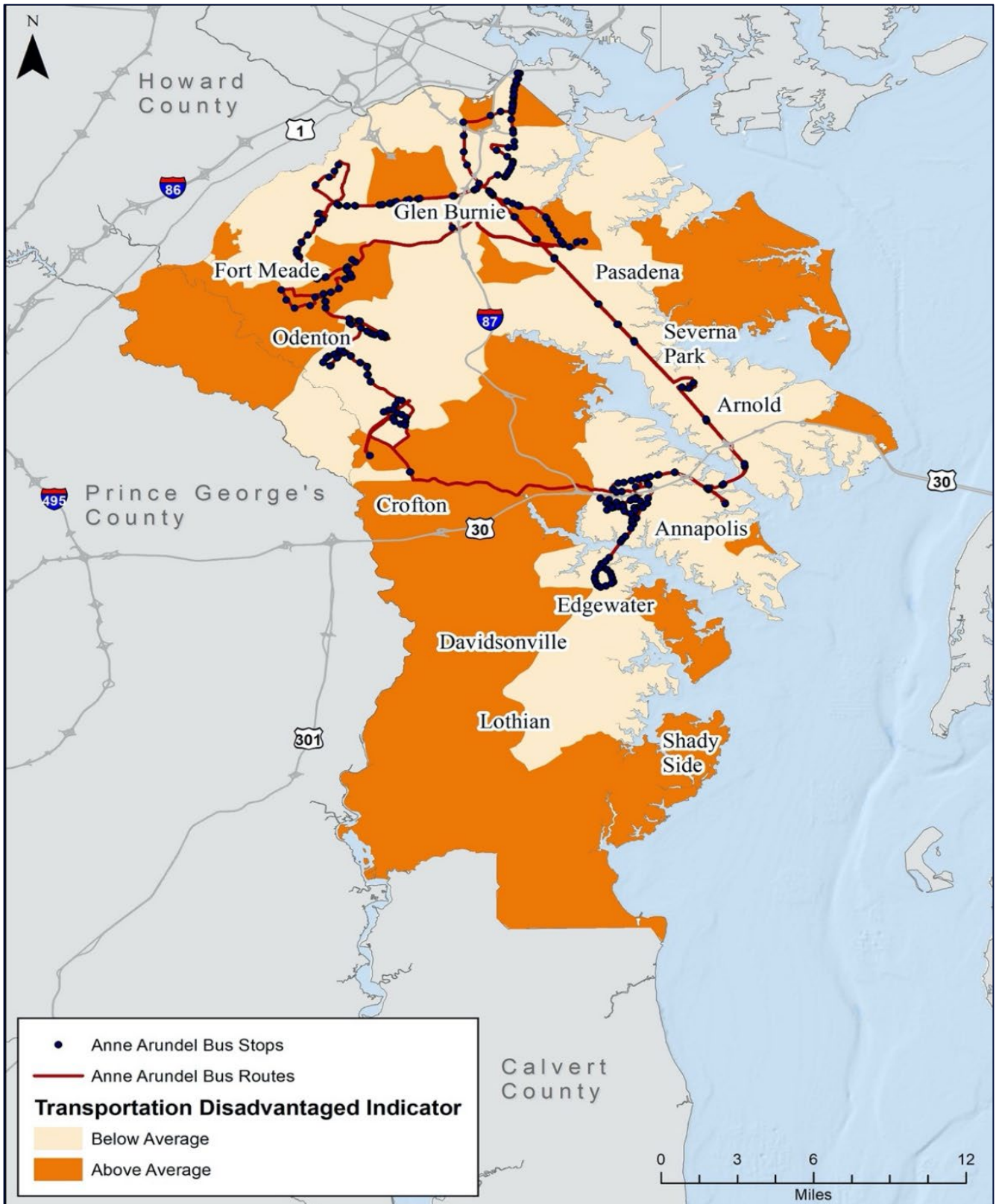
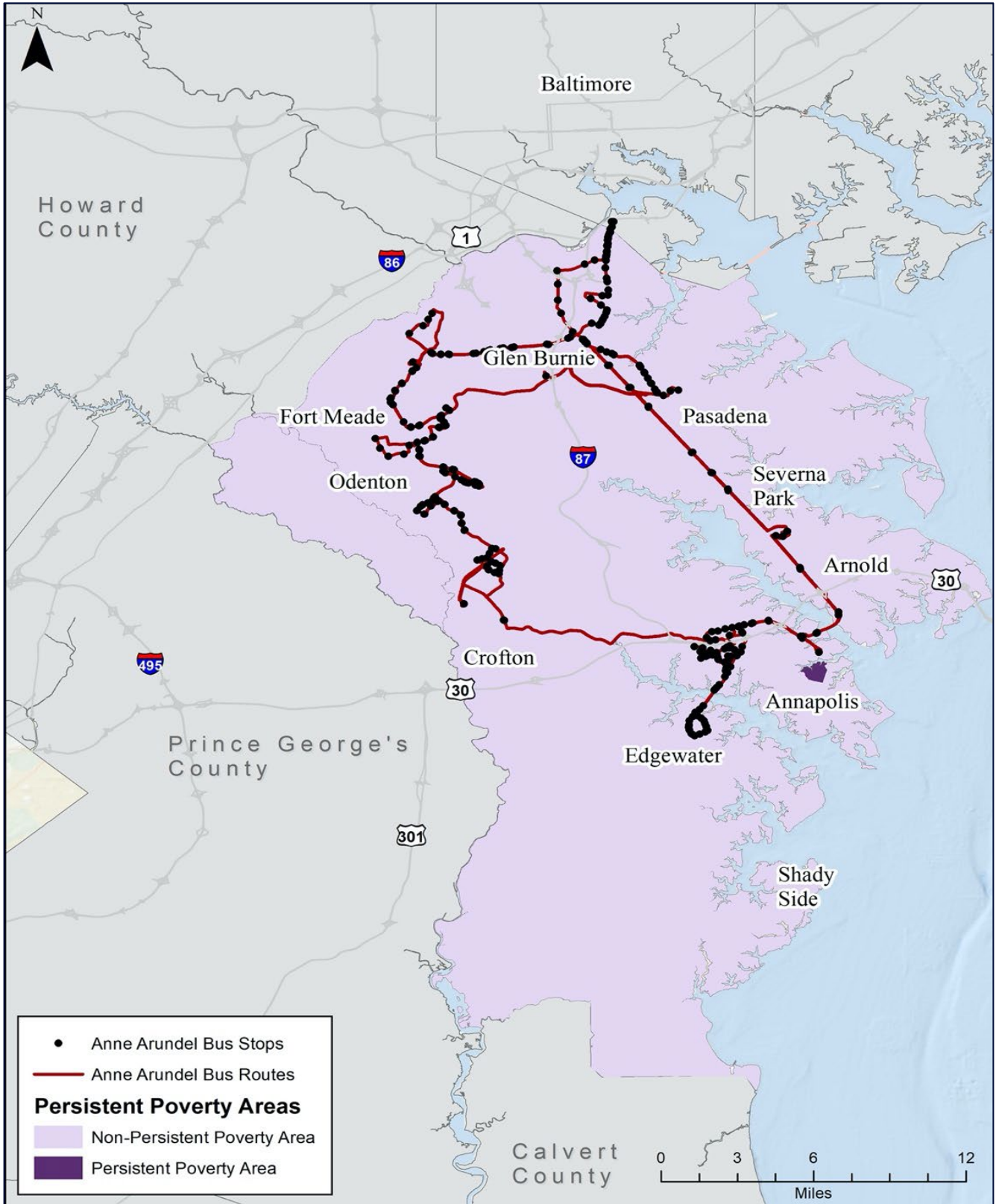


Figure 4-15: Anne Arundel Persistent Poverty



Chapter 5

Service Alternatives

Introduction

This chapter presents service alternatives to improve and expand public transportation services in Anne Arundel County. Preliminary alternatives were developed based on a review of current services, the analysis of current and future demographics, and input from customers, residents, and various agency representatives, and then updated based on input from Office of Transportation staff.

The alternatives discussed in this chapter include a summary of each proposal, and as appropriate the potential advantages, disadvantages, and estimates of costs and ridership. They focus on:

- Potential new county routes to expand geographic coverage of the current transit system.
- Regional services identified through the TDP process and other previous or current planning efforts.
- Increased use of on-demand microtransit services to fill gaps in service areas and provide first mile-last mile connections with current and future routes.

It should be noted that these alternatives were developed at a time when Anne Arundel County Transit, like other transit providers in Maryland and throughout the country, was just recovering from the significant impact from the COVID-19 pandemic on transit capacity and demand. Looking ahead, the alternatives are designed to provide the foundation for improvements and expansions in the future as the recovery from the pandemic continues. In addition, the proposed alternatives will need further analysis and more detailed service planning in the future before implementation to take into account any ongoing ramifications from the pandemic, or other changing conditions in Anne Arundel County or with transit services in Maryland.

Background: Review of 2018 Proposed Alternatives

The 2018 Central Maryland TDP proposed a variety of service alternatives, and those served as the basis for an initial discussion with the Office of Transportation and MDOT MTA on potential improvements to be included in this current Anne Arundel County plan. Based on this discussion, appropriate alternatives are incorporated into the following section and future transit options.

ADA Paratransit Impacts of Proposed Alternatives

The Americans with Disabilities Act (ADA) requires public transit agencies that provide fixed-route service to provide “complementary paratransit” service to people with disabilities who cannot use the service because of a disability. The regulations also define minimum service characteristics that must be met for this service to be considered equivalent to the fixed-route service it is intended to complement. In general, ADA complementary paratransit service must be provided within 3/4 of a mile of a bus route, at the same hours and days.

As discussed in Chapter 2, Anne Arundel County Transit provides complementary ADA paratransit service for individuals who are unable to use fixed route bus service due to a disability. The proposed alternatives would serve new areas, and therefore when implemented would require similar complementary ADA paratransit service within a ¾ mile buffer around any new routes (in addition to existing bus routes). ADA paratransit considerations are further discussed in Chapter 6 of this TDP that presents the proposed future transit plan.

Service Alternatives: Guiding Goals and Objectives

Another key consideration in the development of service alternatives was input from the Office of Transportation on the priorities for the future, and overall goals and objectives for transit services provided by Anne Arundel County. The following input was provided by County staff, and helped to guide the development of the potential alternatives:

- Anne Arundel County Transit is an emergent system, and therefore the immediate focus should be on geographic coverage. Then later the emphasis can be on increasing service frequency on existing routes.
- Expansion of on-demand services should be a major component in the provision of this geographic coverage expansion. In this way, gaps such as lower density peninsulas with little or no service can be filled, and the reach of transit services in the county can be expanded. Based on demand, microtransit services could gradually be transitioned to deviated fixed-route services.
- Anne Arundel County Government administers *OpenArundel*, as noted by the county, that serves as a collection of tools and resources to empower residents with information and to provide feedback. The OpenPerformance section of this effort provides the opportunity for Anne Arundel County residents to track the performance of by exploring measures set by individual county departments.

The Office of Transportation has established the following goals and objectives related to transit through the OpenPerformance effort:

- **Goal 1:** To improve transportation service options to residents and visitors of Anne Arundel County so it is easy to move around the County and improve their quality of life.
 - ✓ **Objective: 1.1** Improve the On-Time Performance of Transit Services.
 - Measure: On-time performance for all routes
 - ✓ **Objective: 1.2** Increase the percentage of households within convenient access of a transit stop via appropriate bicycle or pedestrian infrastructure.
 - Measure: Percent of households with convenient access to a transit stop via appropriate bicycle or pedestrian infrastructure

According to the OpenPerformance website, the target for this objective is 50%, and that the Office of Transportation reported that as of June 30, 2022, there were 43% of households living within 1/8 mile walking distance via appropriate pedestrian infrastructure or within one mile bicycling distance via appropriate bicycle infrastructure. They also reported that was dramatically higher than the 36% in FY2020, and credited it to the addition of the new Crofton Express route, extension of the Gold Route, and new Call and Ride demand-response services. The Office of Transportation estimated that in FY 2023 adding sidewalk and bicycle connections to transit stops will connect some residences to current services, though not a large number so the overall percentage is anticipated to remain at 43%. However, in discussions with the Office of Transportation, they noted that the goal is to be at 50% by FY2027.

Potential Service Alternatives

New County Fixed-Route, Fixed-Schedule Routes

This section discusses potential new fixed-route or fixed-schedule services within the county that would help to expand geographic coverage of the current Anne Arundel County Transit system. In particular, three new routes are proposed that would help fill gaps in public transit between key areas and destinations in the county. These potential routes would also support the development of key connecting transit hubs in Anne Arundel County, particularly those located at Arundel Mills, Cromwell Light Rail Station, Parole, and Crofton:

- Anne Arundel Community College – Fort Meade/NSA
- Annapolis – Arundel Mills/BWI Airport
- Crofton – Cromwell

The projected cost information and ridership estimates for these service alternatives are based on operating and performance data provided by the Office of Transportation. Conceptual maps for each route are also provided, and include potential on-demand microtransit zones discussed in a later section of this chapter.

Anne Arundel Community College/Severna Park – Fort Meade/NSA

The previous Central Maryland TDP recommended a route between Anne Arundel Community College (AACC) in Arnold and Severna Park with the Fort Meade/NSA area. This proposed route would provide a mid-county service that is currently lacking, and would also serve the Odenton Health Campus, Odenton MARC Station, and Annapolis Junction.

This alternative proposes implementation of this route at the suggested service levels in the previous TDP:

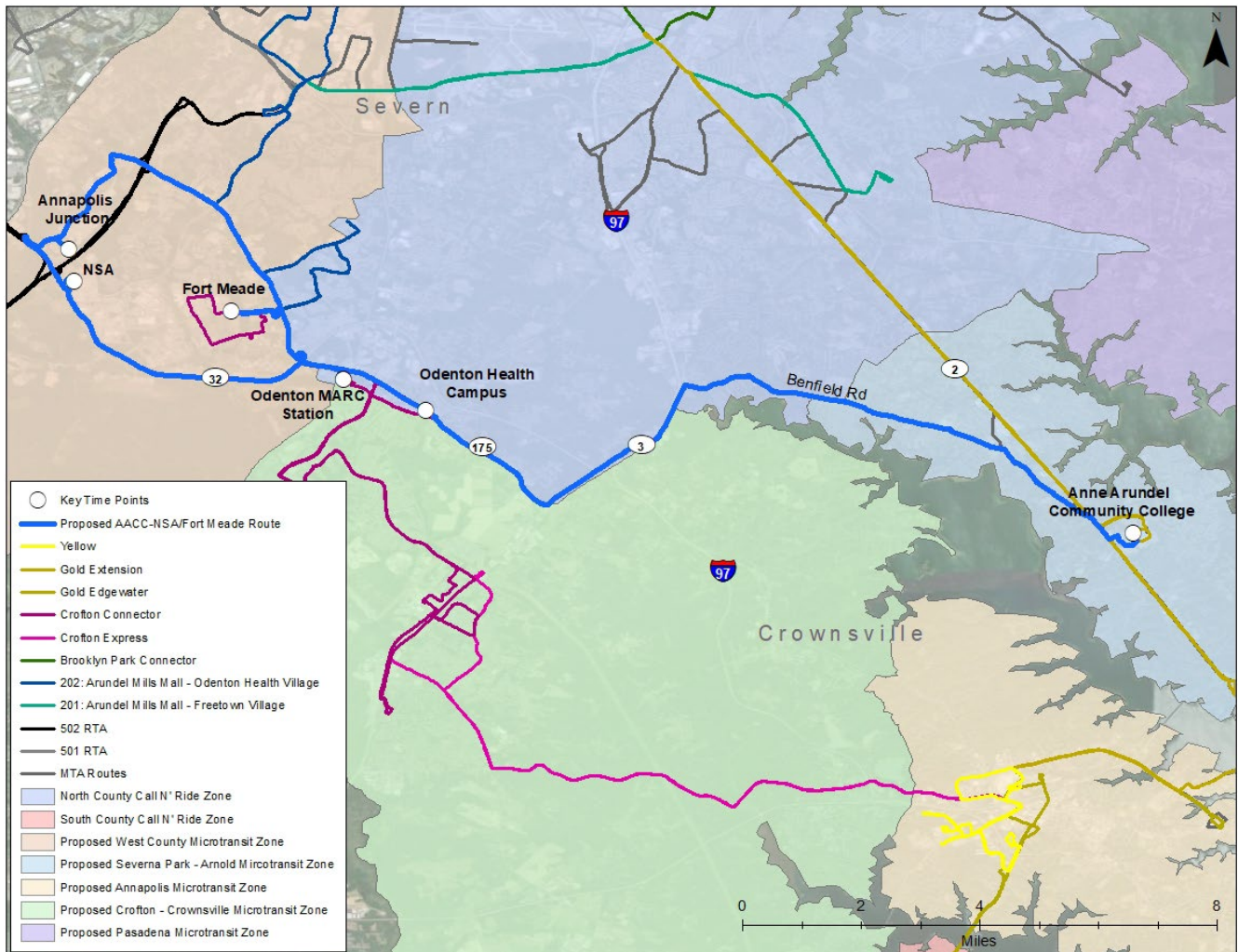
- Days and Hours: Monday through Friday, 6:00 a.m. to 6:30 p.m.
- Frequency: 60 minutes

The potential impacts of this proposal are outlined in Table 5-1, and a preliminary service design for the route is depicted in Figure 5-1.

Table 5-1: Potential Impacts of AACC/Severna Park - Ft. Meade/NSA Route

Advantages	Disadvantages
<ul style="list-style-type: none"> • Expands geographic coverage and provides a mid-county service not currently in place. • Provides a connection between several key destinations in the county. • Expands mobility options, particularly for employment, educational, and medical trips. • Responds to top improvement expressed through community survey for new services that connect communities and key destinations. • Opportunities for connections at AACC, Odenton MARC to create a broader connected county-wide network. 	<ul style="list-style-type: none"> • Would require additional vehicles and drivers to implement new route. • Based on proposed service design and headways three vehicles would be needed to operate this route. • Would increase annual operating expenses for the County's transit system. • Much of the route is in low-density areas with relatively few activity centers (employment or shopping opportunities)
Cost Estimates	Ridership Impacts
<ul style="list-style-type: none"> • Implementing the AACC/Severna Park-Fort Meade/NSA route at the proposed service level would result in approximately 10,710 annual service hours. Based on the current hourly operating expense estimated annual operating expenses would be \$803,250. 	<ul style="list-style-type: none"> • Assuming ridership levels similar to current services it is estimated that this route would result in 28,382 annual passenger trips.

Figure 5-1: Preliminary Concept – AACC – Ft. Meade/NSA Route



Annapolis – Arundel Mills/BWI Airport

Another route proposed in the previous Central Maryland TDP, but not yet implemented, is one between Annapolis and Arundel Mills/BWI Airport. This route would also provide a connection between key areas in Anne Arundel County and expand mobility options for access to major employment and shopping locations. The route could also provide a link between the different public transit providers operating services in the county, with potential stops that connect with Annapolis Transit, MDOT MTA, and RTA routes. It would also provide a connection between the Cromwell and BWI Light Rail stations.

This alternative proposes implementation of this route at the service levels suggested in the previous TDP:

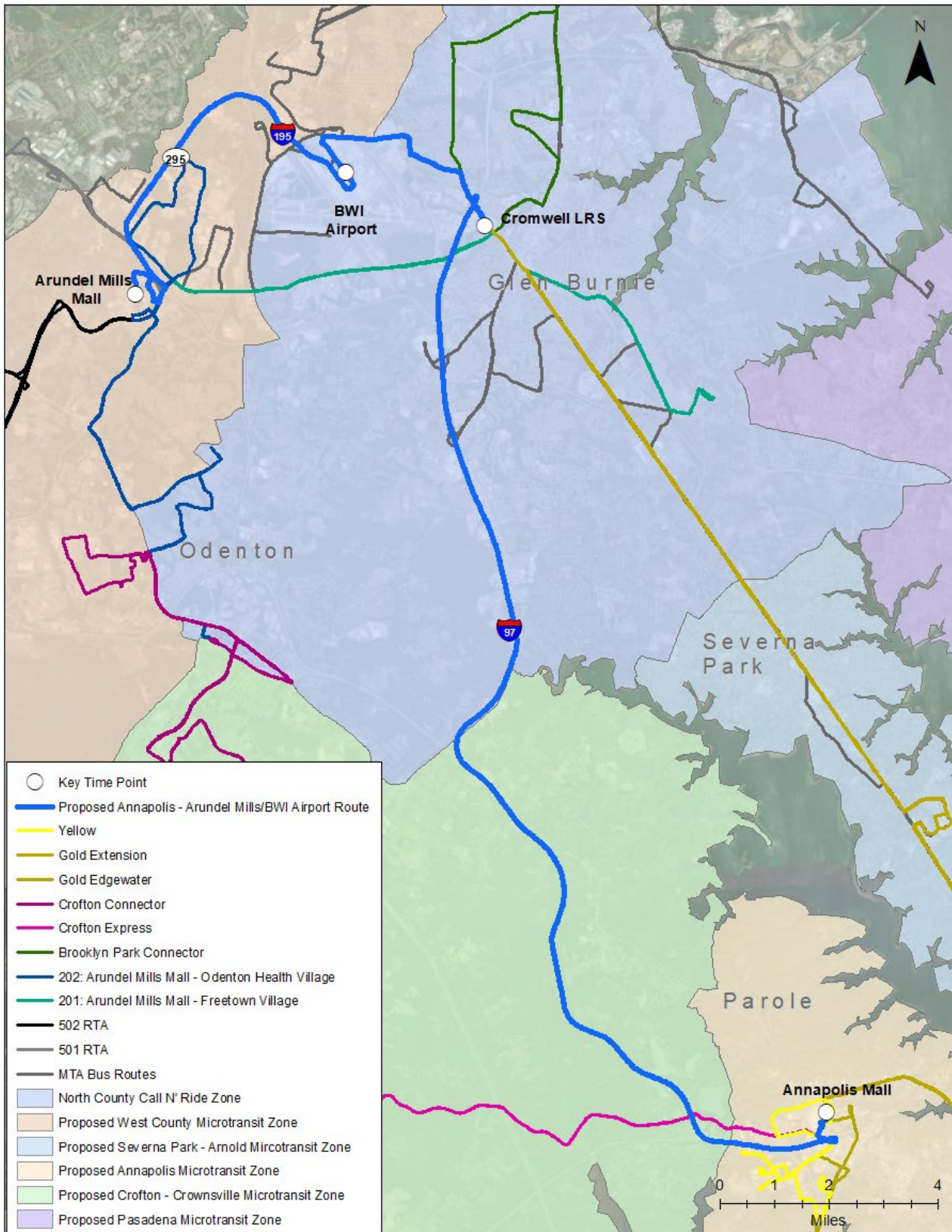
- Days and Hours:
 - Monday through Friday, 6:00 a.m. to 11:00 p.m.
 - Saturday, 8:00 a.m. to 11:00 p.m.
 - Sunday, 8:00 a.m. – 6:30 p.m.
- Frequency: 60 minutes

The potential impacts of this proposal are outlined in Table 5-2, and a preliminary service design for the route is depicted in Figure 5-2.

Table 5-2: Potential Impacts of Annapolis – Arundel Mills/BWI Airport Route

Advantages	Disadvantages
<ul style="list-style-type: none"> • Expands access to key employment and shopping destinations. • Connects major areas of the county. • Helps link services between different transit providers by linking transit hubs to create a broader connected county-wide network. 	<ul style="list-style-type: none"> • Would require additional vehicles and drivers to implement new route. • Would increase annual operating expenses. • Limited direct access opportunities at stops, would rely on demand between major hubs and connections to generate ridership.
Cost Estimates	Ridership Impacts
<ul style="list-style-type: none"> • Implementing the Annapolis – Arundel Mills/BWI Airport route at the proposed service level would result in approximately 19,021 annual service hours. Based on the current hourly operating expense estimated annual operating expenses would be \$1,426,572. 	<ul style="list-style-type: none"> • Assuming ridership similar to current services it is estimated that this route would result in 50,406 annual passenger trips.

Figure 5-2: Preliminary Concept – Annapolis – Arundel Mills/BWI Airport Route



Crofton – Cromwell Light Rail

The previous Central Maryland TDP recommended a new route between the Bowie Town Center and the Cromwell Light Rail station. This proposed alternative modifies this option, and recommends service that originates in Crofton as the southern point of the route that can be coordinated with the Crofton Connector service and would help to develop Crofton as a key connecting transit hub. In addition, the original concept anticipated that local microtransit services would provide first-mile, last-mile connections from community residential areas to stops along this fixed-route to enhance countywide transit coverage. New service between Crofton and the Cromwell Light Rail Station would also be consistent with the regional corridors identified in the Central Maryland Regional Transit Plan.

This alternative proposes implementation of this route at the service levels suggested for the similar Bowie- Cromwell service in the previous TDP:

- Days and Hours:
 - Monday through Friday, 6:00 a.m. to 6:30 p.m.
 - Saturday, 8:00 a.m. to 6:30 p.m.
 - Sunday, 10:00 a.m. – 6:30 p.m.
- Frequency: 60 minutes

The potential impacts of this proposal are outlined in Table 5-3, and a preliminary service design for the route is depicted in Figure 5-3.

Table 5-3: Potential Impacts of Crofton – Cromwell Light Rail Route

Advantages	Disadvantages
<ul style="list-style-type: none"> • Connects major areas of Anne Arundel County. • Provides link to MDOT MTA services and access to locations outside the county. • Links microtransit service areas (for first-mile last-mile) with frequent transit connection to Baltimore. 	<ul style="list-style-type: none"> • Would require additional vehicles and drivers to implement new route. • Would increase annual operating expenses. • Would require implementation of microtransit services with connection points to facilitate community access along the route.
Cost Estimates	Ridership Impacts
<ul style="list-style-type: none"> • Implementing the Crofton – Cromwell at the proposed service level would result in approximately 14,030 annual service hours. Based on the current hourly operating expense estimated annual operating expenses would be \$1,052,226. 	<ul style="list-style-type: none"> • Assuming ridership similar to current services it is estimated that this route would result in 37,179 annual passenger trips.

Figure 5-3: Preliminary Concept – Crofton – Cromwell Light Rail Station Route

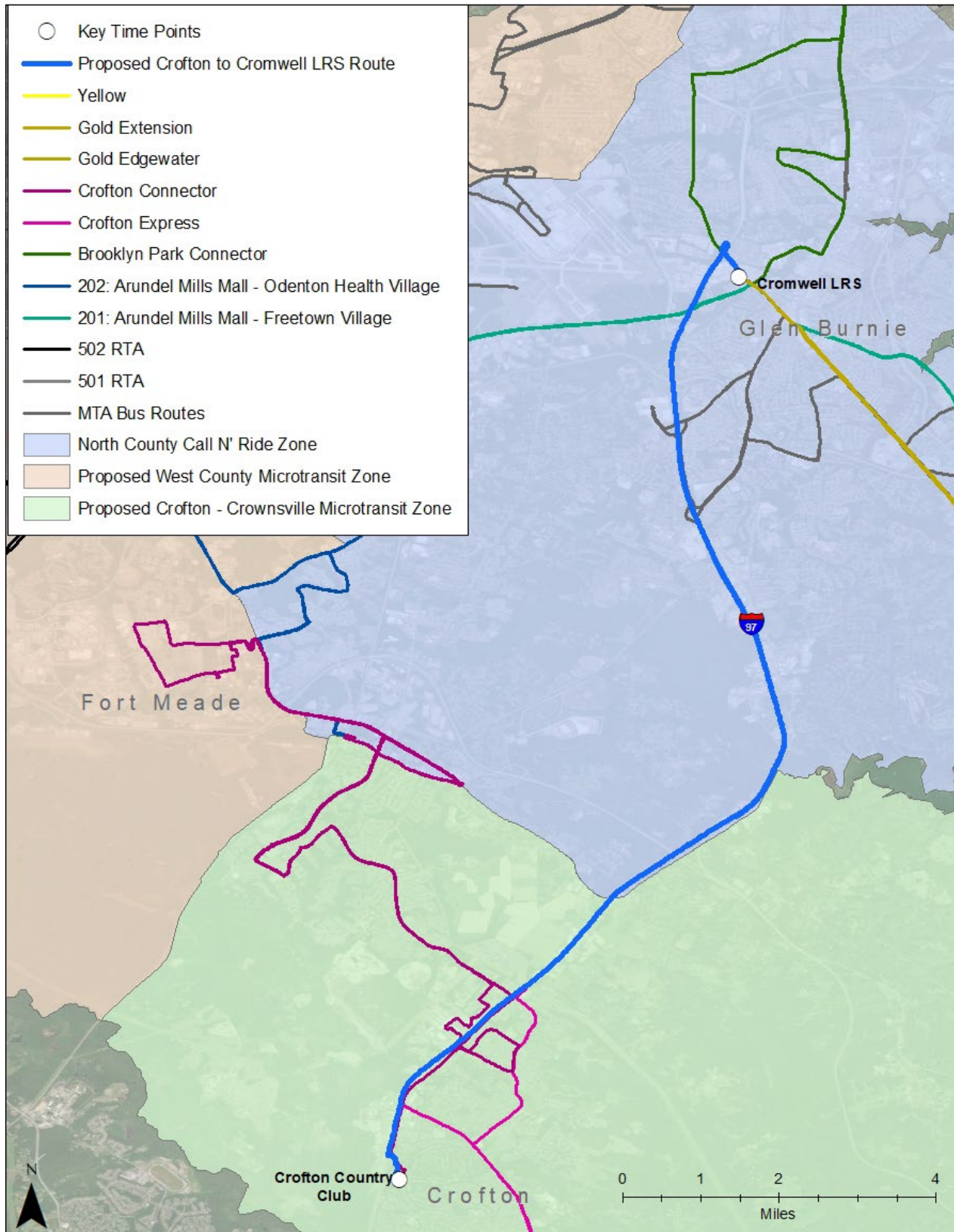


Table 5-4 provides a summary of three proposed routes with projected annual operating and ridership data. Taking these proposed routes into consideration along with current services, Figure 5-4 then provides a visual presentation for a possible future Anne Arundel County Transit network that includes these proposed routes. This network could be implemented incrementally route by route. The routing is conceptual, and additional service planning that would involve community outreach would be needed to finalize the actual services. Ultimately, this transit network would greatly expand access to key locations in Anne Arundel County.

Table 5-4: Summary of Proposed New Routes

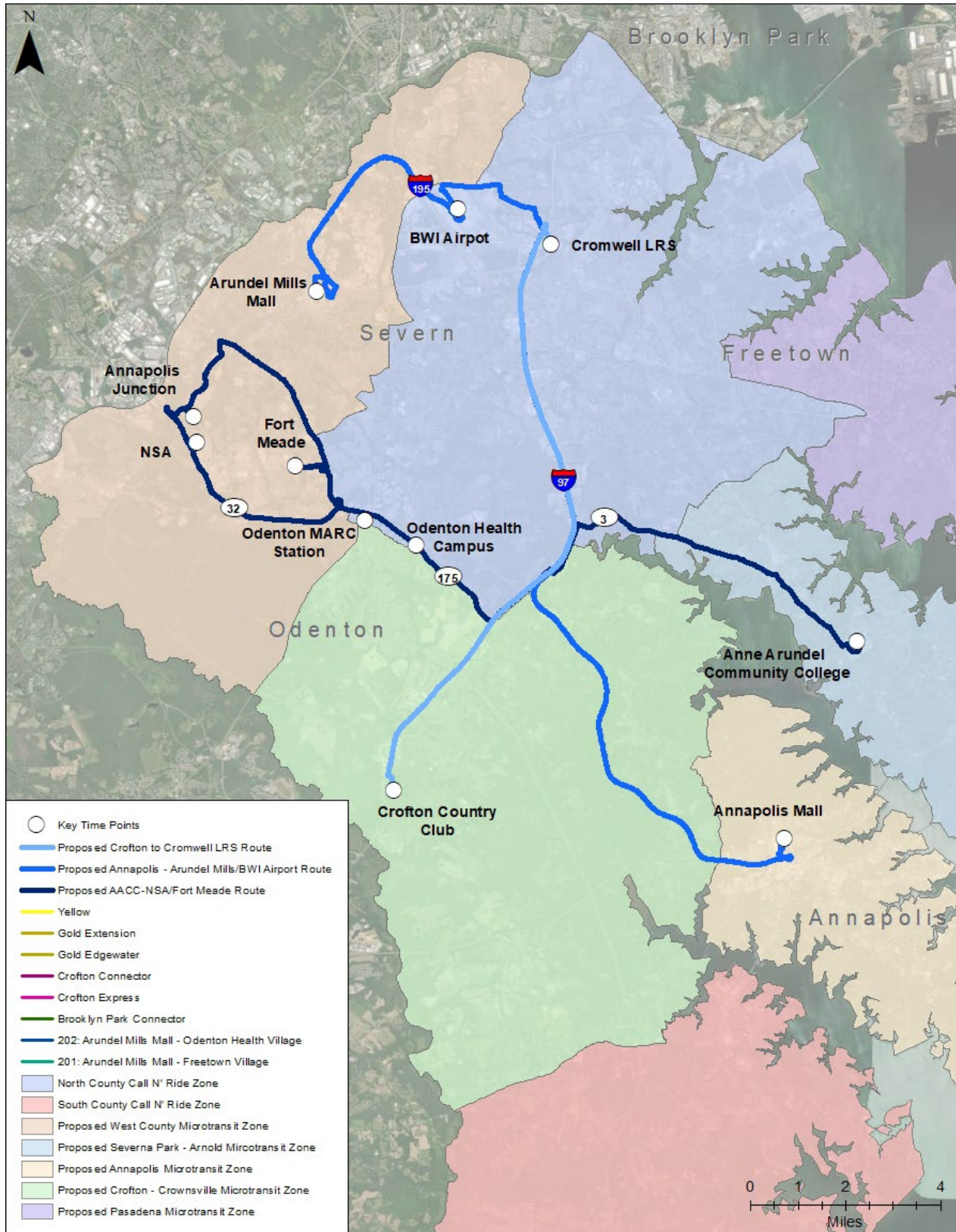
Project Description	Projected Annual Revenue Service Hours (1)	Projected Annual Operating Expenses (2)	Estimated Annual Ridership (3)
AACC/Severna Park - Ft. Meade/NSA Route (Monday - Friday)	10,710	\$803,250	28,382
Annapolis - Arundel Mills/BWI Airport Route	19,021	\$1,426,572	50,406
Crofton - Cromwell Route	14,030	\$1,052,226	37,179
	43,761	\$3,282,048	115,966

(1) Assumes proposed service hours plus 12% for deadhead.

(2) Assumes current operating expense per hour of \$75, as provided by Office of Transportation.

(3) Assumes ridership per hours similar to current AA201, AA202, Gold, and Yellow average of 2.65.

Figure 5-4: Potential Expanded Anne Arundel County Transit Network



Additional Service Considerations

Beyond these proposed routes there are a variety of additional service expansion considerations that resulted from the planning process and meetings with the Office of Transportation. These options will be discussed through the review of the preliminary draft TDP, and then further detailed in the final plan:

- Pasadena – NSA Route
- Glen Burnie – Fort Meade Route

Similar to the previous alternatives the conceptual maps for these services include potential on-demand microtransit zones discussed in a later section of this chapter.

Pasadena – NSA Route

In the development of the service alternatives the Office of Transportation noted that NSA has reported that many of their employees are located in the Pasadena area, warranting consideration of a route that would connect these locations. More detailed service planning would be needed to identify specific areas that would be served in Pasadena, though it is anticipated the route could originate at the Lakeshore Plaza and serve the Chesterfield development before travelling to NSA. Potential on-demand microtransit services (discussed later in this chapter) could serve as a feeder service and first mile-last mile connection to a potential Pasadena – NSA route.

Figure 5-5 depicts a preliminary service design for this route.

Glen Burnie – Fort Meade Route

Another opportunity to provide additional cross-county service would be a route between Glen Burnie and Fort Meade (and possibly NSA). Figure 5-6 depicts a preliminary service design for this route that would originate at the Cromwell Light Rail Station and serve Glen Burnie and Severn in route to the Fort Meade area.

Figure 5-5: Pasadena – NSA Route

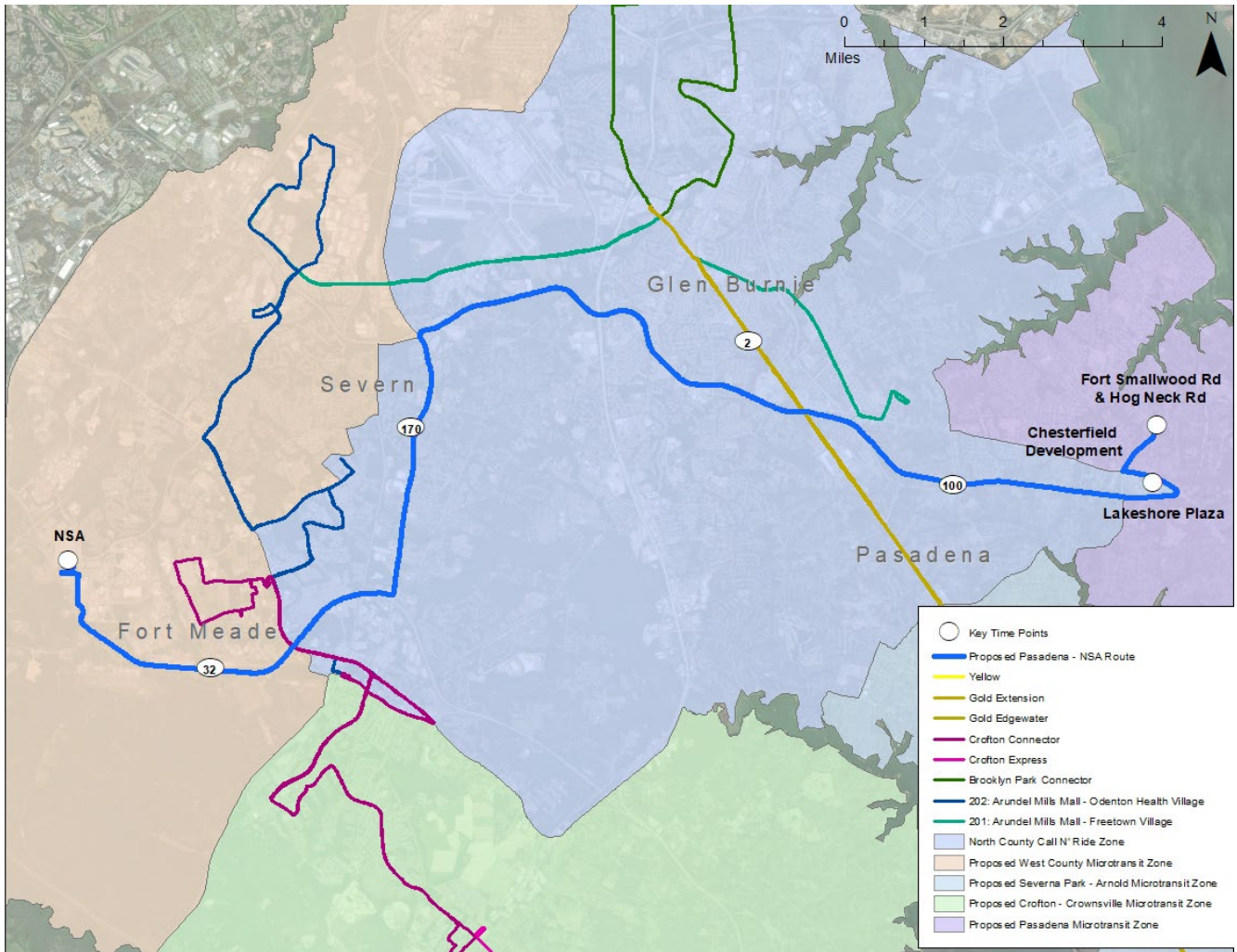
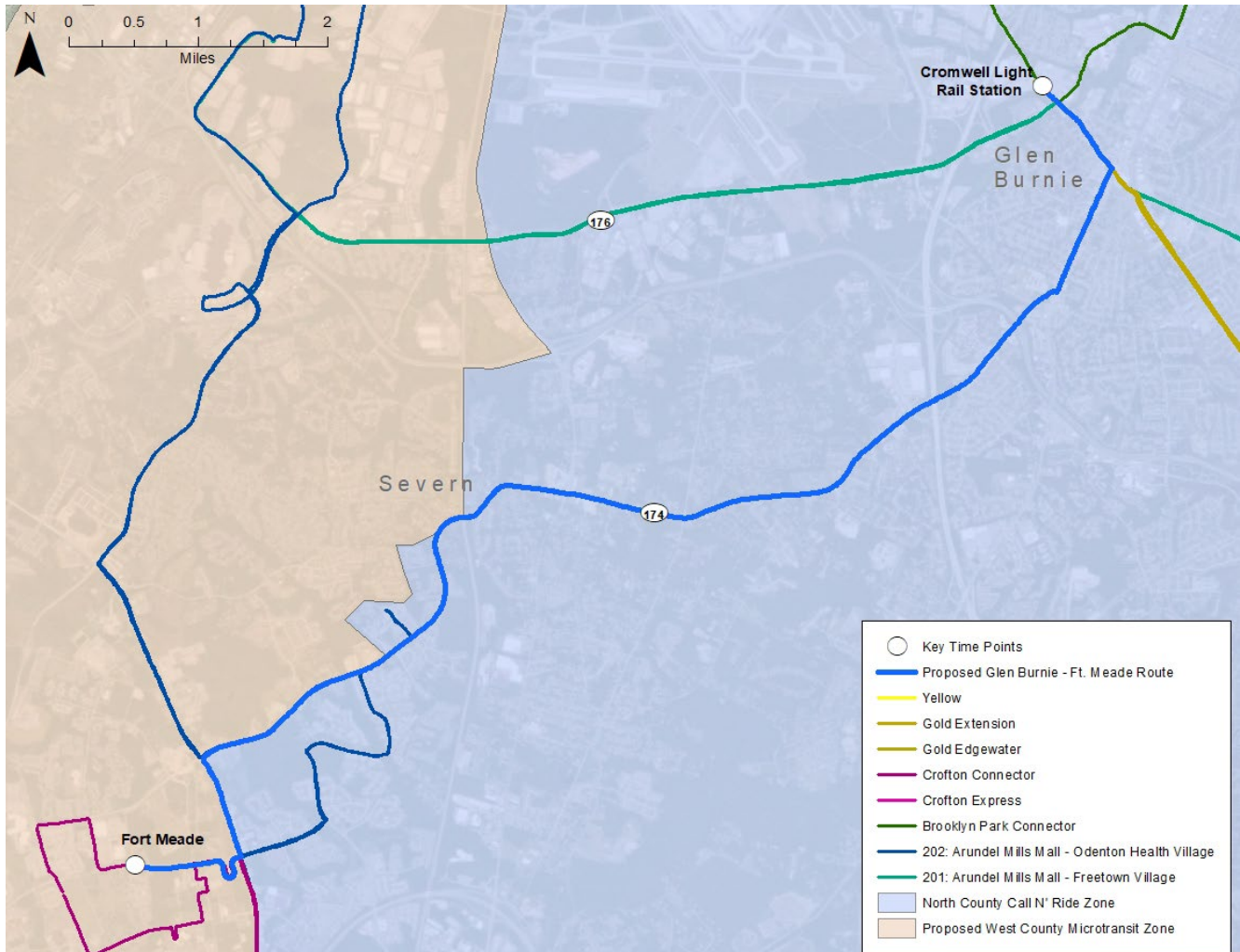


Figure 5-6: Glen Burnie – Fort Meade



Increased Frequency on Current Routes

While as noted earlier the focus of the service alternatives are on the geographic expansion of the Anne Arundel County Transit network, there is also opportunity to increase frequency on the system's popular routes to reduce the times between buses on these routes. Based on the most recent operating and performance data the ideal candidates for this increase would be on AA201 that provides the highest number of trips per hour, and the Gold Line Extension that serves Ritchie Highway – another regional corridors identified in the Central Maryland Regional Transit Plan.

Regional Routes / Connections

In addition to the new services proposed within Anne Arundel, other potential regional services that impact Anne Arundel County have been identified through other planning efforts, and are discussed in the following section. These potential services would involve routes that cross jurisdictional boundaries, potentially operated by another transit provider such as the RTA or MDOT MTA Commuter Bus.

I-97 Express Bus between Cromwell Light Rail Station and Parole Transit Center (Downtown Annapolis)

Anne Arundel County's FY 23 list of priorities for the FY 2023-28 Consolidated Transportation Program (CTP) included express bus using I-97 from the Cromwell Light Rail Station to Parole Transit Center. The County noted that this service would close the transit gap between Annapolis and the end of the current light rail spur, and that the concept is supported by the Central Maryland Regional Transit Plan and would help to alleviate congestion along a route that one of the most congested areas in Anne Arundel County. Information on this potential service will be updated based on any additional MDOT MTA Commuter Bus analysis on this option.

MD 32 Express Bus between Columbia and Annapolis/Parole

The MD 32 Enhanced Bus Feasibility Study completed in October 2021 discusses several alignment alternatives for express bus service between Columbia and Annapolis/Parole, broken out into the following four segments:

- Segment 1: Columbia to US 1
- Segment 2: US 1 to Odenton
- Segment 3: Odenton to MD 3
- Segment 4: MD 3 to Annapolis/Parole

Columbia - Fort Meade / NSA Route

The Howard County TDP that is being conducted simultaneously with the Anne Arundel planning process includes the following potential services between Columbia and Fort Meade / NSA:

- Option 1 - New route between Columbia Mall and Odenton MARC Station:
 - Would serve Columbia, Snowden Square, Owen Brown, Jessup MARC Station, Fort Meade and the Odenton MARC Station.
- Option 2- New route from Columbia to new NSA Visitors Center
 - This route would be similar to Option 1, but would also include an extension to NSA.

Additional information will be included in the final TDP as planning efforts on the Howard County project continue.

Columbia/Ellicott City – BWI Airport and Regional Services

The current alternatives for the Howard County TDP also include expansion of current RTA services that originate in Columbia and that serve locations in Anne Arundel County:

- Option 1 - Doubles the frequency for Route 501 that operates between Columbia Mall and Arundel Mills.
- Option 2 - Extends Route 501 to BWI Amtrak/MARC Station.
- Option 3 - Extends Route 501 to BWI Business District Light Rail Station
- Option 4 - Proposes a new express route from Columbia to BWI Airport
- Option 5 -Proposes a new express route between Ellicott City to BWI Airport and MARC

Similar to the previous alternative more information will be included in the final TDP as planning efforts on the Howard County project continue.

Laurel – NSA/Fort Meade Service

Another potential regional connection is a service between Laurel/Maryland City and NSA/Fort Meade. While more detailed planning and analysis would be needed to assess the success and need for this service, it is anticipated that a route or shuttle could originate at Town Centre Laurel in Prince George's County, providing connections to RTA and WMATA bus routes, before serving Maryland City in Anne Arundel County before stops at NSA and Fort Meade.

Parole – New Carrollton Express

One of the regional corridors identified in the Central Maryland Regional Transit Plan was between Annapolis and the New Carrollton Metro Station in Prince George’s County. This corridor was previously served by an MTA Commuter Bus service, and then by a private operator (Young’s Transportation) without any public transit funding. MTA provides service in this corridor that connects Parole with downtown Washington without stopping at New Carrollton Metro, but there has been continuing rider demand for the connection to New Carrollton. Loss of ridership during the COVID pandemic made it impossible for the private firm to continue service, and it has not restarted. It is anticipated that any new service would originate at the Parole Transit Center, with a stop at the Harry S. Truman Park and Ride lot as well.

Expanded Microtransit / On-Demand Services

As on-demand ride-hailing apps like Uber and Lyft have become a common mobility option over the past decade, demand has risen for public transit services that utilize mobile technology to provide on-demand transportation services. In the past few years, microtransit services have emerged across the country, and many transit systems have implemented these services or are exploring the potential for mobility on-demand options for the communities they serve. The previous TDP included six “Call N’Ride” zones to provide either demand-response or route-deviation services, and the advancement of microtransit app technology for hailing trips would support implementation of this concept, potentially with a more responsive and flexible system.

The current North County and South County Call N’ Ride services provide on-demand transportation in large geographic portions of Anne Arundel County. This alternative proposes smaller, more defined zones for microtransit services, and would respond to a variety of objectives for improving mobility in Anne Arundel County:

- On-demand service expansion would help to expand geographic coverage of transit services, and in particular would help to eliminate gaps and to serve low density peninsulas in the county currently with little or no service. There are certain attributes of the region that indicate that the area is well-suited for microtransit services and would expand mobility.
- These services would respond to a top improvement requested through the community survey, for service near the respondents’ home. The opportunity to access on-demand service through their smartphone was also a top improvement noted through the community survey when respondents were asked which ones would encourage their use of public transit.
- Through individual interviews, several key stakeholders noted the need for first mile/last mile connections to existing routes and expressed interest in exploring the potential expanded use of microtransit services in Anne Arundel County.

The Office of Transportation conducted an initial assessment of seven possible microtransit zones in Anne Arundel County that are shown in Figure 5-7. As indicated in this map, and discussed in Chapter 2, Call N’Ride services have been implemented in the North County and South County zones.

Following that map the following four figures (5-8 to 5-11) provide a more detailed presentation of proposed zones (excluding the one zone for Annapolis that would be primarily located in the Annapolis Transit service area). The maps illustrate possible linkages with current routes and the three proposed new routes. More specific planning would be needed to finalize the zones for future implementation.

Ensuring Compliance with Federal Civil Rights

To assure that a microtransit program complies with the federal civil rights requirements in Title VI of the 1964 Civil Rights Act (Title VI) and the 1990 Americans with Disabilities Act (ADA), demographic analyses and initiatives must be undertaken. Title VI compliance requires that any service change does not have a disparate impact or disproportionate burden on minority or below-poverty populations. A full Title VI analysis is only required for fixed-route bus service, but a service equity analysis is warranted for a new microtransit system. ADA accessibility requirements for microtransit are the same as those for demand response; a vehicle, payment system, and information distribution that is accessible to all potential riders.

Some Title VI and ADA considerations include:

- Reducing fares for disadvantaged socioeconomic groups.
- Customers with no smartphone or internet access.
- Unbanked customers who cannot pay via the mobile app.
- Limited English proficiency (LEP) populations. Translations and interpretation services should be made available at the service call center, post translated documents on the service’s website, and make Google Translate available on the website.
- Vehicle accessibility. In compliance with ADA guidelines, all vehicles used for microtransit service must be wheelchair accessible. Service available to individuals with disabilities, including individuals who use wheelchairs, must be provided in the most integrated setting appropriate to the needs of the individual, and equivalent to the service provided to other individuals.

Figure 5-7: Potential Microtransit Zones Planned by Anne Arundel County

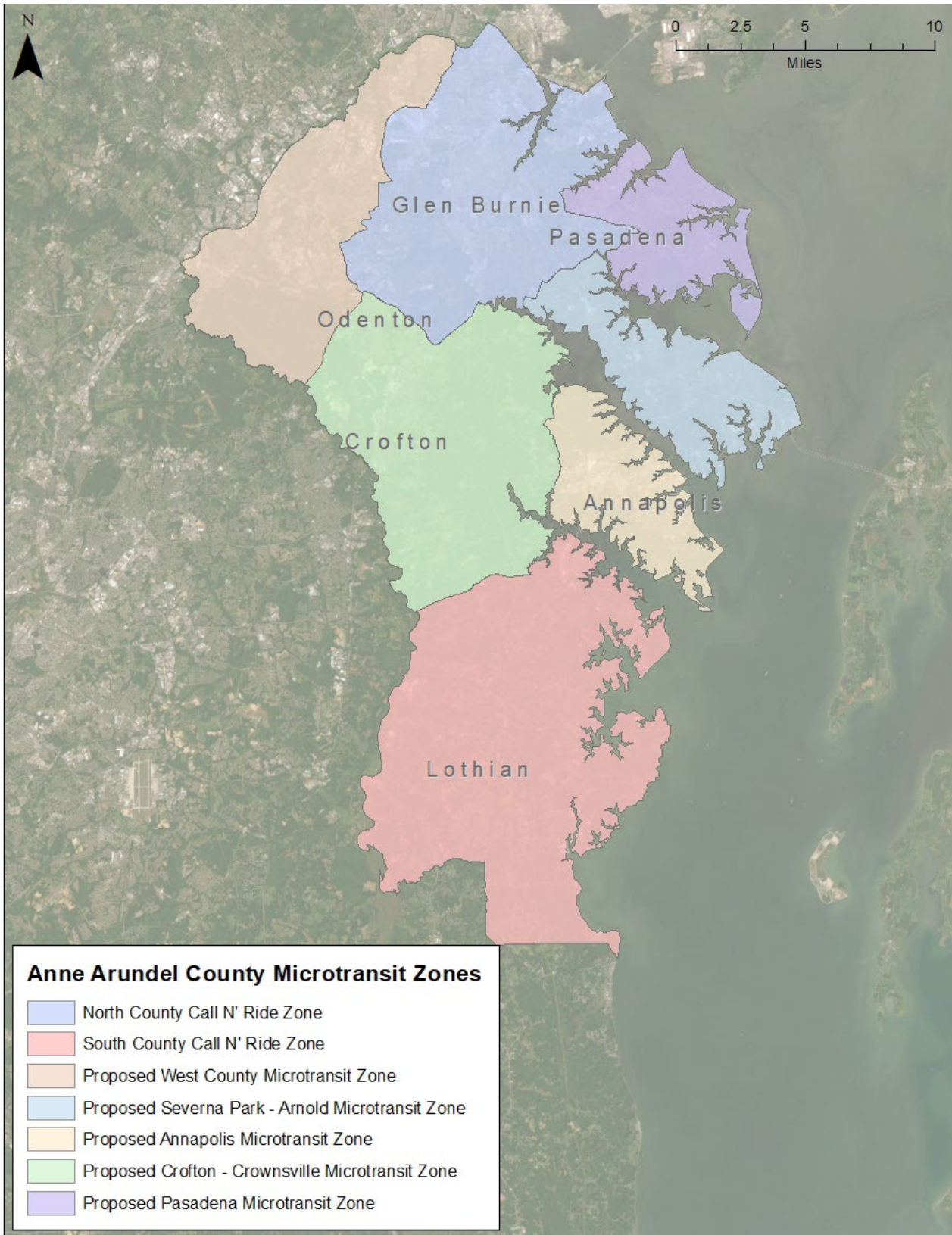


Figure 5-8: Potential Severna Park/Arnold Microtransit Zone

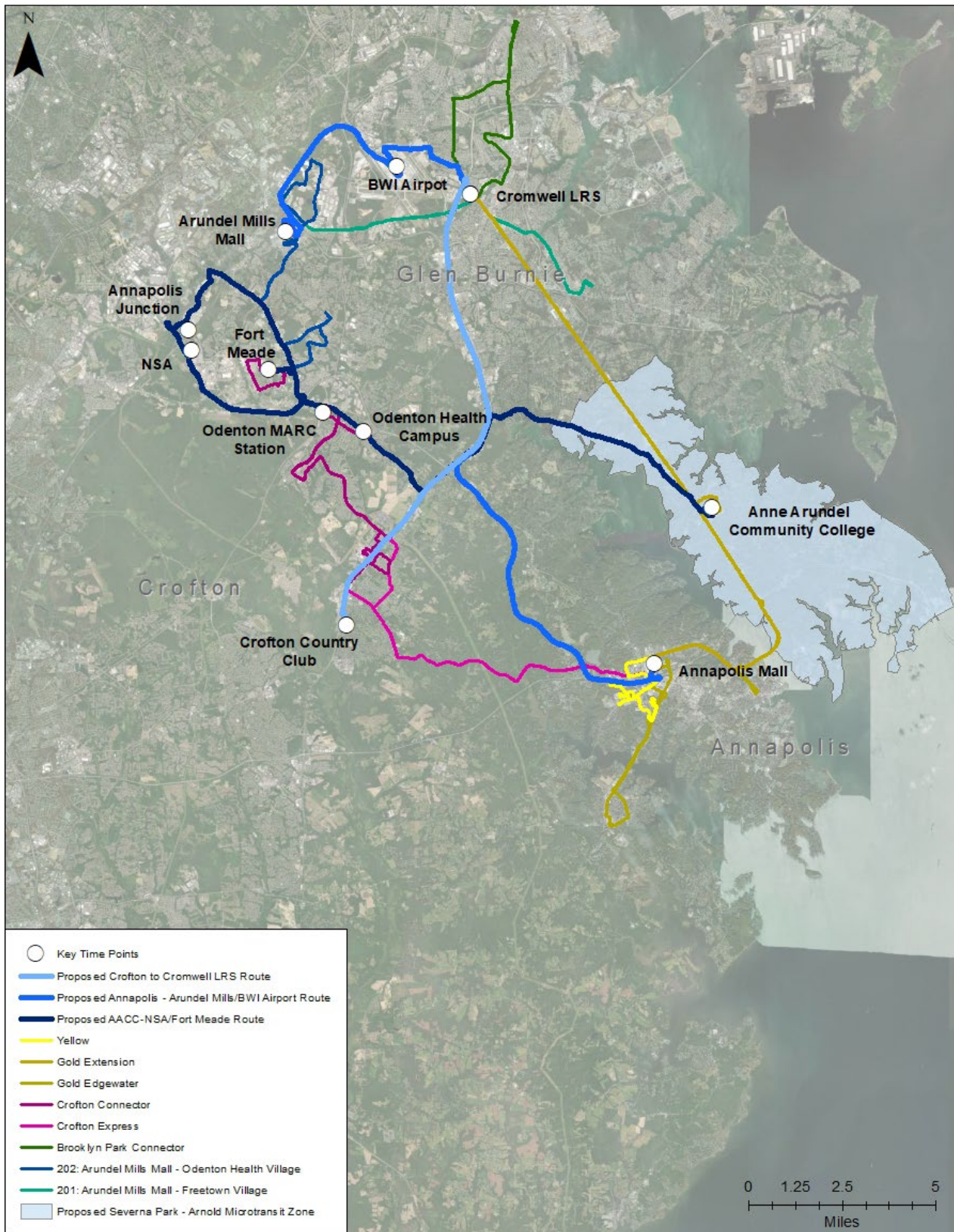


Figure 5-9: Potential Crofton/Crownsville Microtransit Zone

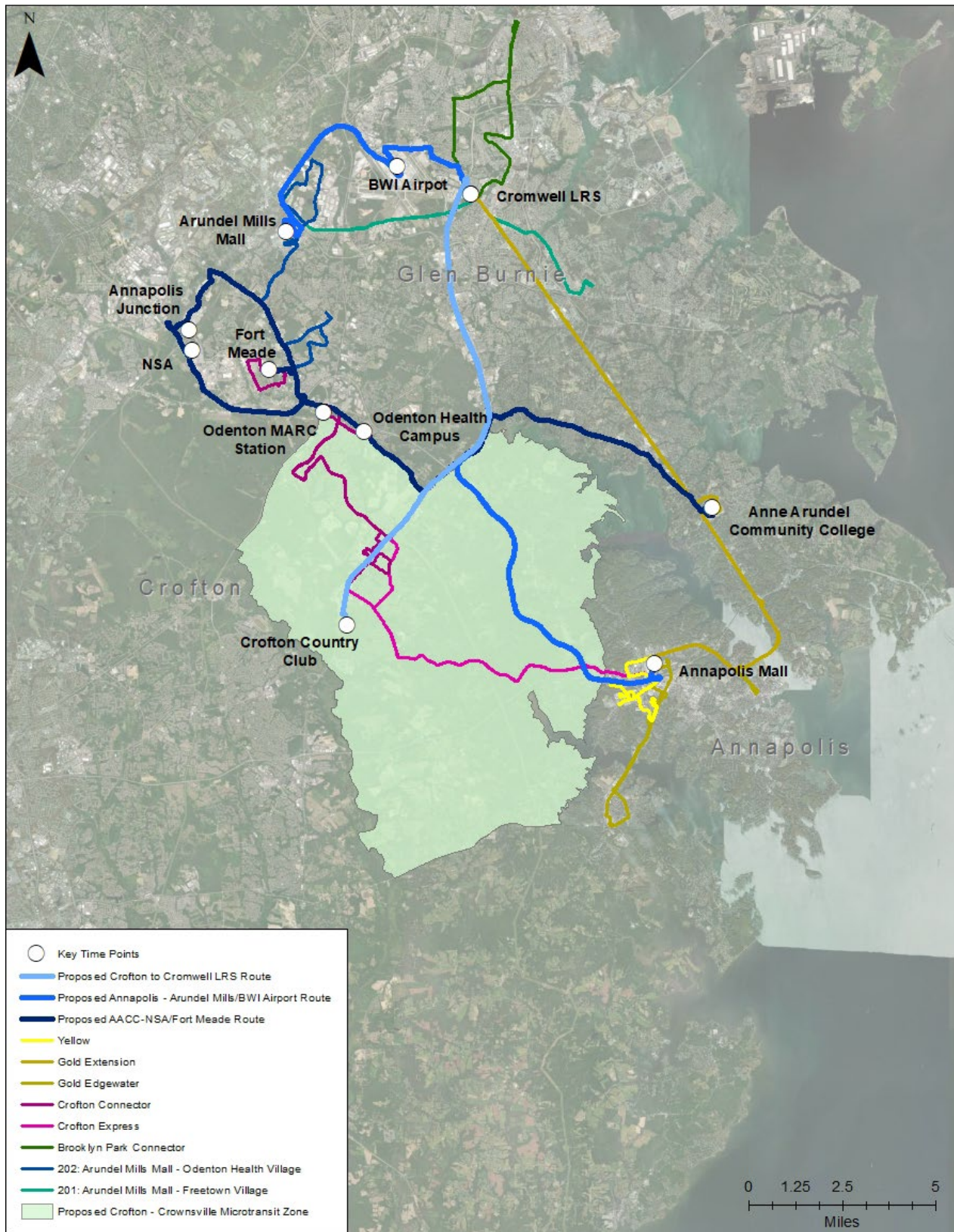


Figure 5-10: Potential Pasadena Microtransit Zone

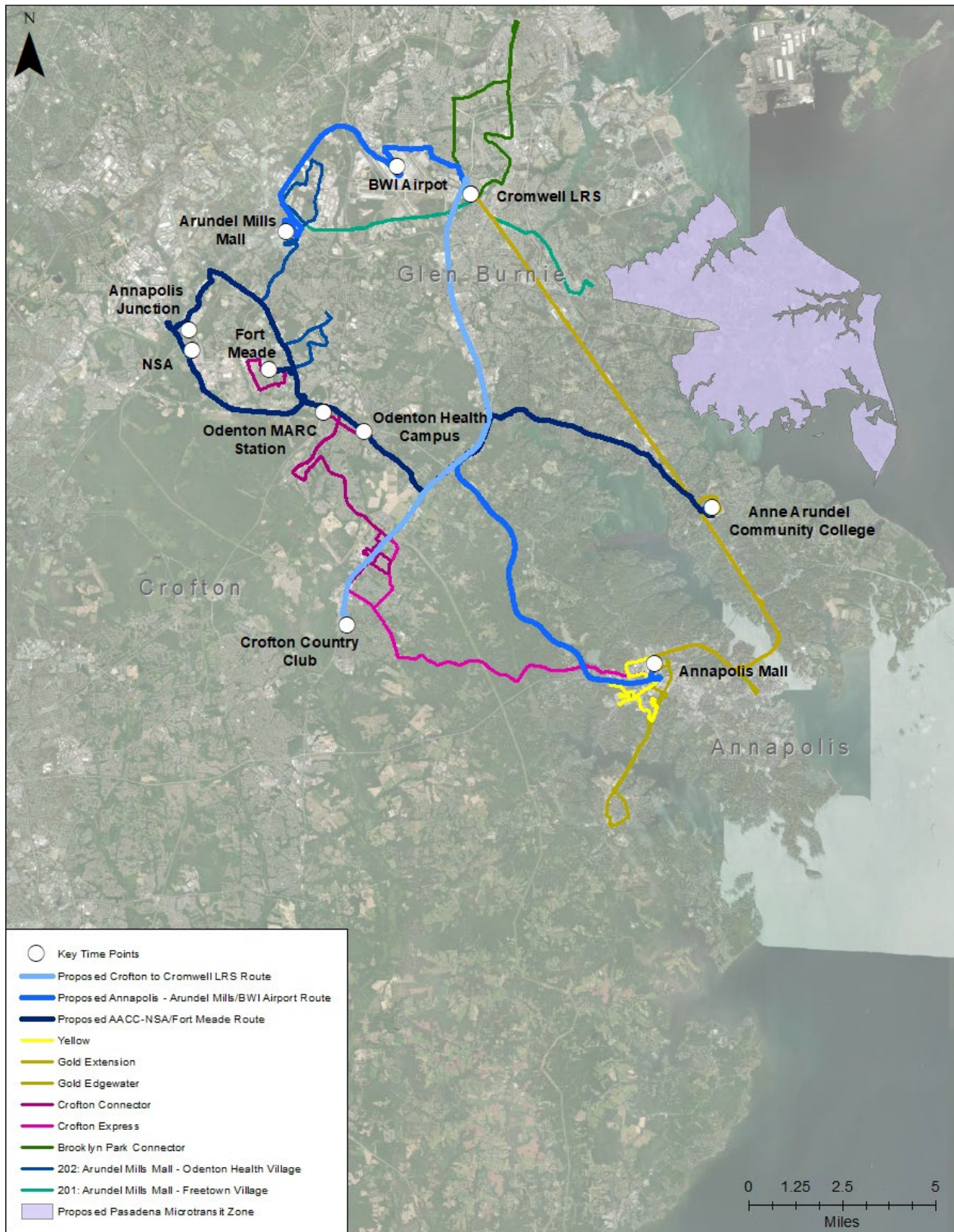
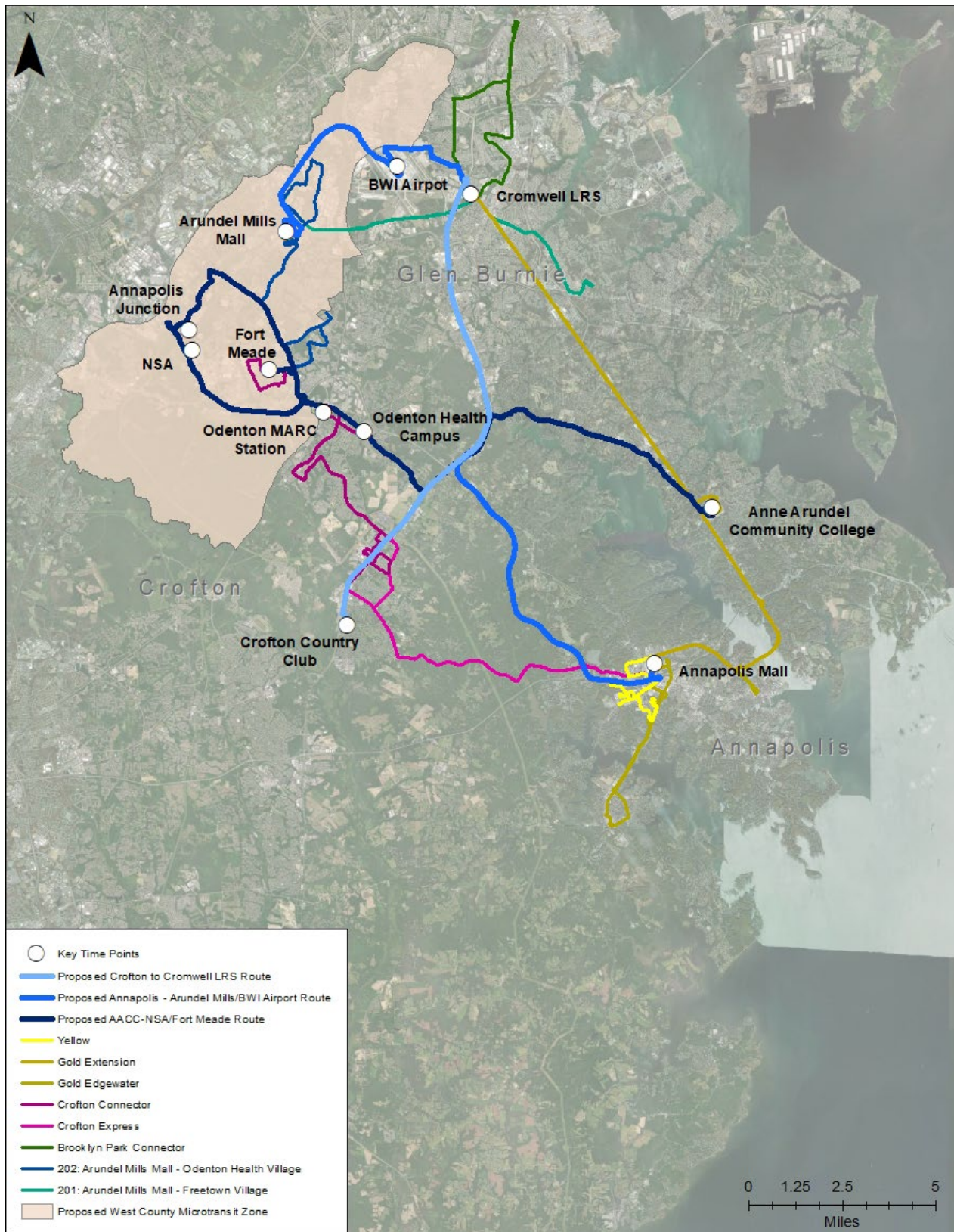


Figure 5-11: Potential West County Microtransit Zone

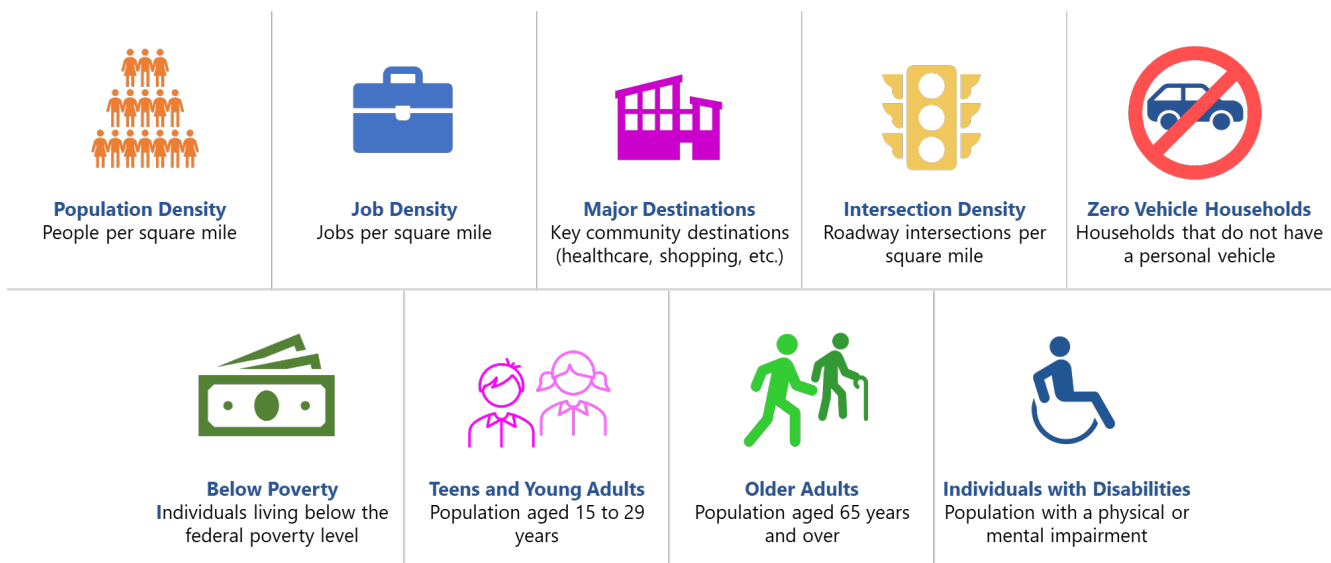


Microtransit / On-Demand Service: Implementation and Operational Considerations

While Anne Arundel County now has some experience implementing microtransit services through the current North County and South County Call N’ Ride on-demand services, there are a variety of lessons learned from other communities that can be taken into account when considering expansion of these services, and include:

- Right sizing the service zone** - A microtransit service needs a clear, well-reasoned geographic area to operate within. If a service area is too large, on-time performance will suffer and the cost per trip will likely increase. Due to the variety of socioeconomic, infrastructural, and operational factors that influence microtransit service efficiency, there is no ideal size for a geo-fenced zone. Some service areas are less than a square mile while others are over 25 square miles. Service zones also need to be designed to allow connections to regional routes and adjacent zones to enable travel beyond the zone. Establishing on-time performance standards and operating data from microtransit projects can also be used to refine both service area size and vehicle deployment.
- Assessing propensity index factors** – A Microtransit Propensity Index (MPI) can help transit providers make decisions on where to establish microtransit zones based on demographic, geographic, and infrastructural factors that may impact an area’s propensity for service. As seen in Figure 5-12, the MPI score is calculated based on several variables including population density, job density, major destinations, intersection density, zero vehicle households, below poverty, teens and young adults, older adults, and individuals with disabilities.

Figure 5-12: Microtransit Propensity Index Factors



These factors are deemed positive indicators of microtransit propensity. Key factors that are not included in this analysis are internet and smartphone access. Microtransit service is typically based around on-demand, real-time trip requests which require broadband connectivity of which data is not readily available. This is an important consideration if the service mode is to be implemented.

The MPI calculates a relative score – this means that each of the factors are scored based on a block group’s relation to the study area’s mean. The resulting factor scores were calculated using the MPI formula. Once the MPI calculation was complete, scores were normalized using percentile scores to adhere to a 1 to 10 scoring schema based on average scores. Figure 5-13 and Table 5-5 provide additional information on the MPI calculation and scoring system.

Figure 5-13: Microtransit Propensity Index Calculation

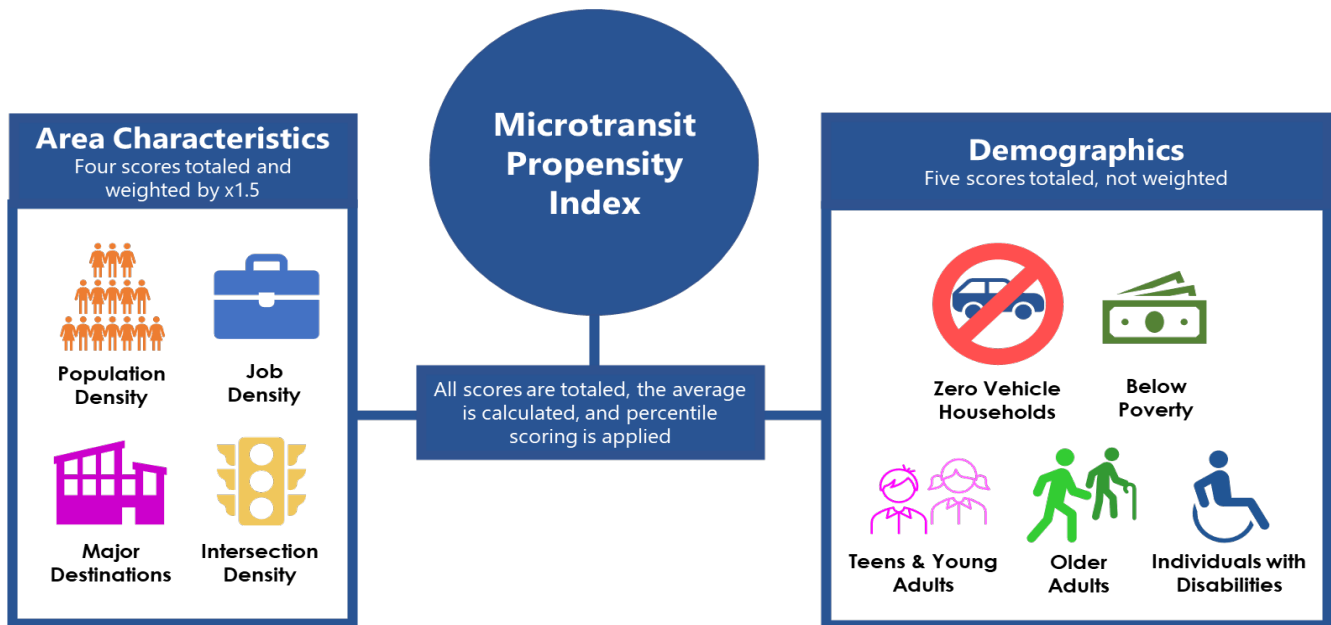
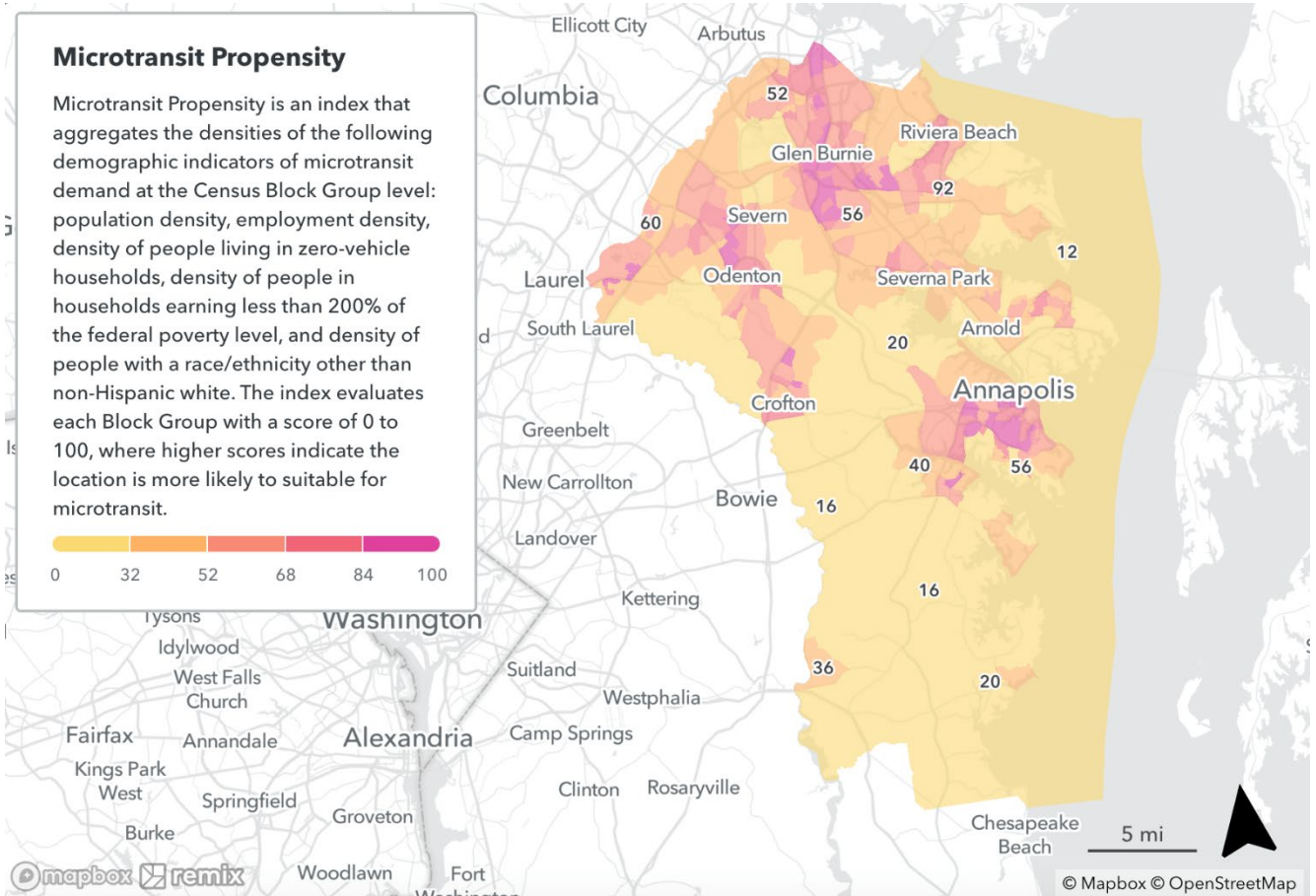


Table 5-5: Microtransit Propensity Index Scoring Table

Microtransit Propensity Scoring System	
1 – Very Low	Metric was in the bottom 10% of the MPI Scores
2	Metric was in the bottom 20% of the MPI Scores
3	Metric was in the bottom 30% of the MPI Scores
4	Metric was in the bottom 40% of the MPI Scores
5 – Below Average ^	Metric was in the bottom 50% of the MPI Scores
6 – Above Average v	Metric was in the top 50% of the MPI Scores
7	Metric was in the top 40% of the MPI Scores
8	Metric was in the top 30% of the MPI Scores
9 – Very High	Metric was in the top 20% of the MPI Scores

Using current planning software, Figure 5-14 provides an initial propensity index for Anne Arundel County that highlighted areas with the highest propensity for on-demand microtransit services, and that can be taken into account for future planning and prioritization of these services.

Figure 5-14: Microtransit Propensity Assessment



Chapter 6

Transit Plan

Introduction

This chapter is the culmination of the TDP process, providing a plan to guide transit services in Anne Arundel County over the next five years. This plan was derived through an evaluation of existing services (Chapter 2), a needs assessment that included an analysis of rider and community input (Chapter 3), a comprehensive demographic review (Chapter 4), and input on the variety of alternatives (Chapter 5).

The costs shown in this chapter are based on projected operating and capital costs provided by the Anne Arundel County Office of Transportation. Depending on the timing and implementation choices, costs may differ due to inflation or variable market costs. All proposed services are conceptual and will require additional operational planning and community outreach before implementation. It should also be noted that actual implementation will vary based on the availability of funding and other changing conditions.

The conceptual plan is divided into the following sections:

- **Service Plan** – Brief narratives on the proposed improvements; separated into possible short, mid, and long-term implementation timeframes.
- **Conceptual Financial Plan for Operating** – Estimated operating costs for the five years of the TDP, based on existing operating costs and estimated expenses for proposed service improvements.
- **Conceptual Financial Plan for Capital** – Estimated capital costs for the five years of the TDP, based on information from Anne Arundel County’s most recent Annual Transportation Plan and estimated capital needs to implement the proposed operating plan.

Service Plan

The proposed projects for the service plan are summarized below in an implementation timeline. Each of the improvements proposed in the service plan has been derived from the review of alternatives in the preceding chapter. Brief descriptions of the proposed improvements are provided in this section; however, additional details can be found in Chapter 5.

Importantly, the proposed service plan takes into account input from Anne Arundel County Office of Transportation staff on the potential phasing of the service improvements. Their review of the

alternatives produced the top service expansion projects that could be implemented using a phased multi-year approach, and that they ranked based on the weighting of the following categories:

- Service enhancements which serve transit disadvantaged communities
- Service area total population
- Service area population density
- Intracounty service
- Intercounty service

Proposed operating hours, annual operating costs, and capital implications for each potential service improvement, are also based on input from the Office of Transportation.

While the proposed service improvements focus on new services that expand the geographic reach of the existing service, increased frequency on all routes will be reviewed periodically by the Office of Transportation for consideration based on ridership and capacity data.

Short-Term Improvements (Years 1-2)

Year 1

West County On-Demand Service

The discussion of microtransit services in Chapter 5 noted that the Office of Transportation has conducted an initial assessment of seven possible zones in Anne Arundel County. Microtransit services utilize mobile technology through a smartphone to provide on-demand transportation services, and many transit systems across the country are implementing these services to provide more flexible options for their communities.

Chapter 5 also discussed several Title VI and ADA considerations when operating these services. These include ensuring service availability for customers without smartphone or internet access, and providing accessible service for individuals with disabilities that is equivalent to the service provided to other individuals. The vehicles projected for use when implementing these services would be fully accessible and wheelchair lift-equipped.

Through further analysis by Anne Arundel County the West County zone that includes Jessup, Hanover, Elkridge, and Laurel was determined to be the highest priority.

- Proposed Operating Hours: Monday – Saturday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$575,770
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

Annapolis/Parole On-Demand Service

An additional microtransit service noted in Chapter 5, this proposed improvement would provide on-demand service in the Annapolis and Parole areas.

- Proposed Operating Hours: Monday – Saturday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$415,120
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Year 2

Severna Park/Arnold On-Demand Service

Also discussed in Chapter 5, this proposed improvement would provide on demand service in the Provide on demand service to Severna Park, Arnold, and Cape St. Claire areas.

- Proposed Operating Hours: Monday – Saturday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$568,058
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Pasadena On-Demand Service

Another microtransit service discussed in Chapter 5, this proposed improvement would provide on demand service in Pasadena.

- Proposed Operating Hours: Monday – Saturday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$703,718
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Mid-Term Improvements (Years 3-4)

Year 3

Crofton/Crownsville On-Demand Service

An additional microtransit service noted in Chapter 5, this proposed improvement would provide on demand service in the Crofton and Crownsville areas. This service would be designed to complement existing services in the Crofton area and enable connections to key locations.

- Proposed Operating Hours: Monday – Saturday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$699,149
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Anne Arundel Community College/Severna Park – Fort Meade/NSA

As discussed in Chapter 5, the previous Central Maryland TDP recommended a route between Anne Arundel Community College (AACC) in Arnold, Severna Park, and the Fort Meade/NSA area. This proposed route would provide a mid-county service that is currently lacking. Station, and Annapolis Junction.

- Proposed Operating Hours: Monday – Saturday, 6:00 a.m. – 7:00 p.m.
- Projected Annual Operating Costs: \$867,510
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

Year 4

Laurel – NSA/Fort Meade Service

Another potential regional connection presented in Chapter 5 is a service between Laurel and NSA/Fort Meade/NSA. This proposed fixed/flex route would need to be coordinated with RTA and WMATA services in place at the time of implementation.

- Proposed Operating Hours: Monday – Friday, 6:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$754,110
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

Crofton - Bowie Service

While the alternatives in Chapter 5 discussed possible options for the Crofton area, an improvement identified by the Office of Transportation, would be a proposed fixed/flex route between Crofton and Bowie. Similar to other proposed regional services, this improvement would need to be coordinated with other transit providers and take into account services in place at the time of implementation, as this may be a service more appropriate for the RTA to operate.

- Proposed Operating Hours: Monday – Saturday, 6:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$578,340
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Annapolis – Arundel Mills/BWI Airport

Another route proposed in the previous Central Maryland TDP, but not yet implemented, is one between Annapolis and Arundel Mills/BWI Airport. As discussed in Chapter 5 this route would provide a connection between key areas in Anne Arundel County, as well as a link between the different public transit providers operating services in the county.

- Proposed Operating Hours: Monday through Friday, 6:00 a.m. to 11:00 p.m.
- Projected Annual Operating Costs: \$1,426,572
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

Crofton – Cromwell Light Rail

The previous Central Maryland TDP also recommended a new route between the Bowie Town Center and the Cromwell Light Rail station. As noted in Chapter 5 that proposed service would be modified to have Crofton as the southern point of the route, though planned with connections to the proposed Crofton on-demand service and Crofton-Bowie service.

- Proposed Operating Hours: Monday through Friday, 6:00 a.m. to 6:30 p.m.
- Projected Annual Operating Costs: \$1,052,226
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

Long-Term Improvements (Year 5 and Beyond)

Year 5

Parole - New Carrollton Express Service

One of the regional corridors identified in the Central Maryland Regional Transit Plan and discussed in Chapter 5 was service between Annapolis and the New Carrollton Metro Station in Prince George's County. This corridor was previously served by an MTA Commuter Bus service, and then by a private operator (Young's Transportation) without any public transit funding. Similar to the proposed I-97 Express service noted in an earlier service improvement, it is anticipated that this potential route would be coordinated with MDOT MTA Commuter Bus staff and operated by MDOT MTA.

- Proposed Operating Hours: Monday – Friday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$515,970
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

I-97 Express Bus: Cromwell Light Rail Station – Parole Transportation Center

As noted in Chapter 5, Anne Arundel County's FY 23 list of priorities for the FY 2023-28 Consolidated Transportation Program (CTP) included express bus between Cromwell Light Rail Station to Parole Transit Center. It is anticipated that this potential service will be coordinated with MDOT MTA Commuter Bus staff and their analysis of this potential route, and also operated by MDOT MTA.

- Proposed Operating Hours: Monday – Friday, 6:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$520,065
- Projected Number of Vehicles: 3
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$1,260,000

Pasadena – NSA Route

As noted in Chapter 5, many NSA employees are located in the Pasadena area, warranting consideration of a route that would connect these locations. Service planning would need to take into consideration the potential Pasadena on-demand services discussed in the proposed short-term service improvements.

- Proposed Operating Hours: Monday – Friday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$520,065
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Glen Burnie – Fort Meade Route

Chapter 5 also discussed a potential route between Glen Burnie and Fort Meade (and possibly NSA). Service planning before implementation would need to take into account the status of on-demand services in the area to ensure full coordination between the different modes.

- Proposed Operating Hours: Monday – Friday, 7:00 a.m. - 7:00 p.m.
- Projected Annual Operating Costs: \$520,065
- Projected Number of Vehicles: 2
- Projected Individual Vehicle Cost: \$420,000
- Projected Total Capital Costs: \$840,000

Conceptual Financial Plan for Operating

Anne Arundel County submits an annual grant application to MDOT MTA that includes operating and capital grant programs. Maryland's transit program combines available federal and state funds to provide local assistance, and the allocation to the different localities is not strictly formula driven. Therefore, any estimate for the amount of grant funding available to Anne Arundel County is somewhat speculative.

However, the TDP serves an important role in MDOT MTA's annual process of reviewing grant applications. Typically, the projects proposed in Anne Arundel County's annual grant application must have been identified in the TDP in order to be considered for funding.

Table 6-1 presents the conceptual financial plan for transit operations covering the TDP's five-year period. The estimated total budget for each year assumes that all service improvements occur in the year planned and the current level of service remains unchanged. As noted previously, the actual implementation will be based on several factors, primarily community input, detailed service planning, and funding availability.

A variety of assumptions were used in developing the operating cost estimates:

- For the initial year the operating costs are based on Anne Arundel County's FY2023 budget submitted to MDOT MTA through the ATP.
- Operating costs to maintain the current level of service and to implement service expansions from year-to-year assume a 5% annual inflation rate based on input from the Office of Transportation on historical cost increases through their contracted service provider.
- Regarding the potential funding to support the proposed services, there are a variety of unknown factors and issues. The projected funding sources are based on a similar percentage from the FY2023 ATP budget. However, projected funding sources are not guaranteed and will need to be developed through consultation with MDOT MTA and local officials

- Anne Arundel County is encouraged to continue to work with MDOT MTA annually through the ATP process to explore opportunities through current federal and state funding programs, as well as any new ones that become available over the next five years. For instance, the Federal Transit Administration (FTA) has recently developed new funding programs that support innovative mobility projects such as microtransit services. Anne Arundel County should take maximum advantage of FTA discretionary funding opportunities to compete for funds to address appropriate elements of this plan.

Table 6-1: Conceptual Financial Plan for Operating

Proposed Operating Requests	Projected Year				
	1	2	3	4	5
Proposed Future Projects					
Baseline Operating Cost with Inflation	\$15,077,120	\$15,830,976	\$16,622,525	\$17,453,651	\$18,326,334
Year 1					
West County On-Demand	\$575,770	\$604,559	\$634,786	\$666,526	\$699,852
Annapolis/Parole On-Demand	\$415,120	\$435,876	\$457,670	\$480,553	\$504,581
Year 2					
Severna Park/Arnold On-Demand		\$596,461	\$626,284	\$657,598	\$690,478
Pasadena On-Demand		\$738,904	\$775,849	\$814,642	\$855,374
Year 3					
Crofton/Crownsville On-Demand			\$770,812	\$809,352	\$849,820
AACC/Severna Park - Fort Meade/NSA			\$885,583	\$929,862	\$976,355
Year 4					
Laurel - NSA/Fort Meade (Possible RTA Service)				\$872,977	\$916,625
Crofton - Bowie (Possible RTA Service)				\$669,501	\$702,976
Annapolis – Arundel Mills/BWI Airport				\$1,651,435	\$1,734,007
Crofton – Cromwell Light Rail				\$1,218,083	\$1,278,987
Year 5					
Parole - New Carrollton Express (Possible MDOT MTA Service)					\$627,165
I-97 Express Bus					\$632,142
Pasadena – NSA					\$557,917
Glen Burnie – Fort Meade					\$557,917
Total Proposed Operating Expenses	\$16,068,010	\$18,206,775	\$20,773,509	\$26,224,180	\$29,910,531
Anticipated Funding Sources for Operating					
Federal/State	\$7,798,635	\$8,836,689	\$10,082,457	\$12,727,949	\$14,517,126
Local	\$8,269,375	\$9,370,087	\$10,691,052	\$13,496,231	\$15,393,406
Total Proposed Operating Revenues	\$16,068,010	\$18,206,775	\$20,773,509	\$26,224,180	\$29,910,531

Title VI Considerations

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color, or national origin. Public transportation agencies have the ability and responsibility to enhance the social and economic quality of life for people in their communities. As such, public transportation agencies must ensure that changes in services do not have a disproportionately high negative impact on below poverty or minority populations. As a result, when implementing potential service improvements Anne Arundel County will need to conduct a Title VI analysis to assess the impacts on the distribution of minority and below poverty populations in the proposed service area.

ADA Paratransit Considerations

The Americans with Disabilities Act (ADA) requires public transit agencies that provide fixed-route service to provide “complementary paratransit” service to people with disabilities who cannot use the fixed-route bus service because of a disability. Anne Arundel County Transit currently provides complementary ADA paratransit service for individuals who are unable to use fixed routes, and several of the proposed new services would also fall into this category and require ADA paratransit services. There may be some geographic overlap with current routes and ADA service areas, and therefore the operating costs for expanded ADA paratransit service to meet the requirement will need to be determined through final service planning and implementation of any new routes.

Conceptual Financial Plan for Capital

The annual capital plan that Anne Arundel County submits to MDOT MTA through the ATP serves as the basis for maintaining, replacing, and expanding the capital infrastructure needed to maintain current services and to implement the operating plan of this TDP. For purposes of the TDP the focus of the capital plan is on expansion vehicles that would be needed to implement proposed future projects discussed in the previous operating plan section.

Financial Plan for Capital

Table 6-2 provide a conceptual financial plan for capital. The following assumptions were considered in developing the capital plan, and as noted there will be additional future considerations related to the vehicle replacement and expansion plans:

- The capital plan includes additional vehicles to accommodate for the potential implementation of new services discussed in the conceptual operating plan.

- For operation of the proposed new microtransit services the Office of Transportation reports that they are planning to operate smaller vehicles not part of the current inventory. Therefore, the projected vehicle costs are an estimate and may be different based on the final type of vehicle procured for the service expansion.
- As discussed in Chapter 2, Anne Arundel County has committed to purchasing only zero-emission buses and hybrid-electric buses (HEBs) from 2023 onward. Therefore, the capital plan projects the use of electric vehicles (EVs) when implementing potential service improvements. Projected vehicles costs were provided by the Office of Transportation.
- The funding sources for vehicle capital are projected to be 80% federal, 10% state, and 10% local.

Table 6-2: Conceptual Financial Plan for Capital

Projected Vehicle Requests	Fiscal Year				
	1	2	3	4	5
Expansion Vehicles					
Electric Vehicles	5	4	5	11	10
Total Projected Costs	\$2,100,000	\$1,680,000	\$2,100,000	\$4,620,000	\$4,200,000
Projected Funding Sources					
Federal	\$1,680,000	\$1,344,000	\$1,680,000	\$3,696,000	\$3,360,000
State	\$210,000	\$168,000	\$210,000	\$462,000	\$420,000
Local	\$210,000	\$168,000	\$210,000	\$462,000	\$420,000
Total Capital Project Funding	\$2,100,000	\$1,680,000	\$2,100,000	\$4,620,000	\$4,200,000

Additional Capital Considerations

Vehicle Replacement

Useful life standards are developed by MDOT MTA based on the vehicle manufacturer's designated life cycle and the results of independent FTA testing. If vehicles are allowed to exceed their useful life they may become much more susceptible to breakdowns which may result in increased operating costs and a decrease in service reliability. MDOT MTA vehicle useful life policy, shown below in Table 6-3, and is also provided in the Locally Operated Transit System Program Manual.

Table 6-3: MDOT MTA's Vehicle Useful Life Policy

Vehicle Classification	Useful Life	
	Years	Miles
Revenue Specialized Vehicles <i>(Accessible Minivans, Vans, Accessible Taxicabs & Sedans)</i>	4	100,000
Light Duty Small Bus <i>(25' to 35')</i>	5	150,000
Medium Duty Bus <i>(25' to 35')</i>	7	200,000
Heavy Duty Bus <i>(Medium Size, 30' to 35')</i>	10	350,000
Heavy Duty Bus <i>(Large Size, Over 35')</i>	12	500,000
Non-Revenue Specialized/Fleet Support Vehicles <i>(Pick-Up trucks, Utility Vehicles & Sedans)</i>	10	200,000

SOURCE: MDOT MTA, LOCALLY OPERATED TRANSIT SYSTEM (LOTS) PROGRAM MANUAL, APRIL 2017, REV. 3 01.2019

Table 6-4 provides an inventory of Anne Arundel County's current fleet. This inventory will serve as the basis for the capital plan submitted by Anne Arundel County to MDOT MTA through the ATP in regard to future vehicle replacement needs.

Table 6-4: Inventory of Anne Arundel County's Current Fleet

Agency Asset ID	Model Year	Make	Model	Vehicle Type	Seating Capacity		Fuel Type	Current Condition	Mileage	Useful Life Minimum Years/Miles		Earliest Possible Replacement Year
					Ambulatory	Wheelchair				Miles	Year	
172301	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	172,415	200,000	6	2019
172302	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	192,483	200,000	6	2019
172303	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	159,498	200,000	6	2019
172304	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	166,540	200,000	6	2019
172305	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	191,045	200,000	6	2019
172306	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	166,003	200,000	6	2019
172307	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	165,821	200,000	6	2019
172310	2013	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	212,253	200,000	6	2019
172401	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	175,660	200,000	6	2021
172402	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	178,001	200,000	6	2021
172403	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	149,368	200,000	6	2021
172404	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	154,932	200,000	6	2021
172405	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	165,203	200,000	6	2021
172406	2014	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	194,355	200,000	6	2021
172505	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	157,335	200,000	6	2021
172506	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	3	193,149	200,000	6	2021
172507	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	164,302	200,000	6	2021
172508	2015	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	154,336	200,000	6	2021
499221	2017	FORD	E-450	Medium Duty Bus	16	2	Gasoline	5	88,006	250,000	8	2026
499222	2017	FORD	E-450	Medium Duty Bus	16	2	Gasoline	5	106,766	250,000	8	2026
499223	2017	FORD	E-450	Medium Duty Bus	16	2	Gasoline	5	104,710	250,000	8	2026
499224	2017	FORD	E-450	Medium Duty Bus	16	2	Gasoline	5	111,434	250,000	8	2026
172712	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	72,594	200,000	6	2024
172713	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	126,282	200,000	6	2024
172714	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	101,076	200,000	6	2024
172715	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	72,140	200,000	6	2024
172716	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	119,795	200,000	6	2024
172717	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	94,313	200,000	6	2024
172718	2017	FORD	E-450	Light Duty Bus	12	2	Gasoline	4	86,370	200,000	6	2024
172806	2018	FORD	E-450	Accessible Van	2	2	Gasoline	5	29,420	150,000	4	2023
172807	2018	FORD	E-450	Accessible Van	2	2	Gasoline	5	53,209	150,000	4	2023
172808	2018	FORD	E-450	Accessible Van	2	2	Gasoline	5	47,698	150,000	4	2023
172900	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	40,071	200,000	6	2025
172901	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	42,920	200,000	6	2025
172902	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	40,139	200,000	6	2025
172903	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	39,111	200,000	6	2025
172904	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	37,266	200,000	6	2025
172910	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	8,320	200,000	6	2027
172911	2019	FORD	E-450	Light Duty Bus	12	2	Gasoline	5	9,148	200,000	6	2027
172912	2019	FORD	F-550	Heavy Duty Medium Bus	26	2	Gasoline	5	14,694	350,000	10	2031
172913	2019	FORD	F-550	Heavy Duty Medium Bus	26	2	Diesel	5	967	350,000	10	2031
172914	2019	FORD	F-550	Heavy Duty Medium Bus	26	2	Diesel	5	1,023	350,000	10	2031
172915	2019	FORD	F-550	Heavy Duty Medium Bus	26	2	Gasoline	5	1,025	350,000	10	2031
172916	2019	FORD	F-550	Heavy Duty Medium Bus	26	2	Gasoline	5	1,030	350,000	10	2031
172917	2019	FORD	F-550	Heavy Duty Medium Bus	26	2	Gasoline	5	920	350,000	10	2031

Technology Initiatives

Through the course of the TDP Anne Arundel County implemented technology upgrades related their on-demand services. There may need to be additional technological improvements as these services are expanded as discussed in the conceptual service plan.

Approved Capital Projects

Four major transit capital projects are underway in Anne Arundel County that were approved by the County Council. The following section provides an overview of each based on input from the Office of Transportation.

Odenton MARC Parking Garage

This project involves the construction of a 1,100 space parking structure:

- Currently in the design phase, construction is scheduled for August 2025 – December 2026.
- Projected budget: \$35.6 million

Transportation Operations Facility

This project is for the land acquisition, design, and construction of a Transportation Operations Facility that will house Anne Arundel County's transit fleet and operations and maintenance staff.

- Currently in the planning phase
- Projected budget: \$6.98 million

Parole Transportation Center

This project will provide a multi-modal transportation center in Parole. Overall project will include design, right of way acquisition, utility relocation, construction and project management.

- Currently in the design phase, construction is scheduled for April 2024 – April 2025.
- Projected budget: \$17.2 million

Arundel Mills Mall Bus Stop and Shelter Enhancements

This project involves improvements to the existing bus stop location and shelter at the Arundel Mills Mall.

- Currently in the design phase, construction is scheduled for March 2024 – July 2024.
- Projected budget: \$1.8 million

Summary

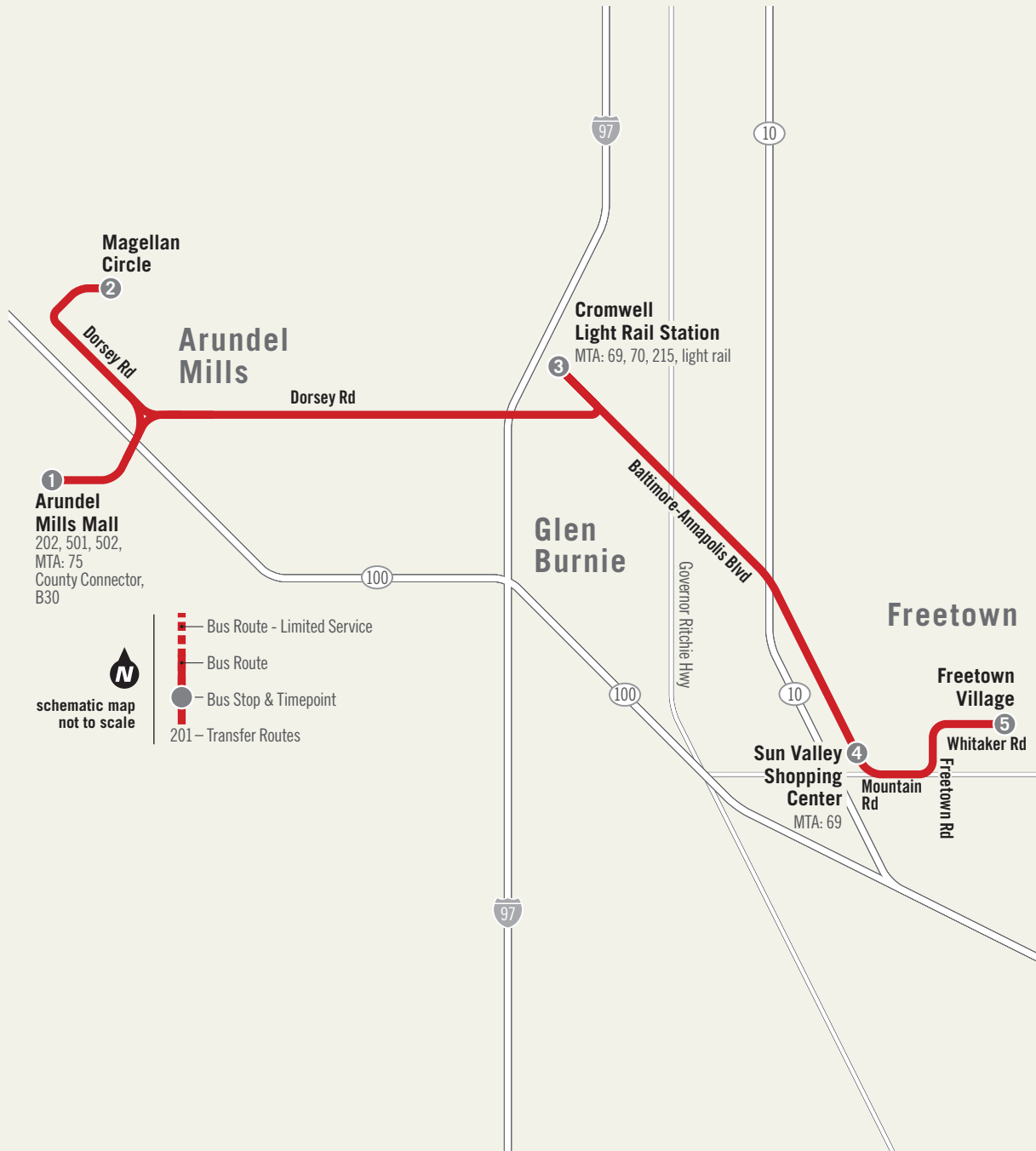
This TDP provides recommendations for the expansion of existing and new public transportation services in Anne Arundel County and the broader Central Maryland region. The TDP specifically focuses on addressing community desires and local initiatives, with a particular focus on:

- Expanding geographic coverage of the existing transit networks.
- Providing connections to other regional transit providers to further expand mobility options for Anne Arundel County residents.
- Utilizing new technologies to implement expanded on-demand services.

Proposed new services and improvements will require additional funding were developed to address issues identified during the review of needs, and are dependent on the future availability of new or additional funding. With uncertain budgets and non-guaranteed financial resources, it is important to remember that public transportation can contribute to the local and regional economy by providing a way for residents to get to work and school, access necessary medical services, and support local businesses and economic development.

Appendix A

Current Route Schedules



Travel Free!

Anne Arundel County Transit is **FARE FREE** to all county residents!

Inclement Weather

For information on route changes during inclement weather, contact Anne Arundel County Office of Transportation at 410-222-7440 or www.aacounty.org/transportation

Anne Arundel County Transit Services

Scan the QR code to access the latest transit service information in Anne Arundel County.

For real-time information download our new **Transit App!**



AA-201

Daily Service

- Arundel Mills Mall
- Magellan Circle
- Cromwell Light Rail Station
- Sun Valley Shopping Center
- Freetown Village

All buses are accessible
TTY MD Relay or 7-1-1



MONDAY–FRIDAY

Arundel Mills Mall	Magellan Circle	Cromwell LRT	Sun Valley Shopping Ctr	Freetown Village	Freetown Village	Sun Valley Shopping Ctr	Cromwell LRT	Magellan Circle	Arundel Mills Mall
1	2	3	4	5	5	4	3	2	1
					5:50	5:54	6:09	6:23	6:29
					6:10	6:14	6:29	6:43	6:49
6:45	6:53	7:06	7:20	7:25	7:30	7:34	7:49	8:03	8:09
7:00	7:08	7:21	7:35	7:40	7:45	7:49	8:04	8:18	8:24
7:30	7:38	7:51	8:05	8:10	8:15	8:19	8:34	8:48	8:54
8:00	8:08	8:21	8:35	8:40	8:45	8:49	9:04	9:18	9:24
8:15	8:23	8:36	8:50	8:55	9:00	9:04	9:19	9:33	9:39
8:40	8:48	9:01	9:15	9:20	9:25	9:29	9:44	9:58	10:04
9:00	9:08	9:21	9:35	9:40	9:45	9:49	10:04	10:18	10:24
9:45	9:53	10:06	10:20	10:25	10:30	10:34	10:49	11:03	11:09
11:15	11:23	11:36	11:50	11:55	12:00	12:04	12:19	12:33	12:39
12:45	12:53	1:06	1:20	1:25	1:30	1:34	1:49	2:03	2:09
2:15	2:23	2:36	2:50	2:55	3:00	3:04	3:19	3:33	3:39
3:00	3:08	3:21	3:35	3:40	3:45	3:49	4:04	4:18	4:24
3:45	3:53	4:06	4:20	4:25	4:30	4:34	4:49	5:03	5:09
4:00	4:08	4:21	4:35	4:40	4:45	4:49	5:04	5:18	5:24
4:30	4:38	4:51	5:05	5:10	5:15	5:19	5:34	5:48	5:54
5:15	5:23	5:36	5:50	5:55	6:00	6:04	6:19	6:33	6:39
6:00	6:08	6:21	6:35	6:40	6:45	6:49	7:04	7:18	7:24
6:45	6:53	7:06	7:20	7:25	7:30	7:34	7:49	8:03	8:09
7:30	7:38	7:51	8:05	8:10	8:15	8:19	8:34	8:48	8:54
8:15	8:23	8:36	8:50	8:55	9:00	9:04	9:19	9:33	9:39
9:45	9:53	10:06	10:20	10:25	10:30	10:34	10:49	11:03	11:09
11:15	11:23	11:36	11:50	11:55	12:00	12:04	12:19	12:33	12:39

Holidays

On holidays, follow these schedules:

New Year's Day	No Service
Martin Luther King Jr Day	Sunday
President's Day	Sunday
Good Friday	Sunday
Memorial Day	Sunday
Independence Day	No service
Labor Day	Sunday
Veterans Day	Sunday
Thanksgiving Day	No Service
Christmas Day	No Service

SATURDAY

Arundel Mills Mall	Magellan Circle	Cromwell LRT	Sun Valley Shopping Ctr	Freetown Village	Freetown Village	Sun Valley Shopping Ctr	Cromwell LRT	Magellan Circle	Arundel Mills Mall
1	2	3	4	5	5	4	3	2	1
					7:00	7:05	7:20	7:34	7:40
7:40	7:48	8:01	8:15	8:20	8:20	8:25	8:40	8:54	9:00
9:10	9:18	9:31	9:45	9:50	9:50	9:55	10:10	10:24	10:30
10:40	10:48	11:01	11:15	11:20	11:20	11:25	11:40	11:54	12:00
12:10	12:18	12:31	12:45	12:50	12:50	12:55	1:10	1:24	1:30
1:40	1:48	2:01	2:15	2:20	2:20	2:25	2:40	2:54	3:00
3:10	3:18	3:31	3:45	3:50	3:50	3:55	4:10	4:24	4:30
4:40	4:48	5:01	5:15	5:20	5:20	5:25	5:40	5:54	6:00
6:10	6:18	6:31	6:45	6:50	6:50	6:55	7:10	7:24	7:30
7:40	7:48	8:01	8:15	8:20	8:20	8:25	8:40	8:54	9:00
9:10	9:18	9:31	9:45	9:50	9:50	9:55	10:10	10:24	10:30
10:40	10:48	11:01	11:15	11:20	11:20	11:25	11:40	11:54	12:00
12:10	12:18	12:31	12:45	12:50					

SUNDAY

Arundel Mills Mall	Magellan Circle	Cromwell LRT	Sun Valley Shopping Ctr	Freetown Village	Freetown Village	Sun Valley Shopping Ctr	Cromwell LRT	Magellan Circle	Arundel Mills Mall
1	2	3	4	5	5	4	3	2	1
					9:10	9:15	9:30	9:44	9:50
10:40	10:48	11:01	11:15	11:20	11:20	11:25	11:40	11:54	12:00
12:10	12:18	12:31	12:45	12:50	12:50	12:55	1:10	1:24	1:30
1:40	1:48	2:01	2:15	2:20	2:20	2:25	2:40	2:54	3:00
3:10	3:18	3:31	3:45	3:50	3:50	3:55	4:10	4:24	4:30
4:40	4:48	5:01	5:15	5:20	5:20	5:25	5:40	5:54	6:00
6:10	6:18	6:31	6:45	6:50	6:50	6:55	7:10	7:24	7:30
7:40	7:48	8:01	8:15	8:20	8:20	8:25	8:40	8:54	9:00
9:10	9:18	9:31	9:45	9:50	9:50	9:55	10:10	10:24	10:30
10:40	10:48	11:01	11:15	11:20					

On all timetables, **BOLD** numerals indicate **PM** times

Guaranteed Ride Home

When you take AA-201 to work and you have an emergency, you are eligible for the Guaranteed Ride Home Program through Commuter Connections. To register, call 1-800-745-RIDE (7433).

How to Read the Schedule & Ride the Bus:

- 1 First, find the schedule for the day of week you wish to travel: **MONDAY–FRIDAY**, **SATURDAY** or **SUNDAY**.
- 2 Next, find the **TIMEPOINT** closest to your origin and destination. The schedule lists timepoints only; additional stops are available and are not shown in the schedule. **BOLD NUMERALS** indicate **PM** times.
- 3 Finally, look below your timepoint to see when buses depart from that location. Arrive at your bus stop 5–10 minutes early so that we don't miss you!
- 4 Have your fare ready as the bus approaches. Pay your fare upon boarding and take a seat. Please refrain from eating, drinking and smoking while on the bus. Use earphones if you're listening to music. Enjoy the ride!

TRANSIT APP

The Transit App Program offers **FREE** trip planning, real time bus information, maps and schedules. Buses, Trains, Bikes, Scooters, Carshare, Ridehail.

Visit the www.Transitapp.com for your mobility trip planning needs.

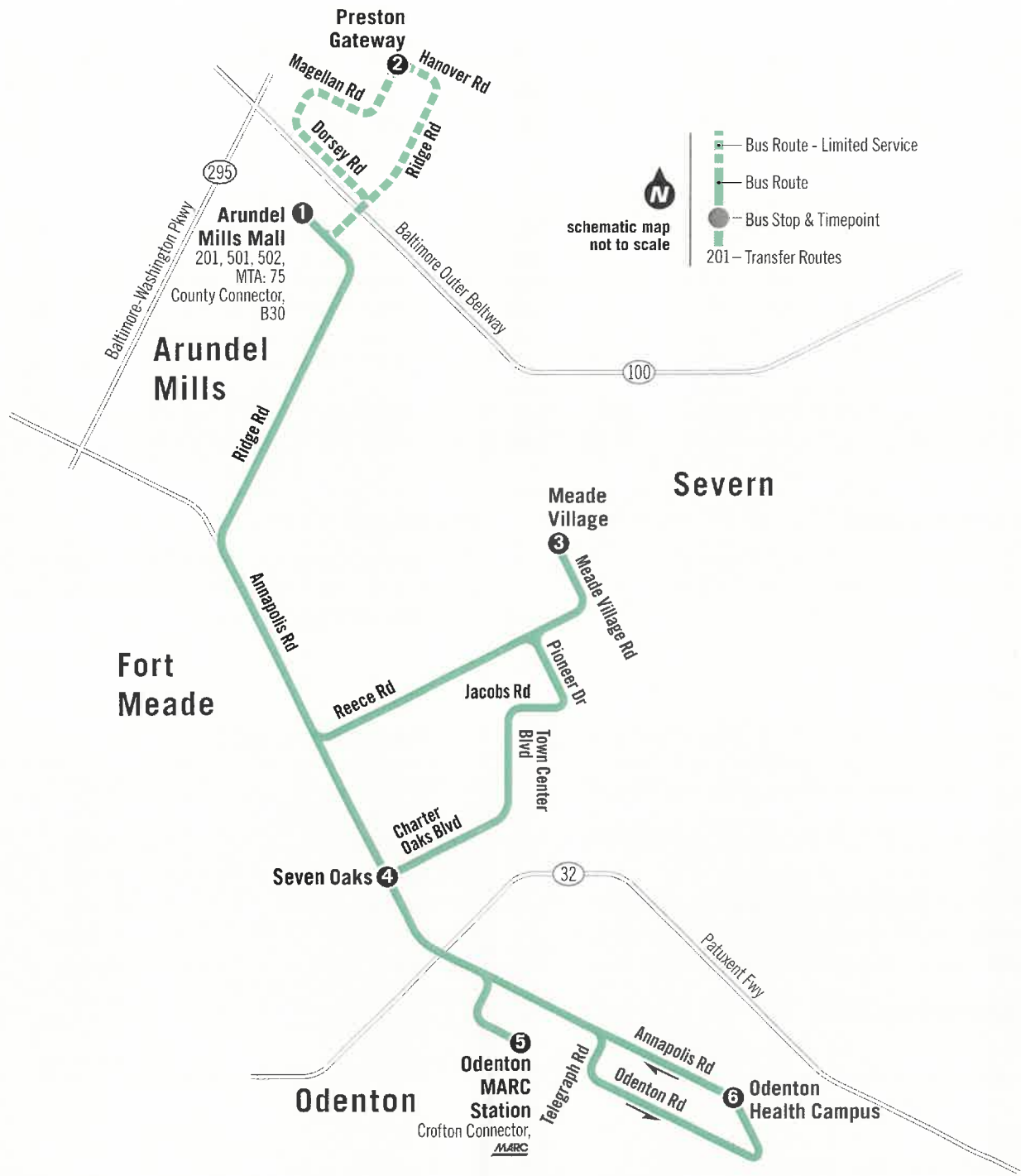
You'll get the **fastest trip plans, transit schedules and directions that work offline**, alerts when service is down, and the most accurate predictions.

Paratransit

For paratransit service, please call Anne Arundel County Office of Transportation at 410-222-0022 (OR) 410-222-0225

Title VI Information

Anne Arundel County Office of Transportation fully complies with Title VI of the Civil Rights Act of 1964. For the full policy, visit www.aacounty.org/transportation



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Inclement Weather

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Anne Arundel County Transit Services

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AA-202

Daily Service

- Arundel Mills Mall
- Preston Gateway
- Meade Village
- Seven Oaks
- Odenton MARC Station
- Odenton Health Campus

All buses are accessible
TTY MD Relay or 7-1-1



MONDAY-FRIDAY

Arundel Mills	Preston Gate	Arundel Mills	Meade Village	Seven Oaks	Odenton MARC	Odenton Health Campus	Odenton MARC	Seven Oaks	Meade Village	Arundel Mills
1	2	1	3	4	5	6	5	4	3	1
6:15	6:30	6:45	6:59	7:07	7:12	7:20	7:25	7:30	7:37	7:57
6:30	6:45	7:00	7:14	7:22	7:27	7:35	7:40	7:45	7:52	8:12
7:00	7:15	7:30	7:44	7:52	7:57	8:05	8:10	8:15	8:22	8:42
7:45	8:00	8:15	8:29	8:37	8:42	8:50	8:55	9:00	9:07	9:27
8:30	8:45	9:00	9:14	9:22	9:27	9:35	9:40	9:45	9:52	10:12
		9:15	9:29	9:37	9:42	9:50	9:55	10:00	10:07	10:27
		10:00	10:14	10:22	10:27	10:35	10:40	10:45	10:52	11:12
		10:45	10:59	11:07	11:12	11:20	11:25	11:30	11:37	11:57
		12:15	12:29	12:37	12:42	12:50	12:55	1:00	1:07	1:27
		1:45	1:59	2:07	2:12	2:20	2:25	2:30	2:37	2:57
		2:30	2:44	2:52	2:57	3:05	3:10	3:15	3:22	3:42
3:15	3:30	3:45	3:59	4:07	4:12	4:20	4:25	4:30	4:37	4:57
4:00	4:15	4:30	4:44	4:52	4:57	5:05	5:10	5:15	5:22	5:42
4:15	4:30	4:45	4:59	5:07	5:12	5:20	5:25	5:30	5:37	5:57
4:45	5:00	5:15	5:29	5:37	5:42	5:50	5:55	6:00	6:07	6:27
5:00	5:15	5:30	5:44	5:52	5:57	6:05	6:10	6:15	6:22	6:42
5:30	5:45	6:00	6:14	6:22	6:27	6:35	6:40	6:45	6:52	7:12
6:15	6:30	6:45	6:59	7:07	7:12	7:20	7:25	7:30	7:37	7:57
7:45		8:00	8:14	8:22	8:27	8:35	8:40	8:45	8:52	9:12
		9:25	9:39	9:47	9:52	10:00	10:05	10:10	10:17	10:37
		11:00	11:14	11:22	11:27	11:35	11:40	11:45	11:52	12:12

SATURDAY

Arundel Mills	Meade Village	Seven Oaks	Odenton MARC	Odenton Health Campus	Odenton MARC	Seven Oaks	Meade Village	Arundel Mills
1	3	4	5	6	5	4	3	1
8:45	9:05	9:14	9:19	8:00	8:09	8:20	8:29	8:49
10:15	10:35	10:44	10:49	9:32	9:41	9:52	10:01	10:21
11:45	12:05	12:14	12:19	12:32	12:41	12:52	1:01	1:21
1:15	1:35	1:44	1:49	2:02	2:11	2:22	2:31	2:51
2:45	3:05	3:14	3:19	3:32	3:41	3:52	4:01	4:21
4:15	4:35	4:44	4:49	5:02	5:11	5:22	5:31	5:51
5:45	6:05	6:14	6:19	6:32	6:41	6:52	7:01	7:21
7:15	7:35	7:44	7:49	8:02	8:11	8:22	8:31	8:51
8:45	9:05	9:14	9:19	9:32	9:41	9:52	10:01	10:21
10:15	10:35	10:44	10:49	11:02	11:11	11:22	11:31	11:51
10:48	11:08	11:17	11:22	11:35	11:44	11:55	12:04	12:24

SUNDAY

Arundel Mills	Meade Village	Seven Oaks	Odenton MARC	Odenton Health Campus	Odenton MARC	Seven Oaks	Meade Village	Arundel Mills
1	3	4	5	6	5	4	3	1
8:45	9:05	9:14	9:19	8:00	8:09	8:20	8:29	8:49
10:15	10:35	10:44	10:49	9:32	9:41	9:52	10:01	10:21
11:45	12:05	12:14	12:19	12:32	12:41	12:52	1:01	1:21
1:15	1:35	1:44	1:49	2:02	2:11	2:22	2:31	2:51
2:45	3:05	3:14	3:19	3:32	3:41	3:52	4:01	4:21
4:15	4:35	4:44	4:49	5:02	5:11	5:22	5:31	5:51
5:45	6:05	6:14	6:19	6:32	6:41	6:52	7:01	7:21
7:15	7:35	7:44	7:49	8:02	8:11	8:22	8:31	8:51
8:45	9:05	9:14	9:19	9:32	9:41	9:52	10:01	10:21
10:15	10:35	10:44	10:49	11:02	11:11	11:22	11:31	11:51
10:48	11:08	11:17	11:22	11:35	11:44	11:55	12:04	12:24

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President's Day	Sunday
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Independence Day	No service
Labor Day	Sunday
Veterans Day	Sunday
Thanksgiving Day	No Service
Christmas Day	No Service

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WESTBOUND

MONDAY–SUNDAY

1 Weis at So. River Colony	2 Route 2 at Mayo Rd.	3 Route 2 & Adm. Cochran	4 Annapolis Harbour Center	5 Westfield Mall	6 Bestgate Rd & Harbour Gates Dr	7 Rowe Blvd at Taylor Ave	8 Church Circle & School St.	7 Rowe Blvd at Taylor Ave	9 Medical Pkwy/ Jennifer Rd	5 Westfield Mall
6:00	6:06	6:11	6:16	6:26	6:30	6:38	6:44	6:50	6:54	6:57
7:00	7:06	7:11	7:16	7:26	7:30	7:38	7:44	7:50	7:54	7:57
8:00	8:06	8:11	8:16	8:26	8:30	8:38	8:44	8:50	8:54	8:57
9:00	9:06	9:11	9:16	9:26	9:30	9:38	9:44	9:50	9:54	9:57
10:00	10:06	10:11	10:16	10:26	10:30	10:38	10:44	10:50	10:54	10:57
11:00	11:06	11:11	11:16	11:26	11:30	11:38	11:44	11:50	11:54	11:57
12:00	12:06	12:11	12:16	12:26	12:30	12:38	12:44	12:50	12:54	12:57
1:00	1:06	1:11	1:16	1:26	1:30	1:38	1:44	1:50	1:54	1:57
2:00	2:06	2:11	2:16	2:26	2:30	2:38	2:44	2:50	2:54	2:57
3:00	3:06	3:11	3:16	3:26	3:30	3:38	3:44	3:50	3:54	3:57
4:00	4:06	4:11	4:16	4:26	4:30	4:38	4:44	4:50	4:54	4:57
5:00	5:06	5:11	5:16	5:26	5:30	5:38	5:44	5:50	5:54	5:57
6:00	6:06	6:11	6:16	6:26	6:30	6:38	6:44	6:50	6:54	6:57
7:00	7:06	7:11	7:16	7:26	7:30	7:38	7:44	7:50	7:54	7:57
8:00	8:06	8:11	8:16	8:26	8:30	8:38	8:44	8:50	8:54	8:57

EASTBOUND

MONDAY–SUNDAY

5 Westfield Mall	6 Bestgate Rd & Harbour Gates Dr	7 Rowe Blvd at Taylor Ave	8 Church Circle & School St.	7 Rowe Blvd at Taylor Ave	9 Medical Pkwy/ Jennifer Rd	4 Annapolis Harbour Center	2 Route 2 at Mayo Rd.	10 Route 2 & Stepneys Ln	1 Weis at So River Colony
6:00	6:04	6:12	6:18	6:24	6:30	6:38	6:48	6:51	6:56
7:00	7:04	7:12	7:18	7:24	7:30	7:38	7:48	7:51	7:56
8:00	8:04	8:12	8:18	8:24	8:30	8:38	8:48	8:51	8:56
9:00	9:04	9:12	9:18	9:24	9:30	9:38	9:48	9:51	9:56
10:00	10:04	10:12	10:18	10:24	10:30	10:38	10:48	10:51	10:56
11:00	11:04	11:12	11:18	11:24	11:30	11:38	11:48	11:51	11:56
12:00	12:04	12:12	12:18	12:24	12:30	12:38	12:48	12:51	12:56
1:00	1:04	1:12	1:18	1:24	1:30	1:38	1:48	1:51	1:56
2:00	2:04	2:12	2:18	2:24	2:30	2:38	2:48	2:51	2:56
3:00	3:04	3:12	3:18	3:24	3:30	3:38	3:48	3:51	3:56
4:00	4:04	4:12	4:18	4:24	4:30	4:38	4:48	4:51	4:56
5:00	5:04	5:12	5:18	5:24	5:30	5:38	5:48	5:51	5:56
6:00	6:04	6:12	6:18	6:24	6:30	6:38	6:48	6:51	6:56
7:00	7:04	7:12	7:18	7:24	7:30	7:38	7:48	7:51	7:56
8:00	8:04	8:12	8:18	8:24	8:30	8:38	8:48	8:51	8:56

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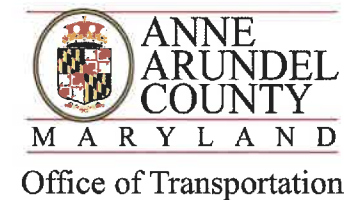
New Year's Day	No Service
Martin Luther King Jr Day	Saturday–Sunday
President's Day	Saturday–Sunday
Good Friday	Saturday–Sunday
Memorial Day	Saturday–Sunday
Independence Day	No service
Labor Day	Saturday–Sunday
Veterans Day	Saturday–Sunday
Thanksgiving Day	No Service
Christmas Day	No Service

AA-Gold Edgewater

Daily Service

- South Colony
- Route 2/ Mayo Rd
- Route 2/ Admiral Cochrane
- Harbour Center
- Westfield Mall
- Annapolis

All buses are accessible
TTY MD Relay or 7-1-1



Travel Free!

Anne Arundel County Transit is **FARE FREE** to all county residents!

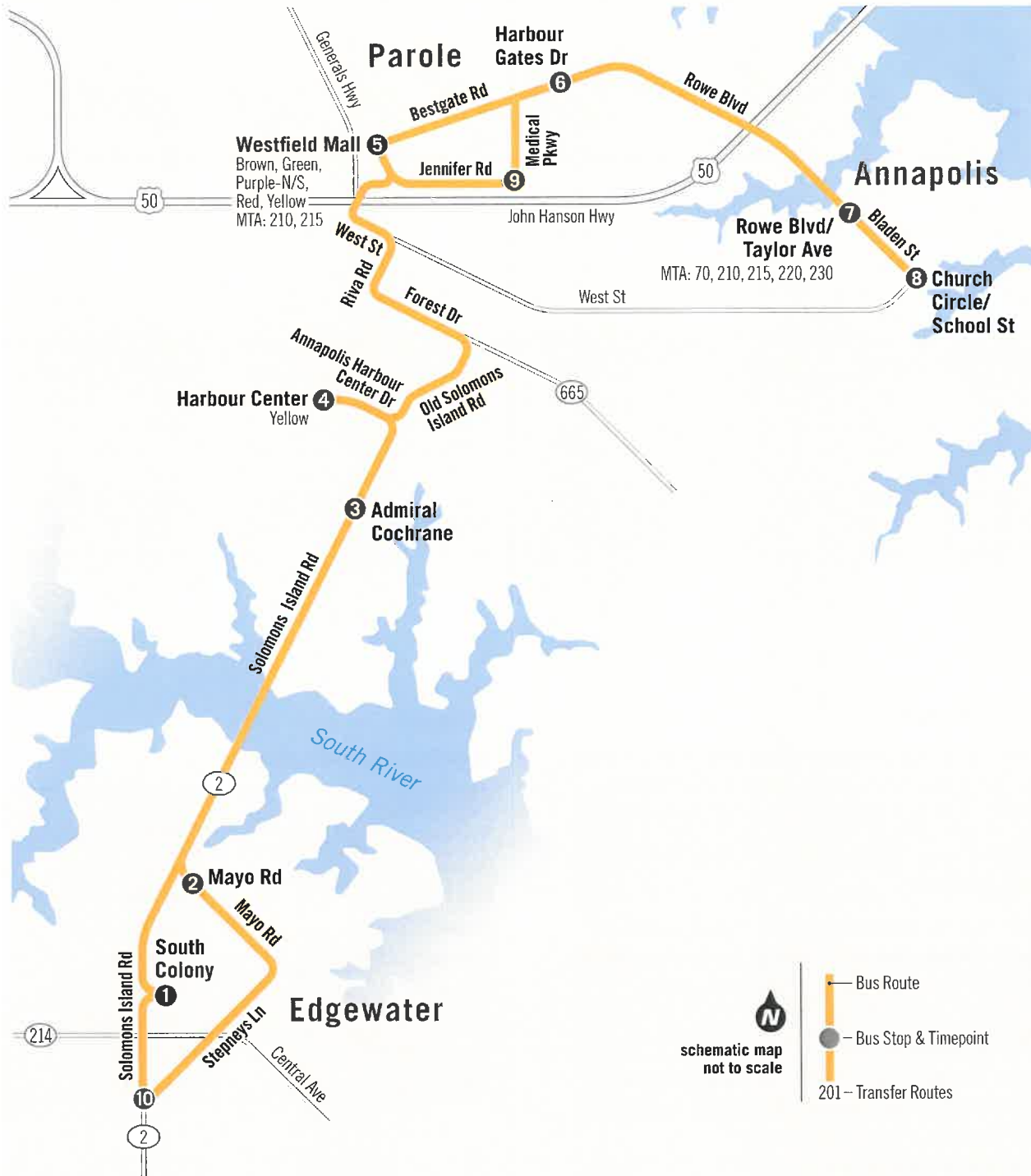
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North arrow and text: schematic map not to scale

- Bus Route
- Bus Stop & Timepoint
- 201 – Transfer Routes



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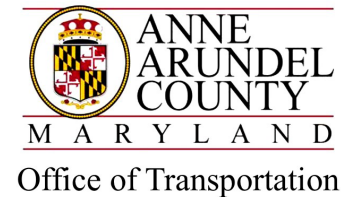


Gold Line Extension

Daily Service

- Westfield Mall
- Bestgate Rd/
Tidewater Colony
- Rowe Bl/Taylor Ave
- MD 450/USNA Gate 8
- Arnold Rd at Safeway
- Anne Arundel CC
- Jumpers Hole Rd at
Walmart Super Center
- Baltimore Annapolis Blvd/
Crain Hwy
- Cromwell Light Rail Station

All buses are accessible
TTY MD Relay or 7-1-1



NORTHBOUND

MONDAY–SUNDAY

Westfield Mall	Bestgate Rd at Tidewater Colony	Rowe Blvd at Taylor Ave	MD 450 at USNA Gate 8	Arnold at Safeway	W Campus Dr/ Ring Rd	Ritchie Hwy/ McKinsey Rd	Jumpers Hole Rd Walmart Super Center	B&A Blvd/ Crain Hwy	Cromwell Light Rail Station
1	2	3	4	5	6	7	8	9	10
6:00	6:05	6:10	6:13	6:20	6:24	6:34	6:41	6:51	6:54
7:00	7:05	7:10	7:13	7:20	7:24	7:34	7:41	7:51	7:54
8:00	8:05	8:10	8:13	8:20	8:24	8:34	8:41	8:51	8:54
9:00	9:05	9:10	9:13	9:20	9:24	9:34	9:41	9:51	9:54
10:00	10:05	10:10	10:13	10:20	10:24	10:34	10:41	10:51	10:54
11:00	11:05	11:10	11:13	11:20	11:24	11:34	11:41	11:51	11:54
12:00	12:05	12:10	12:13	12:20	12:24	12:34	12:41	12:51	12:54
1:00	1:05	1:10	1:13	1:20	1:24	1:34	1:41	1:51	1:54
2:00	2:05	2:10	2:13	2:20	2:24	2:34	2:41	2:51	2:54
3:00	3:05	3:10	3:13	3:20	3:24	3:34	3:41	3:51	3:54
4:00	4:05	4:10	4:13	4:20	4:24	4:34	4:41	4:51	4:54
5:00	5:05	5:10	5:13	5:20	5:24	5:34	5:41	5:51	5:54
6:00	6:05	6:10	6:13	6:20	6:24	6:34	6:41	6:51	6:54
7:00	7:05	7:10	7:13	7:20	7:24	7:34	7:41	7:51	7:54
8:00	8:05	8:10	8:13	8:20	8:24	8:34	8:41	8:51	8:54
9:00	9:05	9:10	9:13	9:20	9:24	9:34	9:41	9:51	9:54

SOUTHBOUND

MONDAY–SUNDAY

Cromwell Light Rail Station	B&A Blvd/ Crain Hwy	Ritchie Hwy/ Marley Station	Jumpers Hole Rd Walmart Super Center	Ritchie Hwy/ McKinsey Rd	College Dr/ Ring Rd	Ring Rd/ W Campus Dr	MD 450 at USNA Gate 8	Bestgate Rd at Harbour Gate	Westfield Mall
10	9	11	8	7	12	6	4	2	1
6:00	6:05	6:13	6:18	6:28	6:34	6:37	6:46	6:52	6:56
7:00	7:05	7:13	7:18	7:28	7:34	7:37	7:46	7:52	7:56
8:00	8:05	8:13	8:18	8:28	8:34	8:37	8:46	8:52	8:56
9:00	9:05	9:13	9:18	9:28	9:34	9:37	9:46	9:52	9:56
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1:00	1:05	1:13	1:18	1:28	1:34	1:37	1:46	1:52	1:56
2:00	2:05	2:13	2:18	2:28	2:34	2:37	2:46	2:52	2:56
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AA-Yellow

Monday–Saturday Service

- Westfield Mall
- Housley Rd at Best Buy
- Riva Rd/Holiday Ct
- Truman Pkwy & M.V.A. Health Dept
- Annapolis Corporate Center
- Riva Rd/Heritage Ct
- Admiral Cochrane Residence Inn
- Harbour Center
- Riva Rd/Claibourne

All buses are accessible
TTY MD Relay or 7-1-1



MONDAY–FRIDAY

Westfield Mall	Housely Rd at Best Buy	Riva Rd/ Holiday Ct	Truman Pkwy & M.V.A. Health Dept	Annapolis Corporate Center	Riva Rd/ Heritage Ct	Admiral Cochrane Residence Inn	Harbour Center	Riva Rd/ Claibourne	Westfield Mall
1	2	3	4	5	6	7	8	9	1
6:00	6:11	6:17	6:20	6:23	6:28	6:31	6:38	6:48	6:52
7:00	7:11	7:17	7:20	7:23	7:28	7:31	7:38	7:48	7:52
8:00	8:11	8:17	8:20	8:23	8:28	8:31	8:38	8:48	8:52
9:00	9:11	9:17	9:20	9:23	9:28	9:31	9:38	9:48	9:52
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12:00	12:11	12:17	12:20	12:23	12:28	12:31	12:38	12:48	12:52
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4:00	4:11	4:17	4:20	4:23	4:28	4:31	4:38	4:48	4:52
5:00	5:11	5:17	5:20	5:23	5:28	5:31	5:38	5:48	5:52
6:00	6:11	6:17	6:20	6:23	6:28	6:31	6:38	6:48	6:52

On all timetables, **BOLD** numerals indicate **PM** times

SATURDAY

Westfield Mall	Housely Rd at Best Buy	Riva Rd/ Holiday Ct	Truman Pkwy & M.V.A. Health Dept	Annapolis Corporate Center	Riva Rd/ Heritage Ct	Admiral Cochrane Residence Inn	Harbour Center	Riva Rd/ Claibourne	Westfield Mall
1	2	3	4	5	6	7	8	9	1
8:00	8:11	8:17	8:20	8:23	8:28	8:31	8:38	8:48	8:52
9:00	9:11	9:17	9:20	9:23	9:28	9:31	9:38	9:48	9:52
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5:00	5:11	5:17	5:20	5:23	5:28	5:31	5:38	5:48	5:52

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- 1 First, find the schedule for the day of week you wish to travel: **MONDAY–FRIDAY** or **SATURDAY**
- 2 Next, find the **TIMEPOINT** closest to your origin and destination. The schedule lists timepoints only; additional stops are available and are not shown in the schedule. **BOLD NUMERALS** indicate **PM** times.
- 3 Finally, look below your timepoint to see when buses depart from that location. Arrive at your bus stop 5–10 minutes early so that we don't miss you!
- 4 Have your fare ready as the bus approaches. Pay your fare upon boarding and take a seat. Please refrain from eating, drinking and smoking while on the bus. Use earphones if you're listening to music. Enjoy the ride!

Title VI Information

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Paratransit

For paratransit service, please call Anne Arundel County Office of Transportation at 410-222-0022 (OR) 410-222-0225

Holidays

On holidays, follow these schedules:

New Year's Day	No Service
Martin Luther King Jr Day	Saturday
President's Day	Saturday
Good Friday	Saturday
Memorial Day	Saturday
Independence Day	No service
Labor Day	Saturday
Veterans Day	Saturday
Thanksgiving Day	No Service
Christmas Day	No Service

TRANSIT APP

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Guaranteed Ride Home

When you take AA-Yellow to work and you have an emergency, you are eligible for the Guaranteed Ride Home Program through Commuter Connections.

To register, call 1-800-745-RIDE (7433).

MONDAY–FRIDAY

1	2	3	4	5	6	7	8	9	10	11	12	13	1
Cromwell Light Rail	8th Ave	Crain Hwy N	Furnace Branch Rd	West Ordinance Rd	Ritchie Hwy N	S Hanover St	E Patapsco Ave	Potee St	Ritchie Hwy S	Hammonds Ln	Baltimore Annapolis Blvd	Ferndale Light Rail	Cromwell Light Rail
6:00	6:03	6:08	6:12	6:14	6:18	6:28	6:30	6:31	6:33	6:37	6:40	6:43	6:47
6:51	6:54	6:59	7:03	7:05	7:09	7:19	7:21	7:22	7:24	7:28	7:31	7:35	7:39
7:43	7:46	7:51	7:55	7:57	8:01	8:11	8:13	8:14	8:16	8:20	8:23	8:27	8:31
8:35	8:38	8:43	8:47	8:49	8:53	9:03	9:05	9:06	9:08	9:12	9:15	9:19	9:23
9:27	9:30	9:35	9:39	9:41	9:45	9:55	9:57	9:58	10:00	10:04	10:07	10:11	10:15
10:19	10:22	10:27	10:31	10:33	10:37	10:47	10:49	10:50	10:52	10:56	11:00	11:04	11:08
11:12	11:15	11:20	11:24	11:26	11:30	11:40	11:42	11:43	11:45	11:49	11:52	11:56	12:00
12:04	12:07	12:12	12:16	12:18	12:22	12:32	12:34	12:35	12:37	12:41	12:44	12:48	12:52
12:56	12:59	1:04	1:08	1:10	1:14	1:24	1:26	1:27	1:29	1:33	1:36	1:40	1:44
1:48	1:51	1:56	2:00	2:02	2:06	2:16	2:18	2:19	2:21	2:25	2:29	2:33	2:37
2:41	2:44	2:49	2:53	2:55	2:59	3:09	3:11	3:12	3:14	3:18	3:22	3:26	3:30
3:34	3:37	3:42	3:46	3:51	3:55	4:05	4:07	4:08	4:10	4:14	4:18	4:22	4:26
4:30	4:33	4:38	4:42	4:44	4:48	4:58	5:00	5:01	5:03	5:07	5:11	5:15	5:19
5:23	5:26	5:31	5:35	5:37	5:41	5:51	5:53	5:54	5:56	6:00	6:04	6:08	6:12

SATURDAY

1	2	3	4	5	6	7	8	9	10	11	12	13	1
Cromwell Light Rail	8th Ave	Crain Hwy N	Furnace Branch Rd	West Ordinance Rd	Ritchie Hwy N	S Hanover St	E Patapsco Ave	Potee St	Ritchie Hwy S	Hammonds Ln	Baltimore Annapolis Blvd	Ferndale Light Rail	Cromwell Light Rail
8:00	8:03	8:08	8:12	8:14	8:18	8:28	8:30	8:31	8:33	8:37	8:40	8:43	8:50
8:54	8:57	9:02	9:06	9:08	9:12	9:22	9:24	9:25	9:27	9:41	9:44	9:47	9:54
9:58	10:01	10:06	10:10	10:12	10:16	10:26	10:28	10:29	10:31	10:35	10:38	10:41	10:48
10:52	10:55	11:00	11:04	11:06	11:10	11:20	11:22	11:23	11:25	11:29	11:31	11:34	11:41
11:45	11:48	11:53	11:57	11:59	12:03	12:13	12:15	12:17	12:19	12:23	12:25	12:29	12:36
12:40	12:43	12:48	12:52	12:54	12:58	1:08	1:09	1:11	1:13	1:17	1:19	1:23	1:30
1:34	1:37	1:42	1:46	1:48	1:52	2:02	2:03	2:05	2:07	2:11	2:13	2:17	2:24
2:28	2:31	2:36	2:40	2:42	2:46	2:56	2:57	2:59	3:01	3:05	3:07	3:11	3:18
3:22	3:25	3:30	3:34	3:36	3:40	3:50	3:51	3:53	3:55	3:59	4:01	4:05	4:12
4:16	4:19	4:24	4:28	4:30	4:34	4:44	4:45	4:47	4:49	4:53	4:55	4:59	5:06
5:10	5:13	5:18	5:24	5:26	5:30	5:40	5:41	5:43	5:45	5:49	5:51	5:55	6:02

On all timetables, **BOLD** numerals indicate **PM** times

Brooklyn Park Zone

Serves Ferndale and Brooklyn Park.

- Deviate ½ mile of the route within the Connector zone are provided upon request.
- Requests must be made in advance.
- Ride time from Brooklyn Park to Glen Burnie is approximately 45 minutes.

On Demand

Brooklyn Park Connector will provide rides to those who qualify and meet the demand response criteria up to a ½ mile deviation.

Deviations make service request 2 hours prior to pick up. Call 410-222-0022 (OR) 410-222-0225.

How to Read the Schedule & Ride the Bus:

- 1 First, find the schedule for the day of week you wish to travel: **MONDAY–FRIDAY**, or **SATURDAY**.
- 2 Next, find the **TIMEPOINT** closest to your origin and destination. The schedule lists timepoints only; additional stops are available and are not shown in the schedule. **BOLD NUMERALS** indicate **PM** times.
- 3 Finally, look below your timepoint to see when buses depart from that location. Arrive at your bus stop 5–10 minutes early so that we don't miss you!
- 4 Have your fare ready as the bus approaches. Pay your fare upon boarding and take a seat. Please refrain from eating, drinking and smoking while on the bus. Use earphones if you're listening to music. Enjoy the ride!

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Guaranteed Ride Home

When you take Brooklyn Park Connector to work and you have an emergency, you are eligible for the Guaranteed Ride Home Program through Commuter Connections. To register, call 1-800-745-RIDE (7433).

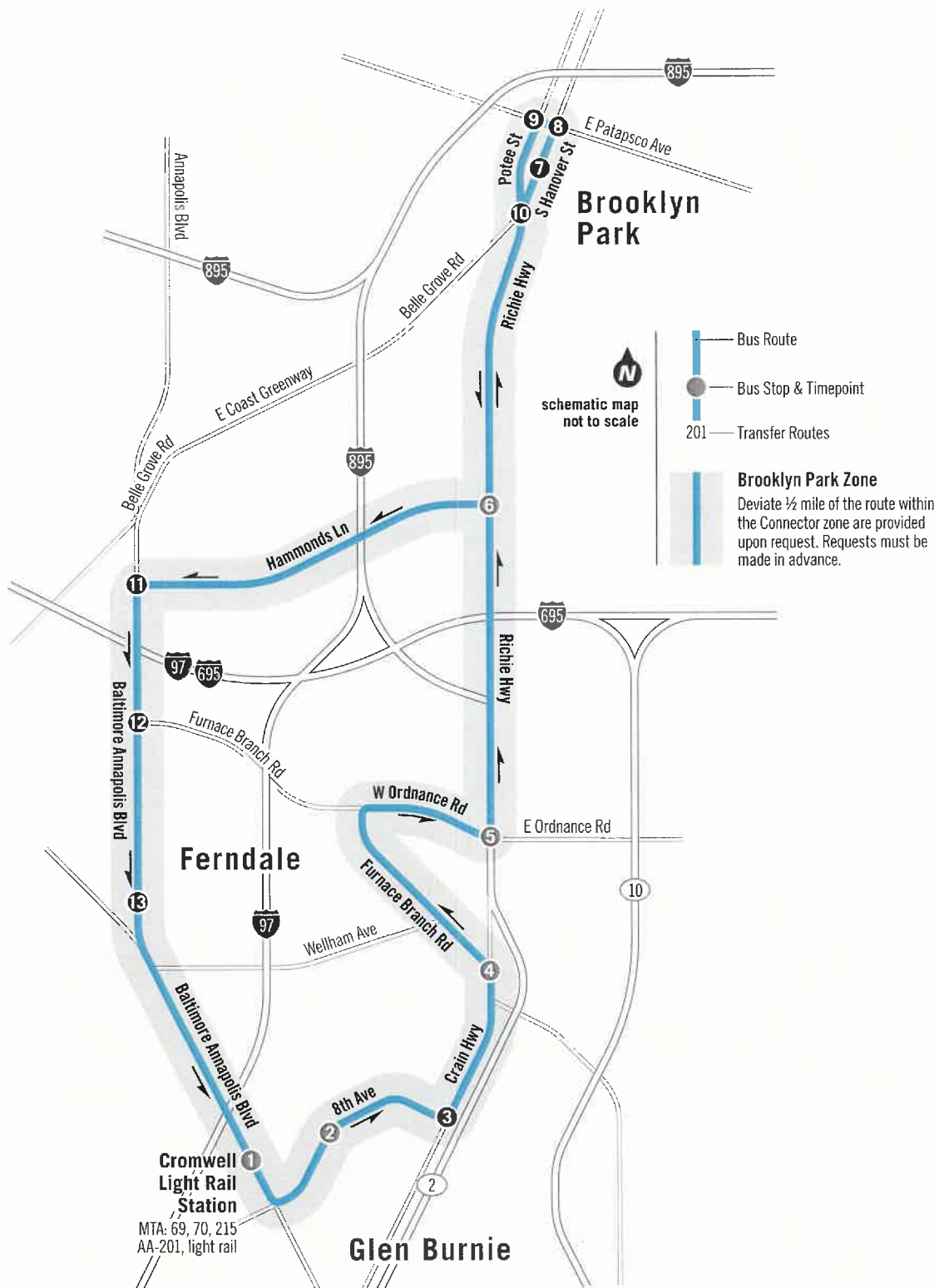
Paratransit

For paratransit service, please call Anne Arundel County Office of Transportation at 410-222-0022 (OR) 410-222-0225

Holidays

On holidays, follow these schedules:

New Year's Day	No Service
Martin Luther King Jr Day	Saturday–Sunday
President's Day	Saturday–Sunday
Good Friday	Saturday–Sunday
Memorial Day	Saturday–Sunday
Independence Day	No service
Labor Day	Saturday–Sunday
Veterans Day	Saturday–Sunday
Thanksgiving Day	No Service
Christmas Day	No Service



Travel Free!

Anne Arundel County Transit is **FARE FREE** to all county residents!

Inclement Weather

For information on route changes during inclement weather, contact Anne Arundel County Office of Transportation at 410-222-7440 or www.aacounty.org/transportation

Anne Arundel County Transit Services

Scan the QR code to access the latest transit service information in Anne Arundel County.

For real-time information download our new **Transit App!**



BROOKLYN PARK CONNECTOR

Monday–Saturday Service

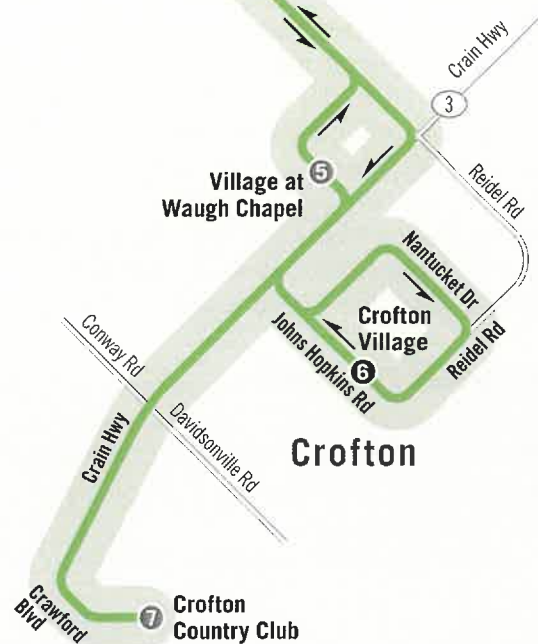
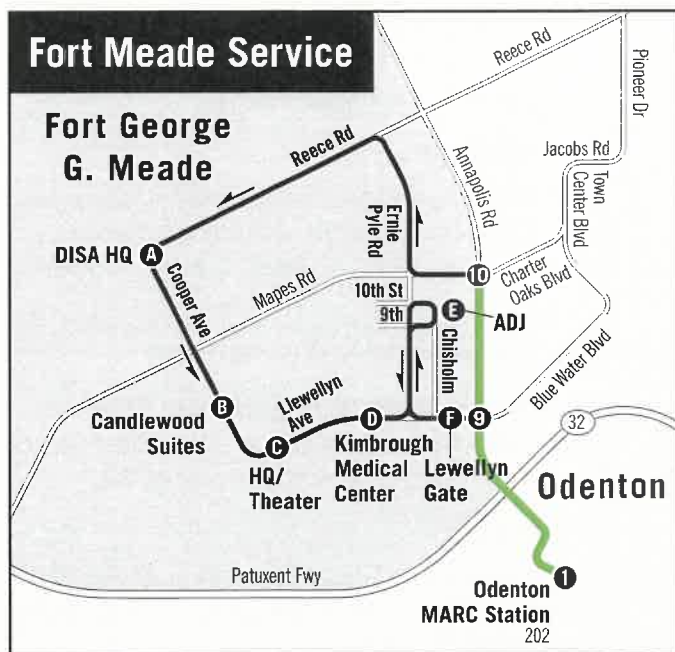
Brooklyn Park Zone

Deviate ½ mile of the route within the Connector zone are provided upon request.

- **Cromwell Light Rail Station**
- **8th Ave**
- **Crain Hwy**
- **Furnace Branch Rd**
- **West Ordnance Rd**
- **Ritchie Hwy**
- **Hanover St**
- **Patapsco Ave**
- **Ritchie Hwy**
- **Hammonds Ln**
- **Baltimore Annapolis Blvd**
- **Ferndale Light Rail Station**
- **Cromwell Light Rail Station**

All buses are accessible
TTY MD Relay or 7-1-1





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Inclement Weather

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Anne Arundel County Transit Services

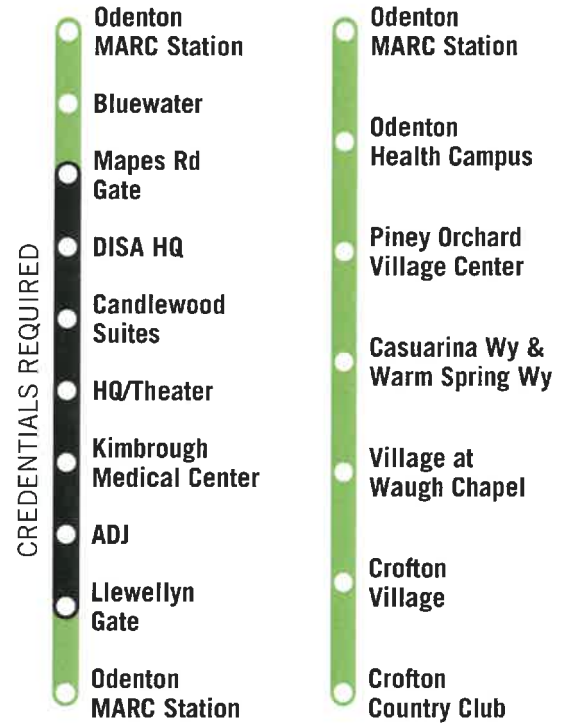
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For real-time information download our new **Transit App!**



CROFTON CONNECTOR

Monday–Friday Service



All buses are accessible
 TTY MD Relay or 7-1-1



MONDAY-FRIDAY

Crofton Country Club	Crofton Village	Village at Waugh Chapel	Warm Springs	Piney Orchard	Health Campus	Odenton MARC	Bluewater	Charter Oaks	DISA HQ	Camdenwood Suites	HQ/Theater	Kimborough Medical Center	ADJ	Lewellyn Gate	Bluewater	Odenton MARC	Health Campus	Piney Orchard	Warm Springs	Village at Waugh Chapel	Crofton Village	Crofton Country Club	
7	6	5	4	3	2	1	9	10	A	B	C	D	E	F	9	1	2	3	4	5	6	7	
5:45	6:00	6:10	6:16	6:20	6:25	6:00	6:04	6:09	6:16	6:18	6:20	6:21	6:24	6:28	6:29	6:37							
7:15	7:30	7:40	7:46	7:50	7:55	6:35	6:39	6:44	6:51	6:53	6:55	6:56	6:59	7:03	7:04	7:12							
8:45	9:00	9:10	9:16	9:20	9:25	7:20	7:24	7:29	7:36	7:38	7:40	7:41	7:44	7:48	7:49	7:57							
10:15	10:30	10:40	10:46	10:50	10:55	8:05	8:09	8:14	8:21	8:23	8:25	8:26	8:29	8:33	8:34	8:42							
11:15	11:30	11:40	11:46	11:50	11:55	9:35	9:39	9:44	9:51	9:53	9:55	9:56	9:59	10:03	10:04	10:12							
12:15	12:30	12:40	12:46	12:50	12:55	11:05										11:12	11:17	11:32	11:38	11:44	12:01	12:16	
1:15	1:30	1:40	1:46	1:50	1:55	12:05										12:12	12:17	12:32	12:38	12:44	1:01	1:16	
2:15	2:30	2:40	2:46	2:50	2:55	1:05										1:12	1:17	1:32	1:38	1:44	2:01	2:16	
						2:05										2:12	2:17	2:32	2:38	2:44	3:01	3:16	
						3:05										3:12	3:17	3:32	3:38	3:44	4:01	4:16	
						3:00	3:04	3:09	3:16	3:18	3:20	3:21	3:24	3:28	3:29	3:37							
									3:31	3:33	3:35	3:36	3:39	3:43	3:44	3:52	3:57	4:12	4:18	4:24	4:41	4:56	
						3:40	3:44	3:49	3:56	3:58	4:00	4:01	4:04	4:08	4:09	4:17							
						4:20	4:24	4:29	4:36	4:38	4:40	4:41	4:44	4:48	4:49	4:57							
									4:51	4:53	4:55	4:56	4:59	5:03	5:04	5:12	5:17	5:32	5:38	5:44	6:01	6:16	
						5:00	5:04	5:09	5:16	5:18	5:20	5:21	5:24	5:28	5:29	5:37							
									5:31	5:33	5:35	5:36	5:39	5:43	5:44	5:52	5:57	6:12	6:18	6:24	6:41	6:56	
						5:40	5:44	5:49	5:56	5:58	6:00	6:01	6:04	6:08	6:09	6:17							

On all timetables, **BOLD** numerals indicate **PM** times

Holidays

On holidays, follow these schedules:

New Year's Day	No Service
Martin Luther King Jr Day	Monday-Friday
President's Day	Monday-Friday
Good Friday	Monday-Friday
Memorial Day	Monday-Friday
Independence Day	No Service
Labor Day	Monday-Friday
Veterans Day	Monday-Friday
Thanksgiving Day	No Service
Christmas Day	No Service

How to Read the Schedule & Ride the Bus:

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- 3 Finally, look below your timepoint to see when buses depart from that location. Arrive at your bus stop 5-10 minutes early so that we don't miss you!
- 4 Have your fare ready as the bus approaches. Pay your fare upon boarding and take a seat. Please refrain from eating, drinking and smoking while on the bus. Use earphones if you're listening to music. Enjoy the ride!

On Demand

Mid-day service from Odenton MARC to Piney Orchard during the hours of 10:00 a.m. - 4:07 p.m. Crofton Connector service will provide rides to those who qualify and meet the demand response criteria with up to 1/2 mile deviation. Deviations are to make service request 2 hours prior to pick-up Please call Anne Arundel County Office of Transportation at 410-222-0022 or 410-222-0225 to schedule a ride.

Guaranteed Ride Home

When you take the Crofton Connector to work and you have an emergency, you are eligible for the Guaranteed Ride Home Program through Commuter Connections.

To register, call 1-800-745-RIDE (7433).

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Guaranteed Ride Home

When you take the Shopper Shuttle to work and you have an emergency, you are eligible for the Guaranteed Ride Home Program through Commuter Connections. To register, call 1-800-745-RIDE (7433).

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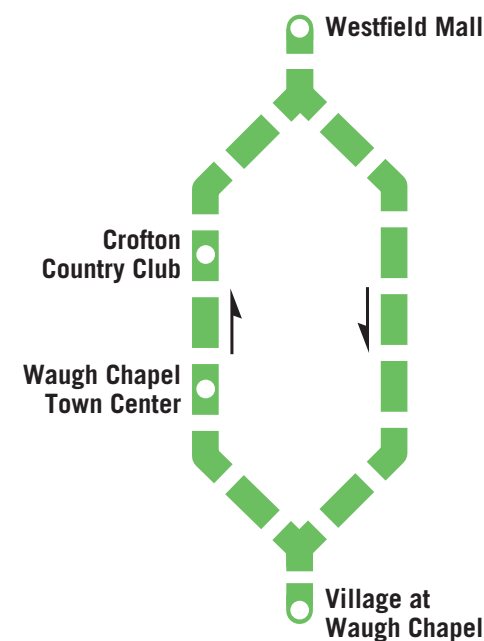


CROFTON EXPRESS

Monday–Friday Service

Crofton Express Zone

Deviate ³/₄ mile of the route within the Connector zone are provided upon request.

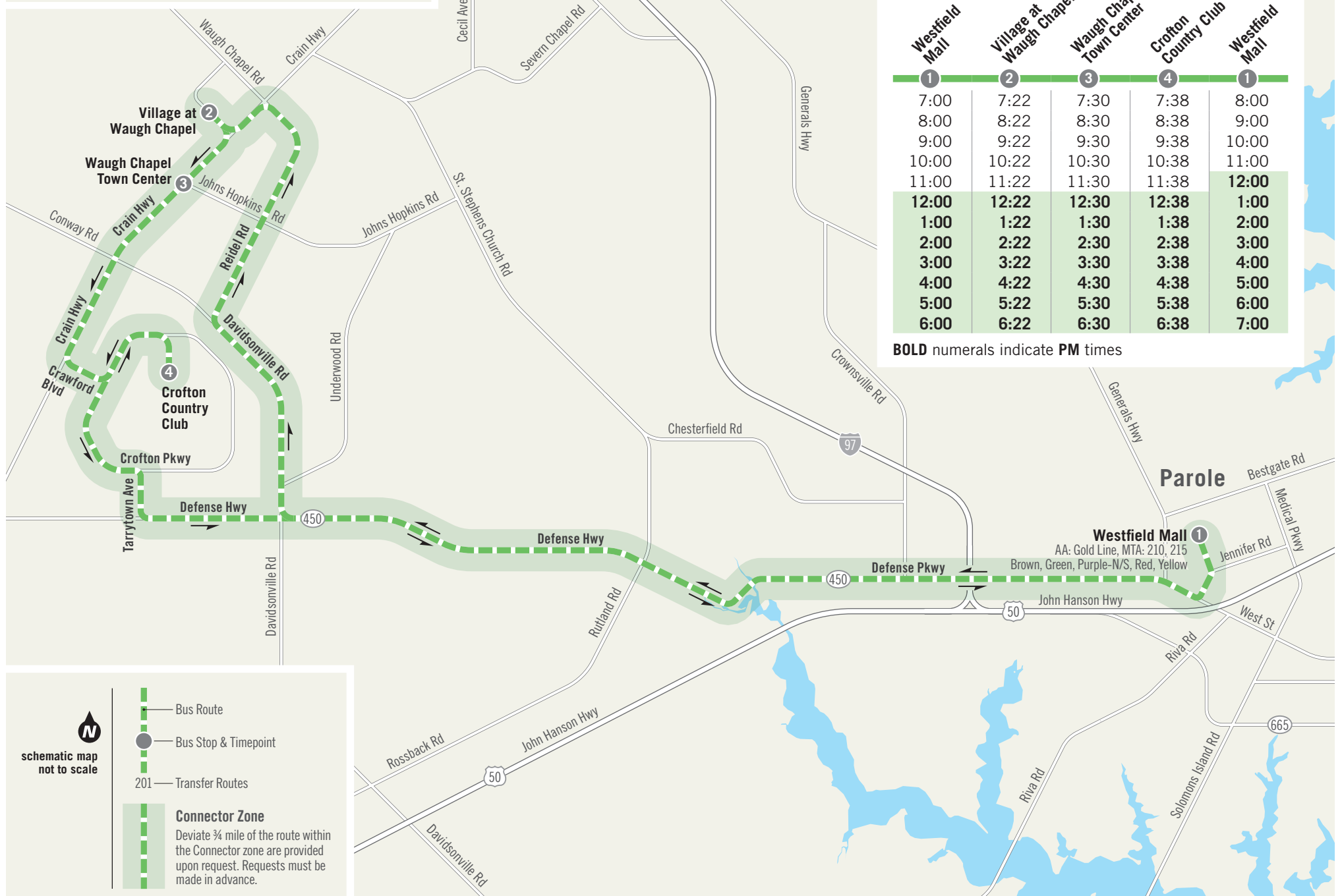


All buses are accessible
TTY MD Relay or 7-1-1



Crofton Express Shuttle

Westfield Mall to Village at Waugh Chapel
Monday to Friday Service



MONDAY-FRIDAY

Westfield Mall	Village at Waugh Chapel	Waugh Chapel Town Center	Crofton Country Club	Westfield Mall
1	2	3	4	1
7:00	7:22	7:30	7:38	8:00
8:00	8:22	8:30	8:38	9:00
9:00	9:22	9:30	9:38	10:00
10:00	10:22	10:30	10:38	11:00
11:00	11:22	11:30	11:38	12:00
12:00	12:22	12:30	12:38	1:00
1:00	1:22	1:30	1:38	2:00
2:00	2:22	2:30	2:38	3:00
3:00	3:22	3:30	3:38	4:00
4:00	4:22	4:30	4:38	5:00
5:00	5:22	5:30	5:38	6:00
6:00	6:22	6:30	6:38	7:00

BOLD numerals indicate PM times

schematic map not to scale

- Bus Route
- Bus Stop & Timepoint
- 201 Transfer Routes
- Connector Zone**
Deviate ¼ mile of the route within the Connector zone are provided upon request. Requests must be made in advance.

Appendix B

MDOT MTA Performance Standards

PERFORMANCE STANDARDS

Performance standards were established for the Locally Operated Transit Systems in the state as a tool for monitoring their services for effectiveness and efficiency. This rating structure is used as a basis for offering technical assistance. The program is set up such that services can be rated as "Successful" or "Needs Review" based on how they perform in each of the operating measures. In addition, these standards will be utilized in determining whether new services requested by the systems should be funded based on their potential for being successful.

The following standards apply:

Recommended Revised Performance Standards for MTA LOTS

Oct 09, 2019

Using 2018 CPI change

Cost-based Standards to be updated annually using prior year as base of CPI (see footnote*)

Urban Fixed-Route Bus	Revised LOTS Performance Standards		
	Successful	Acceptable	Needs Review
Operating Cost per Hour	< \$96.94	\$96.94 - \$118.48	> \$118.48
Operating Cost per Mile	< \$7.54	\$7.54 - \$8.62	> \$8.62
Operating Cost per Passenger Trip	< \$4.04	\$4.04 - \$4.85	> \$4.85
Local Operating Revenue Ratio	> 70%	60% - 70%	< 60%
Farebox Recovery Ratio	> 25%	20% - 25%	< 20%
Passenger Trips per Mile	> 2.25	1.75 - 2.00	< 1.75
Passenger Trips per Hour	> 30.0	20.0 - 30.0	< 20.0

*Based on composite of 54 national peer agencies with comparably-sized operations

Urban Demand-Response Service	Revised LOTS Performance Standards		
	Successful	Acceptable	Needs Review
Operating Cost per Hour	< \$75.40	\$75.40 - \$96.94	> \$96.94
Operating Cost per Mile	< \$4.31	\$4.31 - \$8.62	> \$8.62
Operating Cost per Passenger Trip	< \$21.54	\$21.54 - \$32.31	> \$32.31
Local Operating Revenue Ratio	> 60%	40% - 60%	< 40%
Farebox Recovery Ratio	> 12%	6% - 12%	< 6%
Passenger Trips per Mile	> 0.25	0.15 - 0.25	< 0.15
Passenger Trips per Hour	> 3.0	1.5 - 3.0	< 1.5

*Based on composite of 375 national peer agencies with comparably-sized operations

Suburban / Small Urban Fixed-Route Bus	Revised LOTS Performance Standards		
	Successful	Acceptable	Needs Review
Operating Cost per Hour	< \$70.01	\$70.01 - \$91.55	> \$91.55
Operating Cost per Mile	< \$4.31	\$4.31 - \$6.46	> \$6.46
Operating Cost per Passenger Trip	< \$4.31	\$4.31 - \$7.54	> \$7.54
Local Operating Revenue Ratio	> 55%	45% - 55%	< 45%
Farebox Recovery Ratio	> 20%	10% - 20%	< 10%
Passenger Trips per Mile	> 1.25	0.75 - 1.25	< 0.75
Passenger Trips per Hour	> 16.0	12.0 - 16.0	< 12.0

*Based on composite of 136 national peer agencies with comparably-sized operations

Suburban/Small Urban Demand-Response Service	Revised LOTS Performance Standards		
	Successful	Acceptable	Needs Review
Operating Cost per Hour	< \$64.63	\$64.63 - \$86.17	> \$86.17
Operating Cost per Mile	< \$3.77	\$3.77 - \$7.54	> \$7.54
Operating Cost per Passenger Trip	< \$21.54	\$21.54 - \$43.08	> \$43.08
Local Operating Revenue Ratio	> 60%	40% - 60%	< 40%
Farebox Recovery Ratio	> 12%	6% - 12%	< 6%
Passenger Trips per Mile	> 0.20	0.10 - 0.20	< 0.10
Passenger Trips per Hour	> 3.0	1.5 - 3.0	< 1.5

*Based on composite of 375 national peer agencies with comparably-sized operations

Appendix C

Central Maryland Transportation & Mobility Consortium

MEMORANDUM OF UNDERSTANDING

OF THE

**CENTRAL MARYLAND TRANSPORTATION & MOBILITY
CONSORTIUM**

FY 2022 and FY 2023

RECITALS

This Memorandum of Understanding ("MOU") is entered into by and among Anne Arundel County, Maryland, a body corporate and politic of the State of Maryland, and Howard County, Maryland, a body corporate and politic and political subdivision of the State of Maryland, and Prince George's County, Maryland, a body corporate and politic, and the City of Laurel, Maryland, a body corporate and politic (individually, each a "Party", and collectively, the "Parties"). As a group, the Parties may also be referenced to herein as the "Consortium".

WHEREAS, the purpose of this MOU is to set forth the understandings that shall govern the Parties' cooperative efforts to maintain an efficient and effective coordinated regional bus system throughout central Maryland, which is known as the "Regional Transportation Agency of Central Maryland" (or "RTA"); and

WHEREAS, the Parties agree that each shall be a full and equal partner in this endeavor; and

WHEREAS, as provided in this MOU, the Parties shall appoint representatives to a Central Maryland Transportation & Mobility Commission (the "Commission"), which shall provide policy and direction for the services operated under the RTA and shall oversee the third-party contractor who will manage the RTA on behalf of the Parties; and

WHEREAS, the obligations set forth in this MOU are contingent on compliance with all personnel, budgeting, purchasing, and expenditure laws, regulations and requirements applicable to each Party, including, but not limited to, all applicable county and/or city codes and charters; and,

WHEREAS, each of the Parties previously provided funding for bus services (the "Transit Services") in their individual jurisdictions through a combination of private and public organizations; and

WHEREAS, the prior approach to the provision of Transit Services by individual Parties, at times, resulted in cost inefficiencies, duplication of effort, and unnecessary administrative and financial burdens on the Parties and led them to agree to provide joint services through the RTA; and

WHEREAS, in the past, the Parties have each entered into memoranda of understanding with Howard County, Maryland, relating to the establishment of the RTA, and each Party desires that this MOU supersede and replace the prior memoranda.

NOW THEREFORE, in consideration of these Recitals, and the mutual covenants and agreements of the Parties hereinafter set forth, the sufficiency of which the Parties acknowledge, the Parties agree as follows:

I. GENERAL ACKNOWLEDGMENTS BY THE PARTIES

- A. The Parties acknowledge and agree that Howard County, Maryland, on behalf of the Parties, has procured an independent third-party contractor (the "Contractor") to incorporate a for-profit corporation (the "Corporation") to manage and operate Transit Services on behalf of the Parties, in accordance with the Howard County Code and Charter, as may be amended, and the contract between Howard County and the Contractor (the "Contract").

- B. The Parties acknowledge and agree that Howard County, Maryland will serve as the Contract Manager, as described in Article III herein, until such time as Parties agree to appoint a new Contract Manager.
- C. The Parties acknowledge and agree to maintain annually a written funding schedule ("Funding Schedule") for purposes of financing the Parties' Transit Services pursuant to the terms of the Contract.
- D. The Parties acknowledge and agree that a signed MOU is necessary so that each Party can be assured that sufficient funding will be available to pay for transit services in the upcoming fiscal year.
- E. The Parties acknowledge and agree to negotiate in good faith and provide funds to the RTA in accordance with the Funding Schedule, and to update the Funding Schedule as needed.
- F. The Parties acknowledge and agree to create a Commission for purposes of providing policy direction concerning the Transit Services provided by the Corporation under the brand of the RTA.
- G. The Parties acknowledge and agree that in the event an authority or other State legislated organization is established to provide regional Transit Services in central Maryland subject to State law, this MOU shall continue to govern the relationship among the Parties until this MOU is superseded by another MOU or agreement.

II. OBLIGATIONS OF THE COMMISSION

- A. The Commission shall be comprised of representatives appointed by each Party. The Parties shall each appoint two (2) representatives to the Commission, and no appointees may be employed by the Contractor or its affiliates.
- B. As provided for in the Commission's Bylaws, the Chair of the Riders' Advisory Council shall be a non-voting member of the Commission.
- C. The Commission's mission and responsibilities are set forth in the Bylaws and shall include reviewing and adopting said Bylaws.
- D. The Contract Manager, once approved by the Commission shall annually recommend a proposed budget for the RTA for consideration by the Parties no later than March 30th of the upcoming fiscal year.
- E. The Contract Manager, once approved by the Commission shall convey, as appropriate, recommendations and directions from the Parties to the Contractor.

III. OBLIGATIONS OF CONTRACT MANAGER

- A. Howard County, Maryland, shall serve as the Contract Manager until the Commission votes to appoint a new Contract Manager.

- B. The Contract Manager shall adhere to all terms and conditions set forth in those grant agreements using state or federal funds that provide transit service funding for the RTA, regardless of which Party receives the grant.
- C. The Contract Manager shall direct the RTA to provide the Parties and the Commission with a monthly progress and financial status report of the RTA, along with any other documents, reports, and other information as reasonably requested by the Commission or individual Parties.
- D. The Contract Manager shall be responsible for coordinating with the RTA and the Parties in the submission of grant applications.
- E. The Contract Manager shall be responsible for ensuring that RTA financial reports are reflective of the participation of each of the Parties.
- F. The Contract Manager shall be responsible for ensuring that the Contractor is meeting all relevant Federal, State, and other grant agreement requirements. The Contract Manager shall be responsible for coordinating the submission of reports mandated by the State and federal governments concerning the operation of public transit services by the RTA.
- G. The Contract Manager shall ensure and report that all revenue received, including farebox and advertising revenue, is appropriately allocated to each Party as agreed by the Parties on a quarterly basis.

IV. OBLIGATIONS OF THE PARTIES

- A. Each Party shall respond in a timely manner to reasonable information requests related to the RTA and the Commission including the reporting of expenses related to the provision of transit services by the RTA, such as the allocated staff labor costs for the previous fiscal year by October 1st for submission to the National Transit Database (NTD) by the contract manager and shall comply with all reporting and compliance requirements by deadlines established by the Commission.
- B. Each Party, as warranted, shall maintain all books and records pertaining to the RTA and the Commission in compliance with all State and Federal audit procedures.
- C. Subject to the availability and appropriation of funding, as provided for in paragraph VI F, the City of Laurel's contribution for this period remains at \$75,000 per year and the other three Parties shall allocate funding for their share of the hours of service recommended by the Commission as of July 15, 2021 for FY 2022 as adjusted downward to reflect actual services provided in that fiscal year. For FY 2023, each Party shall allocate funding to support the service hours reflected in Attachment A as adjusted for routine transit grant funding from the MTA and approximately \$3.1 million from the Federal Transit Administration for pandemic and economic recovery related funding through the American Rescue Plan (ARP) and Coronavirus Response and Relief Supplemental Appropriations Act of 2021 (CRRSAA) unless amended by a subsequent written agreement between the parties.
- D. Beginning no later than October 15 of each year, the Parties will review any RTA budget projections, and work towards agreement on the Funding Schedule that will apply to the

upcoming fiscal year. The Parties will agree on the Funding Schedule prior to the beginning of each fiscal year, and each Party shall timely contribute available and appropriated funds, as specified in the Funding Schedule, to support the Transit Services.

- E. All Parties agree to provide personnel resources, as reasonable, required and appropriate, to support the purpose and intent of this MOU.
- F. All Parties agree to make reasonable efforts to avoid any unreasonable delay in the allocation, provision, and expenditures of funding and support to the participating jurisdictions and organizations involved in the RTA.
- G. Each Party may use its internal processes for evaluating purchasing options for assets for the Transit Services provided through this MOU. Each Party may exercise its right to purchase such assets directly or through the Corporation.
- H. The Parties shall work collaboratively with the Contract Manager on securing grants and funding to support the expansion of Transit Services covered under this MOU.
- I. The Parties shall work towards the assimilation of Transit Services to achieve singularity in brand name, fares, transfers, and operating procedures for the RTA, as practicable.
- J. Each Party shall maintain control over those Transit Services operating solely within that Party's jurisdiction.

V. ASSETS

- A. In the sole discretion of each Party, that Party may lease its individually-owned capital assets to the Corporation for purposes of providing Transit Services. The lease of any capital assets to the Corporation shall be documented in a separate written lease agreement signed by the relevant Party.
- B. Upon dissolution or termination of the Corporation, or upon the withdrawal of any Party from this MOU, capital assets shall be returned to the applicable lessor Party.
- C. The Parties may sell or transfer capital assets to the Corporation subject to policies and procedures to be established by the Parties.
- D. Upon dissolution or termination of the Corporation and to the extent permitted by law, any assets allocated to the Corporation by a specific Party shall be returned to that Party. All other assets not specifically allocated by a particular Party shall be returned to and divided among the Parties in proportion to each Party's total financial contribution to the Corporation.

VI. GENERAL PROVISIONS

- A. Term. This MOU shall become effective on July 1, 2021 ("Effective Date") and shall remain in effect through June 30, 2023, unless earlier terminated or extended by the Parties.
- B. No Waiver of Sovereign Immunity. Nothing in this MOU, nor any action taken by any Party pursuant to this MOU, nor any document that arises out of this MOU shall constitute or be constituted as a waiver of either the sovereign immunity or governmental immunity of the Parties.
- C. Obligations Contingent. All obligations of the Parties under this MOU are contingent on compliance with personnel, budgeting, purchasing, and expenditure laws, regulations and requirements governing laws of the respective Parties as applicable to each Party, incurring, but not limited to, all applicable county and/or city codes and charters.
- D. No Waiver. Etc. The failure or delay by any Party to insist upon the strict performance of any term, condition or covenant of this MOU, or to exercise any right, power, or remedy consequent upon a breach thereof, shall not constitute a waiver of any such term, condition, or covenant or any such breach, or preclude any Party from exercising any such right, power, or remedy at any later time or times.
- E. Independent Contractor Status. Nothing contained in this MOU shall be construed to constitute any one Party as an agent, representative or employee of any other Party. Moreover, members of the Commission shall be considered agents or representatives of the respective appointing Party only and shall not be considered agents or representatives of any other Party or the Consortium. Nothing contained in this MOU shall be construed in any manner to create any relationship between the Parties other than what is expressly specified herein, and the Parties shall not be considered partners or co-venturers for any purpose on account of this MOU.
- F. Funding. All financial obligations of the Parties under this MOU, including all obligations that require the expenditure of funds, are contingent upon the availability of appropriated funds from which payment can be made.
- G. Dispute Resolution. In the event that the Parties are unable to resolve a dispute, the affected Party or Parties may submit the dispute to a mediator, acceptable to all affected Parties, for the purpose of facilitating discussion and receiving new perspectives on the issues and new proposals for compromise. The Parties involved in the mediation shall share the cost of the mediation equally. Such mediation shall not be binding on any Party. Each Party reserves all remedies available at law or in equity for violations of this MOU.
- H. Governing Law and Venue. This MOU shall be construed and enforced in accordance with the laws of the State of Maryland.
- I. Entire Agreement. This MOU contains and embodies the entire agreement of the Parties. No representations, inducements, or agreements, oral or otherwise, between the Parties not contained herein shall be of any force and effect. This MOU may not be amended or modified in any manner other than by an agreement in writing approved by the Parties and duly signed by authorized persons on behalf of all the Parties. The Parties, through their respective authorized representatives, have executed this MOU on the dates indicated below.

- J. Severability. If any of the provisions in this Agreement are declared by a court or other lawful authority to be unenforceable or invalid for any reason the remaining provisions hereof shall not be affected thereby and shall remain enforceable to the full extent permitted by law.
- K. Assignment. No Party shall subcontract or transfer the rights it has, or the obligations imposed on it by this MOU without the prior written consent of all the other Parties.
- L. Binding Effect. The terms of this MOU shall be binding on and enforceable against the Parties and their respective successors and assigns.
- M. Withdrawal. Any Party may withdraw from the RTA and from this MOU only on dates scheduled for services changes, which typically take place in March and November of each year, so long as they give at least ninety (90) calendar days' written notice to the other Parties. The withdrawing Party shall pay its allocated share of all costs of the RTA through the date of withdrawal pursuant to the Funding Schedule.

Any Party may revise, terminate or add to its transportation routes within the RTA. Such changes shall follow the Howard County Department of County Administration's Policy on Fare or Service Changes Affecting Regional Transportation Agency Service Area (July 13, 2016) and should be planned for the scheduled service change dates in March and November.
- N. Recitals. The Recitals are hereby incorporated into this MOU.
- O. Notice. Any notice required to be delivered shall be deemed to have been received when the notice has been sent by certified mail, return receipt, overnight carrier, or hand delivered to the following addresses and individuals or at such other addresses and/or individuals a Party may identify in writing to the other Parties:

**MEMORANDUM OF UNDERSTANDING
OF THE
CENTRAL MARYLAND TRANSPORTATION & MOBILITY CONSORTIUM
FY 2022 and FY 2023**

FOR ANNE ARUNDEL COUNTY:

Samuel Sneed, Transportation Officer Anne Arundel County
Office of Transportation 2664 Riva Road, MS 6402
Annapolis, MD 21401
Telephone: (410) 222-3294 Fax: (410) 222-7255
Email: trsnea19@aacounty.org

FOR HOWARD COUNTY:

Bruce Gartner, Administrator
Howard County Office of Transportation
3430 Court House Dr.
Ellicott City, MD 21043
Telephone: (410) 313-0702 Fax: (410) 313-3467
Email: bgartner@howardcountymd.gov

FOR THE CITY OF LAUREL:

Christian Pulley, City Administrator
City of Laurel
8103 Sandy Spring Rd. Laurel, MD 20707-2502
Telephone: (301) 725-5300, Fax: (301) 490-5068
Email: CPulley@laurel.md.us

FOR PRINCE GEORGE'S COUNTY:

Oluseyi A. Olugbenle, Deputy Director
Department of Public Works and Transportation
9400 Peppercorn Place, Suite 300
Largo, MD 20774
Telephone: (301) 883-5600, Fax: (301) 883-5709
Email: oaolugbenle@co.pg.md.us

MEMORANDUM OF UNDERSTANDING
OF THE
CENTRAL MARYLAND TRANSPORTATION & MOBILITY CONSORTIUM
FY 2022 and FY 2023

ATTEST:

HOWARD COUNTY, MARYLAND

DocuSigned by:
Lonnie R. Robbins
60D75A62B756493...

Lonnie R. Robbins
Chief Administrative Officer

DocuSigned by:
Dr. Calvin Ball
ABC14D1BE8A04F7...

By: Calvin Ball
County Executive
Date: 6/28/2022

APPROVED FOR SUFFICIENCY OF FUNDS:

DocuSigned by:
Rafiu Igile
1BE046A7697F41C...

Rafiu Igile
Director, Department of Finance

DocuSigned by:
Holly Sun
598D538570074613

Holly Sun, Administrator
Office of Budget

APPROVED FOR FORM AND LEGAL SUFFICIENCY

DocuSigned by:
Gary Kuc
2FF4481407704C3...

Gary Kuc

County Solicitor:

DocuSigned by:
Norman Parker
B36385BD903A40E...

Norman Parker
Assistant Deputy County Solicitor

APPROVED FOR PROGRAM SUFFICIENCY:

DocuSigned by:
Bruce Gartner
1101B3224D80443...

Bruce Gartner, Administrator
Office of Transportation

**MEMORANDUM OF UNDERSTANDING
OF THE
CENTRAL MARYLAND TRANSPORTATION & MOBILITY CONSORTIUM
FY 2022 and FY 2023**

ATTEST:

ANNE ARUNDEL COUNTY, MARYLAND

DocuSigned by:
Sandra Ballard
3753B71E6AE34F0...

Witness Name:

DocuSigned by:
[Signature]
CBG47D9EB95C44A...

Matthew J. Power
Chief Administrative Officer

Date: 6/29/2022

**APPROVED FOR FORM AND LEGAL SUFFICIENCY
GREGORY J. SWAIN, COUNTY ATTORNEY**

DocuSigned by:
[Signature]
2CE95C8084464A3...

Jason E. Fetterman
Senior Assistant County Attorney

DocuSigned by:
NOTED
Karin McQuade
592A982A62E9499...

Karin McQuade, Controller
Anne Arundel County, Maryland

**MEMORANDUM OF UNDERSTANDING
OF THE
CENTRAL MARYLAND TRANSPORTATION & MOBILITY CONSORTIUM
FY 2022 and FY 2023**

ATTEST:

PRINCE GEORGE'S COUNTY, MARYLAND

Anty F.

Witness Name

Anthony Foster

Floyd E. Holt
By: Floyd E. Holt (Sep 22, 2022 13:24 EDT)

Deputy Chief Administrative Officer for Public
Infrastructure

Date: Sep 22, 2022

**MEMORANDUM OF UNDERSTANDING
OF THE
CENTRAL MARYLAND TRANSPORTATION & MOBILITY CONSORTIUM
FY 2022 and FY 2023**

ATTEST:

CITY OF LAUREL, MARYLAND

By: 

Date: 6/16/2022

Christian Pulley, City Administrator
City of Laurel
8103 Sandy Spring Rd. Laurel, MD 20707-2502
Telephone: (301) 725-5300, Fax: (301) 490-5068
Email: CPulley@laurel.md.us

Appendix A

Estimated Service Hours FY 2022 and FY 2023 Regional Transportation Agency (RTA) Management and Operations

Partner Jurisdiction	FY 2022 Budgeted Hours June 2021	FY 2022 Projected Hours May 2022	FY 2023 Projected Hours May 2022
Howard County	165,914	132,834	172,680
Anne Arundel County	11,638	10,689	11,638
Prince George's County	21,394	19,189	21,351
SYSTEM TOTAL	198,946	162,712	205,669

Notes and Assumptions:

- (1) Laurel Hours are included in Prince George's County; Laurel funding commitment is capped at \$75,000 during this time period.
- (2) FY 2022 service hours were reduced due to reduced demand related to the pandemic and due to the shortage of drivers\
- (3) For FY 2022, hourly costs are projected to be as follows:
 - a. Fully loaded (direct and indirect cost) for Fixed Route - \$109.42/hour
 - b. Fully loaded (direct and indirect cost) for Paratransit - \$74.46/hour
- (4) FY 2023 service hours assumes July 1, 2022 restoration of February 2022 service reductions related to the driver shortage and November 1 restoration of service hours that were in operation on March 1, 2020 except as amended by the modifications approved by the CMTMC on July 17, 2021
- (5) For FY 2023, hourly costs are projected to be as follows:
 - a. Fully loaded (direct and indirect cost) for Fixed Route - \$115.92/hour
 - b. Fully loaded (direct and indirect cost) for Paratransit - \$77.95/hour

Appendix D

Community Transportation Survey



Community Transportation Survey

Anne Arundel County is currently conducting a transit plan to assess current services and identify opportunities to improve mobility in the future. This is your opportunity to provide your thoughts on the future of community transportation in our county. Please take a few minutes to complete the following short survey by **(insert due date – typically three weeks after release)** so we can better understand travel patterns and transit needs and receive input on potential transit improvements. Individual survey responses will be kept confidential.

First, please tell us about your typical travel patterns.

1. What is your **primary** mode of daily transportation? Please check only one.

- Car Public Transportation Walk Bicycle Uber/Lyft Taxi
- A friend or family member drives Vanpools or carpools Electric Scooter
- Other: _____

2. Are you aware of the services provided by Anne Arundel County Transit Services? What is your impression of these services?

- Aware of Anne Arundel County Transit Services, overall positive impression
- Aware of Anne Arundel County Transit Service, overall negative impression
- Not aware of Anne Arundel County Transit Services

3. Do you use any of the public transportation services that operate in Anne Arundel County?

- Yes No *(If checked "No", will skip to Question #7.)*

4. Which of the following transportation services do you use? Please check all that apply and how often you use this service.

	2-3 times per week or more	Once a week	A few times per month	About once a month	Less than once a month
Anne Arundel County Transit Services					
MDOT MTA Local Bus					
MDOT MTA Light RailLink					
MDOT MTA Commuter Bus					
MARC Train					
Annapolis Transit					
RTA					
Amtrak					
Vanpools or Carpools					
BWI Business Partnership County Connector Service					
Taxis					
Uber/Lyft					
Partners in Care					
Other _____					

5. If you use public transportation, what are your main reasons for your trip? Please check all that apply.

- Medical
- Work
- Shopping
- School
- Social/Recreation
- Errands
- Attend Senior Center
- Attend Senior Meal Site
- Government Service Agency
- Other: _____

6. How do you typically travel to your bus stop, light rail station, MARC station, or park-&-ride lot to access public transportation?

- Car
- Walk
- Bicycle
- Uber/Lyft
- Vanpools or carpools
- Taxi
- A friend or family member drives
- Electric Scooter
- Other: _____

7. If you **DO NOT** use any form of public transportation, please indicate why not (check all that apply).

- I prefer to drive
- Need my car before/after work/school
- Need my car for emergencies/overtime
- No service is available near my home/work/school
- Don't know if service is available and/or location of transit stops or stations
- I have limited mobility and it is hard for me to use transit
- There is not adequate pedestrian infrastructure for me to access public transportation from my home
- I don't feel safe using public transit
- Public transit is too expensive
- Using public transportation is confusing
- Trips via public transit take too much time
- Public transit services are unreliable
- I have to wait too long for the bus or train
- The hours of operation are too limited
- Other: _____

8. What improvements would be needed for you to consider using public transportation? (check all that apply)

- Service near my home
- Service between _____ to _____
(Please be as specific as possible)
- Shorter wait/pickup time
- More reliable service
- More frequent service
- Longer hours of service
- Shorter travel time
- Fewer transfers
- Safer vehicles
- Less crowded vehicles
- Better sidewalk infrastructure to access transit stops and stations
- Improved information on available services
- On-demand service similar to Uber/Lyft in my neighborhood
- Guaranteed ride home for emergencies/overtime
- Additional park and ride facilities
- Other: _____

9. How would you prefer to receive information about public transportation? (Please check all that apply.)

- | | | |
|--|---------------------------------------|---|
| <input type="checkbox"/> Website | <input type="checkbox"/> Bus Stops | <input type="checkbox"/> Brochure |
| <input type="checkbox"/> Email | <input type="checkbox"/> Direct Mail | <input type="checkbox"/> County Office |
| <input type="checkbox"/> TV | <input type="checkbox"/> Social Media | <input type="checkbox"/> Smartphone |
| <input type="checkbox"/> Radio | <input type="checkbox"/> Newspaper | <input type="checkbox"/> Friends/Family |
| <input type="checkbox"/> Outdoor Ads | <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> Prefer Not to Receive | | |

Now, please provide your thoughts on unmet transportation needs and possible transit service improvements.

10. Do you think there is a need for additional or improved public transportation in Anne Arundel County?

- Yes No (*If checked "No", will skip to Question #13.*)

11. Please indicate the locations that need additional or improved service.

12. Which of the following improvements are needed in Anne Arundel County? Please check all that apply.

- New service that would connect communities or key destinations.
If so, which communities or destinations?
- Expanded service on current routes. If so, which route(s)?
- Local service within my community (such as local circulator shuttle or on-demand service)
If so, which community?
- New or expanded service that would provide connections to MDOT MTA bus route(s)
If so, which route(s) and from where?
- New or expanded service that would provide access to an MDOT MTA Park & Ride lot
If so, which Park and Ride lot and from where?
- New or expanded service that would provide access to an MDOT MTA LightRail station
If so, which station and from where?
- New or expanded service that would provide access to a MARC station
If so, which station and from where?
- New or expanded service that would provide connections to Annapolis Transit route(s)
If so, which route and from where?
- New or expanded service that would provide connections to a RTA route(s)
If so, which route and from where?
- Expanded transportation services designed for older adults and people with disabilities
- Other Improvements (please be as specific as possible)

Please tell us a little about yourself.

13. What is your zip code? _____

14. What is your gender? Male Female Prefer Not To Answer

15. Please indicate your age:

- Under 18 18-25 26-35 36-45
 46-55 56-65 66-75 76 or older

16. Do you have a driver's license? Yes No

17. Do you have a car available to drive on a regular basis? Yes No

18. How many working cars/trucks/SUVs/motorcycles are in your household?

- 0 1 2 3 4 or more

19. 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
 Retired Homemaker Student, part-time
 Unemployed Other _____

20. 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

21. 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
 Prefer Not to Answer

22. Are you of Hispanic or Latino origin? Yes No Prefer Not to Answer

23. Do you speak a language other than English at home? Yes No

If yes, what language(s) do you speak at home? (e.g. Spanish, Korean, Chinese)

If yes, how well do you speak English?

- Very Well Well Not Well Not at All

Lastly, please provide any additional comments concerning public transportation in Anne Arundel County.

If you would like to receive updates about the Anne Arundel County Transit Development Plan, please provide your contact information:

Name: _____
Email: _____

Thank you!

Appendix E

Fixed Route Rider Survey



Anne Arundel County Transit Services Transit Development Plan Customer Survey

Help us to serve you better! Anne Arundel County Transit Services is conducting a transit development plan, and we need your input on our services to better understand travel patterns and needs in the community. Please take a few minutes to complete this survey during your bus trip, and give to the driver when you get off the bus. Please complete only one survey. Thank you for taking the time to give us your thoughts and comments!

1. Which route did you board?

- AA - 201 Arundel Mills Mall – Freetown Village
- AA - 202 Arundel Mills Mall – Odenton Health Campus
- AA - 204 Brooklyn Park Connector
- AA - Gold Edgewater
- AA - Gold Line Extension
- AA - Yellow
- Crofton Connector Crofton Express

2. What is the purpose of your trip today?

You may check more than one.

- Work School
- Social/Recreation Medical/Dental
- Shopping/Errands Tourism
- Child Care Other _____

3. Where did your trip start? Please select only one.

- Home Shopping/Errands
- School Medical/Dental Office
- Work Social or Recreational Activity
- Child Care Other _____

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.

4. How did you get to the stop for this bus?

You may check more than one.

- Walked; about how many blocks? _____

- Another AAC Transit bus; which route? _____
- MDOT MTA bus; which route? _____
- MDOT Light Rail South County Call N’Ride Service
- RTA bus; which route? _____
- Annapolis Transit; which route? _____
- Car – Drove Alone Car - Carpooled
- Bicycle Uber/Lyft Taxi
- Other: _____

5. Where will this trip end? Please select only one.

- Home Shopping/Errands
- School Medical/Dental Office
- Work Social or Recreational Activity
- Child Care Other _____

Please indicate the street address, intersection, building, or landmark. For example, Arundel Mills Mall.

6. How will you get to your final destination once off the bus? You may check more than one.

- Walk – About how many blocks? _____
- Another AAC Transit bus; which route? _____
- MDOT MTA bus; which route? _____
- MDOT Light Rail South County Call N’Ride Service
- RTA bus; which route? _____
- Annapolis Transit; which route? _____
- Car – Drive Alone Car - Carpool
- Bicycle Uber/Lyft Taxi
- Other: _____

7. Please rate Anne Arundel County Transit Services in the following areas:

	<u>Strongly Satisfied</u>	<u>Satisfied</u>	<u>Neutral</u>	<u>Dissatisfied</u>	<u>Strongly Dissatisfied</u>	<u>No Opinion</u>
a. Frequency of Bus Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Areas that Are Served by Bus Routes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Locations of Bus Stops	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
e. Hours of Bus Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Availability of Transit Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Sense of Security on Buses / Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Cleanliness of Buses and Stops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Courtesy/Friendliness of Bus Drivers	<input type="checkbox"/>	<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"/>	<input type="checkbox"/>
k. Overall Service	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What do you like the MOST about Anne Arundel County Transit Services?

9. What do you like the LEAST about Anne Arundel County Transit Services?

10. Are there places in the area that you need to go that Anne Arundel County Transit Services does not serve?

Yes No

If, yes, where?

11. How often do you typically ride Anne Arundel County Transit Services?

- Once a week More than 10 times a week
 2-5 times a week Once a month
 6-10 times a week 2-3 times a month

12. What is your home ZIP Code? _____

13. What is your gender? Male Female
 Prefer Not To Answer

14. How many people live in your household? _____

15. What is your age?

- Under 16 25 – 49
 16 – 18 50 – 64
 19-24 65 and older

16. Do you have a valid driver's license?

Yes No

17. How many cars are in your household?

0 1 2 3 or more

18. Was a car available to you for this trip?

Yes No

19. Have you used the new Anne Arundel County Transit Services app?

Yes No

20. Which of the following improvements would be MOST useful to you? Please choose your top 3.

- More frequent service Additional Saturday service
 Shorter travel times Sunday service
 Earlier morning service Later evening service
 Safer buses/stops
 Additional bus stop shelters/benches
 Greater availability of schedule information
 Other: _____

21. If Anne Arundel County Transit Services were to make one service improvement, what would be your top choice?

22. Which best describes your current employment status?

You may check more than one.

- Employed Full-Time Employed Part-Time
 Student Homemaker
 Not Employed Retired

23. What is your total annual household income?

- Under \$20,000 \$60,000 - \$79,999
 \$20,000-\$39,999 Over \$80,000
 \$40,000 - \$59,999 Don't Know

24. Are you of Hispanic or Latino origin?

- Yes No
 Prefer Not To Answer

25. How would you classify yourself?

- African American/Black
 Asian or Pacific Islander
 Caucasian/White
 Native American
 Other: _____
 Prefer Not To Answer

26. Do you speak a language other than English at home?

Yes No

If yes, what language? For example Spanish, Korean, Chinese? _____

If Yes, how well do you speak English?

Very Well Well Not Well Not at All

Please provide any comments regarding your ride today or public transportation in the area:

THANK YOU! Please return your completed survey to your driver. If you need more time please give the completed survey to the driver on your next trip.