

CITY OF ANNAPOLIS

Transit Development Plan

January, 2010



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Transit Development Plan City of Annapolis

Final Report

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and
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Executive Summary

INTRODUCTION

A Transit Development Plan (TDP) is a planning tool used to analyze the need for transit in a defined area, evaluate the services that are provided, and develop strategies to match the service to the identified transit needs. The TDP provides a vision of how the public transportation system should adapt to address the demand for public transportation services within a five-year horizon. This document is an update to the City of Annapolis TDP; the last TDP was completed in 2003. This Executive Summary provides an overview of the process and describes the recommended transit improvements.

This TDP includes an introduction to the plan identifying the goals and objectives of this study (Chapter 1), an assessment of current and near-term unserved potential needs (Chapter 2), a review of existing services (Chapter 3), alternatives to address identified needs and performance concerns (Chapter 4), and a recommended plan for improvements (with phased implementation) including capital and operating budget projections (Chapter 5).

Major tasks for the TDP included an extensive transit needs analysis with public, agency, and stakeholder outreach; an analysis of existing services; and the development of alternatives to improve public transportation in the study area. The major findings and results from these tasks are highlighted in this Executive Summary.

OBJECTIVES FOR THE TDP

Chapter 1 identifies the goals and objectives of this study at its outset. The Citizen Advisory Committee (CAC) communicated a variety of needs and issues for this update of the TDP. The following goals and objectives were articulated by the CAC with guidance from City staff:

- Create a more seamless transit system within the City of Annapolis.

- Improve transit-related amenities, including sidewalks, bus shelters, and signage.
- View transit services from a regional perspective.
- Connect residents to jobs – support economic development.
- Make transit services more convenient and reduce transfers.
- Marketing – provide easy access to information on available mobility options.
- Support the City’s desire to “go green” and reduce car travel/congestion.

NEEDS ANALYSIS

Chapter 2 identifies and assesses population characteristics and land use in the City of Annapolis and the surrounding area, and their impact on public transportation services. This chapter begins with a demographic analysis of the study area that identifies the population segments that are most likely to use transit. The major origins and destinations that transit riders travel to and from are also identified to prepare for the service planning process.

Transit needs within the City of Annapolis included needs for:

- Lower-income workers to access employment,
- Individuals without cars to access a variety of destinations including shopping destinations, and
- Youth without access to cars to reach certain school-centered academic and recreational programs after school hours and during the summer.

The significant tourist population that visits Annapolis each year also translates into needs for transportation options to navigate points of attraction around the City. Beyond providing an affordable mobility option, transit also addresses a major concern of residents – the need to reduce traffic congestion in the Annapolis area, particularly as high density development occurs in Parole.

Another component of the needs analysis involved collecting input from existing Annapolis Transit riders through an on-board rider survey. The data collected through

these surveys confirmed popular origins and destinations that transit riders need to access, outlined common travel patterns, and provided insight into riders' perceptions of service quality and major areas for improvement.

For those who live in the City of Annapolis, the most basic needs for public transportation are currently being met through the existing services. The challenge for this TDP process is to develop strategies to improve and expand upon the current system, specifically addressing the issues raised through public outreach and survey work. The needs analysis indicated that improvements should focus on:

- Making transit services more direct,
- Increasing on-time performance, and
- Evaluating potential service expansion (i.e., more Sunday service and later evening hours).

EXISTING SERVICES

Chapter 3 discusses and assesses the existing public transportation services that operate in the City. The fixed-route and deviated fixed-route public transportation services are provided by Annapolis Transit. A review and assessment of the capital/facility assets, administrative staff, and management structure is also included.

Annapolis Transit

Annapolis Transit serves as the primary transit provider in the City of Annapolis. The Annapolis Transit system includes 11 fixed routes or loops (including those running in different directions within the same color route) and two shuttle routes. The Red, Yellow, Green, Orange, Gold, and Brown routes serve Annapolis and Parole, and operate Monday through Saturday. The Gold and Brown Routes also operate on Sundays. Service hours vary, with many routes operating from 5:30 a.m. to 7:00 p.m. and others starting later and ending as late as 10:00 p.m. Headways for the Red, Yellow, and Orange Routes are 30 minutes, while the Green, Gold, and Brown Routes operate at 60-minute frequencies.

Providing service from Annapolis into Anne Arundel County, the C-40 and C-60 Routes run Monday through Friday, from as early as 6:00 a.m. to as late as 8:00 p.m. Headways on these routes are 60 or 120 minutes, depending on the route and trip taken. Route deviation services are provided on the Brown, C-40, and C-60 Routes, where eligible passengers may request curb-to-curb pickups if they live within three-quarters of a mile of the regular fixed-route service. Route deviation services run during late evenings, Sundays, and holidays, and passengers must meet the Americans with

Disabilities Act (ADA) eligibility requirements. Reservations for route deviation services must be made at least one day in advance.

Among its fixed-route services, Annapolis Transit offers two free shuttles from the Navy-Marine Corps Memorial Stadium—the Navy Blue and State Shuttles. The Navy Blue Shuttle is geared toward visitors and travels through historic Annapolis and Inner West Street. The State Shuttle is geared toward State employees that commute to the legislative buildings downtown, though anyone may ride this route to access parking at the stadium. Both shuttles operate Monday through Friday from 6:30 a.m. to 8:00 p.m. The State Shuttle runs until 10:00 p.m. on Monday nights during the legislative session, and the Navy Blue Shuttle also operates during the weekend from 10:00 a.m. to 6:00 p.m. with the exception of some major holidays and special stadium events.

During the process of this TDP, Annapolis Transit was also granted funding to operate a commuter bus route that was previously operated by the Maryland Transit Administration (MTA). Previously known as Route 921, the new route will be named the JARC (Job Access Reverse Commute) Commuter Connector Service, or the C-90 Route, and provide commuter service between Annapolis and the New Carrollton Metro Station in Prince George’s County. Using two buses, the C-90 Route will provide hourly service from 5:30 a.m. to 9:30 a.m. and from 4:30 p.m. to 8:30 p.m., Monday through Saturday.

Other important components of this chapter include the comparison of transit needs with the existing services, to determine how the needs are addressed and to identify any service gaps, and an inventory of other transportation service providers in the region.

Key Issues

Annapolis already has a good foundation in public transportation, with significant geographic coverage including the densest residential areas of the City and major destinations. However, as the City and surrounding areas such as Parole have continued to experience population and economic growth, both traffic and congestion have accordingly worsened and impacted the quality of Annapolis Transit services. Annapolis Transit’s existing services have poor on-time performance, primarily due to the nature of the “pulse” system, which requires timed transfers between all routes. This persistent lack of punctuality in operating the services, compounded by other negative customer experiences such as the poor quality of vehicles, has come to overshadow the convenience of the pulse system for passengers transferring between routes.

ALTERNATIVES

Chapter 4 documents the “menu” of potential service and organizational options that were presented to and considered by the CAC. It includes alternatives that address areas with productivity issues and those without service, detailed route-by-route service alternatives, capital requirements (both vehicles and facilities), a discussion of organizational issues, and recommendations for improved marketing efforts (i.e., an updated Rider’s Guide). It also includes cost estimates for the proposed service improvements.

The recommended alternatives were developed based on the review of existing transit services, the needs analysis, and input by the CAC. Each alternative was described along with advantages and disadvantages. Additionally, each alternative network (the collection of routes) was designed to be cost neutral. Cost estimates were determined for new service that expands beyond the existing budget levels. Future expansion of service (i.e., later evening hours and/or reduced headways) is also described in the Transit Plan, in the last chapter. The cost estimates were conservative, using the fully allocated costs (including all administrative and operating costs). In addition, these alternatives will require more specific service and route planning before actual implementation.

Alternative Networks

Three alternative networks were developed for consideration by the CAC and City staff. Each service alternative started with a number of service assumptions:

1. Funding levels will initially remain approximately the same, reflecting the same number of service hours and cost.
2. Increases in service levels should first address headways.
3. Services will operate according to a schedule and will operate on time. The service must be very dependable.
4. To meet ADA requirements, the proposed core routes would operate as flex routes, where buses may flex up to three-quarters of a mile from the planned route to pick up eligible passengers.
5. There will be significant marketing enhancements with comprehensive route and schedule guides to allow for a clear understanding of all the routes.

The first alternative network proposes to keep the “pulse” system, where all services travel through the Spa Road Transfer Point. The new routes developed in this network aim to provide more direct connections and shorter trips, while maintaining the Spa Road Transfer Point. However, a number of changes would enhance service and make the transit system more user-friendly for the public.

The enhancements include:

- Schedule improvements to ensure that the buses run at least 90% on time.
- Enhanced marketing campaign touting the new changes, including a set of route and schedule guides so that riders can clearly understand the services available. A website with all rider information should also be developed; the existing Annapolis Transit website could be updated to reflect new service information and marketing formats.

The second alternative network and the third alternative network (proposed by the MTA after its analysis of the Annapolis Transit system in the spring of 2007) propose to change the existing “pulse” system to an arterial-based system, where routes connect at multiple transfer points instead of at Spa Road. The benefits of an arterial-based system include:

- Individual routes that provide more direct and shorter trips between major origins and destinations, decreasing the need to transfer.
- Improved on-time performance because all routes will no longer have a timed-transfer at the Spa Road Transfer Point.
- Multiple transfer points at popular destinations, so passengers no longer need to go out of their way to the Spa Road Transfer Point to make connections. Certain routes may continue to have timed-transfers for passenger convenience at the various transfer points.

The final service alternatives and overall networks that were selected and approved by the CAC are presented in the Transit Plan, summarized below.

TRANSIT PLAN

Chapter 5 presents a five-year plan for implementing improvements. There are improvements that can occur immediately, and there are others that should be implemented in later years. The proposed service improvements do not have any

additional capital requirements (vehicles). A separate plan is presented to address the need for replacement vehicles; as the existing vehicles continue to operate. A plan should be in place to address replacements based on the anticipated service life of the vehicles. The vehicle replacement plan is uncoupled from the phased service expansion plan, and outlines vehicle replacement needs by year. These improvements are discussed below.

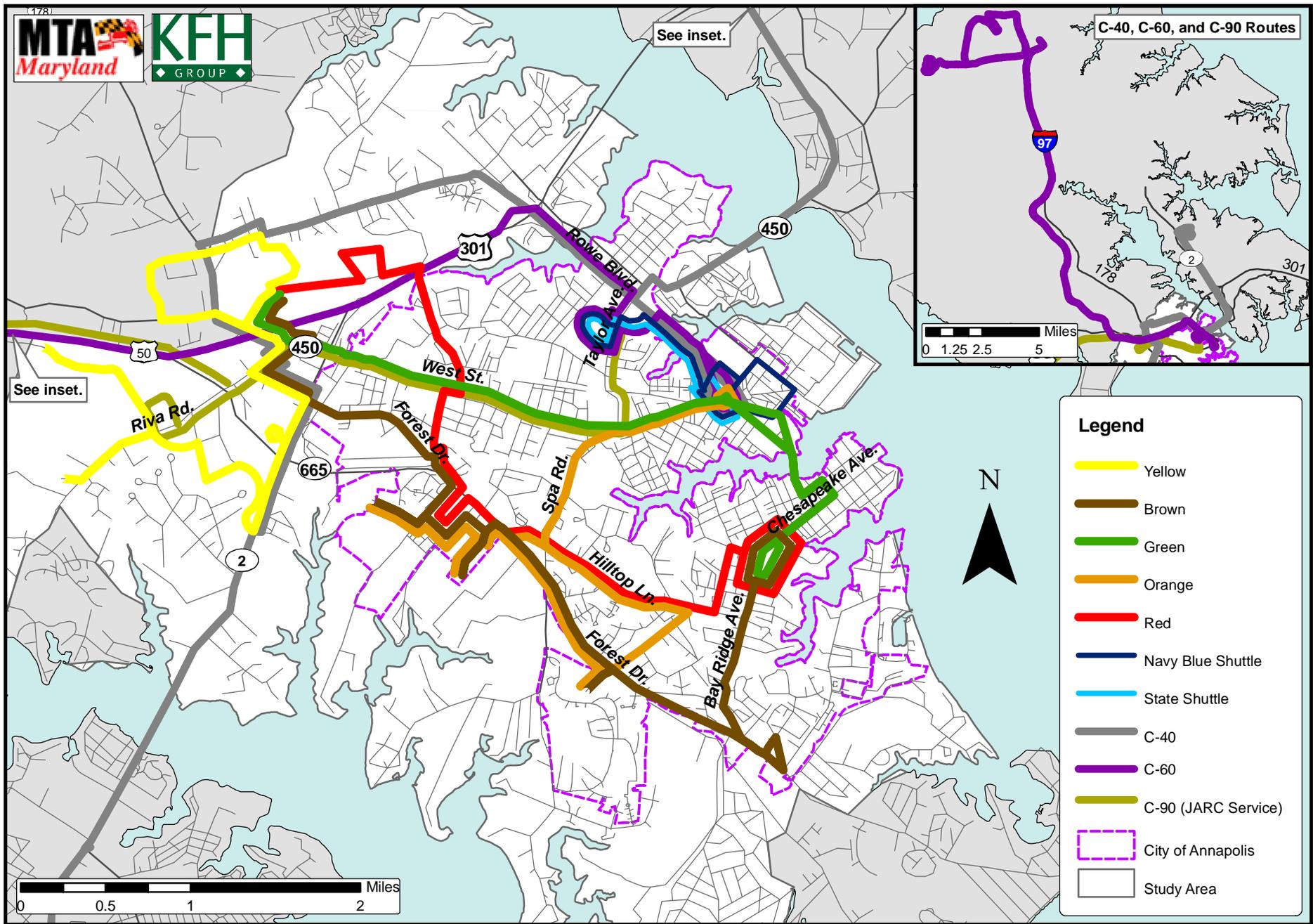
Two preferred conceptual service plan networks were designed and endorsed by Annapolis Transit, the CAC, and the MTA. Both are arterial in design, with major transfer points at Westfield Mall, Eastport Plaza, downtown, and Annapolis Market Place. The networks were designed to be more passenger-friendly, reducing the need to transfer between buses. The routes offer more direct connections between high density residential areas and major destinations throughout the service area. With the new network design, there is less overlap among the services, which reduces confusion for passengers. The proposed networks - Network A and Network B - are shown in Figures ES-1 and ES-2, and two evening and Sunday routes that would complement each proposed network are shown in Figure ES-3.

Each network is designed to include a set of core routes, two downtown shuttles, and two regional routes. The recently funded JARC Commuter Connector Service, or the C-90 Route, between Annapolis and New Carrollton Metro Station will also operate in conjunction with each of these networks. Two additional routes will provide updated service into the evenings and on Sundays. Both proposed networks including the evening and Sunday service were designed to be cost-neutral, compared to the existing system.

The differences between the two concepts are very minor. Network A provides a slight improvement in the geographic coverage of the service area by proposing one additional route. Network B provides a slight improvement in the headways for most of the routes, such that passengers would typically have shorter wait times between buses.

Strategy and Phasing

The proposed plan takes into account both the need to improve services, while maintaining expenses near current funding levels. In addition, services should be expanded when funding opportunities become available. The phasing of improvements therefore reflects initial service modifications that could be implemented with little change in operating costs, and service expansions that would be implemented gradually over the next five years.

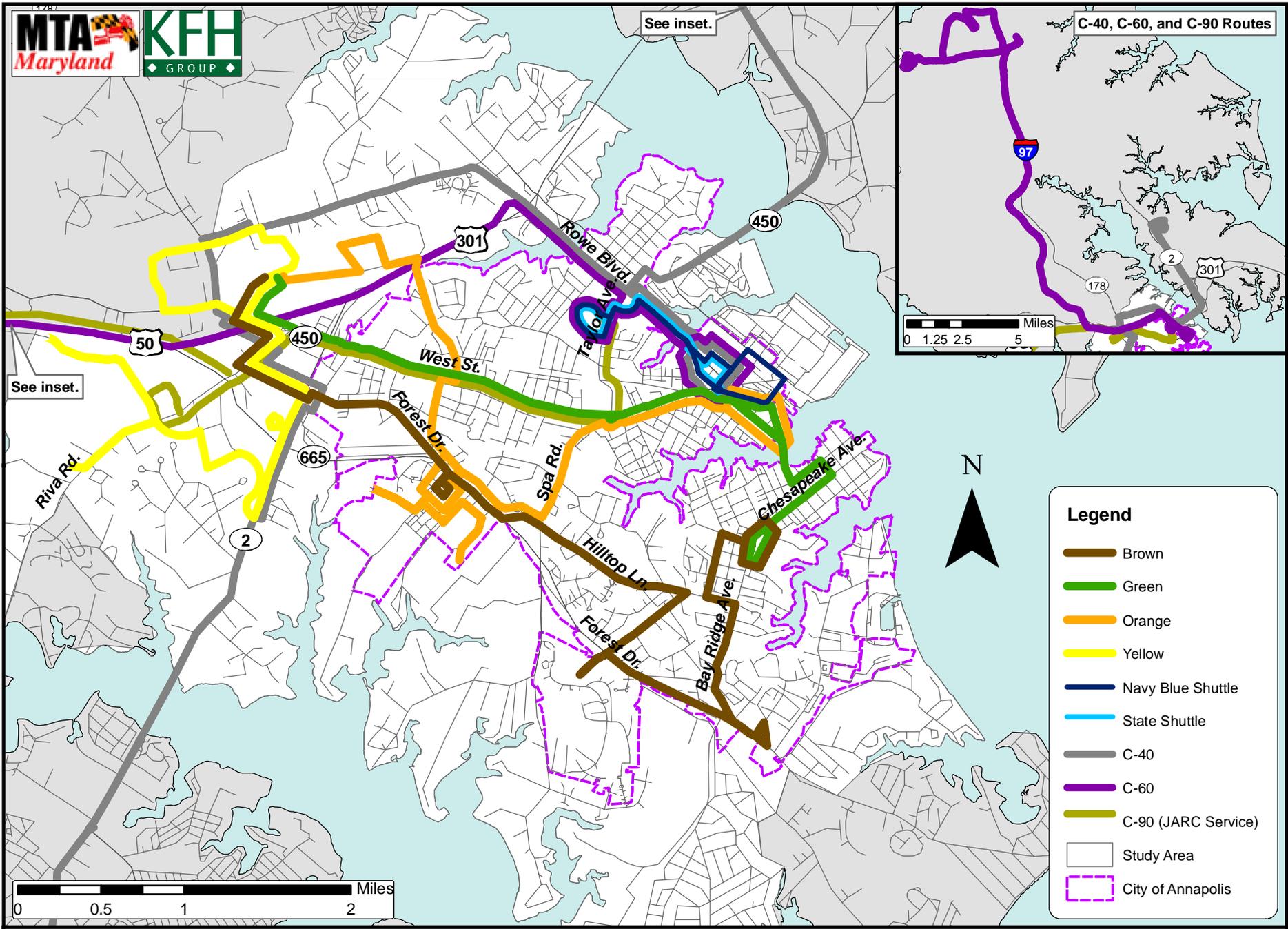


Legend

- Yellow
- Brown
- Green
- Orange
- Red
- Navy Blue Shuttle
- State Shuttle
- C-40
- C-60
- C-90 (JARC Service)
- City of Annapolis
- Study Area

Figure ES-1: Annapolis Transit Conceptual Plan, Network A

ES-8

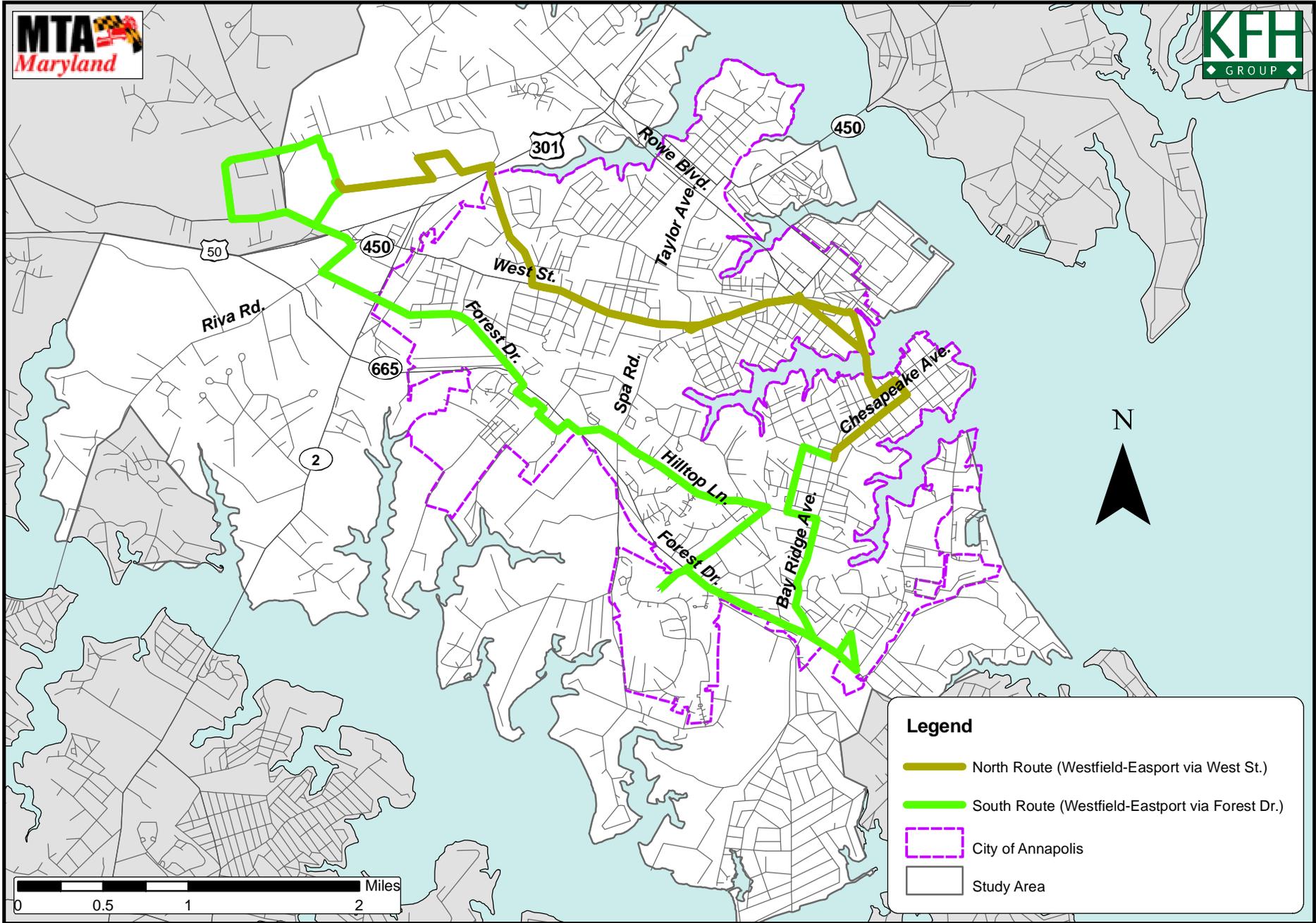


ES-9

Figure ES-2: Annapolis Transit Conceptual Plan, Network B



ES-10



Legend

- North Route (Westfield-Eastport via West St.)
- South Route (Westfield-Eastport via Forest Dr.)
- City of Annapolis
- Study Area

Figure ES-3: Annapolis Transit Conceptual Plan, Evenings and Sundays

The phasing is designed to indicate approximate timing and priority; however, implementation of any component is often a function of funding availability. Both an annual budget process and MTA grant application process allow for public input and revisions to the anticipated project phasing based on need and funding. Acceptance of this TDP does not obligate the City of Annapolis or the State to fund any particular element at any time.

Operating Plan – Year 1

- *Implement New Network Service* – Modify existing routes for greater connectivity to each other with no change in costs (cost-neutral).
- *Develop Schedules, System Maps, and Rider's Guide* – Marketing materials, clear and concise system maps, and accurate schedules will also be developed along with the new service.

Operating Plan – Year 2

- *All Services* – Initiate on-going monitoring and planning activities, making minor route adjustments on an annual basis as needed.
- *Marketing Program* – On-going funding support for the promotion of services and printed material.

Operating Plan – Year 3

- *Evening Service* – Expand hours on the new evening routes. Add service hours to extend span in the evening until 12:00 a.m., Monday through Saturday.

Operating Plan – Year 4

- *Evening Service* – Reduce headways from 1 hour and 15 minutes to 40 minutes, Monday through Saturday.

Operating Plan – Year 5

- *Sunday Service* – Reduce headways from 1 hour and 15 minutes to 40 minutes.

Table ES-1 summarizes the operating costs for the plan, whether the City chooses to implement Network A or B. The table uses FY 2009 as the base year for operating costs, and rolls in the full implementation cost of the previous year as the base for the

next year in the plan. Table ES-2 presents the summary of the operating *and* capital costs by year. While the TDP is meant to be a five-year plan, the years outlined in the plan may also be considered as sequential phases that are implemented over a longer time period, as funding becomes available.

**Table ES-1: Operating Expansion Plan Summary
(In Current Dollars)**

	Operating Budget	TDP Planned Expansion	Total Operating Budget
Base	\$4,394,600		
Plan Year 1	\$4,570,000	\$44,000	\$4,614,000
Plan Year 2	\$4,799,000	\$22,000	\$4,777,000
Plan Year 3	\$4,968,000	\$104,000	\$5,072,000
Plan Year 4	\$5,275,000	\$208,000	\$5,483,000
Plan Year 5	\$5,702,000	\$125,000	\$5,827,000

(Assumes 4% annual inflation.)

**Table ES-2: Operating and Capital Plan Summary
(In Current Dollars)**

	Operating Budget	TDP Planned Expansion	Total Operating Budget	Total Capital	Total
Base	\$4,394,600				
Plan Year 1	\$4,570,000	\$44,000	\$4,614,000	\$1,020,000	\$5,634,000
Plan Year 2	\$4,799,000	\$22,000	\$4,777,000	\$1,520,000	\$6,297,000
Plan Year 3	\$4,968,000	\$104,000	\$5,072,000	\$180,000	\$5,252,000
Plan Year 4	\$5,275,000	\$208,000	\$5,483,000	\$1,520,000	\$7,003,000
Plan Year 5	\$5,702,000	\$125,000	\$5,827,000	\$850,000	\$6,677,000

(Assumes 4% annual inflation.)

Other Recommendations

The proposed plan recommends several additional improvements and further studies to address issues identified in this study in more detail. These include the following:

- Base Realignment and Closure (BRAC)-related service to Fort Meade, connecting the Harry S. Truman Park & Ride to Fort Meade and Enhanced Use Lease sites;
- A new passenger transfer facility, ideally in the Parole Area; and
- A Bus Stop Assessment/Shelter Improvement Study.

Results

Implementation of this TDP will significantly improve the quality and coverage of transit services in the City of Annapolis. This TDP presents a vision for the growth of transit in the City that will:

- Improve service through progressive route modifications and increases in service frequency and span to make transit attractive and usable;
- Improve connectivity with both local and regional transit services; and
- Provide transit infrastructure improvements to support continued growth in transit services.

The program described in this TDP was developed as the result of analyses on existing services, demographic information, and land use, and incorporated substantial input from the CAC, existing transit riders, and Annapolis Transit staff. With the continuing support of the community, these improvements can improve the quality of transit service in Annapolis and promote increased transit use, even if implementation stretches beyond the five-year horizon of this TDP.

Chapter 1

Introduction

The function of a Transit Development Plan (TDP) is to direct a transit system's evolution in the short-term timeframe. This plan is the basis for the system's design and operation. The City of Annapolis TDP provides an outline for the development of local public transit services in the City of Annapolis, Maryland for the next five years. The planning process was guided by Annapolis Transit staff, a Citizen Advisory Committee (CAC), the members of which are included in Appendix A, and the Maryland Transit Administration (MTA). The responsible parties met periodically to review materials, provide input, and guide the direction of this study, which was an update of the previous TDP developed in 2003 in conjunction with Anne Arundel County.

The City of Annapolis is characterized primarily by an urban environment; however, many of Annapolis' suburban areas spread beyond the municipal boundaries into unincorporated Anne Arundel County. Annapolis spans roughly six square miles in land area.¹ The Maryland Department of Planning estimates that the City's population was 36,524 as of July 2008, experiencing a growth rate of 1.7% from the 2000 Census.² The slowing growth is not uncommon due to the built-out nature of this mature city. That principle may be challenged by the recent infill and redevelopment activity within the City and in nearby Parole, which was also examined in this study.

Analyses of the City's demographics, land uses, and travel patterns, along with input from Annapolis Transit staff and CAC members, reveal that transit services need to be restructured and improved to meet the needs of existing and future residents. This TDP proposes a restructuring of current Annapolis Transit services, along with several recommendations to enhance service quality and transit riders' overall experiences. It is unlikely that transit ridership will grow, or even remain constant, if the proposed recommendations are not implemented.

¹ U.S. Census Bureau, State and County QuickFacts.

² Maryland Department of Planning, Maryland State Data Center, Municipal Population Estimates, http://www.mdp.state.md.us/msdc/Pop_estimate/Estimate_08/municipal/popest_muni08.shtml

REVIEW OF PREVIOUS TDP

As mentioned above, the City's last TDP was developed in conjunction with Anne Arundel County in 2003. A few service changes have occurred in the last six years, though Annapolis Transit generally provides the same geographic coverage on a similar service schedule and frequency as it did during the last TDP. The most significant service changes were the cancellations of the C-50 Route and the Kent Island Shuttle and the addition of the C-60 Route. The C-50 Route ran between Annapolis and the southern part of Anne Arundel County. The County Department of Social Services took over this route temporarily, renaming it the South County Bus Service (SCOTS), but ended the service in March 2009 due to rising costs, a limited budget, and persistently low ridership. Only two fewer trips, one each in the morning and the evening, were provided with the discontinuation of the Kent Island Shuttle, which operated between the Kent Island Park and Ride Lot and the Navy-Marine Corps Stadium.

With service commencing in 2005, the C-60 Route provides a connection between Annapolis and County destinations including the Cromwell Light Rail Station in Glen Burnie, BWI Airport, Arundel Mills, and Anne Arundel Community College at Arundel Mills. The Downtown Parking Shuttle has also changed since the last TDP, replaced by two free shuttles. The State Shuttle now covers a similar route as the previous Downtown Parking Shuttle and primarily serves commuters going to government offices. The Navy Blue Shuttle provides increased coverage of downtown and primarily serves visitors. Another accomplishment of the transit system was the implementation of a Free Fare Zone. Starting in November 2006, this Free Fare Zone aimed to boost transit use in downtown Annapolis, and consequently reduce traffic congestion in this high activity area, by allowing passengers to ride any Annapolis Transit bus for free when traveling within this zone.

Some challenges identified in the 2003 TDP that still persist today include the need to interline routes at the Spa Road Transfer Point, in order to reduce transfers and make services more user-friendly, and difficulties maintaining route schedules. While the latter issue mainly pertained to the Brown Route, a deviation service, in the last TDP process, the whole system now suffers from poor on-time performance due to the nature of the "pulse" system and increased traffic congestion in the service area. The 2003 TDP also identified the need for improved service frequencies and expanded hours, which is still applicable to this TDP update since today's schedules are similar to those when the last TDP was conducted.

GOALS AND OBJECTIVES OF TDP UPDATE

A critical component of this process was identifying the goals and objectives of this study at the outset. As part of this process, the CAC communicated a variety of needs and issues for the study. Based on this discussion, the following goals and objectives were developed to help shape the planning process and are detailed further in Appendix B:

- Create a more seamless transit system within the City of Annapolis.
- Improve transit-related amenities, including sidewalks, bus shelters, and signage.
- View transit services from a regional perspective.
- Connect residents to jobs – support economic development.
- Make transit services more convenient and reduce transfers.
- Marketing – provide easy access to information on available mobility options.
- Support the City’s desire to “go green” and reduce car travel/congestion.

SUMMARY OF ISSUES

The TDP includes elements in a number of areas:

- Service Plan
- Marketing
- Capital Plan
- Financial Plan

This report examines each of these components for providing transit services and outlines relevant details for implementation. Examining these elements together was a critical part of reviewing the existing Annapolis Transit system, and helped identify various transportation issues that the City of Annapolis is facing. Several inherent goals surfaced during the TDP process:

- Restructuring existing routes to more accurately reflect changing demand and land uses (specifically traffic patterns);

- Improving the performance of services;
- Serving shopping, health facilities, and employment locations;
- Improving transit services to become more convenient and user friendly; and
- Continuing to provide transportation services to outlying regions.

OVERVIEW OF THE PLAN

The chapters that follow present the process and results of the efforts to address these goals in the development of the 2009 TDP. Chapter 2 reviews the land use and demographic characteristics that affect public transit needs and services in the City. Chapter 3 presents a review of the current transportation services available within the City - fixed-route, Americans with Disabilities Act (ADA) service, and other transportation providers. Chapter 4 presents route and service alternatives for Annapolis Transit. Chapter 5 presents the recommended plan for improving public transit services for City residents, employees, and visitors, and includes a project budget and implementation plan.

Chapter 2

Transit Needs Analysis

INTRODUCTION

The purpose of this chapter is to effectively assess current and potential transit needs for the City of Annapolis. This multi-faceted needs analysis reviews information from related transportation plans and documents, illuminates demographic trends, identifies current and planned land uses, and incorporates public input from the community and its stakeholders.

The initial section provides a review of recent plans that are relevant to the City's overall public transportation landscape. This section provides the context behind the Transportation Development Plan (TDP) and its current update. The chapter then focuses the next two sections on compiling secondary data to assess potential transit needs amongst the City's range of population groups and geographic areas. The final section of the chapter will review primary data gathered from the public to examine any gaps in transit service, which will help direct the development of service alternatives later in this TDP update process.

Developing profiles of demographic trends and land uses helps provide an accurate understanding of the locations where transit-dependent persons reside—considered as major origins—and the locations that residents need to access in their daily activities—considered as major destinations. The demographic analysis examines the needs of traditionally transit-dependent populations, as well as those of “choice riders”, who have access to a personal vehicle but may choose to ride transit. The community has serious concerns about worsening congestion in Annapolis and neighboring Parole, and with a potential increase in gas prices over the next few years, transit can serve as a convenient, affordable, and much needed transportation alternative for all residents. The methodology behind the identification and analysis of major origins and destinations, as well as the evaluation of demographics and land use, is explained in detail in the pertinent sections.

The final segment of this chapter analyzes primary data gathered from the community and its stakeholders, primarily via surveys of transit riders and input from the study's Citizen Advisory Committee (CAC) and City staff. This part of the analysis goes a step beyond examining Annapolis' current demographics and built environment to identify potential gaps in existing transit services and accordingly improve and expand services in the future.

REVIEW OF RECENT PLANS AND STUDIES

The first part of the needs analysis involved reviewing recent plans and studies that have addressed transportation needs in the City of Annapolis. These plans included the Annapolis Regional Transportation Vision and Master Plan, the City's new comprehensive plan, the West Street Transit Study, the Annapolis Neck Small Area Plan, the Broadneck and Edgewater/Mayo Small Area Plans, and the Anne Arundel County TDP. The Parole Urban Design Concept Plan was also reviewed since Annapolis' transit issues do not stop at the City limits, and new, high density development in Parole will heavily impact transportation in Annapolis. The demographic trends, transit needs, and related land use issues identified in these studies are described below. The City's previous TDP, developed in conjunction with Anne Arundel County in 2003, was also reviewed; the transit needs documented in the last TDP are still relevant for this update and will be incorporated into the service alternatives development process.

Annapolis Regional Transportation Vision and Master Plan

The Annapolis Regional Transportation Vision and Master Plan provides a guide for safe and convenient mobility throughout the Annapolis area, while enhancing residents' quality of life.¹ This coordinated intergovernmental approach, between the City of Annapolis, Anne Arundel County, the State, the U.S. Naval Academy, and the Annapolis Regional Transportation Management Association, included various strategies to address transportation problems and improve mobility options. The Plan focused on two main activity centers, Parole and downtown Annapolis. The transit-related strategies offered in the plan will be considered when developing transit alternatives and complementary actions later in the TDP process. The transportation needs relevant to the TDP that the Plan identified and aimed to address through its strategies are outlined below:

¹Referenced final draft of Volumes I and II, dated January 10, 2006, accessed from City of Annapolis Website:

http://www.ci.annapolis.md.us/upload/images/government/depts/pl_zon/compplan/ARTVAMP%20Volume%201%20-%20Executive%20Summary.pdf and

http://www.ci.annapolis.md.us/upload/images/government/depts/pl_zon/PlanRecFinal.pdf (accessed October 15, 2009).

- Need to alleviate traffic congestion by reducing automobile trips along major routes including West Street, Forest Drive, Rowe Boulevard, Riva Road, and key intersections in Parole.
 - Traffic congestion on Forest Drive is particularly bad due to through traffic to Aris T. Allen Boulevard during peak periods and local traffic, which has no alternative routes for short trips.

- Need to provide quality transportation choices and reduce automobile-dependency.
 - Need to reduce travel time for transit relative to cars to encourage a mode shift.
 - Need to promote alternatives to driving, particularly for peak period travel, because it is not feasible to build more travel lanes or other capacity improvements in the Annapolis area.

- Need to meet parking demands that promote transit use.

- Need for increased inter-governmental coordination of land use and transportation planning so that new developments or redevelopments do not overwhelm the capacity of the transportation network.

- Need to address transportation from a user and system perspective, which includes meeting the needs of all user groups and optimizing the efficiency of the transit network.
 - User groups whose needs may be addressed through transit include daytime workers, shift workers, outbound commuters, short-term patrons, long-term patrons, day tripper tourists, and overnight visitors.²

The Annapolis Regional Transportation Vision and Master Plan also examined the transportation needs specific to each user group. Three needs recurred among all groups: resolving security concerns to help increase ridership, decreased distance from home to bus stops, and improvements to make transit stops and paths to stops more accessible, particularly for persons with disabilities. Accessibility could specifically be improved by removing obstructions on sidewalks and ensuring sufficient sidewalk

²Daytime workers are those that work in the area during normal business hours. Shift workers work in the area in shifts, such as restaurant employees. Outbound commuters live in the area, but commute elsewhere for work. Short-term patrons travel to retail, office, and government centers for quick trips, while long-term patrons visit these destinations for longer periods. Day tripper tourists come to the area for the day, while overnight visitors stay over for at least one night. Residents and deliveries were additional user groups examined in the study, but specific transit-related needs were not identified. Cut-through traffic and parking impacts were the focus of residents' needs, and the ability to deliver goods close to the destination were the focus of deliveries' needs.

widths. Table 2-1 below includes additional transit-related needs specific to each user group.

Table 2-1: Transit Needs of Specific User Groups

User Group	Transit-Related Needs³
Daytime Workers	Expanded and improved shelters at transit stops, including those at outlying park and ride lots.
Shift Workers	-- Examination of the feasibility of evening and late-night transit service, if not fixed-route then on-demand services, to take shift workers home or to their cars.
Outbound Commuters	Increased supply of convenient parking to take transit.
Short-term Patrons	-- Increased convenience and reduced travel time for using transit to encourage a mode shift from driving. -- Increased transit services during the evening. -- Improved walking conditions to access transit stops outside of downtown Annapolis.
Long-term Patrons	Same as needs for short-term patrons.
Day Tripper Tourists	Clear signage and information to park at remote lots and take transit service to final destination (typically downtown).
Overnight Visitors	Clear signage and information to park at hotels or bed and breakfasts, and then take transit service to final destination (typically downtown).

The Plan provided a number of transit strategies to address these needs. The policy and project recommendations were considered in the TDP process when developing service alternatives and related actions to improve Annapolis' transit system.

2009 Annapolis Comprehensive Plan⁴

An update to the City's 1998 Comprehensive Plan, the 2009 Comprehensive Plan outlined numerous goals related to the City's growth and development over the next 20 years. Three major themes shaped the development of the 2009 Comprehensive Plan: preserving and enhancing community character, maintaining a vibrant economy, and promoting a "Green" Annapolis. Public transportation impacts each of these areas.

³ Needs specific to each user group were referenced in Volume II of the Plan:

http://www.ci.annapolis.md.us/upload/images/government/depts/pl_zon/PlanRecFinal.pdf
(accessed October 15, 2009).

⁴Adopted by the Annapolis City Council on October 5, 2009. Full plan may be accessed on City of Annapolis website: <http://annapolis.gov/info.asp?page=8953>.

Transit helps maintain Annapolis as a desirable place to live and visit by reducing traffic congestion, promotes the mobility of people and goods, which keeps the local economy running, and provides an alternative transportation option that reduces energy use and improves air quality. The 2009 Comprehensive Plan provided pertinent insights into the City's transportation needs through its chapters on demographic data, land use and economic development, transportation, municipal growth and community facilities, and housing.

Demographic Data

The 2009 Comprehensive Plan described several demographic trends related to traditionally transit-dependent populations and commuters. From 1980 to 2000, the two fastest growing age groups were the 45 to 64 and 85 and over groups. These trends indicated an increasing number of older adults living in Annapolis who require transportation options, such as transit to maintain independent lifestyles when they stop driving. Based on the 2000 Census, a high percentage of Annapolis' population lived below the poverty level (13%), compared to Anne Arundel County (5%) and the State (9%).

While per capita income was similar between the City, County, and State, the median household income in 1999 was notably lower in Annapolis, at approximately \$49,000 compared to \$62,000 and \$53,000 for the County and State, respectively. Census data on incomes indicated that a higher proportion of the City's population is low-income, which is likely due to the large supply of public and subsidized housing in Annapolis. Public transportation is therefore an important service that provides equal access to employment, shopping, and recreational opportunities for low-income residents, who may not be able to afford a personal vehicle.

Housing

Annapolis has continued to experience an increase in its housing stock, though the growth has occurred at a slower rate in comparison to the County, since the City has largely been built out. Annapolis had approximately 16,200 housing units as of 2007, and 61% were single family homes while 38% were multi-family structures. The locations of multi-family housing, which provides greater densities to improve transit ridership than do single family homes, were taken into account in developing service alternatives in this TDP update. As mentioned above, the City has a significant supply of public and subsidized housing (nearly 2,400 units), which accounts for 50% of the public housing supply in Anne Arundel County. The City's public housing supply includes public housing managed by the Housing Authority of the City of Annapolis, properties where tenants are eligible to use Section 8 Housing Vouchers, and other subsidized rental units available to low and moderate income households. These specific housing locations are described further below.

Transportation Issues

Several factors have contributed to the worsening congestion and traffic in Annapolis in the past several years. For one, the City's geographic orientation on a peninsula means that all travel into and out of the City occurs on a few major roads that are at or near capacity. Traffic volumes on these roads are high on a near daily basis due to the large bi-directional flow of commuters during the week and tourist and visitor traffic during weekends. Population growth and development have also continued in a mature community that has little vacant land remaining. Recent infill developments and redevelopments have therefore resulted in higher densities within the City. When combined with growth in surrounding areas such as the Outer Neck at the end of the peninsula, both the travel demand within and through Annapolis have increased with limited improvements made to the existing road network to accommodate this demand.

Annapolis is both a bedroom community, with 53% of city resident workers commuting out of the City for employment, and a major regional employer, which attracts employees from the County and the Eastern Shore to jobs at the state capitol, the County government, and other businesses and organizations. High levels of commuter traffic into and out of Annapolis result in significant congestion along Annapolis' major gateways, particularly along Forest Drive and US 50/US 301, during peak periods. West Street and Riva Road are other major arterials that experience congestion due to commuter traffic as well as local travel for shopping and other commercial services.

The Transportation Issue Paper included in the Appendix of the 2009 Comprehensive Plan cited three major transportation issues: transportation system performance, transportation-land use linkage, and balance of transportation modes. Transportation system performance referred to the congestion problems on the major arterials described above, which also result in negative spillover effects onto local streets within Annapolis. Roscoe Rowe Boulevard and the U.S. Naval Academy Bridge are additional gateways that experience heavy congestion due to commuter traffic. Aside from heavy, peak-period commuter traffic during the week, congestion problems also occur during special events and summer weekends with tourism traffic to the City.

The transportation-land use linkage issue highlighted the job-household imbalance in Annapolis. Of those who worked in the City in 2000, only 30% also resided there, while 70% commuted from outside Annapolis. A large portion (46.6%) of City workers commuted from Anne Arundel County, specifically Parole, Broadneck, Glen Burnie, and the west and southern areas of the County. Other commuter origins included Queen Anne's, Prince George's, and Baltimore Counties and the City of Baltimore. As mentioned earlier, more than half of City residents that are working commuted to places outside Annapolis. The City had 11,500 out-commuters in 2000,

which combined with another 2,800 commuters from the Outer Neck to clog the major gateways out of the City. Forest Drive is a particular problem corridor as more than 9,000 commuters from Annapolis and the Outer Neck use Forest Drive to access US 50, I-97, and Route 2 to reach employment in the Washington, D.C. and Baltimore metropolitan areas.

Though Annapolis offers travel by several transportation modes, the balance of modes is still heavily car-oriented. In 2000, nearly 70% of workers in Annapolis commuted via single-occupancy vehicles. Twelve percent commuted through carpools and about 7% each through public transportation and walking. These mode shares were indicative of other types of trips too, particularly grocery and school trips that tend to be made by automobile. The mode splits need to be balanced by discouraging growth of automobile use within the City and improving other modes such that taking public transit, biking, and walking are viable and attractive mobility options.

The issues described above, particularly with regard to congestion within and around Annapolis, accentuate the need for effective transportation alternatives to driving alone. Convenient, reliable, and affordable public transportation is a key part of the solution. While the existing Annapolis Transit routes provide good geographic coverage and serve major destinations, there is a need to increase service frequencies to attract more riders. Greater transit use could also be encouraged by concentrating higher density land uses in nodes that are already served by transit. The City also has needs for improved pedestrian infrastructure and amenities, not only to increase the pedestrian mode share, but also to enhance accessibility to transit stops and help boost transit ridership.

Growth and Planned Opportunity Areas

The 2009 Comprehensive Plan recommended concentrating future growth, in the form of mixed-use centers, into four Opportunity Areas: West Annapolis, Bay Ridge, Forest Drive, and Outer West Street. Outer West Street is anticipated to accommodate nearly 80% of the City's housing growth by 2030.⁵ The large increase in commercial space and housing units anticipated in these Opportunity Areas will require new and improved transit services, particularly since the road network is at or near capacity with no significant plans for improvements to accommodate the projected growth. The high density and mixed uses, including residential, office, and commercial, of these growth areas provide significant opportunities to promote both local and regional transit use. Major potential benefits include minimizing the traffic congestion and strain on transportation resources that are often associated with growth. The Comprehensive

⁵While this time frame is longer than the typical five-year planning horizon of the TDP, it is worth noting areas of projected growth so that transit services may be planned in conjunction with new developments.

Plan reiterated that “each of the four opportunity areas should be seen as vital nodes on the network of public transit routes.”

Principles and Objectives Related to Transit

Numerous transportation principles and objectives outlined in the 2009 Comprehensive Plan called for public transportation to play a larger role in Annapolis’ transportation network:

Principle 1. Transportation plays a critical role in the achievement of personal and community goals.

Relevant Objectives: All neighborhoods in Annapolis should be readily accessible to transit service.

Principle 2. Transportation offers a significant opportunity to move toward a “Green” Annapolis.

Relevant Objectives: Reduced transport-related energy consumption. A public transportation system that is a convenient and fully functional replacement for auto use.

Principle 3. Transportation systems both lead and follow important changes in our city’s land uses.

Relevant Objectives: Acknowledging that our development patterns are shifting toward higher density, the City must emphasize high capacity modes of transport over single occupant vehicles.

Principle 4. Transportation investment and operating priorities in Annapolis must shift to transit, pedestrians, and bicycles first, automobile second.

Relevant Objectives: Convenient access to local and regional public transportation for every citizen.

Principle 5. Parking is key to transport system operation and funding.

Relevant Objectives: Parking pricing and availability is managed by the City in a manner that maximizes the potential for people to choose non-auto alternatives. Parking revenues contribute to improvements in transit services and infrastructure.

The City has prioritized transit as an alternative transportation option that meets the mobility needs of residents while decreasing congestion, reducing fuel use, and improving air quality. Improved and expanded transit services in Annapolis translate into a higher quality of life and progress toward becoming a Green City. As indicated in Principle 5, funding for the transit improvements that can help the City accommodate growth and address transportation issues is a need in itself. Since Federal and State funding is limited, more City revenues will be required to support increases and improvements to Annapolis Transit. However, the City faces a “chicken and egg” situation, where it must consider its budget availability to increase support for transit services, in hopes that transit ridership will increase with greater service frequency, for example. Or, will the City’s policy preclude additional financial support for transit until ridership figures demonstrate demand? The Comprehensive Plan appears to champion the first approach, to prioritize transportation investments in transit before the automobile. These funding issues and related policy questions are further discussed the transit plan in the final chapter of this report.

West Street Transit Study

In July 2009, the City of Annapolis completed a study on developing a direct transit connection between downtown Annapolis, Inner West Street, and Parole via the West Street corridor. West Street is one of the City’s primary access routes, and connects both Annapolis and Parole to the regional highway network. The corridor hosts numerous area attractions, including the City Dock, the U.S. Naval Academy, and the newly developed Annapolis Towne Centre at Parole. Currently flanked by relatively high density developments at its ends and intermittently along the corridor, with more future density planned, West Street provides an ideal opportunity to develop a linear transit connection between downtown Annapolis and Parole.

This study was premised on the need to “increase overall transit use and spur new investment in transit-supportive land use.” The Annapolis Transit network has experienced significant delays due to its operation as a “pulse” system, where all routes meet to provide transfer opportunities. There is a need to improve the on-time performance of these services in order to improve service quality for existing customers and attract new riders. The study also highlighted the need to provide a direct connection between downtown Annapolis and Westfield Mall in Parole, which each contain one of the highest-boarding stops in the existing transit system.

The demographics along the West Street corridor also indicated transit need, given the significant traffic that currently congests the City during peak travel periods. The area within a quarter-mile of the study’s route concepts contained approximately 19,500 primary jobs, 8,400 total residents, and 3,200 residents employed in primary

jobs.⁶ The study also noted that only 580 of the 3,200 employed residents work in the West Street corridor. Other employed residents in the corridor worked elsewhere in the City or in Anne Arundel County. Half of the employees working in the corridor came from Anne Arundel County, including 12% that live in Annapolis. This data implied that a small portion of people live and work in the West Street Corridor, though many commuters travel between the corridor and other areas of the City. There is also a need to consider how transit can serve the large share of employees who work in the West Street Corridor but come from an origin outside of Anne Arundel County.

Anne Arundel County General Development Plan

The County adopted a new General Development Plan (GDP) in October 2009. Prepared and periodically updated by the County's Office of Planning and Zoning, the GDP guides countywide growth and development and includes policy recommendations that comply with state legislation and goals. Among its transportation recommendations, the GDP identified Transit Investment Corridors, major highway corridors to be designed or redesigned for compatibility with transit and to promote transit connectivity between activity centers in the County and the region. The Transit Investment Corridors located within the current Annapolis Transit operating area include US-50/US-301, MD-2/Solomons Island Road, MD-2/Governor Ritchie Highway, and I-97. These corridors will be further evaluated, in terms of transit needs, adjacent land uses and densities, and land side support infrastructure, in a Transportation Functional Master Plan, as recommended in the GDP.

Annapolis Neck Small Area Plan

Effective as of May 2003, the Annapolis Neck Small Area Plan has served as a detailed guide, complementary to the County's GDP, to land use, transportation improvements, and development-related issues within the Annapolis Neck Peninsula. Downtown Annapolis is one of two large, regional activity centers identified in the Plan (Parole was the other), along with several smaller mixed-use activity centers such as Outer West Street, Inner West Street, and West Annapolis. The Plan identified the need to connect these activity centers including a regional transportation center just outside the City boundary in Parole.

This Plan also identified traffic congestion on major roads including Forest Drive, West Street, and Riva Road as the primary concern in public forums. The Plan outlined the need for expanded local and regional transit services that are convenient and

⁶These figures were determined through the U.S. Census Bureau's Longitudinal-Employer Household Dynamics data and the Transportation Analysis Zones data provided by the Baltimore Metropolitan Council. The number of total residents represented 2000 data, while the other two figures were 2006 data.

affordable to serve the greater Annapolis Neck area. Increased parking availability to access transit services at park and ride lots or a transit center were additional needs, which also apply to Annapolis. The Plan also documented the need to explore water transportation as a component of the local transit system. Other needs related to transit were improvements in pedestrian and bicycle safety and accessibility along roadways. A lack of continuity and maintenance of sidewalks, and the need for improved connectivity between established communities and new developments, were additional items discussed in the Small Area Plan. These needs apply to the TDP analysis since many transit riders walk to bus stops, and Annapolis Transit wants to encourage connections between biking and transit use.

One of the Small Area Plan's explicit transportation goals was to increase the use of buses by residents of the Annapolis Neck and visitors to Annapolis. Other needs that were addressed through the Plan's recommendations included incorporating multi-modal transportation capabilities into land use development and increasing the information campaign about transportation alternatives to residents, employees, and visitors to Annapolis Neck. The Plan also proposed examining the feasibility of a two-tiered transit system, which would provide on-demand transit service within neighborhoods to feed into express bus services at activity centers. A multi-modal transportation center in Parole was a major capital project discussed to serve as a regional transfer center that could accommodate local and regional transit services, provide new parking capacity, and foster connections to other modes including taxis, bicyclists, and pedestrians.

Broadneck Small Area Plan

Effective January 2002, the Broadneck Small Area Plan provides a detailed land-use plan for the Broadneck Peninsula just north of Annapolis. The main relevant transportation goal identified during the study process was to plan for future public transportation needs. Recognizing the opportunity to decrease reliance on the automobile, the Committee identified the need to establish local shuttle or circulation services in the Broadneck area when sufficient demand is present. The area's only existing public transit services are Annapolis Transit's C-40 Route, which connects Arnold and Anne Arundel Community College to Annapolis and Edgewater, and the Maryland Transit Administration's Route 14, which runs along Ritchie Highway between Annapolis and the Patapsco Light Rail Station. The plan recommended making new east-west transit connections within the peninsula, as well as linkages between employment centers, residences, and shopping destinations, particularly around the Bay Dale and College Parkway Shopping Center. A related goal in the plan was to improve pedestrian access. Whereas the Broadneck area is currently dominated by automobile traffic, pedestrian facilities including sidewalks and crosswalks in densely populated areas would facilitate increases in both pedestrian and transit activities.

Edgewater/Mayo Small Area Plan

Effective April 2002, the Edgewater/Mayo Small Area Plan described transportation needs for the Edgewater/Mayo area, which lies just across the South River from Annapolis. Currently served by Annapolis Transit's C-40 Route, which only operates during the week, participants of the planning process expressed interest in initiating a weekend shuttle service connecting this area with retail areas in Parole and Annapolis. Under the goal of reducing traffic congestion, the plan recommended developing public transit service as an alternative to the automobile for special events in the near term, leading to regularly scheduled transit service between Edgewater/Mayo and Annapolis in the long term. A related recommendation was to examine potential demand for additional park and ride locations, including at the South River Colony complex, to promote ridesharing among travelers to the interstate and Washington, D.C. and transit use to reach Annapolis.

Anne Arundel County TDP

The 2009 update of the Anne Arundel County TDP included a similar approach to determining transit needs through a demographic and land use analysis, which is described later in this chapter. In the County-wide analysis, Annapolis was identified as an area with relatively high potential transit needs based on the number and density of transit-dependent persons, including youth, older adults, persons with disabilities, persons with lower incomes, and autoless households. Annapolis is also one of the areas of highest population density in the County, with more than 2,000 persons per square mile, which is generally a minimum threshold necessary to support fixed-route transit services. Described further in the land use analysis below, Annapolis also has one of the greatest concentrations of trip generators—origins and destinations—in the County. The service alternatives proposed for the Annapolis Area in the County TDP update were also considered during the development of alternatives in this TDP process.

Parole Urban Design Concept Plan

Adopted by Anne Arundel County in 1994, the Parole Urban Design Concept Plan provided a detailed guide for development within the County-designated Parole Growth Management Area. The plan reflected the analysis, goals, and implementation measures developed by the Parole Area Management Group. The transportation plan developed as part of this effort included transit as a travel demand management (TDM) strategy to optimize the efficiency of the transportation network. Linkages to Annapolis, Edgewater, and Odenton were among the transit needs identified. The plan also discussed the need for new and improved express bus service along regional commuter corridors, namely I-595 (the section of US-50 from the Capital Beltway to MD-70 in Annapolis) and I-97. These services would travel to Baltimore and

Washington and provide transfers to rail transit services in the region, including the Baltimore Light Rail Line at Glen Burnie, the Maryland Area Regional Commuter (MARC) train at Odenton, and the MARC and Washington Metro services at New Carrollton.

The plan also highlighted the need for an intermodal transfer center to serve as an access point for Annapolis and Parole. Ideally, travelers to the area would park at the facility and ride shuttles or local bus service to their final destinations. Proposed to be located in the vicinity of West Street and Holly Avenue, the intermodal transfer center would also need to accommodate tour buses and express buses. The plan also identified several parking needs related to providing transit services: more park and ride spaces in northern Parole, near Westfield Mall; expansion of the Harry S. Truman Park and Ride Lot; new lots in conjunction with new development; and consolidating parking in a core area to promote higher density mixed use development that supports transit use and other TDM strategies.

DEMOGRAPHIC ANALYSIS

In order to provide transit service that effectively meets the needs and demands of users, it is first necessary to understand the demographic makeup of the service area. The initial step in this process was to define the service area in terms of geographical situation and jurisdictional demarcation. The remainder of this section examines specific population characteristics to understand potential transit needs and demands within the service area.

Service Area Description and Methodology

The City of Annapolis is located at the confluence of the Severn River and the Chesapeake Bay in Central Maryland. Approximately 30 miles east of Washington, D.C. and 30 miles south of Baltimore, Annapolis is part of the Washington-Baltimore-Northern Virginia, DC-MD-VA-WV Combined Statistical Area (CSA), as defined by the U.S. Office of Management and Budget (OMB). As the county seat of Anne Arundel County, the City exhibits significant social and economic integration with the Baltimore area, illustrated in its inclusion by OMB in the Baltimore-Towson, MD Metropolitan Statistical Area (MSA) rather than the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA, each of which are subsets of the larger CSA.

Annapolis spans roughly six square miles in land area.⁷ However, many of Annapolis' suburban areas spread beyond the municipal boundaries into unincorporated Anne Arundel County, and as such, the extent of the service area is

⁷ U.S. Census Bureau, State and County QuickFacts.

somewhat open to interpretation. Adding to this is the issue of block groups – geographic zones of data collection, developed by the U.S. Census Bureau, that typically align with county boundaries but rarely follow city boundaries. In this analysis, demographic data were collected at the block group level, and, as in most cases, the borders of these block groups did not fit with the City’s borders.

Shown in Figure 2-1, 22 block groups have their geographic center inside the City boundary, meaning that portions of them may or may not reach outside that boundary. Using that scale, however, excludes large portions of the City itself, as well as significant suburban areas.⁸ To avoid working at an under-inclusive level, the service area in this analysis was defined as the 33 block groups that are at least partially contained within the Annapolis City limits, or are immediately adjacent to them, shown in Figure 2-2.⁹ This scope creates a service area that is more representative of the City and its immediate surroundings.

In an effort to account for changes in the Annapolis area since 2000, the citywide percent change in population from the 2000 Census to the 2007 American Community Survey (ACS) was calculated and applied to the data for each block group, essentially bringing this relatively old data up to date. This process is certainly not an exact science. It operates on the assumption that the service area changes at roughly the same rate as the City alone, even though—as mentioned above—some of the service area lies outside the City limits. It also does not account for potential changes between 2007 and 2009. Unfortunately, however, population estimates are not available at the block group level any more recently than 2000. More recent data are only available for cities and counties of 20,000 persons or more, as part of the ACS program.

As of November 2009, the most recent and reliable population data come from the 2005-2007 ACS 3-Year Estimates.¹⁰ Because Anne Arundel County is much larger than the City of Annapolis, using the countywide growth rate to update block group data is inappropriate in this instance. As such, the decision was made to update block group data using the citywide growth rate for the period 2000 to 2007. This was done for the sake of accuracy, but the net effect is rather minimal: the City saw a slight population decrease during this period, yielding a change of -1.2%. Thus, the updated data does not differ radically from the 2000 data overall, and the demographic attributes of any given block group relative to any other remain essentially the same.

⁸ Figure 2-1 illustrates the differences between this collection of block groups based on geographic centers and the City of Annapolis boundary.

⁹Figure 2-2 also includes the City of Annapolis boundary to illustrate the different geographic coverage of the service area considered in this study compared to the City boundary.

¹⁰For more information on 2005-2007 ACS 3-Year Estimates, see http://factfinder.census.gov/jsp/saff/SAFFInfo.jsp?_content=acs_guidance.html.

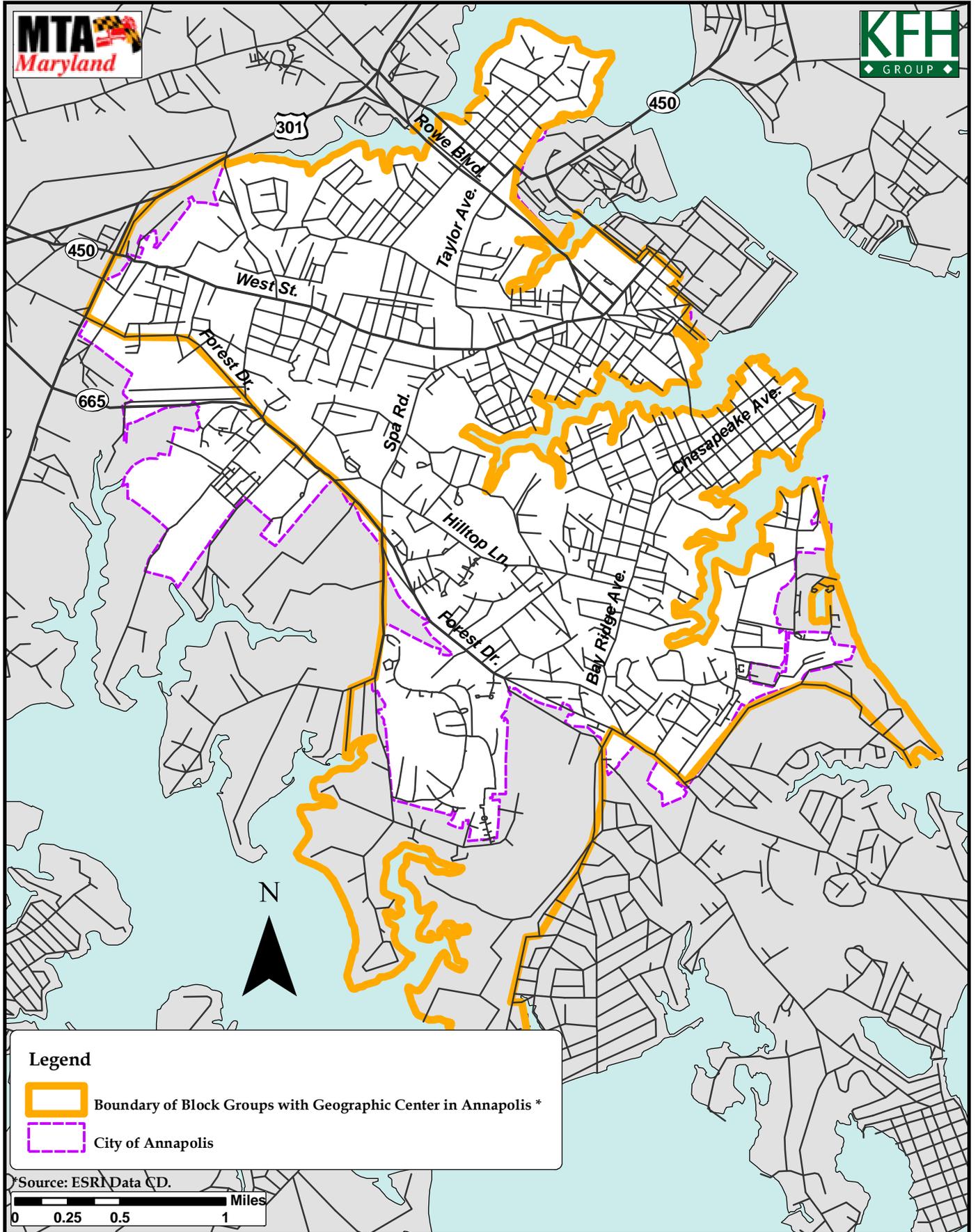
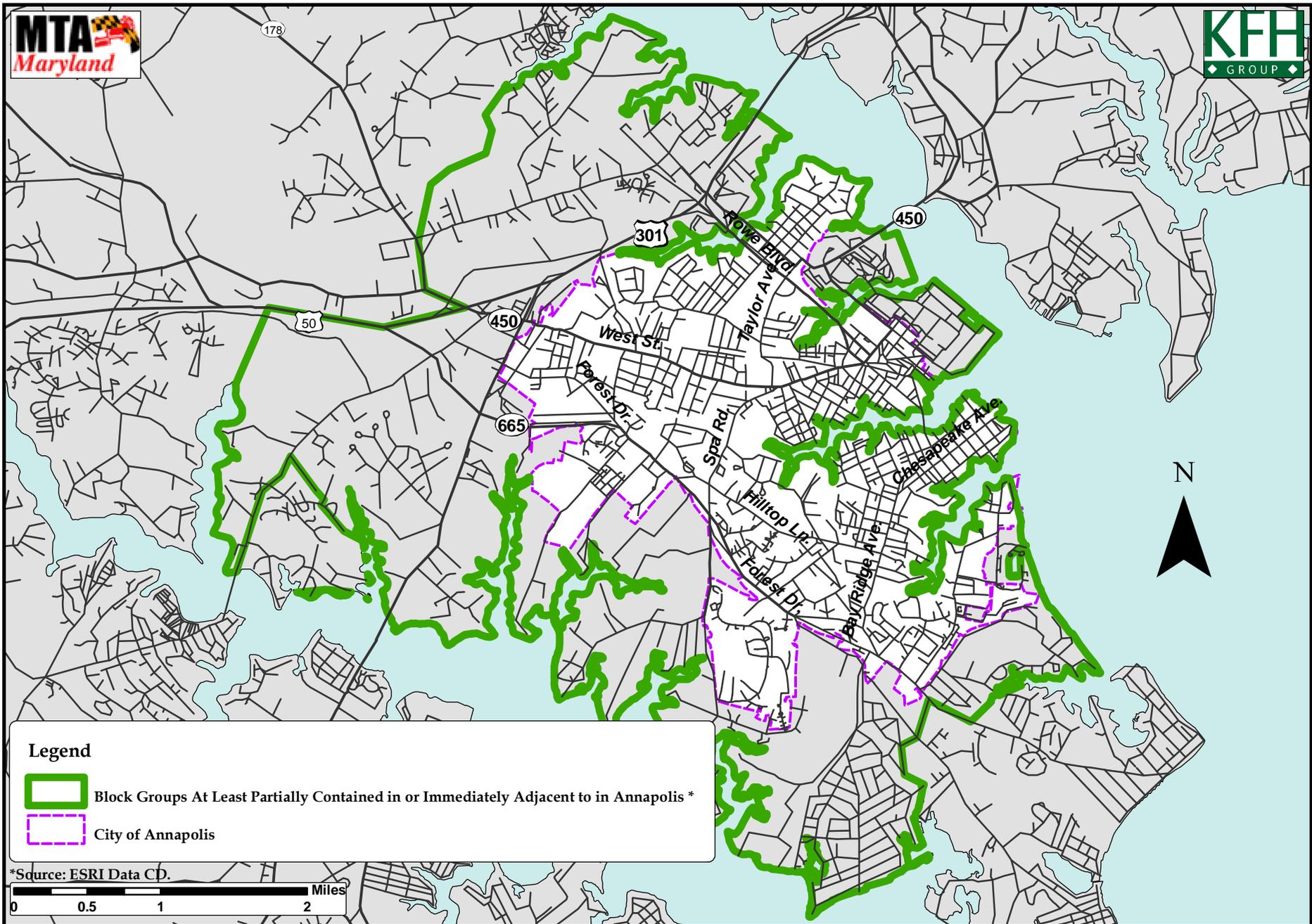


Figure 2-1: Boundary of Block Groups with Geographic Center in Annapolis



2-16

Figure 2-2: Boundary of Block Groups At Least Partially Contained in or Immediately Adjacent to Annapolis

Population Density

Population density serves as a general indicator of the types of transit services that may be most feasible for a particular area. While there are exceptions to every rule, an area with a density of about 2,000 persons per square mile or greater is commonly considered to be able to support frequent, daily, fixed-route bus service.

Of the 33 block groups in the Annapolis service area, 27 exhibit the required level of population density to support fixed-route service. Because of this high level of density overall, a higher category was created to reflect those block groups exhibiting the very highest levels of density—5,000 persons per square mile or more—in an effort to identify areas where fixed-route transit could be supported to an even greater degree. Figure 2-3 and the data itself help highlight some important conclusions:

- High-range block groups, with densities of 5,000 persons per square mile or above, predominate in the central and east-central portions of the service area; this includes downtown Annapolis, the Eastport neighborhood, and a large area roughly bounded on the south by Forest Drive and by Edgewood Road on the east. Block groups in this category number 12 out of 33 total, or roughly 36.7%.
- Mid-range block groups, with densities between 2,000 and 5,000 persons per square mile, are dispersed fairly evenly but can be seen to cluster in the north, northwest, and south-central sections of the service area. Block groups in this category make up another 15 of the 33 total block groups, or again, about 45%.
- The six block groups with population densities below 2,000 persons per square mile are found at the far western and far southern edges of the service area. However, these block groups still exhibit densities greater than 1,000 persons per square mile. Areas with this density are often too sparse to efficiently support fixed-route service but may be better served by demand-response service.

Potentially Transit-Dependent Populations

Transportation needs are defined in part by identifying the relative size and location of those segments of the population most likely to rely upon some form of public transportation. Once these populations are identified, it is possible to evaluate the extent to which current transit services are meeting their needs. To identify the areas of the highest potential transit need, block group level data in five population categories was downloaded and analyzed. The five populations tend to have a greater

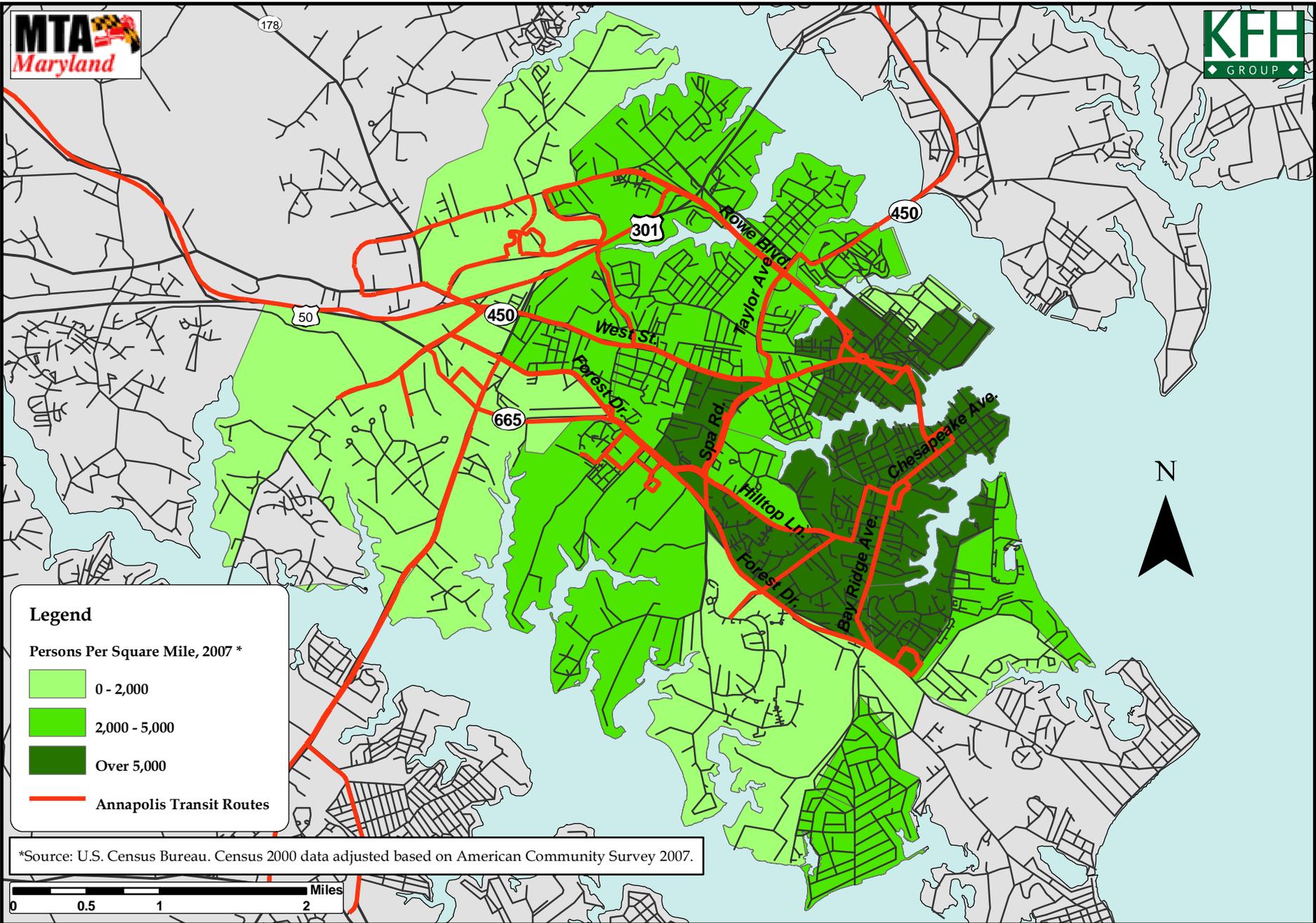


Figure 2-3: Population Density by Block Group, 2007

dependence upon public transit services than the average segment of the population; they include:

- Youth: persons between the ages of 12 and 17.
- Elderly: persons age 60 and above.
- Mobility-Limited: persons over the age of 16 who have a mobility or “go-outside-the-home” limitation.
- Lower Income: persons whose income is below the federal poverty level.
- Autoless: households without access to an automobile.

Typically, for larger service areas with dozens or hundreds of block groups (counties and metropolitan regions), data in these five categories are aggregated, and block groups are then ranked based on the relative number, percentage, and density of each type of transit-dependent population. Because of Annapolis’ relatively compact size and small number of block groups, a range of numeric thresholds were used instead to effectively illustrate relative levels of need in each of the above-mentioned categories.

Youth

Young people who are out of childhood but still in their pre-teenage and teenage years typically make up a large segment of the potentially transit-dependent population, especially in urban areas. They are at an age where they have begun to make their own choices and spend time independent of their families and home life, but they either are too young to drive by themselves or simply do not have access to a vehicle. Figure 2-4 shows relative potential transit need based on the number of youths age 12 to 17 in the Annapolis service area. The four block groups with the highest number (150 or more) are found in the south, south-central, and far northwestern neighborhoods, while the 29 block groups with low-end and middle-range numbers are distributed fairly evenly throughout the rest of the service area.

Elderly

Older adults make up another large segment of the potentially transit-dependent population. After age 60, a person’s auto-dependent mobility typically decreases as driving duration and distance are reduced. Adults in their 70s and 80s usually cease driving altogether at some point. As seen in Figure 2-5, block groups with the highest numbers of older adults (300 and above) are located in the northern, far western, southwest, east-central, and far eastern areas of Annapolis; this category makes up nine

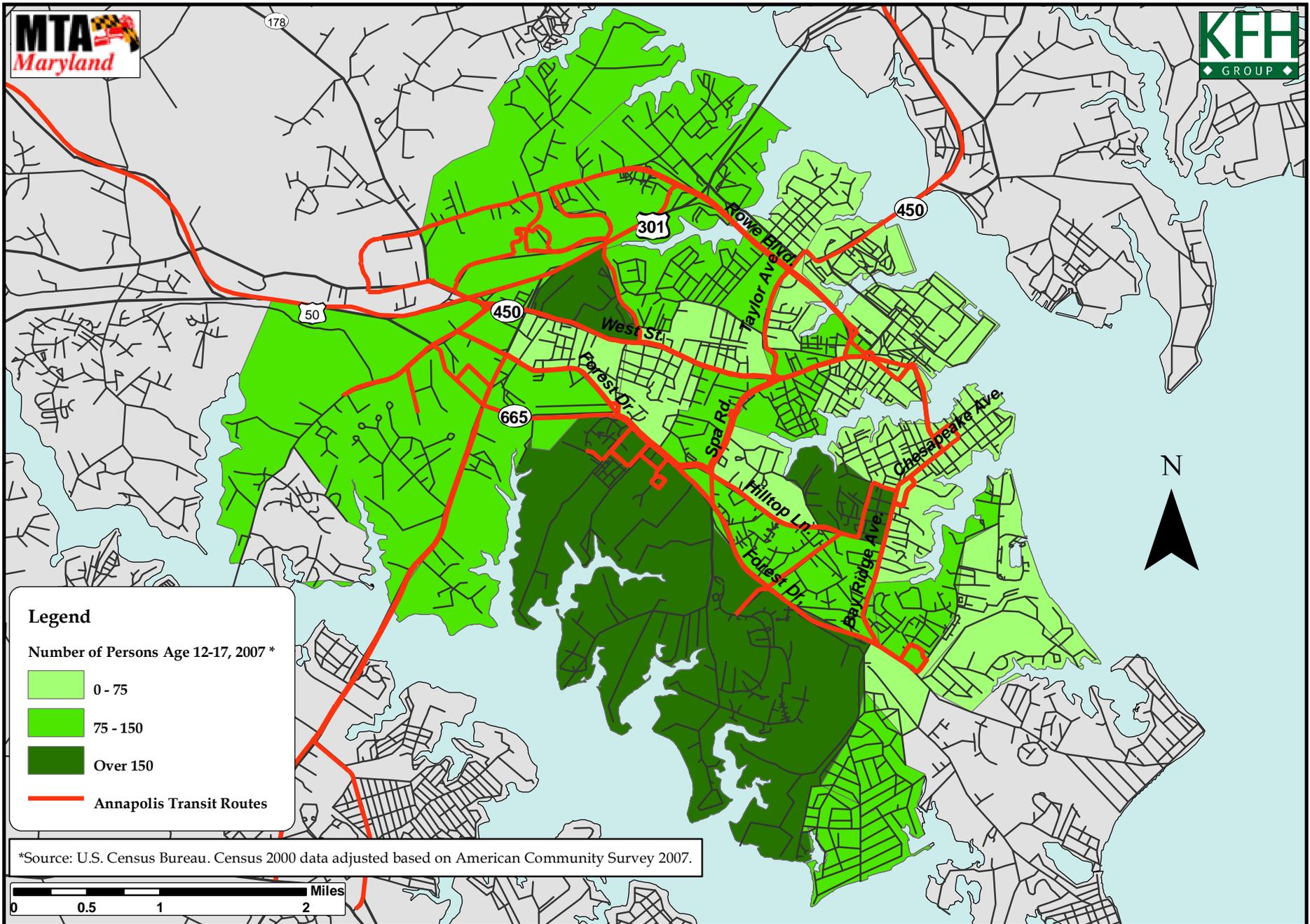


Figure 2-4: Youth Population by Block Group, 2007

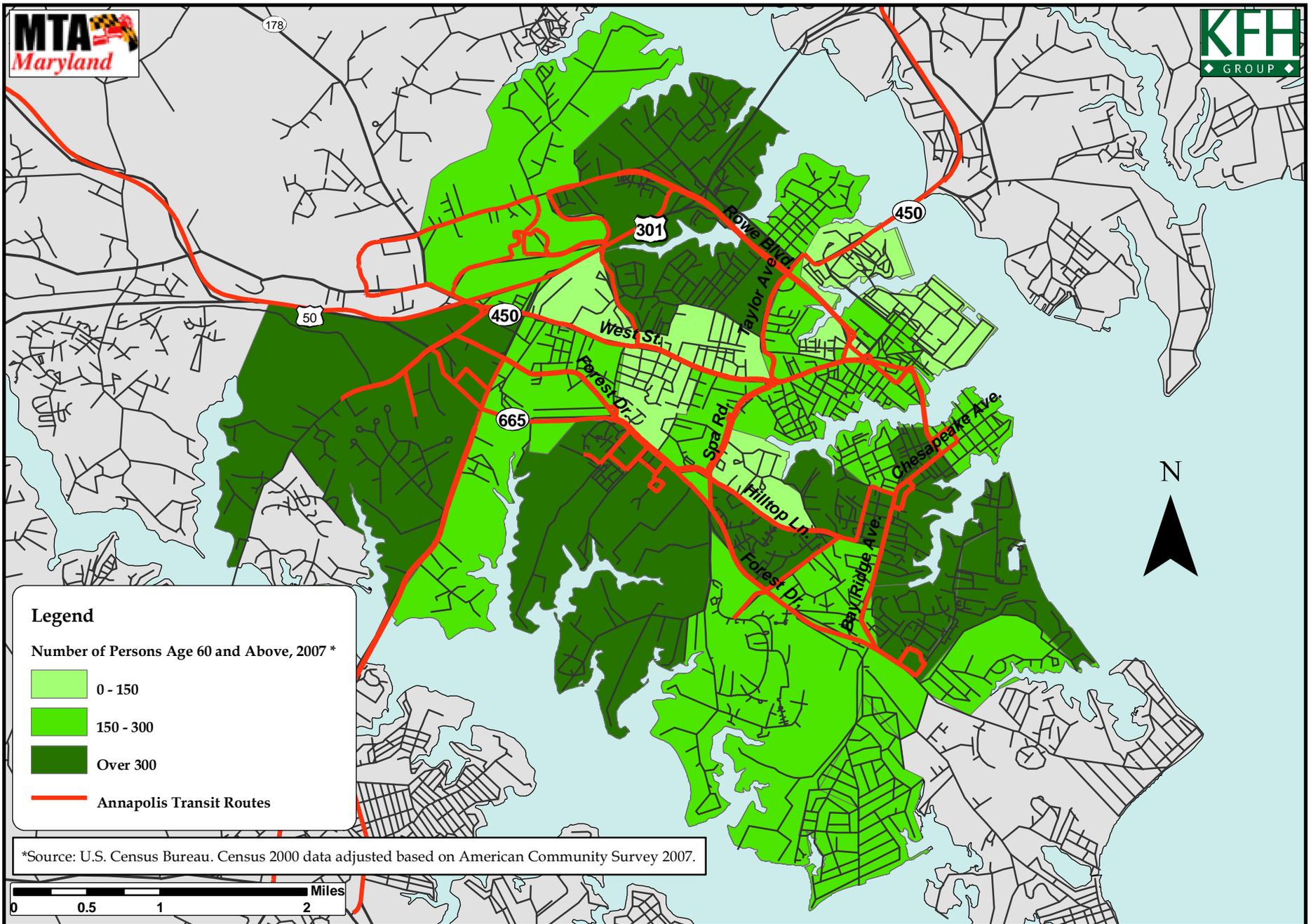


Figure 2-5: Elderly Population by Block Group, 2007

of 33 total block groups. Downtown and Eastport exhibit, for the most part, mid-range numbers of elderly persons, as do the far southern and southeastern sections of the service area. Block groups with low numbers of older persons can be seen to cluster somewhat to the north and south of West Street, between Solomons Island Road and Taylor Avenue.

Mobility-Limited

Young adults and adults with go-outside-the-home disabilities often must rely on transit because they are independent but cannot operate a vehicle themselves. In the Annapolis service area, as shown in Figure 2-6, high numbers of the mobility-limited population (100 and above per block group) are concentrated in ten block groups north of West Street and Cedar Park Road and west of Taylor Avenue; in the east-central region bounded by Bay Ridge Avenue, Forest Drive, Tyler Avenue/Primrose Road, and Madison Street; and, prominently, along the southern and western edges of the service area, south of Forest Drive. Block groups featuring mid-level numbers of mobility-limited populations predominate in the south-central and southeastern areas of Annapolis.

Lower Income

Persons living below the poverty line often represent a substantial component of the transit-dependent population. For people in this situation, the costs of owning, driving and maintaining a car are typically much higher than what they can afford, leaving them to rely on public transit service to reach many necessary destinations. In this analysis, Figure 2-7 illustrates that block groups with the highest numbers of persons living below the poverty level (300 and above) do not cluster in any one area but are spread across Annapolis in five distinct pockets.

Autoless Households

Households without access to at least one personal vehicle – whether by personal choice or a lack thereof – are much more likely to be reliant upon public transit than those with access to an automobile. Locating areas with large numbers of autoless households represents one of the more significant functions of this analysis. Shown in Figure 2-8, in many ways, the pattern of block groups with high numbers of autoless households (100 or more) mirrors that of persons living below the poverty level, except that it also includes much of Downtown, the southern portion of Eastport, a central corridor north of Hilltop Lane, most of the area on both sides of Back Creek, and the far eastern edge of the service area. These block groups make up ten, or 30%, of the total number of block groups. Nine block groups containing between 50 and 100 autoless households predominate in the south-central and north-central neighborhoods as well as the northern portion of Eastport.

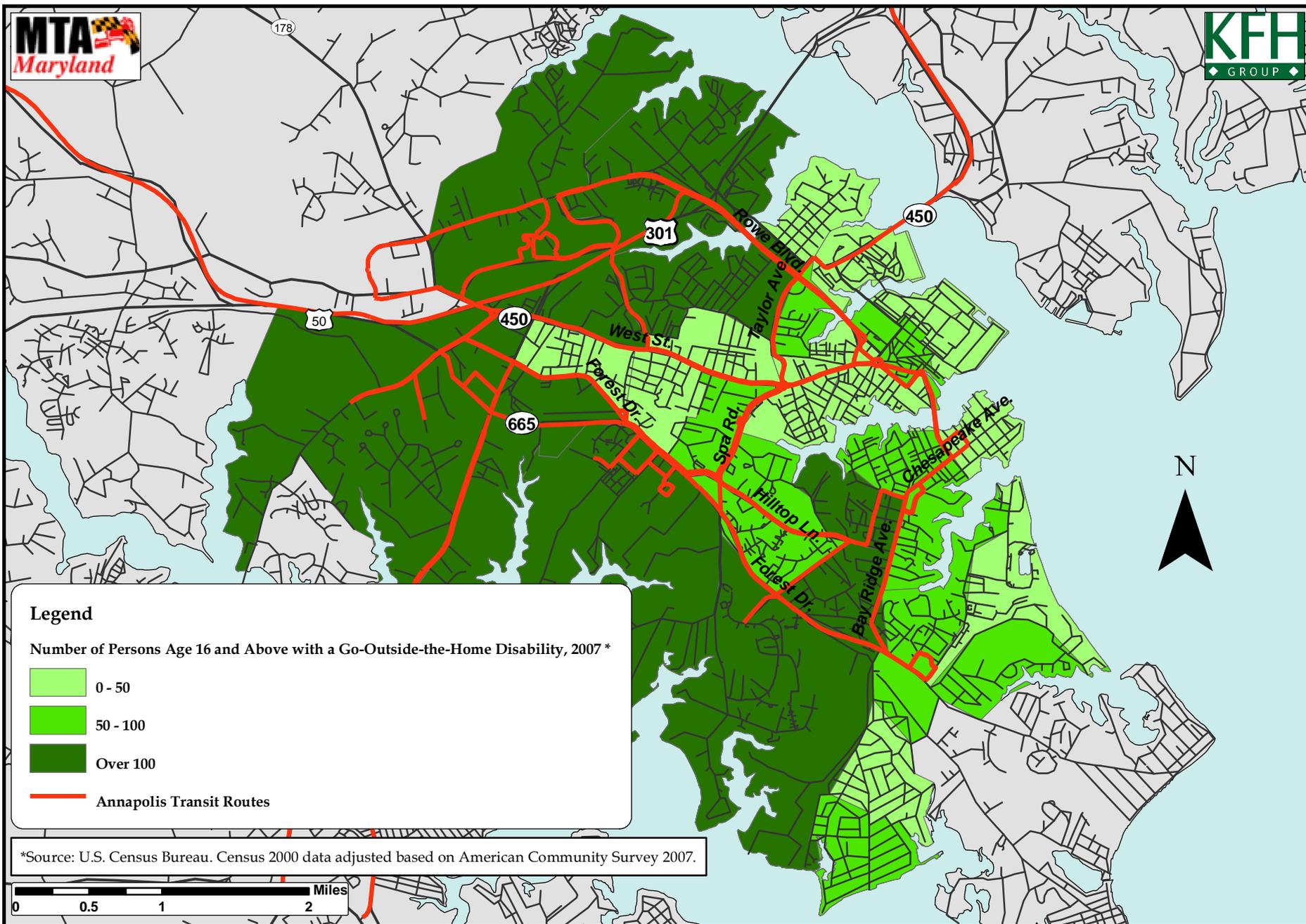


Figure 2-6: Mobility-Limited Population by Block Group, 2007

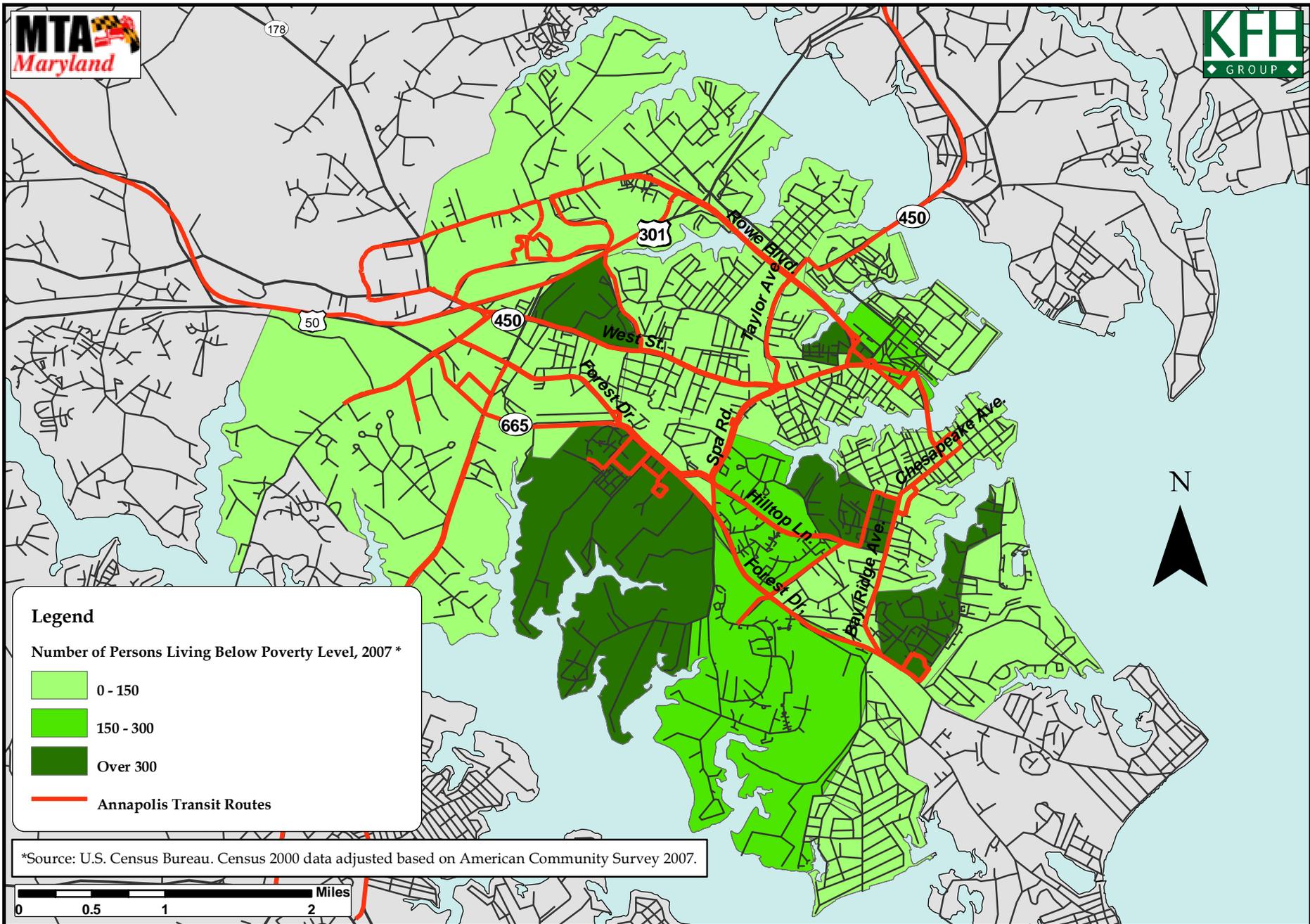


Figure 2-7: Population Living in Poverty by Block Group, 2007

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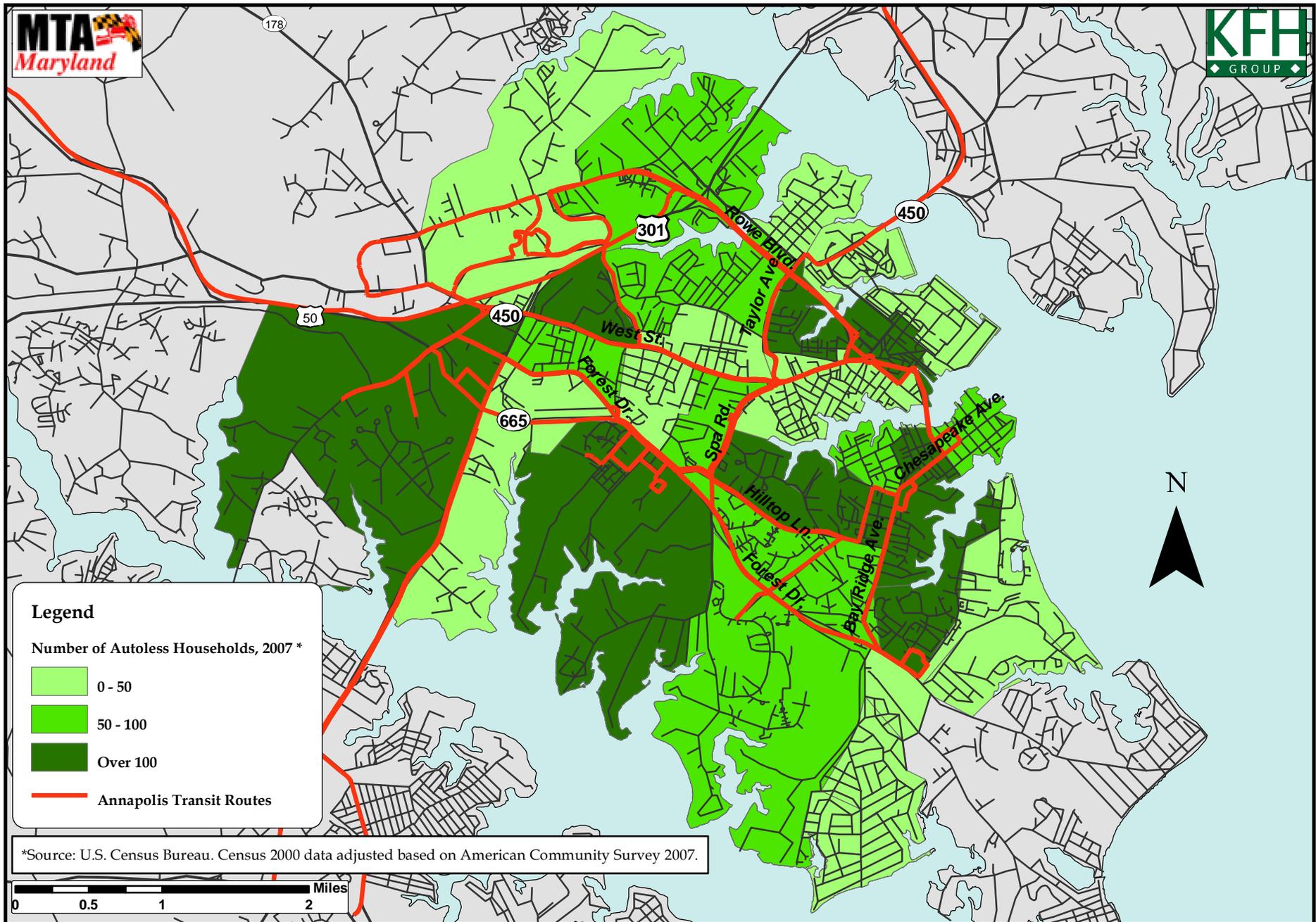


Figure 2-8: Autoless Households by Block Group, 2007

Future Considerations

The numeric ranking of transit need described above is a valuable form of analysis but should not be seen as all-encompassing. One reason is that the geographic extent of block groups is not considered - only the absolute number of persons displaying a certain characteristic associated with transit dependence. For example, a block group with a large geographic area may possess a sizeable number of autoless households, but those households may be spread out sparsely, a pattern which is not conducive to fixed-route transit. As with any form of analysis, numeric analysis must be “taken with a grain of salt.” On the other hand, numeric analysis can yield important information. A block group with a large geographic extent may contain a high number of people with transit needs, which may not represent a large percentage of the total block group population or the total city population. Nonetheless, it still may be numerically large enough to warrant some type of transit service.

LAND USE PROFILE, ANALYSIS, AND EVALUATION

In addition to establishing where the populations who are likely to require transit assistance reside within the City of Annapolis, it is also significant to determine the destinations where these populations need to travel.

Assessment of Major Trip Generators

The next major aspect to the overall transit needs analysis is identifying the locations of major trip generators throughout Annapolis. Major trip generators include those origins and destinations that people need to access on a daily basis, whether going to work or school, seeking medical care or social services, shopping, or pursuing other recreational activities. It is important to identify such frequented places so that residents have access to the services and opportunities they seek, and employees and visitors have transportation options available to meet their needs. Thorough identification of major trip generators is particularly important to serve those persons who are reliant upon public transit services, as well as making transit as convenient as possible to attract “choice riders.”

This component of the transit needs analysis identified housing origins as well as destinations such as educational institutions, human service agencies, major employers, medical facilities, and shopping centers. There are also two park and ride lots located in the Annapolis area, where people sharing rides can meet or transit riders can park and use local or commuter services. Figure 2-9 portrays all these trip generators in relation to existing Annapolis Transit services. The main purpose of this map was to demonstrate that the majority of origins and destinations are currently served by

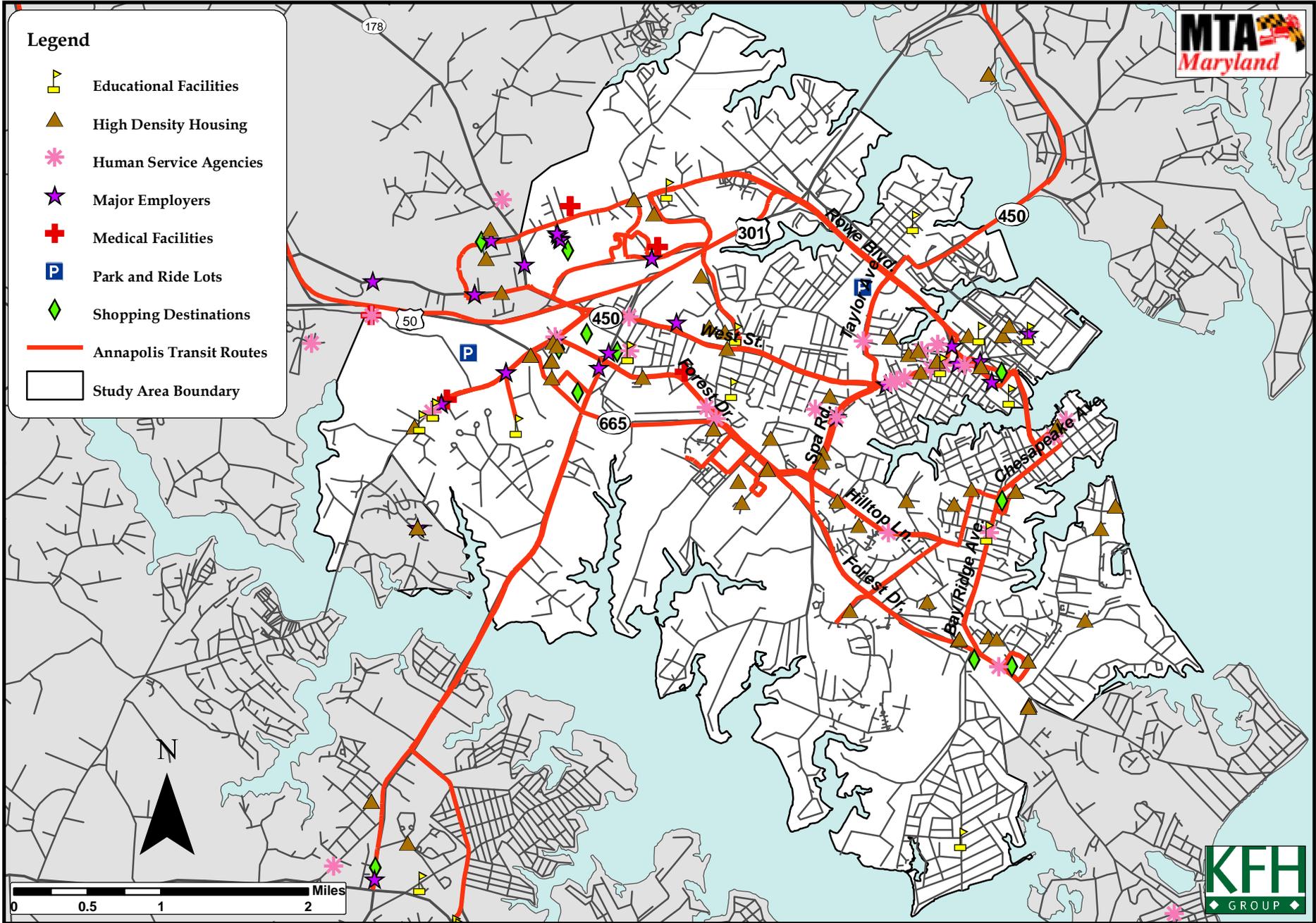


Figure 2-9: Major Trip Generators

Annapolis Transit. The development of new transit alternatives in this TDP process aims to continue and improve service to these important locations.

Each type of trip generator and its distribution within the study area is described further below. Major origins and destinations just outside the City boundary within Annapolis Neck, were also included since these places contribute to local transportation needs. Regional trip generators and the resulting commuting patterns into and out of Annapolis will be evaluated and discussed.

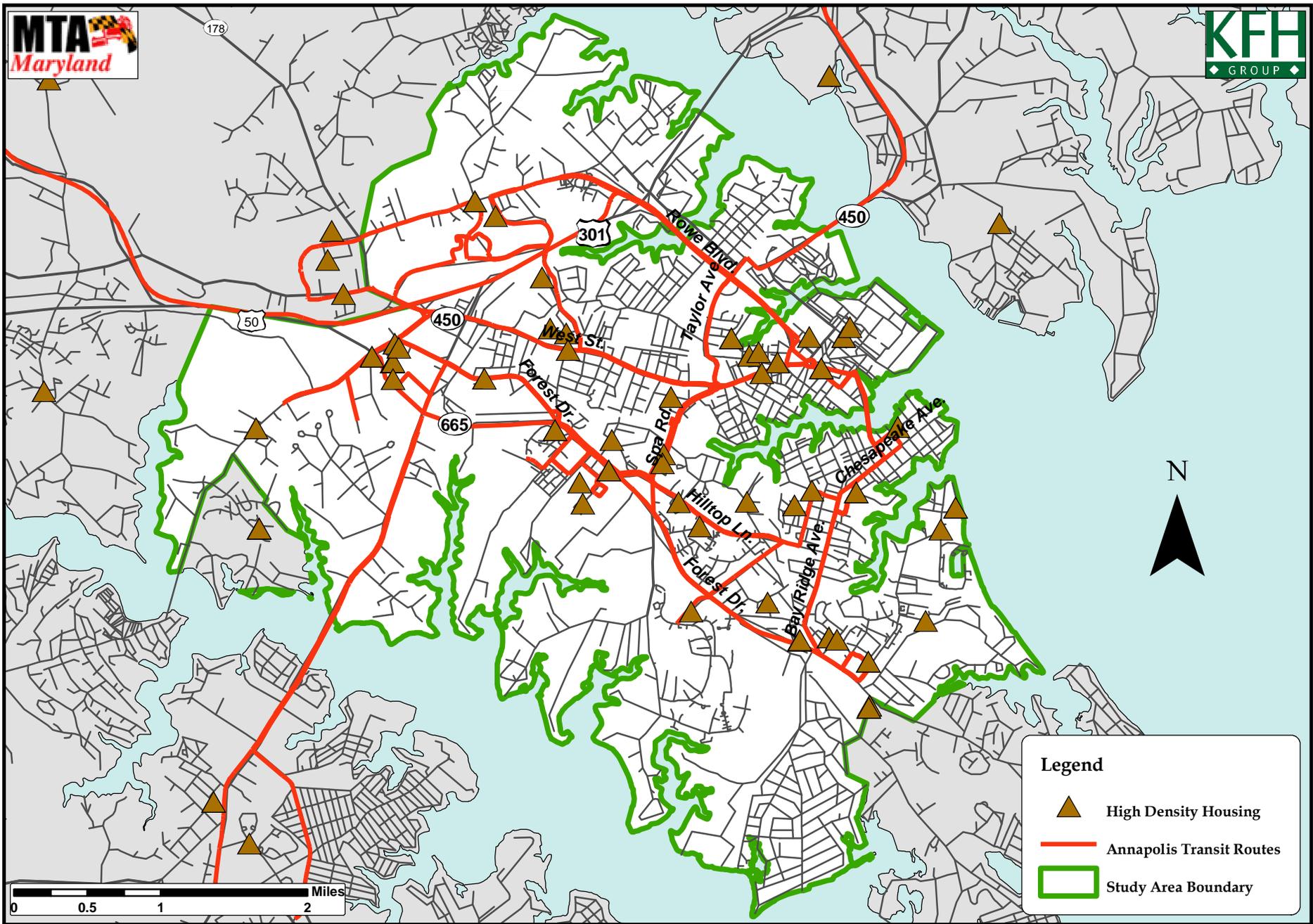
High Density Housing

In addition to the process of mapping population density, the identification and analysis of high density housing locations provided another effective tool to understand where larger pockets of the population reside. For the purposes of this study, high density housing included multi-unit complexes such as apartments, condominiums, senior housing, and subsidized housing. Most of the senior housing complexes have age and income eligibility requirements; a number of these complexes are also open to persons with disabilities. Subsidized housing is available to low-income individuals and families under the Section 8 Program of the Housing and Community Development Act of 1974.

High density housing is often served by transit routes due to the high number of potential transit riders that may be served relatively easily at one stop. Residents of senior and subsidized housing facilities also tend to have high relative transit needs. Residents who choose to live in high density housing complexes near transit services may also prefer using transit, so it is important to provide this option to driving alone. Figure 2-10 displays the location of more than 60 high density housing sites within the Annapolis service area, while the accompanying Table 2-2 includes the specific address for each origin.

Educational Institutions

Given that a sizeable share of transit use can be attributed to the patronage of the youth population, it is important to detail the location of educational institutions, or schools. Transit is also an important option for people who cannot drive or do not have a personal vehicle available to access educational opportunities. Several types of educational institutions were included in this analysis: both public and private middle schools and high schools, special education schools, alternative schools, colleges, vocational schools, and workforce development centers. The locations of these educational facilities are displayed in Figure 2-11, while the list of physical addresses and type of program offered by each institution is noted in Table 2-3.



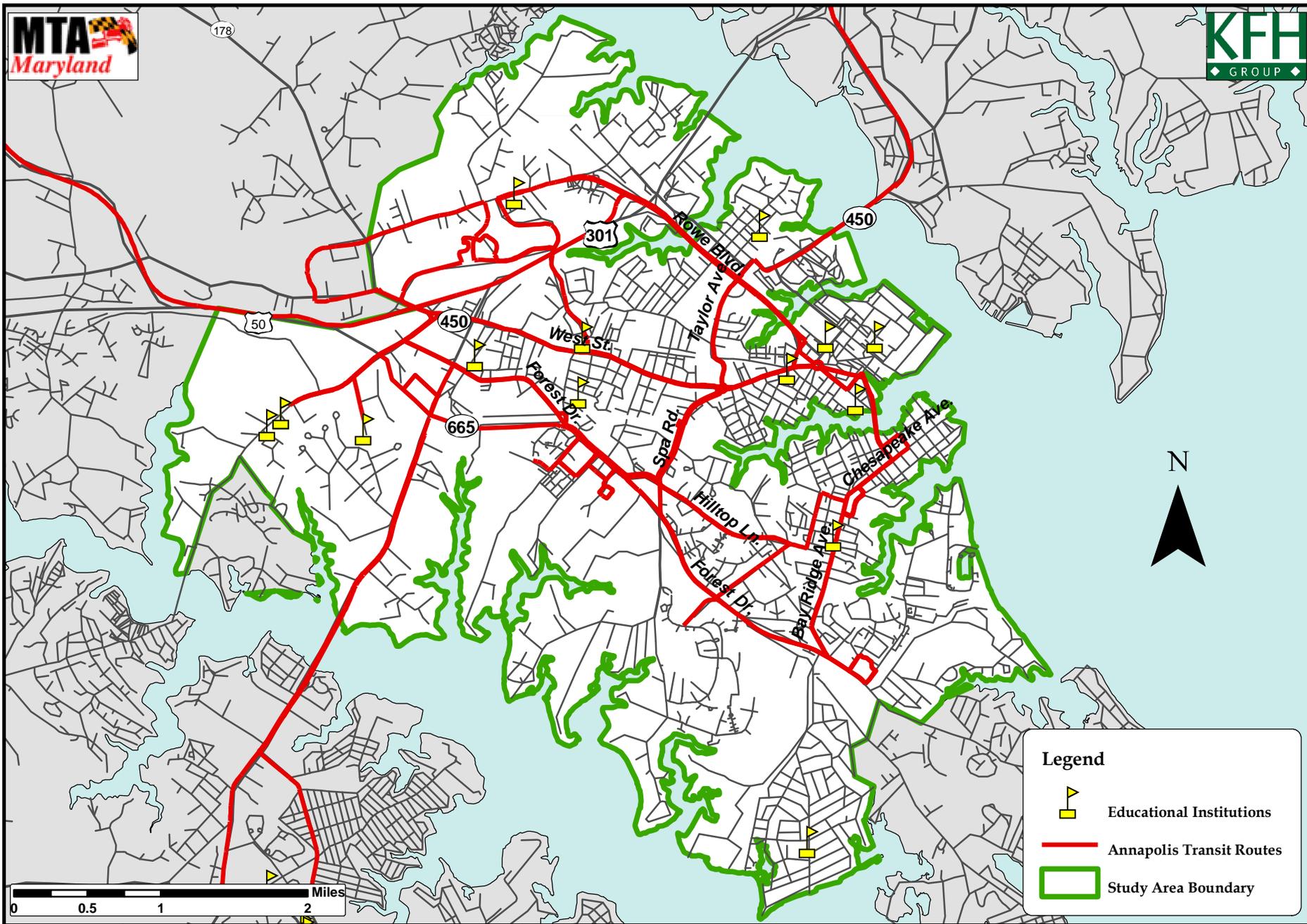
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Figure 2-10: High Density Housing

Table 2-2: High Density Housing

Type	Name	Address	Zip Code	Number of Units	Rental Guidelines
Multi-unit Housing	1901 West	1901 West St	21403		
Multi-unit Housing	Admiral Farragut Apartments	230 Hilltop Ln	21403		
Multi-unit Housing	Admiral Oaks Apartments	445 Captains Cir	21401		
Multi-unit Housing	Allen Apartments	205 Center St	21401		
Multi-unit Housing	Annapolis Roads	1 Eaglewood Rd	21403		
Multi-unit Housing	Archstone Annapolis Bay	721 S Cherry Grove Avenue	21401		
Multi-unit Housing	Bayshore Landing Apartments	988 Spa Rd	21403		
Multi-unit Housing	Conte Lubrano Apartments	130 Lubrono Dr	21401		
Multi-unit Housing	Cooper Apartments	2 Maryland Ave	21401		
Multi-unit Housing	Fairwinds of Annapolis	212 Victor Pkwy	21403		
Multi-unit Housing	Forest Hills Apartments	4 Bricin St	21403		
Multi-unit Housing	GrandView at Annapolis Towne Centre at P	2505 Riva Rd	21401		
Multi-unit Housing	Harbour Gates Apartments	2001 Harbour Gates Dr	21401		
Multi-unit Housing	Mariner Bay at Annapolis Towne Centre	1910 Towne Centre Boulevard	21401		
Multi-unit Housing	North Green of Annapolis	302 Hilltop Ln	21403	84	Condos
Multi-unit Housing	Regatta Bay Apartments	70 Regatta Bay Ct	21401		
Multi-unit Housing	Reserve at Quiet Waters	1293 Thom Ct	21403		Discount for seniors
Multi-unit Housing	Spa Cove Apartments	910 Primrose Rd	21403		
Multi-unit Housing	Stone Point Apartments	116 Stone Point Dr	21401		
Multi-unit Housing	Tecumseh Condominium Apartments	312 Severn Ave	21403		
Multi-unit Housing	Thornbury Bay at Annapolis	721 S Cherry Grove Ave	21401		
Multi-unit Housing	Wardour Bluffs Apartments	2B S Monroe Rd	21402		
Multi-unit Housing	West Wood Apartments	110 Hearne Ct	21401		
Multi-unit Housing	Westwinds Apartments	1029 Spa Rd	21403		
Senior Housing	Annapolis Life Care Inc	4000 River Crescent Dr	21401		
Senior Housing	Bay Forest Senior Apartments	930 Bay Forest Ct	21403	120	Low-income (elderly)
Senior Housing	Bay Woods of Annapolis	7101 Bay Front Dr	21403		Continuing care retirement community
Senior Housing	Chase Home	22 Maryland Ave	21401		
Senior Housing	Claiborne Place Apartments	130 Hearne Rd	21401		Low-income (elderly, disabled)
Senior Housing	Deerfield Senior Day Center Of Annapolis	2525 Riva Rd	21401		
Senior Housing	Ewing Health Systems Inc	234 Main St	21401		
Senior Housing	Forest Village Apartments	1293 Thom Ct	21403		
Senior Housing	Gardens of Annapolis	931 Edgewood Rd	21403		Elderly
Senior Housing	Ginger Cove	4000 River Crescent Dr	21401		Continuing care retirement community
Senior Housing	Glenwood Senior Citizen High-Rise	701 Glenwood St	21401	154	Low-income (elderly, disabled)
Senior Housing	Heritage Harbor	Compass Way & South Haven Rd	21401		Retirement community
Senior Housing	Ivy Court At Bay Ridge	3023 Arundel On The Bay Rd	21403		
Senior Housing	Manresa On The Severn	85 Manresa Dr	21401		
Senior Housing	Somerford Place	2717 Riva Rd	21401		
Senior Housing	Sunrise of Annapolis	800 Bestgate Rd	21401		
Senior Housing	The Annapolitan	84 N Old Mill Bottom Rd	21401		
Senior Housing	The Residence at Wiley H. Bates	1103 Smithville St	21401		Low-income (elderly, disabled)
Senior Housing	Timothy House	29 W Washington St	21401		Low-income (elderly, disabled)
Senior Housing	Watergate Village	655 Americana Dr	21403		Fair market, high senior population
Subsidized Housing	Annapolis Gardens	Bowman Dr & Croll Dr	21401		
Subsidized Housing	Bay Ridge Gardens	2 Bens Dr	21403		Low-income (families)
Subsidized Housing	Bloomsbury Square	Bloomsbury Square & Saint Johns St	21401	51	Low-income (families, seniors, disabled)
Subsidized Housing	Bowman Court	Bowman Court & Bowman Dr	21401	50	Low-income (families, seniors, disabled)
Subsidized Housing	Bywater Mutual Homes	911 Royal St	21401		Low-income (families)
Subsidized Housing	College Creek Terrace	College Creek Terrace & Obery St	21401		
Subsidized Housing	College Parkway Place	570 Bellerive Dr	21401		Low-income (families)
Subsidized Housing	Eastport Terrace	Frederick Douglass St & Medgar Evers St	21403	85	
Subsidized Housing	Harbour House	Madison St & President St	21403	273	
Subsidized Housing	Langton Green Apartments	3016 Arundel on the Bay Rd	21403		Low-income (disabled)
Subsidized Housing	Newtowne 20	Newtowne Dr & Betsy Ct	21401	78	
Subsidized Housing	Obery Court	Obery Ct & Bates St	21401	56	
Subsidized Housing	Robinwood	1469 Tyler Ave	21403	150	
Subsidized Housing	Woodside Gardens	702 Newtowne Dr	21401		Low-income (families)

Notes: Number of units given where data was available. Elderly adults refer to persons age 62 or older. Continuing care retirement communities range from private, independent housing to assisted living and nursing home care.



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Figure 2-11: Educational Institutions

Table 2-3: Educational Facilities

Type	Name	Address	City	Zip Code
College	Sojourner Douglass College-Annapolis	49 Old Solomons Island	Annapolis	21401
College	St John's College	60 College Ave	Annapolis	21401
College	U.S. Naval Academy	121 Blake Rd	Annapolis	21401
College	University of Maryland University College (Annapolis)	190 Admiral Cochrane Dr	Annapolis	21401
High School-Private	Annapolis Area Christian School	716 Bestgate Rd	Annapolis	21401
High School-Private	Key School	534 Hillsmere Dr	Annapolis	21403
High School-Private	Rapture Learning Institute for Excellence	1834 George Ave	Annapolis	21401
High School-Private	Saint Mary's High School	113 Duke of Gloucester St	Annapolis	21401
High School-Private	The Learning Community	110 Shiley St	Annapolis	21401
High School-Private	Van Buren Street Baptist School	911 Van Buren St	Annapolis	21403
High School-Public	Annapolis High School	2700 Riva Rd	Annapolis	21401
High School-Public	Broadneck High School	1265 Green Holly Dr	Annapolis	21409
Workforce Development	Annapolis and Anne Arundel County Chamber of Commerce	49 Old Solomons Island Rd	Annapolis	21401
Workforce Development	Anne Arundel County Minority Business Enterprise Program	2660 Riva Rd	Annapolis	21401
Workforce Development	Anne Arundel Economic Development Corporation	2660 Riva Rd	Annapolis	21401
Workforce Development	Anne Arundel Tech Council	2660 Riva Rd	Annapolis	21401
Workforce Development	Community Resource Center	80 West St	Annapolis	21401
Workforce Development	Service Corps of Retired Executives (SCORE)	49 Old Solomons Island Rd	Annapolis	21401

Human Service Agencies and Senior Centers

Human service agencies provide assistance and aid to residents in fields such as aging, child support, mental health and rehabilitation, as well as other general social services. Public transportation is often the only means of transportation for people who need the assistance offered by human service agencies. About 30 human service agencies were identified within the City of Annapolis. For the purposes of this study, the Annapolis Senior Activity Center was also included as a human service agency due to its comparable size and services provided to older adults. Both human service agencies and senior centers are mapped in Figure 2-12, and the addresses listed in Table 2-4.

Major Employers

Major employers were identified through the City's Department of Economic Affairs and the Anne Arundel Economic Development Corporation. Mapped in Figure 2-13 and listed in Table 2-5, these major employers all have workforces of at least 200 employees.¹¹ A cluster of major employers is located in downtown Annapolis and several are located outside the City boundaries in the Parole area.

Medical Facilities

Medical facilities, mainly general hospitals and their immediate network of outpatient services, represent a significant destination for riders of public transportation. Being that public transportation services are largely intended for transit dependent populations, which include older adults and mobility limited persons, it is important that medical facilities are accessible through public transportation. The six medical facilities identified within Annapolis are shown in Figure 2-14 and listed in Table 2-6.

Table 2-6: Medical Facilities

Name	Address	City	Zip Code
Annapolis Health Center	3 Harry S Truman Pky	Annapolis	21401
Anne Arundel Medical Center	2001 Medical Pkwy	Annapolis	21401
Children's National Medical Center	888 Bestgate Rd	Annapolis	21401
Communicable Diseases Program	1 Harry S Truman Pky	Annapolis	21401
Parole Health Center	1950 Drew St	Annapolis	21401
Riva Road Surgical Center	2635 Riva Rd	Annapolis	21401

¹¹The workforce numbers included in Table 2-5 are approximately up to date as of the end of 2008, the most recent data that was available.

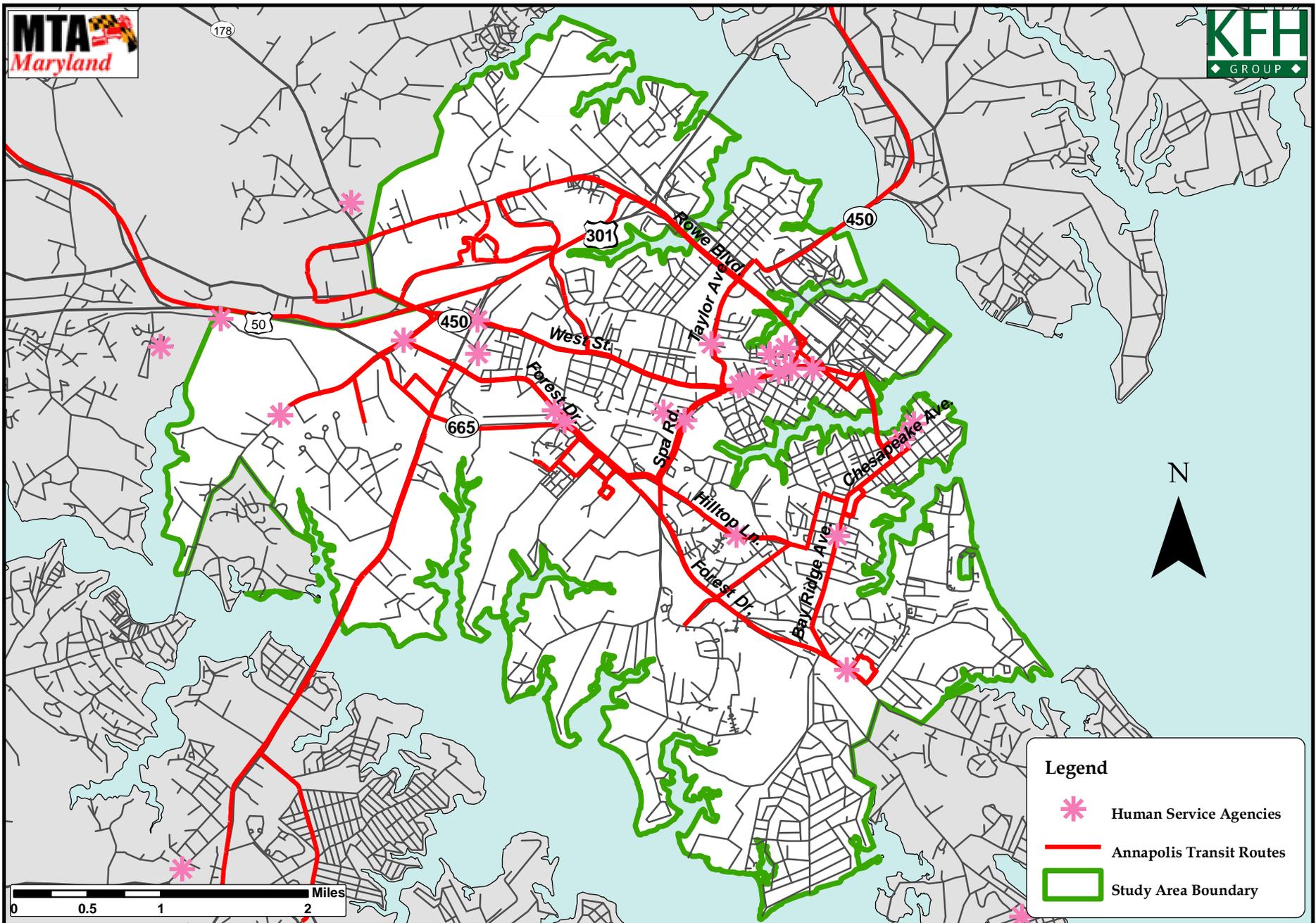


Figure 2-12: Human Service Agencies

Table 2-4: Human Service Agencies

Name	Address	City	Zip Code	State
Anne Arundel County Health Dept	Truman Pkwy	Annapolis	21401	MD
Family & Children's Services of Central Maryland: Annapolis Office	45 Old Solomons Island Rd	Annapolis	21401	MD
Abilities Network	132 Holiday Ct	Annapolis	21401	MD
Agency of Community Action	251 West St	Annapolis	21401	MD
Annapolis Area Ministries Inc	206 West St	Annapolis	21401	MD
Annapolis Nursing & Rehab Center	900 Van Buren St	Annapolis	21403	MD
Annapolis Youth Services Bureau	92 W Washington St	Annapolis	21401	MD
Anne Arundel Co Dept of Aging & Disabilities	2666 Riva Rd	Annapolis	21401	MD
Anne Arundel County Casa	94 Franklin St	Annapolis	21401	MD
ARC of Anne Arundel Co	931 Spa Rd	Annapolis	21401	MD
Arundel Child Care Connections	77 West St	Annapolis	21401	MD
Arundel Lodge Inc	2012 Renard Ct	Annapolis	21401	MD
Center of Help	1906 Forest Dr	Annapolis	21401	MD
Centro De Servicios	7 Willos St	Annapolis	21401	MD
Christian Workers of Annapolis	1340 Fishing Creek Rd	Annapolis	21403	MD
Eastern Point Shelter	772 Eastern Point Rd	Annapolis	21401	MD
Homes For America	222 Severn Ave	Annapolis	21403	MD
LMS Woman & Childrens Program	230 West St	Annapolis	21401	MD
Anne Arundel County Equal Opportunities Committee	251 West St	Annapolis	21401	MD
MD Rural Development	428 4th St	Annapolis	21403	MD
Obery Human Services Center	109 Clay St	Annapolis	21401	MD
Oficina De Asuntos Latinos	306 Taylor Ave	Annapolis	21401	MD
Promedicorp	114 West St	Annapolis	21401	MD
Restoration Community Development	914 Bay Ridge Rd	Annapolis	21403	MD
Salvation Army	351 Hilltop Ln	Annapolis	21403	MD
Tamar Inc	1831 Forest Dr	Annapolis	21401	MD
Volunteer Center for Anne Arundel County	2666 Riva Rd	Annapolis	21401	MD
We Care and Friends	92 W Washington St	Annapolis	21401	MD

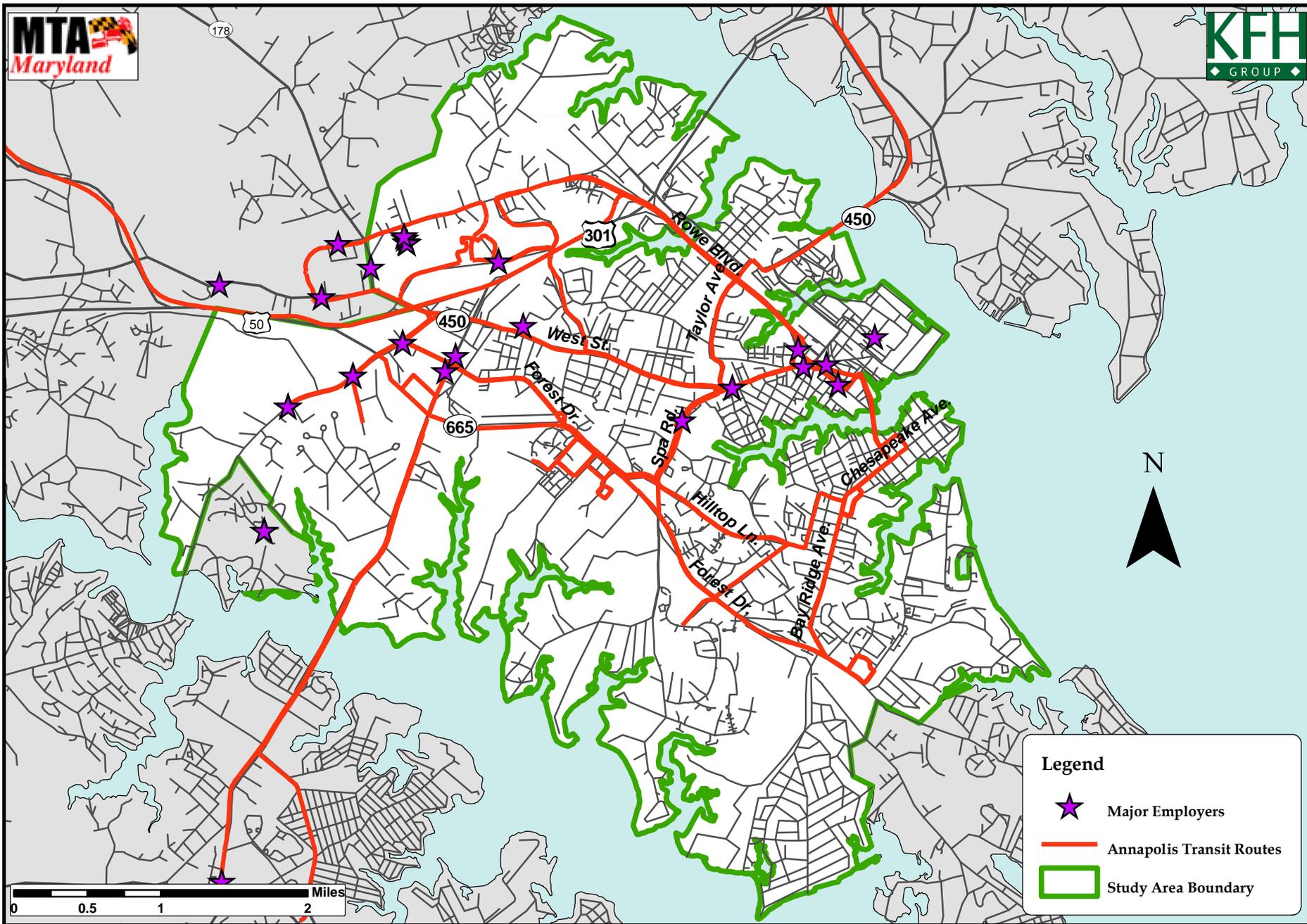


Figure 2-13: Major Employers

Table 2-5: Major Employers

Name	Address	City	Zip Code	Number of Employees
Anne Arundel County Government	44 Calvert St	Annapolis	21404	4,111
Anne Arundel County Public Schools	2644 Riva Rd	Annapolis	21401	10,500
Anne Arundel Health System, Inc.	2001 Medical Pkwy	Annapolis	21401	2,025
ARC of Anne Arundel County	931 Spa Rd	Annapolis	21401	250
ARINC	2551 Riva Rd	Annapolis	21401	1,300
Best Buy	2643 Housley Rd	Annapolis	21401	branch
Capital Gazette Communications, Inc.	2000 Capital Dr	Annapolis	21401	330
City of Annapolis Government	160 Duke of Gloucester St	Annapolis	21401	550
Ginger Cove	4000 River Crescent Dr	Annapolis	21401	250
Home Depot	145 Defense Hwy	Annapolis	21401	1129
Home Depot	55 Forest Plaza	Annapolis	21401	branch
JC Penney Company	1695 Annapolis Mall	Annapolis	21401	320 total
Macy's Department Store	1295 Annapolis Mall	Annapolis	21401	500 total
Nordstrom	1880 Annapolis Mall	Annapolis	21401	300
Sams Club	2100 Generals Hwy	Annapolis	21401	350 total
Sears Roebuck and Co. - District Office	1040 Annapolis Mall	Annapolis	21401	branch
Shoppers Food Warehouse	2371 Solomons Island Rd	Annapolis	21401	870 total
State of Maryland	100 State Cir	Annapolis	21404	9,524
TeleCommunication Systems, Inc.	275 West St	Annapolis	21401	250
U.S. Naval Academy	121 Blake Rd	Annapolis	21402	2,052
USInternetworking, Inc.	2500 Riva Rd	Annapolis	21401	365
Verizon Communications MD	12 West St	Annapolis	24101	844
Windermere Group LLC	2000 Windermere Ct	Annapolis	21401	400

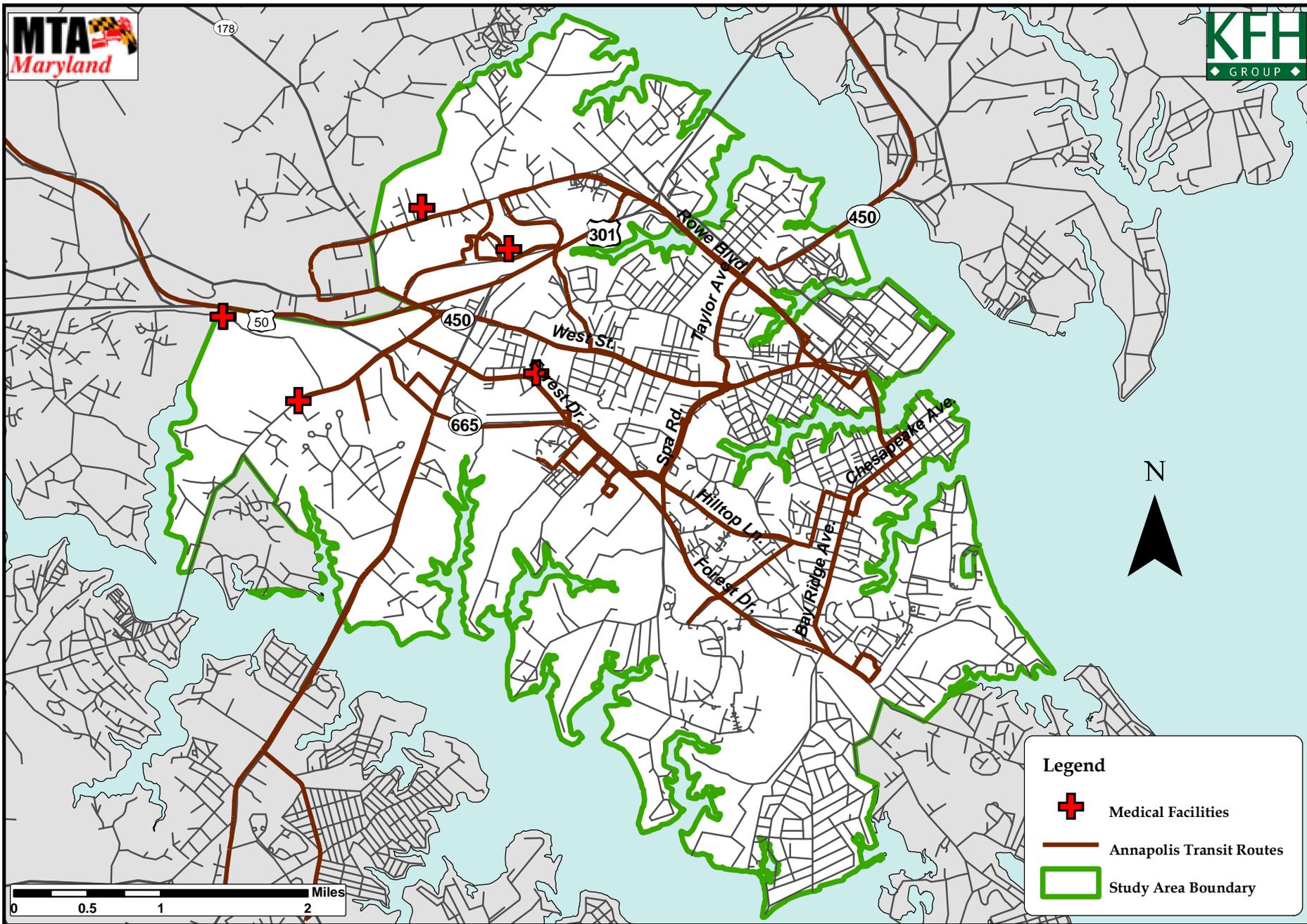


Figure 2-14: Medical Facilities

Shopping Destinations

Rather than distinguish each individual shopping facility, only those combinations of stores classified as malls or plazas, as well as generally recognized large retail establishments were identified as shopping destinations. About ten major shopping destinations were identified in the Annapolis area, including one in Edgewater, which is currently served by Annapolis Transit. The largest, most prominent shopping destinations are downtown Annapolis and the new Annapolis Towne Centre at Parole. These shopping destinations provide the community with an assortment of goods, in addition to providing retail employment opportunities to residents of the City and neighboring communities. The shopping destinations are visually displayed in Figure 2-15 and their addresses included in Table 2-7.

COMMUNITY AND STAKEHOLDER INPUT

In addition to collecting and evaluating secondary data to develop the population and land use profiles, the study team also collected primary data on transit needs through on-board rider surveys and meetings with the project's Citizen Advisory Committee, a group of Annapolis residents who volunteered their time to provide input on the TDP process. Both these forms of public input were invaluable to determine any service gaps within the existing transit system, to be addressed in the development of service alternatives.

On-Board Rider Survey

The on-board survey was administered on Thursday, June 25, 2009, and Saturday, June 27, 2009. The purpose of these dates was to capture a typical weekday and weekend day of Annapolis Transit service. When riders boarded Annapolis Transit buses on these days, the operators asked them to complete an on-board rider survey. Shown in Appendix C, the survey consisted of numerous questions that attempted to characterize the persons utilizing this system and their associated travel patterns, as well as examine the quality of the existing service and riders' requests for service changes and improvements. While the entire results tally can be found in Table 2-8, several highlights from the findings are presented below.

The first portion of the on-board rider survey helped determine the general travel patterns of Annapolis Transit riders:

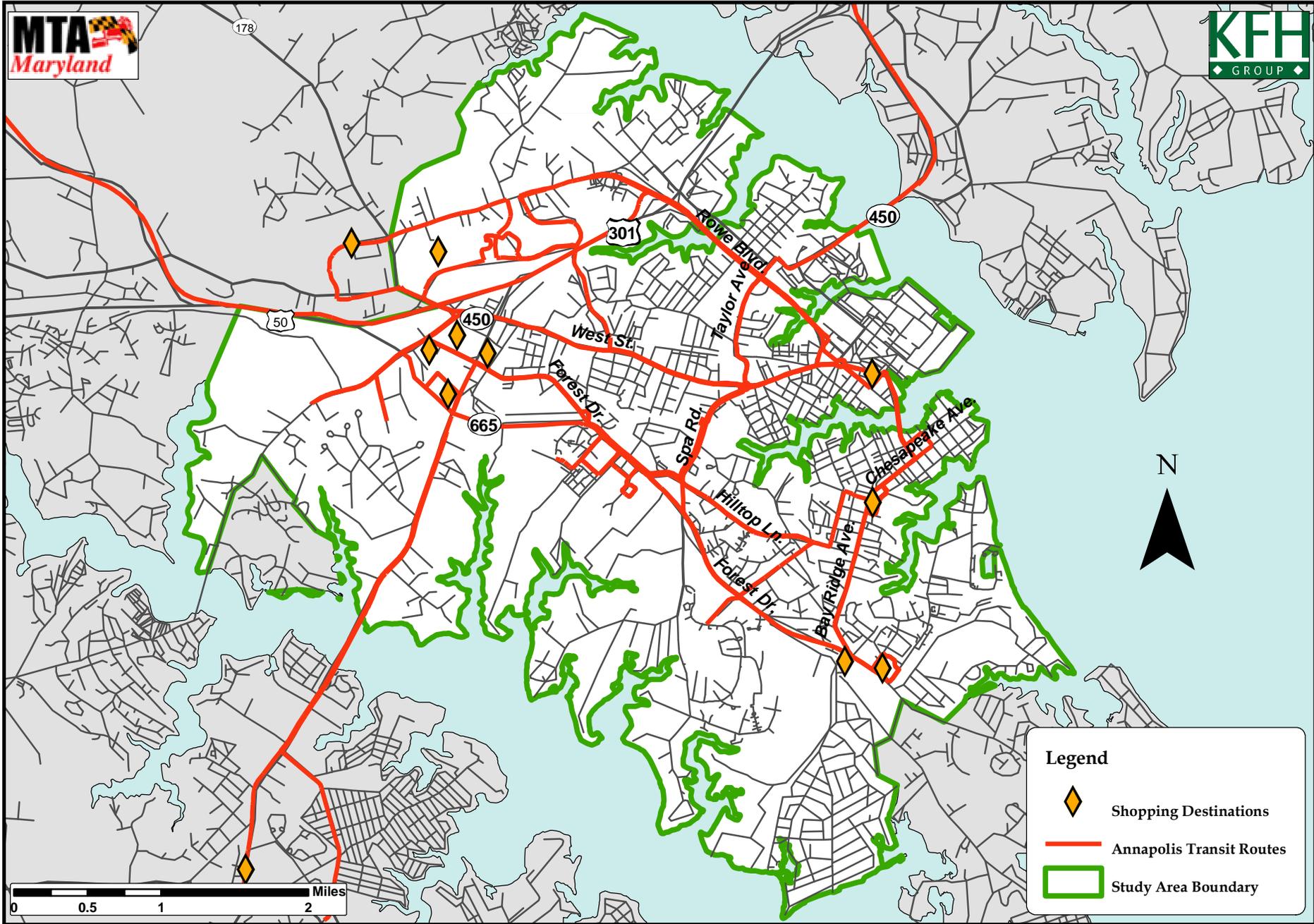


Figure 2-15: Shopping Destinations

Table 2-7: Shopping Destinations

Name	Address	City	Zip Code
Annapolis Harbour Center	Solomons Island Rd & Annapolis Harbour Center Dr	Annapolis	21401
Annapolis Mall & Annapolis Plaza	Jennifer Rd & Annapolis Mall Rd	Annapolis	21401
Annapolis Towne Centre at Parole	Riva Rd & Forest Dr	Annapolis	21401
Bay Forest Shopping Center	Bay Ridge Rd & Georgetown Rd	Annapolis	21403
Cape Saint Claire Shopping Center	Hilltop Dr & Cape Saint Claire Rd	Annapolis	21409
Downtown Annapolis	Main St & Conduit St	Annapolis	21401
Eastport Shopping Center	Chesapeake Ave & Bay Ridge Ave	Annapolis	21403
Factory Stores - Bay Bridge Marketplace	Whitehall Rd & Skidmore Dr	Annapolis	21409
Gateway Village Shopping Center	Defense Hwy & Housley Rd	Annapolis	21401
Quarterfield Crossing	Hwy 97 & Quarterfield Rd	Annapolis	21401
Value City Shopping Center	Solomons Island Rd & Forest Dr	Annapolis	21401
The Market at South River Colony	Solomons Island Rd and Puddington Rd	Edgewater	21037

Table 2-8: On-Board Rider Survey Results

Q1. What route are you currently riding?

Red Route:	5%
Yellow Route:	34%
Orange Route:	22%
Gold Route:	11%
Green Route:	1%
Brown Route:	19%
C-40 Route:	0%
C-60 Route:	2%
Navy Blue Shuttle:	6%

Q2. What was the location where you boarded the bus? (Most Popular Origins listed)

(origin)	# of riders
Eastport	47
Hilltop	30
Navy-Marine Corps Stadium	26
Church Circle	16
Bywater Rd	15
President St	13
West St	12
Newtowne Dr	11
Safeway (Annapolis Market Place)	10
Tyler Ave	8

Q3. Did you or will you have to transfer buses in order to complete this trip?

Yes, one transfer:	58%
Yes, two or more transfers:	7%
No:	35%

Q4. What bus route(s) will you transfer to or did you transfer from?

Red Route:	32%
Yellow Route:	12%
Orange Route:	11%
Gold Route:	13%
Green Route:	24%
Brown Route:	4%
C-40 Route:	3%
C-60 Route:	1%
Navy Blue Shuttle:	0%

Q5. What is your final destination? (Most Popular Destinations listed)

(destination)	# of riders
Westfield Mall	68
West St	27
Eastport	22
Downtown	19
Forest Dr	12
Anne Arundel Medical Center	11
Church Circle	11

Table 2-8: On-Board Rider Survey Results

Main St	11
Shoppers Food Warehouse	11
Riva Rd	10
Bay Ridge	8

Q6. Approximately how long will it take you to make this bus trip?

30 minutes or less:	69%
31-45 minutes	21%
46-60 minutes	7%
More than 60 minutes	4%

Q7. What is the purpose of your trip today?*

Work:	54%
Shopping:	16%
School:	3%
Social/Recreation:	12%
Medical:	7%
Dine:	2%
Government Service Agency:	2%
Other:	5%

Q8. How often do you ride the bus?

Once a week:	6%
2-5 times a week:	40%
6-10 times a week	25%
More than 10 times a week:	21%
Once a month:	4%
2-3 times a month:	3%

Q9. What service improvements would you like to see?*

Cleaner buses:	10%
Safer buses:	10%
Lower fares:	6%
Earlier morning hours:	7%
More Sunday service:	18%
More helpful staff:	4%
Later evening hours:	14%
More informative web site:	2%
Improved access to transit information:	4%
More bus shelters & benches:	8%
Improved on time performance:	17%

Q10. Please rate your overall satisfaction with Annapolis transit:

Very Satisfied:	21%
Satisfied:	50%
Neither Satisfied or Unsatisfied:	15%
Unsatisfied:	9%
Very Unsatisfied:	5%

Table 2-8: On-Board Rider Survey Results

Q11. Do you have a car?	
Yes:	17%
No:	83%
Q12. If Yes was your car available for this trip?	
Yes:	32%
No:	78%
Q13. Do you have a drivers license?	
Yes:	43%
No:	57%
Q14. Are you:	
Male:	43%
Female:	57%
Q15. Please indicate your age group:	
Under 16:	1%
16-18:	5%
19-24:	20%
25-49:	49%
50-64:	18%
65 or older:	7%
Q16. Which of the following best describes your employment status?*	
Employed, full-time:	48%
Employed, part-time:	22%
Retired:	8%
Student, full-time:	6%
Student, part-time:	4%
Homemaker:	3%
Unemployed:	7%
Other:	2%

Notes: A total of 649 surveys were collected over two days. The percentages shown for responses were taken out of the specific number of responses given for each question; respondents did not answer all questions. For the questions noted with asterisks, the answer percentages will not add up to 100% because respondents could fill in more than one answer.

-
- The greatest number of respondents were riding the following routes:
 - Yellow Route (34%)
 - Orange Route (22%)
 - Brown Route (19%)
 - The survey indicated that a significant number of riders must transfer between services to reach their ultimate destination. Over half (58%) of the surveyed riders noted that they had to make one transfer from their current route in order to reach their final destination, with 7% stating they would need at least two transfers. This is likely due to the fact that all services currently meet at the Spa Road Transfer Center for a timed transfer, where many riders transfer between routes.
 - The route that has the respondents transferred to/from the most was the Red Route (21%) and second was the Green Route (15%).
 - The most popular trip origins among riders were Eastport (47 riders), Hilltop (30 riders), and the Navy-Marine Corps Stadium (26 riders). The most popular destinations were the Westfield Shopping Center/Annapolis Mall (52 riders), West Street (27 riders), and Eastport (22 riders).
 - The most common duration for their trips was “30 minutes or less” (69%), trailed by durations of “30-45 minutes” (21%) and “45-60 minutes” (7%).
 - The two most popular purposes for the riders’ trips on the days of the surveys were “work” (63%) and “shopping” (18%).
 - Less than half (40%) of the surveyed bus riders stated that they ride the bus “2-5 times a week”, and another 25% of respondents utilized the bus service “6-10 times a week.”

While the first part of the survey attempted to establish a sense of general travel patterns for the riders, the second part included several quantitative and qualitative questions regarding the riders’ perceptions of the quality of existing services and any changes they would like to see:

- Four specific service improvements, out of 11 possible choices, were selected by 24% or more of the customers who completed the survey; the responses are listed in order of popularity: “Sunday service” (42%), followed by “Improved on-time performance” (39%), “Later evening hours of service” (32%), and “Cleaner buses” (24%).

- When asked to rate the overall level of satisfaction with the Annapolis Transit service, the bulk of respondents stated they were “satisfied” (50%) or “very satisfied” (21%), whereas 14% of riders selected the “unsatisfied” or “very unsatisfied” responses.

In addition to these quantitative questions, the riders also provided responses to two qualitative questions about what they like the best and least about Annapolis Transit services. The top three responses for what riders liked best about the service were convenience (takes riders where they need to go), friendly and courteous drivers, and affordable fares. For what riders liked least about the service, the two most common responses were late buses and no air conditioning (and sometimes no heat) on the buses, followed by numerous responses each for insufficient frequency of service, lack of late night service including during weekends, and poor conditions of the buses. All the responses given for these questions are included in Appendix D. It is worth mentioning that 64 more responses to what riders liked best about Annapolis Transit were given compared to the number of responses to what riders liked the least.

The final section of the on-board rider survey complemented the prior two portions concerning travel pattern and the quality of service by providing a glimpse into the demographic composition of the surveyed Annapolis Transit riders:

- Female riders made up 57% of the respondents.
- Participants’ responses regarding age range included:
 - 25-49 years old = 49%
 - 19-24 years old = 20%
 - 50-64 years old = 18%.
- A marginal number of surveyed riders stated “Yes” (17%) when asked if they possess an automobile, with a subset of 32% of those riders noting that their car was available for this particular trip. This result also indicated that 83% of respondents did not own an automobile, and many depend on Annapolis Transit as an important transportation option.
- Additionally, it was found that over half (57%) of the surveyed riders marked “No” when asked if they currently possess a driver’s license. The disparity between this result and the previous point indicated that a portion of riders have driver’s licenses, but do not own a personal vehicle.
- “Employed, full-time” (48%) was the most popular selection for the current employment status of surveyed transit riders, with “Employed, part-time”

(22%) and “Retired” (8%) being the second and third most common responses, respectively.

The responses regarding age ranges outside of the youth and elderly populations and employment status provided some insight into the travel patterns and preferences of the choice riders, who use Annapolis Transit services. Additional characteristics could be attributed to choice riders based on the responses from riders who said they both own a car and have a license, and therefore reasonably had the option of driving in place of using transit:¹²

- The top three routes that they were riding when they completed the survey were the Navy Blue Shuttle (40%), Yellow Route (22%), and Orange Route (15%).
- 59% of these choice riders did not need to transfer buses to complete their trip, while 36% made one transfer, and 6% made two or more transfers.
- Common responses for final destinations included downtown Annapolis, Eastport, the Naval Academy, and Westfield Mall.
- The top responses for the choice riders’ trip purposes were “social/recreation” (37%), “work” (35%), and “shopping” (14%).
- The most common frequencies with which they used Annapolis Transit services were 2-5 times a week (36%), 6-10 times a week (19%), once a month (18%), more than 10 times a week (11%), and 2-3 times a month (10%). This range of frequencies indicated that choice riders included commuters who use the transit service regularly, as well as occasional riders who likely use the transit service for social or recreation trips a few times per month.
- The choice riders’ most popular responses for service improvements included “improved on-time performance” (19%), “later evening hours” (19%), “more Sunday service” (12%), and “cleaner buses” (12%).
- 49% were male, while 51% were female.
- The majority were in the 25-49 age range (70%), while the next common age ranges were 50-64 (21%) and 65 and older (10%).

¹²Ninety-two respondents answered that they own a car and have a driver’s license. Other characteristics that could indicate transit dependency, such as age (i.e., older adults who own a car and have a driver’s license), were not factored into this part of the analysis.

- The top three responses regarding these choice riders' current employment status were employed full-time (58%), employed part-time (14%), and retired (12%).

One of the highlights from this analysis of current choice riders was that most only took one bus and did not transfer buses to reach their destination, compared to a similar percentage of overall riders who had to make a transfer to reach their destination. Many of the choice riders who only used one route used the Navy Blue Shuttle and boarded the bus at the Navy-Marine Corps Stadium, which includes a commuter park and ride lot. The survey responses described above indicated that choice riders are generally employed persons, who range from ages 25 to 64, that use Annapolis Transit services for social, recreation, and work purposes several times a week, with some using the service just a few times a month. The most common destinations named by choice riders in the surveys, as well as the most popular service improvements requested, were considered in the development of service alternatives, described later in this report.

Surveys from respondents who rode the services, which travel longer distances into the County, were also examined separately from those of the City routes to determine if any differences exist between these riders.¹³ One of the main differences was that a greater majority of riders on the County routes used the service for work purposes (69%). Social and recreational trips trailed as the second most common trip purpose (15%), and school was a notable trip purpose (8%) compared to riders on the City routes. A larger share of riders on the County routes also rode the bus more frequently (50% rode 6-10 times per week) compared to the riders on the City routes, the majority of which rode 2-5 times per week (41%). A larger majority of these respondents were also in the 25-49 years age group (75% compared to 48% for City route riders) and were employed full-time (62% compared to 48% for City route riders).

Citizen Advisory Committee Input

The kickoff meeting of the CAC included a thorough discussion of transit needs and issues that members wanted to address in developing this TDP update. Highlights regarding transit needs from this discussion are included below:

- Need to coordinate existing transit services, including Annapolis Transit as well as regional transit providers).
- Need to improve links between services and reduce transfers.

¹³The results for the County routes were based on surveys from C-60 riders; no C-40 surveys ended up being collected over the two survey days.

- Need to establish a single hub for local and regional transit services.
- Need to improve transit-related amenities, such as accessible bus stops, paths of travel to stops, safety and maintenance issues, and signage.
- Need to serve choice riders as well as visitors and transit-dependent persons.
- Need to make transit services more convenient, including serving various trip purposes, operating at higher frequencies, and minimizing transfers, while maintaining components of the existing transit system that work well.
- Need to improve marketing and provide easy access to transit information.
- Need to reduce car travel and congestion, and help Annapolis “go green”.

These issues identified by the CAC were translated into goals and objectives (Appendix B) for this TDP process, and guided the development of service recommendations.

SUMMARY

There is a delicate balance between providing adequate service for a well sustained population in the City of Annapolis, and keeping those services within expected performance standards. Primary data obtained during the study process generally supported secondary data showing transit needs in the Annapolis area, including neighboring Parole. Input from the on-board rider survey, discussions with the project’s Citizen Advisory Committee, and observations from Annapolis Transit staff helped determine specific local transit needs.

Transit needs within the City of Annapolis included needs for lower-income workers to access employment, for individuals without cars to access a variety of destinations including shopping, and for youth without access to cars for certain school-centered academic and recreational programs after school hours and during the summer. The significant tourist population that visits Annapolis each year also translated into needs for transportation options to navigate points of attraction around the City. Beyond providing an affordable mobility option, transit also addresses a major concern of residents – the need to reduce traffic congestion in the Annapolis area, particularly as high density developments occur in Parole.

For those who live in the City of Annapolis, the most basic needs for public transportation are currently being met through the existing services. The challenge for this TDP process was to develop strategies to improve and expand upon the current system, specifically addressing the issues raised through public outreach and survey work. The needs analysis indicated that improvements should focus on making transit services more direct, increasing on-time performance, as well as evaluating potential service expansion (i.e., more Sunday service and later evening hours).

This chapter provided both quantitative and qualitative data that was analyzed in conjunction with the review of existing transportation services completed in Chapter 3. Together, this information helped identify service gaps in regard to span of services, frequency of service, and unserved or underserved geographic areas. Subsequently, alternatives for discussion and consideration were developed and is included in Chapter 4.

Chapter 3

Review of Existing Transit Services

INTRODUCTION

This chapter provides analysis of existing public transit services in Annapolis, with particular attention given to the City's primary public transportation provider, Annapolis Transit. In conjunction with the analysis of transit needs described in Chapter 2, the information presented here helps identify gaps in the geographic extent, frequency, performance, and organizational efficiency of existing transit services. This pairing of needs analysis with existing service analysis serves as the basis for the development of the service and organizational alternatives, presented in the next chapter.

REVIEW OF EXISTING SERVICES

Only six square miles in area, the City of Annapolis is relatively well served by existing transit services in terms of geographic coverage. Annapolis Transit is the main public transportation provider in the area, though residents can also access other transit services to reach destinations in Anne Arundel County and the greater Washington and Baltimore regions. Since the TDP guides development of local transit services, Annapolis Transit is the focus of this review, though other public transportation providers and commuter assistance agencies are also described below. In addition, Annapolis is served daily by the national intercity bus provider, Greyhound, whose stop in Annapolis is located at the Annapolis Transit office.

Annapolis Transit

Annapolis Transit serves as the primary transit provider in the City of Annapolis. Organizational, route, and performance data were collected from the Maryland Transit Administration (MTA) and Annapolis Transit in order to assess the

system's current services and evaluate them in relation to established MTA and other standards.

Organizational Overview

It is important to touch briefly on the system's organizational structure, as well as its relationship to Anne Arundel County. In short, transit planning, funding, and operations in Annapolis and Anne Arundel County are interconnected in many ways, but are essentially distinct from one another. The City of Annapolis Department of Transportation (ADOT) conducts its own transit planning activities with input from the County, and manages Annapolis Transit services that cover the City and many surrounding areas in Anne Arundel County. ADOT procures its own funding from federal, state, and local sources. Exhibit 3-1 portrays ADOT's organizational structure, including its jurisdiction over Annapolis Transit, parking, and other personal transportation, and the associated staffing.

Anne Arundel's Office of Planning and Zoning (OPZ) is responsible for countywide transit planning. It recently completed a draft update to its TDP, which included new services and service improvements in the Annapolis area. The OPZ manages contracts with transit operators—primarily the Corridor Transportation Corporation (CTC), for services in the western part of the County. The OPZ also contracts with Annapolis Transit to operate those routes that serve the County outside of the Annapolis City limits. Like Annapolis, the Anne Arundel County OPZ procures its own transit funding from multiple sources. Funding for Annapolis Transit is discussed in more detail later in this chapter.

Routes Overview

The Annapolis Transit system includes 11 fixed routes or loops (including those running in different directions within the same color route) and two shuttle routes. Figure 3-1 portrays all routes, and Table 3-1 provides a summary of basic service characteristics for these routes. The Red, Yellow, Green, Orange, Gold, and Brown routes operate Monday through Saturday. The Gold and Brown Routes also operate on Sundays.

Service hours vary, with many routes operating from 5:30 a.m. to 7:00 p.m. and others starting later and ending as late as 10:00 p.m. Headways for the Red, Yellow, and Orange Routes are 30 minutes, while the Green, Gold, and Brown Routes operate at 60-minute frequencies. The C-40 and C-60 shuttles run Monday through Friday, from as early as 6:00 a.m. to as late as 8:00 p.m. Headways on these routes are 60 or 120 minutes, depending on the route and trip taken. Route deviation services are provided on the Brown, C-40, and C-60 Routes, where eligible passengers may request curb-to-curb pickups if they live within three-quarters of a mile of the regular fixed-route

Transportation Department

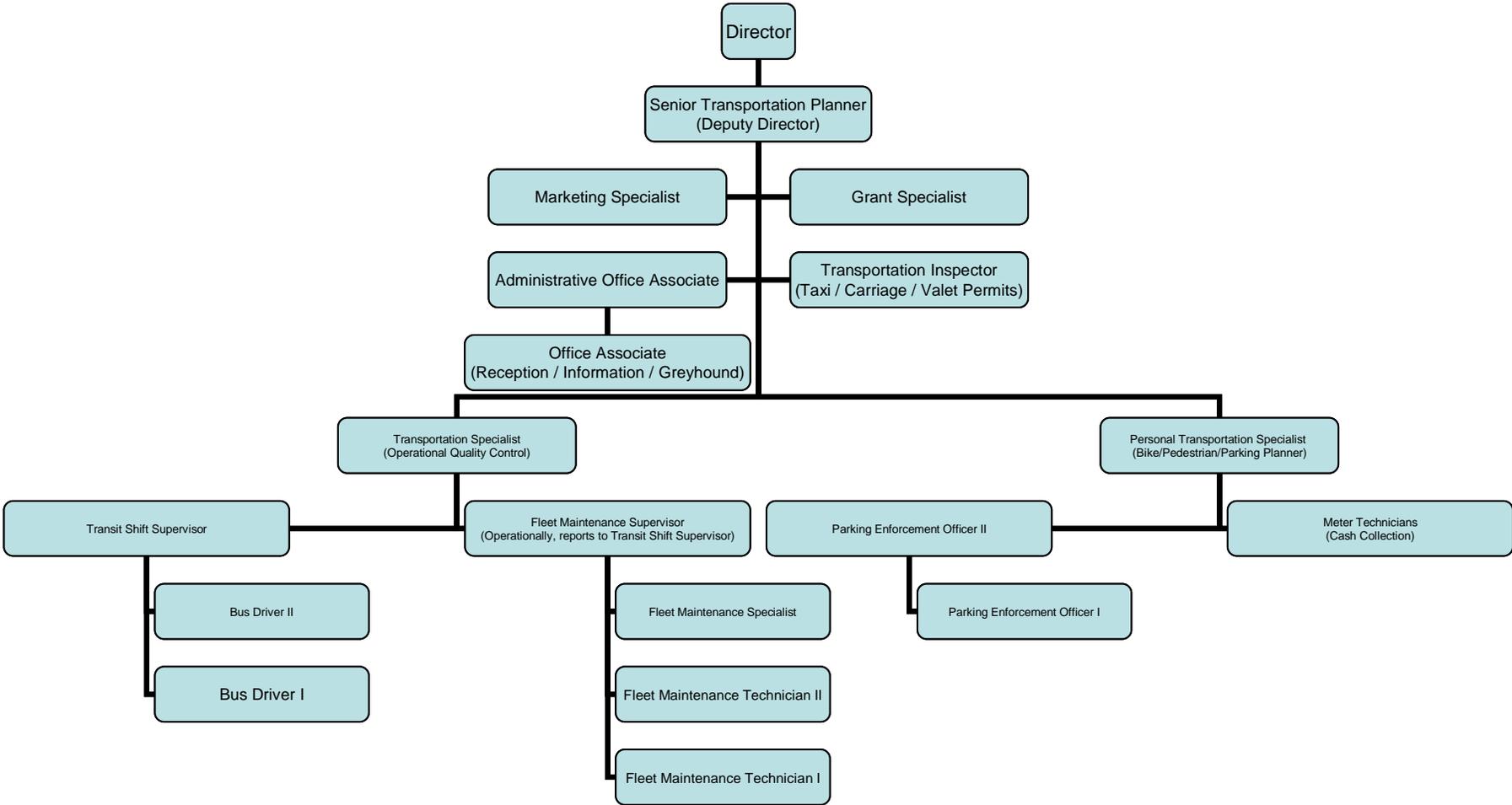
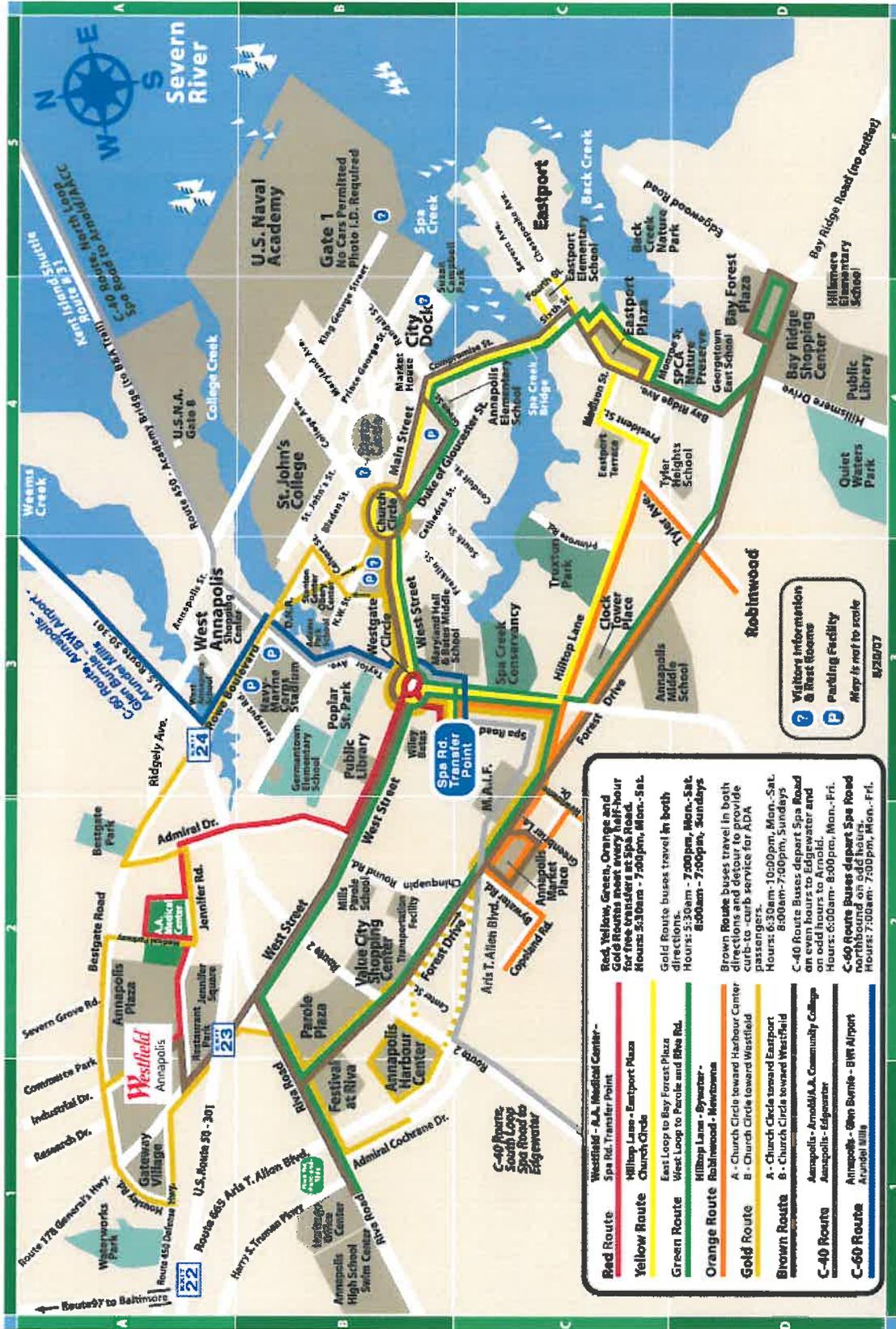


Figure 3-1: Annapolis Transit Bus Routes



Source: Annapolis Transit Website, http://www.ci.annapolis.md.us/upload/images/government/depts/transport/images/map_print.gif

Table 3-1: Service Characteristics of Annapolis Transit Routes

Route	Origin/Destination	Major Stops/Areas of Service	Hours of Service	Frequency of Service	Fares	FY08 Ridership
Red	Westfield Mall to Spa Road Transfer Point	West St./Library, Anne Arundel Medical Center, Westfield Mall, Admiral Drive	M-Sat. 5:30 a.m. to 7:00 p.m.	30 minutes	\$1.00 base fare, \$0.50 Senior/Disabled (S/D)	212,984
Yellow	Hilltop Lane to Eastport Plaza to Church Circle	Spa Creek Bridge, West Street	Same as above	30 minutes	\$1.00 base fare, \$0.50 S/D	184,092
Green	East Loop to Bay Forest Plaza West Loop to Parole and Riva Road	East Loop: Eastport Plaza, Church Circle; West Loop: Forest Drive/Maryland Automobile Insurance Fund, West Street	Same as above	60 minutes (stops at Spa Rd. Transfer Point twice, b/w loops)	\$1.00 base fare, \$0.50 S/D	146,393
Orange	Hilltop Lane to Bywater Road	Newtowne Drive, Annapolis Middle School, Robinwood	Same as above	30 minutes	\$1.00 base fare, \$0.50 S/D	187,607
Gold	A: Church Circle toward Harbour Center B: Church Circle toward Westfield Mall	A: West St./Calvert St., Value City Shopping Center, Riva Road, Admiral Cochrane Dr., Defense Hwy., Gateway Village, Westfield Mall, A.A. Medical Center B: Rowe Blvd./West Annapolis, A.A. Medical Center, Westfield Mall, Gateway Village, Admiral Cochrane Dr., Annapolis Harbour Center, Forest Dr./Center St.	M-Sat. 5:30 a.m. to 7:00 p.m. Sun 8:00 a.m. to 7:00 p.m.	60 minutes	\$1.00 base fare, \$0.50 S/D	398,848
Brown	A-Church Circle toward Eastport B-Church Circle toward Westfield, Deviated fixed-route service for ADA passengers	Same stops but Routes A and B travel in different directions: Spa Creek Bridge, Eastport Plaza, Bay Ridge Ave., Bay Forest Plaza, Forest Dr., Annapolis Market Place, Forest Dr./Center St., Riva Rd./Forest Dr., Riva Rd., Westfield Mall, West St.	M-Sat. 6:30 a.m. to 10:00 p.m. Sun 8:00 a.m. to 7:00 p.m.	60 minutes	\$1.00 base fare, \$0.50 S/D; \$2.00 for route deviation services	206,656

Route	Origin/Destination	Major Stops/Areas of Service	Hours of Service	Frequency of Service	Fares	FY08 Ridership
C-40	North Loop: Annapolis to Arnold and Anne Arundel Comm. College South Loop: Annapolis to Edgewater	North Loop--USNA, Route 2/B&A Blvd, Anne Arundel Community College, Route 2/Joyce Ln., Route 450/Brice Rd., Taylor Ave/Herbert Sachs-Dept. of Natural Resources. South Loop – Route 2/Virginia Ave., Mayo Rd./Bay Ridge Rd., South River Colony Shopping Center; Route 2/Mayo Rd., Route 2/Wilelinor Rd.	M-F 6:00 a.m. to 8:00 p.m. Buses depart Spa Road on even hours to Edgewater and on odd hours to Arnold	120 minutes for each loop (60 minutes at Spa Road Transfer Point)	\$1.00 per zone; \$2.00 base fare for Edgewater or Arnold/AACC to/from Annapolis, \$4.00 base fare for Arnold/AACC to/from Edgewater; route deviation services cost double	13,669
C-60	Annapolis to Glen Burnie, BWI Airport, and Arundel Mills	Navy-Marine Corps Stadium Park and Ride, Cromwell Station Light Rail, BWI Airport Southwest and International gates, Anne Arundel Community College at Arundel Mills	M-F 7:00 a.m. to 7:00 p.m. Buses depart Spa Road northbound on odd hours.	60 minutes	\$1.00 per zone, \$3.00 with MTA transfer from Cromwell Station, \$4.00 Annapolis to/from Cromwell, BWI, or Arundel Mills	10,602
Navy Blue Shuttle	Navy-Marine Corps Stadium to downtown Annapolis	Historic Annapolis, Inner West Street	M-F 6:30 a.m. to 8:00 p.m. Sat/Sun 10:00 a.m. to 6:00 p.m.	30 minutes	Free	52,797
State Shuttle	Navy-Marine Corps Stadium to legislative buildings	Church Circle	M-F 6:30 a.m. to 8:00 p.m. (runs until 10:00 p.m. on Mondays during legislative session)	5 minutes at peak periods, 15 minutes otherwise	Free	389,278

Sources: Annapolis Transit Website for service characteristics, and Annapolis Transit's Annual Transportation Plan for Fiscal Year 2010 (Form 2A).

*All routes serve the Spa Road Transfer Point except for the shuttles.

service. Route deviation services run during late evenings, Sundays, and holidays, and passengers must meet ADA eligibility requirements. Reservations for route deviation services must be made at least one day in advance.

The route profiles found in Figures 3-2 through 3-9 provide an inventory of each of Annapolis Transit's fixed routes, deviation routes, and shuttles. Each profile outlines the type of service offered, the area served, the operating schedule, the passenger fare and the roundtrip mileage of the route. Also included is a range of productivity data for each route, including annual passenger trips, revenue hours, revenue miles, and operating cost; average passenger trips per revenue hour; and operating cost per revenue hour, revenue mile, and passenger trip. Finally, each profile offers a detailed accounting of the major origins and destinations—including high-density housing, medical facilities, major employers, educational facilities, human service agencies, shopping destinations, and park-and-ride locations—served within a one-quarter mile and a three-quarter mile radius of the route. These distances are pertinent to show the approximate area within walking distance of the route (one-quarter mile) and the geographic area that needs to be served by route deviation or complementary demand-response service to fulfill ADA requirements (three-quarter mile).

Among its fixed-route services, Annapolis Transit offers two free shuttles from the Navy-Marine Corps Memorial Stadium—the Navy Blue and State Shuttles. The Navy Blue Shuttle is geared toward visitors and travels through historic Annapolis and Inner West Street. The State Shuttle is geared toward State employees that commute to the legislative buildings downtown, though anyone may ride this route to access parking at the stadium. Both shuttles operate Monday through Friday from 6:30 a.m. to 8:00 p.m. The State Shuttle runs until 10:00 p.m. on Monday nights during the legislative session, and the Navy Blue Shuttle also operates during the weekend from 10:00 a.m. to 6:00 p.m. with the exception of some major holidays and special stadium events.

During the process of this TDP, Annapolis Transit has also been granted funding to operate a commuter bus route that was previously operated by the MTA. Previously known as Route 921, the new route will be named the JARC Commuter Connector Service, or C90, and provide commuter service between Annapolis and the New Carrollton Metro Station in Prince George's County. In Annapolis the route will serve the Navy-Marine Corps Memorial Stadium and the Harry S. Truman Park and Ride Lot, before taking US-50 W toward the New Carrollton Station, stopping at the Davidsonville Park and Ride Lot along the way. Using two buses, the C90 Route will provide hourly service from 5:30 a.m. to 9:30 a.m. and from 4:30 p.m. to 8:30 p.m., Monday through Saturday. This route has been funded through a two-year grant, for Fiscal Years 2010 and 2011, under the Job Access and Reverse Commute (JARC) Program.

Figure 3-2: Red Route

MAJOR TRIP GENERATORS

High Density Housing

- Harbour Gates Apartments
- 1901 West
- Avalon Landing Apartments
- Westwinds Apartments
- Annapolis Gardens
- Bowman Court
- Sunrise of Annapolis
- Deerfield Senior Day Center of Annapolis
- Ewing Health Systems, Inc.
- Bloomsbury Court
- Bywater Mutual Homes
- College Creek Terrace
- Obery Court
- Woodside Gardens
- Timothy House
- Glenwood Senior Citizen High Rise
- Claiborne Place Apartments
- Admiral Farragut Apartments
- Admiral Oaks Apartment
- Allen Apartments
- Conte Lubrano Apartments
- North Green Apartments
- Regatta Bay Apartments
- Spa Cove Apartments
- Thornbury Bay at Annapolis

Medical Centers

- Anne Arundel Medical Center
- Children's National Medical Center
- Parole Health Center

Major Employers

- Mall
- Anne Arundel Health Systems Inc.
- TeleCommunication Systems Inc.
- Anne Arundel County Government
- Best Buy
- Capital Gazette Communications
- Sams Club
- Verizon Communications Maryland

Educational Facilities

- University of Maryland
- Sojourner Douglas College
- Community Resource Center
- Service Corps of Retired Executives
- Chamber of Commerce
- Annapolis Area Christian School
- Rapture Learning Institute for Excellence

Human Service Agencies

- ARC of Anne Arundel County
- Agency of Community action
- Maryland Energy Assistance
- LMS Women & Children's Program
- Annapolis Area Ministries Inc.
- Tamar Inc.
- Center of Help
- Promedcorp
- Arundel Child Care Connections
- Anne Arundel County Casa
- Obery Human service Center
- Family and Children's Services
- Annapolis Youth Services Bureau
- We Care and Friends
- Oficina De Asuntos Latinos
- Abilities Networks
- Centro De Servicios
- Arundel Lodge Inc.

Shopping Centers

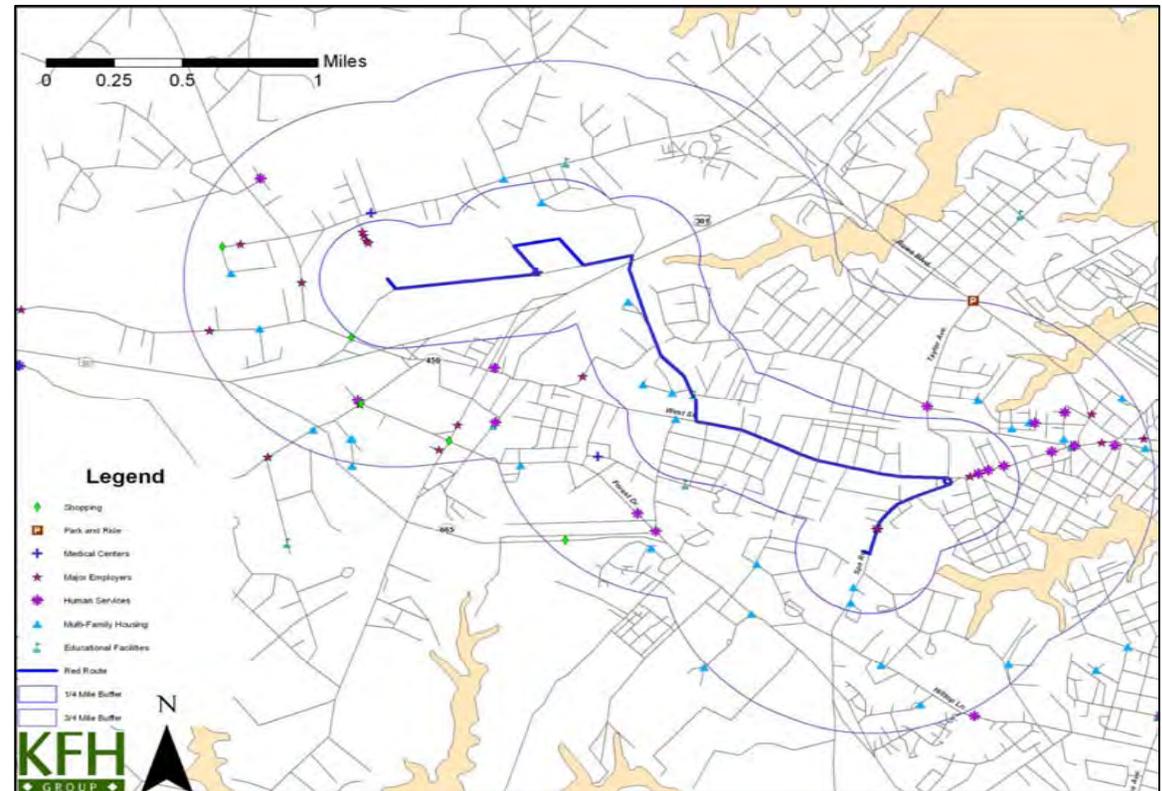
- Mall
- Annapolis Harbour Center
- Value City Shopping Center
- Annapolis Towne Center at Parole
- Gateway Village Shopping Center

Park & Ride Lot Locations

(None)

**Within 1/4 Mile of Route*

**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Westfield, A.A. Medical Center
Hours of Service:	5:30am - 7:00pm Monday-Saturday
Days of Service:	Mon-Sat
Fares:	\$1.00 for General Public
Round Trip Miles:	7

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	212,984
Annual Revenue Hours:	4,439
Annual Revenue Miles:	62,139
Annual Operating Cost:	\$255,623
Passenger Trips per Revenue Hour:	47.98
Operating Cost per Revenue Hour:	\$57.59
Operating Cost per Revenue Mile:	\$4.11
Operating Cost per Passenger Trip:	\$1.20

Figure 3-3: Yellow Route

MAJOR TRIP GENERATORS

High Density Housing

- Chase House
- Ewing Health Systems Inc
- Timothy House
- Watergate Village
- Admiral Farragut Apartments
- Bloomsbury Square
- College Creek Terrace
- Eastport Terrace
- Harbour House
- Obery Court
- Avalon Landing Apartments
- North Green Apartments
- Spa Cove Apartments
- Tecumseh Condominium Apartments
- Westwinds Apartments
- Bay Ridge Gardens
- Bywater Mutual Homes
- Newtowne 20
- Robinwood
- Woodside Gardens
- Cooper Apartments
- Fairwinds of Annapolis
- Thornbury Bay at Annapolis
- Baywoods of Annapolis
- Forest Village Apartments
- Gardens of Annapolis
- Glennwood Senior Citizen High-Rise

**Within 1/4 Mile of Route*

**Within 3/4 Mile of Route*

Medical Centers

- National Rehabilitation Center

Major Employers

- ARC of Anne Arundel County
- TeleCommunication Systems Inc.
- City of Annapolis
- Anne Arundel County Government
- State of Maryland
- Verizon Communications MD
- US Naval Academy

Educational Facilities

- Community Resource Center
- Saint Mary's High School
- Van Buren Street Baptist School
- St. Johns College
- US Naval Academy
- Rapture Learning Institute for Excellence

Human Service Agencies

- Annapolis Nursing and Rehab Center
- Salvation Army
- Maryland Rural Development
- Homes for America
- ARC of Anne Arundel County
- Agency of Community Action
- Maryland Energy Assistance
- LMS Women & Children's Program
- Annapolis Area Ministries Inc.
- Promedcorp
- Arundel Child Care Connections
- Anne Arundel County Casa
- Obery Human Services Center
- Annapolis Youth Services Bureau

Human Service Agencies Cont.

- We Care and Friends
- Oficina De Asuntos Latinos

Shopping Centers

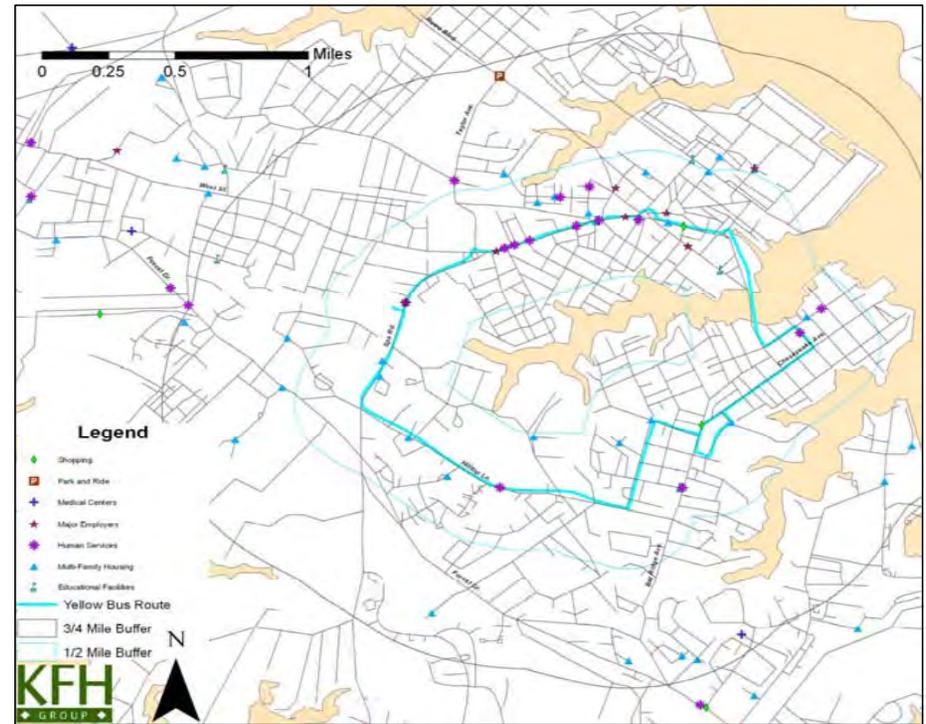
- Eastport Shopping Center
- Downtown

Park & Ride Lot Locations

- Navy Stadium

**Within 1/4 Mile of Route*

**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Hilltop Lane, Eastport Plaza,
Hours of Service:	5:30am - 7:00pm
Days of Service:	Mon-Sat
Fares:	\$1.00 for General Public
Round Trip Miles:	5.5

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	184,092
Annual Revenue Hours:	4,314
Annual Revenue Miles:	51,762
Annual Operating Cost:	\$243,435
Passenger Trips per Revenue Hour:	42.67
Operating Cost per Revenue Hour:	\$56.43
Operating Cost per Revenue Mile:	\$4.70
Operating Cost per Passenger Trip:	\$1.32

Figure 3-4: Green Route

MAJOR TRIP GENERATORS

High Density Housing

- Annapolis Gardens
- Bay Ridge Gardens
- Bloomsbury Square
- Bowman Court
- Bywater Mutual Homes
- College Creek Terrace
- Harbor House
- Langton Green Apartments
- Obery Court
- Robinwood
- Woodside Gardens
- Bay Forest Senior apartments
- Claiborne Place Apartments
- Deerfield Senior Day Center
- Ewing Health Systems Inc.
- Forest Village Apartments
- Ivy Court at Bay Ridge
- Timothy House
- Watergate Village
- 1901 west
- Admiral Farragut Apartments
- Allen Apartments
- Avalon Landing Apartments
- Fairwinds of Annapolis
- North Green Apartments
- Tecumseh Condominium
- Thornbury Bay at Annapolis
- West Wood Apartments
- Westwinds Apartments
- Newtowne 20
- Bay Ridge Gardens
- Bay Woods of Annapolis
- Chase Home
- Glenwood Senior Citizen High-Rise
- Somerford Place

High Density Housing Cont.

- Admiral Oaks Apartments
- Conte Lubrano Apartments
- Cooper Apartments
- Harbor Gates Apartments
- Regatta Bay Apartments
- Spa Cove Apartments

Medical Centers

- National Rehabilitation Hospital
- Riva Road Surgical Center
- Parole Health Center
- Anne Arundel Medical Center
- Children's National Medical Center

Major Employers

- ARC of Anne Arundel County
- Anne Arundel County Public Schools
- TeleCommunication Systems Inc.
- City of Annapolis
- ARINC
- Usinternetworking Inc.
- Capital Gazette Communications
- Home Depot
- Shoppers Food Warehouse
- State of Maryland
- Verizon Communications MD
- Anne Arundel Health Systems Inc.
- Mall
- Anne Arundel County Government
- Sams Club
- US Naval Academy

Educational Facilities

- Annapolis High School
- Saint Mary's High School
- Rapture Institute for Excellence
- Van Buren Street Baptist School
- Sojourner Douglass College
- University of Maryland
- Community Resource Center
- County Minority Business Enterprise
- Anne Arundel Economic Development Corp
- Anne Arundel Tech Council
- Service Corps of Retired Executives
- Chamber of Commerce
- St. Johns College
- US Naval Academy

Park & Ride Lot Locations

- Harry S. Truman
- Navy Stadium

Shopping Centers

- Bay Forest Shopping Center
- Eastport Shopping Center
- Downtown
- Value City Shopping Center
- Annapolis Towne Centre at Parole Mall
- Annapolis Harbor Center

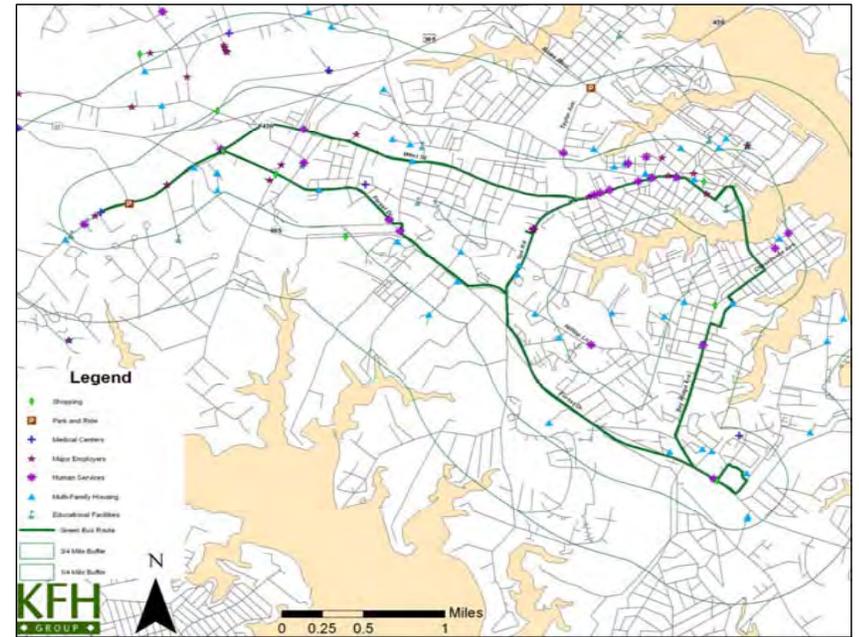
Human Service Agencies

- Restoration Community Development
- Annapolis Rehab and Nursing Center
- Maryland Rural Development
- Tamar Inc.
- ARC of Anne Arundel County
- Volunteer Center of Anne Arundel County

Human Service Agencies Cont.

- Center for Help
- Agency of Community Action
- Maryland Energy Assistance
- LMS Woman & Children's Program
- Annapolis Area Ministries
- Promedcorp
- Arundel Child Care Connections
- Anne Arundel County Casa
- Obery Human Services Center
- Family and Children's Services
- Annapolis Youth Service Bureau
- We Care and Friends
- Abilities Network
- Centro De Servicios
- Salvation Army
- Homes for America
- Oficina De Asuntos Latinos

**Within 1/4 Mile of Route*
**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	East Loop to Bay Forest Plaza
Hours of Service:	5:30am - 7:00pm
Days of Service:	Mon-Sat
Fares:	\$1.00 for General Public
Round Trip Miles:	14

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	146,393
Annual Revenue Hours:	4,439
Annual Revenue Miles:	66,578
Annual Operating Cost:	\$261,717
Passenger Trips per Revenue Hour:	32.98
Operating Cost per Revenue Hour:	\$58.96
Operating Cost per Revenue Mile:	\$3.93
Operating Cost per Passenger Trip:	\$1.79

Figure 3-5: Orange Route

MAJOR TRIP GENERATORS

High Density Housing

- Bywater Mutual Homes
- Newtowne 20
- Robinwood
- Woodside Gardens
- Admiral Farragut Apartments
- Avalon Landing Apartments
- North Green Apartments
- Spa Cove Apartments
- Thornbury Bay at Annapolis
- Westwinds Apartments
- Annapolis Gardens
- Bay Ridge Gardens
- Bowman Court
- College Creek Terrace
- Eastport Terrace
- Harbor House
- Forest Village Apartments
- Glenwood Senior Citizen High-Rise
- Watergate Village
- 1901 West
- Allen Apartments

Medical Centers

- Parole Health Center

Major Employers

- ARC of Anne Arundel County
- TeleCommunication Systems Inc.

Educational Facilities

- University of Maryland

Human Service Agencies

- Salvation Army
- Tamar Inc.
- ARC on Anne Arundel County
- Annapolis Nursing and Rehab Center
- Center of Help
- Agency of Community Action
- Maryland Energy Assistance
- LMS Women & Children's Program
- Annapolis Area Ministries
- Promedcorp
- Oficina De Asuntos Latinos

Shopping Centers

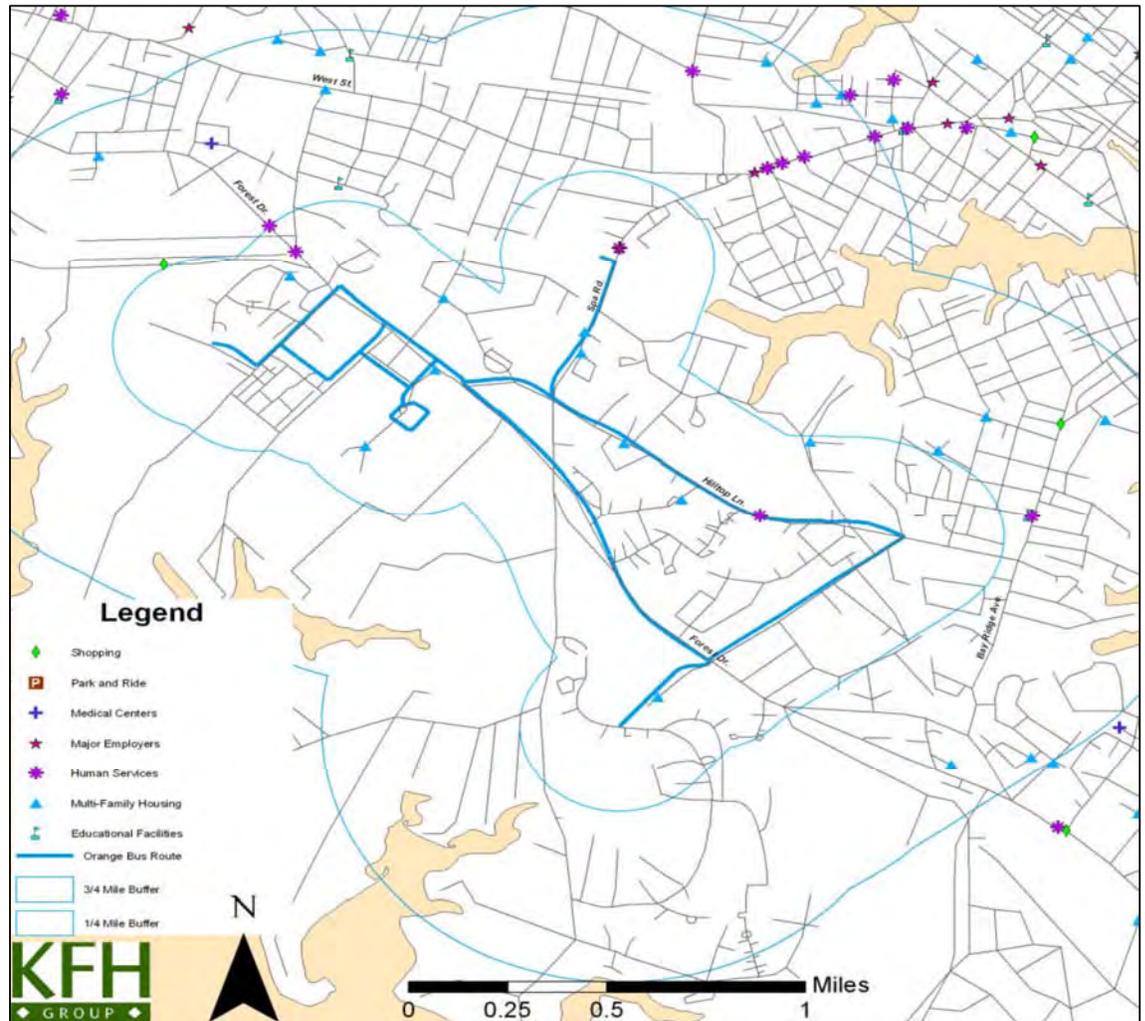
- Eastport Shopping Center
- Annapolis Harbor Center

Park & Ride Lot Locations

(None)

**Within 1/4 Mile of Route*

**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Bywater - Robinwood
Hours of Service:	5:30am - 7:00pm
Days of Service:	Mon-Sat
Fares:	\$1.00 for General Public
Round Trip Miles:	6.6

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	187,607
Annual Revenue Hours:	4,314
Annual Revenue Miles:	60,389
Annual Operating Cost:	\$255,623
Passenger Trips per Revenue Hour:	43.49
Operating Cost per Revenue Hour:	\$59.25
Operating Cost per Revenue Mile:	\$4.23
Operating Cost per Passenger Trip:	\$1.36

Figure 3-6: Gold Route

MAJOR TRIP GENERATORS

High Density Housing

- Bloomsbury Square
- Bywater Mutual Homes
- College Creek Terrace
- Obery Court
- Woodside Gardens
- Claiborne Place Apartments
- Deerfield Senior Day Center
- Ewing Health Systems Inc.
- Sunrise of Annapolis
- Timothy House
- Admiral Farragut Apartments
- Admiral Oaks Apartments
- Allen Apartments
- Avalon Landing Apartments
- Conte Lubrano Apartments
- Harbor Gates Apartments
- Regatta Bay Apartments
- Thornbury Bay at Annapolis
- West Wood Apartments
- Westwinds Apartments
- Glenwood Senior Citizen High-Rise
- Tecumesh Condominium
- Annapolis Gardens
- Bowman Court
- Newtowne 20
- Chase House
- Somerford Place
- 1901 West
- Cooper Apartments
- North Green Apartments
- Spa Cove Apartments

Human Service Agencies

- Tamar Inc.
- ARC of Anne Arundel County
- Center of Help
- Agency of Community Action
- Maryland Energy Assistance
- LMS Woman & Children's Program
- Annapolis Area Ministries Inc.
- Promedcorp
- Arundel Child Care Connections
- Anne Arundel County Casa

Human Service Agencies Cont.

- Obery Human Service Center
- Family and Children Services
- Annapolis Youth Services Bureau
- We Care and Friends
- Abilities Networks
- Salvation Army
- Maryland Rural Development
- Homes for America
- Dept of Aging and Disabilities
- County Volunteer Center
- Oficina De Asuntos Latinos
- Anne Arundel County Health Dept
- Arundel Lodge Inc.

Major Employers

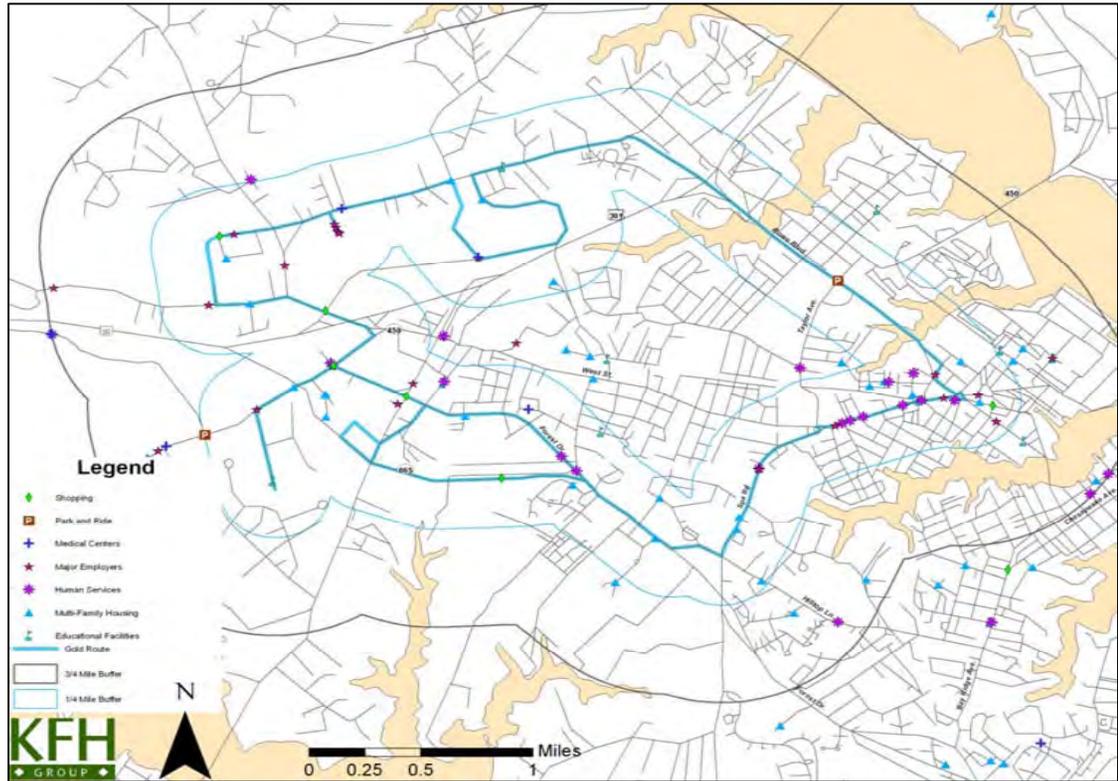
- ARC of Anne Arundel County
- TeleCommunication Systems Inc.
- City of Annapolis
- ARINC
- Usinternetworking Inc.
- Home Depot
- Anne Arundel Health Systems Inc.
- Mall
- Anne Arundel County
- Best Buy
- Sams Club
- Shoppers Food Warehouse
- State of Maryland
- Verizon Communications MD
- Anne Arundel Public Schools
- Capital Gazette Communications
- US Naval Academy
- Windermere Group LLC

Medical Centers

- Anne Arundel Medical Center
- Children's National Medical Center
- Parole Health Center
- Riva Road Surgical Center
- Annapolis Health Center

Park & Ride Lot Locations

- Navy Stadium
- Harry S Truman



Educational Facilities

- University of Maryland
- Sojourner Douglass College
- Community Resource Center
- Service Corps of Retired Executives
- Chamber of Commerce
- Annapolis Area Christian School
- Rapture Learning Institute for Excellence

Shopping Centers

- Annapolis Harbor Center
- Downtown
- Value City Shopping Center
- Annapolis Towne Centre at Parole Mall
- Gateway Village Shopping Center

- *Within 1/4 Mile of Route*
- *Within 3/4 Mile of Route*

SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	A. Church Circle - Harbour Center B. Church Circle - Westfield
Hours of Service:	5:30am-7pm Mon-Sat, 8am-7pm Sun
Days of Service:	Mon-Sun
Fares:	\$1.00 for General Public
Round Trip Miles:	15

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	398,848
Annual Revenue Hours:	9,211
Annual Revenue Miles:	82,891
Annual Operating Cost:	\$480,586
Passenger Trips per Revenue Hour:	43.3
Operating Cost per Revenue Hour:	\$52.18
Operating Cost per Revenue Mile:	\$5.80
Operating Cost per Passenger Trip:	\$1.20

Figure 3-7: Brown Route

MAJOR TRIP GENERATORS

High Density Housing

Annapolis Gardens
 Bay Ridge Gardens
 Bloomsbury Square
 Bowman Court
 Bywater Mutual Homes
 College Creek Terrace
 Harbor House
 Langton Green Apartments
 Newtowne 20
 Obery Court
 Robinwood
 Woodside Gardens
 Bay Forest Senior Apartments
 Chase Home
 Claiborne Place Apartments
 Deerfield Senior Day Center
 Ewing Health Systems Inc.
 Forest Village Apartments
 Ivy Court at Bay Ridge
 Somerford Place
 Timothy House
 Watgate Village
 1901 West
 Admiral Farragut Apartments
 Allen Apartments
 Fairwinds of Annapolis
 North Green Apartments
 Tecumseh Condominiums
 West Wood Apartments
 Eastport Terrace
 Bay Woods of Annapolis
 Gardens of Annapolis
 Glenwood Senior Citizen High-Rise
 Admiral Oaks Apartments
 Annapolis Roads
 Avalon Landing Apartments
 Conte Lubrano Apartments
 Cooper Apartments

High Density Housing Cont.

Harbor Gates Apartments
 Regatta Bay Apartments
 Spa Cove Apartments
 Thornbury Bay at Annapolis
 Westwinds Apartments

Medical Centers

National Rehabilitation Hospital
 Riva Road Surgical Center
 Parole Health Center
 Children's National Medical Center
 Anne Arundel Medical Center

Major Employers

ARC of Anne Arundel County
 Anne Arundel Public Schools
 TeleCommunication Systems Inc.
 City of Annapolis
 ARINC
 Usinternetworking Inc.
 Anne Arundel County
 Capital Gazette Communications Inc.
 Home Depot
 Shoppers Food Warehouse
 State of Maryland
 Verizon Communications MD
 Mall
 Anne Arundel Health Systems Inc.
 Best Buy
 Sams Club
 US Naval Academy

Educational Facilities

Sojourner Douglass College
 University of Maryland
 Community Resource Center
 Minority Business Enterprise Project
 Anne Arundel Economic Development Corp

Educational Facilities Cont.

Anne Arundel Tech Council
 Service Corps of Retired Executives
 Chamber of Commerce
 Annapolis High School
 Saint Mary's High School
 Rapture Learning Institute for Excellence
 Van Buren Street Baptist School
 St. Johns College
 US Naval Academy

Human Service Agencies

Restoration Community Development
 Annapolis Nursing and Rehab Center
 Maryland Rural Development
 Tamar Inc.
 ARC of Anne Arundel County
 County Volunteer Center
 Center of Help
 Agency of Community Action
 Maryland Energy Assistance
LMS Woman & Children's Program
 Annapolis Area Ministries Inc.
 Pomedcorp
 Arundel Child Care Connections
 Obery Human Service Center
 Family and Child Services
 Annapolis Youth Services Bureau
 We Care and Friends
 Abilities Network
 Centro De Servicios
 Salvation Army
 Homes for America
 Oficina De Asuntos Latinos
 Arundel Lodge Inc.

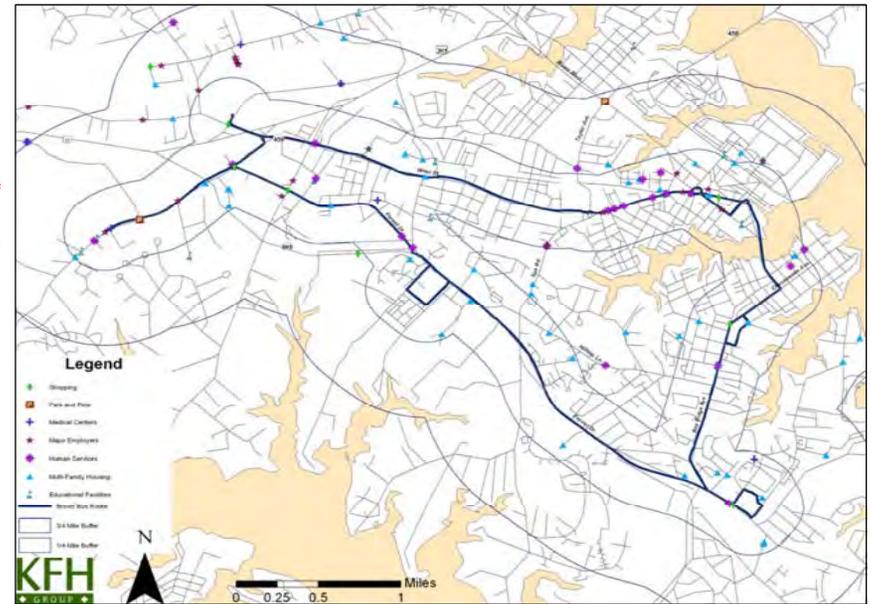
Shopping Centers

Bay Forest Shopping Center
 Eastport Shopping Center
 Downtown
 Value City Shopping Center
 Annapolis Towne Centre at Parole Mall
 Annapolis Harbor Center
 Gateway Village Shopping Center

Park & Ride Lot Locations

Harry S Truman
 Navy Stadium

**Within 1/4 Mile of Route*
**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

Service Type: Fixed-Route
 Service Description: General Public
 Area Description: A. Church Circle - Eastport
 B. Church Circle - Westfield
 Hours of Service: 6:30am-10pm Mon-Sat, 8:00am - 7:00pm Sun
 Days of Service: Mon-Sun
 Fares: \$1.00 General Public
 Round Trip Miles: 14.7

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips: 206,656
 Annual Revenue Hours: 12,798
 Annual Revenue Miles: 166,374
 Annual Operating Cost: \$719,845
 Passenger Trips per Revenue Hour: 16.15
 Operating Cost per Revenue Hour: \$56.25
 Operating Cost per Revenue Mile: \$4.33
 Operating Cost per Passenger Trip: \$3.48

Figure 3-8: C-40 Route

MAJOR TRIP GENERATORS

Educational Facilities

- South River High School
- The Learning Community
- Rapture Learning Institute for Excellence
- Antioch Christian School
- Center of Applied Technology South
- St. Johns College
- University of Maryland
- Sojourner Douglass College
- Community Resource Center
- Service Corps of Retired Executives
- Chamber of Commerce

High Density Housing

- Avalon Landing Apartments
- Thornbury Bay at Annapolis
- Westwinds Apartments
- Glenwood Senior Citizen High-Rise
- Manresa on the Severn
- Woodside Gardens
- Bywater Mutual Homes
- College Creek Terrace
- 1901 West
- Admiral Farragut Apartments
- Allen Apartments
- Avelon Landing Apartments
- Claiborne Place Apartments
- Cooper Apartments
- North Green Apartments
- Spa Cove Apartments
- West Wood Apartments
- Victoria Place at Edgewater
- Annapolis Life Care Inc.
- Ginger Cove
- Ewing Health Systems Inc.
- Timothy House
- Deerfield Senior Day Center

High Density Housing Cont.

- Chase Home
- South River Colony
- Annapolis Gardens
- Bloomsbury Court
- Bowman Court
- Newtowne 20
- Obery Court
- The Annapolitan

Human Service Agencies

- Tamar Inc.
- ARC of Anne Arundel County
- Center of Help
- Agency of Community Action
- Maryland Energy Assistance
- LMS Woman & Children's Program
- Annapolis Area Ministries Inc.
- Oficina De Asuntos Latinos
- MD Coalition Against Sexual Assault
- Salvation Army
- Promedcorp
- Anne Arundel Child Care Connections
- Anne Arundel County Casa
- Obery Human Services Center
- Family and Children's Services
- Annapolis Youth Services Bureau
- Abilities Network

Major Employers

- ARC of Anne Arundel County
- TeleCommunication Systems Inc
- Anne Arundel County
- ARINC
- Capital Gazette Communications Inc.
- Ginger Cove
- Home Depot

Major Employers Cont.

- Kmart
- Shoppers Food Warehouse
- State of Maryland
- Usinternetworking Inc.
- Verizon Communications MD

Medical Centers

- Parole Health Center

Shopping Centers

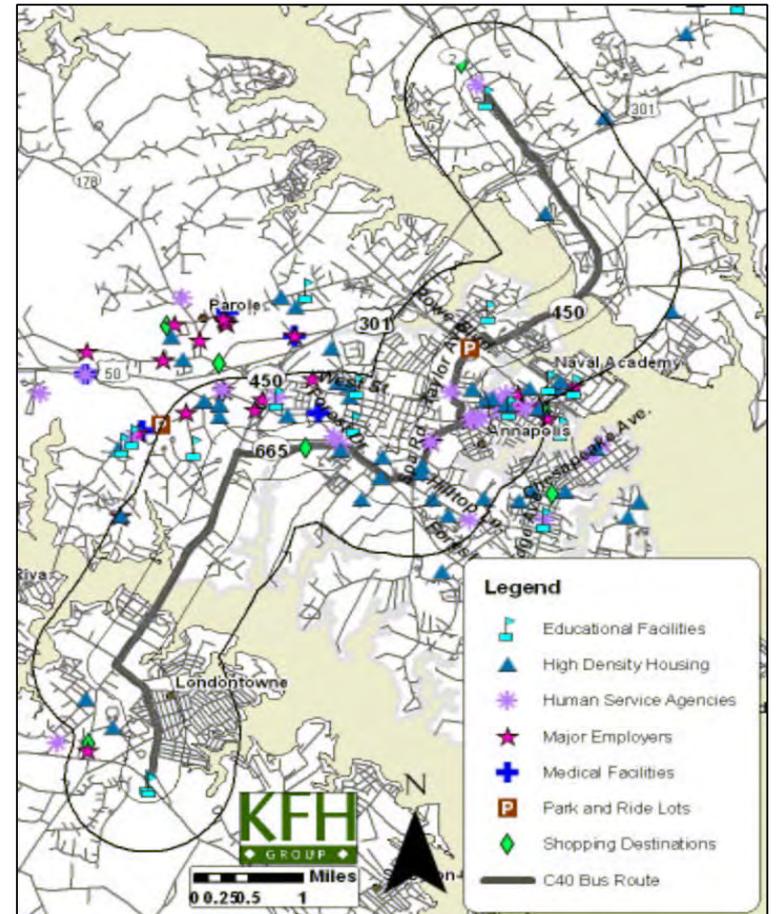
- Annapolis Harbor Center
- The Market at South River Colony
- Value City Shopping Center
- Annapolis Towne Centre at Parole
- Arnold Center Shopping Center

Park & Ride Lot Locations

- Navy Stadium

**Within 1/4 Mile of Route*

**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Annapolis - Edgewater
Hours of Service:	6am-8pm
Days of Service:	Mon-Fri
Fares:	\$4.00 for General Public
Round Trip Miles:	22

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	13,669
Annual Revenue Hours:	3,625
Annual Revenue Miles:	48,938
Annual Operating Cost:	\$224,915
Passenger Trips per Revenue Hour:	3.77
Operating Cost per Revenue Hour:	\$62.05
Operating Cost per Revenue Mile:	\$4.60
Operating Cost per Passenger Trip:	\$16.45

Figure 3-9: C-60 Route

MAJOR TRIP GENERATORS

Educational Facilities

- Sales and Service Training Center
- BWI Airport One-Stop Career Center
- Archbishop Spalding School
- Calvary Christian Academy
- AACC at Arundel Mills
- Hospitality, Culinary Arts & Tourism Institute
- Glen Burnie One-Stop Career Center
- Minority Business Enterprise Program
- Anne Arundel Economic Development Corp
- Service Corps of Retired Executives
- Chamber of Commerce
- Annapolis High School
- North County High School
- Old Mill High School
- Annapolis Area Christian School
- University of Maryland
- The Learning Community
- Rapture Learning Institute for Excellence
- Sojourner Douglass College
- Church on the Rock Christian Academy
- Center for Applied Technology North
- Anne Arundel Community College
- AACC at Glen Bernie

High Density Housing

- Rol-Park Trailer Village
- Admiral Oaks Apartments
- Avalon Landing Apartments
- Conte Lubrano Apartments
- Green Tree Apartments
- Glenwood Senior Citizen High-Rise
- Park Glen Apartments
- Woodside Apartments
- College Creek Terrace
- Glen Forest Senior Apartments
- Knollwood Manor
- Annapolis Gardens
- Bloomsbury Square
- Bowman Court
- Obery Court
- North Green Apartments
- Regatta Bay Apartments
- Spa Cove Apartments
- West Wood Apartments
- Thornbury at Annapolis

High Density Housing Cont.

- Westwinds apartments
- Coursey Station Apartments
- Doll Furnished Apartments
- Glen Mar Apartments
- Glen Burnie Town Apartments
- Quarterfield Apartments
- Summerhill Park
- Village Square
- Chesapeake Mobile Court
- Harpers Mill Townhouses
- 1901 West
- Ewing Health Systems Inc.
- Timothy House
- Admiral Farragut Apartments
- Deerfield Senior Day Center
- Allen Apartments
- Sunrise of Annapolis
- Claiborne Place Apartments
- Millpond Apartments
- Glenview Gardens
- Harbor Gates Apartments
- Severn Square, Stagecoach

Human Service Agencies

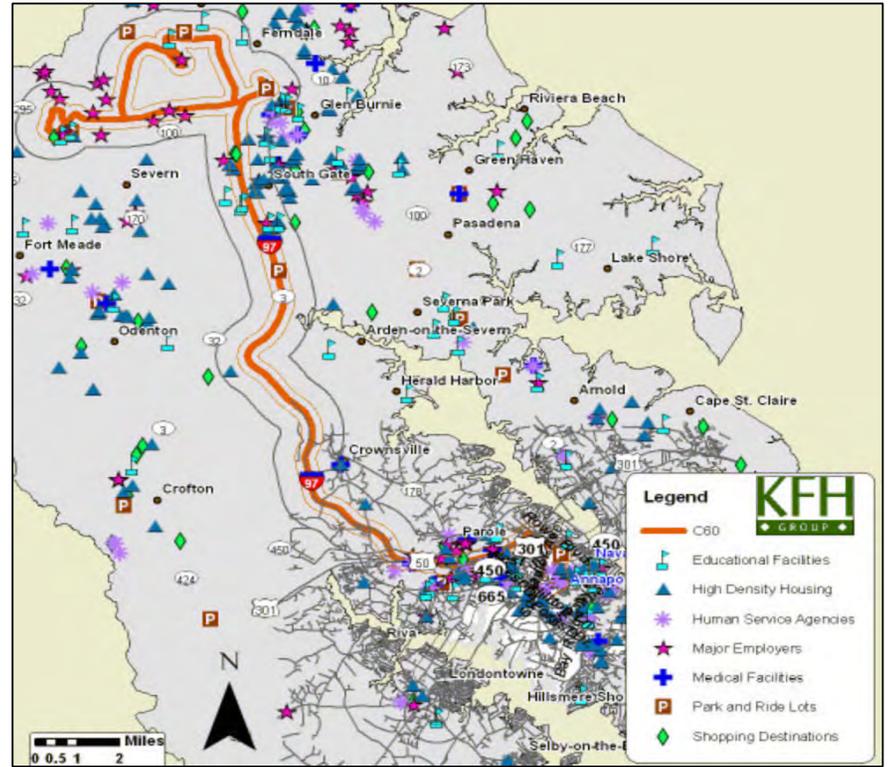
- ARC of Anne Arundel County
- Agency of Community Action
- Maryland Energy Assistance
- LMS Woman & Children's Program
- Annapolis Area Ministries Inc.
- Oficina De Asuntos Latinos
- Abilities Network
- Centro De Servicios
- Anne Arundel County Health Dept.
- County Volunteer Center
- Promedcorp
- Arundel Child Care Connections
- Anne Arundel County Casa
- Obery Human Services Center
- Family and Children's Services
- Annapolis Youth Services Bureau
- We Care and Friends
- Eastern Point Shelter
- MD Korean Social Services Center
- CASOS Inc.
- County Dept of Aging & Disabilities

Major Employers

- Anne Arundel Health Systems Inc
- ARC of Anne Arundel County
- Bass Pro Shops Outdoor World
- Best Buy
- Harland Company
- Home Depot
- Jillian's of Arundel Mills
- Mohawk Industries
- Northwest Airlines
- Opportunity builders Inc.
- Shoppers Food Warehouse
- Signature Flight Support Group
- Southwest Airlines
- TeleCommunication Systems Inc.
- US Airways
- Wal-Mart
- Windermere Group LLC
- BWI Thurgood Marshall Airport
- Advance Marketing Services
- Anne Arundel County
- Anne Arundel Public Schools
- ARINC
- Capital Gazette Communications
- Coca Cola Enterprises Inc.
- Corporate Express
- Mall
- Kop-Flex Inc.
- Pennysaver Group Inc.
- Sams Club
- Structural Group
- Target Stores
- Verizon Communications MD
- Weis Markets

Shopping Centers

- Annapolis Towne Centre at Parole
- Mall
- Cromwell Shopping Center
- Quarterfield Crossing
- Wal-Mart
- Arundel Mills
- Value City Shopping Center
- Gateway Village Shopping Center
- Glen Burnie Town Center



Medical Centers

- Annapolis Health Center
- Anne Arundel Medical Center
- Communicable Diseases Program
- Children's National Medical Center
- Glen Burnie Health Center
- Parole Health Center
- Riva Road Surgical Center

Park & Ride Lot Locations

- Navy Stadium
- Benfield
- Cromwell Station Light Rail
- Arundel Mills
- BWI Airport
- Glen Burnie County Government
- Harry S Truman

**Within 1/4 Mile of Route*
**Within 3/4 Mile of Route*

SERVICE DESCRIPTIONS

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Annapolis-Glen Burnie-BWI
Hours of Service:	7:00am - 7:00pm
Days of Service:	Mon-Fri
Fares:	\$4.00 for General Public
Round Trip Miles:	58

PRODUCTIVITY DATA (FY 2008)

Annual Passenger Trips:	10,602
Annual Revenue Hours:	3,125
Annual Revenue Miles:	93,750
Annual Operating Cost:	\$260,051
Passenger Trips per Revenue Hour:	3.39
Operating Cost per Revenue Hour:	\$83.22
Operating Cost per Revenue Mile:	\$2.77
Operating Cost per Passenger Trip:	\$24.53

Other Services

Annapolis Transit also provides demand-response service for passengers who require transportation assistance beyond ADA requirements. Smaller vehicles are used for such trips as needed. Demand-response trips account for less than five percent of the agency's total trips. Reservations are preferred, and service may be limited due to waiting lists or capacity limitations.

Service Changes

Some service changes have occurred in recent years. Annapolis Transit no longer operates the C-50 Route, which ran between Annapolis and the southern part of Anne Arundel County. The County Department of Social Services (DSS) took over this route, renaming it the South County Bus Service, or SCOTS, for a period, but had to discontinue the service in March 2009, due to rising costs, a limited budget, and sustained low ridership. Annapolis Transit also no longer runs the Kent Island Shuttle, or Route #31, a service that previously connected commuters between the Kent Island Park-and-Ride Lot and Annapolis.

Budgets and Funding Sources

The MTA's Statewide Planning Office administers federal and state funding for the Locally Operated Transit Systems (LOTS) in Maryland. For FY 2010, the City of Annapolis applied to the MTA through the Annual Transportation Plan (ATP) application for funding through the following programs:

- Federal Transit Administration (FTA) Section 5307
- Americans with Disabilities Act (ADA)
- Statewide Rural and Community Based Program (RCB)

The application for FY 2010 requested \$5,790,736 in federal/state funds, with \$2,029,500 of this amount in operating funds and the remainder in capital assistance requests.

The City of Annapolis also provides significant funding for the Annapolis Transit services. The FY 2010 ATP application indicates the City will provide \$894,270 in operating assistance, and a total of \$1,296,710 in total local funding. Overall, the FY 2010 proposed budget was \$7,087,445.

As noted above, Annapolis Transit routes rely on a mix of federal, state, and local funding sources. The Yellow, Orange, Red, Green, and Brown Routes, as well as the Navy Blue and State Shuttles, are funded by the FTA Section 5307 Urbanized Area Formula Program. The Gold, C-40, and C-60 Routes are funded through the MTA's

RCB Program. Currently, the Anne Arundel County OPZ prepares a Memorandum of Understanding (MOU) with Annapolis Transit for the operation of the Brown, Green, Red, and C-40 routes.

Fare Policies

Table 3-2 illustrates Annapolis Transit's fare structure for its fixed-route and ADA/route deviation services.

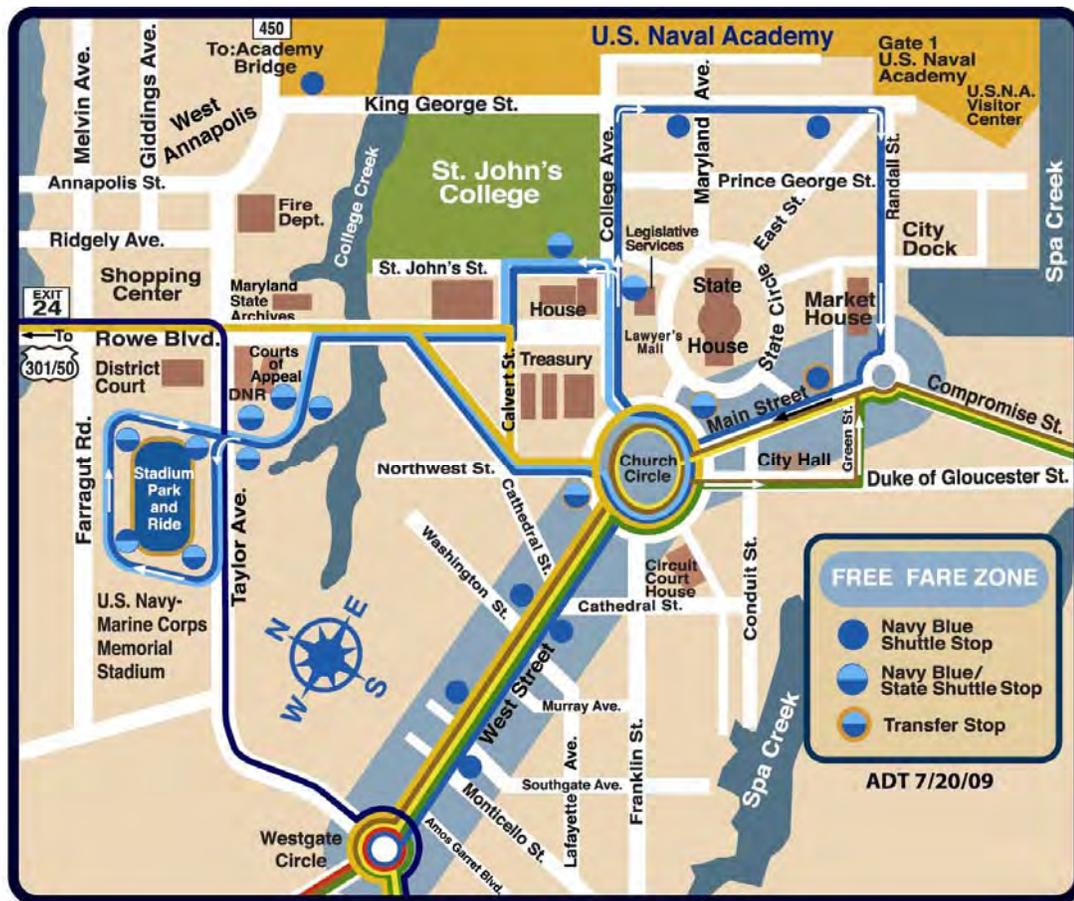
Table 3-2: Annapolis Transit Fare Structure

Service	Adult One-Way	Senior/Disabled*	ADA/Route Deviation
Base Fare	\$1.00	\$0.50	\$2.00
C-40 Route: Arnold to/from Edgewater	\$4.00	\$2.00	\$8.00
C-40 Route: Annapolis to/from Arnold or Edgewater	\$2.00	\$1.00	\$4.00
C-60 Route: Annapolis to/from BWI Airport, Arundel Mills Mall	\$4.00	\$2.00	\$8.00
Orange discount punch card-10 basic fares	\$9.50	--	--
ADA Service (Curb-to-Curb service on Brown Route)- Cash Fare	--	--	\$2.00
One child 6 and under with paying adult	Free	--	--
Use of bicycle racks	Free	--	--
Student discounts available for riders age 12-17 with school ID (half the base fare). Anne Arundel Community College student discount available with valid ID (monthly pass). Monthly, Quarterly, Annual, and Summer Youth passes also available.			
*Discount for 60 years and over or persons with disabilities with ADOT ID, during non-peak hours only (9:30 am to 3:30 pm and 6:30 pm to close).			

While the base fare for fixed-route services is \$1.00, seniors (persons age 60 and over), persons with disabilities, and persons receiving federal medical assistance pay a reduced fare of \$0.50 with an approved ADOT ID Card. Eligible passengers must apply for reduced fare cards by contacting Annapolis Transit. Students age 12 and over with a current school-issued ID also pay this reduced fare when they ride during non-school hours and weekends from September to mid-June. These reduced fares apply during off-peak hours only, between 9:30 a.m. and 3:30 p.m., and after 6:30 p.m. The fare for route deviation services is double the standard fare. Exact fare is required for all services, as drivers do not handle money or provide change. Monthly, quarterly (three-month), and annual passes are also available. A Summer Youth Pass, requiring a school-issued ID, allows riders ages 12 to 18 to have unlimited rides from mid-June to Labor Day.

Starting on November 21, 2006, Annapolis Transit implemented a Free Fare Zone in downtown Annapolis, within which passengers can ride buses and shuttles for free. Figure 3-10 portrays the Free Fare Zone, which encompasses the downtown area between Compromise Street (on the Annapolis side of the Spa Creek Bridge) and Westgate Circle. Passengers who board the Yellow, Green, Brown and Gold Routes within the Free Fare Zone ride for free, though they must pay the regular fare if traveling outside the Free Fare Zone.

Figure 3-10: Annapolis Transit’s Free Fare Zone



Source: Annapolis Transit Website, <http://www.ci.annapolis.md.us/info.asp?page=7615>

Fleet

The Annapolis Transit fleet is currently composed of 27 vehicles that can seat between 16 and 30 passengers. Annapolis Transit reports that peak service requires 23 vehicles. The existing route network only requires 15 vehicles for peak service. However, due to extreme back-ups that arise during the peak periods, “back-up” service is implemented thereby adding an additional eight vehicles to meet the times listed within the schedule.

Additional information on vehicle inventory that the City of Annapolis submitted to the MTA as part of their FY10 Annual Transportation Plan is included in Table 3-3. This inventory includes information on seating capacity, funding source, and mileage. As noted in this inventory, nine vehicles in the fleet have over 250,000 miles. In the FY 2010 application to the MTA, Annapolis Transit requested seven vehicles to replace these older buses that have reached their useful life.

Operations / Maintenance Facilities

Annapolis Transit has an administrative and maintenance facility on Chinguapin Round Road in Annapolis. The facility houses the administrative offices, transit operations, a maintenance shop, bus wash, as well as CNG fueling facilities. The MTA conducted a Triennial Review of Annapolis Transit in November 2009, as required by federal law, to evaluate the system's formula grant management performance and compliance with current FTA requirements. The Triennial Review included preliminary reviews of files at the MTA office and on-site discussions and review of agency procedures, practices, and records. The review found that Annapolis Transit is fully in compliance in all but one of the 23 areas reviewed (maintenance). In addition, follow-up is needed in three areas - Half-Fare for Elderly and Persons with Disabilities, ADA, and Drug and Alcohol Testing Program.

As part of the Triennial Review, the MTA conducted an in-depth review of vehicle and facility maintenance practices in 2008. The review identified many problems with both facility maintenance and vehicle maintenance. Annapolis Transit had a maintenance plan that included a series of checklists for routine and preventive maintenance (PM), but these were not being followed and the condition and cleanliness of the vehicles, as well as maintenance record keeping, at the time of the 2008 maintenance review were not acceptable. At the conclusion of the 2008 review, MTA provided consultant assistance to Annapolis Transit as the system attempted to correct deficiencies.

MTA conducted a follow-up re-assessment in 2009 that found that while some progress had been made, some of the same problems persisted with inadequate record-keeping and poor vehicle condition. The 2009 maintenance re-assessment noted that problems found on the Annapolis Transit buses are so widespread, of varying types of severity, that it appears there has been a breakdown in the PM program. A visual inspection of the vehicles showed that they do not appear to be well maintained, and the maintenance records reviewed during the 2009 re-assessment indicated that the monthly PM servicing was not being done consistently. In light of these results, the MTA requested that Annapolis Transit develop a plan for correcting maintenance issues identified in the 2009 maintenance re-assessment report. In addition, to comply with ADA requirements, the plan should address how Annapolis Transit will ensure

Table 3-3: Annapolis Transit Vehicle Inventory

Agency Fleet Number	Vehicle Identification Number (VIN)	Model Year	Make	Vehicle Type or Model	Equipped with Lift or Ramp? (Y or N)	Seating Capacity		Communi-cations Equipment	Capital Funding Source	Current Mileage	Current Status	Average Annual Mileage	Fiscal Year Budgeted for Replacement
						Ambu-latory	Wheel chair						
REVENUE VEHICLES:													
49	1C9CS2DW5LW077508	1990	Chance	Trolley	N	22	n/a	Radio	5307	461,552	Back-up	30,000	2007
50	1C9CS2DW7LW077509	1990	Chance	Trolley	N	22	n/a	Radio	5307	486,890	Back-up	30,000	2007
51	1C9CS2DW3LW077510	1990	Chance	Trolley	N	22	n/a	Radio	5307	436,789	Back-up	30,000	2007
67	1C9S1CCSOVW535039	1997	Chance	Trolley	Y	30	2	Radio	5307	285,391	Active	25,000	2010
56	1C9M2RAS0RW535723	1994	Chance	Medium	Y	25	2	Radio	5307	522,589	Back-up	45,000	2008
57	1C9M2RAS2RW535724	1994	Chance	Medium	Y	25	2	Radio	5307	513,698	Back-up	45,000	2008
58	1C9M2RAS4RW535725	1994	Chance	Medium	Y	25	2	Radio	5307	555,326	Back-up	45,000	2008
59	1C9M2RAS6RW535726	1994	Chance	Medium	Y	25	2	Radio	5307	519,698	Back-up	45,000	2009
68	1C9M4RBS9VW535822	1997	Chance	Medium	Y	25	2	Radio	5307	482,471	Active	45,000	2009
61	1FDKE30F4SHC00734	1995	Startrans	Small Transit Bus	Y	16	2	Radio	5307	466,359	Active	35,000	2010
62	1FDKE30F2SHC00735	1995	Startrans	Small Transit Bus	Y	16	2	Radio	5307	476,224	Active	35,000	2010
100	5DF230DB52JA99302	2002	Thomas	Medium-Duty Transit Bus	Y	30	2	Radio	5307	255,924	Active	50,000	2014
101	5DF230DB72JA99303	2002	Thomas	Medium-Duty Transit Bus	Y	30	2	Radio	5307	237,691	Active	50,000	2014
102	5DF230DB92JA99304	2002	Thomas	Medium-Duty Transit Bus	Y	30	2	Radio	5307	265,080	Active	50,000	2014
103	5DF230DB02JA99305	2002	Thomas	Medium-Duty Transit Bus	Y	30	2	Radio	5307	266,055	Active	50,000	2014
104	5DF230DB42JA99307	2003	Thomas	Medium-Duty Transit Bus	Y	30	2	Radio	5307	240,384	Active	50,000	2014
105	5DF230DB42JA99308	2003	Thomas	Medium-Duty Transit Bus	Y	30	2	Radio	5307	202,065	Active	50,000	2014
200	1FDWE45F63HB43116	2003	Thomas	Small Transit Bus	Y	17	2	Radio	5307	268,897	Active	50,000	2010
201	1FDWE45F13HB43119	2003	Thomas	Small Transit Bus	Y	17	2	Radio	5307	281,139	Active	50,000	2010
202	1FDWE45F83HB43120	2003	Thomas	Small Transit Bus	Y	17	2	Radio	5307	233,359	Active	50,000	2010
203	1FDXE45P95HA36030	2005	Thomas	Small Transit Bus	Y	17	2	Radio	5307	179,483	Active	50,000	2012
204	1FDXE45P05HA36031	2005	Thomas	Small Transit Bus	Y	17	2	Radio	5307	142,091	Active	50,000	2012
205	1FDXE45P05HA36032	2005	Thomas	Small Transit Bus	Y	17	2	Radio	5307	208,313	Active	50,000	2012
206	1FDXE45P85HA24211	2005	Thomas	Small Transit Bus	Y	17	2	Radio	5307	150,031	Active	50,000	2012
300	1Z9B6BSS56W216333	2006	Optima	Heavy-Duty Transit Bus	Y	23	2	Radio	5307	93,206	Active	50,000	2018
301	1Z9B6BSS76W216334	2006	Optima	Heavy-Duty Transit Bus	Y	23	2	Radio	5307	123,691	Active	50,000	2018
302	1Z9B6BSS96W216335	2006	Optima	Heavy-Duty Transit Bus	Y	23	2	Radio	5307	97,803	Active	50,000	2018

Table 3-3: Annapolis Transit Vehicle Inventory

Agency Fleet Number	Vehicle Identification Number (VIN)	Model Year	Make	Vehicle Type or Model	Equipped with Lift or Ramp? (Y or N)	Seating Capacity		Communi-cations Equipment	Capital Funding Source	Current Mileage	Current Status	Average Annual Mileage	Fiscal Year Budgeted for Replacement	
						Ambu-latory	Wheel chair							
NON-REVENUE VEHICLES:														
70	1GCGK24F9WE137677	1998	Chevrolet	Other	n/a	2	n/a	Radio	5307	38,029	Active	8,000	2011	If replacement, Vehicle being replaced
71	1FTOF28W0XNB65478	1999	Ford	Other	n/a	2	n/a	Radio	5307	102,729	Active	10,000	2012	
72	211BWB25Y41K557209	2001	Dodge	Other	n/a	10	n/a	Radio	5307	330,974	Active	45,000	2011	
76	1G1JC524X27248834	2002	Chevrolet	Other	n/a	5	n/a	Radio	5307	46,157	Active	8,000	2012	
B1	1GKDT13W5SK543421	1995	GMC	Other	n/a	5	n/a	Radio	5307	128,698	Active	20,000	2009	
B2	1GKDT13W0SK543164	1995	GMC	Other	n/a	5	n/a	Radio	5307	139,821	Active	25,000	2008	
63	1GJT13W9SK542790	1995	GMC	Other	n/a	5	n/a	Radio	5307	157,970	Inactive	25,000	2007	
90	1FMFU16598LA78242	2008	Ford	Other	n/a	7	n/a	Radio	5307	3,646	Active	15,000	2018	
VEHICLES AWARDED BUT NOT RECEIVED (2009 and previous years):											Grant Award Year	Order Date		
n.a.	n.a.	n.a.	n.a.	Heavy-Duty Trolley	Y	28	2	Radio	5307	n.a.	FY07	6/1/2007	n.a.	49
				Heavy-Duty Trolley	Y	28	2	Radio	5307		FY07	6/1/2007		50
				Heavy-Duty Trolley	Y	28	2	Radio	5307		FY07	6/1/2007		51
				Heavy-Duty Transit Bus	Y	28	2	Radio	5307		FY08	Pending		56
				Heavy-Duty Transit Bus	Y	28	2	Radio	5307		FY08	Pending		57
				Heavy-Duty Transit Bus	Y	28	2	Radio	5307		FY08	Pending		58
				Other	n/a	7	n/a	Radio	5307		FY08	n/a		B2
				Heavy-Duty Transit Bus	Y	28	2	Radio	5307		FY09	n/a		59
				Heavy-Duty Transit Bus (Partial)	Y	28	2	Radio	5307		FY09	n/a		68 (Partial)
				Other	n/a	7	n/a	Radio	5307		FY09	n/a		B1

maintenance of lifts and other accessibility features as part of the revisions to maintenance procedures. This corrective action is currently in progress.

Service Performance Review - MTA Performance Standards

The MTA has established performance standards for the LOTS 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”, “Acceptable”, or “Needs Review” based on how they perform in each of the operating measures. In addition, these standards are utilized in determining whether new services requested by the systems should be funded based on their potential for being successful.

The performance standards are derived from a compilation of sources that include industry research, industry experience, and peer reviews. The performance standards assessed for each route include:

- *Operating Cost Per Hour* – total cost of operations with respect to total service hours, which is calculated as the time from when the driver pulls out for service until the driver returns from service.
- *Operating Cost Per Mile* – total cost of operations with respect to total service miles, which is calculated as miles from driver pull-out to driver pull-in, which includes deadhead mileage.
- *Operating Cost Per Passenger Trip* – total cost operations with respect to total ridership, which is calculated as each passenger boarding counted as one passenger trip.
- *Farebox Recovery* – total farebox receipts with respect to total operating cost.
- *Passenger Trips Per Mile* – total passenger trips with respect to the total service miles.
- *Passenger Trips Per Hour* – total passenger trips with respect to the total service hours.

It should be noted that the MTA guidelines involving cost (cost per mile, cost per hour, cost per trip) were developed using data that is now several years old, and these have not been adjusted by MTA to reflect general inflation in transportation costs, or fuel cost increases. The most useful single measure is the boardings (person-trips) per hour measure, as it reflects usage in relation to 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.

Table 3-4 shows the MTA performance standards, including those that apply to small urban fixed-route services operated by Annapolis Transit.

Table 3-4: MTA Performance Standards

Lots Small Urban Fixed-Route Service	Successful	Acceptable	Needs Review
Operating Cost per Hour	< \$45	\$45-\$50	> \$50
Operating Cost per Mile	< \$2.50	\$2.50-\$3.50	> \$3.50
Operating Cost per Passenger Trip	< \$4.00	\$4.00-\$6.00	> \$6.00
Local Operating Revenue Ratio	> 50%	40% -50%	< 40%
Farebox Recovery Ratio	> 25%	20-25%	< 20%
Passenger Trips per Mile	> 0.75	0.65-0.75	< 0.65
Passenger Trips per Hour	> 12	8 - 12	< 8

Service Performance Review by Route

Table 3-5 outlines Annapolis Transit's service performance in FY 2008 by route, according to the agency's FY 2010 grant application to MTA (Form 2a). Numbers are highlighted in green, blue, or red to indicate their performance as "successful," "acceptable" or "needs review," respectively, based on MTA's Locally Operated Transit System (LOTS) performance indicators for small urban fixed-route service. As seen in the table, Annapolis Transit routes are in need of review in several categories. All the fixed routes are in need of review in terms of operating cost per hour; the C-40 and C-60 routes are the worst performers in this category. All routes are also in need of review in terms of the farebox recovery ratio; the FY 2008 data for this indicator were significantly less than the MTA's threshold of 20%, at which services should be reviewed. Nearly all routes also performed poorly in terms of the operating cost per mile, except for the C-60, which was acceptable.

Table 3-5: Service Performance of Annapolis Transit Routes in FY 2008

Route	Operating Cost/Hour	Operating Cost/Mile	Operating Cost/ Passenger Trip	Local Operating Revenue Ratio	Farebox Recovery Ratio	Passenger Trips/Mile	Passenger Trips/Hour
Red	\$57.59	\$4.11	\$1.20	50.9%	10.6%	3.43	47.98
Yellow	\$56.43	\$4.70	\$1.32	55.7%	9.6%	3.56	42.67
Green	\$58.96	\$3.93	\$1.79	43.8%	7.1%	2.20	32.98
Orange	\$59.25	\$4.23	\$1.36	50.5%	9.3%	3.11	43.49
Gold	\$52.18	\$5.80	\$1.20	40.3%	10.2%	4.81	43.30
Brown	\$56.25	\$4.33	\$3.48	14.4%	7.4%	1.24	16.15
C-40	\$62.05	\$4.60	\$16.45	11.3%	5.1%	0.28	3.77
C-60	\$83.22	\$2.77	\$24.53	4.1%	1.4%	0.11	3.39

Key: Red = 'Needs Review', Blue = 'Acceptable', Green = 'Successful' based on MTA Standards for LOTS Performance Indicators of Small Urban Fixed-Route Service.

Source: Annapolis Transit's FY 2010 grant application to MTA (Form 2a).

The local routes within the City were generally successful for the indicators of operating cost per passenger trip, local operating revenue ratio, passenger trips per mile, and passenger trips per hour. The indicators related to passenger trips may have performed well in part due to the high occurrence of transfers between existing routes, such that riders are often counted twice for total ridership counts. The C-40 and C-60 routes were the worst-performing services overall, in need of review for nearly all performance indicators. It should be noted, however, that the MTA standards used here are for fixed-route service, even though the Brown, C-40 and C-60 Routes are technically deviation services. Although not included in Table 3-5, the Annapolis Transit system, as a whole, operates at an average of 28.27 and 1.88 passenger trips per hour and per mile, respectively, both of which meet MTA standards.

On-Time Performance Review and Ridership Analysis by Stop

During May and early June 2007, MTA conducted a review of on-time performance and a stop-by-stop analysis of ridership on Annapolis Transit's fixed routes. Table 3-6 portrays Annapolis Transit's on-time performance by route.

Table 3-6: On-Time Performance by Route

	Total Trips	Early (>0 min. early)	On Time (0-5 min. late)	Late (>5 min. late)	Very Late (>15 min. late)
RED	30	10%	63%	27%	0%
YELLOW	20	0%	50%	50%	0%
GREEN-W	12	0%	83%	17%	0%
GREEN-E	12	0%	42%	58%	17%
ORANGE	18	0%	44%	56%	0%
GOLD-A	10	10%	30%	60%	10%
GOLD-B	10	10%	40%	50%	20%
BROWN-A	12	8%	33%	58%	8%
BROWN-B	10	30%	50%	20%	0%
Average	134	7%	51%	43%	4%

The following excerpt from the MTA 2007 report outlines the issues related to Annapolis Transit's on-time performance:

- Overall, only 51% of all trips operated on-time (defined as between 0 and 5 minutes late)¹. Seven percent of all trips began early, and 43% of them began late. Four percent of all trips began "very late," defined as more than 15 minutes behind schedule.²
- The Green West Route had by far the best on-time performance, with 83% of all trips operating on-time. The next-best performer was the Red Route, with a 63% on-time rate. On the other end of the spectrum, only 30% of the Gold A Route's trips, and 33% of the Brown A Route's trips, ran on-time. The Gold B and Green East routes had the highest proportion of very late trips – 20% and 17%, respectively.
- The overriding cause of Annapolis Transit's mediocre punctuality performance is the very feature that makes the system so convenient for its riders: its reliance on a timed-transfer pulse system. It was observed that if any bus arrived late at the Spa Road Transfer Point, all the other buses would wait for it. This would cause the entire pulse to be delayed, which in turn would cause the next one to be even more delayed. (Lack of layover time only compounded the problem.) Yet though this was the main reason for buses being late, it was paradoxically also the reason why so few trips were *very* late; once the buses fell close to 15 minutes behind schedule, Supervision would hold all buses at Spa Road until the following pulse-time. Such a "hold" took place at least once a day, and sometimes two or even three times. And while this tactic would get the system back on schedule, it would also result in a fairly high proportion of missed trips – and delayed riders.

Figure 3-11 displays the system-wide ridership by stop, and Table 3-7 summarizes the highest ridership by route and stop, excluding the Spa Road Transfer Point. As seen in Figure 3-11, the most frequented stops (outside of the Spa Road Transfer Point) were Westfield Mall, the Department of Aging and Disabilities (DoAD) on Calvert Street, Eastport Plaza, Hilltop Lane at Boxwood Road, and Annapolis Marketplace.

¹ To determine the punctuality of each trip, the actual time was compared to the scheduled time at two time points: the origin (which, for most trips, was the Spa Road Transfer Point) and an important stop located roughly halfway through the trip.

² Missed trips were not included in the punctuality calculations, even though would-be riders of these trips would have perceived them as being very late.

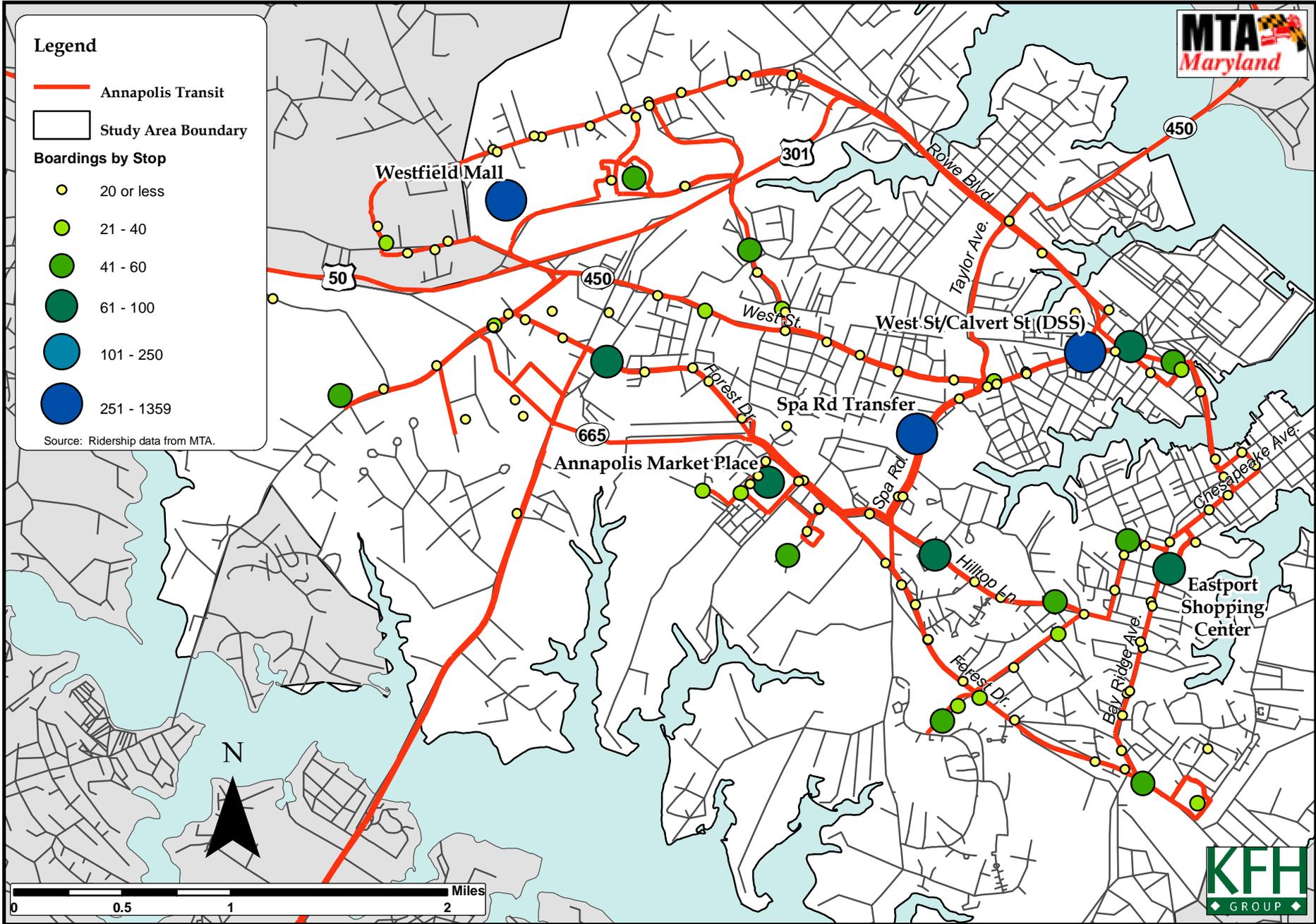


Figure 3-11: Boardings by Stop (Spring 2007 Counts)

Table 3-7: Highest Ridership by Route and Stop

Route	Stops with Highest Ridership (number)
Red	<ul style="list-style-type: none"> ▪ Westfield Mall (135) ▪ Anne Arundel Medical Center (45) ▪ Admiral Drive - Admiral Oaks (32) ▪ Admiral Drive - Poplar Avenue (31)
Yellow	<ul style="list-style-type: none"> ▪ DoAD - Calvert Street (130) ▪ Eastport Plaza (65) ▪ President Street - Madison Street (49)
Green (East & West combined)	<ul style="list-style-type: none"> ▪ Heritage Office Center (24) ▪ Forest Drive - Solomons Island Road/Route 2 (24)
Orange	<ul style="list-style-type: none"> ▪ Hilltop Lane - Boxwood Road (72) ▪ Newtowne Drive - Betsy Court (42)
Gold (A & B combined)	<ul style="list-style-type: none"> ▪ Westfield Mall (47) ▪ DoAD - Calvert Street (45)
Brown (A & B combined)	<ul style="list-style-type: none"> ▪ Westfield Mall (84) ▪ Safeway - Forest Drive (58) ▪ DoAD - Calvert Street (46)

MTA Bus Service

At this time, the only other public transportation service in Annapolis is operated directly by the MTA. MTA Routes 922 and 950 are two commuter bus routes that connect Annapolis to Washington, D.C. These services are operated by Dillon's Bus Service, Inc., under contract to the MTA. Both commuter routes originate at Kent Island and travel through Annapolis, making several stops along West Street and at the Harry S. Truman Park and Ride Lot, before continuing express to downtown D.C. Several trips serve Annapolis during the morning peak period, from about 5:00 a.m. to 8:80 a.m., and during the evening peak period, from about 4:00 p.m. to 7:30 p.m. Route 950 also offers one midday trip from D.C. to the Harry S. Truman Park and Ride, arriving at 1:20 p.m. Both commuter services run approximately 20- to 30-minute headways during the peak periods, and operate on weekdays only.

The MTA also operates a local bus route, Route 14, which connects Annapolis to the Patapsco Light Rail Station in Lansdowne-Baltimore Highlands. From Calvert and Bladen Streets in Annapolis, this service travels north via Route 2/Ritchie Highway, serving destinations including Anne Arundel Community College, Severna Park, Pasadena, Cromwell, Glen Burnie, and Brooklyn Park. Route 14 operates daily, serving Annapolis from about 5:30 a.m. to 12:40 a.m. on weekdays, 8:00 a.m. to 11:50 p.m. on Saturdays, and 8:00 a.m. to 9:00 p.m. on Sundays and holidays. The headways are approximately hourly, with more frequent service during the week. This local bus route provides an important connection to the MTA's light rail system for Annapolis residents to access the City of Baltimore, and vice versa.

Route 922, 950, and 14 are shown in Figure 3-12. MTA does the planning for these services in response to user input and their own public outreach, so these services are not directly a focus of consideration under the City of Annapolis TDP, except for the Annapolis Transit routes that connect with these services.

Anne Arundel County Department of Aging and Disabilities

The DoAD provides human service transportation in the County, including Annapolis. Older adults, age 55 and older, and persons with disabilities, age 18 and older, are eligible to participate in the DoAD's Van Program or Taxi Voucher Program. The Van Program provides curb-to-curb service with small, accessible buses during the week, from 7:00 a.m. to 5:00 p.m. This program mainly involves subscription service to senior centers, nutrition sites, dialysis centers, and community colleges. Services provided by the Van Program are free of charge, but donations are accepted. The DoAD also operates the Taxi Voucher Program, where eligible persons may purchase coupons for rides, at discounted prices, with participating cab companies. Aside from serving older adults and persons with disabilities, this program also has a limit on income for eligibility. Table 3-8 includes the participating cab and taxi companies that serve the Annapolis area.

Commuter Assistance

The Annapolis Regional Transportation Management Association (ARTMA) is a Transportation Management Association (TMA) that advocates for transportation-related issues and provides ridesharing assistance throughout Anne Arundel County, with a focus on connecting Annapolis to Baltimore and Washington. ARTMA coordinates information on available transit services and promotes transportation alternatives including ridesharing. ARTMA is a membership organization and provides a venue for various stakeholders to participate in dialogue about transportation needs and help provide solutions. The organization is managed by a volunteer Board of Directors and receives funding from the MTA and Anne Arundel County. ARTMA also coordinates with the City of Annapolis to offer fare-free rides to Annapolis area employees.

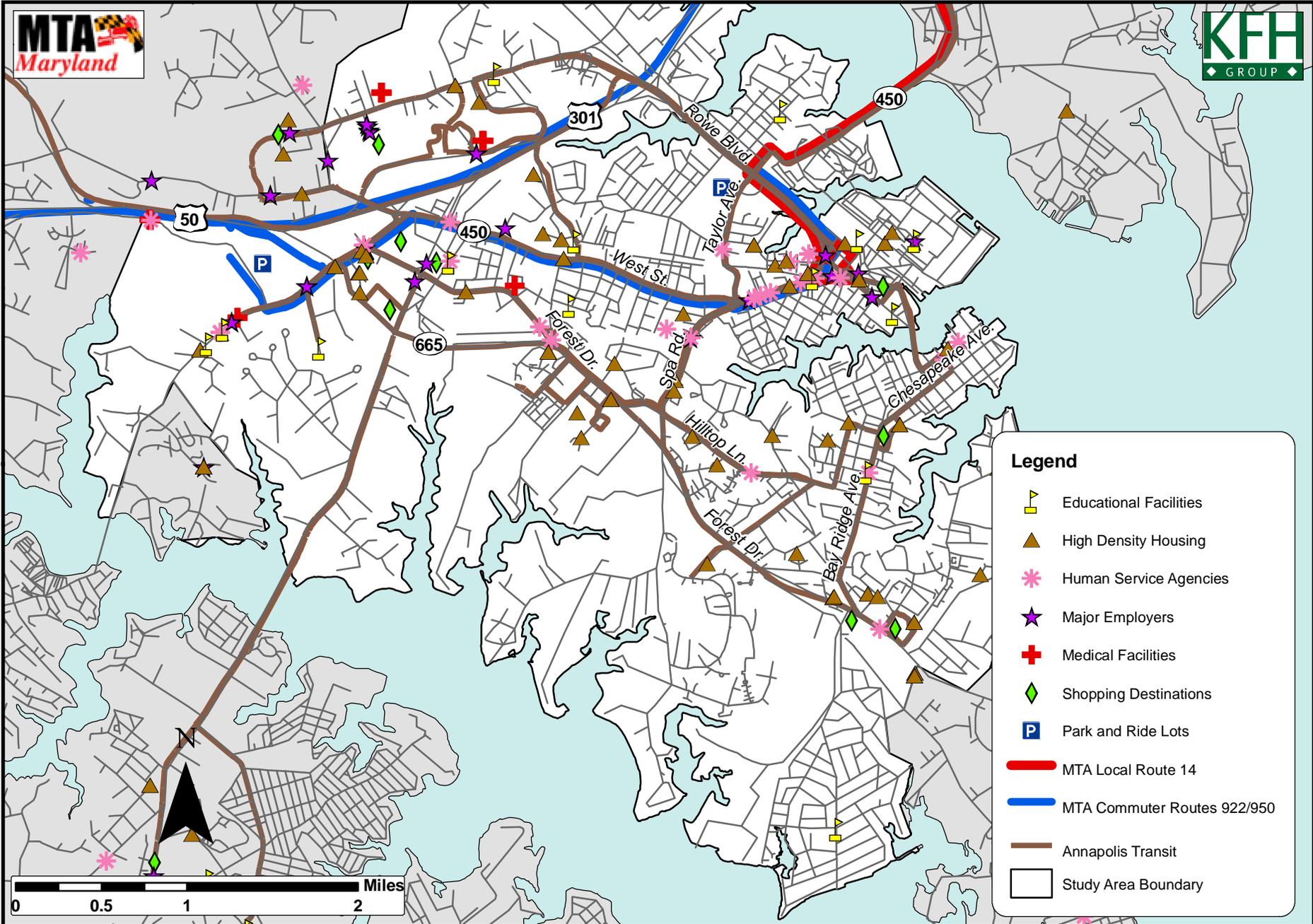


Figure 3-12: MTA Routes that Serve Annapolis

**Table 3-8: Annapolis Area Taxi Companies
Participating in the DoAD Taxi Voucher Program**

Company	Locations	Phone Numbers
Annapolis Bay-Area Taxi	Serves all of Anne Arundel Co.	(410) 267-7004 (410) 267-0068
Annapolis Yellow Cab Co.	Annapolis, Severna Park, Edgewater	(410) 268-1212 (410) 268-2626 (410) 268-3737
Annapolis Diamond Cab Company	Annapolis, Edgewater, Severna Park	(410) 268-0022 (410) 573-0000
Bruce Thomason	Annapolis, Edgewater, Severna Park	(410) 353-5130
County Cab	Annapolis, Brooklyn Park, Crofton, Fort Meade, Hanover, Linthicum, Odenton, Parole, Pasadena, Severn, Severna Park, Baltimore City, and Baltimore County	(410) 787-8800
Reliable Cab Company	Annapolis	(410) 268-4714
United Cab Companies of Anne Arundel County LLC	Serves all of Anne Arundel Co.	(410) 760-9090 (410) 760-1241
Yellow Cab Company LLC of Anne Arundel County	Serves all of Anne Arundel Co.	(410) 609-1200

Assessment of Pedestrian and Bicycle Access

Annapolis Transit has a Bike-On-Bus program, which encourages multi-modal connections for transit users and bicyclists. All Annapolis Transit vehicles are equipped with bike racks, which are free of charge. The City has numerous walking and biking trails, including the Navy-Marine Corps Memorial Stadium Trail, the Poplar Ave. Trail, and the Spa Creek Trail. The Baltimore and Annapolis Trail connects Annapolis to Glen Burnie. Two major national trails also travel through Annapolis: the East Coast Greenway, which connects to other locales along the East Coast, and the American

Discovery Trail, which runs from Delaware to California. These trails, along with Annapolis Transit's Bike-On-Bus program, promote the use of alternative transportation for leisure and other trip purposes in the Annapolis area and beyond.

Regarding pedestrian access, Annapolis is recognized as one of the top American cities for walking. Most streets where transit services run have sidewalks, though sidewalk improvements would enhance accessibility to transit, especially for persons with disabilities. Such improvements could include widening sidewalks, removing obstructions, and paving smoother sidewalks, particularly in Historic Annapolis where sidewalks are often uneven. Recommendations for improving pedestrian and bicyclist accessibility will be determined in the City's first pedestrian and bicycle plan, which is currently underway.

SUMMARY

Annapolis already has a good foundation in public transportation, with significant geographic coverage including the densest residential areas of the City and major destinations. However, as the City and surrounding areas such as Parole have continued to experience population and economic growth, both traffic and congestion have accordingly worsened and impacted the quality of Annapolis Transit services. Annapolis Transit's existing services have poor on-time performance, primarily due to the nature of the "pulse" system, which requires timed transfers between all routes. This persistent lack of punctuality in operating the services, compounded by other negative customer experiences such as the poor quality of vehicles, has come to overshadow the convenience of the pulse system for passengers transferring between routes. Described in the next chapter, this TDP developed service alternatives to include improvements to the pulse system as well as new route structures, which provide more direct connections, shorter trips, and multiple opportunities for transfers.

Chapter 4

Service and Organizational Alternatives

INTRODUCTION

This chapter provides a series of service and organizational alternatives that could be implemented to meet identified needs for improving public transit in the City of Annapolis. Conceptual routes were developed based on the initial needs assessment, gaps determined in current services, recommendations from previous studies and proposals, and a physical review of potential routes. Various scenarios were formulated, discussed, and evaluated for potential inclusion in the recommended plan, described in the next chapter.

Through the in-depth review and outreach conducted as part of this TDP process, including input from the study's Citizen Advisory Committee and the on-board surveys of current Annapolis Transit riders, several specific improvements were developed for consideration. These improvements address several issues related to Annapolis Transit services:

- Bettering the on-time performance of the routes;
- Reducing the need for customers to transfer and allowing more “one-seat” rides (where customers do not need to transfer between routes to reach their destination);
- Shortening travel time for customers through service modifications; and
- Reducing headways (the time interval between successive buses on the same route heading in the same direction).

This chapter also provides a comparison of the organizational structures of peer transit systems, which Annapolis Transit may consider adapting if a different organizational structure would be more appropriate for implementing the service changes recommended as a result of this TDP process.

KEY AREAS TO SERVE

Based on the transit needs and service analyses described previously, several major origins and destinations were targeted in developing new services and service improvements:

- High density housing along Bywater Road, Copeland Road, and Newtowne Drive; Hilltop Lane and Tyler Avenue; President Street and Madison Street; and Admiral Drive
- Westfield Annapolis Shopping Mall
- Downtown
- Eastport Plaza
- West Street
- Department of Aging and Disabilities – Calvert Street
- Navy-Marine Corps Memorial Stadium
- Annapolis Market Place
- Church Circle (School Street)
- Value City Shopping Center
- Heritage Office Center
- Bay Ridge Shopping Center
- Anne Arundel Medical Center
- Gateway Village (Housely Road)

These places include existing Annapolis Transit stops with the highest boardings, which are expected to continue to be the most popular stops among the service alternatives described below.

BALTIMORE METROPOLITAN COUNCIL (BMC) TRAVEL DEMAND DATA

The BMC's Baltimore Regional Transportation Board (BRTB) is the metropolitan planning organization for the Baltimore region, which consists of six jurisdictions including Anne Arundel County. As part of its responsibility to coordinate transportation planning in the region, the BRTB conducts travel demand forecasting,

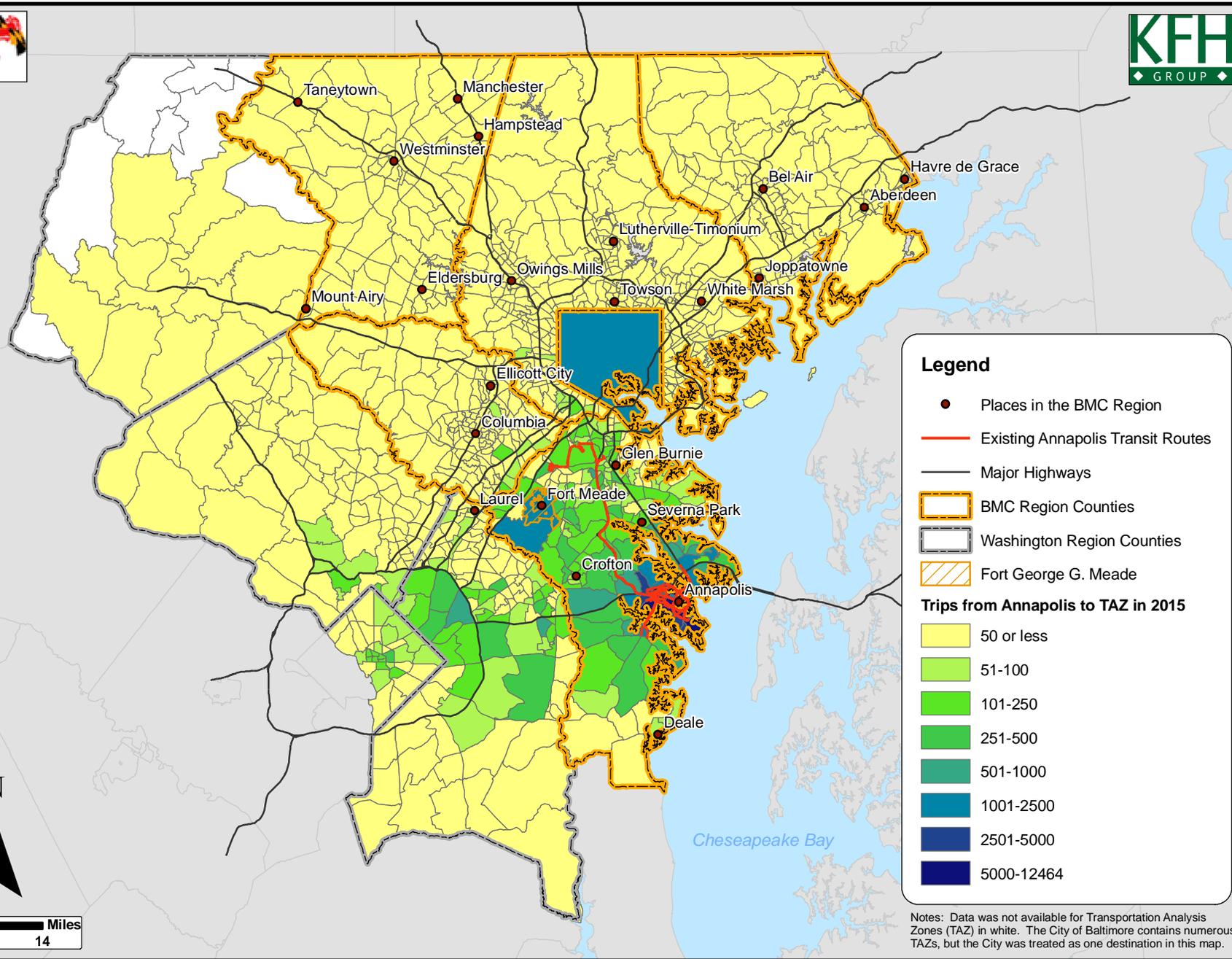
which estimates future trips that will be generated based on demographic data and employment. The BRTB model's estimates of daily trips include all modes and various trip purposes, and represent different time periods. The BRTB's trip tables for 2015 were analyzed to determine areas within the Baltimore and Washington, D.C. regions that are projected to have the highest connectivity to Annapolis in terms of travel patterns over the next five years. Figure 4-1 portrays the projected trips in 2015 *from* Annapolis to transportation analysis zones (TAZs) within the Baltimore and Washington regions, while Figure 4-2 portrays the trips *to* Annapolis from regional TAZs.¹

Figure 4-1 indicates that, in 2015, a large number of residents in the study area will make trips within the Annapolis Neck Peninsula and to the Broadneck Peninsula, particularly Arnold and Cape St. Claire. The two other top destinations are Fort Meade and the City of Baltimore. Much of Anne Arundel County and central Prince George's County, including New Carrollton and Bowie, will also attract a relatively high number of trips from the Annapolis area in 2015. Downtown D.C. and the I-270 corridor between Chevy Chase and Rockville in Montgomery County are additional destinations for trips from Annapolis.

Figure 4-2 shows that many of these same areas will also serve as major origins for trips to Annapolis in 2015. The TAZs with the highest projected trips to the study area are located in the Annapolis Neck Peninsula, including Parole, and surrounding parts of Anne Arundel County, particularly Londontowne, Riva, Arnold, and Cape St. Claire. Central Anne Arundel County, around Odenton, Crownsville, Crofton, and Birdsville, will also generate a relatively high number of trips to the study area. Figure 4-2 also indicates that southern Anne Arundel County will be a popular origin for trips to Annapolis in 2015. Compared to Figure 4-1, a higher number of trips are projected to originate in the City of Baltimore and travel to Annapolis than vice versa. Prince George's County, particularly Bowie, is also projected to generate numerous trips to Annapolis, as are parts of eastern D.C. and the I-270 corridor, from Chevy Chase to Germantown. A few areas in eastern Howard County and southern Baltimore County will also generate a notable number of trips to Annapolis in 2015.

This information regarding projected regional travel patterns was considered mainly in the development and improvement of Annapolis Transit's longer-distance routes that travel into Anne Arundel County, such as the existing C-40 and C-60 routes. Possible new or improved commuter bus services between Annapolis and parts of the Baltimore and Washington regions are noted in this plan, though the primary focus of the TDP is on local transit services. To this end, a third map was developed based on

¹ Note that all the trips to and from the City of Baltimore are portrayed together, rather than separating the specific trips to transportation analysis zones within Baltimore.



4-4

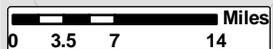


Figure 4-1: Projected Trips from Annapolis in 2015 Based on BMC Travel Demand Data

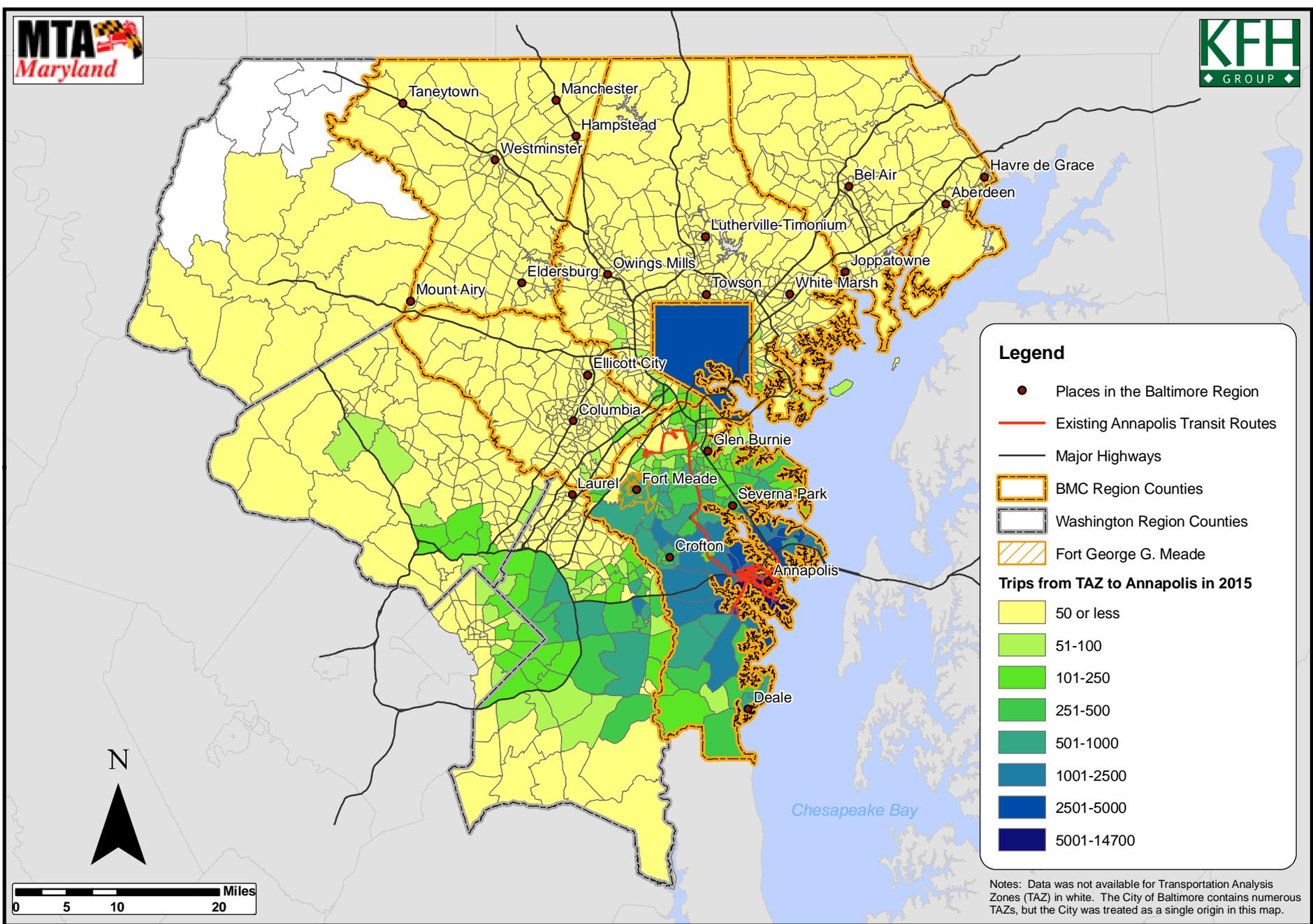


Figure 4-2: Projected Trips to Annapolis in 2015 Based on BMC Travel Demand Data

the BMC travel demand data to show travel between the TAZs that are located within the study area.

Figure 4-3 displays both the number of trips that are projected to originate and travel to each TAZ in the study area in 2015. The top destinations for trips within Annapolis include Westfield Annapolis Shopping Mall (Westfield Mall), Anne Arundel Medical Center, downtown Annapolis, Eastport, and the southern tip of the Annapolis Neck Peninsula, including Highland Beach. Most of these areas were expected major destinations with the exception of the southern tip of the Peninsula. This TAZ may have been projected to receive such a high number of trips because it is a large residential area, and the travel demand model captured the trips of residents returning home. The top TAZs from which trips were projected to originate included the southern tip of the Peninsula, the areas around Hilltop Lane and Annapolis Market Place, and Eastport. These popular origins were not too surprising since these areas have abundant and relatively dense housing, including large apartment complexes. The BMC travel demand data for future trips within the study area helped guide the development of new services and service improvements in this TDP update.

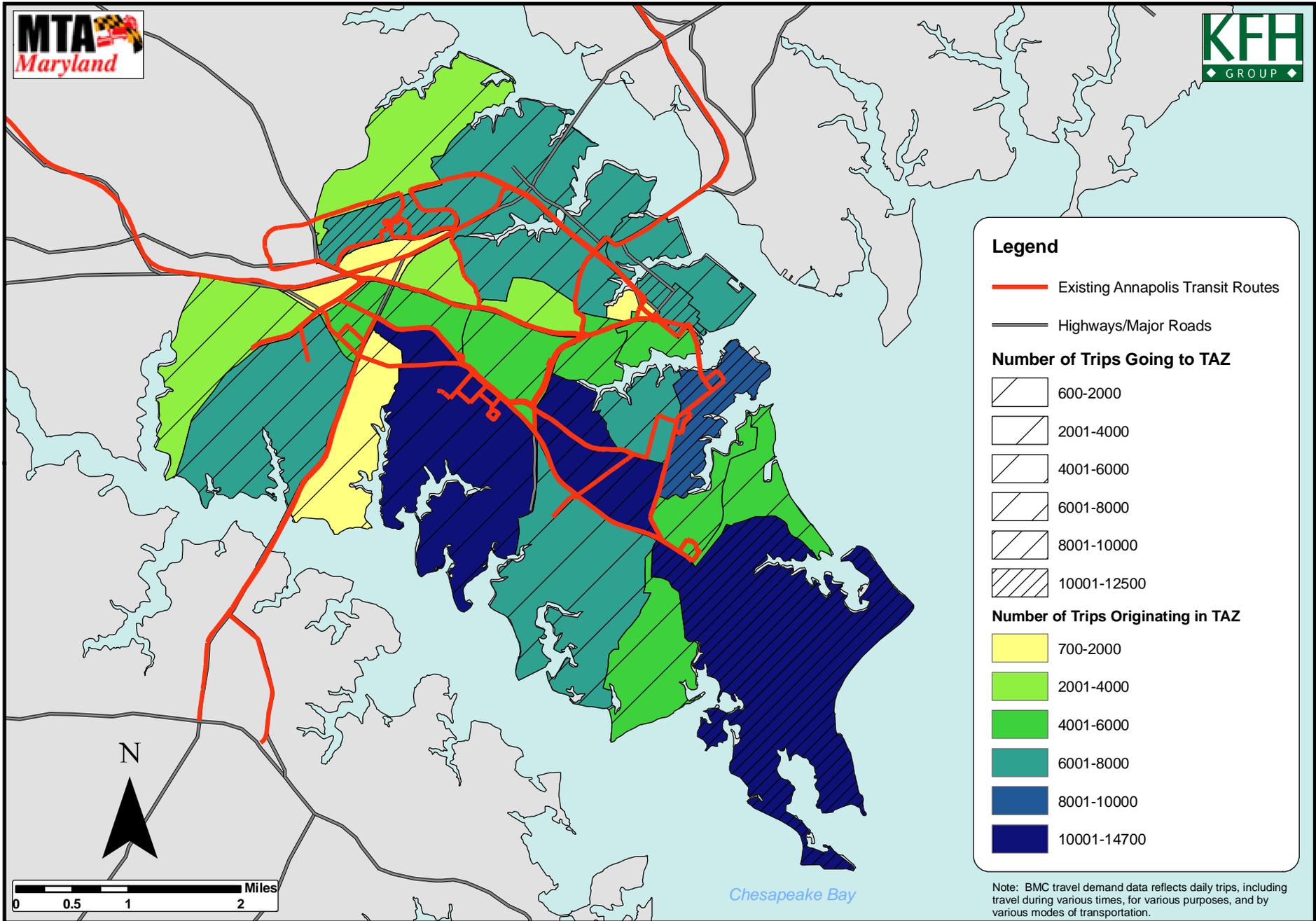
TRANSIT NEEDS

The City of Annapolis has implemented a transit system that serves the major residential and commercial areas of the City. The needs, therefore, are more related to improvements to the current system that would provide customers with additional access to community locations and greater flexibility with their travel plans when using the Annapolis Transit system.

The rider survey clearly identified that Annapolis Transit customers are very dependent on transit services, especially for accessing jobs. Therefore, they are somewhat resigned to the transfers needed to reach their destinations. The proposed alternatives will greatly improve their travel experiences by offering more direct routing, shorter trips, fewer transfers, and better service frequency. In addition, these improvements will make transit services more convenient and help gradually attract “choice” riders who have greater mobility options.

ANNAPOLIS TRANSIT OPTIONS

The implementation of service improvements in future years will depend on the availability of the necessary funds. The options identified for immediate implementation should be constrained by known funding levels for Fiscal Year (FY)



4-7

Figure 4-3: Projected Travel Patterns Within Annapolis for 2015 Based on BMC Travel Demand Data

Note: BMC travel demand data reflects daily trips, including travel during various times, for various purposes, and by various modes of transportation.

2011. Service improvements recommended for future years take the availability of funds into account, but are not fiscally constrained.

Service options are based on our analysis of the data, interviews, and meetings documented in the previous chapters. Service alternatives for the next five years have been developed to address the goals and concerns for public transit in the area. Issues addressed in this service development process included:

1. Changes to existing services in order to improve the quality and quantity of service.
2. The feasibility and development of new services in under- or un-served areas.
3. The feasibility and development of additional services to major employment, medical, educational, commercial destinations, and areas of tourism.
4. The transportation needs of the service area residents based on projected future demographic, development, and economic growth.

Options have been examined in terms of how well they serve the identified markets, the degree to which they address adopted local and state goals for transit, the service type, likely impacts on operating costs and ridership, capital requirements, and any other particular needs or requirements.

There are two basic considerations in designing effective and efficient transit services in areas not yet served. Effectiveness is doing the right things, while efficiency is doing things right. The system is effective if it meets the travel needs of the residents. This means identifying the markets for transit and determining if those markets are served. A system is efficient if it meets those needs in a manner that maximizes travel while minimizing resources expended. This means providing a mix of services that are appropriate to the need.

Key Issues

For purposes of understanding the alternatives and strategies, we will first review the key areas in need of change in the system, identified earlier in the TDP process. The development of these alternatives is based in part on the following issue areas:

- **Connectivity Between Routes:** The current routes are not designed to work as one system; they are more a collection of individual routes. The pulse system masks this premise since all routes are required to stop at the Spa Road Transfer Point. Typically, a rider is required to make at least one

transfer to reach their final destination. Where feasible, buses should have a timed meeting in only a few locations and be designed to interline (go into a transfer station as one route and leave as another route) and maximize the use of vehicles. Because of the variety of focal points for transit, it is important to ensure excellent connectivity between these routes to give customers the greatest options.

- **Dependability - Improving On-Time Performance:** If the buses are not on time, most people will not be able to depend on or use the service for work or appointments. As documented, on-time performance is poor, resulting in a significant loss of potential ridership. If the system stays as a pulse network, at the very least routes and schedules will need to be modified to ensure an on-time performance of 90% or better.
- **Base Realignment and Closure (BRAC) Issues:** Fort Meade is projected to experience considerable employment growth associated with the BRAC relocations. To meet this forecasted demand, Annapolis Transit/Maryland Transit Administration (MTA) should explore transit services to the garrison.
- **Marketing Service and Riders Guide:** A very important consideration will be the redevelopment of coherent route and schedule guide(s) to allow for ease of use.

SERVICE ALTERNATIVES

This section discusses the potential service alternatives for the Annapolis Transit system. As noted earlier, these alternatives were developed based on the review of existing transit services, the needs analysis, and input by the TDP Citizen Advisory Committee (CAC). Each alternative is described along with advantages and disadvantages. Additionally, each alternative network (the collection of routes) was designed to be cost neutral. For service that expands beyond the existing budget levels, cost estimates are included for these new services. Future expansion of service (i.e., later evening hours and/or reduced headways) is detailed in the transit plan, described in the next chapter. The cost estimates are conservative, using the fully allocated costs (including all administrative and operating costs). In addition, these alternatives would require further and more specific service and route planning before actual implementation.

The service alternatives presented below are conceptual in nature, and are subject to modification, as necessary. Not all of the options are appropriate for implementation in FY 2011; some (if selected) can be phased in over the five-year span

of the plan. The service alternatives start with a number of service assumptions that will help ensure success. These are as follows:

1. Funding levels will initially remain approximately the same, reflecting the same number of service hours and cost.
2. Increases in service levels should first address headways.
3. Services will operate according to a schedule and will operate on time. The service must be very dependable.
4. To meet ADA requirements, the proposed core routes would operate as flex routes, where buses may flex up to three-quarters of a mile from the planned route to pick up eligible passengers.
5. There will be significant marketing enhancements with comprehensive route and schedule guides to allow for a clear understanding of all of the routes.

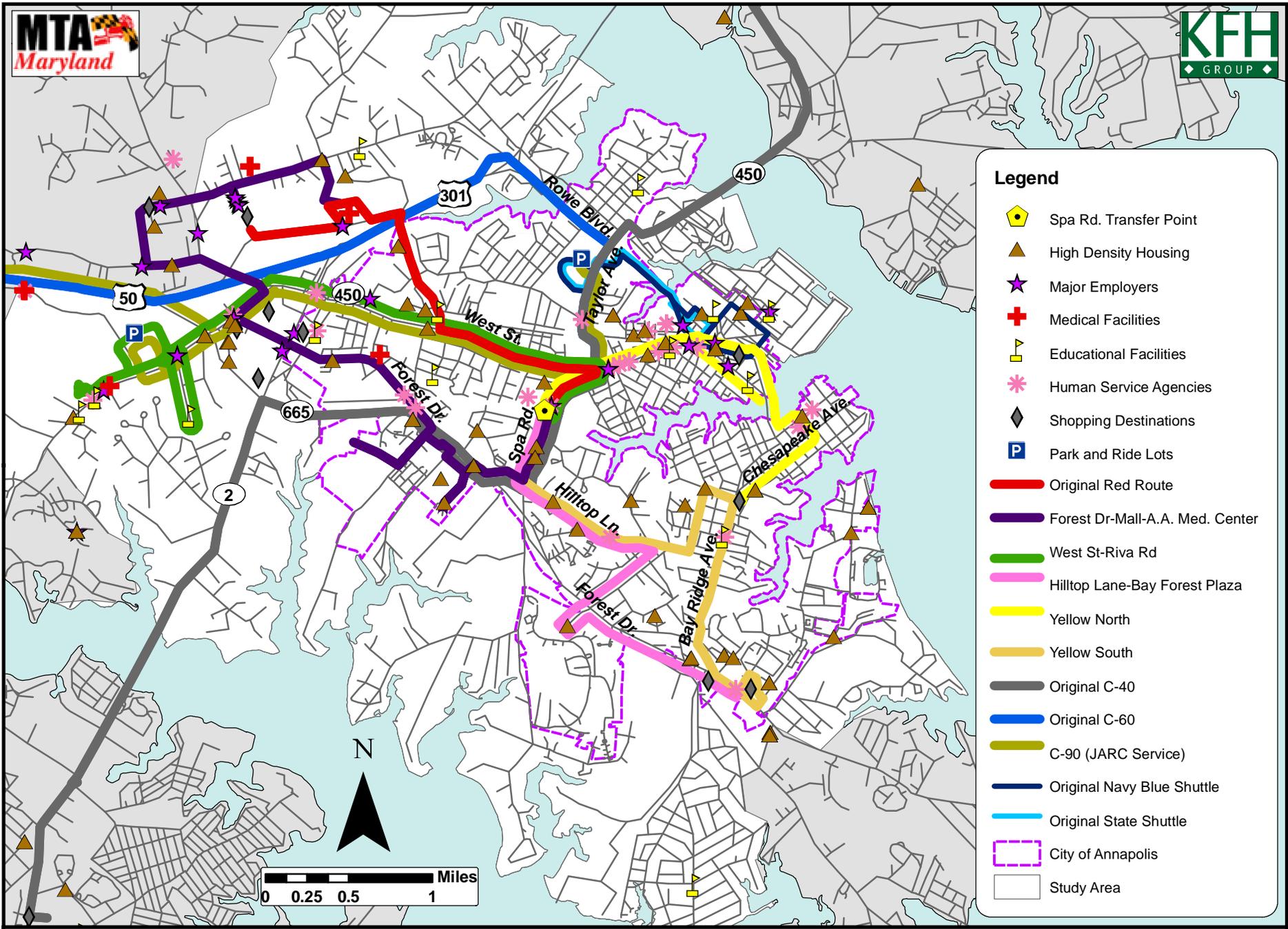
Alternative Network 1

This first alternative proposes to keep the “pulse” system, where all services travel through the Spa Road Transfer Point. However, a number of changes will enhance service and make the transit system more user-friendly for the public.

The enhancements include:

- Schedule improvements to ensure that the buses run at least 90% on time.
- Enhanced marketing campaign touting the new changes, including a set of route and schedule guides so that riders can clearly understand the services available. A website with all rider information should also be developed.
- The flex routes, when going off route, will come back to the exact spot they went off route to ensure dependable service.

Figure 4-4 displays the routes included in Alternative Network 1. Several routes in the existing Annapolis Transit system are maintained in this alternative, including the Red Route, the C-40, the C-60, and the State and Navy Blue Shuttles. The Red Route maintains an important, direct connection from the Spa Road Transfer Point to Anne Arundel Medical Center and Westfield Mall. The C-40 and C-60 routes continue to provide connections to Anne Arundel County destinations, including Arnold, Edgewater, Glen Burnie, BWI Airport, and Arundel Mills Mall. The State and Navy Blue Shuttles will continue to provide a transit connection between parking at the



4-11

Figure 4-4: Alternative Network 1

Navy-Marine Corps Stadium and destinations downtown. The newly funded JARC Commuter Connector Service, or the C90 Route, is also included in this alternative network. This route will operate between Annapolis and the New Carrollton Metro Station, providing connections to Annapolis Transit and the Washington Metro system on either ends.

The new routes developed in this network aim to provide more direct connections and shorter trips, while maintaining the Spa Road Transfer Point:

- The Forest Drive - Westfield Mall - Anne Arundel Medical Center Route provides a direct connection from the residential area around Annapolis Market Place to access employment, shopping, and medical services at the Parole Area, the Gateway Village, Westfield Mall, and Anne Arundel Medical Center.
- The West Street - Riva Road Route serves destinations along West Street, the University of Maryland University College, and the Heritage Office Complex. This route would also serve the Harry S. Truman Park and Ride Lot during peak periods to provide a transit connection between local origins and commuter bus service.
- The Hilltop Lane - Bay Forest Plaza Route connects relatively dense residential areas along Hilltop Lane and Tyler Avenue (Robinwood) to shopping at the Bay Forest Plaza. Residents that live near the Bay Forest Plaza could also ride this route to connect to the Spa Road Transfer Point.
- The Yellow North Route connects downtown and Eastport, including service to Eastport Plaza.
- The Yellow South Route connects residential areas along Hilltop Lane, President Street, and Madison Street to Eastport Plaza and Bay Forest Plaza.

The services in this alternative generally run Monday to Saturday, from 5:30 a.m. to 7:00 p.m. at 30-minute and hourly headways (dependent upon the length of the route). The Red Route and Navy Blue Shuttle run at 30-minute intervals, while the State Shuttle runs at 5-minute headways during the peak periods and at 20-minute headways otherwise. The Navy Blue Shuttle also operates from 10:00 a.m. to 6:00 p.m. during the weekend. The C-40 and C-60 Routes run on weekdays only, at two-hour headways. The C90 Route provides hourly service during peak periods from Monday through Saturday.

Advantages:

- New, one-seat ride from residential areas near Annapolis Market Place and Hilltop Lane to shopping, employment, and medical destinations including the Parole Area, the Gateway Village, Westfield Mall, Anne Arundel Medical Center, and Bay Forest Plaza.
- Convenience for customers who need to transfer as all routes will still meet at Spa Road Transfer Point.
- New transit connection to the Harry S. Truman Park and Ride Lot to connect to commuter bus services during peak periods.
- Improved on-time performance due to schedule adjustments and shorter, more direct routes.

Disadvantages:

- The number of transfers will remain relatively high.
- The Spa Road Transfer Point is not a desirable destination in itself.
- Passengers riding the C-40 and C-60 routes will likely need to transfer at Spa Road to access local origins and destinations.

Alternative Network 2

This second alternative proposes to change the existing “pulse” system to an arterial-based system, where routes connect at multiple transfer points instead of at Spa Road. The benefits of an arterial-based system include:

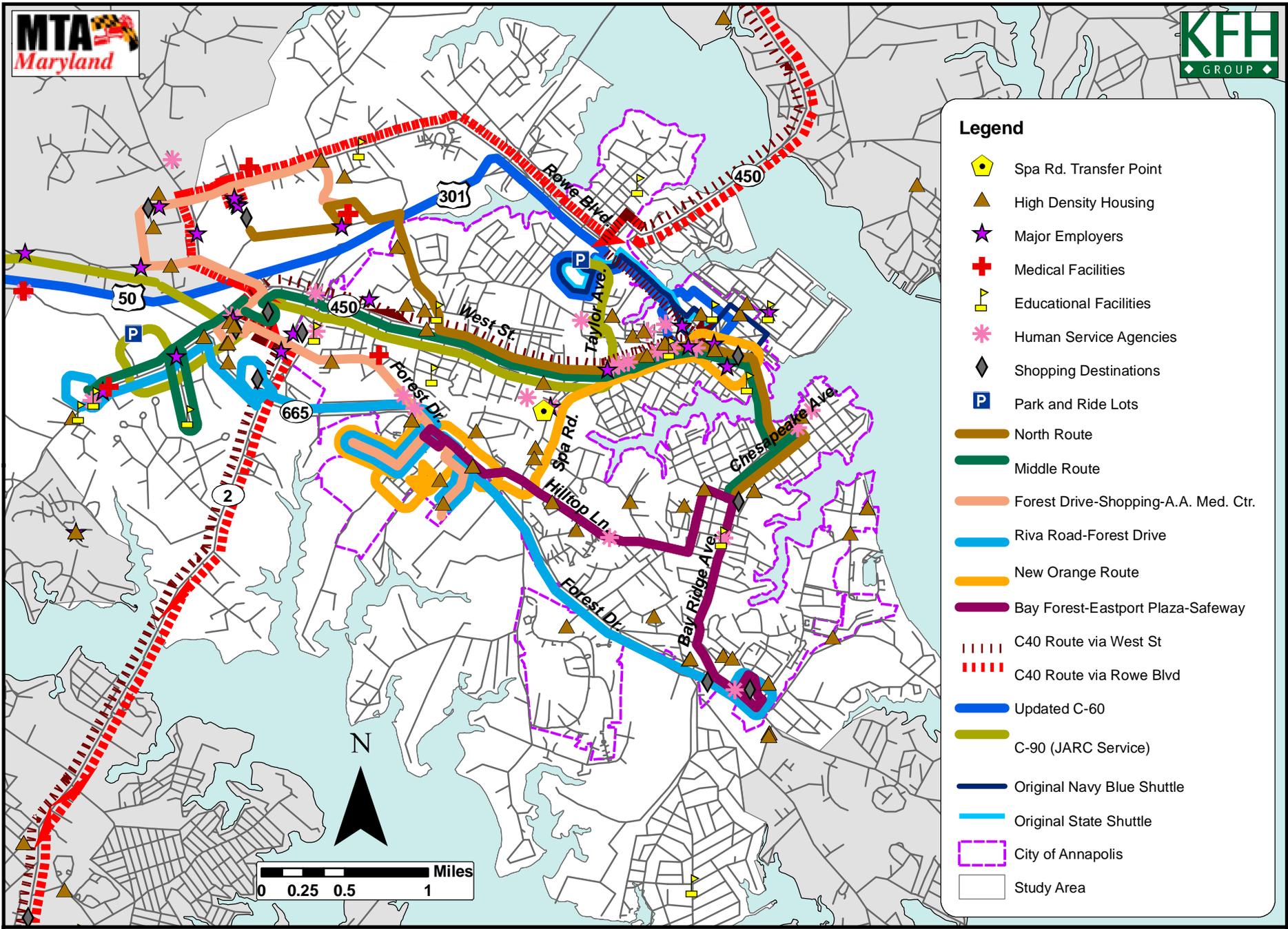
- Individual routes that provide more direct and shorter trips between major origins and destinations, decreasing the need to transfer.
- Improved on-time performance because all routes will no longer have a timed-transfer at the Spa Road Transfer Point.
- Multiple transfer points at popular destinations, so passengers no longer need to go out of their way to the Spa Road Transfer Point to make connections. Certain routes may continue to have timed-transfers for passenger convenience at the various transfer points.

Shown in Figure 4-5, Alternative Network 2 includes a few existing services as well as new services and improvements. The current C-60 Route will continue to connect Annapolis to Glen Burnie, the BWI Airport, and Arundel Mills including Anne Arundel Community College, with a minor modification in that the route will serve downtown Annapolis and no longer serve the Spa Road Transfer Point. The existing Navy Blue and State Shuttles continue to serve commuters and tourists, providing a transit connection from the Navy Marine-Corps Stadium Park and Ride to downtown.

The C-40 Route is also proposed as part of this alternative, with two potential modifications for service within Annapolis: rather than traveling to the Spa Road Transfer Point, the updated C-40 Route either serves downtown before traveling along West Street, or the route could travel along Rowe Boulevard and serve Westfield Mall, before continuing toward Edgewater. The newly funded JARC Commuter Connector Service, or the C90 Route, is also included in this alternative network. This route will operate between Annapolis and the New Carrollton Metro Station, providing connections to Annapolis Transit and the Washington Metro system on either ends.

Several new services were developed for Alternative Network 2:

- The North Route connects Eastport and downtown to Anne Arundel Medical Center and Westfield Mall via West Street, also serving Eastport Plaza and housing along Admiral Drive.
- The Middle Route provides a direct connection between Eastport and downtown and the Parole Area, University of Maryland University College, and the Heritage Office Complex.
- The Forest Drive-Shopping-Anne Arundel Medical Center Route serves high density housing along Copeland Street and Newtowne Drive and connects to shopping and employment at the Festival at Riva Road Shopping Center, Gateway Village along Housely Road, and Westfield Mall. The route also serves the Anne Arundel Medical Center, providing access to medical services and employment opportunities, and the Parole Area, for shopping and employment.
- The Riva Road-Forest Drive Route connects residential areas along Forest Drive to human service agencies, shopping destinations, and employment opportunities. Destinations served include Bay Forest Plaza, Annapolis Market Place, the Harbour Center, and the Heritage Office Complex.
- The New Orange Route provides additional, direct service to the high density residential area around Annapolis Market Place including Brightwater Drive



- Legend**
- Spa Rd. Transfer Point
 - High Density Housing
 - Major Employers
 - Medical Facilities
 - Educational Facilities
 - Human Service Agencies
 - Shopping Destinations
 - Park and Ride Lots
 - North Route
 - Middle Route
 - Forest Drive-Shopping-A.A. Med. Ctr.
 - Riva Road-Forest Drive
 - New Orange Route
 - Bay Forest-Eastport Plaza-Safeway
 - C40 Route via West St
 - C40 Route via Rowe Blvd
 - Updated C-60
 - C-90 (JARC Service)
 - Original Navy Blue Shuttle
 - Original State Shuttle
 - City of Annapolis
 - Study Area

Figure 4-5: Alternative Network 2

- and Greenbriar Lane. The route serves additional housing, major employers, and human service agencies along Spa Road, before connecting to employment, shopping, and recreation opportunities downtown.
- The Bayforest-Eastport Plaza-Safeway Route connects high density housing along Hilltop Lane, President Street, and Madison Street to shopping destinations including Annapolis Market Place, Eastport Plaza, and Bay Forest Plaza. This route also provides an opportunity for residents that live near the Annapolis Market Place to access other shopping destinations and potentially employment as well.

The services in this alternative generally run Monday to Saturday, from 5:30 a.m. to 7:00 p.m. at hourly headways. The North Route, New Orange Route, and Navy Blue Shuttle run at 30-minute intervals, while the State Shuttle runs at 5-minute headways during the peak periods and at 20-minute headways otherwise. The Navy Blue Shuttle also operates from 10:00 a.m. to 6:00 p.m. during the weekend. The C-40 and C-60 Routes run on weekdays only, at two-hour headways. The C90 Route provides hourly service during peak periods from Monday through Saturday.

Advantages:

- Transfer opportunities at popular destinations, including Eastport Plaza, Annapolis Market Place, Westfield Mall, West Street, and downtown.
- New, direct connections from the high density residential area around Annapolis Market Place to major destinations, including shopping, employment, and human services. Direct service is also provided from the high density residential area along Hilltop Lane to nearby shopping destinations.
- Options for the updated C-40 Route provide direct service to some major destinations, including downtown, West Street, and Westfield Mall, thereby decreasing the need for passengers to transfer to local routes to reach these places.
- Routes are designed such that, should additional funding for transit become available, vehicles could be added to routes to increase service frequencies.

Disadvantages:

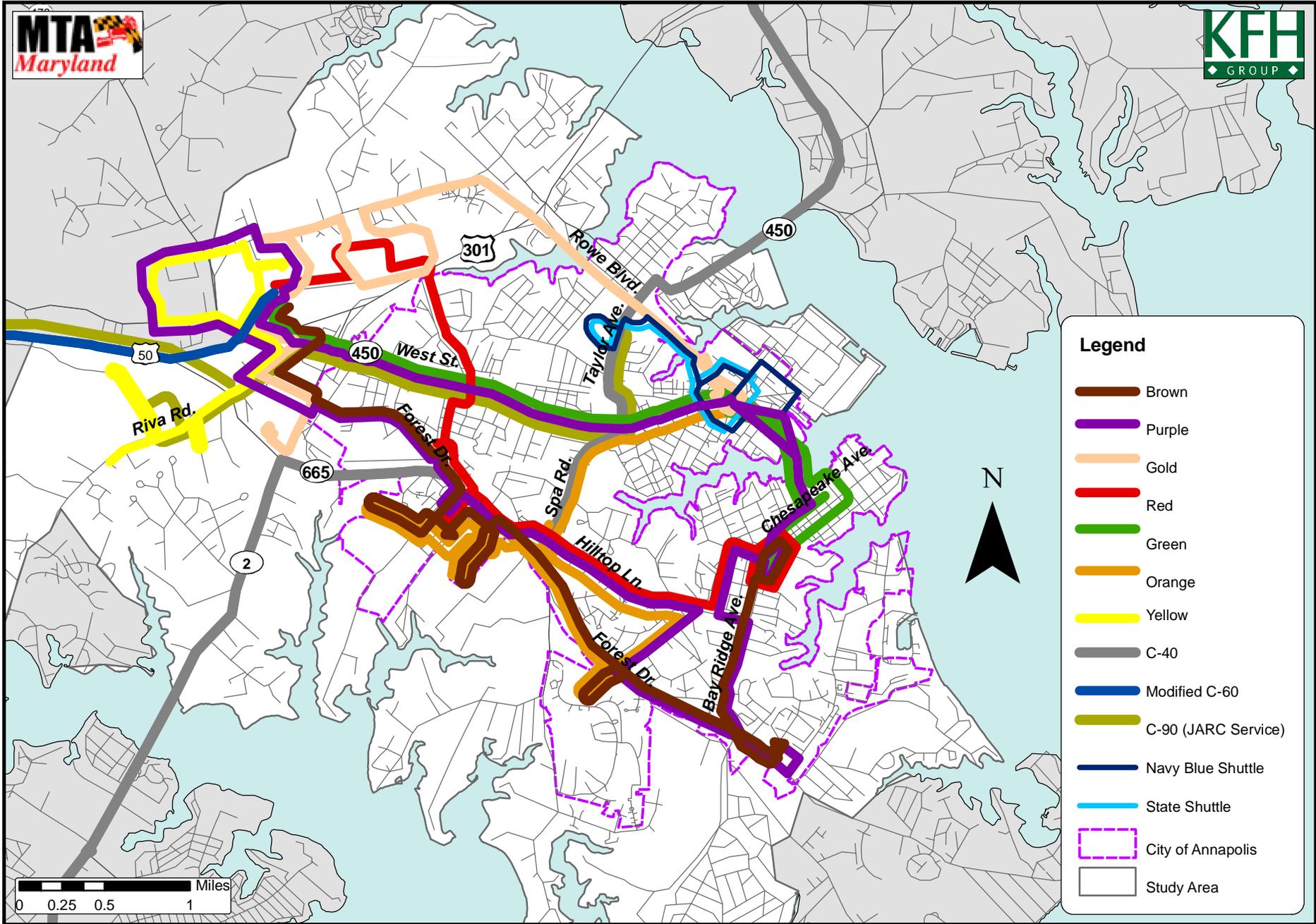
- Passengers will still need to transfer when traveling between certain parts of the City.

- For example, the proposed routes do not include direct connections between the east and west ends of Forest Drive.
- Passengers boarding along Hilltop Lane must also transfer to reach downtown, outer West Street, and Parole.
- Several routes overlap along West Street, which may exacerbate the existing traffic problems, especially during peak periods. The existing congestion may also detract from the quality of the new transit services along West Street.
- Limited direct North-South connections are provided, with the exception of the New Orange Route that travels along Spa Road to connect Forest Drive to downtown.

Alternative Network 3

Shown in Figure 4-6, the third network alternative was proposed by the MTA after its analysis of the Annapolis Transit system in the spring of 2007. The following descriptions of individual routes were adapted from the MTA's 2007 report on proposed changes to the Annapolis Transit route structure and schedules. All "city-service" routes (excluding the C-40, C-60, and C-90) were proposed to operate as deviated fixed routes.

- The proposed Brown Route essentially combines the lower halves of the existing Green and Brown Routes, operating between Westfield Mall and Eastport Plaza via Forest Drive and Bay Ridge Avenue. This route also serves Annapolis Marketplace, the Bay Forest Plaza, and housing along Copeland Road, Newtowne Drive, and Tyler Avenue (Robinwood).
- The proposed Red Route combines the existing Red Route with the lower half of the existing Yellow Route, operating between Westfield Mall and Eastport Plaza. This route would serve the Anne Arundel Medical Center, Admiral Drive, Chinquapin Round Road, Forest Drive, Hilltop Lane, and President Street.
- The proposed Orange Route is the same as the existing route, but extended to Church Circle to provide a direct connection between housing around Annapolis Marketplace and along Hilltop Lane to downtown and the Department of Social Services.
- The proposed Gold Route redesigns the existing Gold A and Gold B routes into a bi-directional linear route. This route would run between Church



4-18

Figure 4-6: Alternative Network 3 - Submitted by MTA

- Circle, providing access to downtown, and the Harbour Center. The route travels along Rowe Boulevard to serve the Anne Arundel Medical Center and Westfield Mall.
- The proposed Yellow Route acts as a shuttle within Parole, running between Westfield Mall and the Heritage Office Complex, serving Housely Road on outbound trips. This route is designed to serve the Department of Agriculture on Harry S. Truman Parkway and the Residence Inn on Admiral Cochrane Drive on alternating trips.
 - Designed similarly to the existing Brown Route, the proposed Purple Route consists of two Routes, where Purple A operates in the clockwise direction, and Purple B operates counter-clockwise. These routes travel between Westfield Mall and Eastport Plaza via West Street, Hilltop Lane, and Forest Drive. Additional areas served on this route include Eastport, downtown, retail along Housely Road, Annapolis Market Place, and Bay Forest Plaza. These routes would operate during the evening from Monday through Saturday, and during the day on Sundays.
 - The State and Navy Blue Shuttles are also proposed for this network alternative, with a slight modification to the Navy Blue Shuttle, where it no longer serves West Street. This change allows the shuttle services to be provided using one less vehicle, the cost savings of which could go toward funding other service modifications in this network.
 - The C-40 route will continue along the same routing, but operate at a higher frequency, every 90 minutes instead of two hours. This route no longer needs to make timed transfers at the Spa Road Transfer Point, but can connect with local routes at Rowe Boulevard, Westgate Circle, Hilltop Lane (at Spa Road), or Forest Drive.
 - The proposed C-60 route will be similar to the existing service with a few adjustments. In Annapolis, the route will serve Westfield Mall rather than the Navy-Marine Corps Stadium and Spa Road Transfer Point. The route will travel north on I-97 to the Wal-Mart at MD-174/Quarterfield Road, and then continue to the Cromwell Light Rail Station in Glen Burnie. The route then serves the BWI Airport and Arundel Mills Mall, including Anne Arundel Community College, before taking MD-100 back to the Cromwell Light Rail Station. The service returns to Annapolis via I-97, serving Wal-Mart again on the return trip. This service would operate at the same two-hour headway and service span as the existing route, but new Saturday service is also proposed, at a two-hour headway between 9:00 a.m. and 7:00 p.m.

The newly funded JARC Commuter Connector Service, or the C90 Route, is also included in this alternative network. This route will operate between Annapolis and the New Carrollton Metro Station, providing connections to Annapolis Transit and the Washington Metro system at either ends.

The routes proposed in this network generally operate Monday to Saturday. The Green Route, Red Route, and New Navy Blue Shuttle run at 30-minute headways, and the Brown Route and Orange Route run at 45-minute headways. The Gold Route and Yellow Route operate at hourly frequencies, while the Purple Routes run every hour and 15 minutes. The State and Navy Blue Shuttles operate at similar frequencies as the current schedule. The C90 Route provides hourly service during peak periods from Monday through Saturday. While the MTA's 2007 report also made recommendations regarding the Kent Island Shuttle and the C-50 Route, these have not been included in this TDP update because these two routes have since been discontinued.

Advantages:

- Improved on-time performance by shifting from the pulse system to an arterial-based system, developing shorter routes, and adjusting headways.
- Improved “cross-town” services that provide more direct and efficient trips (i.e., additional connection between Westfield Mall and Eastport Plaza via the Red Route, and more efficient coverage between Westfield Mall and Eastport via the proposed Green and Brown Routes).
- Transfer opportunities at popular destinations, including Eastport Plaza, Annapolis Market Place, Westfield Mall, West Street, and downtown.
- New service to the Greyhound Bus Station in Annapolis and the Annapolis Transit Office, on Chinquapin Round Road.
- Routes are designed such that, should additional funding for transit become available, vehicles could be added to routes to increase service frequencies.

Disadvantages:

- More overlap (i.e., Hilltop Lane, Forest Drive, Bay Ridge Avenue) between individual routes than other alternative networks.
- More variation in service headways, which may be confusing for passengers.

- Purple Route as bi-directional loop may also be confusing for passengers, who need to ensure they are boarding the route in the correct direction; Yellow Route with two legs may be confusing in a similar manner—passengers going to the Department of Agriculture or the Residence Inn will need to examine the schedule closely.

Evening/Sunday Routes

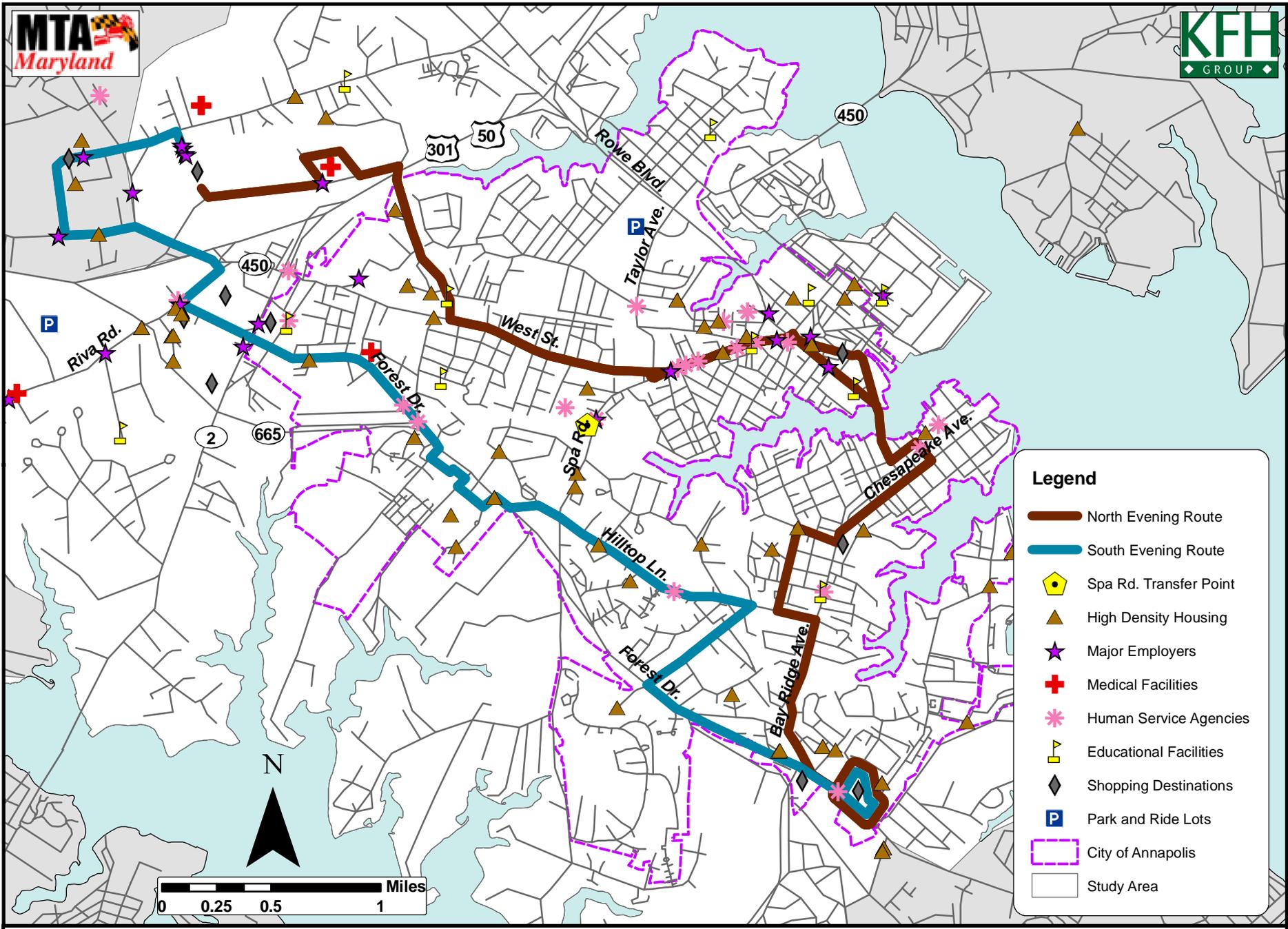
For both Alternative Networks 1 and 2, two new routes operating into the evening and on Sundays are proposed for extended coverage in the service area:

- The North Evening Route runs along Bay Ridge Avenue and West Street, connecting residential areas near President and Madison Streets and Admiral Drive to Bay Forest Plaza, Eastport Plaza, downtown, Anne Arundel Medical Center, and Westfield Mall.
- The South Evening Route primarily travels along Forest Drive, connecting residential areas along Hilltop Lane and adjacent to Annapolis Market Place with the Bay Forest Plaza, Annapolis Market Place, Parole Area, retail along Housely Drive, and Westfield Mall.

Shown in Figure 4-7, these routes provide basic, but sufficient geographic coverage to serve most major origins and destinations in Annapolis and Parole, with transfer points at Bay Forest Plaza and Westfield Mall. From Monday to Saturday, these routes would provide three additional hours of evening service to promote social trips and dining out and to accommodate workers whose shifts end later in the evening. On Sundays, these routes are proposed to operate for 11 hours, from 8:00 a.m. to 7:00 p.m. The new evening/Sunday services will initially operate at 75-minute headways to ensure a dependable on-time performance.

Advantages:

- Continued service into the evenings and on Sundays will be particularly helpful for transit-dependent passengers, but also provides an alternative for residents with cars to run errands, shop, and conduct social activities after work and on Sundays via transit.
- The two potential transfer points between the North and South Evening Routes, Westfield Mall and Bay Forest Plaza (or Eastport Plaza), are popular destinations.



Legend

- North Evening Route
- South Evening Route
- Spa Rd. Transfer Point
- High Density Housing
- Major Employers
- Medical Facilities
- Human Service Agencies
- Educational Facilities
- Shopping Destinations
- Park and Ride Lots
- City of Annapolis
- Study Area

4-22

Figure 4-7: Proposed Evening and Sunday Routes

- Provides convenient service for East-West travel between Annapolis and Parole.
- In terms of fulfilling ADA requirements, the three-quarter mile buffer around these two routes provides significant access for eligible persons with disabilities.

Disadvantages:

- Provides limited North-South service except for the routing along Chesapeake Avenue and Bay Ridge Avenue.
- These services are not as direct, and may require longer trip times depending on the origins and destinations, compared to the proposed “daytime” services.

Parole Shuttle

An additional service that may be added to any network alternative is the Parole Shuttle. Identified as a potential new service in the Anne Arundel County TDP update, this route was modified slightly for the Annapolis TDP update. Shown in Figure 4-8, this route serves the University of Maryland University College, the Harbour Center, the Festival at Riva Road Shopping Center, the Parole Area, Westfield Mall, and the Anne Arundel Medical Center. This route could potentially be extended to serve the Harry S. Truman Park and Ride Lot, ARINC, and hotels along Admiral Cochrane Drive to connect commuters, employees, and tourists to local shopping destinations. Implementation of this route would require additional funding, as the Alternative Networks described above were designed to be cost-neutral in comparison to existing Annapolis Transit services. The Parole Shuttle would operate Monday through Saturday, from 5:30 a.m. to 7:00 p.m., at hourly headways.

Advantages:

- Provides a transit option for residents and visitors to travel within Parole, which may help alleviate the worsening traffic and congestion that is resulting from new, higher density development, such as the Parole Area.
- Provides a transportation alternative to major shopping destinations and employment opportunities, which will be particularly helpful for transit-dependent passengers.

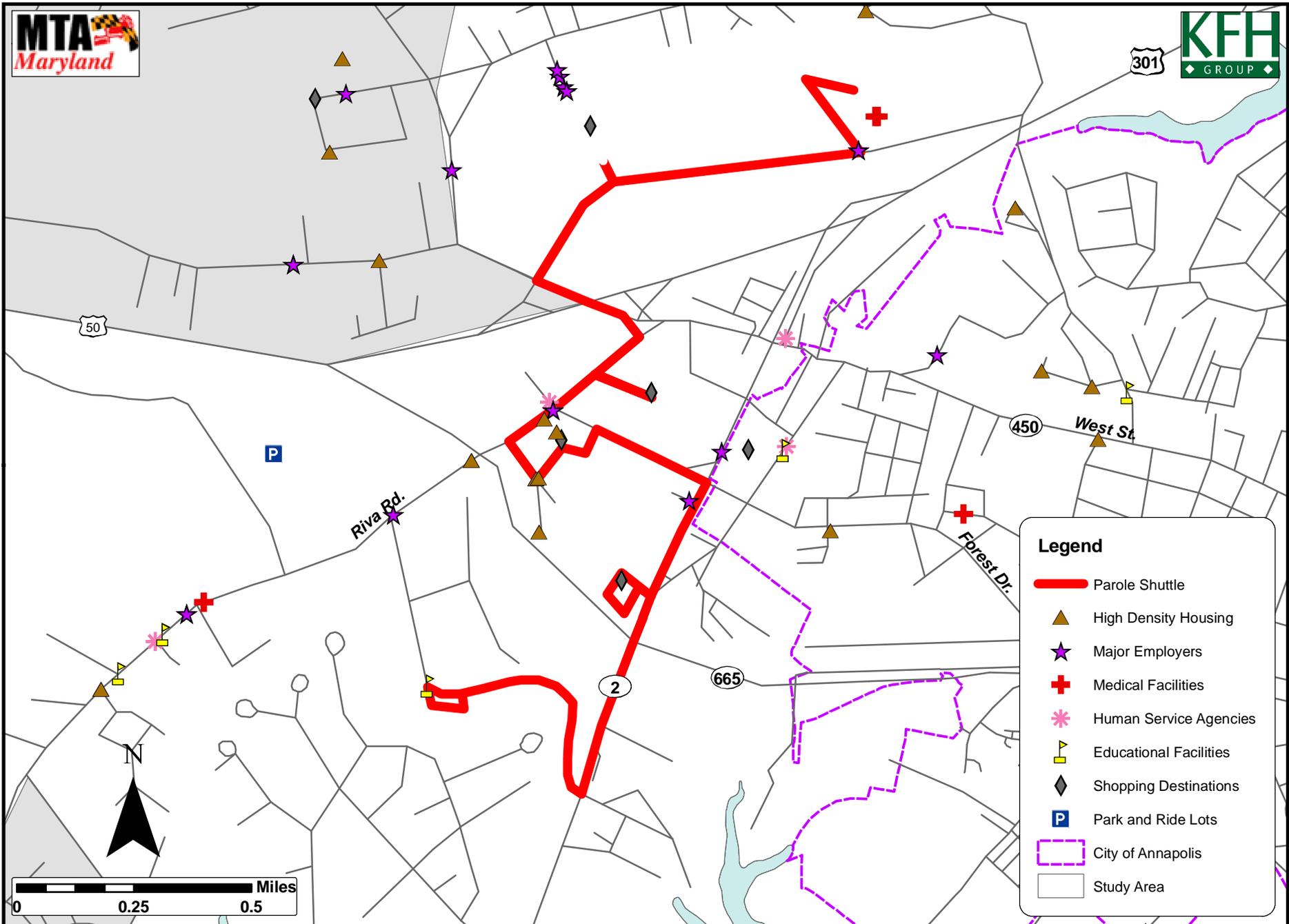


Figure 4-8: Parole Shuttle

Disadvantages:

- This route technically lies outside of Annapolis City limits, though Parole includes several major destinations such as Westfield Mall and Anne Arundel Medical Center, which Annapolis residents need to access.
- Does not directly serve some high density housing or the senior day center near Riva Road and Aris T. Allen Boulevard.

Estimated Costs:

- The cost to add a Parole Shuttle route, assuming the current Annapolis Transit operating hours, would be about \$321,000 annually. Annapolis Transit currently has a vehicle that it can use for this service based on adequate capital inventory within their fleet of vehicles.

Americans with Disabilities Act Requirements

The ADA requires public transit agencies that provide fixed-route service to provide “complementary paratransit” services to people with disabilities who cannot use the fixed-route bus service because of a disability. To meet ADA requirements, the proposed transit services would operate as flex-routes, or deviation services, where the buses may deviate up to three-quarters of a mile from the planned route to pick up eligible passengers, who call in advance for such deviations. The proposed routes within each alternative network described above would be conducive to this approach.

Title VI Requirements

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 low income or minority populations.

Chapter 2 included maps that show the distribution of people who are most likely to be transit dependent. In addition, Appendix E outlines why each of the recommended service alternatives meets the requirements of Title VI. Appendix E includes maps that depict the distribution of low income and minority populations throughout the City of Annapolis. The distribution of residents who live below the poverty level and the distribution of minority persons were mapped along with the proposed networks and existing Annapolis Transit routes to demonstrate that these

populations are not disproportionately impacted by the service changes in a negative manner. The maps also indicate those Census block groups in the City that have a higher percentage of persons living below the poverty level or of minority populations than the City-wide average percentages. The proposed alternatives described above would benefit all people within these service areas, and would therefore have no adverse effects on low income or minority residents. However, Annapolis Transit will need to ensure Title VI requirements are followed when specific improvements are finalized and implemented.

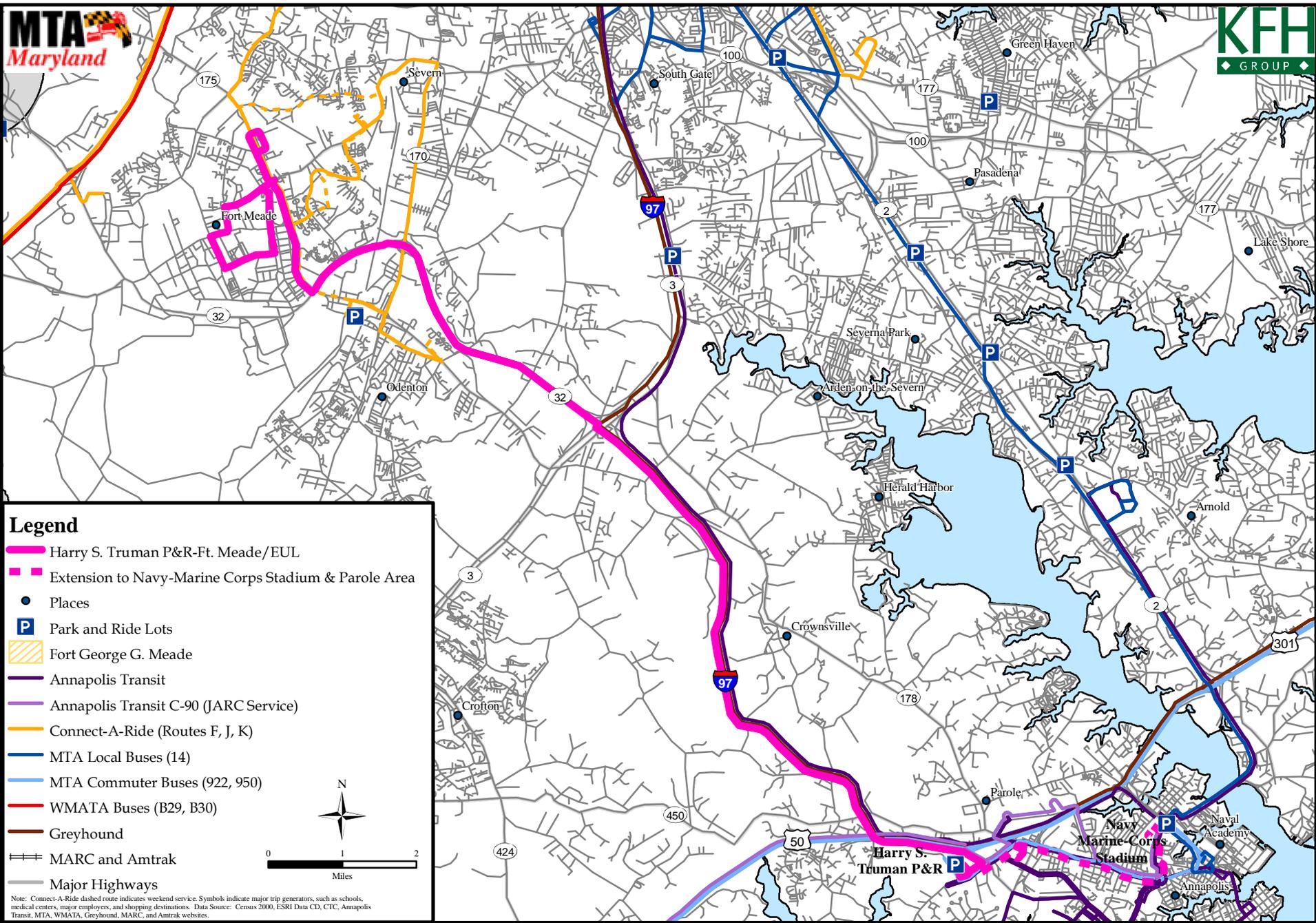
BRAC

This section identifies service alternatives relevant to Annapolis that were developed as part of the Anne Arundel County *Fort Meade/Base Realignment and Closure (BRAC) Transit and Ridesharing Planning Study*, a report developed to provide transit alternatives to help accommodate the growth at Fort Meade expected from BRAC. The BRAC report is intended to serve as a parallel guide for service development and capital programming for the next five years. The main service recommended for Annapolis, running between the Harry S. Truman Park and Ride Lot and Fort Meade, is in addition to the recommended transit plan in the City's TDP.

Harry S. Truman Park and Ride Lot - EUL - Fort Meade

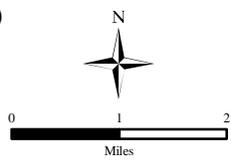
Shown in Exhibit 4-1, this route travels between the Harry S. Truman Park and Ride Lot in Parole and Fort Meade. The route virtually runs express, connecting to MD-32 near Millersville and traveling to MD-175/Annapolis Road, potentially serving the EUL site before making a loop onto Fort Meade. This service would operate on weekdays during peak hours (6:00 a.m. - 9:00 a.m. and 4:00 p.m. - 7:00 p.m.) only, with 30-minute headways. Potential connections with other transit providers include Annapolis Transit, Connect-A-Ride (Route K), and MTA commuter services (Routes 922 and 950). This route could also be extended to serve the Navy-Marine Corps Stadium Park and Ride Lot in Annapolis and the Parole Area given available funding. The annual operating costs for this route are estimated at \$504,000, and the service requires four buses, each costing \$211,000.²

² The operating costs are based on the current CTC rate with First Transit, plus the CTC management fee. Cost per hour utilized the following formula $1.05(\$62.75/\text{hr.} + \$15.98/\text{hr.}) = \$82.67/\text{hr.}$ (1.05 is a 5% escalation factor to 2010, \$62.75 is First Transit's operation rate, and \$15.89 is CTC's management rate.) Assumes operation of County-owned vehicles.



Legend

- Harry S. Truman P&R-Ft. Meade/EUL
- - - Extension to Navy-Marine Corps Stadium & Parole Area
- Places
- P Park and Ride Lots
- Fort George G. Meade
- Annapolis Transit
- Annapolis Transit C-90 (JARC Service)
- Connect-A-Ride (Routes F, J, K)
- MTA Local Buses (14)
- MTA Commuter Buses (922, 950)
- WMATA Buses (B29, B30)
- Greyhound
- MARC and Amtrak
- Major Highways



Note: Connect-A-Ride dashed route indicates weekend service. Symbols indicate major trip generators, such as schools, medical centers, major employers, and shopping destinations. Data Source: Census 2000, ESRI Data CD, CTC, Annapolis Transit, MTA, WMATA, Greyhound, MARC, and Amtrak websites.

Exhibit 4-1: Harry S. Truman Park and Ride Lot - EUL - Fort Meade

4-27

Advantages:

- Provides direct commuter service for employees who reside near Annapolis and Parole to Fort Meade and the EUL site.
- Provides transit service for residents at Fort Meade to fulfill medical, educational, shopping, and recreational needs in Parole and Annapolis; spouses that reside at Fort Meade could also potentially use this service to access employment in Parole or Annapolis.
- Portion of route on I-97 and MD-32 will run express, minimizing operating costs and providing fast service between two nodes.

Disadvantages:

- The Harry S. Truman Park and Ride is already near capacity, so riders may have a difficult time accessing the transit service if parking is not available.
- Segments of route on I-97 and MD-32, run as express service, will have little ridership opportunities.

The Harry S. Truman route is recommended in the long-term and is a medium priority because of the longer distance from the garrison. Demand is expected to increase and make transit services geared toward Fort Meade more feasible and productive after the BRAC process has been completed. Additionally, employees that reside in the Parole and Annapolis areas most likely currently drive to the installation or participate in ridesharing, so the recommended transit alternatives would provide additional options for their commutes. However, the transit alternatives would need to compete with automobile travel times, convenience, and affordability in order to be viable. The feasibility of these transit services is more likely to increase several years after the BRAC process has been completed as the population in the region grows and traffic and congestion worsen. This transit alternative could then provide a less stressful commuting option as well as time savings if transit service receives priority along congested roads (potentially in the form of traffic signal prioritization or even dedicated bus lanes).

OTHER SERVICE IMPROVEMENTS

Another service alternative that is related to Annapolis, but perhaps lies more in the purview of Anne Arundel County, is a Crofton – Parole Area Route. This service travels from near the Crofton Country Club along Crofton Parkway and takes Layton

Street to MD-424/Davidsonville Road, where the route continues south. The route travels east on MD-450/Defense Highway, essentially running express service, to West Street in Parole. Then the route takes Riva Road to serve the Parole Area. Passengers traveling from Annapolis to Crofton could potentially transfer to a local Crofton Circulator, also proposed in the County TDP; or transfer to other regional bus routes to access Bowie and the New Carrollton Metro Station, from which they could access the D.C. metropolitan area.

In discussing the goals and objectives for this TDP, the CAC also called for more frequent commuter bus service, as well as additional midday trips. Parking to access commuter services was another issue, specifically improving existing park and ride lots. Parking improvements, including establishing new parking areas outside the City, could also help promote transit use to major destinations in Annapolis and accordingly reduce car use and alleviate traffic congestion in the area. While these issues have been noted in the TDP, the jurisdiction to change commuter services and address parking lie with the MTA and the City, respectively.

ORGANIZATIONAL STRUCTURE

This section presents the information obtained from research KFH Group has performed on peer systems. The peer systems selected were those that offer a comparable approach to addressing transit demand based on system size. The first step of this process involved documenting Annapolis Transit's existing organizational structure, which was described in Chapter 3.

Each system discussed below is accompanied by two exhibits containing that system's organizational charts. The first exhibit provides an overall representation of the jurisdiction that houses the transit system – typically within a county government. The second exhibit represents the organizational chart for staff that is directly involved with the daily operations of the transit services. The reason for the two-part representation is to show how the provision of transit services extends into various departments and units, and how being a part of a department means that transit must compete with other major services, as it is not the primary objective of the department.

Howard County, Maryland: Howard Transit

Howard County provides Howard Transit (fixed-route) and Howard Transit Ride (paratransit) services. Nine fixed-routes are operated, with an additional express service for one of the routes. The vehicle fleet consists of 52 vehicles to provide fixed-route and paratransit services. The Howard County Government, through the Department of Planning and Zoning, Transportation Planning Division (TPD), contracts

for the management of transit services with the Corridor Transportation Corporation (CTC) following a competitive procurement for management and operations. The TPD staff is located in the main county offices. CTC has contracted with First Transit, Inc. (also in a competitive procurement process) to operate the transit services in Howard County. The contractual relationship between CTC and First Transit, Inc. (FTI) began in July 2007. Routine and preventive maintenance, as well as vehicle storage, is conducted at the facility leased by FTI in Laurel.

Organizational Structure

Figures 4-9 and 4-10 are organizational charts representing the primary entities involved in the provision of the Howard Transit and Howard Transit Ride services in Howard County. These are an overall jurisdiction representation and the core staff representation. In addition to addressing demand for transit services, the TPD is responsible for several county services: Regional Planning, Transit Planning & Oversight, Highway, Pedestrian, and Bicycle Planning, and Commuter Solutions. The Chief of the TPD serves as the Transit Manager, and is responsible for oversight of the management contractor, CTC, who in turn oversees the operations of its contractor, FTI. In the TPD there are nine staff members that execute Howard Transit duties. However, each staff member has a unique proportion of their full-time equivalency (FTE) devoted to this, as they are primarily Transportation Planning staff. CTC has 18.5 full-time equivalent staff available to support the administration and management of transit services in Howard County.

Some staff members in the Howard County Department of Citizen Services are assigned a portion of their FTE to address inquiries regarding HT Ride services and to conduct screenings for county residents, who apply for general paratransit services.

Figure 4-9: Howard County Organizational Structure

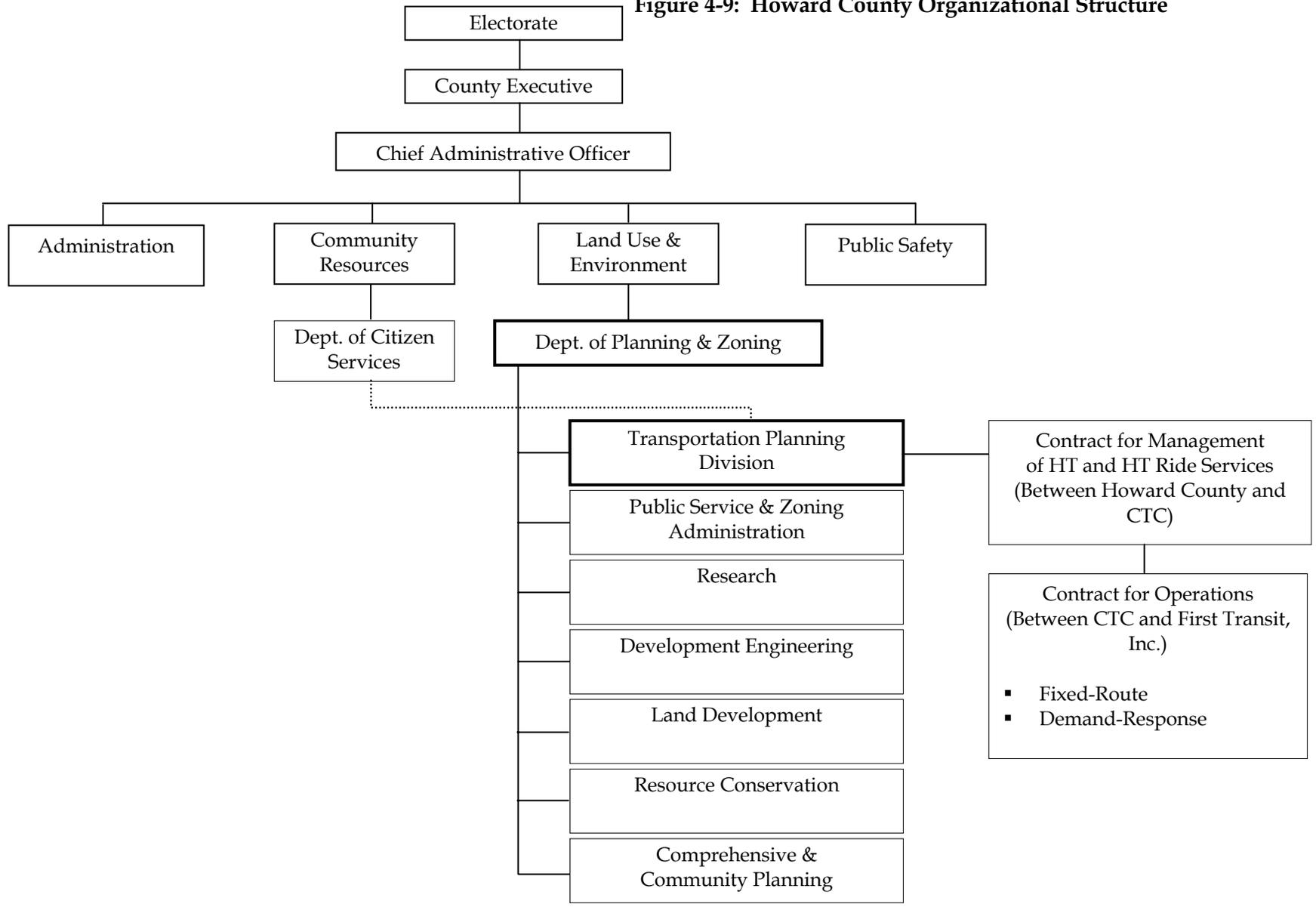
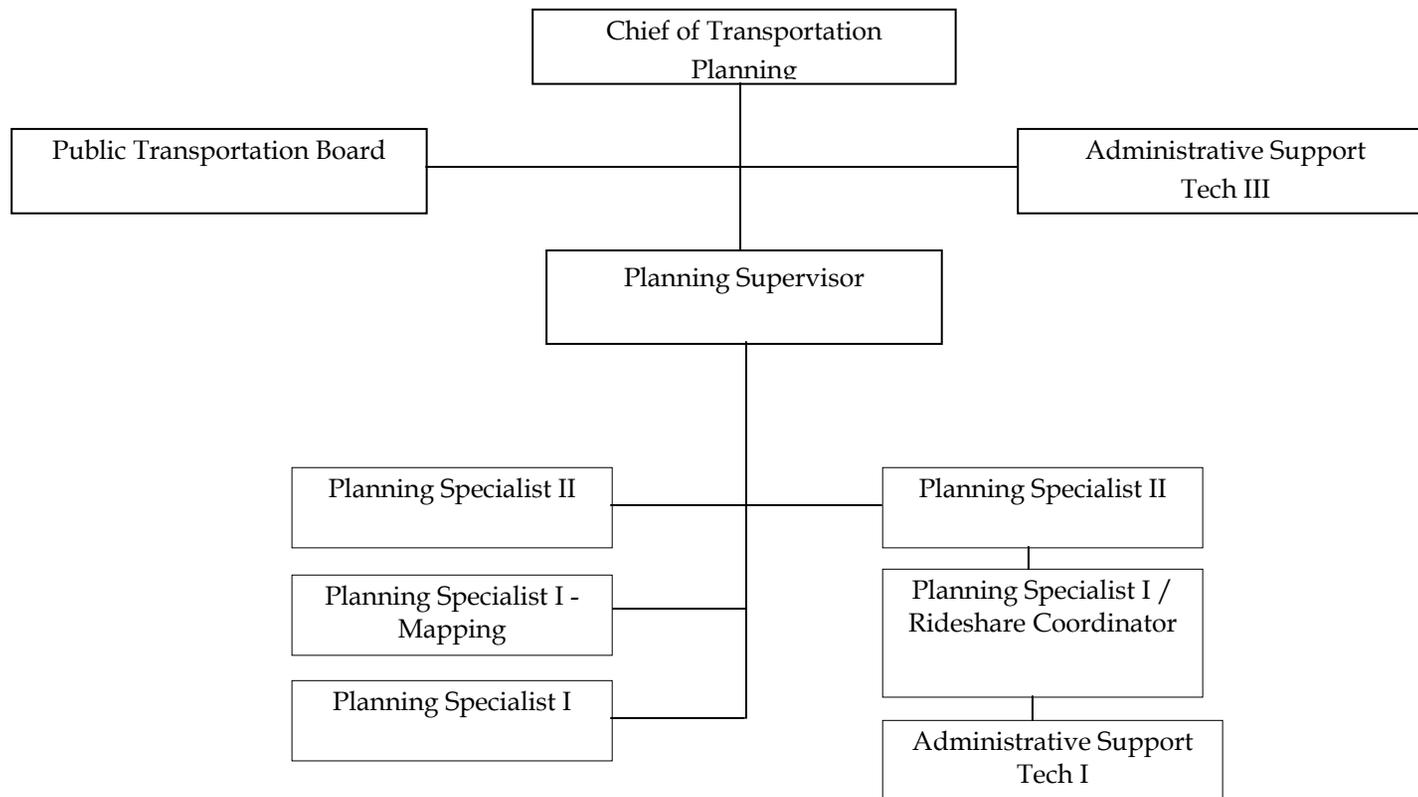


Figure 4-10: Transportation Planning Division Organizational Structure



Charles County, Maryland: VanGO

Charles County's VanGO system provides both fixed-route services, ADA paratransit, and services for seniors and persons with disabilities. The vehicle fleet consists of 35 vehicles: five lift-equipped medium-duty buses, 17 lift-equipped small buses, and the balance a combination of utility and service vehicles. The total staff includes five administrative and support staff, with some staff members shared with other departments. VanGO operates out of county offices. The transit service is managed by county staff in the Transportation Division (TD), which is situated in the Department of Community Services in Charles County, and vehicle operations are contracted to MV transportation. The Department of Community Services manages programs and services to the public, including recreational classes, housing programs, transportation services, senior activities, child care, and others.

The provision of transit services involves contractual arrangements with MV Transportation. Charles County contracts for the operation of vehicles, maintenance, and paratransit services. As for other daily operations duties, the VanGO TD staff implements random vehicle inspections, oversees adherence to schedules, conducts paratransit certification for demand-response and ADA services, and fields calls from the public requesting information on transit services. VanGO is also the Medical Assistance transportation provider for Charles County.

Organizational Structure

The VanGO TD staff consists of five employees. As this is a small staff, a lot of responsibilities and duties are shared among them. This arrangement can blur the lines of position titles, but there is a chain of command that is adhered to. The leader of this unit is the Chief, who is supported by an Administrator. The Administrator is supported by the Supervisor. The Supervisor manages two (transportation) specialists that are more involved with the daily operations. The Chief reports to the Director of Community Services. Figures 4-11 and 4-12 present the County's organizational structure. These figures include an overall jurisdictional representation and the core staff representation. The contractor maintains approximately 59 employees for the operation of VanGO transit services - with approximately 49 of them serving as drivers.

Figure 4-11: Charles County - Organizational Structure

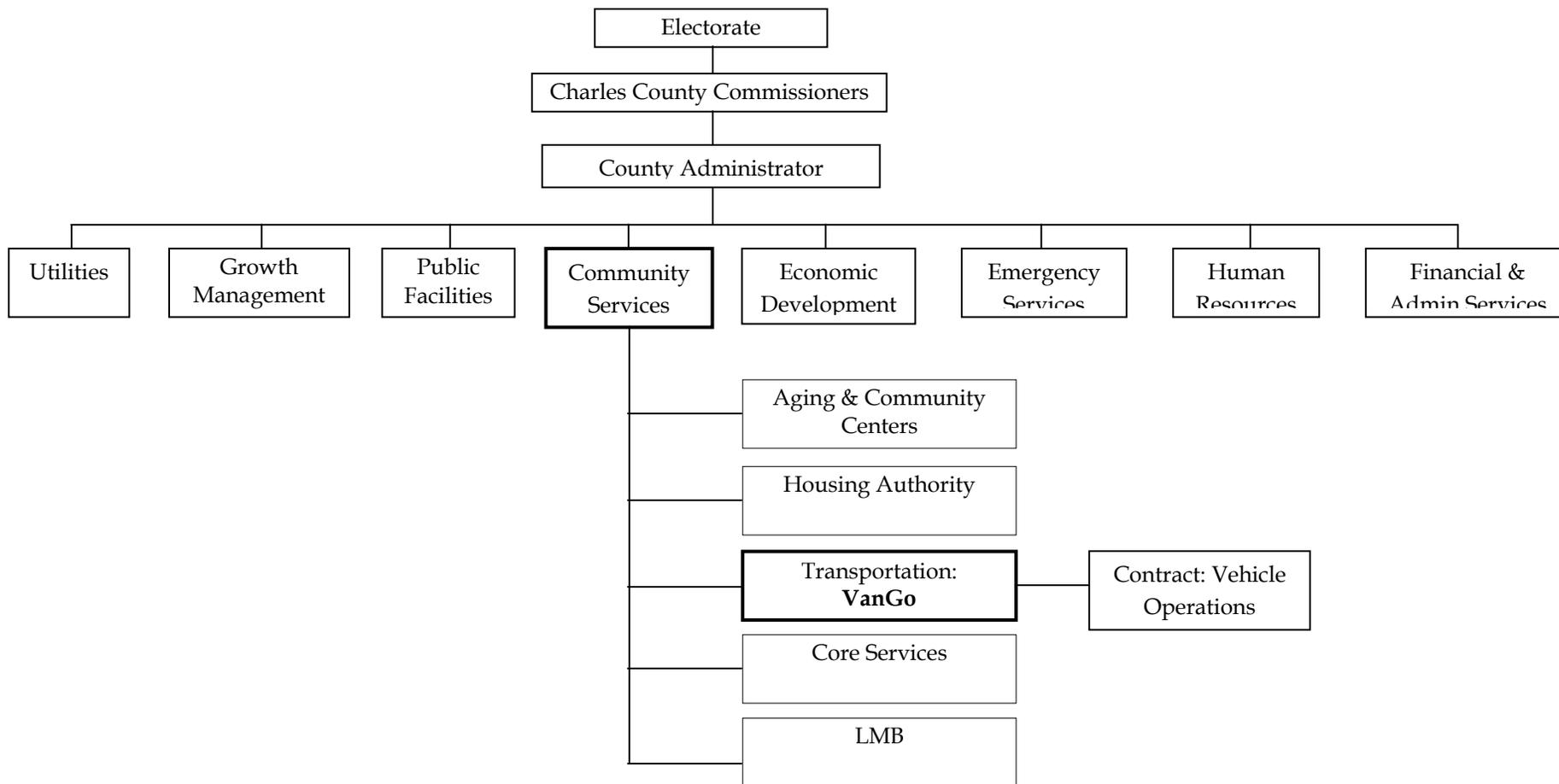
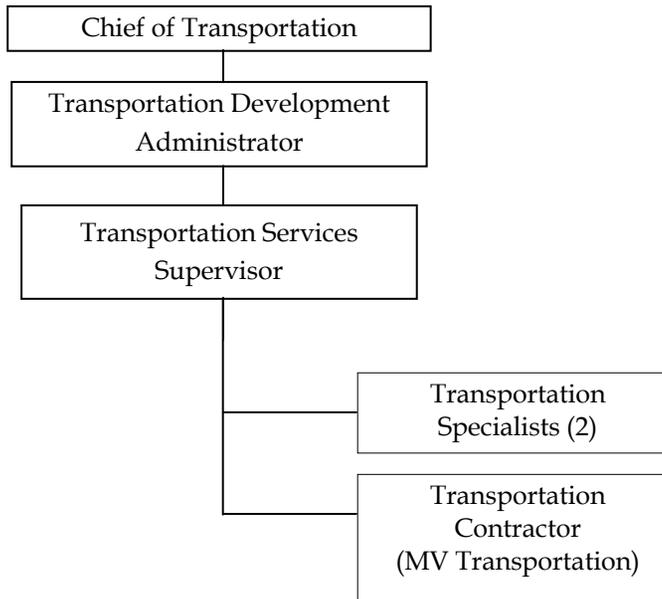


Figure 4-12: VanGO Organizational Structure



The County Commissioners and Director of Community Services are the highest level of authority for guiding transit policy. Charles County is also a member of the Tri-County Council for Southern Maryland (TCCSM) and participates in a forum for addressing regional needs, which include transportation.

VanGO TD staff also work with other county entities to accomplish the provision of transit services. Although VanGO performs short-range transit planning, it works closely with staff from various departments: the County's Planning and Growth Management Department, with respect to transportation planning tasks for long-range planning; the Human Resources Department for employee training and complaints; the Fiscal and Administrative Department for procurement protocols; and other divisions within the Department of Community Services.

Frederick County, Maryland: TransIT

Frederick County's TransIT system provides both fixed-route and paratransit services, with limited rural fixed routes outside the City of Frederick and its immediate environs. TransIT provides ADA paratransit and services for seniors and persons with disabilities; the paratransit service also includes Medicaid-funded transportation. The vehicle fleet consists of 58 vehicles: 25 lift-equipped transit buses, 26 small buses (22 are lift-equipped), four minivans, and three utility vehicles. The total staff includes 20 administrative and support staff, 47 full-time drivers, and 27 part-time drivers. All of employees are County workers. TransIT operates out of its own facility in Frederick, Maryland. The facility includes offices and administrative space, vehicle maintenance and repair facilities, and vehicle storage. These are all used exclusively by TransIT and its staff. TransIT is currently in the process of planning for expansion of the facility.

Organizational Structure

The entire system is operated as a Division of County government, and all employees are County employees. No operations or other functions are contracted out. As a Division, the Division Director of TransIT traditionally reports to the County Manager, though an Assistant County Manager position was recently created, and TransIT's Director will now report to this position. TransIT's policy board is the elected Board of County Commissioners. Figures 4-13 and 4-14 present the County's organizational structure, including an overall jurisdictional representation and the core staff representation.

Figure 4-13: Frederick County – Organizational Structure

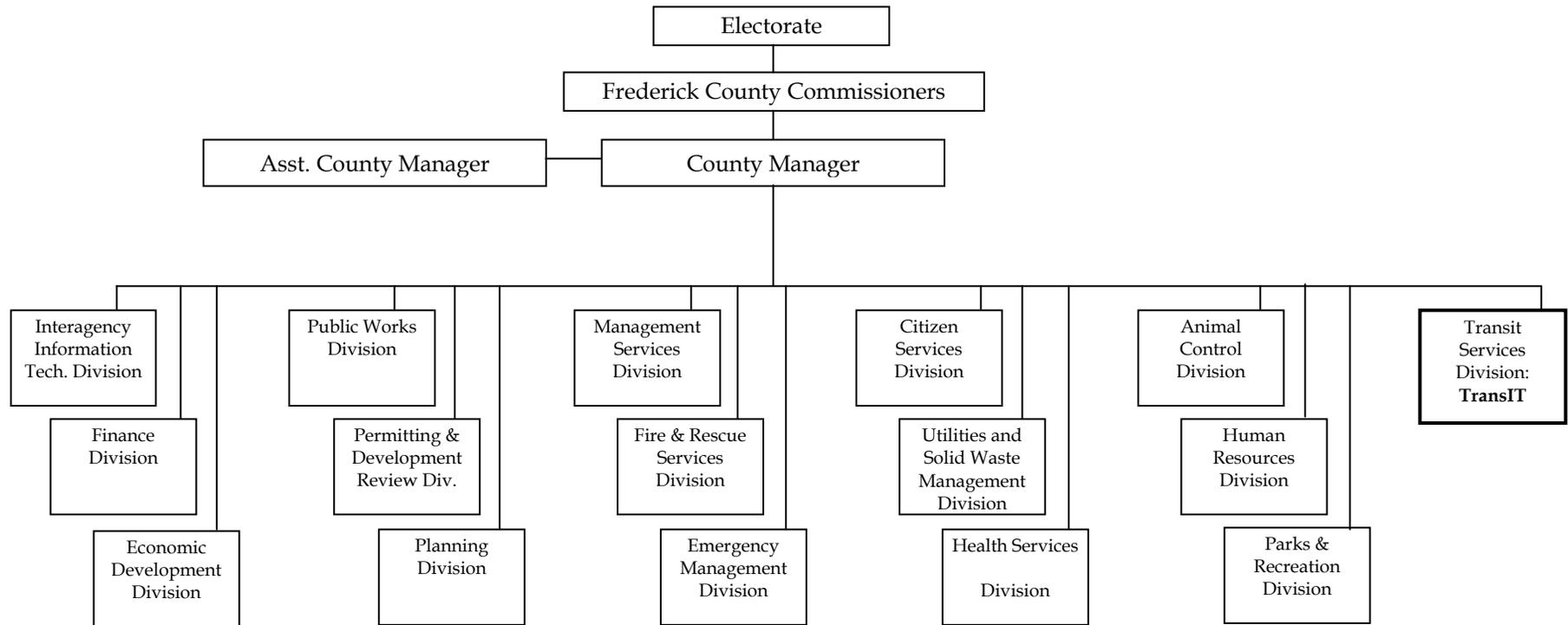
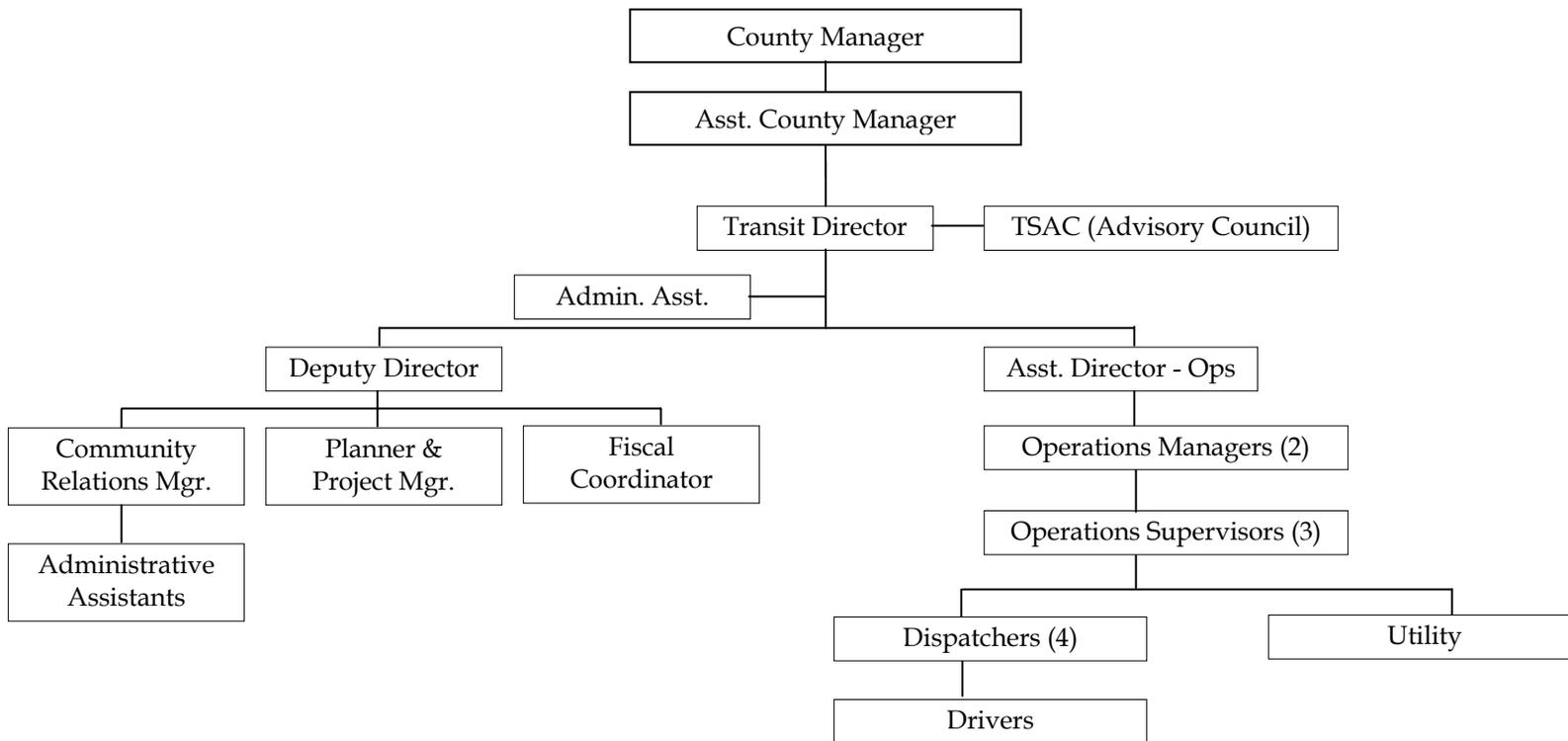


Figure 4-14: TransIT Organizational Structure



The Transportation Services Advisory Council (TSAC) is an appointed advisory board, which includes 11 appointed citizen representatives and nine Ex-Officio members, representing the City of Frederick's Planning and Zoning Department, the Office of Economic Development, the MTA, a County Commissioner, a City Alderman, the County's Planning and Zoning Department, a citizen's transportation advocacy group, and the County Planning Commission.

The Transit Division Director is supported by an Administrative Assistant. Reporting to the Director, the Deputy Director supervises a Community Relations Manager (and two Administrative Assistants), a Planner, and Project Manager (one person), and a Fiscal Coordinator. In addition to the Deputy Director, an Assistant Director of Operations oversees two Operations Managers (one for Shuttle and Paratransit service, and one for fixed-route). There are also three Operations Supervisors on offset shift schedules (6:00 a.m. to 3:00 p.m., 8:00 a.m. to 5:00 p.m., and 1:30 p.m. to 10:30 p.m.) to provide for additional span coverage. The Operations Supervisors oversee four dispatchers, one of whom is a part-time call intake person, and one is a full-time scheduler/batcher (of paratransit trips). The Utility staff includes one full-time person who opens the system at 5:00 a.m. and is there until 2:00 p.m., Monday through Friday. There are two part-time utility persons who provide additional coverage later in the evening and on Saturday. Given the three part-time positions in the administrative staff, there are 19 FTE positions. In addition, TransIT employs 47 full-time drivers and 27 part-time drivers.

The Transit Division also works with other County agencies to accomplish its missions. The staff maintaining the vehicles work for County Fleet Maintenance, though they work in the TransIT facility. Fleet Maintenance bills TransIT for the maintenance and repair work performed by its staff. Although TransIT performs short-range transit planning, it also works closely with the transportation staff of the County's Planning and Zoning Division, which oversees long-range planning, participates in regional planning organizations, conducts multimodal transit planning and bicycle and pedestrian planning, and develops the transit component of the Comprehensive Plan.

TransIT also works with the County's Human Resources Department, which maintains employee records, provides oversight on hiring, conducts the County employee briefing to new employees, and performs payroll and benefits functions. The County's Fiscal offices assist in budget preparation and invoicing for grant funding, though the basic functions are performed by TransIT staff. Formerly the County's financial offices had the lead in performing these functions, but the unique requirements led them to pass this role back to TransIT, as the County has confidence in the capacity of the TransIT program to perform these activities. The Fiscal Coordinator in TransIT provides support for the quarterly reports/invoices, maintenance and fuel tracking, and for Medical Assistance transportation billing.

Harford County, Maryland: Harford Transit

Harford Transit is the public bus service for Harford County, and also provides both ADA paratransit and services for seniors and persons with disabilities within Harford County only. Harford Transit is also the Medical Assistance transportation provider for Harford County. The current fleet includes 33 vehicles, and Harford County contracts for the maintenance and repair of County vehicles through a county-wide contract with First Vehicle.

Harford Transit is managed by the TD staff that is situated in the County Department of Community Services. All of the TD staff are County employees. Harford Transit bus drivers operate the vehicles. Most of the drivers are full-time, though many are part-time (2- to 3-day) employees. Drivers include 17 full-time for fixed-route service, eight full-time for paratransit service, eight on-call drivers, and three wage-connection drivers. The on-call and wage-connection drivers are considered part-time. In Harford County, full-time is seven hours a day, and very few employees work 40-hour weeks. The Harford Transit staff runs operations from its own facility – a renovated firehouse. The Department of Community Services manages other programs and services to the public, including health services, housing programs, transportation services, services for seniors, and others.

As for other daily operations duties, the Harford Transit staff conducts random vehicle inspections and adherence to schedules, provides paratransit certification for demand-response and ADA services, and answers inquiries from the public requesting transit services information.

Organizational Structure

Harford Transit operations are conducted by a relatively small staff, so a lot of responsibilities and duties are shared among them. The leader of this unit is the transit administrator, who is supported by an administrative assistant. The next in rank are the three managers: two operations managers and a financial specialist. As a result of all the personnel that must be monitored, the three managers are involved in daily supervision and planning operations. Figures 4-15 and 4-16 present Harford Transit's organizational structure, which include an overall jurisdictional representation and the core staff representation.

The County Executive and Director of Community Services are the highest level of authority. Staff members' responsibilities are not necessarily tied to their positions; in some cases, various staff members may collaborate on addressing an issue or task. Any transit issues are addressed within Harford Transit.

Figure 4-15: Harford County - Organizational Structure

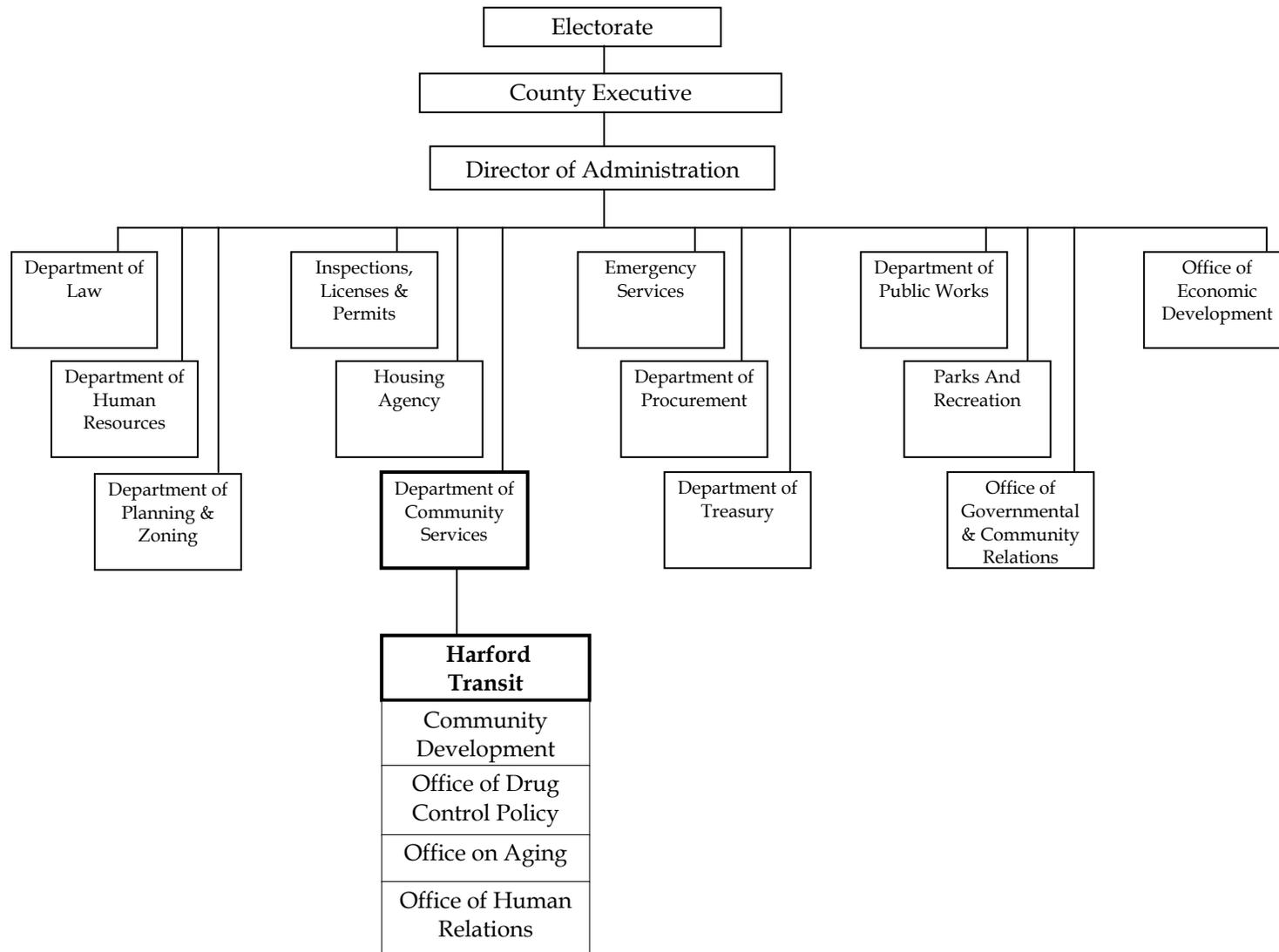
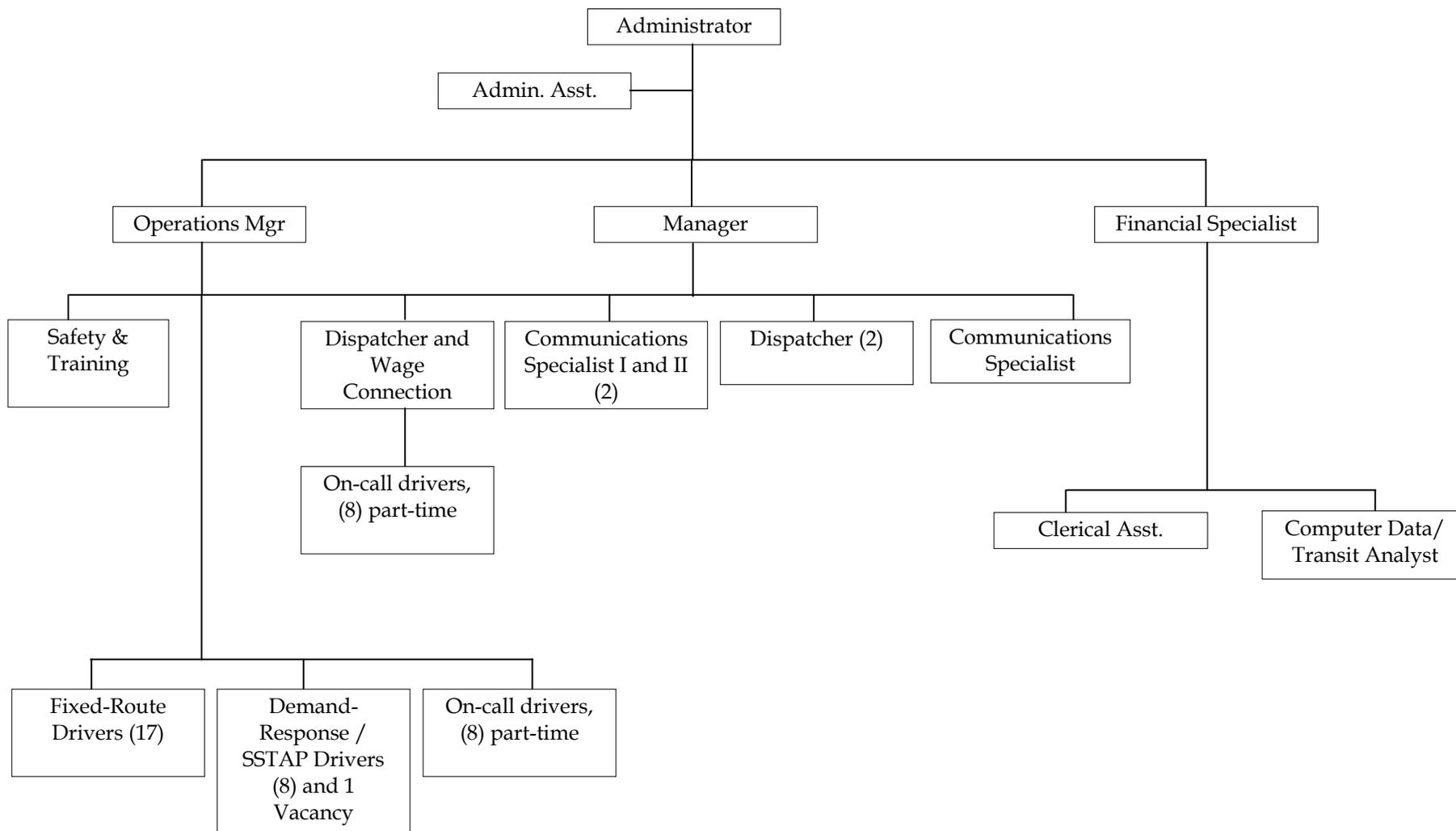


Figure 4-16: Harford Transit Organizational Structure



The Harford Transit division also works with other County agencies to achieve successful operations. Grant Administrators in the Community Services Department assist Harford Transit with completing grant applications. The Department of Planning and Zoning offers Harford Transit opportunities to provide input on land use projects that are under review. Harford Transit staff members hold general discussions with Community Services and Office on Aging staff to stay abreast of issues related to providing paratransit services.

Contractor

The maintenance contractor maintains Harford Transit vehicles as part of its contract with Harford County to maintain all county vehicles. The Harford Transit office includes two bus bays, and a First Vehicle mechanic is stationed there to conduct minor maintenance on vehicles.

SUMMARY

The service alternatives outlined in this chapter were considered as a starting point for the draft plan of the TDP. These alternatives were adjusted based on the deliberations of the CAC and input from Annapolis Transit and MTA staff. The suggested service changes and improvements were developed into the recommended transit plan, described in the next chapter. The peer analysis of organizational structures described above provided insight into other types of transit organizations, should Annapolis Transit choose to adjust its organizational structure along with implementing the service improvements recommended in this TDP.

Chapter 5

Transit Plan

INTRODUCTION

This chapter presents the transit improvements for the City of Annapolis Transit Development Plan (TDP), which will guide implementation of improvements to transit operations over the next five years. The plan was developed from the alternatives presented to the TDP's Citizen Advisory Committee (CAC) and is based on the review of the current transportation services in the City, the needs analysis, and input of the CAC. Some of the recommendations are presented as stand-alone, while others are dependent upon each other. The plan is composed of two major components: a service plan and a capital plan. In addition, the plan addresses marketing and public information components.

The recommendations follow the analysis of the transportation needs of the region (presented in Chapter 2) and the review of the current transit services (Chapter 3 of this report). Service alternatives were developed to address the identified needs and service issues, and these were presented in Chapter 4. These alternatives were reviewed by Annapolis Transit and the CAC, and based on their input, the alternatives have been modified as needed and included here as the Transit Plan.

SYSTEM IMPROVEMENT NEEDS

As demonstrated in Chapter 3, Annapolis Transit generally already provides a high level of coverage. However, there are several potential areas for change in the service design, routes, and schedules that will help improve the service. The changes will promote greater connectivity by using through routes, timed transfers where appropriate, and re-alignment of existing services. In addition, the plan calls for new marketing materials – schedules and system maps that make it easier to connect from one part of the City to another. Initially, the service changes call for similar funding

levels, with the potential for expansion through later hours of service and increased frequency of service in the later years of the plan.

Finally, this plan includes system improvements that are needed to support the development of the transit operations included in the plan. These improvements include expanded marketing and promotional materials, such as quality system maps, rider's guides, and an interactive web site. Further, in the future Annapolis Transit should also provide appropriate passenger amenities, such as benches and shelters at all of the transfer locations, and bus stops that include pertinent route and schedule information.

Plan elements were developed in four general categories of service, along with a marketing component:

- City Transit - Revised Service
- Local Shuttles - Revised Service
- Regional Transit - Revised Service
- Flex Route - ADA Service
- Marketing Program

City Transit Service - Core Service

The City Transit service focuses on the most densely populated areas in Annapolis and Parole with downtown, Westfield Annapolis Shopping Mall (Westfield Mall), Annapolis Market Place, and Eastport Plaza as the four transfer focal points. This embodies the core service for the City and the surrounding area. The physical coverage of the existing service will remain in place with significant changes to ensure increased ridership through better service dependability, timed transfer, and more direct service.

Local Shuttles

The importance of the State and Navy Blue Shuttles cannot be overlooked. The two shuttles offer State government staff, commuters, and visitors the best access to downtown Annapolis without having to drive. The two shuttles should continue to operate from the Navy-Marine Corps Memorial Stadium on Rowe Boulevard, just off Route 50, to Historic Annapolis and the legislative buildings, with minor routing modifications: the shuttles would overlap so that both would operate between the Navy-Marine Corps Memorial Stadium and Church Circle, no longer serving West Street directly. Overlapping these routes allows the services to be provided using one fewer vehicle, reallocating the cost savings towards other service modifications.

Regional Transit

Serving outlying destinations beyond the City is important, especially to individuals who have limited mobility options. The C-40 Route provides the only public transit link to Edgewater, and connects residents to opportunities in Annapolis, Arnold, and the main campus of Anne Arundel Community College. The C-60 Route provides another key public transit connection from Annapolis to the Cromwell Light Rail Station, BWI Airport, and Arundel Mills Mall and the associated Anne Arundel Community College center. The Proposed Service Plan section, which follows, details the recommended plans to continue these services, though changes are incorporated for each route.

Flex Route - ADA

As noted in Chapter 4, an issue to consider in terms of implementation is the need to meet the requirements of the ADA. The ADA requires public transit agencies that provide fixed-route service to provide “complementary paratransit” services to people with disabilities who cannot use the fixed-route bus service because of a disability.

To meet ADA requirements, the proposed transit services would operate as flex routes, where the buses may deviate up to three-quarters of a mile from the planned route to pick up eligible passengers, who call in advance for such deviations. The services proposed in this plan are conducive to this approach.

If it is determined that the service on-time performance is suffering by employing a flex route system, modifications to the system’s schedule would be required. Another approach to fulfill ADA requirements is to directly provide demand-response services, where patrons call ahead (by the close of business the day before the desired trip) to schedule trips, and an accessible van or small bus transports them between a specific origin and destination. Such door-to-door service often provides higher quality transportation, but at higher costs because more vehicles and operators are needed, among other resources, to operate this type of service.

Marketing Program

Marketing and public information are important in increasing transit usage in the City of Annapolis. A clear and informative brochure is a critical marketing tool for the transit system. It helps to make transit services “real” and “concrete” for users. Annapolis Transit currently produces a detailed systemwide brochure that provides information on fixed-route schedules, regional transit, shuttle service, fares, and ADA service. The brochure also displays the route schedule in a unique manner – a color “clock” displaying the times each hour that a route serves specific stops. This design

saves space, but the trade-off is a less comprehensive and more confusing schedule. Consequently, additional resources need to be committed to improve upon the current systemwide brochure and to develop new brochures for individual routes.

Individual brochures for each of the routes would serve as a sensible companion to the systemwide brochure. Each individual brochure would contain a description of the particular route, thorough schedule information, along with a detailed route map. The two pieces (systemwide brochure and individual schedules) would allow existing passengers and potential users to easily determine the destinations and origin areas that are served and the specific routes that provide access to those locations.

PROPOSED SERVICE PLAN

Two preferred conceptual service plan networks were designed and endorsed by Annapolis Transit, the CAC, and the MTA. Both are arterial in design, with major transfer points at Westfield Mall, Eastport Plaza, downtown, and Annapolis Market Place. The networks were designed to be more passenger-friendly, reducing the need to transfer between buses. The routes offer more direct connections between high density residential areas and major destinations throughout the service area. With the new network design, there is less overlap among the services, which reduces confusion for passengers. The proposed networks - Network A and Network B - are shown in Figures 5-1 and 5-2, and two evening and Sunday routes that would complement each proposed network are shown in Figure 5-3.

Each network is designed to include a set of core routes, two downtown shuttles, and two regional routes. The recently funded JARC Commuter Connector Service, or the C-90 Route, between Annapolis and New Carrollton Metro Station will also operate in conjunction with each of these networks, but is not further detailed in this transit plan since no changes were recommended to the service (see Chapter 3 for route description). As noted above, two additional routes were designed to provide service into the evenings and on Sundays. Both proposed networks were designed to be cost-neutral, compared to the existing system, and include the evening and Sunday service.

The differences between the two concepts are very minor. Network A provides a slight improvement in the geographic coverage of the service area by proposing one additional route. Network B provides a slight improvement in the headways for most of the routes, such that passengers would typically have shorter wait times between buses.

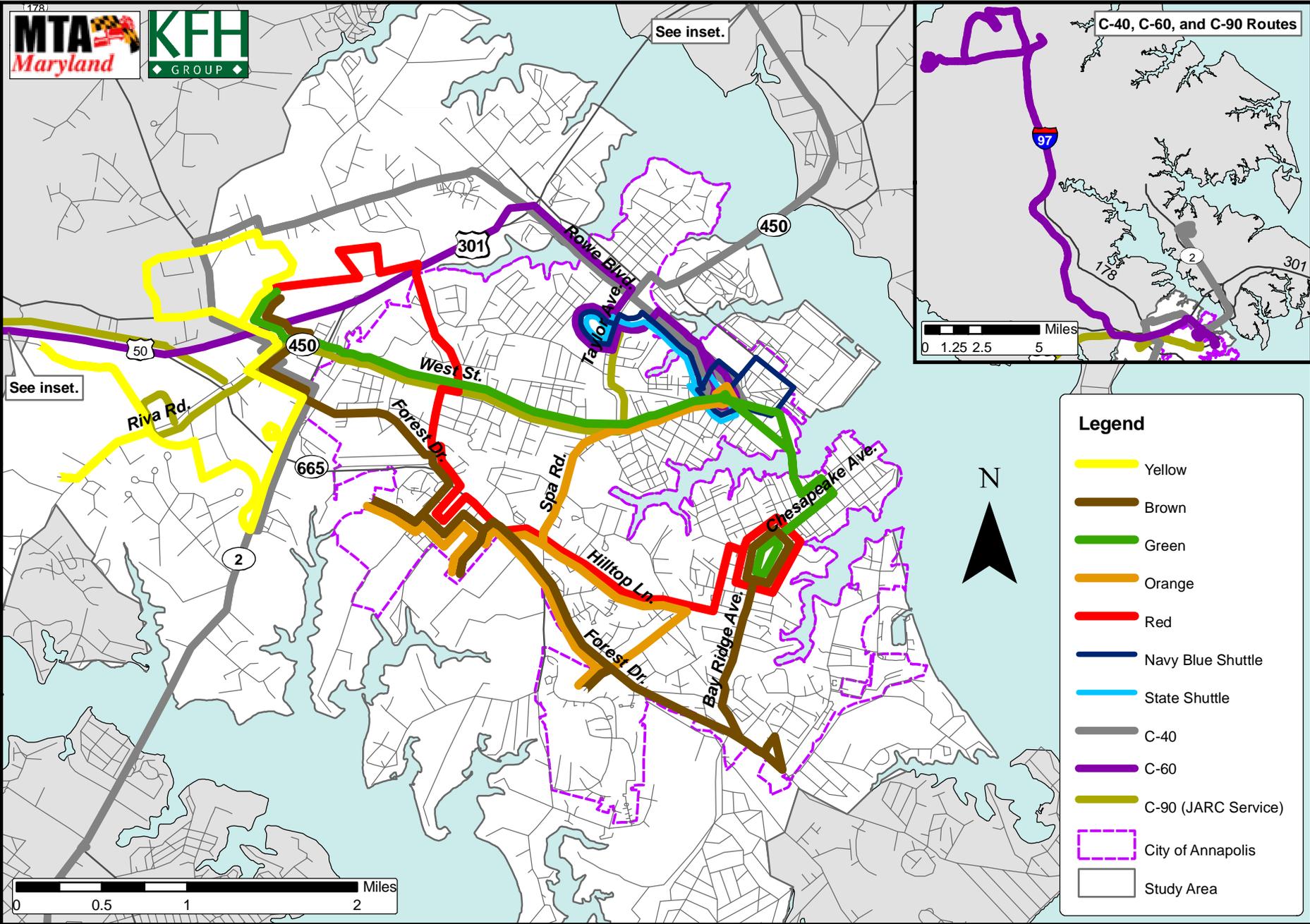


Figure 5-1: Annapolis Transit Conceptual Plan, Network A

5-5

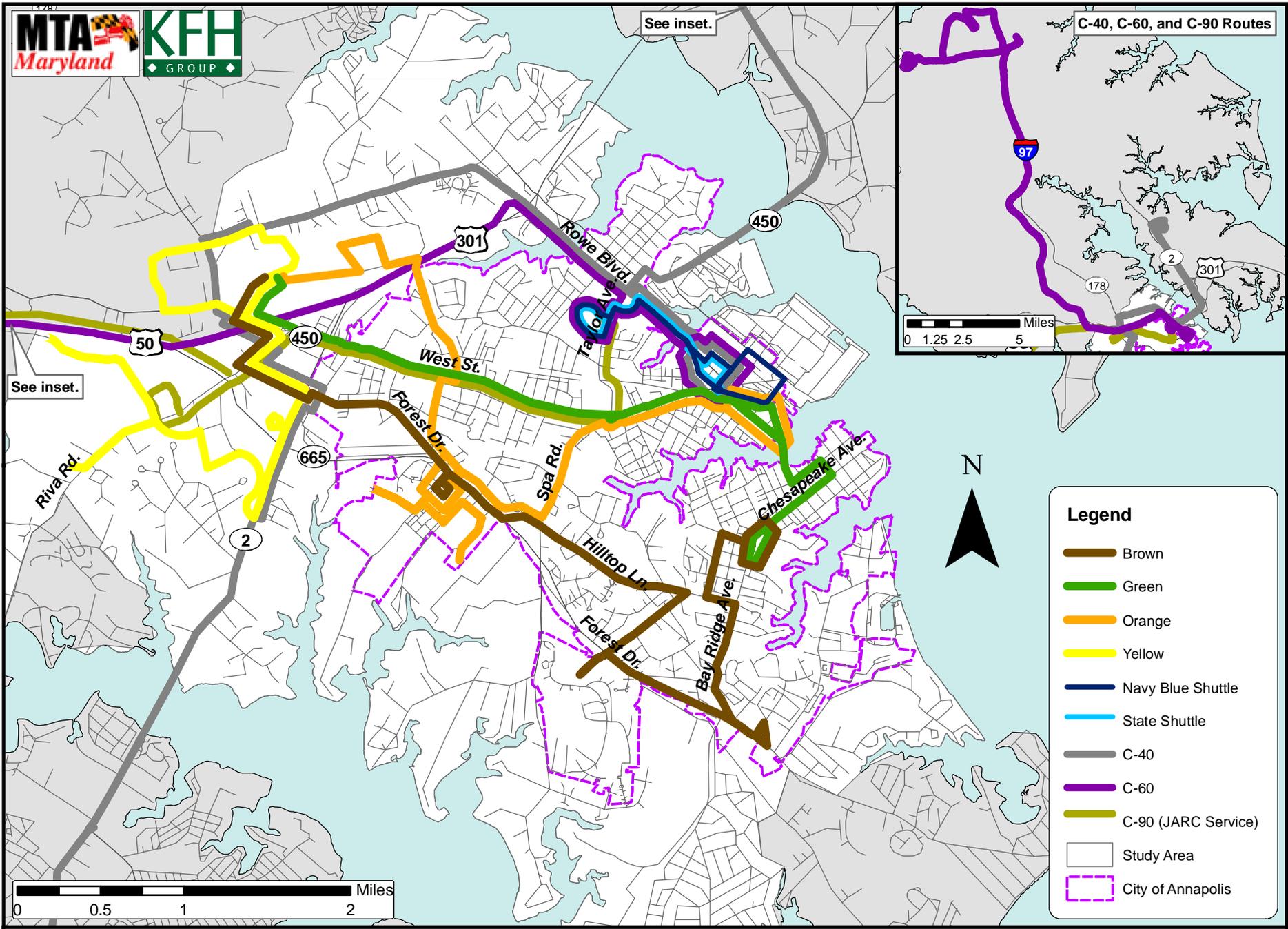
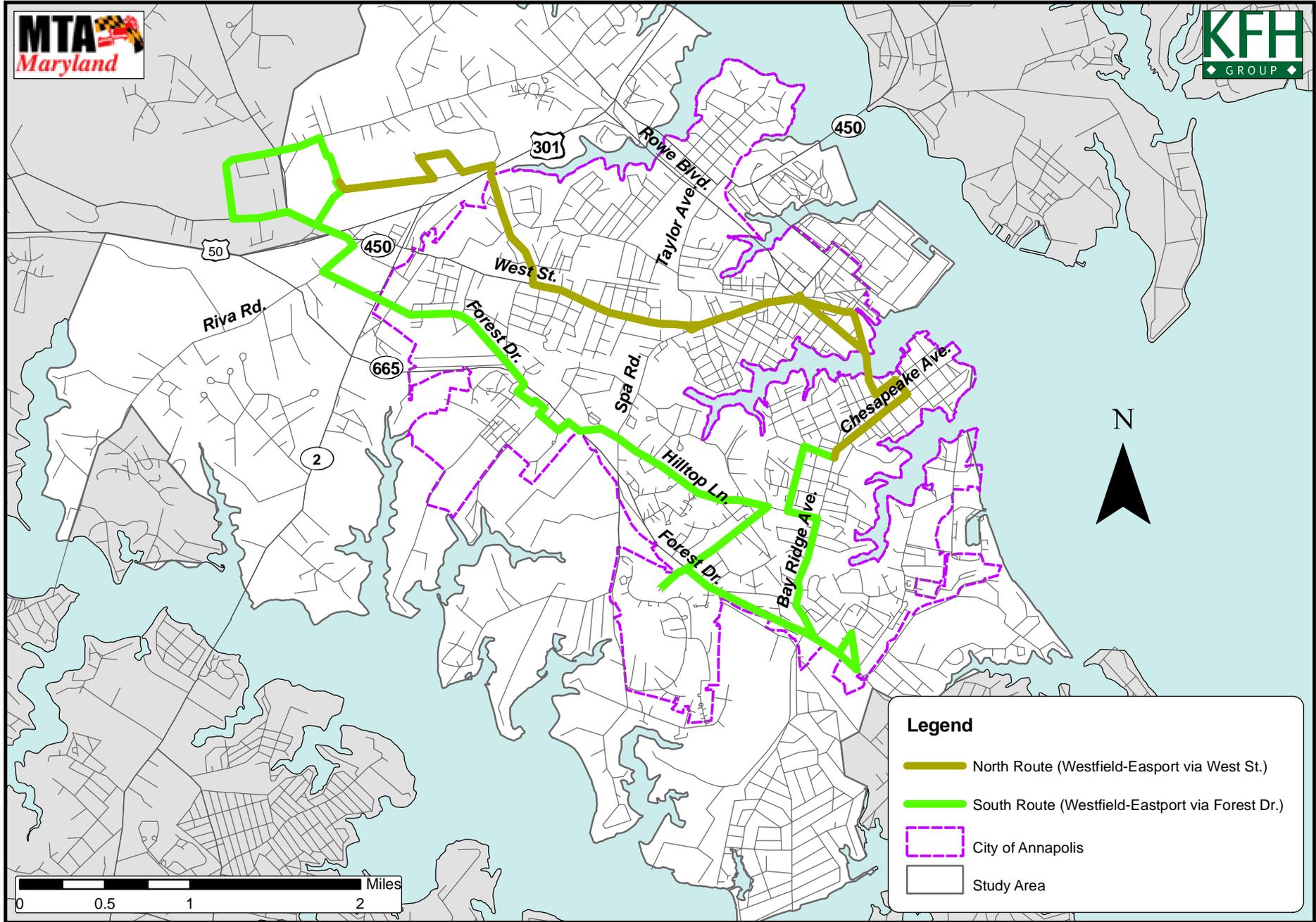


Figure 5-2: Annapolis Transit Conceptual Plan, Network B



5-7

Figure 5-3: Annapolis Transit Conceptual Plan, Evenings and Sundays

Revised Service Design

Both networks offer a more reliable service package due to the arterial design of the routes. A new “shopping” route (Yellow Route) connects Heritage Office Center with Westfield Mall via other major shopping destinations (Annapolis Harbour Center, Festival at Riva, Parole Plaza, and Gateway Village), as well as the University of Maryland University College, the Harry S. Truman Park and Ride Lot, and the Motor Vehicle Administration. Another new service travels to the Annapolis Transit Office on Chinquapin Round Road and provides a link to the Greyhound Bus Station. The regional service is re-aligned to provide direct service to some major destinations. The C-40 Route now serves Westfield Mall and downtown directly; and the C-60 Route now also serves downtown as well as the Walmart at MD-174/Quarterfield Road.

Service hours for both networks would be the same, closely following the existing service hours for transit.

Route	Service Hours
Core Routes	Monday – Saturday: 5:30 am – 7:00 pm
Evenings & Sundays Routes	Monday – Saturday: 7:00 pm – 10:00 pm Sunday: 8:00 am – 7:00 pm
Navy Blue Shuttle	Monday – Friday: 9:00 am – 6:00 pm Saturday – Sunday: 10:00 am – 6:00 pm
State Shuttle	Monday – Friday: 6:30 am – 8:00 pm
C-40 Route	Monday – Friday: 6:00 am – 8:00 pm
C-60 Route	Monday – Friday: 7:00 am – 7:00 pm

Network A

Network A is designed using five new core routes.

Table 5-1 provides a summary of implementation details for this proposed network. The service characteristics of the individual routes are as follows:

5-1: Network A Service Characteristics		
Route	Service Area	Headways*
Brown	Westfield Mall/ Annapolis Market Place/ Forest Dr./ Robinwood/ Bay Forest Plaza/ Eastport Plaza	45 minutes
Green	Westfield Mall/ West Street/ Downtown/ Eastport Plaza	30 minutes
Orange	Annapolis Market Place/ Robinwood/ Hilltop Lane/ Downtown	45 minutes
Red	Westfield Mall/ A.A. Medical Center/ Admiral Dr./ Chinguapin Round Rd./ Annapolis Market Place/ Hilltop Ln./ Eastport Plaza	30 minutes
Yellow	Westfield Mall/ Gateway Village/ Parole Area/ UM University College/ Harry S. Truman Park & Ride/ Heritage Office Center	30 minutes
North Evenings & Sundays	Westfield Mall/ A.A. Medical Center/ Admiral Dr./ West Street/ Downtown/ Eastport Plaza	75 minutes
South Evenings & Sundays	Westfield Mall/ Gateway Village/ Parole Area/ Annapolis Market Place/ Hilltop Ln./ Robinwood/ Bay Forest Plaza/ Eastport Plaza	75 minutes
Navy Blue & State Shuttles	Navy-Marine Corps Memorial Stadium/ Church Circle/ Government Offices/ Downtown	5-30 minutes
C-40	Edgewater/ Westfield Mall/ Downtown Connection	90 minutes
C-60	Downtown Connection/ Navy-Marine Corps Memorial Stadium/ Walmart/ Cromwell Light Rail/ BWI Airport/ Arundel Mills Mall & AACC	2 hours

*The amount of time (usually in minutes) that elapses between two vehicles passing the same point traveling in the same direction on a given route.

Note: The C-90 Route, connecting Annapolis (Navy-Marine Corps Memorial Stadium and Harry S. Truman Park and Ride) to the New Carrollton Metro Station, would also operate with this network at hourly headways.

Network B

Network B is designed using four new core routes.

Table 5-2 provides a summary of implementation details for this proposed network. The service characteristics of the individual routes are as follows:

Table 5-2: Network B Service Characteristics

Route	Service Area	Headways*
Brown	Westfield Mall/Annapolis Market Place/Hilltop Ln./Robinwood/Bay Forest Plaza/Eastport Plaza	30 minutes
Green	Westfield Mall/West Street/Downtown/Eastport Plaza	30 minutes
Orange	Westfield Mall/A.A. Medical Center/Chinquapin Round Rd./Admiral Dr./Annapolis Market Place/Downtown	40 minutes
Yellow	Westfield Mall/Gateway Village/Parole Area/UM University College/Harry S. Truman Park & Ride/Heritage Office Center	30 minutes
South Evenings & Sundays	Westfield Mall/Gateway Village/Parole Area/Annapolis Market Place/Hilltop Ln./Robinwood/Bay Forest Plaza/Eastport Plaza	75 minutes
North Evenings & Sundays	Westfield Mall/A.A. Medical Center/Admiral Dr./West Street/Downtown/Eastport Plaza	75 minutes
Navy Blue State Shuttle	Navy-Marine Corps Memorial Stadium/Church Circle/Government Offices/Downtown	5-30 minutes
C-40	Edgewater/Westfield Mall/Downtown Connection	90 minutes
C-60	Downtown Connection/ Navy-Marine Corps Memorial Stadium/Walmart/Cromwell Light Rail/BWI Airport/Arundel Mills Mall & AACC	2 hours

*The amount of time (usually in minutes) that elapses between two vehicles passing the same point traveling in the same direction on a given route.

Note: The C-90 Route, connecting Annapolis (Navy-Marine Corps Memorial Stadium and Harry S. Truman Park and Ride) to the New Carrollton Metro Station, would also operate with this network at hourly headways.

STRATEGY AND PHASING

The proposed plan takes into account both the need to improve services, while maintaining expenses near current funding levels. In addition, services should be expanded when funding opportunities become available. The phasing of improvements therefore reflects initial service modifications that could be implemented with little change in operating costs, and service expansions that would be implemented gradually over the next five years.

The phasing is designed to indicate approximate timing and priority; however, implementation of any component is often a function of funding availability. Both an annual budget process and MTA grant application process allow for public input and revisions to the anticipated project phasing based on need and funding. Acceptance of this TDP does not obligate the City of Annapolis or the State to fund any particular element at any time.

The costs shown in this chapter are based on current hourly operating costs (average cost per hour for Annapolis Transit routes captured from the FY 2010 Annual Transportation Plan) and estimates of capital costs. Depending on the timing and the final choices, in any given year the costs could differ due to the effects of inflation and energy prices. For extending service hours, the costs shown are incremental—above the base year funding of the current system. For service restructuring, including the proposed networks and associated new routes, the costs are net of the current operating costs of that service. *For each phase, the costs of extending service hours or new programs become part of the base year.* All new services are presented as conceptual services that would need final operational planning of the exact route alignment, stop location, timetable, etc. prior to final implementation.

OPERATING PLAN FOR SERVICE IMPROVEMENTS

Operating Plan - Year 1

Implement New Network Service

Modify existing routes for greater connectivity to each other with no change in costs (cost-neutral).

Develop Schedules, System Maps, and Rider's Guide

Marketing materials, clear and concise system maps, and accurate schedules will also be developed along with the new service. The MTA Locally Operated Transit System's (LOTS) Program Manual recommends that a system spend at least 1% of their annual budget on a modest marketing program. Therefore, we recommended that Annapolis Transit budget \$44,000 for the initial year to develop and implement the marketing program.

Estimated Total Additional Operating Cost: \$44,000

Operating Plan – Year 2

All Services

Initiate on-going monitoring and planning activities, making minor route adjustments on an annual basis as needed.

Marketing Program

On-going funding support for the promotion of services and printed material. The subsequent years of the plan would require at a minimum 0.5% of the annual budget – \$22,000 annually to continue the marketing program.

Estimated Total Annual Additional Operating Cost: \$22,000

Operating Plan – Year 3

Evening Service

Expand hours on the new evening routes. Add service hours to extend span in the evening until 12:00 a.m., Monday through Saturday. This would cost an additional \$104,000. Uses existing fleet.

Estimated Total Annual Additional Operating Cost: \$104,000

Operating Plan – Year 4

Evening Service

Reduce headways from 1 hour and 15 minutes to 40 minutes, Monday through Saturday. This would cost an additional \$208,000. Uses existing fleet.

Estimated Total Annual Additional Operating Cost: \$208,000

Operating Plan – Year 5

Sunday Service

Reduce headways from 1 hour and 15 minutes to 40 minutes. This would cost an additional \$125,000. Uses existing fleet.

Estimated Total Annual Additional Operating Cost: \$125,000

Estimated Operating Costs

Following the plan elements presented above, Table 5-3 details the estimated additional operating costs for each proposed service improvement. The table demonstrates how the incremental annual operating costs were estimated, including the additional hours of service, hourly operating costs, and number of service days per proposed service improvement. Costs associated with the marketing program are also included in the table.

CAPITAL PLAN FOR SERVICE IMPROVEMENTS

This section presents the plan to provide the capital infrastructure needed to implement the operating plan presented above, and to maintain the current level of services. This capital plan includes a vehicle replacement plan to improve the quality of service of the existing transit system. No additional vehicles are required to implement the expansion plan. It also includes capital for passenger amenities, including bus shelters. A combined budget projection is presented in the next section, showing the estimated future operating cost combined with the capital costs.

Vehicles

The capital plan for the vehicles was developed by applying Federal Transit Administration (FTA)/MTA vehicle replacement standards to the current vehicle fleet inventory for Annapolis Transit as presented in Chapter 3. These vehicle replacement standards are as follows:

Buses

- Heavy Duty Bus (over 35'): at least 12 years of service or an accumulation of at least 500,000 miles.
- Heavy Duty Bus (under 35'): at least ten years of service or an accumulation of at least 350,000 miles.
- Medium Duty Bus (under 30', 15,000 lbs. < 23,000 lbs.): at least eight years of service or an accumulation of at least 250,000 miles.
- Light Duty Small Bus (15,000 lbs or less): at least six years of service or an accumulation of at least 200,000 miles.

Raised Roof Vans, Standard Vans, Mini-Vans, and Automobiles

- At least four years of service and an accumulation of 150,000 miles; or
- At least five years of service and an accumulation of 100,000 miles; or
- At least six years of service regardless of mileage.

Table 5-3: Operating Cost of Service Improvements/Expansions

Description of Improvement	Proposed Change	Incre- mental Hours	Cost per Hour ¹	Daily Operating Cost	Number of Service Days	Total Incremental Annual Cost
YEAR ONE:						
1) Implement New Network Service	Core Routes	0	\$56.78	\$0	254	\$0
	Evenings & Sundays Routes	0	\$56.78	\$0	358	\$0
	Navy Blue Shuttle	0	\$56.78	\$0	306	\$0
	State Shuttle	0	\$56.78	\$0	254	\$0
	C-40 Route	0	\$56.78	\$0	254	\$0
	C-60 Route	0	\$56.78	\$0	254	\$0
2) Marketing Program	Development of Schedules, System Maps and Riders Guide					\$44,000
Total Year One: Additional Operating Cost						\$44,000
YEAR TWO:						
1) All Services	On-Going Monitoring and Planning - Minor Route Adjustments					\$0
2) Marketing Program	Annual Upkeep of Schedules, System Maps and Riders Guide					\$22,000
Total Year Two: Additional Operating Cost:						\$22,000
YEAR THREE:						
1) Evening Routes - Expand Service Hours	Extend evening hours on the new routes from 10:00 pm until 12:00 am, Monday through Saturday	6	\$56.78	\$341	305	\$103,907
Total Year Three: Additional Operating Cost:						\$103,907
YEAR FOUR:						
1) Evening Routes - Reduce Headways	Reduce headways from 1 hour and 15 minutes to 40 minutes, Monday through Saturday	12	\$56.78	\$681	305	\$207,815
Total Year Four: Additional Operating Cost						\$207,815
YEAR FIVE:						
1) Sunday Routes - Reduce Headways	Reduce headways from 1 hour and 15 minutes to 40 minutes, Monday through Saturday	44	\$56.78	\$2,498	50	\$124,916
Total Year Five: Additional Operating Cost						\$124,916

¹Cost per hour is the average cost per hour for Annapolis Transit routes (\$56.78) from their FY 2010 ATP.

Applying these standards to the existing fleet provided a baseline estimate of capital needs for the next five years just to maintain the existing level of service. The standards indicate that different types of vehicles have different expected lifespans. The builders of these vehicles are required to designate the projected life-cycle when the vehicles are submitted for testing by the FTA, and the vehicles are designed to meet these standards. Vehicles are not typically designed to greatly exceed the expected life; consequently maintenance costs for over-age vehicles can significantly increase operating costs. In addition, the reliability of vehicles generally declines as they age, particularly after their design life is exceeded. This decrease in vehicle reliability also affects operating costs and impacts the quality of service for passengers.

Aside from the capital needs for existing services, the additional vehicles needed for each of the service expansion elements were also determined based on the number of additional service hours required, whether the existing fleet had vehicles that were not in use during those periods, or if the service required a different type of vehicle. This analysis determined that the proposed service expansion could be operated with the existing fleet.

Capital assistance is available for financing capital equipment needed for an efficient, effective, and coordinated transportation system. Costs associated with preventive maintenance (consistent with eligible FTA guidelines) are an additional capital expense, eligible for reimbursement as a capital expense. Broadly speaking, preventive maintenance expenses include the costs of maintaining vehicles and facilities, and these expenses occur every year. Annapolis Transit receives grant funds for preventive maintenance through their annual application to the MTA since FTA will pay 80% of capital costs under these programs.

Passenger Facilities

Another component of the capital plan includes passenger shelters. Each transfer location requires at least one shelter. The cost associated with each shelter include the costs of site preparation, shelter purchase, and installation. Bus shelters not only provide protection from the sun and weather for users, but also make the transit system visible and give it permanence in the community. Shelters are also excellent locations to provide transit information such as schedules (for service at that stop), routing, and contacts for additional information. Shelters must meet the requirements of the Americans with Disabilities Act (ADA) regarding layout, ramps, and clearances, etc.

The capital needs, primarily vehicles and bus shelters, to implement the proposed services are included in the year-by-year capital plan presented below. (All amounts shown represent current dollars.) Projects and costs are shown in the

anticipated year of application; see Table 3-3 for references to existing vehicles (by agency fleet number) that will be replaced as part of the capital plan. The dollar amount required to purchase the vehicles in each year of the plan was based on the Annapolis Transit grant application to the MTA.

Capital Plan – Year 1:

- Replacement Vehicles
 - Two Support Vehicles (Replace 70 and 72): \$40,000 and \$25,000, respectively
- AVL System: \$350,000
- Bus Wash: \$250,000
- Customer Amenities: \$75,000
- Ten Shelters: \$100,000
- Preventive Maintenance: \$180,000

Estimated Total Capital Cost: \$1,020,000

Capital Plan – Year 2:

- Replacement Vehicles
 - Four Heavy-Duty Transit Buses (Replace 203, 204, 205, and 206): \$1,340,000
- Preventive Maintenance: \$180,000

Estimated Total Capital Cost: \$1,520,000

Capital Plan – Year 3:

- Replacement Vehicles: None
- Preventive Maintenance: \$180,000

Estimated Total Capital Cost: \$180,000

Capital Plan – Year 4:

- Replacement Vehicles
 - Four Heavy-Duty Transit Buses (Replace 100, 101, 102, and 103): \$1,340,000
- Preventive Maintenance: \$180,000

Estimated Total Capital Cost: \$1,520,000

Capital Plan – Year 5:

- Replacement Vehicles
 - Two Heavy-Duty Transit Bus (Replace 104 and 105): \$670,000
- Preventive Maintenance: \$180,000

Estimated Total Capital Cost: \$850,000

Estimated Capital Costs Over TDP Timeframe

Table 5-4 presents a summary of the capital program, by type of project and year.

Table 5-4: Five-Year Capital Plan

Year	Replacement Vehicles	Expansion Vehicles	Other Capital	Preventive Maintenance	Total
1	\$885,000	\$0	\$775,000	\$180,000	\$1,020,000
2	\$1,340,000	\$0	\$0	\$180,000	\$1,520,000
3	\$0	\$0	\$0	\$180,000	\$180,000
4	\$1,340,000	\$0	\$0	\$180,000	\$1,520,000
5	\$670,000	\$0	\$0	\$180,000	\$850,000

Note: Amounts shown in current dollars.

COMBINED BUDGET PROJECTION

Table 5-5 presents the combined cost summary by year, including both the operating and capital programs. The estimated total operating budget for each year assumes all expansions and modifications take place in the year planned, and at the level of service planned for that expansion.

It should be noted that Annapolis Transit develops an annual grant application to the MTA that includes capital and operating grant requests. This grant application has to be approved by the City Council each year. It is likely that the proposed expansions may be modified in the year of application based on the growth of ridership, the timing of new development to be served, and other factors including the projected availability of new federal and state funding. Federal and state support for transit operations has continued to be strong; however, the City-share of the local operating deficit for the proposed services may be greater than it is for the current services. 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, so estimating the amount available to the City of Annapolis is not easily done. Annapolis Transit's annual proposals will have to compete in a discretionary program. The service expansion within this chapter represents a financially-unconstrained plan for growth to increase transit usage.

Table 5-5: Projected Operating and Capital Plan Summary

	Operating Budget	TDP Planned Expansion	Total Operating Budget	Total Capital	Total
Base	\$4,394,600				
Plan Year 1	\$4,570,000	\$44,000	\$4,614,000	\$1,020,000	\$5,634,000
Plan Year 2	\$4,799,000	\$22,000	\$4,777,000	\$1,520,000	\$6,297,000
Plan Year 3	\$4,968,000	\$104,000	\$5,072,000	\$180,000	\$5,252,000
Plan Year 4	\$5,275,000	\$208,000	\$5,483,000	\$1,520,000	\$7,003,000
Plan Year 5	\$5,702,000	\$125,000	\$5,827,000	\$850,000	\$6,677,000

(Assumes 4% annual inflation).

OTHER RECOMMENDATIONS

In addition to the expansion of operations and the procurement of capital, the TDP process has included consideration of several other actions that comprise other recommendations. Some of these are reflected in the capital budget, but not all of them require specific budgeting.

BRAC - Service to Fort Meade

In this section, the alternative relevant to Annapolis, developed as part of the *Fort Meade/Base Realignment and Closure (BRAC) Transit and Ridesharing Planning Study*, is also highlighted. Serving Fort Meade, this alternative was designed to end at the garrison so that only riders with appropriate security clearance ride onto the installation. Due to the large size of the post, the service travels in a small loop on the installation, serving destinations such as the Post Commissary and the Kimbrough Ambulatory Care Center. If it is determined that Fort Meade will provide an internal timed shuttle to meet proposed transit services, then only a peripheral stop at the Visitor Control Center would be required.

Harry S. Truman Park & Ride-EUL-Fort Meade Route

This route travels between the Harry S. Truman Park and Ride Lot in Parole and Fort Meade. This service would only operate on weekdays during peak hours, essentially as express bus service (6:00 – 9:00 a.m. and 4:00 – 7:00 p.m.) only with 30-minute headways. This route would travel from the Harry S. Truman Park and Ride to US 50/301 and connects to I-97 going north. The route virtually runs express, connecting to MD-32 near Millersville and traveling to MD-175/Annapolis Road, potentially serving the EUL site before making a loop onto Fort Meade. Potential connections with other transit providers include Annapolis Transit, Connect-A-Ride (Route K), and MTA commuter bus service. This route could also be extended to serve the Navy-Marine Corps Stadium Park and Ride Lot in Annapolis and the Annapolis Towne Centre at Parole given available funding.

Estimated Total Costs: \$504,000 in annual operating costs and four \$211,000 buses.

New Passenger Transfer Facility – Parole Area

A passenger transfer facility is also recommended at Parole. Several existing and recommended routes serve the mixed-use development, making it a prime choice for a transfer facility. While an enclosed building that could house a transit shop, waiting room, and other passenger amenities may be ideal, the Parole area could also serve as a sufficient transfer point if marked bus bays and shelters or benches are constructed. Building such a transfer facility, particularly an attractive one with trip generators nearby, is crucial to promoting transit use and connectivity and mitigating the traffic congestion expected with future population growth. A feasibility study to explore the potential for this facility should be undertaken at an estimated cost of \$50,000.

Evaluate Bus Stop/Shelter Improvements

As noted in Chapter 2 by the CAC, Annapolis Transit needs to improve transit-related amenities, such as accessible bus stops, paths of travel to stops, safety and maintenance issues, and signage. While Annapolis Transit has an existing bus stop inventory, a more formal bus stop evaluation study should be considered. This study would provide an assessment and updated inventory of all the Annapolis Transit bus stops, using accessibility and assessment guidelines, and form the basis for a prioritized annual bus stop improvement program that could be implemented on a continuing basis over subsequent years. Typical costs for this type of study, based on the 260 bus stops documented within the Annapolis Transit system, are in the range of \$22,500.

Maintenance Plan

The MTA recently conducted an in-depth review of Annapolis Transit's vehicle and facility maintenance practices. This is detailed in Chapter 3, where many problems with both facility maintenance and vehicle maintenance were exposed. Since Annapolis Transit is deficient in the area of maintenance, the MTA has been working with the transit system to address these maintenance problems. This report strongly recommends a revision to the maintenance procedures that builds in an internal control mechanism to guard against future failings. In the near-term, Annapolis Transit must provide MTA with a plan for correcting remaining maintenance issues that were identified in the 2009 maintenance re-assessment report. In addition, to comply with ADA requirements, Annapolis Transit should address how it will ensure maintenance of lifts and other accessibility features as part of the revisions to maintenance procedures. Over the last year, Annapolis Transit has explored the possibility of contracting out maintenance to address these issues.

BENEFITS OF THE TRANSIT PLAN

This TDP presents a vision for the growth of transit in the City of Annapolis that would:

- Improve service through progressive route modifications and increases in service frequency and span to make transit attractive and usable;
- Improve connectivity with both local and regional transit services; and
- Provide transit infrastructure improvements to support continued growth in transit services.

The phasing of this plan is based on the notion that continuing development, tough economic times, and the high cost of gasoline will drive ridership increases on transit. The actual implementation may take longer, depending on the degree to which these factors drive transit demand. The TDP recognizes that buses operating at frequencies of an hour are not likely to attract many current drivers, or serve as a convenient alternative to the private vehicle. Consequently, the plan calls for a higher frequency of service to bring the convenience factor to a level that is attractive to "choice" riders. Additional geographic coverage to provide transit service to areas of new development is another draw of the plan, which aims to make transit an attractive mobility option to new residents and employees. The recommended transit improvements will help transit become a more convenient and natural form of transportation for those living in, working in, and visiting the City of Annapolis.

APPENDIX A
Citizen Advisory Committee

APPENDIX A

Citizen Advisory Committee

Committee Member	Agency
Lara Boeck	Citizen
George Cardwell	Anne Arundel County Office of Planning and Zoning
Rev. Henry Green	Pastor, Heritage Baptist Church
Susan Gross	Citizen
Matt Grubbs	Discover Annapolis Tours
Joanna Hanes-Lahr	Citizen
David W. Humphreys	Citizen
Corinne Irwin	Citizen
Melanie Lynch	Citizen
Michael Lynch1	Citizen
Jim Martin	Free State Press, Inc.
John H. McLeod	Citizen
Sally Nash	Annapolis Department of Planning and Zoning
Laurie Powell	Citizen
Rick Sisas	Citizen
Burnell Vincent	Citizen
Felecia Wallace	Citizen
Ted Woods	Citizen
Keisha Ransome	Maryland Transit Administration (MTA)
Glenn Hoge	Maryland Transit Administration (MTA)

APPENDIX B

Goals and Objectives from Kick-Off Meeting

APPENDIX B

Goals and Objectives from Kick-Off Meeting

City of Annapolis Transit Development Plan (TDP)
Citizens Advisory Committee (CAC) Kick-Off Meeting
September 16, 2009
7:00 – 9:00 PM

As part of the kick-off meeting for the City of Annapolis Transit Development Plan project, the committee communicated a variety of needs and issues for the study. Based on this discussion, the following goals and objectives have been developed to help shape the planning process, though both can be revisited based on new issues or needs that arise during the project:

Goal: *Create a more seamless transit system within the City of Annapolis.*

Objectives:

- Coordinate existing transit services (Annapolis Transit, Dillon's, MTA, WMATA, private operators) into unified, rationalized operation including current and future service to/from Anne Arundel County
 - Selectively re-draw/reorganize existing bus routes and schedules
 - Improve transfers/links between services – reduce transfers
 - Establish single hub served by local feeder buses and regional express buses
 - Use existing infrastructure for hub (i.e., Navy-Marine Corps Stadium, Harry S. Truman Park-and-Ride lot) if necessary, due to funding and other constraints
 - Focus on accessibility and other improvements at chosen hub and major transfer points
 - Parking
 - Waiting/standing
 - Pick-up/drop-off
 - Operations

Goal: *Improve transit related amenities.*

Objectives:

- Examine and improve accessibility at all stops
 - Focus on particular corridors with highest ridership
 - Examine “Last Mile” issues
 - Curb cuts, sidewalks, connections
 - Street/sidewalk obstructions (i.e., telephone poles with spikes)
 - West Street sidewalks in particular (ADA waivers)
 - Examine paths of travel to stops
 - Utilize existing pedestrian pathways (trails, alleys, etc.)
 - Enhance safety, lighting, maintenance
 - Provide wayfinding signage to guide riders to stops
 - Potentially change routes with accessibility in mind (i.e., Dillon’s service has not changed in a significant period of time)
 - Provide County connections within Annapolis
- Improve pedestrian safety around, and access to, stops
 - Especially important for people with children
 - Focus on work trip commuters
- Examine characteristics (i.e., density) around current stops
 - See what areas have similar characteristics and examine potential new stops
- Upgrade passenger amenities at stops (i.e., benches, shelters)

Goal: *View transit services from a regional perspective.*

Objectives:

- Improve commuter bus service
 - Parking
 - Provide service where needed
 - Accommodate bicycles, Segways
 - More frequency, more midday trips

Goal: *Connect residents to jobs – support economic development.*

Objectives:

- Current system serves primarily visitors and transit-dependent persons; needs to serve choice riders
- Focus on internal City work trips in addition to the commute trips outside the City
- Focus on low fares

Goal: *Make transit services more convenient.*

Objectives:

- Serve all types of trip purposes
- Run high-frequency headways
 - Every 15 minutes, especially at high ridership stops
 - Need critical mass of customers
- Enhance convenience
- Better utilize existing infrastructure
- Minimize transfers to greatest extent possible
- Maintain components of existing transit system that work

Goal: *Marketing – provide easy access to information on available mobility options.*

Objectives:

- Develop pocket-size version of bus routes
 - Information on connections to other modes, systems
 - Suggestions on how to coordinate or link trips
- Provide real-time information at stops (know when bus is coming)
- Improve advertising and information displays
- Work to overcome stigma of “bad” market, where people are conditioned to drive

Goal: *Support City of Annapolis’ desire to “go green” and reduce car travel/congestion.*

Objectives:

- Green buses, Green City
- Serve employment centers and other key points
 - Anne Arundel Medical Center
 - Westfield Annapolis Mall
 - Harbour Center
 - Harry S. Truman Park-and-Ride Lot
 - Navy-Marine Corps Memorial Stadium
 - State Government offices
- Establish parking areas outside City and enhance existing parking areas
 - Link to City with frequent service
 - Brings people into City who might otherwise not come
 - Decreases congestion
 - Improves air quality
 - Decreases noise pollution in City

Although the following goal does not fall within the scope of the TDP, it resonated with the CAC. Its inclusion in this write-up illustrates its importance and the fact that it should be championed through alternative channels.

Goal: *Engage and involve the community in the transportation process.*

Objectives:

- Establish a Transportation Advisory Board
- Keep local elected officials and staff informed of key transportation-related issues that have a tangible effect on transit, but which might not be addressed within a TDP
- Take issues raised within the TDP beyond the TDP to the appropriate City Departments
 - Concept of identifying issues that are carried forward by other City commissions or initiatives – like traffic flow and pedestrian improvements

Next Steps

KFH Group will complete Technical Memorandums 1 and 2, which include a transit needs analysis and inventory of existing services. KFH will send the tech memos to the CAC for review before the next meeting, to be scheduled by the end of October. Please feel free to contact KFH regarding concerns or further input on needs in the meantime (jeisenfeld@kfhgroup.com). Also, remember to send Danielle your resume if you are interested in joining the Transportation Advisory Board (matlandd@annapolis.gov).

APPENDIX C

On-Board Rider Survey

Annapolis Transit – ENCUESTA PARA LOS PASAJEROS

Annapolis Transit conduce una investigación de transporte público y tenemos la intención de entender la demanda para los servicios de transporte públicos de los pasajeros. Por favor, complete esta encuesta y devuélvalo al encuestador cuando usted baje del autobús. Si usted ya ha llenado una encuesta **esta semana**, usted no necesita llenarla de nuevo. Gracias.

-
-
1. ¿En cuál ruta se encuentra ahora?
- (1) Ruta Roja (3) Ruta Naranja (5) Ruta Verde (7) Ruta C-40 (9) Azul Marino
 (2) Ruta Amarillia (4) Ruta Oro (6) Ruta Cafe (8) Ruta C-60 Autobús de enlace
2. ¿Cuál fué el lugar dónde usted abordó el autobús? Si usted transbordó a este autobús, donde abordó el primer autobús. Por favor indique la calle, intersección, edificio o sitio de referencia. (*Por ejemplo: Westfield Shoppingtown, o Estacionamiento/Aparcamiento Estadio*). Por favor de no usar términos como “casa” o “trabajo”.
-
3. ¿Cambió o tendrá que cambiar de autobús para llegar a su destino?
- (1) Sí, un cambio (2) Sí, dos o mas de dos cambios (3) No (Sí indica “No”, Skip to question #5)
4. ¿A cuál ruta de autobús se cambiará o de cuál ruta se cambió?
- (1) Ruta Roja (3) Ruta Naranja (5) Ruta Verde (7) Ruta C-40 (9) Azul Marino
 (2) Ruta Amarillia (4) Ruta Oro (6) Ruta Cafe (8) Ruta C-60 Autobús de enlace
5. ¿Cuál es su destino? Por favor indique la calle, intersección/esquina, edificio o sitio de referencia. (*Por ejemplo: Eastport Plaza*) Por favor de no usar términos como “casa” o “trabajo”.
-
6. ¿Aproximadamente, cuánto tiempo tomará para completar este viaje en autobús?
- 30 minutos o menos 31 a 45 minutos 46 a 60 minutos Más de 60 minutos
7. ¿Cuál es la razón de su viaje en autobús hoy? Usted puede identificar más de una razón.
- (1) Trabajo (Empleo) (3) Escuela (5) Atención Médica (7) Agencia Gubernamental
 (2) Ir de Compras (4) Social/ Recreación (6) Comer/Cenar (8) Otra razón: _____
8. ¿Con que frecuencia viaja usted en los servicios de Annapolis Transit?
- (1) Una vez por **semana** (3) 6 a 10 veces por **semana** (5) Una vez por **mez**
 (2) 2 a 5 veces por **semana** (4) Mas de 10 veces por **semana** (6) 2 a 3 veces por **mez**
9. ¿Cuáles mejoramientos de servicios de este servicio preferiría? Por favor identifique tres preferencias:
- (1) Autobuses limpios (4) Servicio mas temprano (7) Mas Servicio en Domingo (10) Mas marquesinas y bancos
 (2) Autobuses Seguros (5) Tarifa menor/rebajada (8) Ayuda de los funcionarios (11) Llegar a tiempo
 (3) Servicio a noche (6) Mas informaciones en el sitio internet (9) Accesibilidad de la información de servicios
10. Por favor indique su satisfacción con el servicio de Annapolis Transit:
- | | | | | |
|------------------------------|------------------------------|---------------------------------|------------------------------|------------------------------|
| Muy Satisfecho | Satisfecho | Ni Satisfecho / Ni Insatisfecho | Insatisfecho | Muy Insatisfecho |
| <input type="checkbox"/> (1) | <input type="checkbox"/> (2) | <input type="checkbox"/> (3) | <input type="checkbox"/> (4) | <input type="checkbox"/> (5) |
- Por favor díganos un poco sobre usted:**
11. ¿Tiene carro? Sí No 12. ¿Si marcó “Sí”, el carro fue disponible para tomar este viaje? Sí No
13. ¿Tiene permiso de conducir / manejar? Sí No 14. Sexo: Masculino Femenino
15. ¿Cuál es tu grupo de edad? (Años):
- (1) Menos de 16 (2) 16 a 18 (3) 19 a 24 (4) 25 a 49 (5) 50 a 65 (6) Más de 65
16. ¿Cuál describe mejor su situación actual de empleo? Usted puede marcar más de una posibilidad:
- (1) Empleado, a tiempo completo (3) Estudiante, a tiempo parcial (5) Desempleado (7) Retirado
 (2) Empleado, a tiempo parcial (4) Estudiante, a tiempo completo (6) Ama de Casa (8) Otra: _____
17. ¿Cuál es el **mejor** aspecto de nuestro servicio? _____
18. ¿Cuál es el **peor** aspecto de nuestro servicio? _____
-
-

Muchas Gracias!

APPENDIX D

Responses to Survey Questions

Appendix D Responses to Qualitative Survey Questions

Question 13: What do you like BEST about our service?

- #1 transit driver: Brown A a.m.
- 75% on time
- A few drivers
- A good time
- AC
- AC
- AC
- Accessibility. Wish it was more accessible
- Affordability
- Affordable
- Air-conditioned, convenient, free
- All of staff are good and counten
- Ally
- Although
- Always on time in the morning
- an ad hoc choice when you be on time
- Annapolis Bus services are faster than some Baltimore routes
- are kind
- at least Brown and Gold work on Sunday
- At least there is a bus service
- At least we have bus service
- Availability
- Availability
- Availability
- Availability
- Availability
- availability and friendliness
- Availability, driver
- availability, nice people
- Awesome, informative driver
- be very kind
- being kind
- being on time
- Best customer service
- Best employed
- Better buses
- better than no bus
- Bus Driver
- bus drivers
- Bus drivers are like family you get to know
- Bus is clean
- Bus stop close to home
- Buses seem to go everywhere I need
- C-60

- cheap
- cheap
- cheap
- cheap
- cheaper
- cheaper than cab
- clean and friendly
- cleaner buses
- close to work
- comes often
- consistency
- convenience
- convenience, AC, free
- convenient
- Convenient and comfortable
- Convenient and price
- convenient at times
- cost
- Courteous staff
- Customer services
- Day shift drivers the best
- dependability
- dependable
- Do have some nice drivers!
- Driver
- driver
- driver helpful
- Drivers
- drivers
- Drivers
- Drivers
- Drivers
- Drivers

- Drivers are courteous
- Drivers are friendly
- Drivers are friendly
- Drivers are friendly/helpful
- Drivers are kind
- Drivers are mostly friendly
- Drivers are nice
- Drivers are pleasant
- Drivers are very pleasant
- Drivers' courtesy
- Drivers' courtesy
- Drivers' customer service
- Drivers friendly
- Drivers more professional
- Drivers very kind
- Drivers very pleasant
- Drivers--Willie and Maurice
- easy wait
- economical
- el ser oncasto
- en autobus porque no puedo manejar
- esta muy caliente
- everyone
- everyone
- everyone is vigilant
- everyone kind
- everything
- everything
- Excellent
- Excellent
- Fare
- Fare is \$1
- fares
- fares
- fares
- Fast service
- few nice bus drivers
- For the most part, on time
- For where I'm going it's OK
- free
- free
- Free + driver
- Free and stylish bus
- Free transfers
- free, AC
- Friendlier
- friendly

- friendly driver
- friendly driver
- friendly driver very helpful
- Friendly driver, good price
- friendly drivers
- Friendly drivers
- Friendly drivers
- friendly drivers
- Friendly drivers, safe commute
- Friendly drivers, seat in front, not back
- Friendly people
- Friendly people!
- friendly service, air-conditioned
- Friendly Services
- Friendly drivers
- Friendly drivers -- except one
- GET me there
- Get me there on time
- get me to work on time
- Get me where I need to go
- Get me where I need to go
- Get me where I need to go
- Get me where I'm going
- Get right to my destination
- Get to work in 10 min
- Get you to where you need to go, reliable
- Gets me to work
- gets me to work
- Gets me to work
- Gets me to work, beats MTA time by far
- Getting there cheaply
- goes to Edgewater
- good
- Good bus driver
- Good communication with people
- good customer service
- Good driver
- good drivers
- good service
- good service
- Good service
- good service
- Good, more or less
- Good, Perfect

- Good, straight to point cover everything
- Good, very good
- Great drivers
- greets drivers
- Hate the bus
- helpful driver
- helpful staff
- Hours for work
- Housley Rd
- Housley Rd
- How all buses meet at transfer point
- How fast and how pretty the people look while riding
- I can depend on a ride
- I can get around without a car
- I can get to where I'm going.
- I can transfer without paying again
- I don't have far to walk to bus stop
- I don't have to drive
- I get dropped off at exact locations
- I know I have a ride to work every day
- I like that it's available for me
- I like the morning route
- I pick bus up outside my door
- I'm able to get to work
- I'm not on it long
- important to people
- improved on-time performance
- inexpensive
- info, clean, bigger shuttle
- is well
- it beats walking
- it exists
- it fulfills [its purpose]
- It gets me around the Annapolis area.
- It gets me there
- It gets me to work (no cabs)
- It gets me where I'm going
- it gets you where you have to go
- It is available to use and share
- it is on time most of the time
- It is right outside my home
- It is secure
- It only costs a dollar
- It provides good access in the Annapolis area
- it runs
- It's \$0.50 for a student ID
- It's \$1
- It's available
- it's available; most people are friendly
- It's cheap

- it's cheap
- it's cheap
- It's cheap for me
- It's cheap. Tracy and Marta
- It's cheaper than other public trans.
- it's helpful to people
- It's inexpensive
- It's okay. But no AC
- It's service
- It's there
- Just about all the drivers are pleasant
- Kathy
- Kind and helpful drivers
- Kind drivers
- Kindly personnel
- kindness
- kindness
- kindness
- kindness
- kindness
- Kindness
- Know that is a bus. Even when late
- Last
- like to ride bus
- locations of bus stops
- los negros son Tonlos
- low cost
- low fare
- Majority of drivers are very pleasant
- Malo
- me not driving
- More buses running during the week
- more Sunday service
- more timely
- Most drivers are nice
- Most drivers are professional
- Most drivers very helpful
- Most drivers will help if you're lost
- Most of the drivers that I've met are nice and helpful
- Most of the time they come on time
- most staff are nice
- mostly on time
- Mostly on time
- Mr. Hunt, our driver on C-60
- Mrs. Kendra
- My bus driver makes me smile
- Need a ride
- need more routes
- Nice bus driver
- nice driver

- Nice driver / air cond.
- Nice drivers
- Nice friendly drivers
- Nice helpful people
- nice people
- Nice way to get around \$5 parking
- ningun haspecto bueno
- No good
- none
- Norma Lobell
- Not having to own a car because buses are available
- not packed
- not too bad
- not whole lot
- nothing
- OK
- OK
- on time
- on time in morning
- on time in the morning
- on time most of the time
- On time most of the time
- on time on morning
- on time, good service
- on time, helpful drivers
- people very kind
- percentage completed
- Pick up close to home
- Pleasant driver
- Point A to B
- porque rapido yeso altravajo
- price
- price
- price
- price
- price, convenience
- prices
- prompt
- Promptness

- Radipez y amabilidad
- Red Route uses AC
- reliability
- Reliable
- Reliable for people that don't have trans.
- respectful driver
- Respectful drivers
- ride
- Ride
- ride the bus
- Routes are easy to use
- runs on time
- Safe transportation
- Safe, peaceful
- satisfactory
- saves money for me
- Service from drivers
- Service from workers
- serving women
- short ride
- short trip
- some buses and drivers are nice
- some drivers
- some drivers are friendly
- Some drivers are kind
- Some drivers are kind
- Some drivers are very helpful
- Some drivers are very nice. The driver who runs the orange route is especially kind.
- Thank you
- Some friendly driver
- Some of the bus drivers are nice
- some of the bus drivers are nice and you get along with them
- some of the drivers
- Some of the drivers are friendly
- Some of the drivers are nice
- some staff are nice
- sometimes they on time
- Some drivers are helpful
- speed
- Staff is helpful
- standard
- Steve
- Stop right in front of my house. Drivers friendly
- stops
- take we have a bus
- Takes me where I need to go
- thank you for providing transportation
- That it is available
- that slow travel
- that the driver is friendly

- that there are buses
- That you guys are always late
- the accurate times
- the availability and friendliness
- the best aspect is the kindness
- the bus driver
- The bus drivers
- The bus drivers
- The bus drivers are very friendly
- The bus drivers on Gold, Green, Brown are nice persons and deserve more hours and a raise per hour
- The buses are clean
- The buses are sometimes clean
- the driver
- the driver
- The drivers
- The drivers are friendly (some of them)
- The drivers are friendly and courteous
- the drivers are pleasant
- the drivers are pleasant and professional
- the drivers are very helpful
- The drivers are very nice
- the drivers are very nice
- The drivers are very professional
- the drivers' courtesy
- the drivers' customer service
- The drivers make sure we get to our destination
- the fare
- the fare is reasonable
- the friendly bus drivers
- The morning Red route is always on time
- The morning staff
- The nice drivers
- THE only bus company provide the routes I need
- the pleasant drivers
- the pleasant drivers
- The pleasant manner of drivers
- The pleasant manner of the drivers.
- the punctuality
- the staff
- The staff are friendly and able to transportate
- The way the drivers treat the riders
- They are kind

- they're nice
- those who expect a fall deal
- Timing
- timing
- transfers to buses
- transit runs 7 days a week
- treat buses good
- Usually friendly drivers
- very friendly
- very good
- very good nothing
- Very good service
- very kind
- very satisfied
- Very valuable to common man
- when on time
- When they are friendly and helpful
- when they're on time
- Willie, my bus driver
- Yellow route
- Yellow route
- You can get along with some of the drivers
- you can ride it without driving
- You have bus service
- you have some nice drivers
- Your time is good
- you're here

Question 14: What do you like LEAST about our service?

2 were not!

AIR

air

Air Condition

air conditioner

all buses aren't air conditioned/heated

All the needed improvement checked! (no Air Conditioning)

All the smelly people

all went last, need heat, cold

Always late in the evening

Always late, no air conditioner. Air conditioner please!!

always on time for once
always tardy and rudeness
arrive later than normal
Bad People
Badly maintained buses. NO AIR CONDITIONING
Barely on time, most handicapped lifts don't work, AC doesn't work, buses mostly full or standing room only
Being on time
Better maintenance (AC), better evening coverage, new buses
broken lifts
Brown A - B
Brown A - B
bus being on time
Bus breakdowns. Not on time
Bus fare
bus too hot in summer time
buses
buses
Buses are always late and VERY hot during summer because most don't have air
buses are late
buses are late a lot
Buses are late sometimes
Buses are late sometimes
Buses are not on time, "running late"
Buses are terrible and unsafe
buses get crowded
Buses skipping stops and nasty drivers
Buses stop running at 10pm
clean
cold on bus
condition of the bus
Confusing system with poor access to schedules and info
Continue to run more buses
crowded
Customer service and bus system
customer service bad
discrimination
don't like the evening late staff
Drivers' attitudes, not being on time, the drivers not helping customers like they suppose to.
drivers do not listen when I say stop
Driver's mouth and too many bumps on road
Drivers sometimes VERY RUDE!!
Drivers that talk on cell phones
early morning trips
enables passengers to not speak english
Evening Service
evening tardiness
Everybody has faults. Fine with me
everything
Everything else (this is the worst run bus service)

fix AC
frequency
frequency (not enough buses)
frequency of service
Frequent breakdowns
Frequently need to stand
Frequently off schedule
Gold B afternoon (Mr. Wright) is always late or never shows up at Cochrane and Riva. He has no respect for public service or his colleagues. Please put him on LWOP or termination
good
Hard seats
Having to wait at the transfer station for long periods of time. No air conditioning on some buses
heat
Hot and cold, noisy
Hot as Hells too long
Hot on the bus in the summer
hours of operation
how hot the ride is
How long it takes to get somewhere my DESTINATION
I am too short to read the schedule
I don't
I like everything
I really don't have any problems
It makes you wait and you can't look at anybody
it only runs on odd hours
it's late
Just having a place to sit when waiting for the bus
la oncstidad
Lack of Air Condition
Lack of air conditioning during summer. Small "shuttle" type buses have insufficient seating
lack of buses
Lack of dependability, buses sometimes unclean and falling apart
lack of evening service
lack of timeliness
late
late
late
Late
late buses
late buses
late buses
late buses
late buses, hot buses
late buses, no air conditioning
late most of the time
late showing up at the mall
Late sometimes, air conditioners on all buses
Late, discrimination (some treat Hispanics poorly
lateness

lateness
Lateness
lateness
lateness
lateness and no AC
Least thing is that some of these drivers do not care about their passengers
Less buses running on Sunday
Less frequency and less on time. More buses to BWI, Air conditioning
Less service on Sundays
listening to nedrgeos[sic?] music
long overdue upgrades
long wait / not on time
los negros son enojones
Lot of people on bus on Friday
Lower fares
Majority of the buses have no AC and we can't even drink water on those buses!!
map, info
mean bus driver
most of the time, buses are late
Nasty drivers / Drivers can't give directions about other routes
Nasty man who drives Gold A in the morning and early afternoon
Need AC on buses. Gold route should go all the way down Riva RD
need air on buses
Need bigger buses
Need extra buses when traffic is heavy
Need later hours and more buses running
need more buses
Need more places to purchase weekly passes
Need new bus
need new bus
Need new buses
Needs later hours. No AC. They stay dirty
Never on time
Never on time and feel like your god
Never on time, always break down, no air condition or heat
Never on time, drivers have attitudes
new drivers that have attitude
Nice bus driver
ninguno
no AC
no AC
No AC
No AC
No AC
No AC
No AC

No AC
No AC
No AC
no AC
No AC
No AC in buses
No AC in the summer
No AC in the summertime. This makes for a very unpleasant bus ride
No AC on bus
No AC on other routes
no AC on some buses, infrequency
No AC on the buses
No AC, bus old
No AC, often late, rude drivers!
No air
no air and no heat
no air and no heat always late
no air condition
no air condition
No air condition in the summer
No air conditioner
No air conditioner
no air conditioner
no air conditioner on bus
No air conditioners
no air conditioning
No air conditioning
no air conditioning
No air conditioning
No air conditioning, late or no show buses
No air in the summertime
No air on buses, no heat in winter
No air on some of the buses
No air on the buses
No air or heat
No air or heat
No air or sometimes no heat, overall condition of buses

No air, bells don't work
no air, later evening hours
No air, not enough Sunday service
no air-conditioning in the summer
No air conditioning!
no air conditions
No definite time schedule, lateness, only one bus for each route
No earlier Sunday Service
no ESI
No free parking at the stadium
No help from drivers
No help from some drivers
No late hours
no mubrenc
no on time
no pasan hala hora se indica
no service on Sundays
No Sunday night service or late Saturday
No weekend service
No work Sunday
none
none
none
none
not a thing
not air conditioned
Not air conditioned
not always convenient
Not always conveniently available. Too few hours, not enough coverage outside Annapolis
proper
Not always on time, senior discounts only available to Annapolis residents
not enough buses
Not enough buses
Not enough buses run per route
Not enough buses with heat/air conditioning
not enough buses with working wheelchair lifts, especially in daytime hours
not enough good drivers
Not enough seats
not enough seats
Not enough service
Not ever on time. Pay for a cab
Not getting where I need to be on time
not on time

some of the bus don't be on time
Some people very disrespectful
Some stops aren't marked
Sometimes buses do not run.
Sometimes is off schedule
Sometimes it takes an hour or so to get home from work. That's too long
Sometimes it takes three pulls of stop cord
Sometimes no AC
sometimes not on time
Sometimes the buses aren't very reliable
Sometimes the buses do not run
sometimes the driver will not answer where the bus is going
sometimes the driver will not answer where the bus is going
Sometimes the Green don't come down Riva Rd
Sometimes there is a half hour delay in the afternoon
sometimes very late
Stay off sometimes
Staying on schedule
stop running too early
stop too early
stops
Stops running too early!
summer (hot)
Sunday service
Sunday Services no late b us
Sundays are confusing
Take this service
Take too long getting there
that the buses need air
That there isn't AC
the air con
The brown route doesn't show up on Riva when it is supposed to and the buses break down.
Also, no AC
the bumpiness
the bus condition
The bus is often late
the buses are late
The buses are old/outdated need more buses per route. Need air-condition/heat, more reliable
break down too much, toilets on bus would be great, too
The buses are very hot in summer
the buses do not have the hours
The buses get off schedule much too often. MTA has more extensive routes and is always on
time. Annapolis Transit should be the same
The buses have a hard time staying on schedule
The buses need to be on time. NO AIR CONDITION
The buses never seem to be on time except in the morning
The buses really need to have working air, some of the drivers are extremely rude and offer
little help. Also, the buses are almost always late due to some drivers stopping to smoke or
stopping (even when they are late) to get food.
the buttons don't work
the destinations

The drivers are sometimes bothered by any questions
The drivers do not have correct information or assistance
The evening route needs improvement
The Green don't go to Bayride at all times
the hanle to talk much
the hours
The hours it stops understandable due to circumstances after 7pm
The lack of dependable AC, MOSTLY FOR TE DRIVERS!
the late buses / no air, no heat
the lateness
The latest and buses not on the regular schedule due to the latest. No air conditioner -- what is the problem???
the patrons
The seats are too hard
The seats on Gold route make me slide
the time
the time limit
the timing
There is a brunette who is mad at my wife
there's no stop out of Newtowne Dr so if the buses are off schedule you might miss your route
they are delayed in the station
they keep breaking down
time
time performance
Time performance and lack of AC
time schedule
Timing need more direct routes more often
Timing
timing
timing
timing
Timing - staff
Timing (buses late) No AC
Timing of arrival
Too cold!
too slow
Transfer
Transfer buses late. I miss cbo
Transferring
uncomfortable climate, heat/AC
Very bad buses
very hot on buses
Very late or delayed
very noisy sounds and terrible
waiting for bus, no AC
waiting time
We need new buses
When it's not on time
When not on time
When the bus is late

When the bus is taken off route
When the buses break down (waiting longer)
When they are late
when they are late and hot, hot, hot
when they are late and people are trying to get home from work
When they are late it makes me late for work
where is
work on Sunday
would like map on bus
wowe
You have to wave down a bus to get it to stop. Buses not on time

APPENDIX E

Title VI of the Civil Rights Act of 1964

APPENDIX E

TITLE VI OF THE CIVIL RIGHTS ACT OF 1964

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 the responsibility to enhance the social and economic quality of life for people in their communities. The Federal Transit Administration provides guidance to help agencies verify that service and fare changes are not discriminatory in nature. When contemplating a service change, transportation agencies must:

1. Describe proposed changes and the rationale behind them.
2. Provide a list of modes the service changes would impact.
3. Describe the impacts of service changes on low-income and/or minority communities. In particular, establish why the proposed service would not have a disproportionately high and adverse effect on low-income and/or minority populations.
4. Describe transit alternatives available to riders impacted by proposed changes.
5. Identify measures, if any, that would be taken to avoid, minimize, or mitigate any adverse effects of the service, or enhancements or offsetting, if any, that would be implemented in conjunction with the service.
6. Describe how the agency intends to reach out and involve minority and low-income populations to make sure their viewpoints are considered.
7. Determine whether it is necessary to disseminate information that is accessible to Limited English Proficient persons. If so, describe the steps that will be taken to provide information in languages other than English.

Items one through five will be addressed for each proposed service change. Items six and seven will be addressed after a brief description of the populations that must be accounted for to meet the requirements of Title VI.

City Overview

The geographic distribution of specific populations within the City, who are likely to be affected by transportation choice, is mapped below. These maps are required under Title VI when service changes or fare changes are being proposed. In Census block groups where the population in question is greater than the average for all block groups in the service area, it must be demonstrated that discrimination is avoided in service and fare changes.

To identify the low-income population, the poverty levels from the 2000 Census were used. The distribution of the low-income population, along with the existing Annapolis Transit network, is shown in Figure E-1. The average number of people living below the poverty level in each block group was 984.5 in 2000. The average percentage of people living below the poverty level by block group was 21.2 percent. Therefore, where service changes are proposed in block groups with more than 985 people, or 21.2 percent of people, living below the poverty level, it must be shown that proposed changes are not discriminatory.

The distribution of the racial minority population is shown in Figure E-2. The average number of non-whites per block group in Annapolis was 1,653.8, with an average of 35.6 percent per block group. Therefore, it must be proved that service changes affecting block groups with more than 1,654, or more than 36%, non-whites are not disproportionately affecting the population adversely, or that alternative service options would bear more adverse consequences than the proposed services.

Minority and Low-Income Involvement

To satisfy the requirements of Title VI, Annapolis Transit will be reaching out to minority and low-income populations to make sure their viewpoints are considered by publicizing public meetings for proposed service changes in the newspaper and on the local TV channel.

Limited English Proficiency

Annapolis Transit must determine whether it is necessary to disseminate information that is accessible to persons with limited English proficiency (LEP). As of the 2000 Census, English was the only language spoken by 29,327 people, or 87.6 percent of the City's population. The LEP four-factor analysis shows 1,140 people, or 3.4 percent of the population, in the City do not speak English "well" or "at all". Frequency use, importance, and resources to address the LEP population are deemed to be relatively low. Despite this, the City includes Spanish translations in its rider brochure.

Figure E-1: Percentage of Low-Income Population for the City of Annapolis

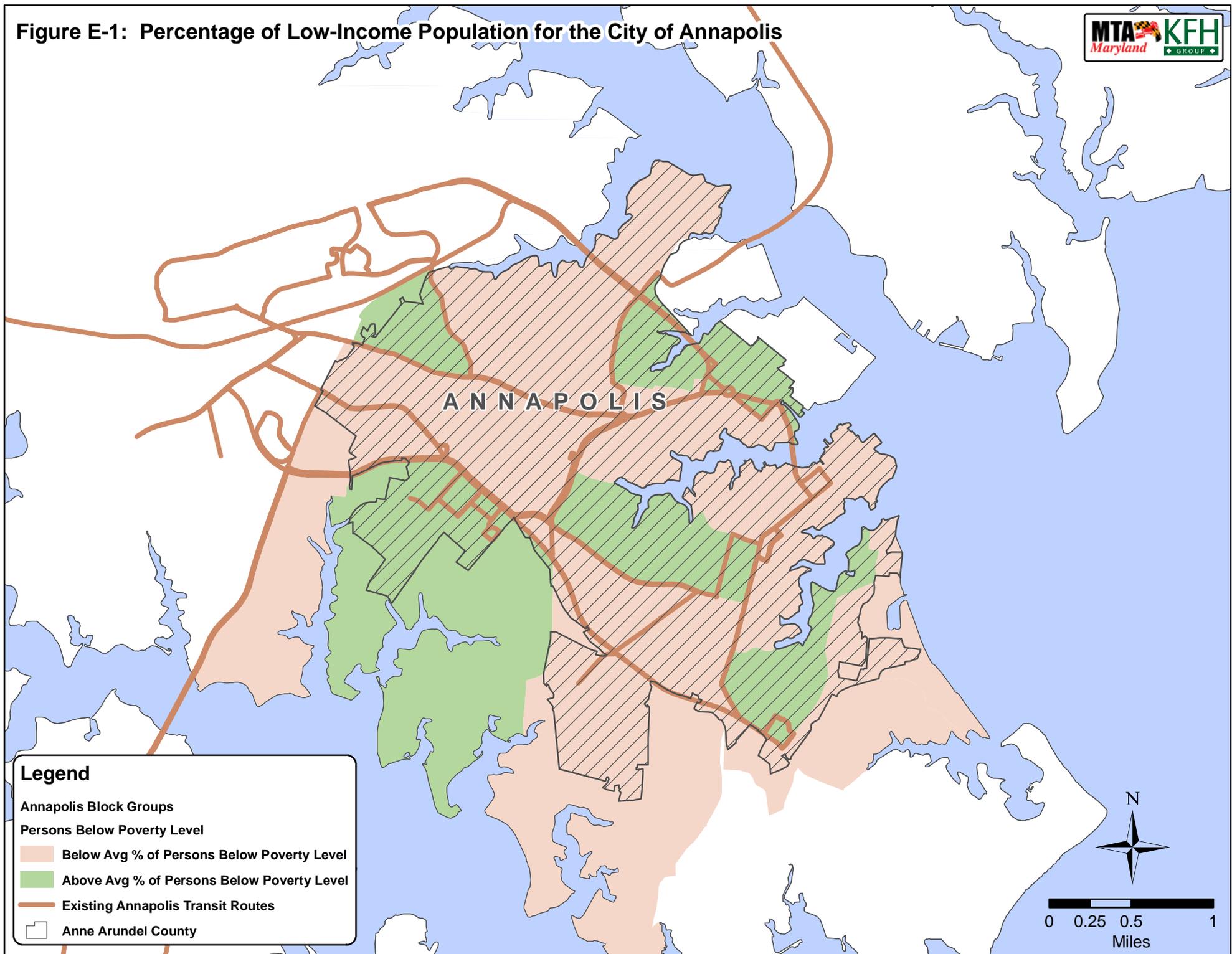
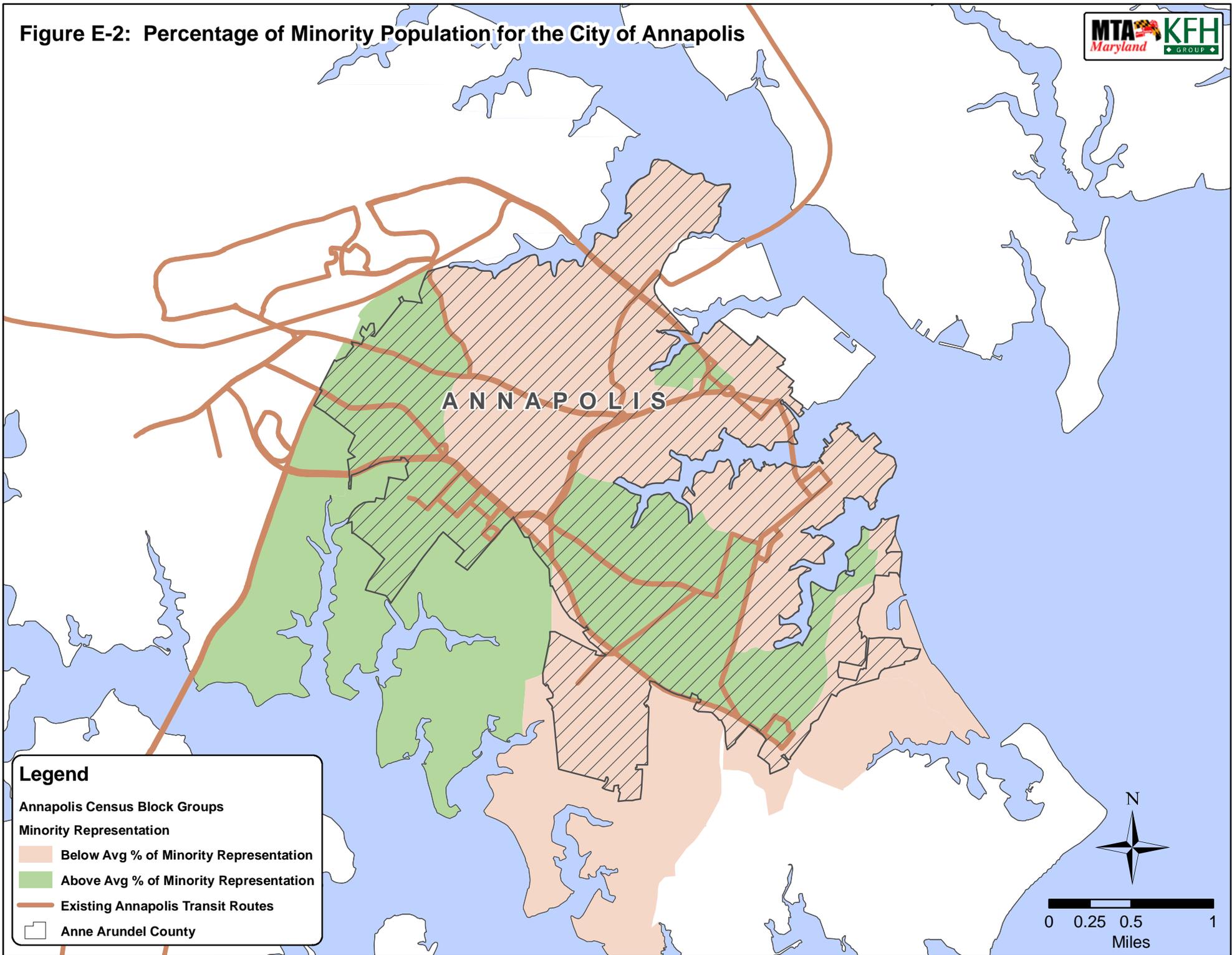


Figure E-2: Percentage of Minority Population for the City of Annapolis



Proposed Service Changes

The service changes and improvements proposed as a result of this TDP process are listed below, including responses to the FTA's guidance to help verify that the changes are not discriminatory in nature, and therefore comply with Title VI requirements.

Implement New Network Service

1. The proposed change is to modify existing routes for greater connectivity between major origins and destinations and to each other. The basis for this service is to increase mobility of people throughout the City by no longer requiring a transfer for most trips.
2. This change would impact the deviated fixed-route bus service.
3. This service will be open to the general public. The communities most likely to benefit from this type of service improvement are the transit-dependent people who currently use Annapolis Transit and suffer through poor on-time performance. The effects of this service would not have an adverse effect on minority or low-income populations.

Figures E-3, E-4, E-5 and E-6 overlay the two proposed networks and existing routes on the distribution of low-income and minority populations by block group. This service change would offer more frequent service throughout the City and neighboring jurisdictions, where both high numbers and percentages of minority and low-income populations are distributed throughout.

4. There are currently no other local transit alternatives for people in the areas where this service would operate.
5. No adverse effects or offsetting would need to be done in conjunction with this service to ensure non-discrimination.
6. Service changes will be promoted by public notices posted on buses and in transit facilities, through news releases to all local media, and through email distribution to residents and organizations representing residents. Also, three committees representing various areas of the City (the Citizen Advisory Committee to the TDP, the Transportation Board, and the Parking Committee) provide direct response to the Transportation Department. Additionally, when major service changes are proposed Annapolis Transit typically holds public meetings to receive further input from the public.

Figure E-3: Proposed Network A and Existing Services Overlaid on Percentage of Low-Income Population for the City of Annapolis

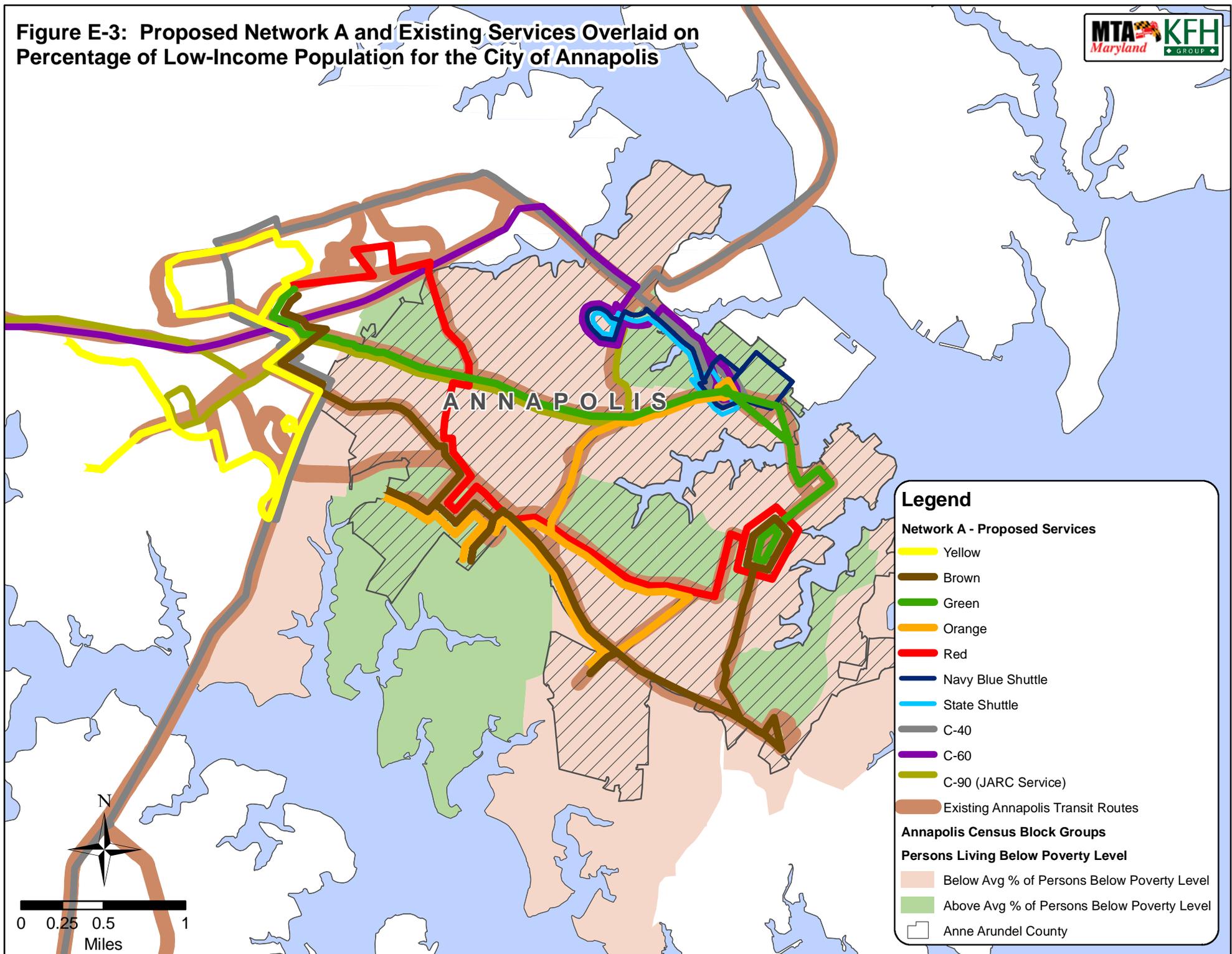


Figure E-4: Proposed Network B and Existing Services Overlaid on Percentage of Low-Income Population for the City of Annapolis

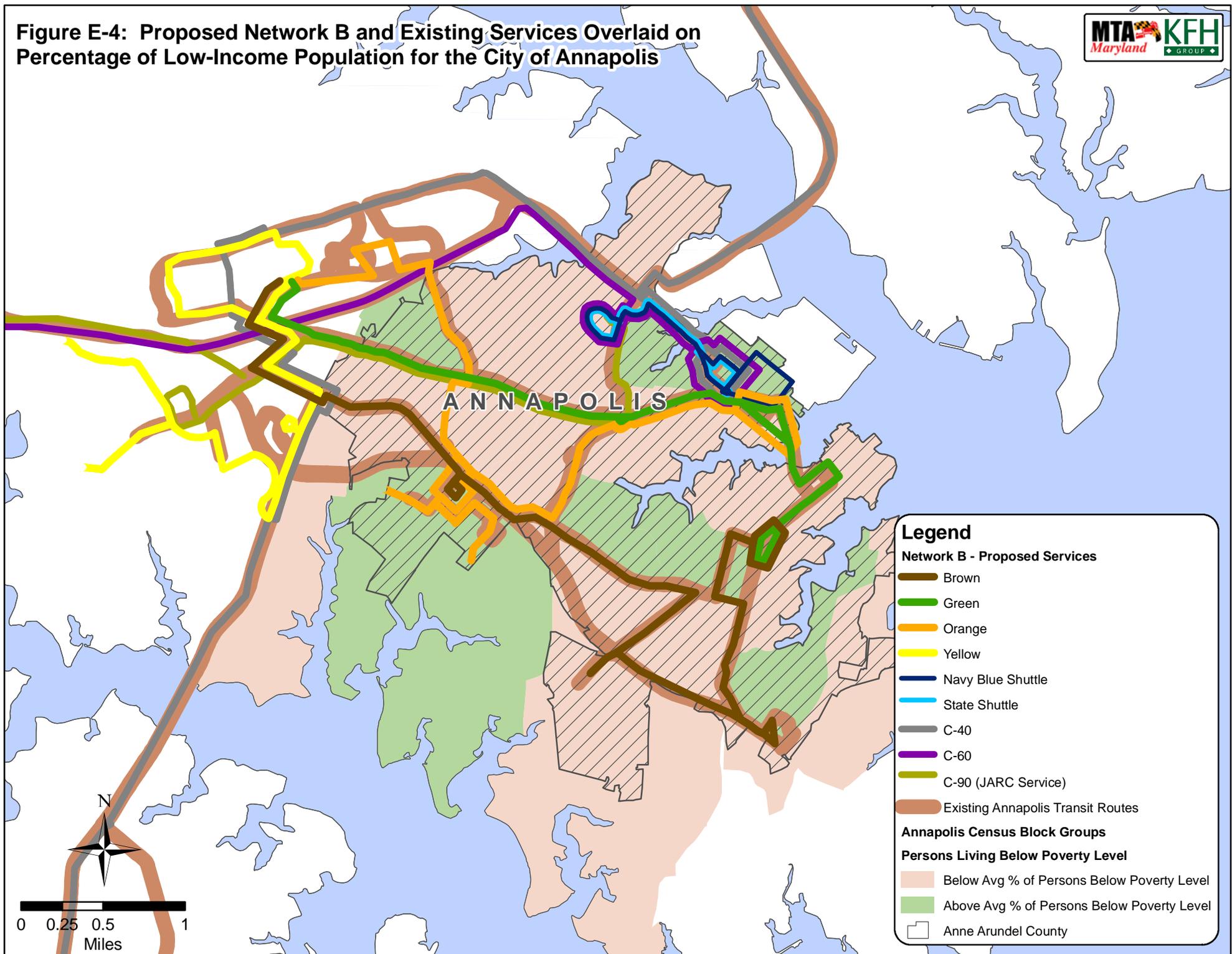
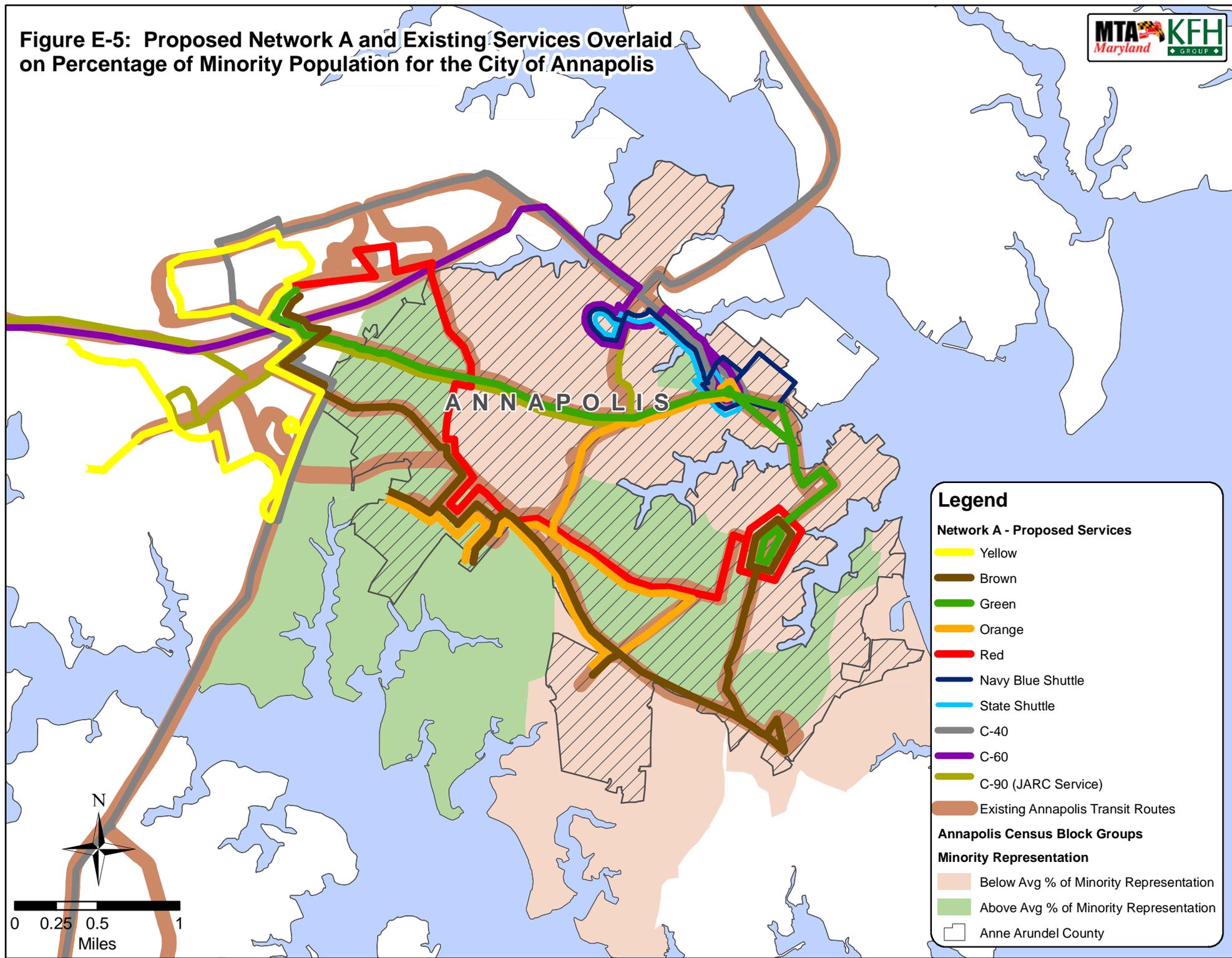


Figure E-5: Proposed Network A and Existing Services Overlaid on Percentage of Minority Population for the City of Annapolis



Legend

Network A - Proposed Services

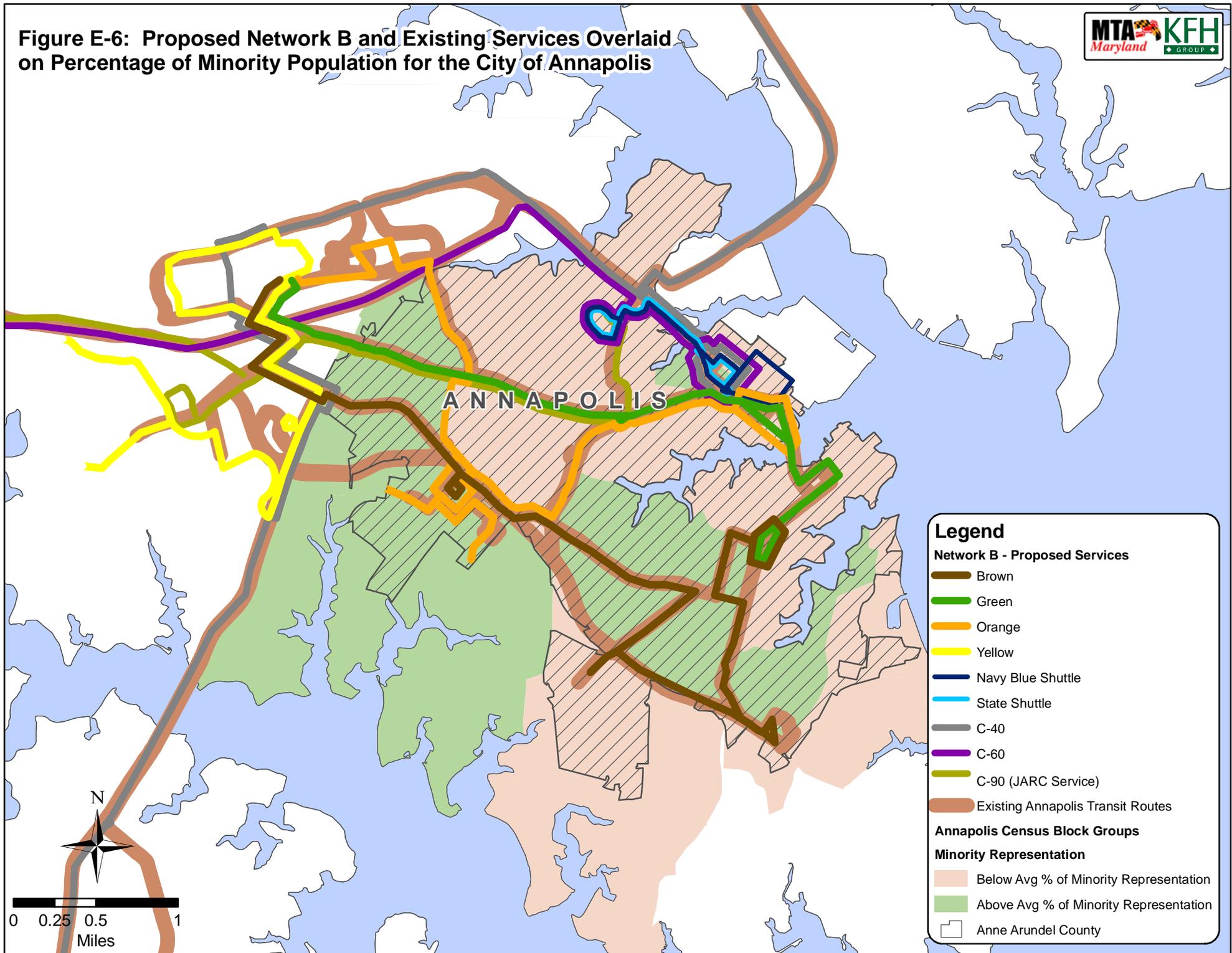
- Yellow
- Brown
- Green
- Orange
- Red
- Navy Blue Shuttle
- State Shuttle
- C-40
- C-60
- C-90 (JARC Service)
- Existing Annapolis Transit Routes

Annapolis Census Block Groups

Minority Representation

- Below Avg % of Minority Representation
- Above Avg % of Minority Representation
- Anne Arundel County

Figure E-6: Proposed Network B and Existing Services Overlaid on Percentage of Minority Population for the City of Annapolis



Legend

Network B - Proposed Services

- Brown
- Green
- Orange
- Yellow
- Navy Blue Shuttle
- State Shuttle
- C-40
- C-60
- C-90 (JARC Service)
- Existing Annapolis Transit Routes

Annapolis Census Block Groups

Minority Representation

- Below Avg % of Minority Representation
- Above Avg % of Minority Representation
- Anne Arundel County

6

7. The predominant language spoken by persons with Limited English Proficiency in the Annapolis area is Spanish. Public notices and other public information materials, including routes and schedules, are prepared with both English and Spanish text.

Expand Span of Service on the Evening Routes

1. Extend the hours of service for the Evening Routes from 10:00 p.m. until 12:00 a.m. This would provide passengers more opportunities for employment (second shift workers), as well as more flexibility for shopping, social activities, errands, and appointments.
2. This change would impact the proposed Evening deviated fixed-route bus service.
3. Minorities or low-income communities would share proportionately in the benefits of this change because there would be more service available to those already within the service area. Increasing the hours of service would have a positive effect on all populations in the service area.
4. There are currently no other local transit alternatives for people in the areas where this service would operate during these later hours.
5. No adverse effects or offsetting would need to be done in conjunction with this service to ensure non-discrimination.
6. Service changes will be promoted by public notices posted on buses and in transit facilities, through news releases to all local media and through email distribution to residents and organizations representing residents. Also, three committees representing various areas of the City (the Citizen Advisory Committee to the TDP, the Transportation Board, and the Parking Committee) provide direct response to the Transportation Department. Additionally, when major service changes are proposed Annapolis Transit typically holds public meetings to receive further input from the public.
7. The predominant language spoken by persons with Limited English Proficiency in the Annapolis area is Spanish. Public notices and other public information materials, including routes and schedules, are prepared with both English and Spanish text.

Increase Frequency of Service on the Evening Routes

1. Increasing the frequency of service for the Evening Routes from 1 hour and 15 minute headways to 40 minute headways. This would provide passengers more trips in the evening hours, facilitating greater flexibility for employment and more available trips for other activities. The idea behind this proposed change is that by increasing the frequency of service on these routes, latent demand will emerge.
2. This change would impact the Evening deviated fixed-route bus service.
3. Minorities or low-income communities would share proportionately in the benefits of this change because there would be more service available to those already within the service area. Increasing the level of service would have a positive effect on all populations in the service area.
4. If this change were not implemented, riders impacted by this change would still be able to ride the Evening Routes on the existing schedules.
5. No adverse effects or offsetting would need to be done in conjunction with this service to ensure non-discrimination.
6. Service changes will be promoted by public notices posted on buses and in transit facilities, through news releases to all local media and through email distribution to residents and organizations representing residents. Also, three committees representing various areas of the City (the Citizen Advisory Committee to the TDP, the Transportation Board, and the Parking Committee) provide direct response to the Transportation Department. Additionally, when major service changes are proposed Annapolis Transit typically holds public meetings to receive further input from the public.
7. The predominant language spoken by persons with Limited English Language proficiency in the Annapolis area is Spanish. Public notices and other public information materials, including routes and schedules, are prepared with both English and Spanish text.

Increase Frequency of Service on the Sunday Routes

1. Increasing the frequency of service for the Sunday Routes from 1 hour and 15 minute headways to 40 minute headways. This would provide passengers more trips throughout the day. The idea behind this proposed change is that by increasing the frequency of service on these routes, latent demand will

emerge. Additionally, more frequent service may lead to new riders who previously determined that service was not conducive for their needs.

2. This change would impact the Sunday deviated fixed-route bus service.
3. Minorities or low-income communities would share proportionately in the benefits of this change because there would be more service available to those already within the service area. Increasing the level of service would have a positive effect on all populations in the service area.
4. If this change were not implemented, riders impacted by this change would still be able to ride the Sunday Routes on the existing schedules.
8. No adverse effects or offsetting would need to be done in conjunction with this service to ensure non-discrimination.
9. Service changes will be promoted by public notices posted on buses and in transit facilities, through news releases to all local media and through email distribution to residents and organizations representing residents. Also, three committees representing various areas of the City (the Citizen Advisory Committee to the TDP, the Transportation Board, and the Parking Committee) provide direct response to the Transportation Department. Additionally, when major service changes are proposed Annapolis Transit typically holds public meetings to receive further input from the public.
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