HARFORD COUNTY

Harford County Transportation Development Plan

June, 2008

Office of Planning
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Baltimore, Maryland 21202-1614

KFH GROUP, INC.

HARFORD COUNTY TRANSPORTATION DEVELOPMENT PLAN

June, 2007

Prepared for

Harford County
and the
Maryland Transit Administration

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CHAPTER 1

DEMOGRAPHICS AND LAND USES

This chapter presents information in relation to the population of Harford County and discusses the land use patterns of the County as it affects the feasibility of public transportation. Specifically it targets residential pockets displaying the greatest needs for transportation services. In conjunction to this analysis, major transit destinations are identified and evaluated. Information presented herein should not be considered on its own, rather it should be coupled with Chapter 2 which assesses current transportation services in Harford County. Collectively this analysis will impart a basic depiction of the linkages most likely needed to improve public transportation.

POPULATION PROFILE

Demographic and economic characteristics of the population are a major indicator of the need for transportation services. The following analysis provides a review of relative needs in Harford County for those population segments that are potentially transit dependent, as well as an overview of the overall population distribution.

General Demographic Profile

According to the annual American Community Survey, there were 237,644 residents of Harford County in 2005. This represents an 8.7% increase over the figure of 218,590 residents recorded by the 2000 U.S. Census. Over the same 2000-2005 period, population grew by only 3% for the State of Maryland as a whole. According to the Baltimore Metropolitan Council's (BMC) Round 7 demographic and employment projections, population growth will continue at over 1% a year through 2015. At that point, the population of Harford County will have reached 274,260. The most populated places in Harford County are Aberdeen, Havre de Grace, and Bel Air. However, most of the County's population now lives in areas located between these three cities along the I-95, US-40, and Route 24 corridors. Increased population in these areas will lead to higher demand for transit services.

Population Density

In order for fixed-route transit service to be viable, there must be identifiable concentrations of trip origins and destinations within a limited area. One way of measuring the concentration of trip origins is by examining population density. Generally, fixed-route transit service is considered feasible in areas with a population density over 2,000 persons per square mile. Areas where population density is between 1,000 and 2,000 persons per square miles, may also be candidates for limited levels of fixed-route service.

Figure 1-1 is a map representing population density in Harford County, according to the 2000 Census, Summary File 1. The data is spatially aggregated by Census Block Group. Block groups are the smallest areas for which the Census releases detailed demographic information. Block groups generally contain between 600 and 3,000 people, with an optimum size of 1,500 people. Most block groups were delineated by local participants as part of the U.S. Census Bureau's Participant Statistical Areas Program. According to the map, areas that meet the minimum density criteria for fixed-route service and are within a ½-mile of Harford County Transit routes are located in Bel Air, downtown Havre de Grace, Aberdeen, Abingdon, Belcamp, Edgewood, and Joppatowne. However, it should be noted that there are also parts of Abingdon and south Bel Air, as well as most of Joppatowne that are more than a ½-mile from transit service. In addition, there is a large high-density area north of Route 1 between Bel Air and Forest Hill that has no transit service.

Figure 1-2 is a map representing population density in Harford County in 2015, according to the BMC Round 7 projections. The data is spatially aggregated by transportation analysis zones. These zones are designed to overlap with Census Block Groups. According to the data, population density will exceed 2,000 persons per square mile by 2015 in the following additional areas: east Havre de Grace, south Abingdon near Abingdon Road, northeast Abingdon near Tollgate Road, and between the Town of Bel Air and US Route 1. It can also be seen that by 2015, there will be over 1,000 residents per square mile nearly everywhere in the Route 24 and US-40 corridors.

Transit Dependent Populations

There are two types of transit users: choice riders and captive users. In order to entice choice riders to use transit, it is necessary to keep the perceived cost and inconvenience of transit use below that of using an automobile. It is very difficult to provide transit service that meets the needs of choice riders outside core areas of major cities. In suburban, exurban and rural conditions, the bulk of transit ridership consists of captive users who belong to transit dependent populations. It is therefore essential that transit planning be geared toward serving these populations in Harford County. Transit dependent people tend to belong to the following categories:

- Those who live in *autoless households*. This is probably the single most important factor in determining whether one is transit-dependent, since it implies that one has no access to an automobile, and is dependent on alternative means of transportation such as transit.

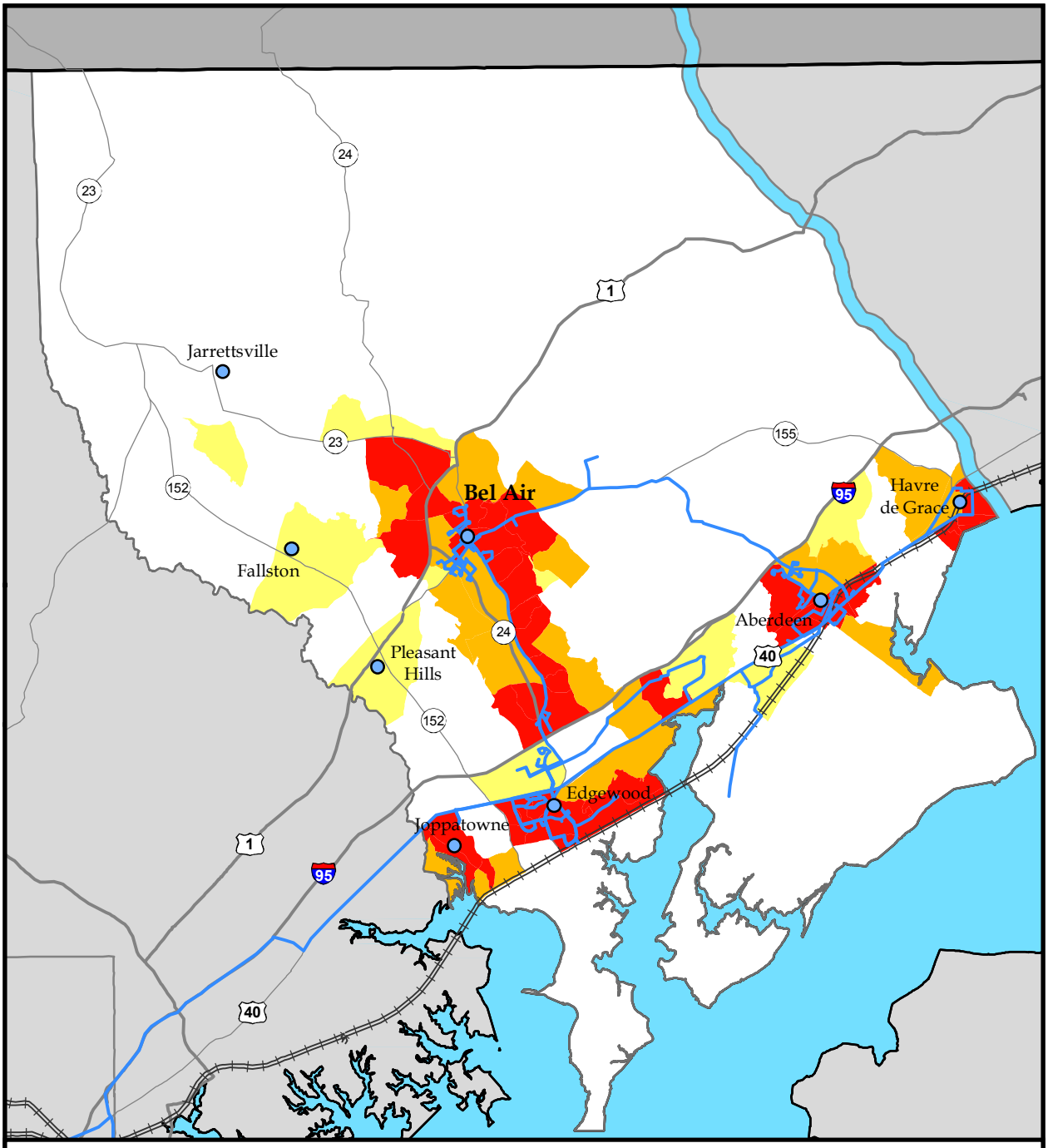


Figure 1-1
HARFORD COUNTY
POPULATION DENSITY, 2000

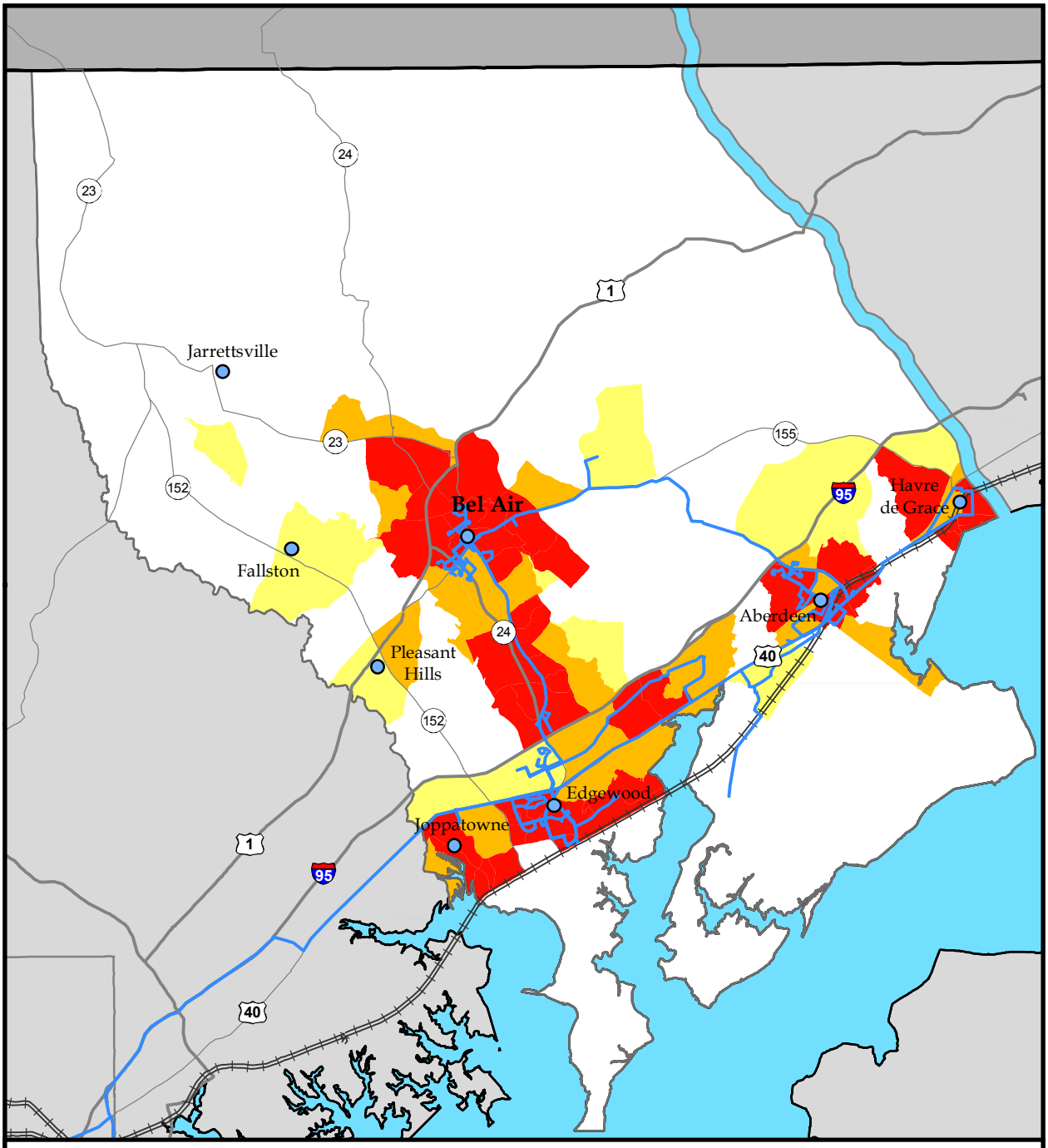


Figure 1-2
HARFORD COUNTY
PROJECTED POPULATION DENSITY, 2015

- Those who are *below poverty*. This population is likely to have limited access to automobiles, and to be unable to afford the cost of driving or maintaining a vehicle.

- *Persons who have a disability* (aged 16 and above). Those affected with a mobility impairment are usually unable to drive. This category is defined as a "Go-Outside-Home disability" in the Census.

- Those who are *elderly (over 65).* This group may include those who either choose not to drive any longer, have previously relied on a spouse for mobility, or because of factors associated with age can no longer drive.

- *Youth (ages 12 to 17)* are either unable to drive and/or usually have no access to an automobile of their own. However, many in this age category are independent enough to travel on their own.

The number of people belonging to each one of these categories was measured by the 2000 U.S. Census. Data is available at the block group level in Summary Files 1 and 3. The distribution of these populations in the County is mapped in Figures 1-3 through 1-7.

Autoless Households

There are relatively few Census Block Groups with large numbers of autoless households in Harford County (see Figure 1-3). The greatest concentration of these households is around Aberdeen, in areas that are served by at least one existing fixed transit route. There are also smaller concentrations of autoless households with transit service in Havre de Grace, Edgewood, Abingdon near Box Hill/Constant Friendship, and downtown Bel Air. The only significant grouping of such households with no current fixed-route service is located in southwest Bel Air west of Tollgate Road.

Population Below Poverty

Figure 1-4 reveals that persons living below the poverty line in 2000 were heavily concentrated in areas along the US-40 corridor, particularly in Aberdeen, Edgewood, and Havre de Grace. These areas are all currently served by Harford County Transit's fixed routes. There are also significant numbers of people below poverty in areas with more limited service in Joppatowne, in Abingdon near Box Hill/Constant Friendship, and in south Bel Air between Route 24 and South Main Street. The main concentration of people below poverty living more than one mile from any fixed routes is south of Route 1 in Darlington, in the northeast part of the County.

Persons with Disabilities, Elderly, and Youth Populations

Figures 1-5, 1-6, and 1-7 show no unique patterns of geographic concentration among the persons with disabilities, elderly, and youth. They do show that there are far more elderly and youth than there are mobility-impaired persons with disabilities in the County. All three of these populations appear to follow a similar geographical distribution to that of the County population

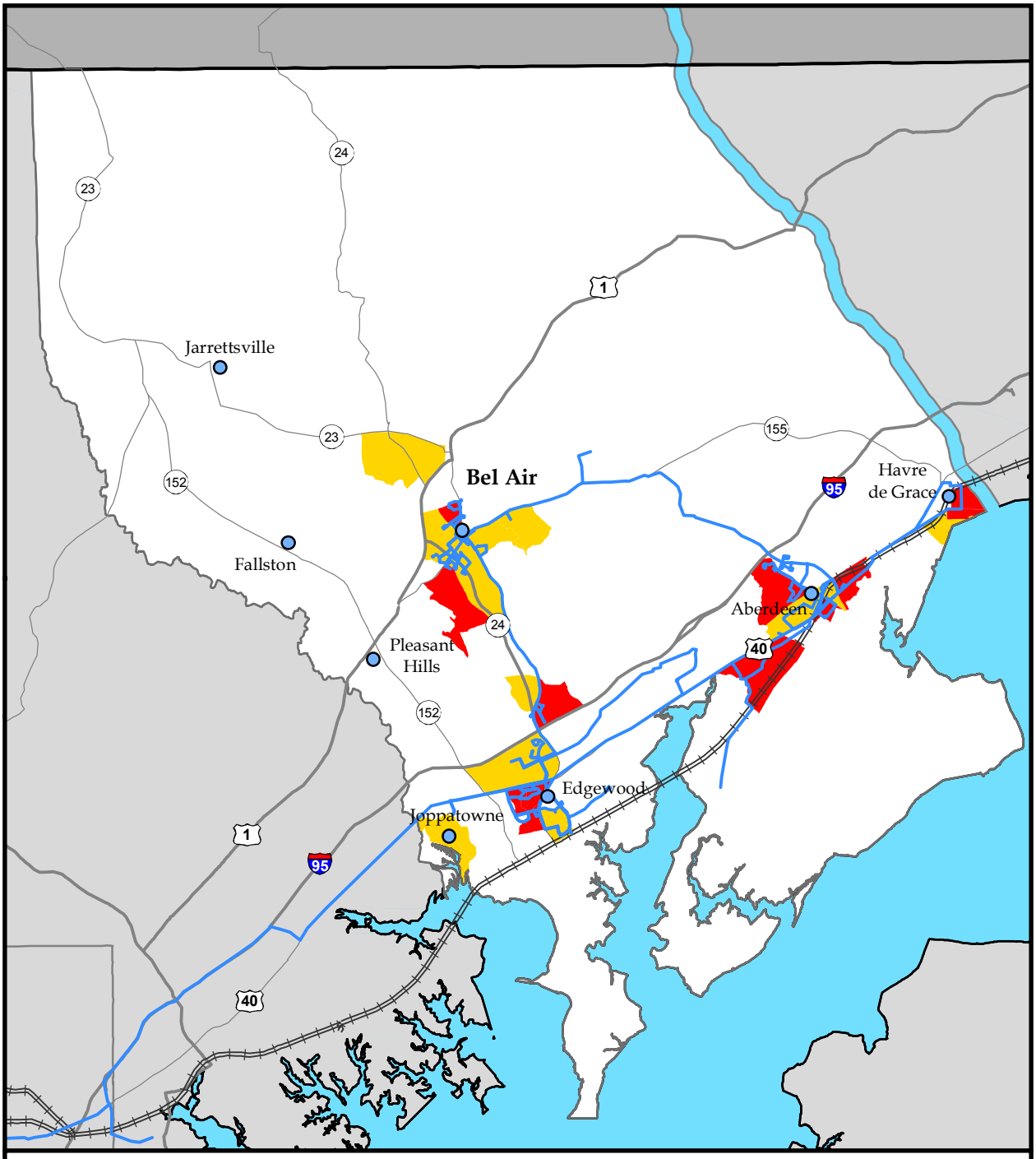


Figure 1-3
HARFORD COUNTY
AUTOLESS HOUSEHOLDS
PER CENSUS BLOCK GROUP, 2000

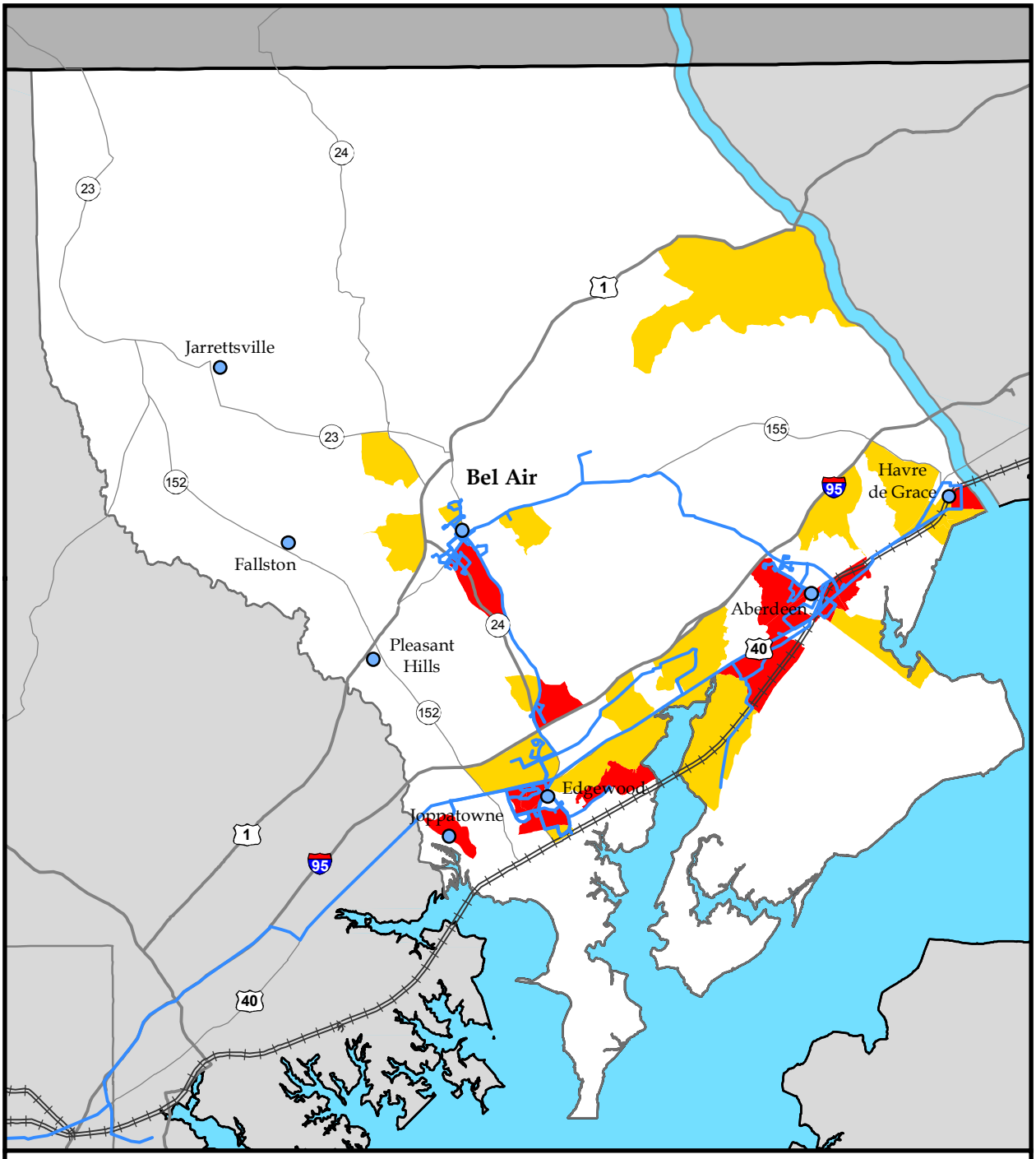


Figure 1-4
HARFORD COUNTY
POPULATION BELOW POVERTY
PER CENSUS BLOCK GROUP, 2000

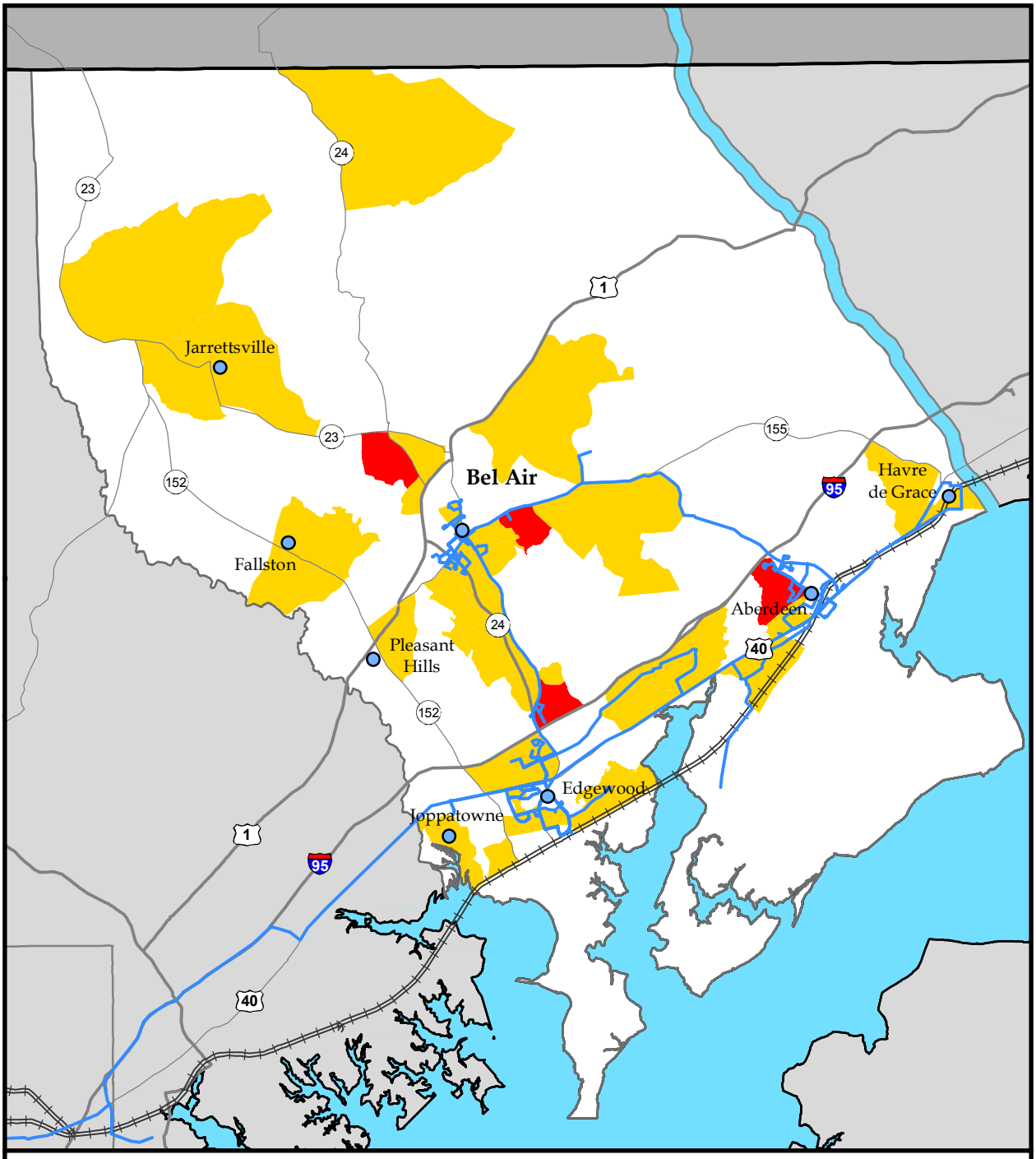


Figure 1-5
HARFORD COUNTY
PERSONS WITH DISABILITIES
PER CENSUS BLOCK GROUP, 2000

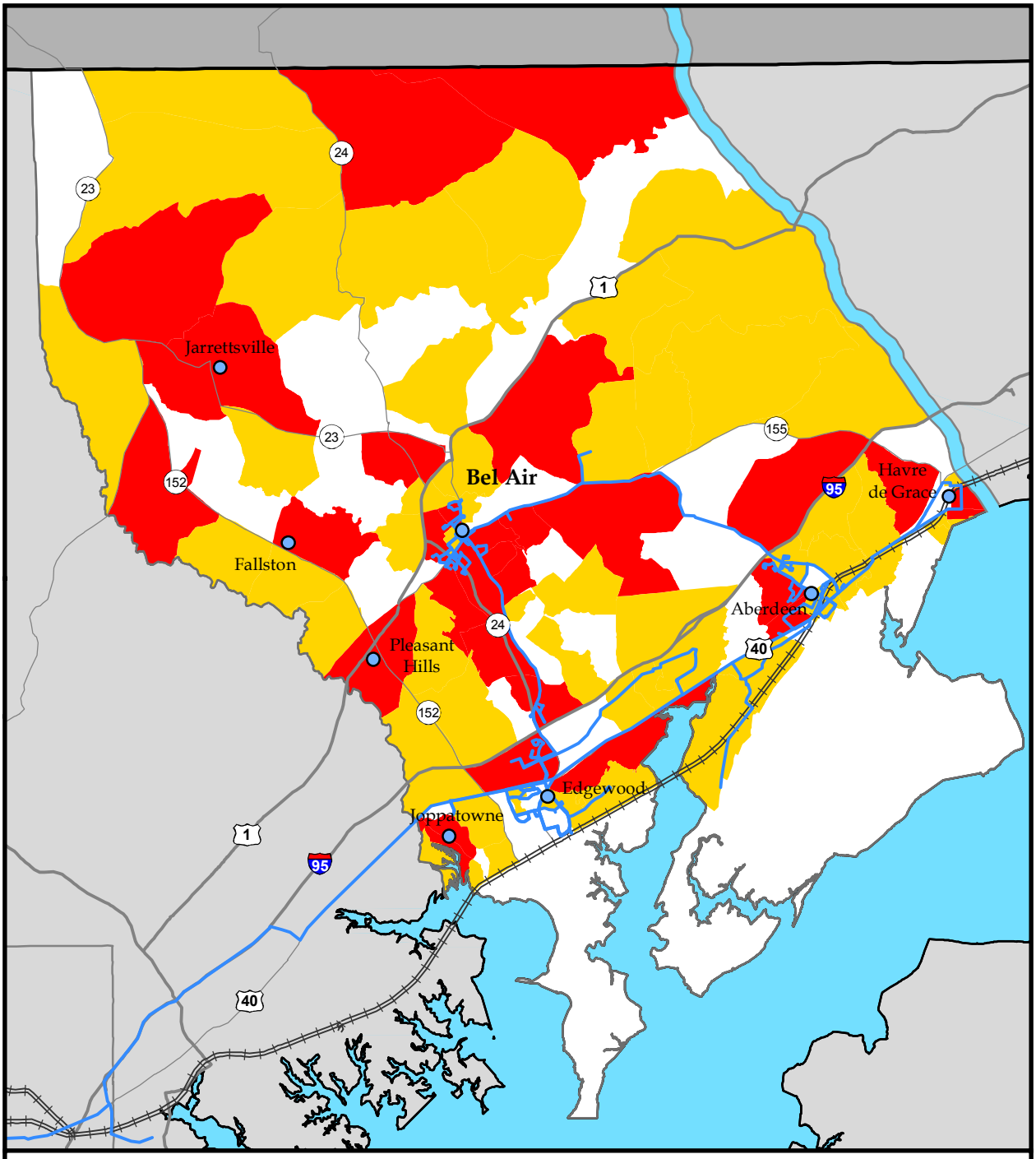


Figure 1-6
HARFORD COUNTY
ELDERLY POPULATION (65+ YEARS)
PER CENSUS BLOCK GROUP, 2000

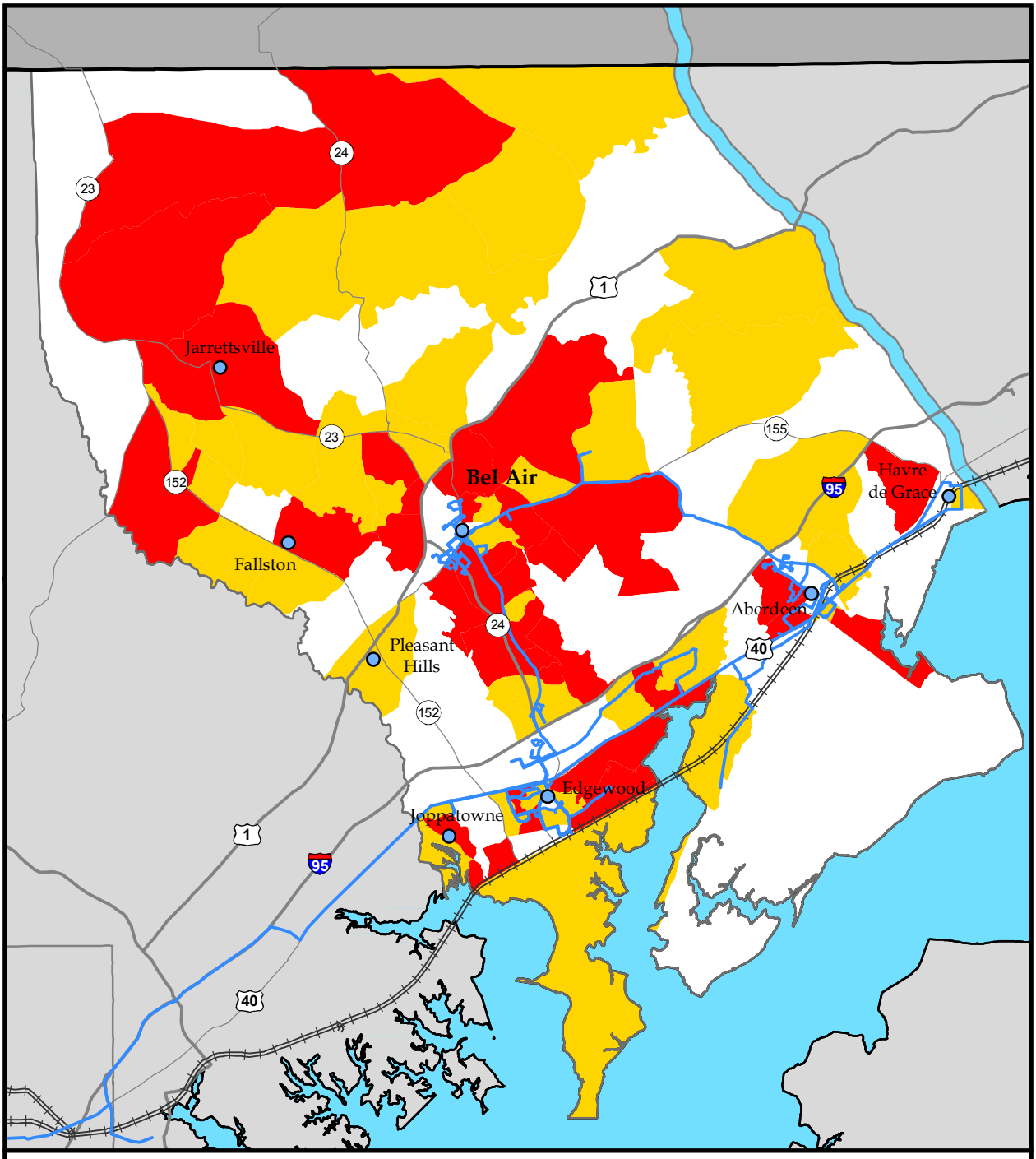


Figure 1-7
HARFORD COUNTY
YOUTH POPULATION (AGES 12-17)
PER CENSUS BLOCK GROUP, 2000

as a whole. Block groups with high overall populations have high numbers of persons with disabilities, elderly, and youth. Therefore, these figures do not reveal new information on locations that are in need of transit service.

Overall Transit Need

Because any one individual may belong to several of the above categories, it is not possible to add the figures up and obtain a number of transit dependent people per Census Block Group. Instead, block groups were ranked against one another based on their relative concentrations of transit dependent people according to the following process.

For each block group, the number of persons or households in each category was divided 1) by the total population to calculate a percentage figure, and 2) by the total land area to produce a density figure. Block groups were then ranked against one another in each category – one based on the percentage figure and one based on the density figure. A sum of rankings was then produced 1) for all percentage ranks and 2) for all density ranks, yielding an overall percentage rank and an overall density rank. Block groups were then classified according to their ranks as high, moderate and low need areas in terms of overall transit need. The results are visible in Figures 1-8 and 1-9, with full data available in Appendix A.

It is important to recognize that these rankings should be examined in relation to one another, as individual rankings may be swayed by overall block group characteristics, such as geographic size or population concentrations. For example, a small block group with low overall population may have few transit dependent persons, and yet still give the impression of high need because a great percentage of its population counts as potentially transit dependent. Another area may have a high density of transit dependent people, even if these people constitute a small percentage of the local population. In this case, the apparent high transit need would only be reflecting high population density. By examining these rankings independently and then comparing them to one another, we can derive a better understanding of the relative potential need for transit services in each block group.

The percentage ranking and density ranking produce two types of information to help with the service planning process. Areas with a relatively high density of potentially transit dependent persons generally have a higher potential need for transit service and are definite candidates for fixed-route service, so long as they are large enough to reflect the presence of a sizeable population. Areas with a relatively high percentage of potentially transit dependent persons have high need regardless of their size, but may only have the population base to support lower frequency or specialized service.

According to Figure 1-8, the following areas have a high overall density of potentially transit dependent residents and are fully covered by fixed-route transit service: Aberdeen, downtown Bel Air, downtown Havre de Grace, and Edgewood. There is high need but somewhat less coverage for Abingdon, southwest Bel Air, and Joppatowne. There is also relatively high transit need but no fixed-route service north of Bel Air in the areas around Red Pump Road and Osborne Parkway. Figure 1-9 reveals roughly the same transit need patterns as Figure 1-8, although two more rural areas do stand out as having a high percentage of transit

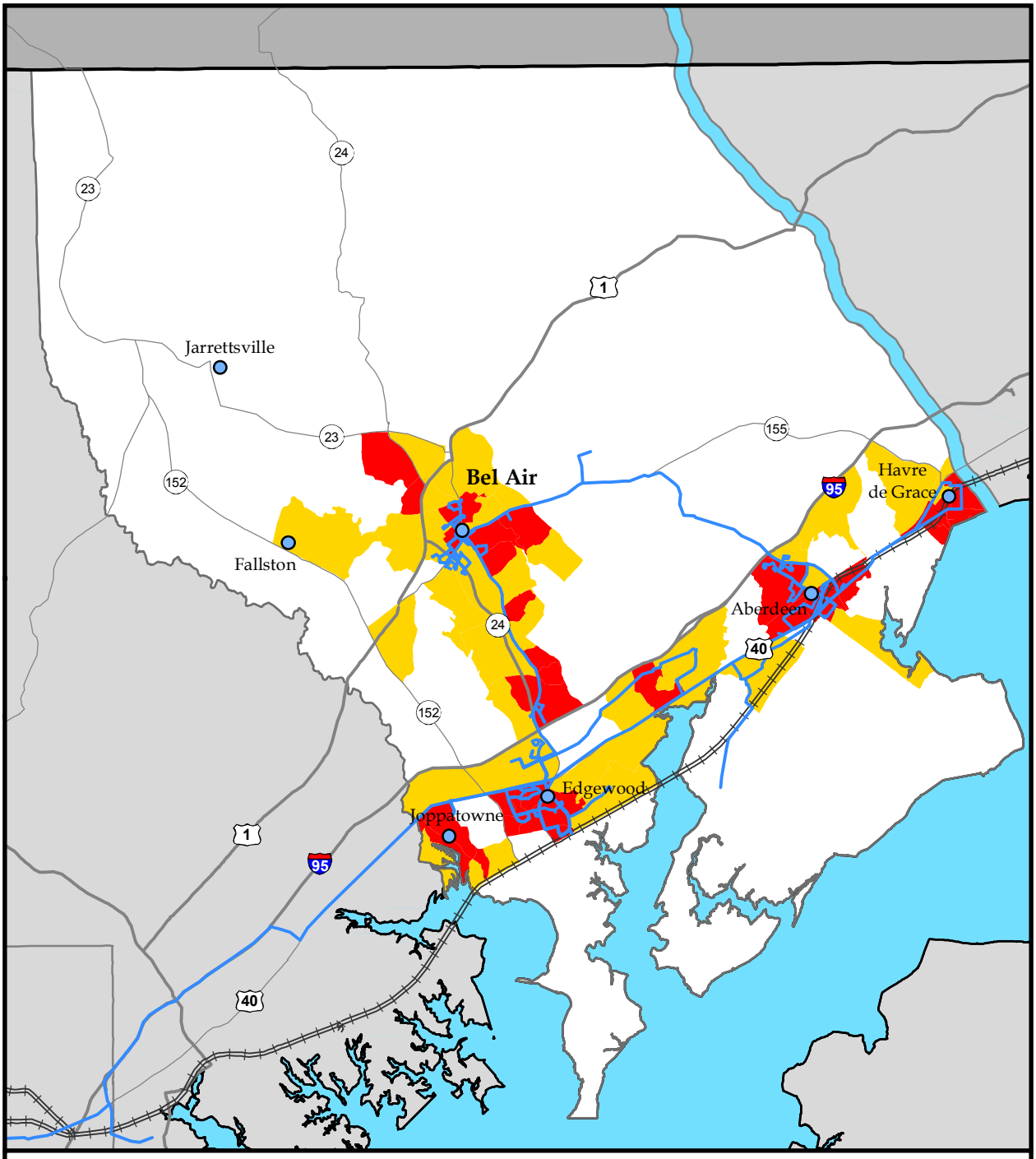


Figure 1-8
HARFORD COUNTY
RELATIVE TRANSIT NEED RANKED BY
DENSITY OF TRANSIT DEPENDENT PERSONS, 2000

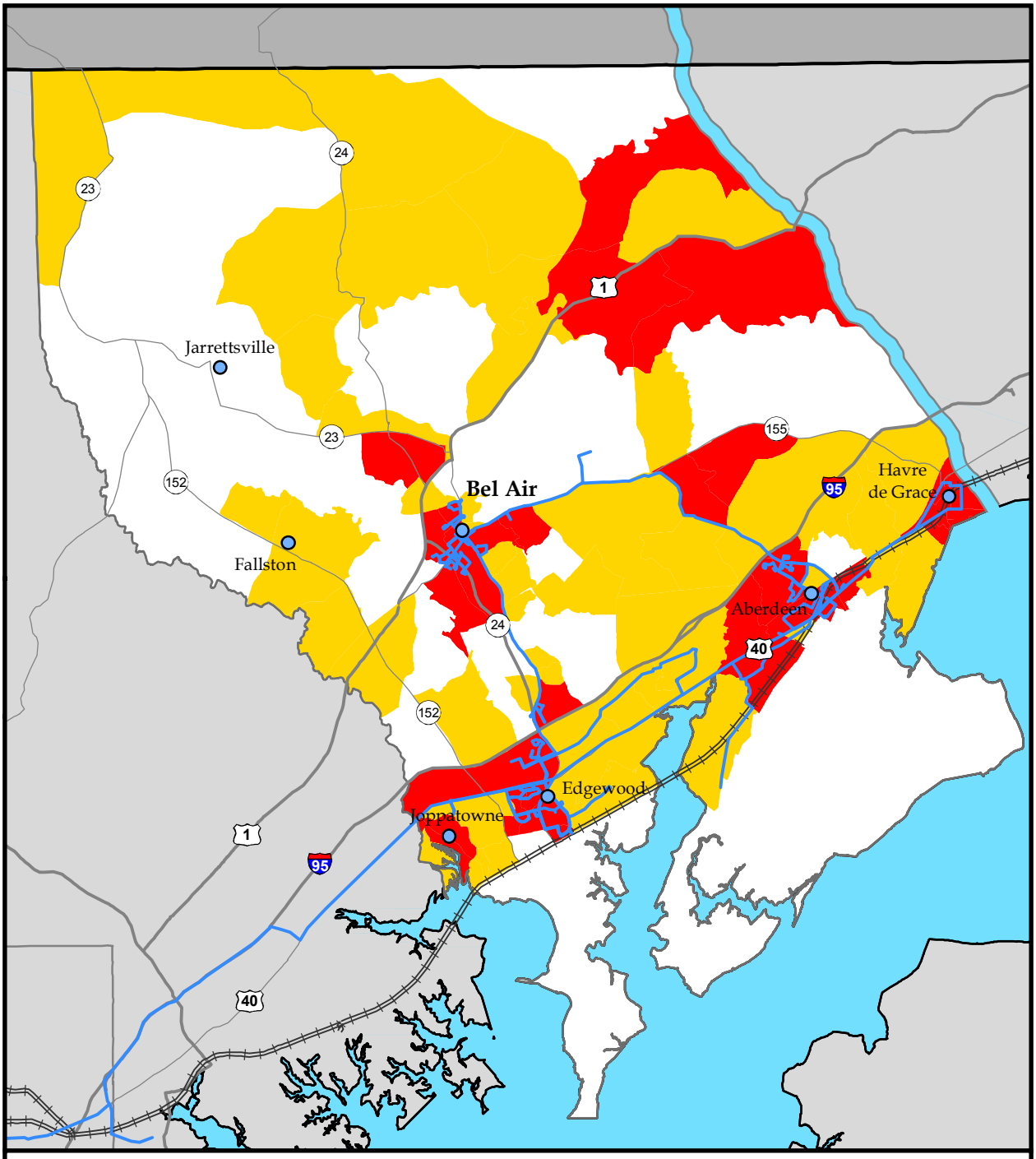


Figure 1-9
HARFORD COUNTY
RELATIVE TRANSIT NEED RANKED BY
PERCENTAGE OF TRANSIT DEPENDENT PERSONS, 2000

dependent residents: north of Aberdeen near Churchville, and on both sides of Route 1 near Darlington and Poole.

TRANSIT ORIGINS AND DESTINATIONS

To determine the future direction of public transportation within Harford County, a comprehensive review and assessment of current services and plans is essential. Understanding that notion, a critical component in the design of transit services is the surrounding land uses. Land use determines the success of transit in several ways. The design of transit services is more feasible in areas of high population density as discussed in detail within the demographics section. Consequently, locating common trip origins and destinations in the County helps determine where these services should be located. Additionally, persons most likely to need transit are sometimes concentrated in particular residential areas, thus making transit practical. Another key factor in determining transit feasibility, in addition to where the population resides, is where they are traveling to. Thus, it is equally important in identifying significant destination points.

The intent of this effort is to display geographic coverage of the major destinations. It will aid in addressing locations where high concentrations of probable transit riders would travel. These data analyses identifying the conventional travel needs destinations will later provide insight when exploring service recommendations (for both fixed-route and demand-responsive service).

Major Trip Generators

Major trip generators are those origins from which a concentrated transit demand is typically generated and those destinations to which both transit dependent persons and choice riders are attracted. They include high density housing locations such as apartments and subsidized housing, major employers, medical facilities, educational facilities, human services agencies, shopping destinations, libraries, community centers, parks, and tourist attractions. Industrial sites and business parks are also major destinations found throughout the County. Aberdeen Proving Ground (APG), a military base that neighbors the City of Aberdeen, is the single largest employer in the county and has more than 800 households, making it both a major origin and destination.

Figure 1-10 shows the locations of the trip generators throughout Harford County. (See Table B-1 in Appendix B for a detailed listing.) The majority of trip generators are located in Bel Air, Havre de Grace, Edgewood, and Aberdeen; Joppatowne, Pleasant Hills, Fallston, and Jarrettsville also have a few major trip generators. A small number of human services agencies, libraries, parks, and tourist attractions are located across the northern part of the County, but most major origins and destinations lie in the southern half of the County and are described below.

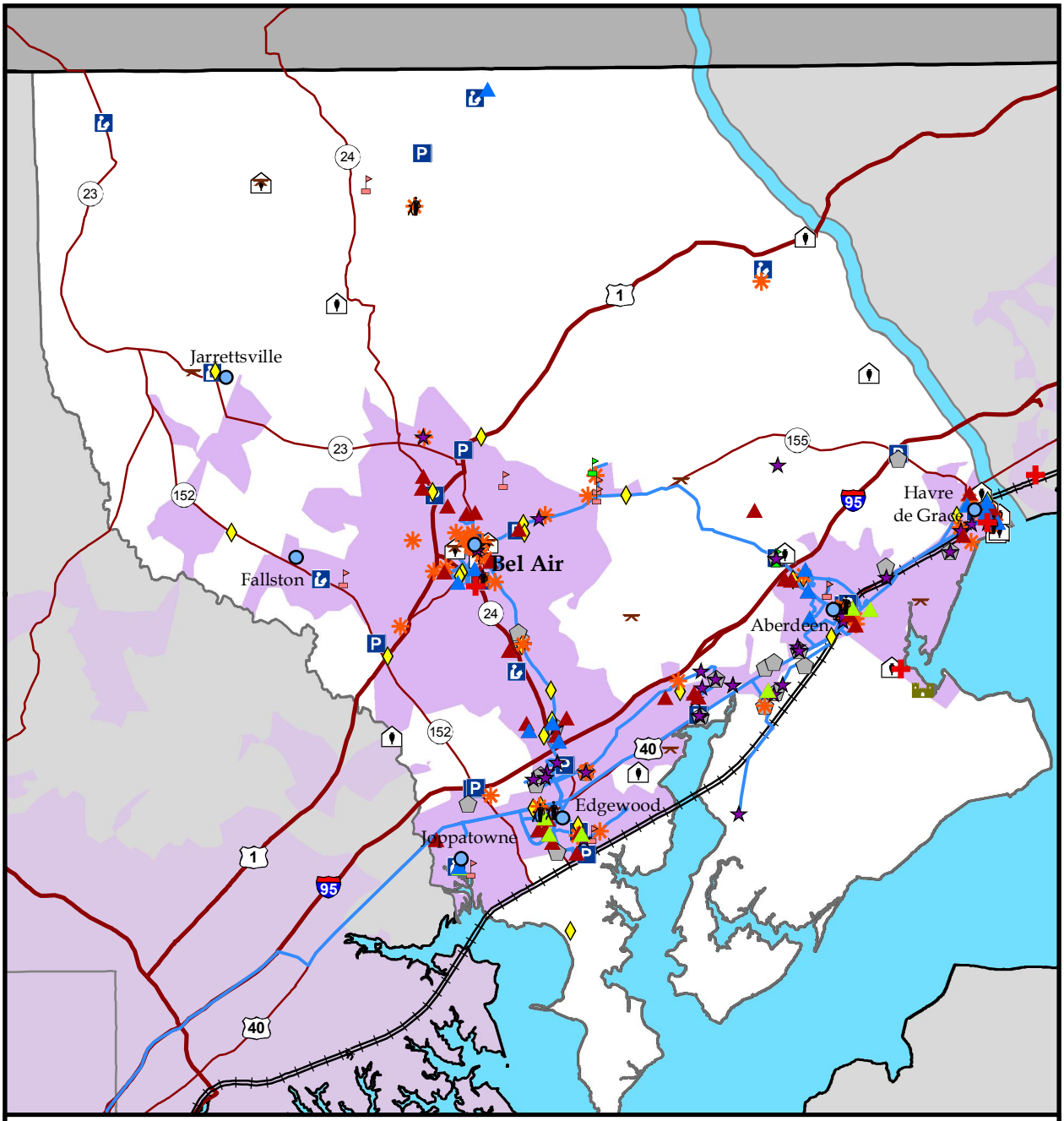


Figure 1-10: HARFORD COUNTY
MAJOR TRIP GENERATORS

High Density Housing

Pinpointing the location of higher density housing is important in the planning of transit routes since they often encompass a higher population density. Intuitively, with a higher population density, more people have accessibility to a bus stop/route, thus elevating the exposure to transit which can lead to increased ridership. Though subsidized housing facilities such as senior housing and low-income housing sometimes create a lower concentration of residents than in regular apartments, these facilities typically house a more transit dependent population. Another factor when considering high density housing complexes is the predisposition for tenants to have lower incomes than do residents of single-family dwellings. Coupling these factors, since those least likely to have personal modes of transportation live in more dense areas, a transit alternative is frequently well received.

Potentially trip-generating housing facilities are mapped, including major apartment complexes and separate subsidized housing facilities. Within Harford County, several multi-unit housing complexes are located in Bel Air and others are found in Edgewood, Abingdon, Belcamp, Aberdeen, and Havre de Grace. Senior housing facilities are similarly spread throughout Bel Air, Abingdon, Aberdeen, and Havre de Grace. Fewer in number, subsidized housing facilities are located primarily in Edgewood and Aberdeen. Within Abingdon, the apartment buildings are clustered in the northwestern area called Constant Friendship. In Aberdeen, several apartment buildings are found in the northwest and just east of downtown.

Major Employers

The major employers mapped were identified as such by the Harford County Office of Economic Development. The number of employees that most of these entities employ ranges from 68 to nearly 4,600. APG is the exception with nearly 12,500 people in its employ. With the exception of Blue Dot of Maryland located in Forest Hill and a few companies in Bel Air, all major employers are located along the southern, urbanized portion of the County. A few companies are located in Edgewood and Abingdon, while clusters of major employers are found in Belcamp, Aberdeen, and Havre de Grace.

Employment density is useful in determining the potential transit need of workers other than those of the County's major employers. Figure 1-11 uses 2000 data to show the employment density in jobs per acre within Harford County. Some major employers correspond with the areas of high employment density in Bel Air, Havre de Grace, and the APG. Several major employers are situated in areas that represent low employment density. Though this trend seems counterintuitive, it may be explained by the fact that these major employers are located in large business parks and industrial sites. While these companies may have high numbers of employees, the density is in the low range because each company's lot acreage is large. The areas with medium employment density but no major employers can be similarly explained. These areas likely contain several small and medium-sized employers, that have smaller lots and/or are located in close proximity to each other, creating a higher density of jobs. The employment density map shows that the corridor between Bel Air and Edgewood, along with segments of Bel Camp, Aberdeen, and Havre de Grace, are prime areas for consideration of work-related transit service.

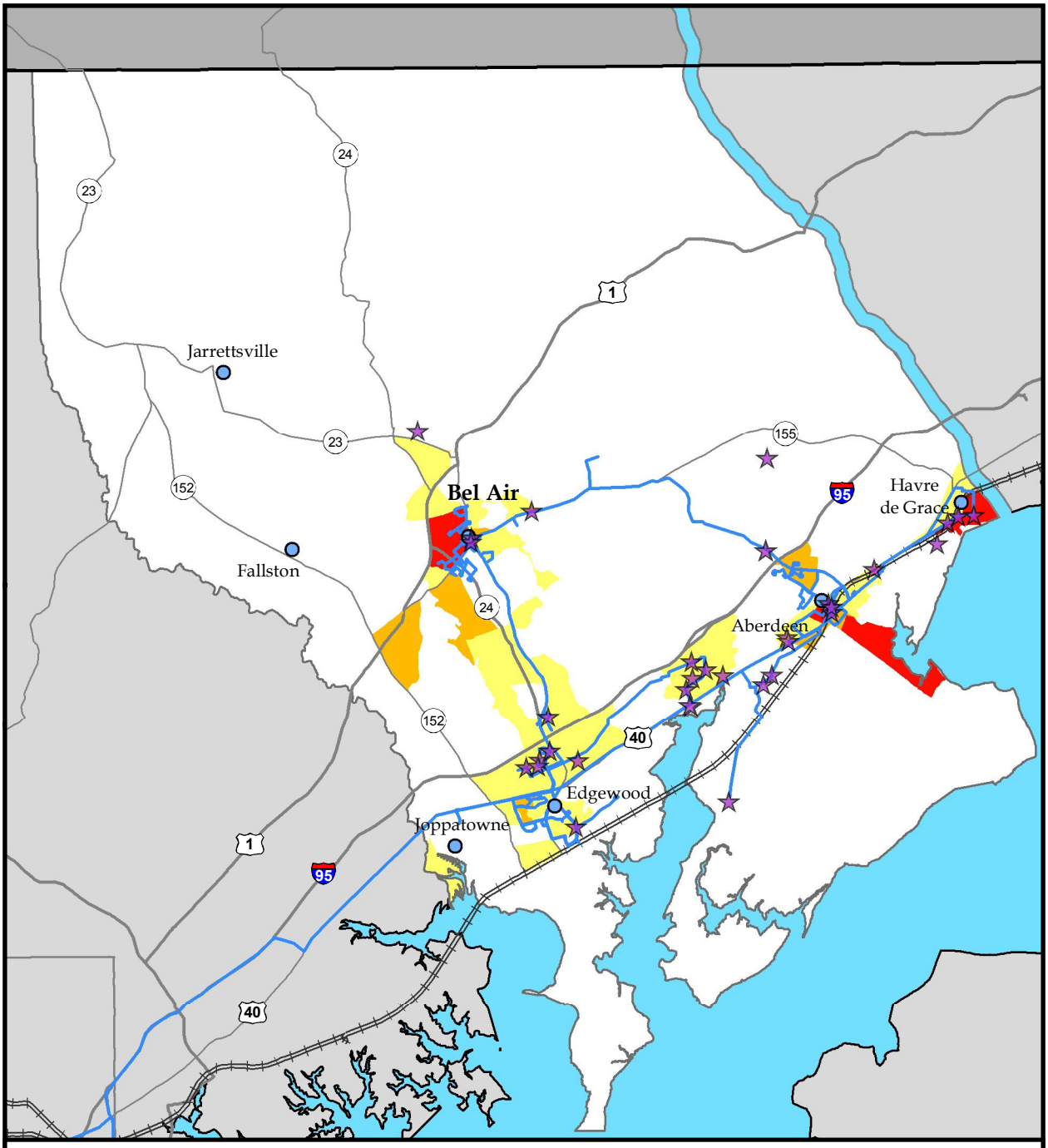


Figure 1-11: HARFORD COUNTY
EMPLOYMENT DENSITY, 2000

Industrial Sites and Business Parks

Like major employers, industrial sites and business parks are major destinations by virtue of being workplaces. While some business parks house major employers, others may house smaller companies who also have employees that will potentially use transit in their commute. Harford County is unique in that it has two designated enterprise zones, within which the County offers new and existing qualifying businesses economic incentives to expand their capital investments and create more jobs. The Edgewood-Joppa Enterprise Zone includes business parks located along U.S. 40, MD 24, and MD 755, while the Greater Aberdeen-Havre de Grace Enterprise Zone includes business sites situated along U.S. 40 near Aberdeen and Havre de Grace.[1] A few premier office parks located south of Bel Air near Colonial Acres and Glenwood and one north of Havre de Grace have also been mapped as business parks.

Medical Facilities

Medical facilities are major transit destinations for patients, visitors, and staff alike. Harford County has three major hospitals: Harford Memorial Hospital located in Havre de Grace, Upper Chesapeake Medical Center in Bel Air, and Kirk U.S. Army Health Clinic at the APG.

Educational Facilities

Educational facilities are included as major destinations deserving consideration for transit routes because the youth population is among those most likely to be without a personal vehicle, and pockets of the youth population are not old enough to drive. Educational facilities include colleges and universities, career and technical education centers, and high schools. Located in Bel Air, Harford Community College is Harford County's main college. The Higher Education and Applied Technology Center, or HEAT Center, near APG offers advanced degree programs as well as technology resources and worker training to local businesses and residents. Harford County has 11 high schools located throughout the County in Pylesville, Fallston, Joppa, Edgewood, Bel Air, Aberdeen, and Havre de Grace. High school students often need transit as an option to get to and from school because they may not have their driver's license yet or they do not have access to a vehicle. We do not list or map elementary or middle schools since young children are not likely to ride public transportation without their parents.

Libraries

While libraries are often related to educational institutions, they are major destinations in themselves as a greater number of community members are likely to use them, especially as libraries now offer free internet access. Unlike some other types of major destinations, library branches are located all over the County in White Hall, Whiteford, Darlington, and Jarrettsville in the north, and in Bel Air, Fallston, Edgewood, Joppa, Abingdon, Aberdeen, and Havre de Grace in central and southern Harford County.

[1] Harford County Transit Development Plan, MTA Office of Planning, October 2004.

Human Services Agencies

Human services agencies can also generate a great deal of transit trips, depending on the nature of their services and clientele. Some human service agencies provide supplemental service to the demand-response public transportation provided by Harford Transit to address specific clientele needs. Ranging from family and children's services to soup kitchens and shelters, many agencies cater to clients who cannot afford a vehicle or are unable to drive and therefore represent likely, potential transit riders. Concerns arise though when service is duplicative, scarce, or absent. While a few agencies are located in Darlington and Street in the northern part of the County, the majority of human services agencies are clustered in Bel Air, Aberdeen, and Havre de Grace, with a few situated in Joppa and Edgewood as well.

Community and Senior Centers

Community centers and senior centers are popular destinations as they offer several resources, services, and recreational space to various community members. The young, elderly, and needy that are among the populations that may frequent community centers also tend to use transit as a viable mobility option. Therefore, it is important to include these buildings as major destinations in creating a transit development plan. Harford County has three senior centers in Aberdeen, Edgewood, and Street, and three community centers in Bel Air, Edgewood, and Havre de Grace.

Parks

Several green spaces are located throughout Harford County, but for the purposes of determining significant transit need, only parks with multi-purpose indoor facilities are mapped. The County contains 11 such facilities; two are located in the north in Pylesville and White Hall, while the rest are spread throughout the southern half of the County in Bel Air, Churchville, Edgewood, Abingdon, Aberdeen, and Havre de Grace.

Shopping Destinations

Shopping areas are some of the primary destinations for transit trips. While most of the mapped destinations are shopping centers and Wal-Marts, some shopping sites geared toward tourists are also included. The majority of major shopping destinations are located in the southern half of the County, with clusters around Bel Air, Edgewood, Aberdeen, and Havre de Grace.

Tourism Attractions

Harford Transit providing access to key attractions and sights is an important component of promoting tourism in Harford County. The tourism attractions that are mapped include museums, historical sites, and state parks. While Bel Air, Aberdeen, and Havre de Grace all house several tourism attractions, the other sites are spread throughout the County as many of them are large parks with trails. These tourism attractions are located in Darlington, Jarrettsville, Kingsville, and Pylesville.

Aberdeen Proving Ground

Harford County is home to APG, located in the southeastern corner of the County. With nearly 15,500 civilians, military personnel, and private business employees working at the military base, along with over 2,000 military family members living on the post, APG is a major origin and destination.[2] As various apartments and services geared toward APG's population are located nearby in Aberdeen, transit service between APG and Aberdeen will be critical in providing mobility options to the area.

Park and Ride Lots

Park and ride lots are major destinations that are mainly frequented by people going to and from work. These parking areas are important to consider in developing transit because many people that live far from transit service areas are willing to drive to these lots and use transit for the remainder of their commute if service is good and reliable. Park and ride lots are spread throughout the County to serve various residential areas. Aside from the Pylesville Park and Ride in the north, the other lots are located throughout the southern half of the County in Bel Air, Fallston, Joppa, Edgewood, Belcamp, Abingdon, Aberdeen, and Havre de Grace.

Major Travel Patterns

While major trip generators help prioritize origins and destinations to best serve potential transit riders, major travel patterns within the County can be analyzed to determine the roadways that are most frequented. Transit can then be developed to help ease traffic congestion in these areas accordingly. Traffic volumes along major corridors and work-related transportation patterns are both good indicators of the major travel patterns within the County. I-95 carries the most traffic through Harford County, especially with County residents using the highway to access major destinations in other counties and states. MD 24 has the next highest traffic volume in the County, particularly in the stretch between I-95 and Bel Air. US 1, US 40, MD 22, and MD 152 are other roadways that are also significantly traveled.

The 2000 Census documented that 52% of Harford County residents worked within the County, while 48% worked outside the County. Baltimore County and Baltimore City were the main out-of-county destinations to which residents commuted for work. Most Harford County residents were also getting to work via automobiles, the majority of which were driving alone, while some participated in ridesharing. Of those working in Harford County, 77% reside within the County and 23% commute from outside the County. These statistics show that nearly half of Harford County's residents are traveling out of the County for work and about a quarter of the County's workforce is commuting from outside the County. These high numbers indicate large traffic flows in and out of the County on a daily basis during the work week, mostly during peak periods in the morning and evening in relation to typical work schedules. The main corridors that commuters are using to travel in and out of the County for work are prime areas for increased transit service, particularly during peak periods.

[2] APG Website.

CHAPTER 2

REVIEW OF TRANSPORTATION SERVICES

The review of public transportation in Harford County includes Harford Transit, human service providers, taxicabs, commuter rail, and park and ride service. This task was essential to:

- understand the level of transportation service provided in the county,
- identify trends in service,
- identify coordination activities, and
- allow us to identify the level of needs that are being fulfilled.

Harford Transit was reviewed in the level of detail necessary for a review of the route structures and the way Harford Transit provides transit service.

HARFORD TRANSIT

Introduction

The purpose of this review was to examine Harford Transit performance over the past three years in order to benchmark the current service and to determine how the system has progressed over the three years. It should be noted that this chapter supplements the previous plan developed in 2004. Readers are encouraged to reference that document when reviewing this Transportation Development Plan.

First we reviewed the routes and performance data, followed by a review of on-off counts as conducted by the Maryland Transit Administration (MTA) staff (Glen Hoge). This information has proven to be invaluable in identifying the centers of activity in the system. We then assessed the current service in order to determine if and what changes were needed.

Review of System

Description of Service

Harford Transit provides a variety of services throughout the county:

- Fixed-route public transportation for the general public - Harford Transit operates seven fixed routes within Harford County;
- Door-to-Door service for elderly and disabled (Statewide Specialized Transportation Assistance Program —SSTAP);
- Americans with Disabilities Act (ADA) Paratransit Service; and
- Job Access/Reverse Commute (JARC) Service – this is the seventh fixed-route serving Baltimore.

This report assessed ridership, costs, performance measures, and service for each of the seven routes and the accompanying paratransit service provided by Harford Transit.

To begin, each route will be explained briefly, followed by a comprehensive route map (Figure 2-1) and budgetary, ridership, performance, and service review. Route numbers and destinations are described briefly below:

- Route 1: Havre de Grace, Aberdeen, Bel Air
- Route 2: Joppatowne, Abingdon, Edgewood, Bel Air
- Route 3: Bel Air Town-Go-Around
- Route 4: Aberdeen Doodlebug
- Route 5: Edgewood Circular
- Route 6: Aberdeen, Perryman, Riverside, Edgewood
- Route 7: Job-Access Edgewood, Johns Hopkins Hospital, East Point Mall, White Marsh Mall

Overall the routes are meandering and difficult to understand. Using the schedule and the map does not clarify the routes at all. Less complicated and meandering routes would be more user-friendly, efficient, and effective.

Route 1, an east-west route, begins in Havre de Grace at the Harford Memorial Hospital. It then makes its way to the train station in Aberdeen (AMTRAK/MARC), the Harford Community College, Greenbriar Shopping Plaza, and finally the Harford Mall Bus Stop in Bel Air.

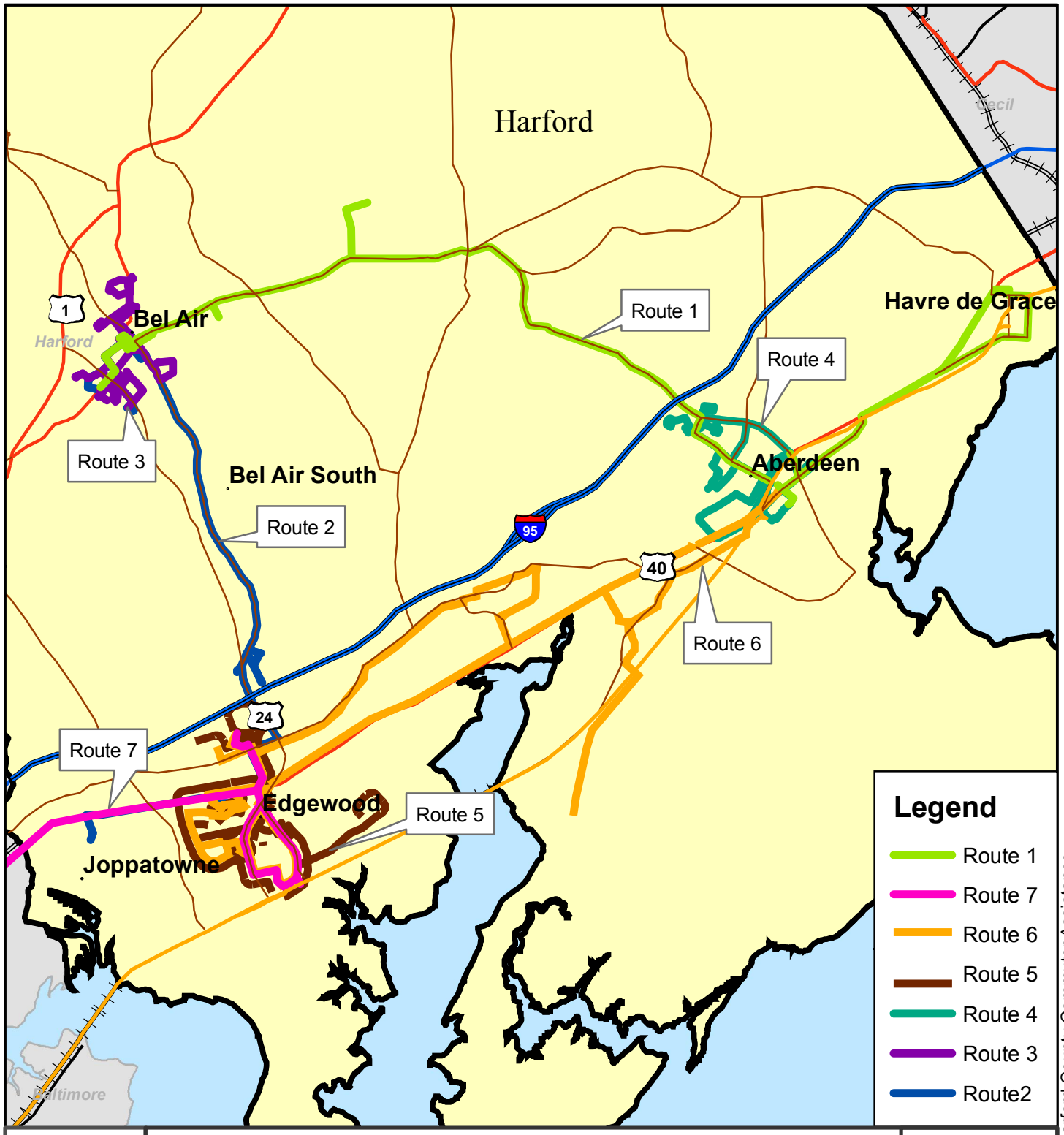


Figure 2-1: HARFORD TRANSIT ROUTES 1-7

Route 2 is oriented north-south and begins in Joppatown at the Joppatown Shopping Plaza. Its main stops include the Route 24 Park and Ride (MTA) and the Wal-Mart in Abingdon. This route also ends at the Harford Mall in Bel Air.

Route 3, the Bel Air Town-Go-Around, stops at service centers and shopping centers in and around Bel Air, including the County Office Building and Courthouse, the State Office Building, the Klein's, Target, Circuit City, Super Fresh Foods, and the Bel Air Senior and Youth Center.

Route 4, the Aberdeen Doodlebug, begins at the Aberdeen train station and stops at key shopping, employment, and housing locations such as the Wal-Mart, Lisby Elementary School, various apartment complexes, Aberdeen High School, Catholic Charities Senior housing, Aberdeen Senior Center, and others.

Route 5 serves the community of Edgewood by stopping at residential streets before coming to several employment centers such as Emmorton Business Park, Lakeside Business Park, Winters Run Industrial Park, and Woodbridge Shopping Center.

Route 6 runs northeast-southwest from Aberdeen to Edgewood. The service starts at the Aberdeen train station, heads southwest to the Aberdeen Wal-Mart, Saks, Frito-Lay, the Rite Aide Distribution Center, Riverside Business Park, Klein's Supermarket, Lakeside Business Park, Winters Run Industrial Park, and the Edgewood Shopping Plaza.

Route 7 is a JARC route crossing the county boundary before traveling to the City of Baltimore. This route begins at the Edgewood Village Shopping Center. It stops at employment centers such as the Lakeside Business Park and the Greater Harford Industrial Park. Route 7 also incorporates two MTA stops: White Marsh Mall Park and Ride and the East Point Mall Bus Stop. The final destination for Route 7 is the Johns Hopkins Hospital in Baltimore.

Total Hours, Miles, and Trips

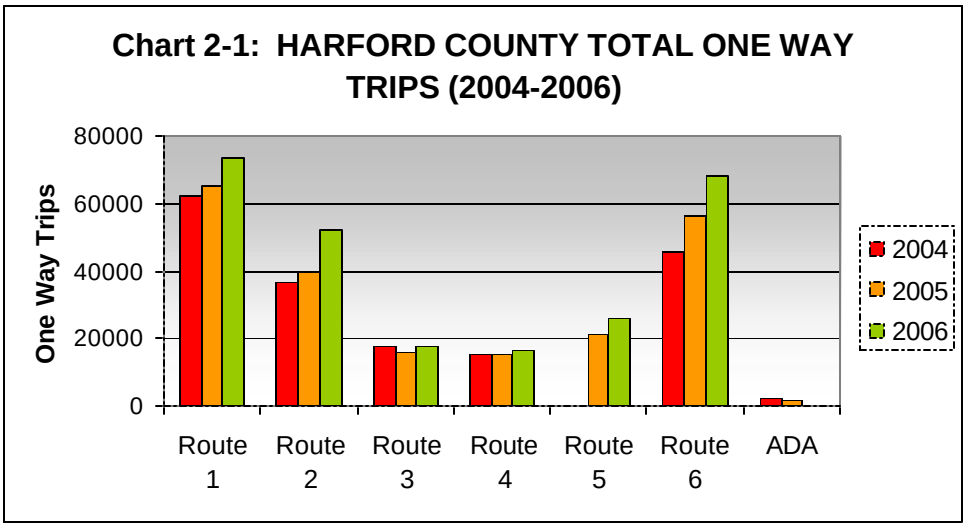
Table 2-1 and Graphs 2-1 through 2-3 show total one-way trips, total vehicle miles, and total vehicle hours for the eight Harford Transit routes. The notable characteristics of these graphs are that Routes 1 and 6 are the most active (i.e., cover the most miles, complete the most trips, and are in service for the greatest amount of time), while the ADA route is the least active. This is important to take into account when reviewing the performance measures in Table 2-1.

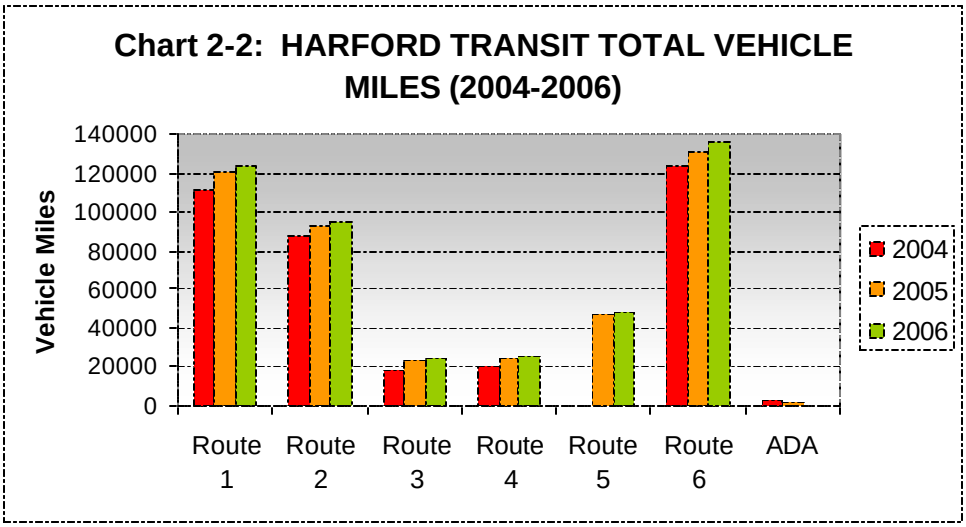
Table 2-1: ONE-WAY TRIPS, TOTAL VEHICLE MILES, TOTAL VEHICLE HOURS FOR ROUTE 1 THROUGH ROUTE 6

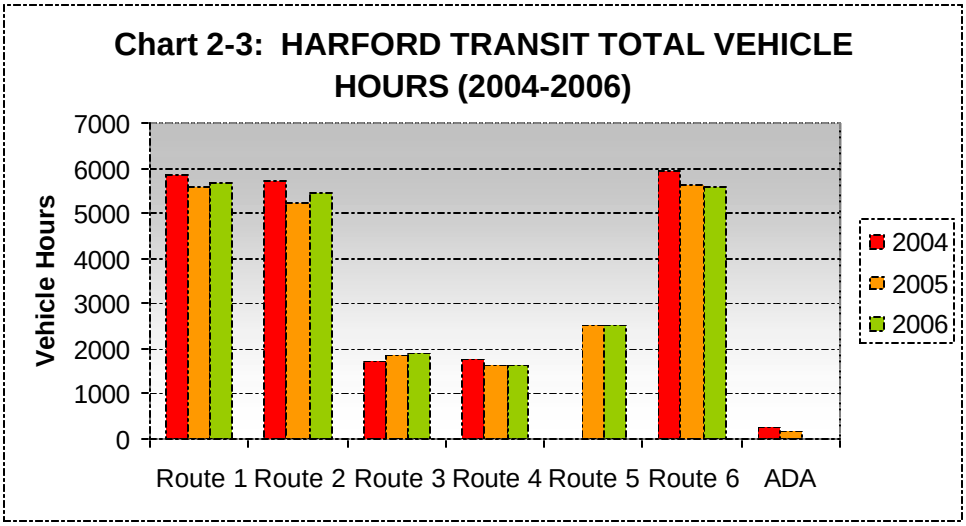
Route 1: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	47,924	48,082	56,054	67,829	**219,889**
Elderly Non-Ambulatory	64	61	954	1,489	**2,568**
Elderly Ambulatory	9,722	11,602	11,100	13,658	**46,082**
Disabled Ambulatory	4,557	5,637	5,476	6,294	**21,964**
Disabled Non-Ambulatory	207	87	102	52	**448**
Total One-Way Trips	**62,474**	**65,469**	**73,686**	**89,322**	**290,951**
Total Vehicle Miles	**111,759**	**120,493**	**124,023**	**82,831**	**439,106**
Total Vehicle Hours	**5,877**	**5,572**	**5,659**	**3,701**	**20,809**
Route 2: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	27,017	29,293	39,678	26,196	**122,184**
Elderly Non-Ambulatory	20	14	727	714	**1475**
Elderly Ambulatory	6,535.00	7,438	7,902	4,738	**26,613**
Disabled Ambulatory	2,982	3,176	3,772	2,111	**12,041**
Disabled Non-Ambulatory	78	43	57	14	**192**
Total One-Way Trips	**36,632**	**39,964**	**52,136**	**33,773**	**162,505**
Total Vehicle Miles	**87,951**	**92,547**	**95,468**	**64,856**	**340,822**
Total Vehicle Hours	**5,705**	**5,253**	**5,448**	**3,574**	**19,981**
Route 3: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	1,881	2,140	2,695	1,894	**8,610**
Elderly Non-Ambulatory	17	10	2,413	1,040	**3,480**
Elderly Ambulatory	14,094	12,332	10,932	6,792	**44,150**
Disabled Ambulatory	1,352	1,520	1,365	964	**5,201**
Disabled Non-Ambulatory	37	1	15	0	**53**
Total One-Way Trips	**17,381**	**16,003**	**17,420**	**10,690**	**61,494**
Total Vehicle Miles	**18,445**	**23,128**	**24,125**	**15,400**	**81,098**
Total Vehicle Hours	**1,731**	**1,850**	**1,904**	**1,234**	**6,719**

Route 4: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	8,106	8,065	7,609	5,231	**29,011**
Elderly Non-Ambulatory	13	14	548	498	**1,073**
Elderly Ambulatory	5,103	5,198	6,145	3,553	**19,999**
Disabled Ambulatory	1,692	1,686	2,009	1,162	**6,549**
Disabled Non-Ambulatory	98	106	19	60	**283**
Total One-Way Trips	**15,012**	**15,069**	**16,330**	**10,504**	**56,915**
Total Vehicle Miles	**20,801**	**24,077**	**25,432**	**16,551**	**86,861**
Total Vehicle Hours	**1,746**	**1,612**	**1,611**	**1,057**	**6,027**
Route 5: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	no	15,739	18,656	11,259	**45,654**
Elderly Non-Ambulatory	info	3	406	393	**802**
Elderly Ambulatory	available	3,878	4,804	2,803	**11,485**
Disabled Ambulatory		1,304	1,781	832	**3,917**
Disabled Non-Ambulatory		14	14	5	**33**
Total One-Way Trips		**20,938**	**25,661**	**15,292**	**61,891**
Total Vehicle Miles		**46,846**	**47,884**	**30,912**	**125,642**
Total Vehicle Hours		**2,510**	**2,510**	**1,620**	**6,640**
Route 6: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	35,701	46,061	54,673	37,064	**173,499**
Elderly Non-Ambulatory	27	8	679	673	**1,387**
Elderly Ambulatory	7,818	8,042	8,964	5,140	**29,964**
Disabled Ambulatory	2,297	2,410	4,077	1,821	**10,605**
Disabled Non-Ambulatory	101	40	28	20	**189**
Total One-Way Trips	**45,944**	**56,561**	**68,421**	**44,718**	**215,644**
Total Vehicle Miles	**124,109**	**131,289**	**136,382**	**89,028**	**480,808**
Total Vehicle Hours	**5,931**	**5,616**	**5,606**	**3,719**	**20,872**
Route ADA: One-Way Trips, Total Vehicle Miles, Total Vehicle Hours					
Year	**2004**	**2005**	**2006**	**2007**	**Total**
General Public	535	435	16	0	**986**
Elderly Non-Ambulatory	0	0	0	0	**0**
Elderly Ambulatory	0	0	0	0	**0**
Disabled Ambulatory	1,706	1,007	33	34	**2,780**
Disabled Non-Ambulatory	51	39	0	2	**92**
Total One-Way Trips	**2,292**	**1,481**	**49**	**36**	**3,858**
Total Vehicle Miles	**3,275**	**2,335**	**61**	**508**	**6,179**
Total Vehicle Hours	**261**	**186**	**20**	**1,7.59**	**485**
	2004	**2005**	**2006**	**2007**	**TOTAL**
Total One-Way Trips	179,735	241,393	275,926	219,955	917,009
Total Vehicle Miles	366,340	440,715	453,375	300,086	1,560,516
TOTAL VEHICLE HOURS	21,251	22,600	22,758	14,923	81,532

Source: MTA FY Reports 2004-2007.



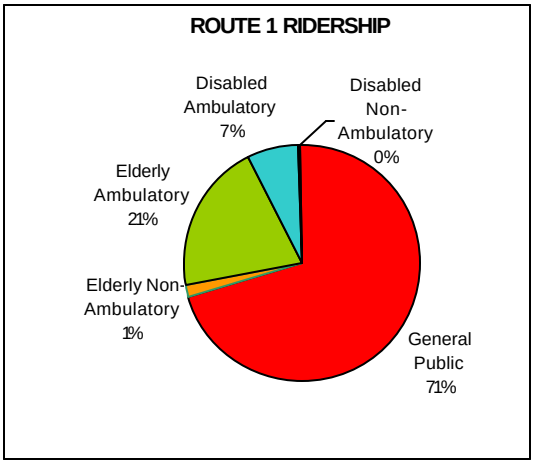


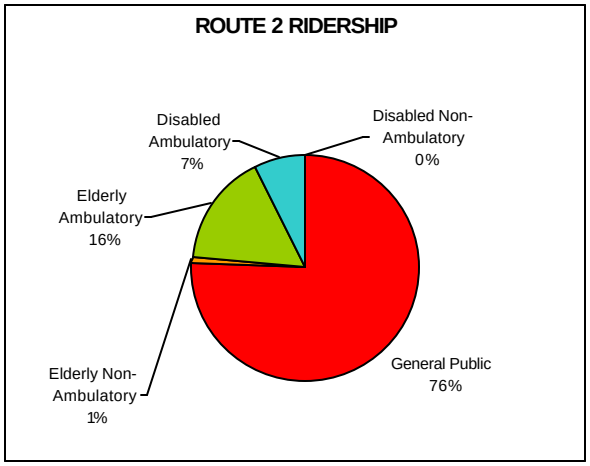


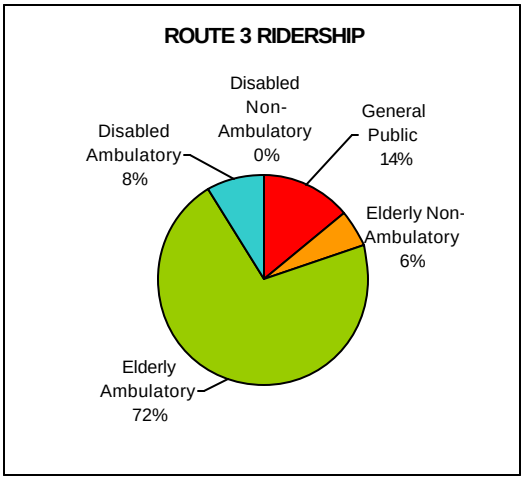
Source: MTA FY Report (2004-2006).

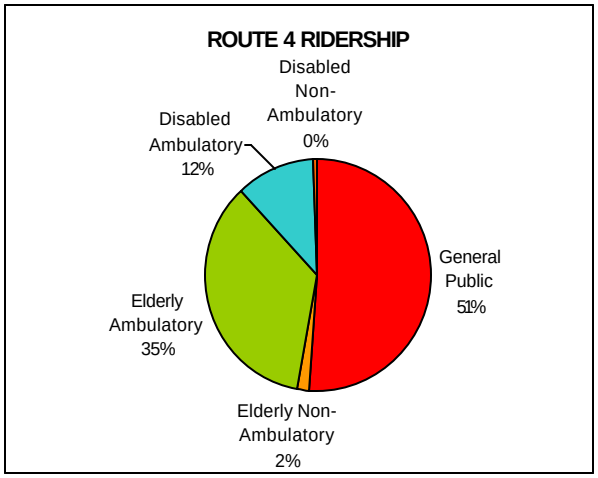
Ridership Breakdown by Passenger: Routes 1-6, ADA, and Total

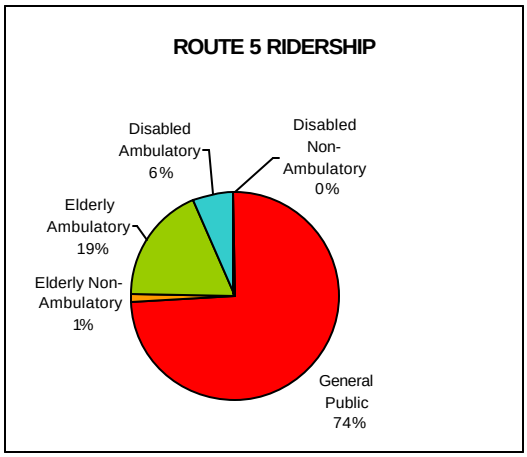
The following are graphic representations of the riders of each of the seven Harford Transit routes. The charts show that most of the riders are part of the general public. However, Routes 3 and 4 show a surprising level of use by elderly ambulatory citizens. In addition, the ADA route provides service to mostly disabled ambulatory passengers.

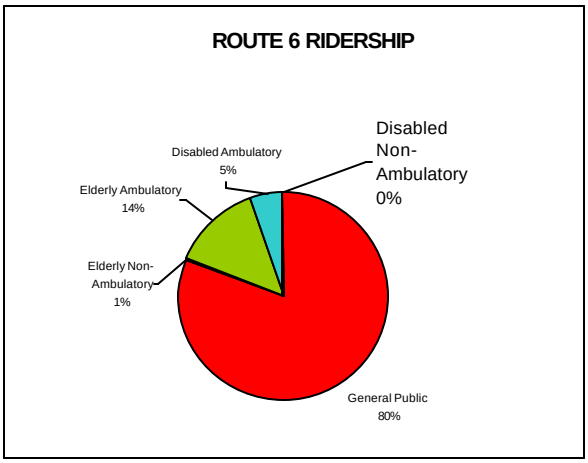


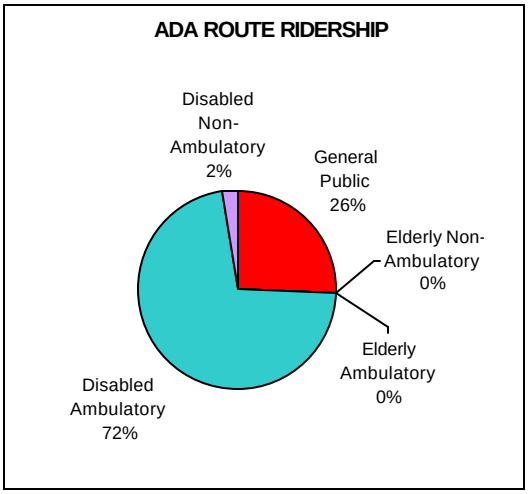












Budget and Expenses

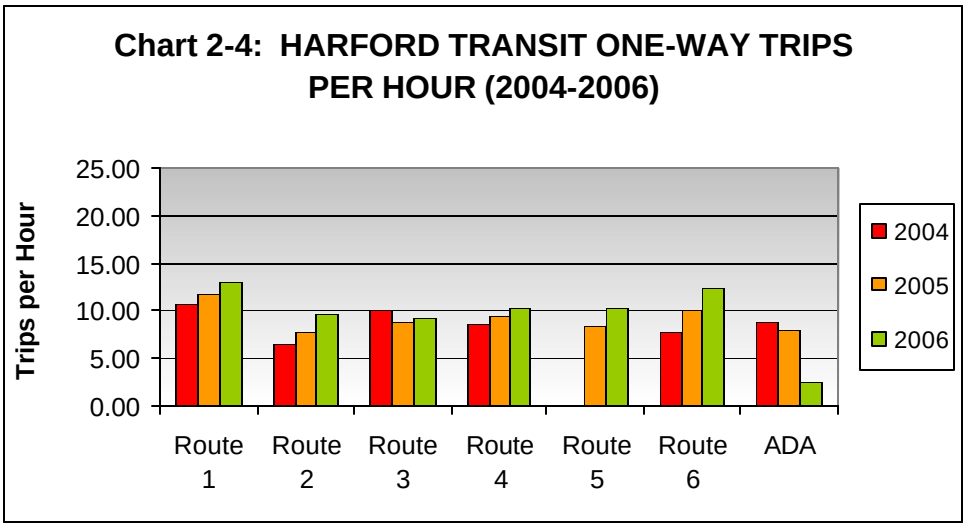
Budget/Expenses: Table 2-2 and Charts 2-4 through 2-7 were developed using Jim Macgill's budgetary data. Two important things to note: Route 5 was not in service in 2004 and the 2007 data does not include the entire year.

Table 2-2: BUDGET AND EXPENSES

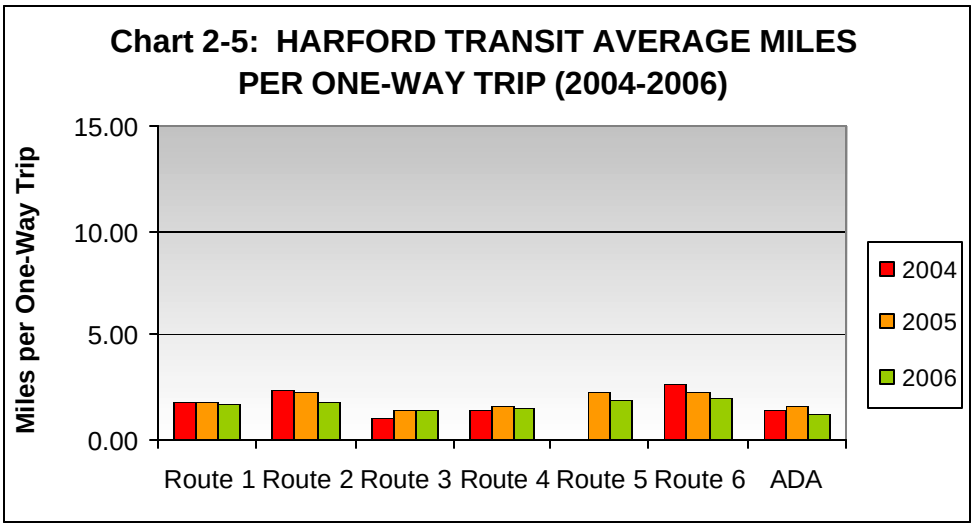
	FY 2004							
	Route 1	**Route 2**	**Route 3**	**Route 4**	**Route 5**	**Route 6**	**ADA**	**TOTAL**
Total Revenue	38,455	19,478	7,508	7,537		27,171	3,668	103,817
Total Administration	10,071	10,071	5,035	5,035		10,071	11,415	51,698
Total Vehicle Operations	114,075	112,510	27,791	28,140		118,278	23,992	424,787
Total Vehicle Maintenance	7,183	11,501	3,224	3,032		13,892	15,722	54,554
Total Operating Expenses	131,329	134,082	36,051	36,207		142,241	51,129	531,039

	FY 2005							
	Route 1	**Route 2**	**Route 3**	**Route 4**	**Route 5**	**Route 6**	**ADA**	**TOTAL**
Total Revenue	46,708	25,491	8,121	9,051	14,033	40,485	3,020	146,909
Total Administration	23,944	23,944	11,972	11,972	11,972	23,944	13,130	120,880
Total Vehicle Operations	171,393	157,044	53,135	47,126	75,549	175,075	14,375	693,697
Total Vehicle Maintenance	51,406	39,417	9,771	10,195	20,051	56,125	25,687	212,651
Total Operating Expenses	246,744	220,405	74,878	69,293	107,572	255,144	53,192	1,027,229

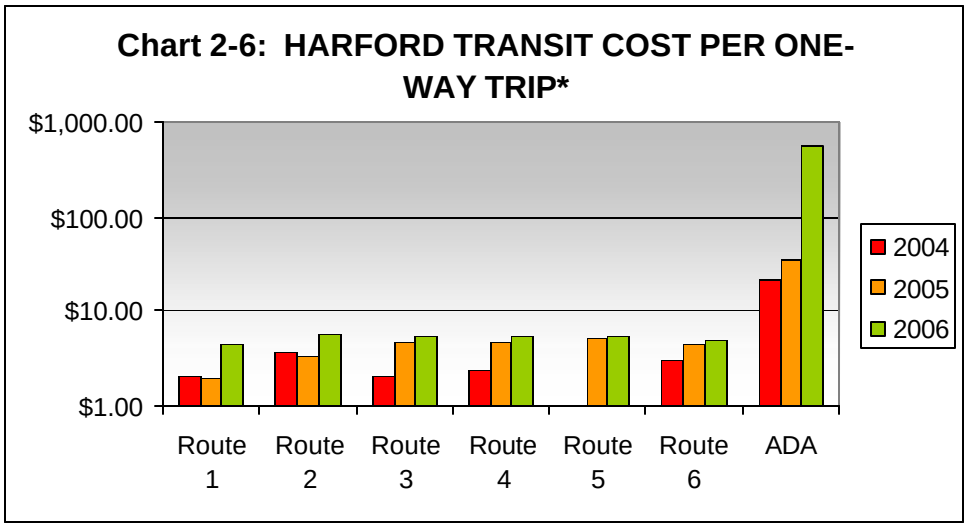
	FY 2006							
	Route 1	**Route 2**	**Route 3**	**Route 4**	**Route 5**	**Route 6**	**ADA**	**TOTAL**
Total Revenue	53,106	34,803	8,970	9,610	16,289	48,461	98	171,337
Total Administration	20,843	20,843	10,422	10,422	10,422	20,843	9,624	103,418
Total Vehicle Operations	224,340	207,546	69,677	60,651	96,968	225,458	4,497	889,137
Total Vehicle Maintenance	82,901	63,856	16,158	16,981	31,922	91,153	12,734	315,705
Total Operating Expenses	328,085	292,245	96,256	88,053	139,312	337,454	26,855	1,308,260



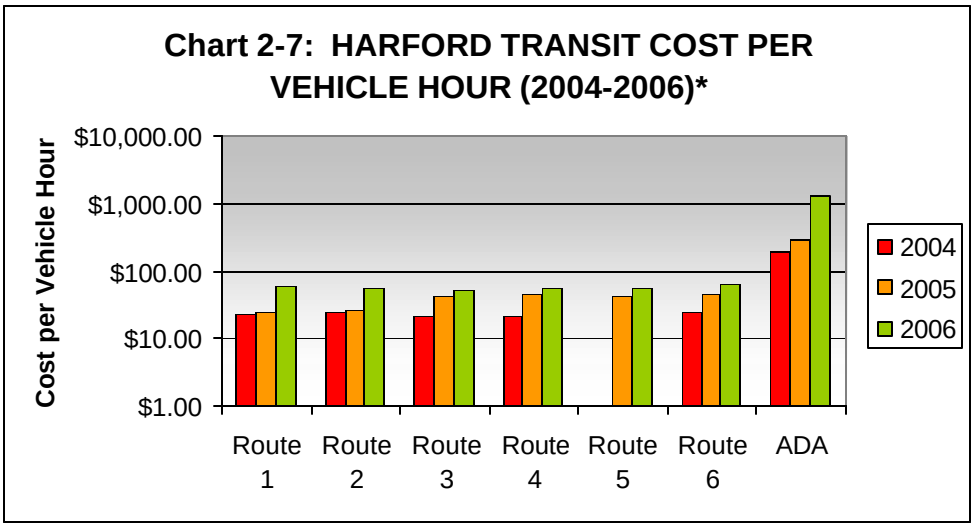
Source: Jim Macgill MTA Budget Data.



Source: Jim Macgill MTA Budget Data.



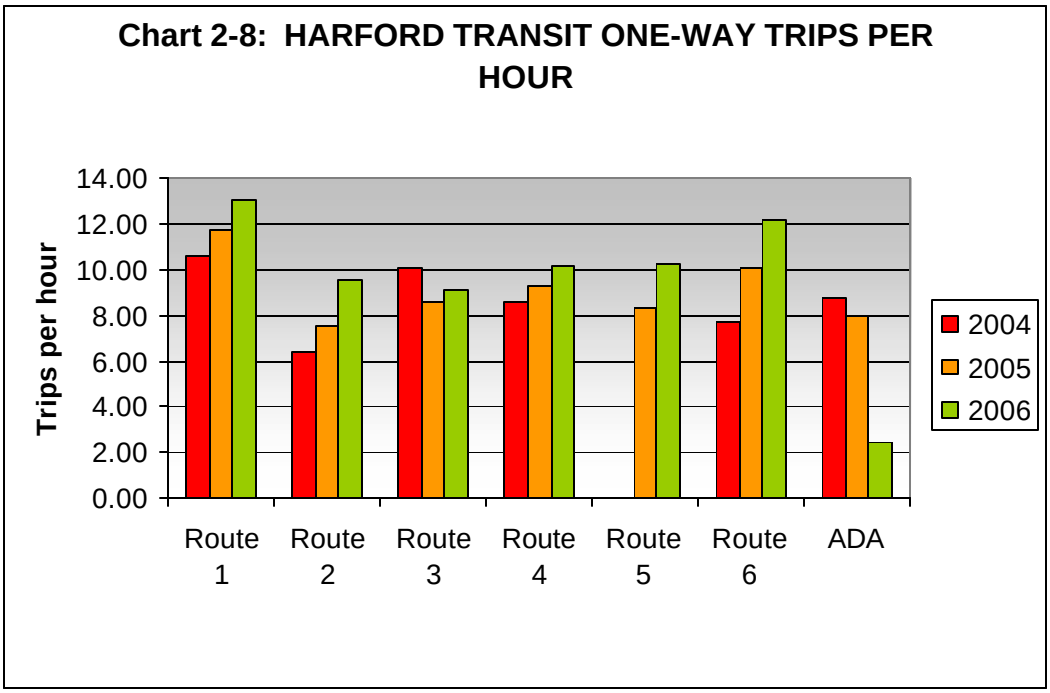
*DUE TO THE LARGE DIFFERENCE BETWEEN THE ADA AND FIXED-ROUTE DATA, THE Y AXIS IN THE ABOVE CHART IS SET TO A LOGARITHMIC SCALE



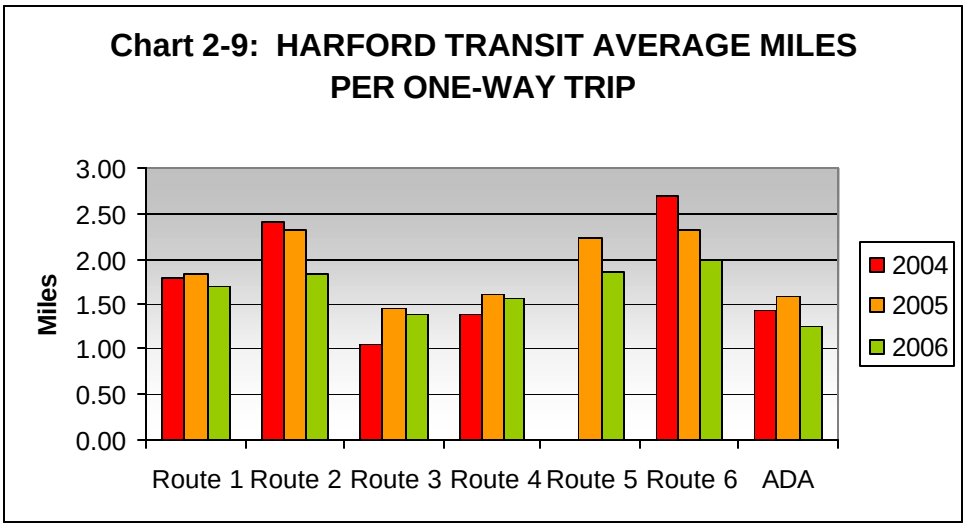
*DUE TO THE LARGE DIFFERENCE BETWEEN THE ADA AND FIXED-ROUTE DATA, THE Y AXIS IN THE ABOVE CHART IS SET TO A LOGARITHMIC SCALE

Performance Measures

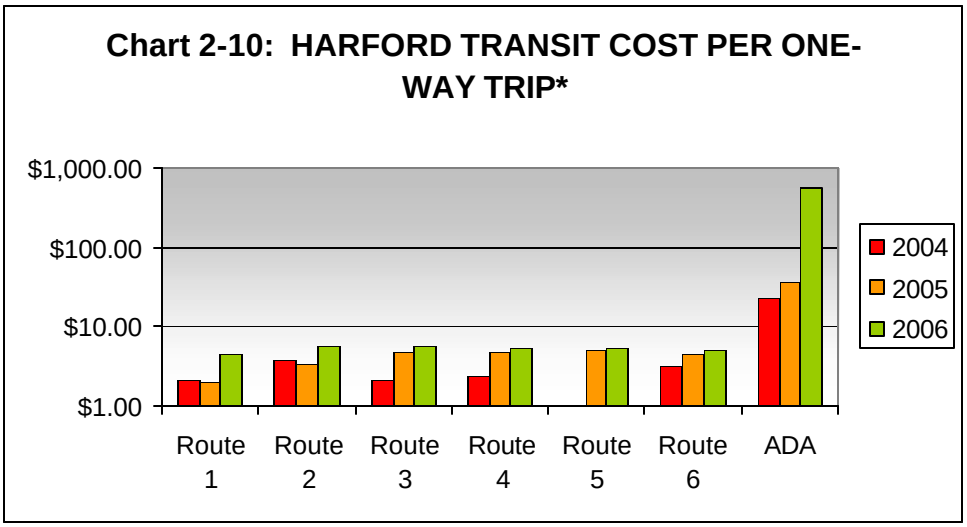
Given one-way trips, vehicle miles, vehicle hours, and cost of service, performance measures such as one-way trips per hour (productivity) and cost per one-way trip were calculated. The results are show Charts 2-8, 2-9, and 2-10 and in Tables 2-3, 2-4, and 2-5.



Source: MTA FY Report (2004-2007).



Source: MTA FY Report (2004-2007).



*DUE TO THE LARGE DIFFERENCE BETWEEN THE ADA AND FIXED-ROUTE DATA, THE Y AXIS IN THE ABOVE CHART IS SET TO A LOGARITHMIC SCALE

Source: MTA FY Report (2004-2007).

Table 2-3: HARFORD TRANSIT ONE-WAY TRIPS PER HOUR (2004-2006)

	One-Way Trips Per Hour			
	2004	2005	2006	2007
Route 1	10.63	11.75	13.02	24.14
Route 2	6.42	7.61	9.57	9.45
Route 3	10.04	8.65	9.15	8.66
Route 4	8.6	9.35	10.13	9.94
Route 5	0	8.34	10.22	9.44
Route 6	7.75	10.07	12.21	12.02
ADA	8.78	7.96	2.42	2.05

Table 2-4: HARFORD TRANSIT AVERAGE MILES PER ONE-WAY TRIP (2004-2006)

	Average Miles Per One-Way Trip			
	2004	2005	2006	2007
Route 1	1.79	1.84	1.68	0.93
Route 2	2.4	2.32	1.83	1.92
Route 3	1.06	1.45	1.38	1.44
Route 4	1.39	1.6	1.56	1.58
Route 5	0	2.24	1.87	2.02
Route 6	2.7	2.32	1.99	1.99
ADA	1.43	1.58	1.24	14.11

Table 2-5: HARFORD TRANSIT COST PER ONE-WAY TRIP (2004-2006)

	Cost Per One-Way Trip		
	2004	2005	2006
Route 1	$2.10	$2.01	$4.45
Route 2	$3.66	$3.36	$5.61
Route 3	$2.07	$4.68	$5.53
Route 4	$2.41	$4.60	$5.39
Route 5	$0.00	$5.14	$5.43
Route 6	$3.10	$4.51	$4.93
ADA	$22.31	$35.92	$548.05

Route 1 generated the most trips per hour, while the ADA route had the least number of trips per hour as one would expect of paratransit services. Fixed Routes 2 and 6 demonstrated the most miles per trip, with Route 3 having the least number of miles per trip. Since Routes 2 and 6 are longer distance routes, (Edgewood to Bel Air and Aberdeen to Edgewood) longer distances are understandable. Moreover Route 3, the Bel Air circular, does not cover many miles. The ADA route however showed the most miles per trip specifically during the year 2007.

The last two performance measures include cost per trip and cost per vehicle hour. The ADA service ranks the highest in these two measures. Higher costs results from the extended time and money needed to provide adequate ADA service. In comparison, Routes 1 and 2 show relatively low cost per trip and cost per vehicle hour ratios.

Assessment of Locally Operated Transit Systems (LOTS) Performance Standards

Performance standards were established 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 will be utilized in determining whether new services requested by the systems should be funded based on their potential for being successful.

Table 2-6 shows the standards that apply to small urban fixed-route service. In this table, Harford Transit fixed routes have been averaged to determine their performance from 2004-2006. Routes 1-6 meet two of the seven standards at the "successful" level, two at the "acceptable" level, and three at the "needs review" level. On an individual basis, the key indicator is productivity – one-way trips per vehicle hour – driving measures such as cost per trip and trips per mile. All fixed routes meet either the successful or acceptable performance and for the most part their productivity has been stable or slightly improving.

Table 2-6: LOTS URBAN FIXED-ROUTE STANDARDS

	LOTS Small Urban			
Fixed-Route Service	**Successful**	**Acceptable**	**Needs Review**	**Harford Transit Performance**
Operating Cost per Hour	< $45	$45-$50	> $50	$41.36
Operating Cost per Mile	< $2.50	$2.50-$3.50	> $3.50	$2.18
Operating Cost per Passenger Trip	< $4.00	$4.00-$6.00	> $6.00	$4.24
Local Operating Revenue Ratio	> 50%	40% -50%	< 40%	Needs info
Farebox Recovery Ratio	> 25%	20-25%	< 20%	15%
Passenger Trips per Mile	> 0.75	0.65-0.75	< 0.65	0.51
Passenger Trips per Hour	> 12	8-12	< 8	9.88

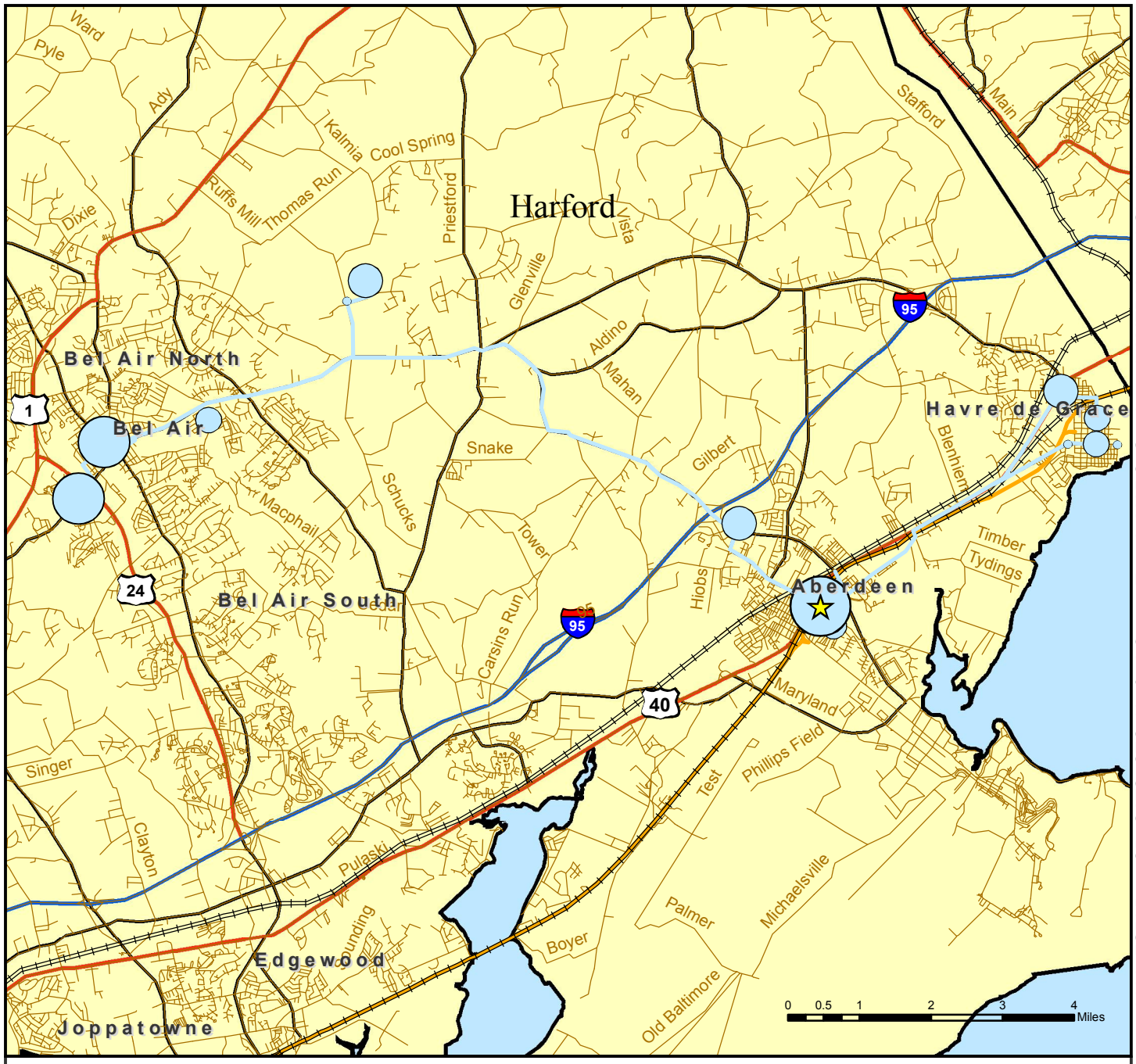
Operating cost per hour and operating cost per mile are successful standards in the Harford Transit system. Therefore, the system is working economically in that the cost per hour and mile is within the favorable standard. The operating cost per passenger trip and passenger trips per mile are at an acceptable level for this standard.

The farebox recovery rate is low and one of the few indicators that does not meet at least acceptable standards. Not enough information was gathered yet to determine the local contribution.

Analysis of Ridership Travel Patterns

The following segment of this report will review data collected over a three-day period (2/1/06, 2/3/06, and 2/6/06) by Glen Hoge of the MTA. The data shows average daily boarding and alighting for Routes 1-6 taken over a three-day period. Figures 2-2 and 2-3 contain dots of varying size indicating number of passengers to board or alight. Larger dots signify more activity, while smaller dots indicate less activity.

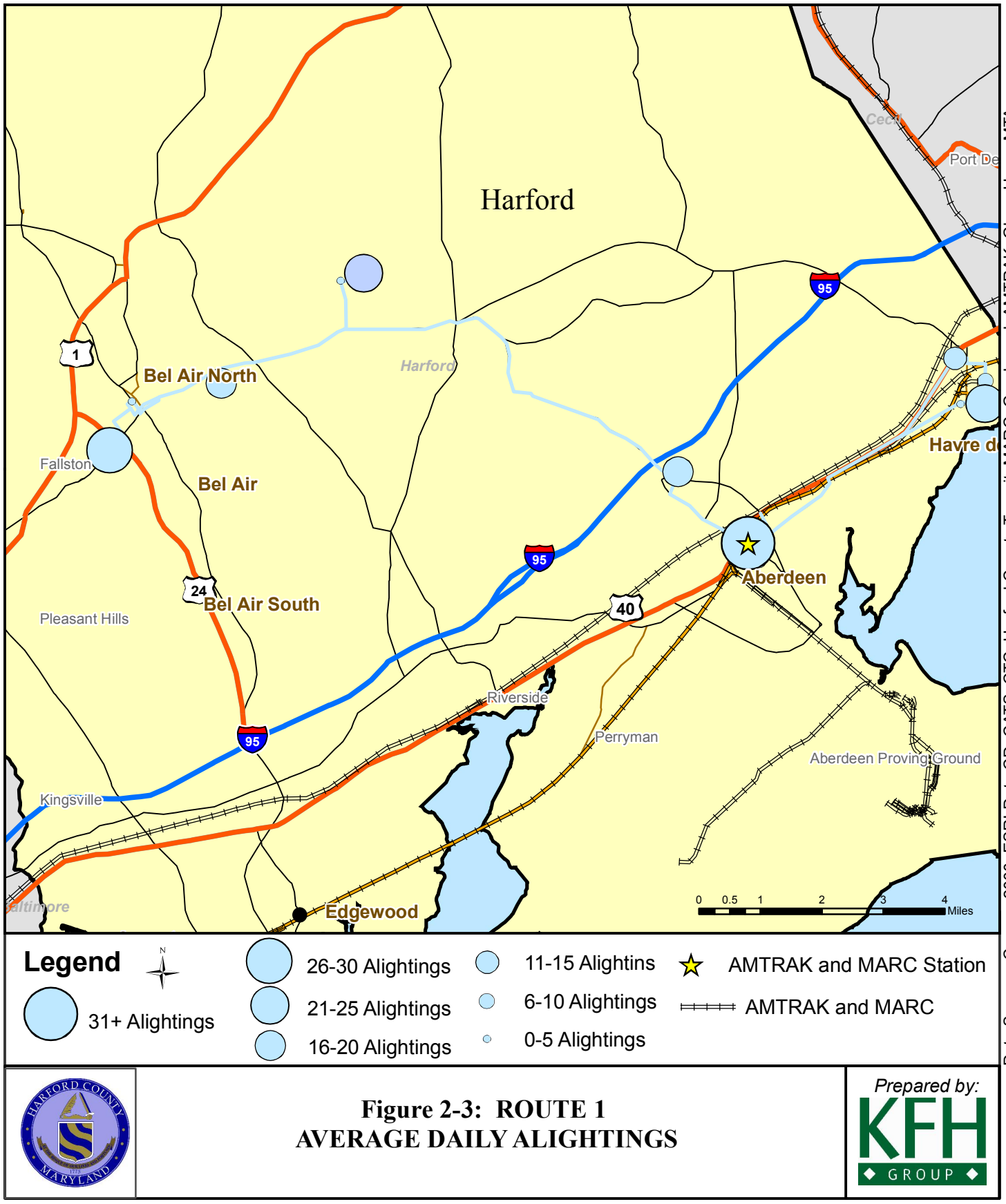
This visual representation of activity at stops permits further review of the effectiveness of each stop. For the most part, shopping destinations are the most active type of stop for all six routes. Employment centers and schools showed less activity than desired. Improvements at these stops could be accomplished by extending the service to cater to commuters and an 8:00 a.m. – 5:00 p.m. work day.



Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Figure 2-2: ROUTE 1
AVERAGE DAILY BOARDINGS

Produced By: KFH GROUP



Data Source: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, Glenn Hoge, MTA

Figure 2-3: ROUTE 1
AVERAGE DAILY ALIGHTINGS

Prepared by: KFH GROUP

Route 1 (Table 2-7) shows considerable activity at the Aberdeen station, the Harford Memorial Hospital, and the Harford Mall. Harford Community College has two stops, one of which has notable activity (Fallston Hall), while the other does not (Joppa Hall). This may be due to the order of stops (i.e. if Fallston Hall is first, many students may alight there). Stops at Owen Realty, Graw Senior Housing, and Joppa Hall do not attract as many riders as other stops on the route.

Table 2-7: ROUTE 1: AVERAGE DAILY BOARDINGS AND ALIGHTINGS

ROUTE 1: SCHEDULED STOPS	ON	OFF
Harford Memorial Hospital	15	22
Owen Realty	5	4
Graw Senior Housing	1	2
Fire Station # 2	13	9
McDonalds	18	6
Old Post Road	15	13
Train Station – Aberdeen	73	59
Aberdeen Plaza (Dollar General)	14	9
Klein's	19	16
Harford Community College (Joppa Hall)	4	5
Harford Community College (Fallston Hall)	18	20
Greenbrier Shopping Plaza (Safeway)	14	17
State Office Building	30	3
Harford Mall	26	29
Health Department	0	21
TOTAL	**265**	**233**

The majority of the activity along Route 2 occurs at the shopping and employment centers (Joppatowne Shopping Plaza, Edgewater Village, Wal-Mart, Klein's, the State Office Building, and Harford Mall). Other stops such as Rumsey Towers, the Route 24 Park and Ride, the Social Security Office, Box Hill Square, and the Upper Chesapeake Medical Center do not experience many boarding and alighting passengers (Table 2-8 and Figure 2-4 and 2-5).

Route 3, the Bel Air circular, has only one stop with significant activity, Harford Senior Housing. Harford Mall has nine passengers boarding and alighting, but all other stops have fewer than eight passengers getting on or off the bus. This may be due to the small size of Bel Air, or that many residents use a personal vehicle. Ultimately, more activity could be gained through careful examination of timing of the routes and the order of the stops. One problem may be that the service begins at or around 9:00 a.m. and ends before or just at 5:00 p.m. This limited schedule reduces accessibility to commuters in the area. (Table 2-9, Figures 2-6 and 2-7).

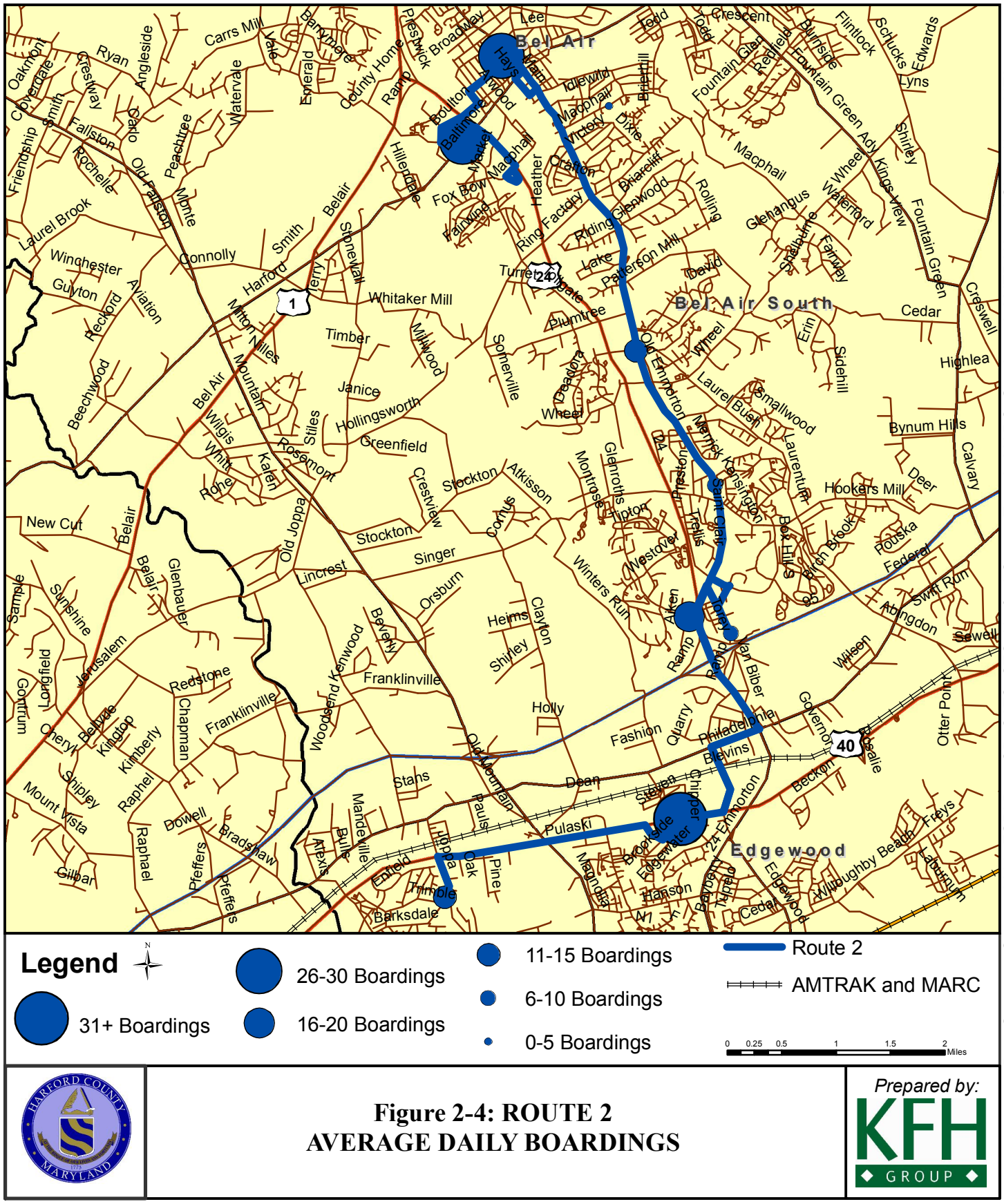
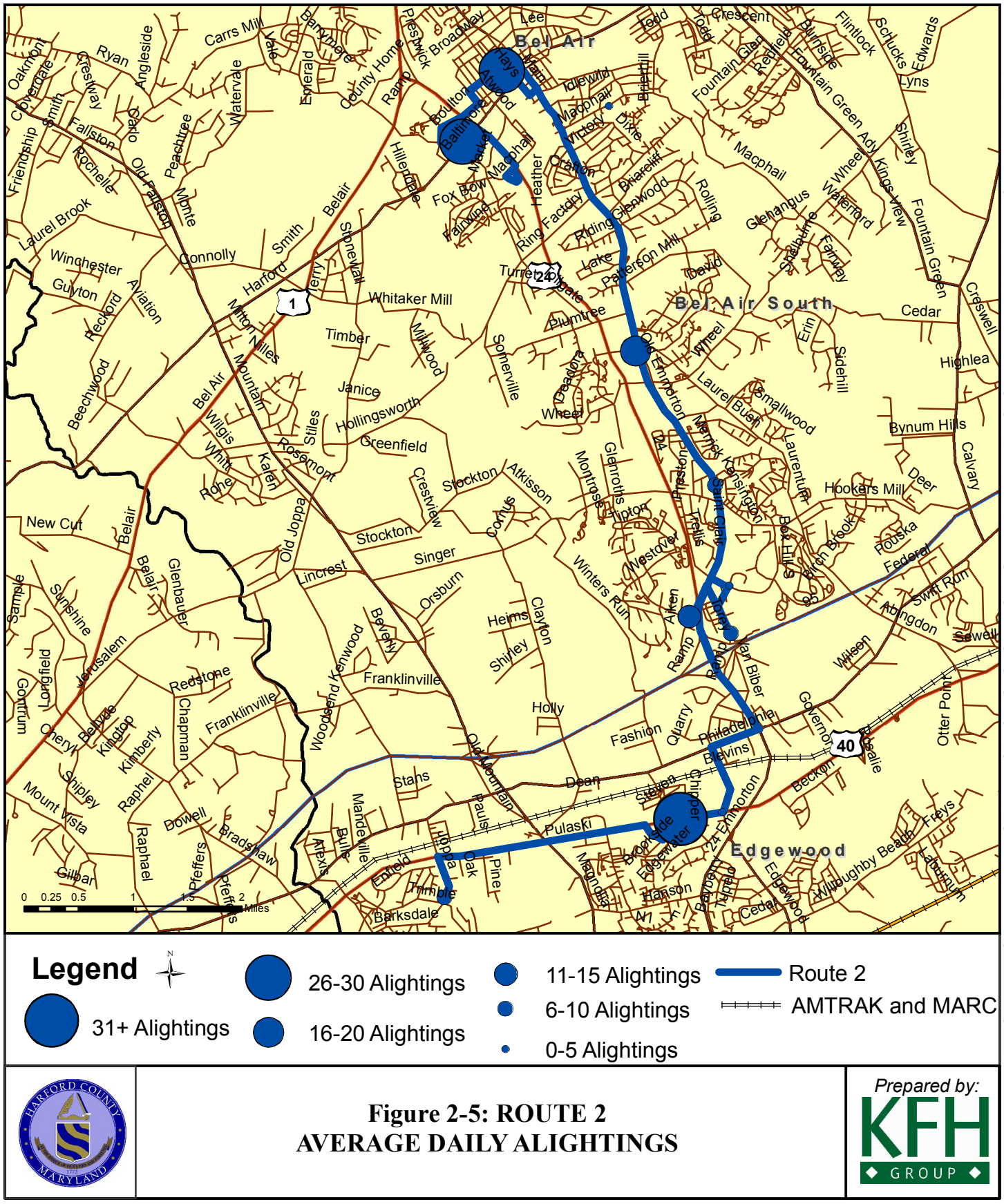


Figure 2-4: ROUTE 2
AVERAGE DAILY BOARDINGS

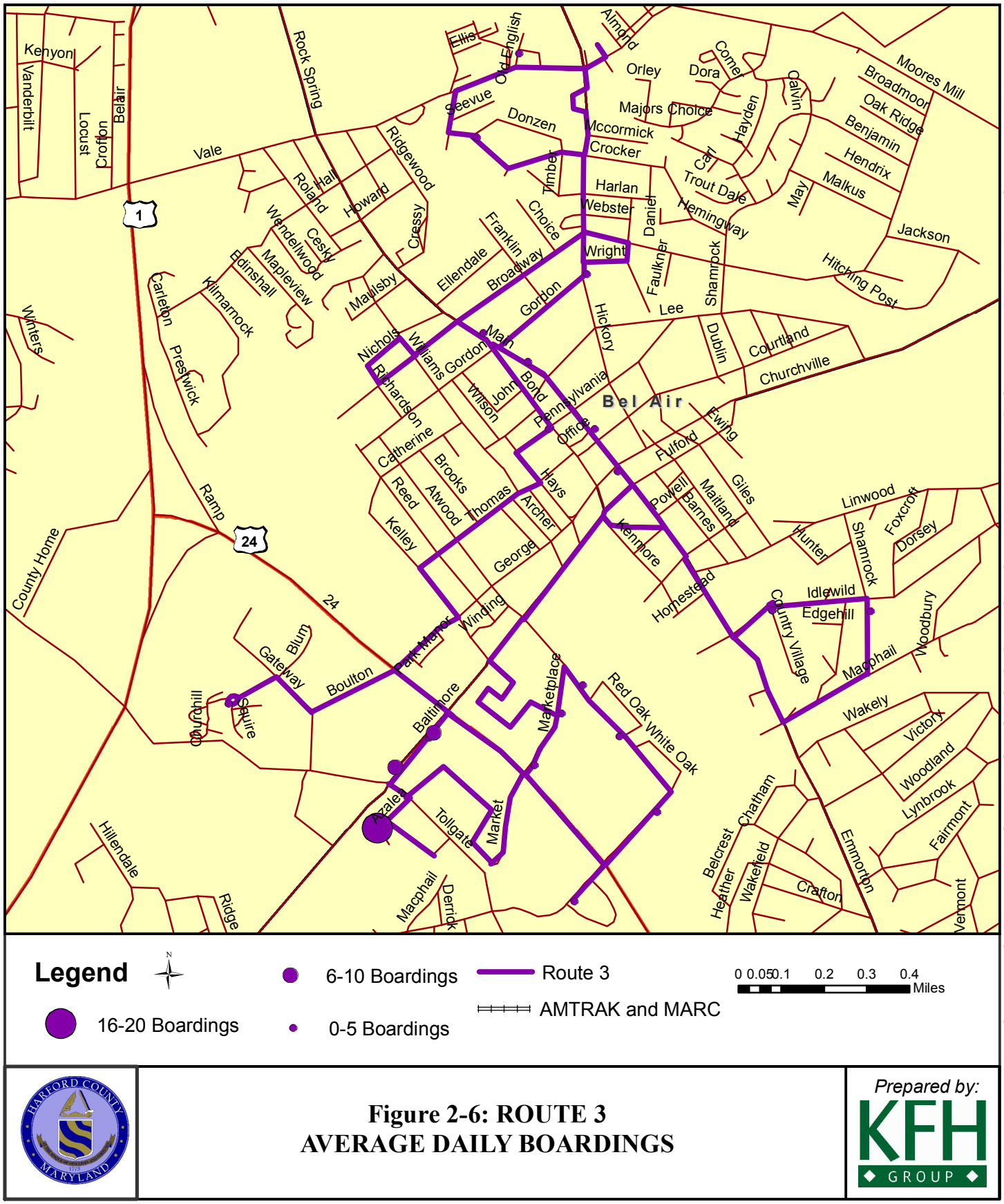
Prepared by: KFH GROUP



Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Figure 2-5: ROUTE 2
AVERAGE DAILY ALIGHTINGS

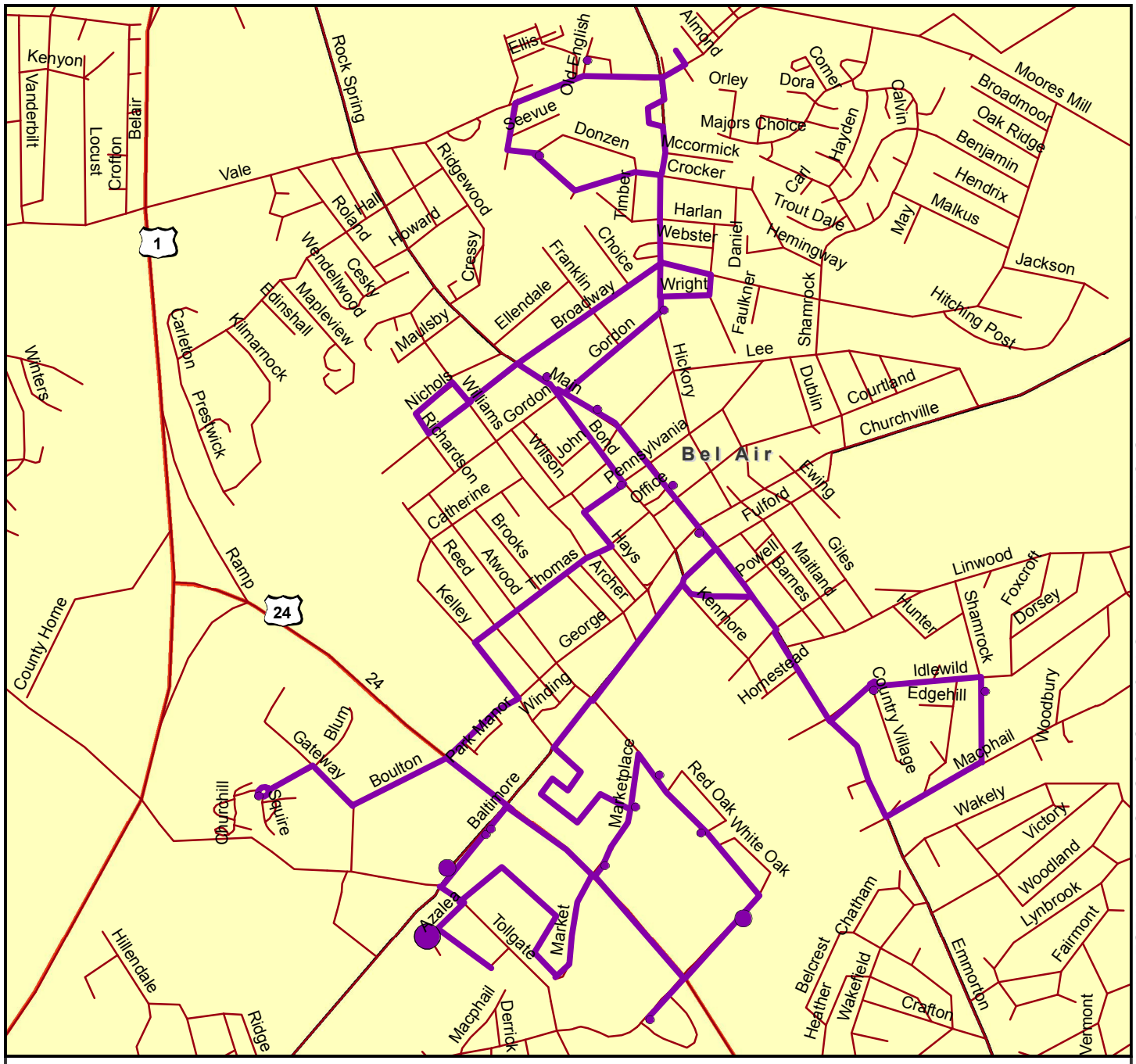
Prepared by: KFH GROUP



Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Figure 2-6: ROUTE 3
AVERAGE DAILY BOARDINGS

Prepared by: KFH GROUP



Legend

- 12-15 Alightings
- 6-11 Alightings
- 0-5 Alightings
- Route 3
- AMTRAK and MARC

N

0 0.05 0.1 0.2 0.3 0.4 Miles

Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Figure 2-7: ROUTE 3
AVERAGE DAILY BOARDINGS

Prepared by: KFH GROUP

Table 2-8: ROUTE 2: AVERAGE DAILY BOARDINGS AND ALIGHTINGS

ROUTE 2: SCHEDULED STOPS	ON	OFF
Joppatowne Shopping Plaza	13	9
Rumsey Towers	1	0
Edgewater Village (Frank's Pizza)	56	47
Route 24 Park & Ride	5	5
Wal-Mart (Abingdon)	19	14
Woodsdale Senior Housing	9	6
Social Security Office	2	2
Box Hill Square	6	6
Festival at Bel Air (Klein's)	13	18
State Office Building	30	2
Upper Chesapeake Medical Center	3	4
Harford Mall	29	28
Health Department (time from Klein's)	1	28
TOTAL	**187**	**169**

Table 2-9: ROUTE 3: AVERAGE DAILY BOARDINGS AND ALIGHTINGS

ROUTE 3: SCHEDULED STOPS	ON	OFF
Country Village	0	0
County Office	0	0
County Courthouse	2	3
Historical Society	1	2
Harford County Office on Aging	2	1
Harford Village South	4	3
Hickory Hills	4	2
Klein's	6	5
State Office Building	3	4
English Country Manor	3	3
Harford Mall	9	9
Harford Senior Housing	16	12
Giant Food	3	5
Circuit City	2	2
Upper Chesapeake Medical Center	2	2
Park View Senior Housing	3	4
Atwood Professional Building	2	2
Bel Air Senior & Youth Center	4	7
Target	2	3
Super Fresh	6	4
Country Village	3	4
Shamrock Rd. & MacPhail Rd.	0	0
TOTAL	**78**	**76**

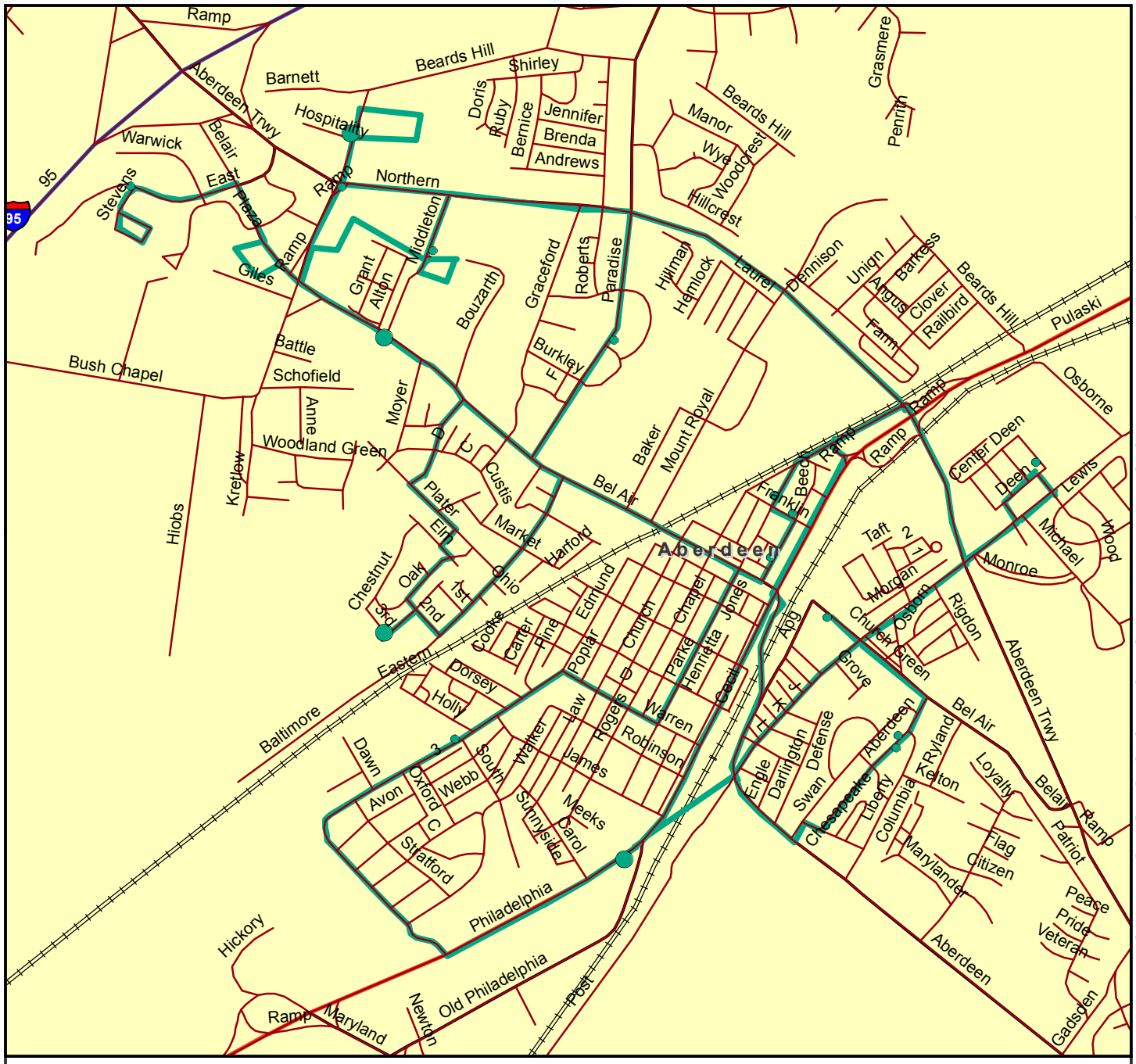
Route 4, the Aberdeen circular, also has only one stop with notable boarding and alighting of passengers (Wage Connection/Klein's). All other stops show little to no activity. As with Route 3, review of the order of stops and hours of service may improve ridership. For example, the Harford Transit route timetable for Lisby Elementary shows that buses stop from 9:11 a.m. to 2:41 p.m. This schedule permits neither students, nor faculty, or staff to take the bus to school. Amending the route schedule to provide service from 8:00 a.m. to 5:00 p.m. would increase ridership. (Table 2-10, Figures 2-8 and 2-9).

Table 2-10: ROUTE 4: AVERAGE DAILY BOARDINGS AND ALIGHTINGS

ROUTE 4: SCHEDULED STOPS	ON	OFF
Aberdeen Train Station	5	4
Wal-Mart	7	6
George D. Lisby Elementary School	0	0
Parke Terrace Apartments	0	0
Burton Manor	9	5
Fairbrooke Apartments	6	3
Cranberry Run Apartments	1	2
Aberdeen Shopping Plaza	2	1
Wage Connection / Klein's	10	10
Catholic Charities Senior Housing	1	1
Mars Market	3	4
Target	1	0
Aberdeen High School	0	0
Cecil Federal Bank Columbian Bank	0	2
Aberdeen Senior Center	5	0
Infinity Apartments	1	3
North Deen Housing	0	0
Baldwin Manor	2	1
Aberdeen Boys & Girls Club	1	0
Swan Meadows Housing	1	1
TOTAL	**56**	**42**

Route 5, the Edgewood circular, has more riders than Routes 3 and 4 (the Aberdeen and Bel Air circulars). This success may be due to high activity at key stops. Key stops for this route include Windsor Valley, Edgewood Shopping Plaza, and Edgewood Village.

In comparison, however, the neighborhood stops on this route show very little activity. This may be a result of data taken in February, 2007. It is possible that these stops see more activity during the summer months when children are out of school. (Table 2-11, Figures 2-10 and 2-11).



Legend

- 0-5 Boardings
- 6-10 Boardings
- Route 4
- AMTRAK and MARC

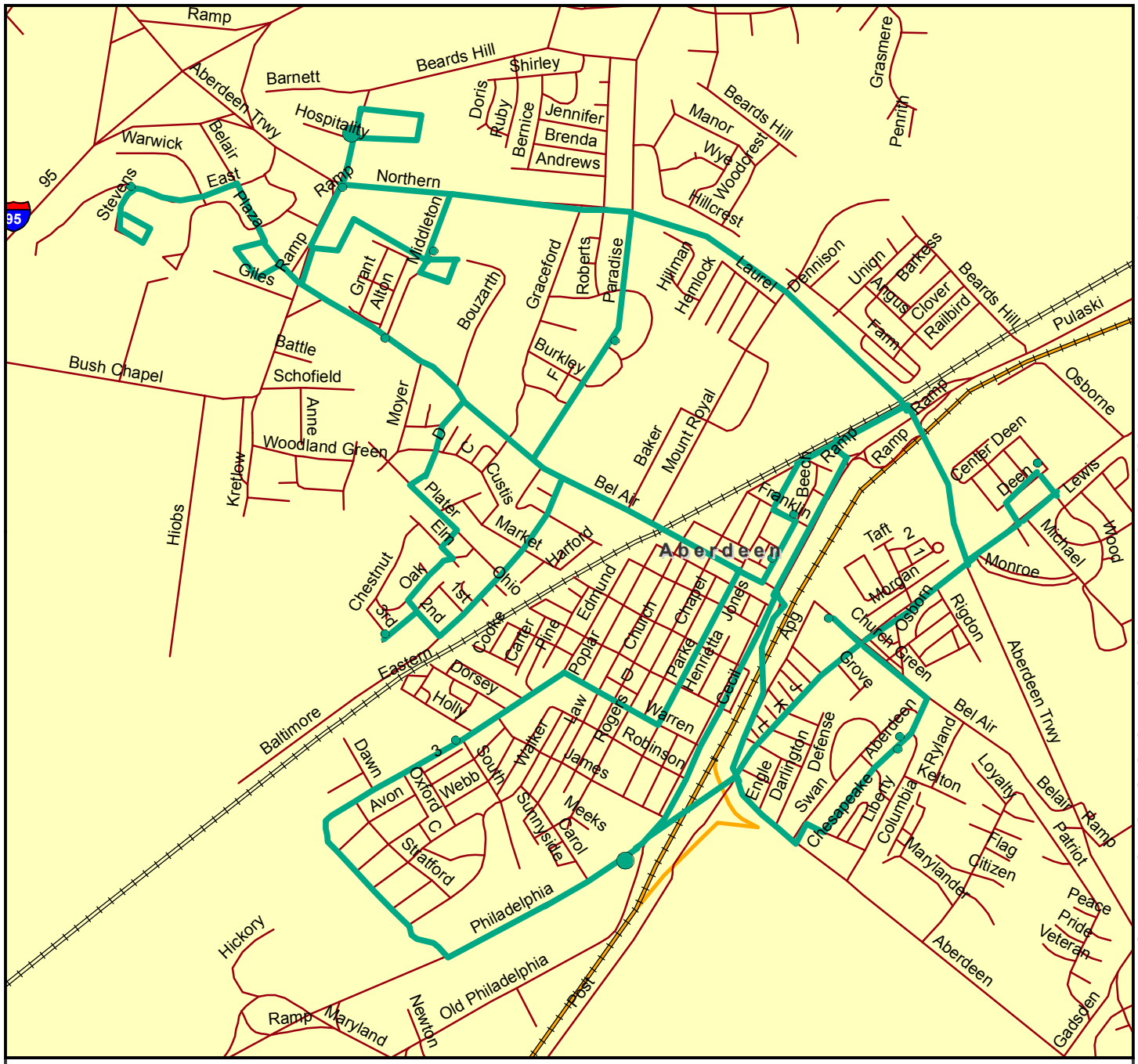
N

0 0.05 0.1 0.2 0.3 0.4 Miles

Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Figure 2-8: ROUTE 4
AVERAGE DAILY BOARDINGS

Prepared by: KFH GROUP



Legend

- 0-5 Alightings
- 6-10 Alightings
- AMTRAK and MARC
- Route 4

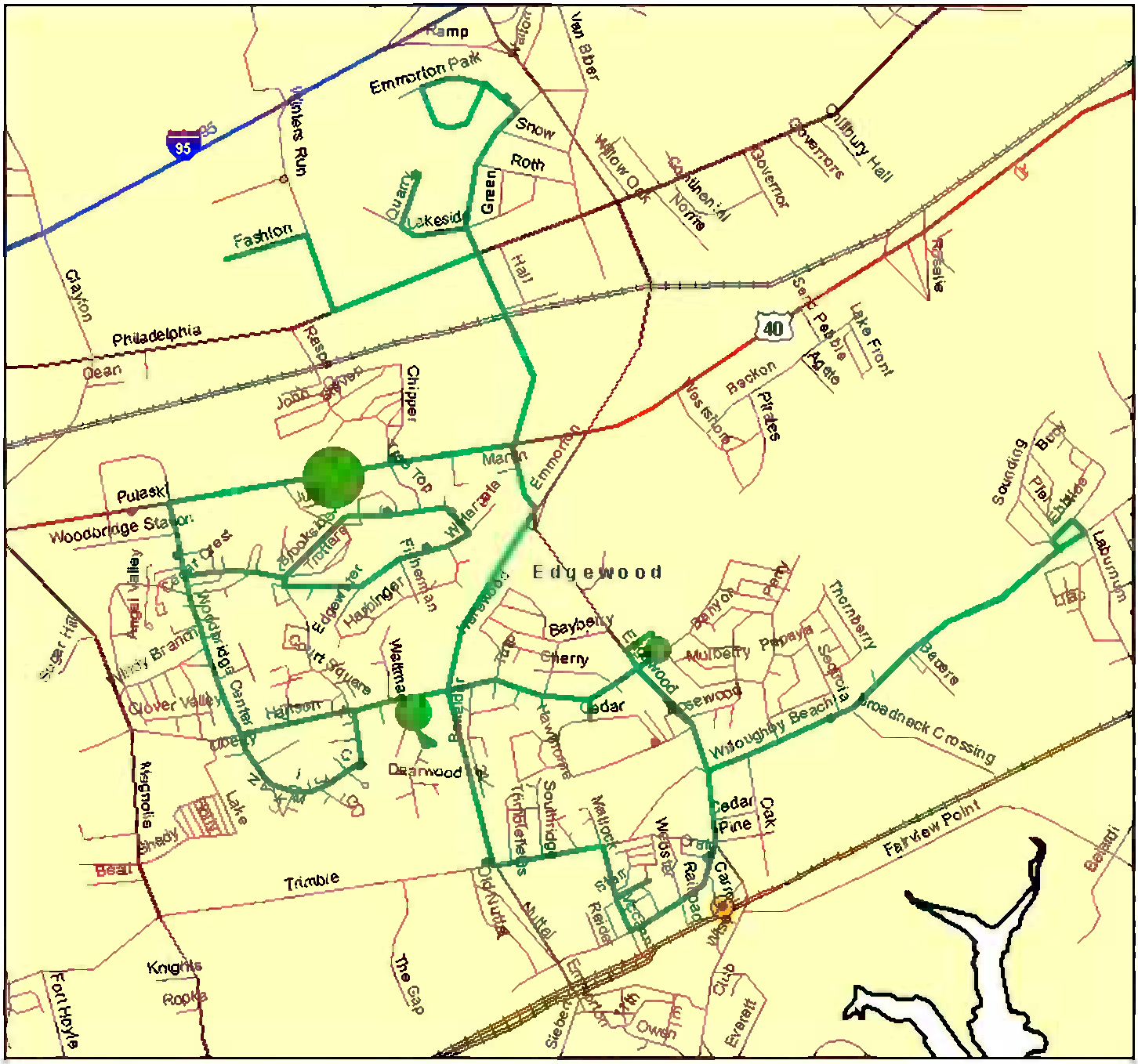
N

0 0.05 0.1 0.2 0.3 0.4 Miles

Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

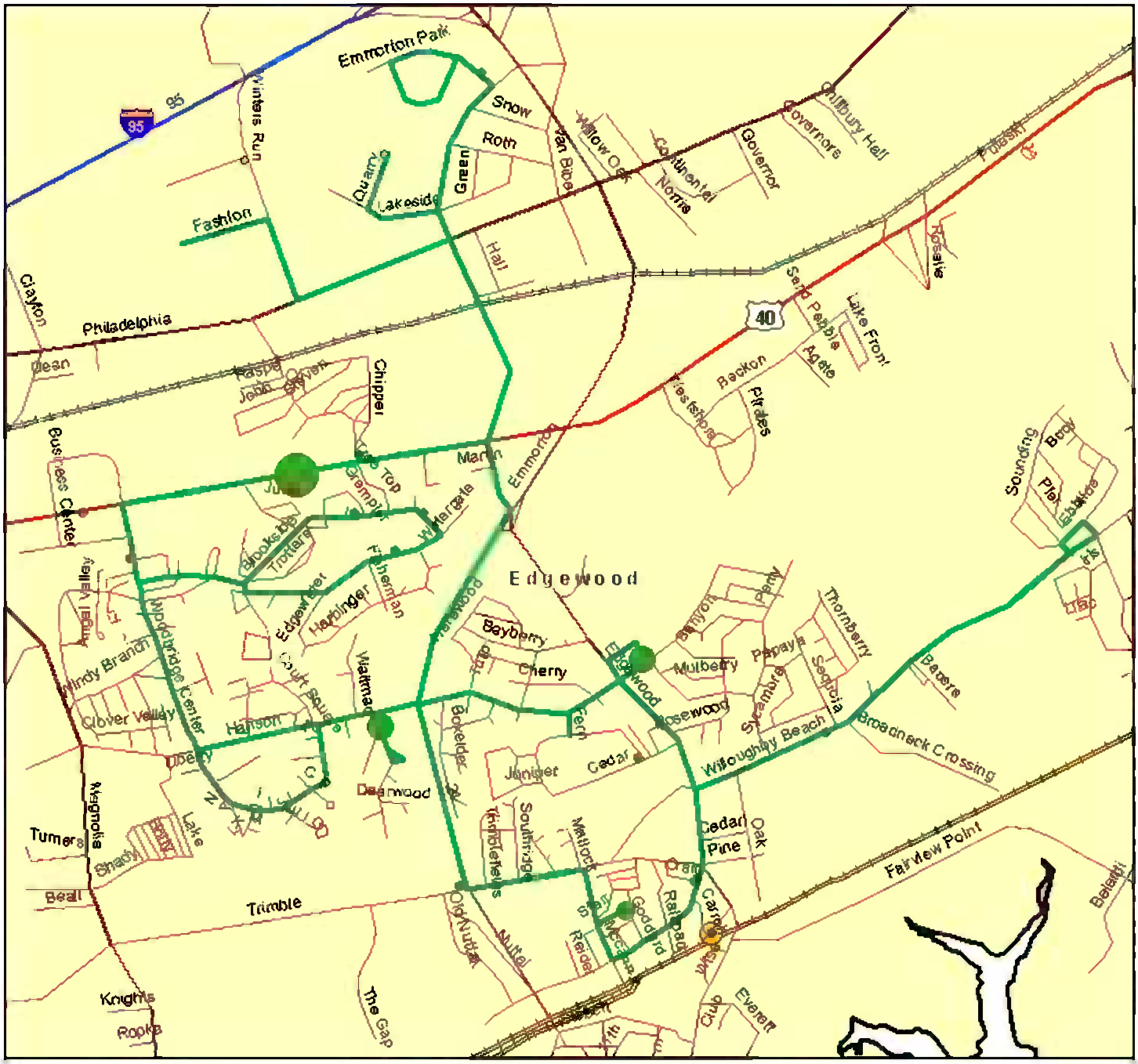
Figure 2-9: ROUTE 4
AVERAGE DAILY ALIGHTINGS

Prepared by: KFH GROUP



Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Prepared by:
KFH



Legend

- 21-25 Alightings
- 11-15 Alightings
- 6-10 Alightings
- 0-5 Alightings
- Route 5
- MARC Rail Stops
- AMTRAK and MARC

0 0.1 0.2 0.4 0.6 0.8 Miles

Data Sources: Census 2000, ESRI Data CD, CATS, CTC, Harford County Transit, MARC, Greyhound, AMTRAK, and Glenn Hoge, MTA

Prepared by: KFH GROUP

Table 2-11: ROUTE 5: AVERAGE DAILY BOARDINGS AND ALIGHTINGS

ROUTE 5: SCHEDULED STOPS	ON	OFF
Harford Square Swim Club	1	3
Windsor Valley	20	13
Edgewood Boys & Girls Club	1	0
Edgewood Shopping Plaza	9	12
Laburnum & Willoughby Beach Rd.	7	9
Broadneck Crossing	2	0
Nuttle Ave. & Craig La.	4	3
Harford Commons	11	6
Master Halco & The Gap	0	1
Tree Top Dr. & Brookside Dr.	1	3
Edgewater Dr. & Fisherman La.	2	2
Top View Dr. & Horseshoe La.	0	0
Brookside Dr. & Gateway Dr.	0	0
Edgewater Village (Frank's Pizza)	41	25
Route 24 Park & Ride	0	0
Emmorton Business Park	1	1
Lakeside Business Park	0	2
Winters Run Industrial Park	1	4
Bus Shelter (U.S. 40 & Paul Martin Dr.)	1	0
Woodbridge Shopping Center	3	5
Woodbridge Center Way & Swallowcrest	1	3
Woodbridge Center Way & Rainbow Way	0	0
TOTAL	**105**	**95**

Route 6 is the second most used route, after Route 1. The stops at Edgewater Village, Windsor Valley, Klein's, and the train station experience significant boarding and alighting.

This route also shows employment centers such as Winters Run Industrial Park and Lakeside Business Park to have very few riders. This can be attributed to limited stops throughout the day. The existing timetable does not allow for employees leaving work after five to use the service. In comparison, Riverside Business Park provides service to several more riders because it has 13 buses arrive during the day, with the last bus leaving at 5:52.

In conclusion, the boarding/alighting data shows that stops located at shopping destinations are most likely to generate more riders. Also, stops at employment centers and schools should provide service before 8:00 a.m. and after 5:00 p.m. to increase ridership from commuters. Finally, the field study may have been influenced by the time of the year and corresponding weather conditions. (Table 2-12, Figures 2-12 and 2-13).

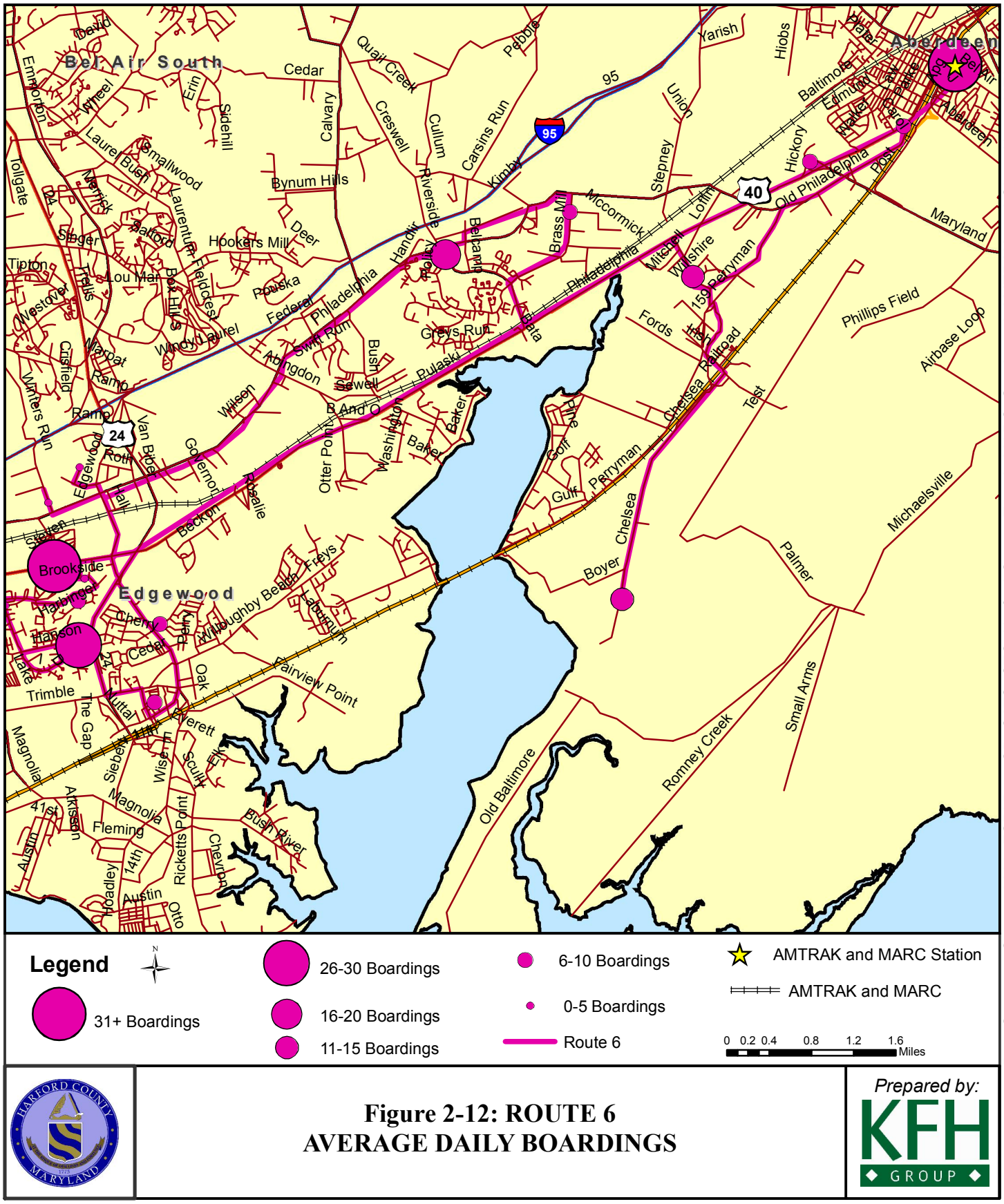


Figure 2-12: ROUTE 6
AVERAGE DAILY BOARDINGS

Prepared by: KFH GROUP

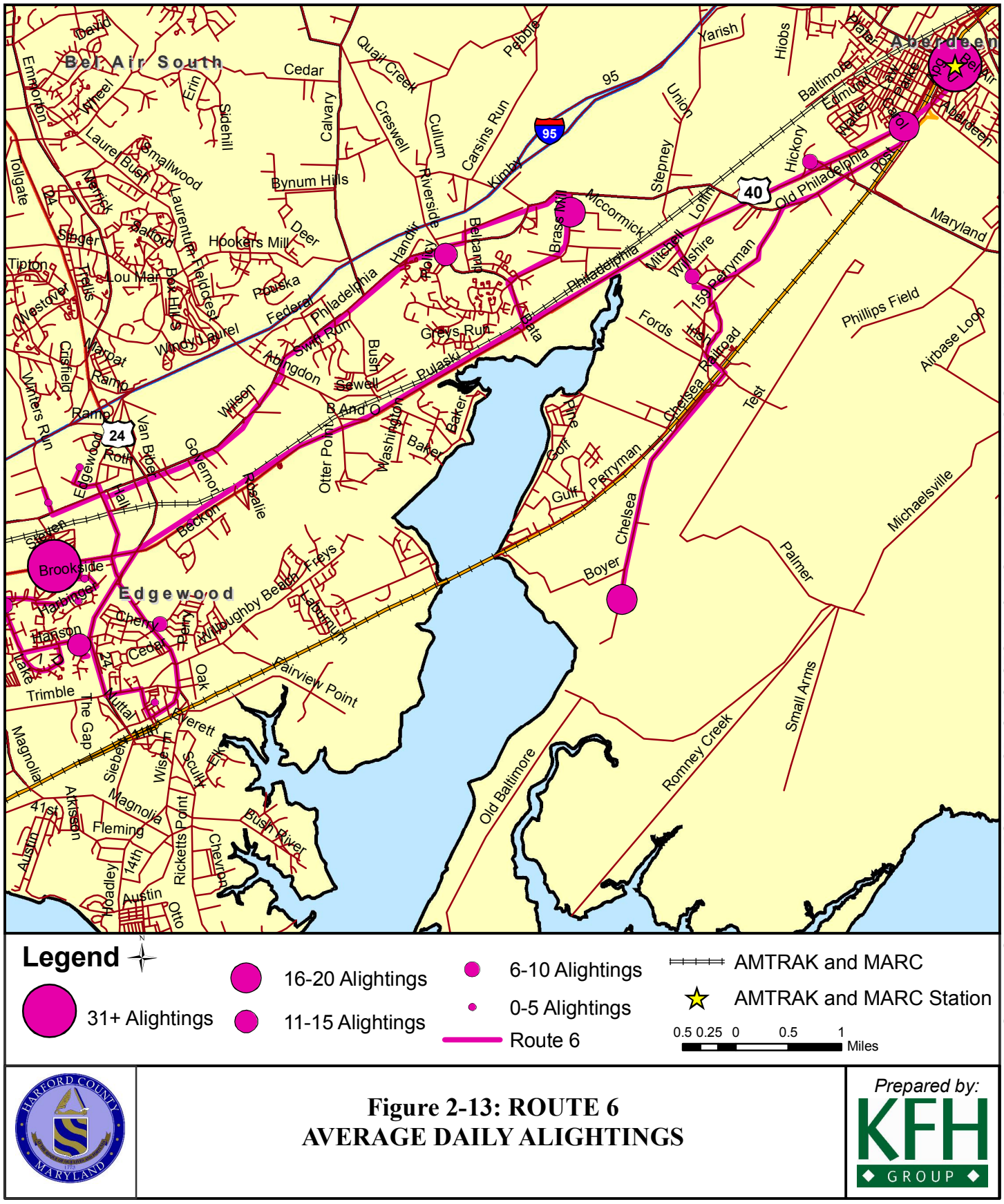


Figure 2-13: ROUTE 6
AVERAGE DAILY ALIGHTINGS

Table 2-12: ROUTE 6: AVERAGE DAILY BOARDINGS AND ALIGHTINGS

ROUTE 6: SCHEDULED STOPS	ON	OFF
Edgewater Village (Frank's Pizza)	27	28
Tree Top & Brookside Dr.	0	4
Edgewater Dr. & Fisherman La.	6	5
Winters Run Industrial Park	0	2
Lakeside Business Park	0	0
Brookside & Top View Dr.	2	2
Woodbridge Center Way & Swallowcrest Dr.	4	6
Windsor Valley (Meadowood Dr.)	29	14
Harford Commons (McCann & Trimble Rd.)	9	4
Edgewood Shopping Plaza (Hanson & 755)	9	8
Home Depot[1]	0	1
Klein's (Riverside Shopping Center)	18	15
Riverside Business Park (Brass Mill Rd.)	9	17
Teake La. & Perrywood Dr.	15	10
Rite Aid Distribution Center	14	16
Sak's/Frito-Lay (U.S. 40 & Hickory Dr.)	9	8
Wal-Mart (U.S. 40, Aberdeen)	10	17
Aberdeen Train Station	59	48
TOTAL	**220**	**205**

ASSESSMENT OF EXISTING SERVICES

Service area coverage, as can be seen in Chapter 1, appears to be where densities are for the most part. The areas covered make sense from a transit perspective and demonstrate that there are appropriate densities throughout much of the service area.

Performance Measures

The overall ridership figures by route, and taken as a whole, show that the service is operating in the satisfactory range for the most part. Further comparisons over time show slow, albeit steady growth. This continued increase in ridership and productivity indicated a high need for service in light of the service related problems identified below

On-time Performance

As noted by staff and Mr. Hoge and acknowledged by management, the on-time performance is poor in that the buses lose time each run and by the end of the day are far off

[1] According to the Harford Transit Timetable for route 6, the bus does not stop at the Home Depot.

schedule. This indicates that the routes and/or their schedules need significant changes because a transit system cannot effectively operate service if the service is unreliable.

Route Structure

The routes are confusing and difficult to comprehend. This is compounded by the flex nature causing regular (daily) changes for drivers and customers. The overall connectivity of the routes suffers as well with few timed meets as on-time performance is so poor. This type of structure and lack of connectivity will inhibit ridership.

Customer Information

Customer information is poor. The route maps are difficult to understand as are the schedules – due in great part to the meandering nature of the routes as described above. Further, there is no map showing all of the routes and the ability to connect to other routes.

CONCLUSIONS

Based on the analysis and the consultants familiarity with the services, there are a number of changes that can be made to increase ridership and improve service. These changes fall into the following categories:

- **Connectivity Between Routes** – The routes at times connect to each other and at other times do not, timed meets are rare. Where feasible buses should have a timed meet and be interlined (going as one route into a transfer station and leaving as another route). Because of the variety of focal points for transit (most of the U.S. 40 and Highway 24 corridors and the Bel Air area) it is important to ensure excellent connectivity between these routes to give customers the greatest options.

- **Circuitous Routing** – The services in Bel Air, Edgewood, Joppatowne, and Aberdeen operate on a very circuitous path of travel. These routes are very difficult to follow and understand. The meandering nature of these routes discourages potential customers and limits the route's productivity. In some cases the routes should be revised and in other cases, there may be opportunities for dial-a-ride type service.

- **Flex Route Service** – There is some flex route service available which tends to slow service down and again make it more circuitous. There are ways to reduce the number of "flexes" through fare policy and other approaches, while still meeting the ADA. On the other hand, flex route operated in place of fixed-route and ADA paratransit gives poorer service to both those that can use fixed-route and those that need a curb-to-curb service.

- **Improving On Time Performance** – As documented, on-time performance is poor, resulting in a significant loss of potential ridership. If the Committee chooses a status quo option, at the very least routes and schedules will need to be modified to ensure an on time performance of 90 percent or better.

- **Marketing Service and Riders Guide** – A very important consideration will be the development of coherent route and schedule guide(s) to allow for ease of use. We will also recommend a professionally produced web page with all route and scheduling information available – ultimately in an automated trip planner system.

HUMAN SERVICE AGENCIES

1. Harford Transit

Michael Hannon
1311 Abingdon Road
Abingdon, Maryland 21009
T: (410) 612-1620 F: (410) 612-1745

Harford Transit provides public transportation throughout Harford County and to Baltimore County and the City of Baltimore. Harford Transit serves 260,000 unduplicated clients Monday through Friday, 5:30 a.m. to 6:30 p.m. Harford Transit provides client transportation to: ARC, ALLIANCE, Davitas Kidney Centers, and Harford County Senior Centers. Harford Transit also provides demand-responsive, subscription, deviated fixed-route, fixed-route, and traditional bus service. Clients contact an agency dispatcher to schedule trips. This call should be made at least 24 hours in advance of the trip. The agency communicates with drivers on the road via cellular phones. There are approximately 16 full-time drivers and 16 part-time drivers. These drivers are formally trained on agency familiarization, bus equipment familiarization, wheel chair lift procedures and operation, customer service, fixed-route, and demand-response training.

Approximately ten percent of the clients served by Harford Transit have special needs. These clients may use a cane, walker, wheelchair, or escort. Vehicles owned/leased by Harford County are maintained in an in-house garage by a maintenance contractor and by a private garage/dealership when they are under warranty. Harford Transit uses 16+ small buses and seven medium buses.

The agency provided 281,925 one-way passenger trips, drove 737,252 total vehicle miles and operated 38,128 revenue service hours last fiscal year. These trips cost the general public $1.00 and seniors/disabled riders $0.50.

Harford Transit does not transport clients from any other agencies, but it does purchase client transportation from United Cab/L&L Taxi. This service is used to transport riders when there is overflow from buses or when bus trips cannot be completed. The rider pays $2.00 for the taxi service, while Harford Transit pays an additional $1.40 per mile. This service cost Harfard Transit $60-75,000 last fiscal year.

2. Harford County Department of Social Services (DSS)

Rick Walker
2 South Bond Street
Bel Air, Maryland 21014
T: (410) 836-4730 F: (410) 836-4581

Harford County DSS provides job placement, Medicaid, welfare/food stamps, child welfare services, adult services, and child support services. Harford County DSS offers many different federal and state programs to its clients within the Cities of Bel Air and Aberdeen. Each program has different eligibility requirements, and many households participate in multiple programs. The eligibility requirements vary greatly. DSS clients arrive at the program sites by driving themselves, riding with family/friends, agency vehicles, taxi, and public transportation. It is unknown how many clients are unduplicated or are unable to drive a car.

3. Medical Assistance (M.A.) Transportation of Harford County

Sabrina Ramirez or Chuck Tillman
119 S. Hays St.
Bel Air, Maryland 21014
T: (410) 638-1671 F: **(**443) 643-0344

M.A. Transportation of Harford provides transportation services to clients that have active Federal or State Medical Assistance, with no other means of transportation. These clients must be going to a local doctor's appointment, which is being paid for by their M.A. Clients must call to schedule their ride no later than 2:00 p.m. the previous working day, must travel to and from their appointment alone, and must be a Harford County resident.

M.A. Transportation is open Monday through Friday 8:30 a.m. to 2:00 p.m.; their transportation services run from 8:00 a.m. to 5:00 p.m. Monday through Friday. Transportation on Saturday or Sunday is provided for chemo or dialysis patients only. M.A. Transportation does not have centralized services. All transportation services are demand-response and arranged by phone by an agency scheduler. The agency contracts transportation services with three companies: Montville Taxi, an ambulatory transport service; Pickton Transport, a wheelchair van transport service, and Hart to Hart Ambulance service. The agency does not charge its clients, due to Medicaid funding. There is a per mile rate paid for the cab service, and per trip rate paid for the wheelchair and ambulance runs. The van and ambulance trips have a mileage charge for one-way mileage over 20 miles.

As a State agency with the Department of Health and Mental Hygiene, benefits for all staff are offered through the State of Maryland.

4. Key Point Health Services

Dr. Karl Weber, Ph.D.
135 N Parke St
Aberdeen, Maryland 21001
T: (443) 625-1600 F: (443) 625-1595

Key Point Health Services is a private non-profit that provides Adult Day Care, Counseling, Education/Training, Mental Health, and Rehabilitative services. All patients in the outpatient mental health center are eligible for services with no other requirements. Patients in the psychiatric rehabilitation program must be diagnosed with a serious and persistent mental health disorder such as schizophrenia, bi-polar disorder, and major depression to qualify for services. Key Point Health serves around 800 clients in Harford County.

Clients arrive by driving themselves, riding with family/friends, use of agency vehicles, taxi services, or public transportation. Approximately 200 clients are unable to drive or do not have a car and are dependent on some sort of transportation. Twenty of these have special needs, mainly the use of a cane or walker.

Key Point provides demand-responsive services, subscription service, and a special service that provides group trips for special events. Clients use a Key Point dispatcher and taxi service dispatchers to schedule trips. It is unknown how far in advance these trips must be scheduled. Key Point drivers communicate with the agency via mobile phone when on the road. Four part-time drivers and ten full-time staff persons with other primary duties are responsible for transporting clients. These drivers are trained annually at Key Point. Key Point's vehicles are maintained at Jones Junction, a private garage. (Table 2-13).

Table 2-13: VEHICLES OWNED/LEASED BY KEY POINT HEALTH SERVICES

Vehicle Type	Number of Vehicles
Sedan	2
Mini Van	6
Small Bus	1

Key Point provided around 400 one-way passenger trips last fiscal year (2006) and approximately 12,000-revenue/service miles last fiscal year. In addition, Key Point provided approximately 18,000 total vehicle miles and 1,600-revenue/service hours and 3,200 total vehicle hours last fiscal year.

Key Point does not charge a fare or request a contribution for transportation, nor does it transport clients for any other agencies or organizations or purchase client transportation from another organization.

Key Point's vehicles are privately covered at $3,000/vehicle. Their vehicle coverage is part of their total insurance. Drivers make $10.00 per hour starting and can make a top wage of $14.00 per hour, both without benefits. (Table 2-14)

Table 2-14: KEY POINT HEALTH OPERATING EXPENSES

Operating Expenses	Cost
Driver's salaries	$50,000
Driver's fringe	$10,000
Fuel and oil	$25,000
Maintenance and repairs	$15,000
Tires, parts, materials and supplies	$5,000
Vehicle and equipment leases and rentals	$25,000
Vehicle insurance	$15,000
OPERATING EXPENSES TOTAL	$145,000

The summed total of Administrative and Operating Expenses is $ 166,000. Key Point has listed no funding sources.

5. Caring Hands

Connie Fallon
41 N. Philadelphia Blvd., Aberdeen, Maryland 21001
T: (410) 575-7125 F: (410) 575-7125

Caring Hands, a private, non-profit organization, offers residential services (24/7) to 18-20 clients. Eligible clients are mentally retarded and over 21 years of age. Caring Hands services seven homes in the Harford County/White Mountain area. All clients are unable to drive. Clients are transported to medical appointments or shopping destinations by agency vehicles. The client's medical coordinator organizes these outings while the secretary schedules the trips. Driver's are contacted through beepers and receive formalized training. Their vehicles are maintained at a private garage/dealership. See Table 2-15 for the number and type of vehicles used at Caring Hands.

Table 2-15: VEHICLES OWNED/LEASED BY CARING HANDS

Vehicle Type	Number of Vehicles
Sedan	1
Mini Van	2
Small Bus	2

6. Abilities Network

Nicky Biggs
401 Market Street, Suite 100, Aberdeen, Maryland 21001
T: (410) 828-7700 F: (410) 272-3892

Abilities Network does not provide formal transportation service for their clients. If a client should require transportation services, a staff person in a personal vehicle provides the ride.

7. The Arc Northern Chesapeake Region

Gail Fricke
4513 Philadelphia Rd. Aberdeen, Maryland 21009
T: (410) 836-7177 F: (410) 893-3909

The only information that we were able to obtain from the Arc Northern Chesapeake Region is that they utilize 15 passenger vans and lift vans.

TAXI AND INTERCITY BUS SERVICE

There are 19 listed taxi services in the Harford County area. However, several of these are the same company with a different name. For example: Abe Van & Sedan Service, Bel Air Taxi and Countywide Transportation all reside at the same location and use the same dispatcher. See the map below for information on the locations of Harford County taxi providers. (Table 2-16, Figure 2-14).

Harford County does not benefit from intercity bus connections. Neither Greyhound, nor Trailways, nor small private transportation companies providing express, closed door service serve the Harford County area. The closest Greyhound station is in Baltimore, just outside of Harford County.

PARK AND RIDE SERVICE

Park and Ride services are available to Harford Transit, MTA, Amtrak, and MARC passengers. Figure 2-15 shows the location and names of the Park and Ride services in Harford County.

Produced by: KFH GROUP

Data Sources: Harford County Commuter Assistance

Figure 2-14: HARFORD COUNTY TAXI PROVIDERS

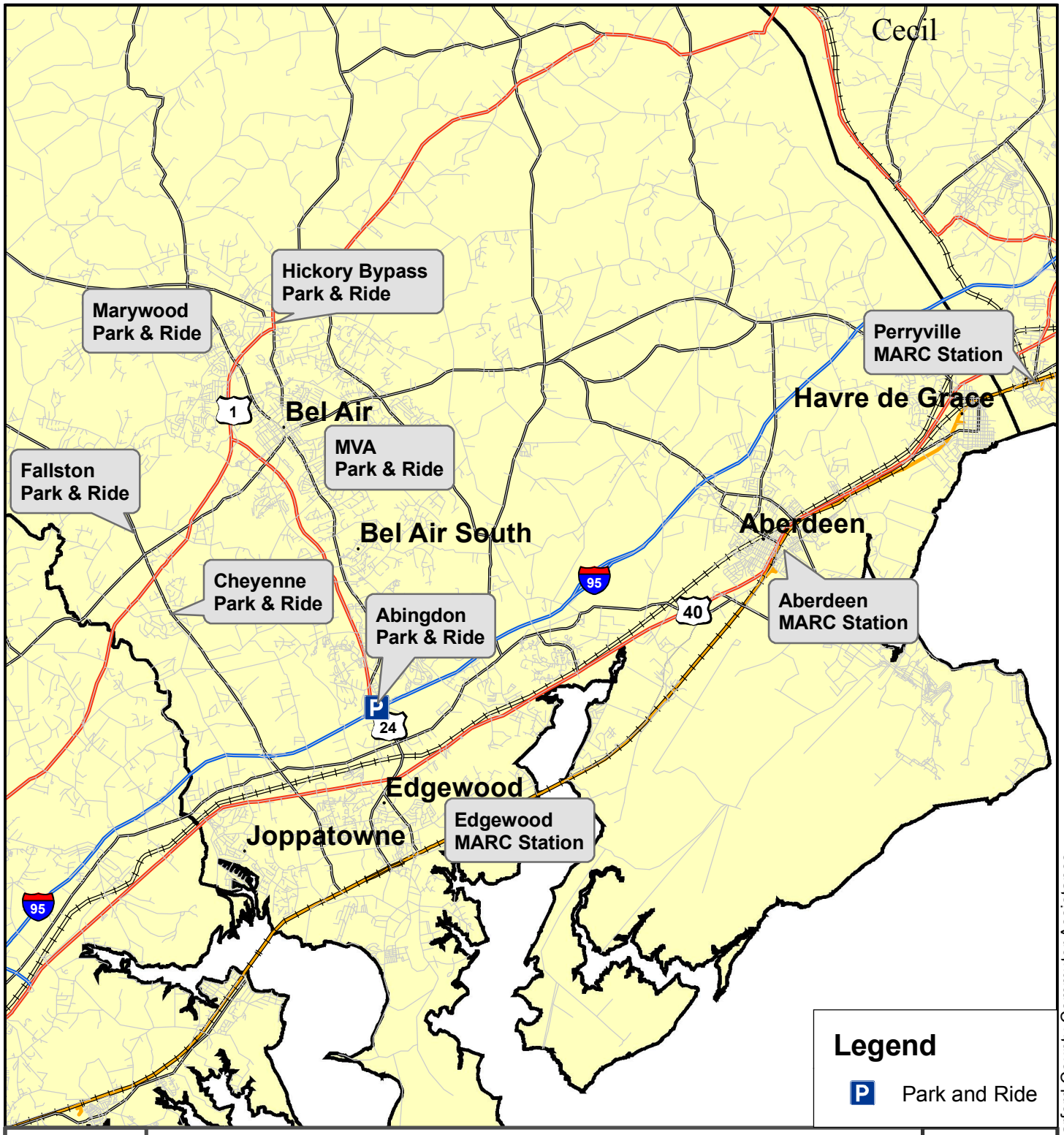


Figure 2-15: HARFORD COUNTY PARK AND RIDE LOCATIONS

Produced by: KFH GROUP

Data Sources: Harford County Commuter Assistance

Table 2-16: HARFORD COUNTY TAXI PROVIDERS

Taxi Co.	Address	City	Phone
Aberdeen Cab Inc	121 S Philadelphia Blvd	Aberdeen, MD	(410) 272-3200
Aberdeen Taxi LLC	115 Poplar Hill Rd	Aberdeen, MD	(410) 272-0022
American Taxi Inc	223 W Bel Air Ave	Aberdeen, MD	(410) 272-3000
Dollar Cab Co	116 Kretlow Dr	Aberdeen, MD	(410) 273-6099
Victory Cabs Inc	121 S Philadelphia Blvd	Aberdeen, MD	(410) 272-0880
Abe Van & Sedan Service	1812 Pulaski Hwy # K	Edgewood, MD	(410) 838-5700
Bel Air Taxi	1812 Pulaski Hwy # K	Edgewood, MD	(410) 838-5700
Countywide Transportation	1812 Pulaski Hwy # K	Edgewood, MD	(410) 676-0500
Medallion Transportation Service	207 Redbud Rd	Edgewood, MD	(410) 676-2422
Sarla & Sheila Transportation Inc.	708 Stanford Ct	Edgewood, MD	(443) 417-4434
United Sedan Service	1812 Pulaski Hwy	Edgewood, MD	(410) 679-2711
United Taxi	1812 Pulaski Hwy # R	Edgewood, MD	(410) 676-2200
Havre Grace Taxi	219 S Washington St	Havre De Grace, MD	(410) 939-7776
Montville Taxi	613a Revolution St	Havre De Grace, MD	(410) 939-0900
Poole's Taxi	613a Revolution St	Havre De Grace, MD	(410) 939-2500
Nancy's Taxi	E Carroll St	Joppa, MD	(410) 679-4200
North East Taxi	15 Rogers Rd	North East, MD	(410) 287-8828
Route 40 Taxi	1427 Principio Furnace Rd	Perryville, MD	(410) 642-9995
Maryland Cab Co	1091 Bainbridge Rd	Port Deposit, MD	(410) 378-4300

CHAPTER 3

SERVICE ALTERNATIVES

HARFORD COUNTY OPTIONS

The purpose of Chapter 3 is to present a range of options (or alternatives) for improving public transit services in Harford County. Needs identified through Chapter 1 are compared with the existing services from Chapter 2 in order to develop meaningful alternatives. Various scenarios were formulated, discussed, and evaluated for potential inclusion in the recommended plan.

The implementation of service improvements in future years will be dependent on the availability of the necessary funds. The options identified for immediate implementation should be constrained by known funding levels for FY 2007. Future years take the availability of funds into account, but are not fiscally constrained.

Service options were based on our analysis of the data, interviews, and meetings documented in the previous chapter. Basic options for the next five years have been developed that address the goals and concerns for public transit in the area. Alternatives address:

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. The most challenging aspect of being efficient is to use less expensive fixed-route services in areas which can sustain those services, and then fill in with more expensive demand-responsive services in areas without sufficient densities or for persons unable to use fixed-route services – to provide a mix of services that do not compete and result in the most rides and service for the dollars expended.

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 in Chapter 2. The development of these alternatives were based in part on the following issue areas:

- **Connectivity Between Routes** – The routes are not designed to work as one system, they are more a collection of individual routes. The routes at times connect to each other and at other times do not, timed meets are rare. Where feasible buses should have a timed meet and be interlined (going as one route into a transfer station and leaving as another route). Because of the variety of focal points for transit (most of the U.S. 40 and Highway 24 corridors and the Bel Air area) it is important to ensure excellent connectivity between these routes to give customers the greatest options.

- **Circuitous Routing** – The services in Bel Air, Edgewood, Joppatowne, and Aberdeen operate on a very circuitous path of travel. These routes are very difficult to follow and understand. The meandering nature of these routes discourages potential customers and limits the route's productivity.

- **Flex Route Service** – There is some flex route service available which tends to slow service down and again make it more circuitous. There are ways to reduce the number of "flexes" through fare policy and other approaches, while still meeting the Americans with Disabilities Act (ADA).

- **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 TDP Advisory Committee chooses a status quo option, at the very least routes and schedules will need to be modified to ensure an on-time performance of 90% or better.

- **Service Area Suitability** – In some cases the routes should be revised, and in other cases there may be opportunities for dial-a-ride type service or shopper shuttles. Areas such as Edgewood could probably benefit from a dial-a-ride that connects to other routes allowing simple transfers.

- **Service to MARC/Amtrak –** It may be valuable to institute routes that can serve the MARC station in Edgewood. Routes should be timed to meet both MARC in Edgewood and Amtrak in Aberdeen.

- **BRAC Issues** – The Aberdeen Proving Ground is projected to experience considerable employment growth associated with the BRAC relocations. To meet this forecasted demand, Harford County should explore transit services to both the base and the Aberdeen multi-modal transit center (after completion).

- **Connectivity with Cecil County** – The northern connection between Harford and Cecil County is minimal. Currently, only paratransit trips go beyond the border. A route connecting the two neighboring counties should be explored.

- **Marketing Service and Riders Guide** – A very important consideration will be the development of coherent route and schedule guide(s) to allow for ease of use. We will also recommend a professionally produced web page with all route and scheduling information available – ultimately in an automated trip planner system.

Fixed-Route Rules

Basic fixed-route concepts are essential rules that should be followed in the creation of a fixed-route local bus service plan in Harford County including:

1. **Minimum Density** – Fixed-route service should be available in communities of at least 1,000 persons per square mile, as well as areas with major destinations. Tourist areas can have a lower density.

2. **Service Days and Hours** – It is recommended that service operate at a minimum, 6:00 a.m. to 7:00 p.m., Monday through Friday and 9:00 a.m. to 7:00 p.m. on Saturday.

3. **Maximize Use of Fixed-Route** – Accessible fixed-route local bus service has proven capable of transporting most persons with disabilities. Indeed, mainstreaming is the intent of the ADA legislation. Incentives and training should be provided for persons with disabilities to ride fixed-route.

4. **Do Not Allow Paratransit to Compete with Fixed-Route** – Only those persons that cannot ride the fixed-route should ride paratransit. This must be enforced. For each fixed-route vehicle put in place, a paratransit vehicle should be eliminated.

5. **ADA Complementary Paratransit** – ADA transportation can be accomplished through a separate paratransit system or through a flex route service, where the vehicle will go off route (within ¾ mile of the route) to pick up a customer. While the fixed-route approach is slightly more expensive, it provides far superior service for both fixed-route riders and persons who cannot ride fixed-route, due to a disability as defined by the ADA.

6. **Timed Transfer and Interlining** – Fixed routes will meet at designated transfer points and then become a second route (interlining). This reduces the need for transfers and increases customer convenience. These services will also be timed to meet inter- and intra-county service, where possible.

7. **Out and Back** – This is the traditional form of fixed-route transit, where as a general rule, a bus goes in two directions down each street it traverses. Large loop style routes where the vehicle goes one-way down each street are generally ineffective due to long travel times, circuitous routings, and difficulties in comprehending schedules. Two way loop style routes can work.

8. **Service Dependability** – The service must be dependable. This includes adhering to its schedule, always using the same route and if flex route, the bus must come back to where it went off route. Failure to perform these tasks will result in suppressed ridership.

9. **Minimum Headways** – For fixed-route in town, headways should be no longer than one hour (the time between buses heading in the same direction), but ½ hour or less is preferable. Rural areas can have longer headways.

10. **Keep It Simple – One Route Cannot Be All Things to All People** – Routes should focus on two or three functions and not attempt to be all things for all people. Twisting, turning routes attempting to serve every potential destination are ineffective – people do not want to ride all around.

11. **Marketing Service** – As with any new start-up business, transit needs to be professionally marketed and promoted, with a reasonable budget. At a minimum, clear and concise route maps and schedules should be developed.

Service Alternatives

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 Fiscal Year 2008; 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 insure success. These are as follows:

1. Funding levels will initially remain approximately the same, reflecting the same number of service hours/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. Flex routes will be limited through fare incentives to come out to the bus stop and buses will retrace their travel path to get back on route.

5. There will be significant marketing enhancements with comprehensive route and schedule guides to allow for a clear understanding of all of the routes. Information will also be available on the Web as well as by telephone.

Service Alternative No. 1 – Modified Status Quo

This first alternative proposes to keep the existing route structure intact. There will be a number of changes however, to enhance service and make it more usable by the public. These changes should allow for an increase in ridership of 10% after the first 1 – 2 years.

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 web site with all rider information should also be developed.

- Flex routes with some restrictions through increased fares (with an exemption for ADA eligible individuals).

- The flex routes, when going off route will come back to the exact spot they went off route to ensure dependable service.

Costs – This status quo option includes minimal additional expenses for the development of route and schedule guides. The operating costs should remain approximately the same.

Service Alternative No. 2 – New Route Structure

This alternative proposes the same basic coverage area as the present time with new interlined routes and timed meets. The services in each of the cities will be changed as will the routes that connect each city. There will be key transfer points in Aberdeen (at the train station), Bel Air (the Mall is recommended) and Edgewood (US Rt. 40 at Rt. 24). These routes will also benefit from the enhanced marketing proposed and it is expected that ridership will increase 20 – 25% in the first two years. The proposed new route structure (Figure 3-1) will allow for:

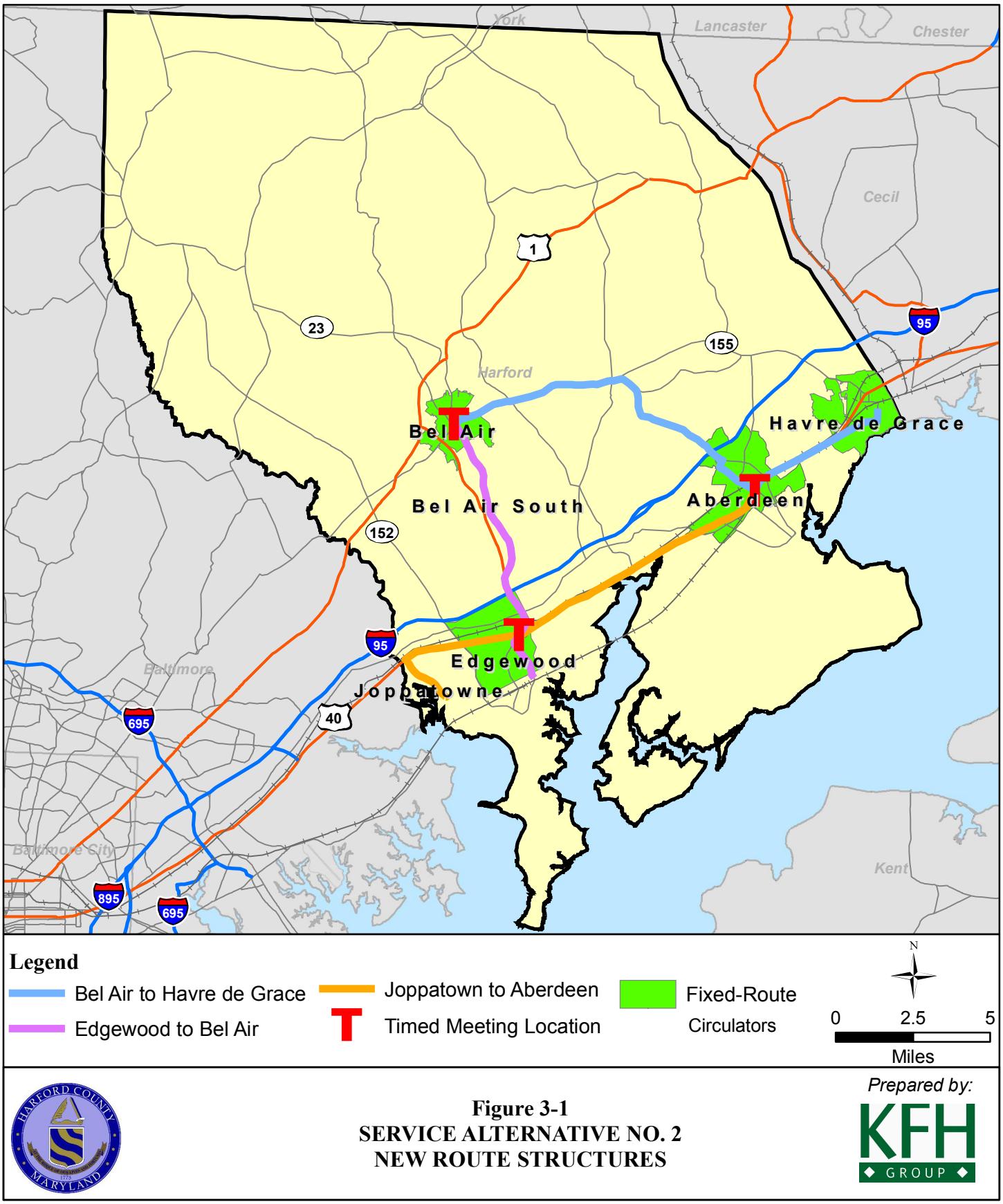


Figure 3-1
SERVICE ALTERNATIVE NO. 2
NEW ROUTE STRUCTURES

Prepared by: KFH GROUP

- More direct routes – faster times with less meandering.

- Easier to understand service – flex rules will restrict flexes to those that need it based on ADA criteria.

- Timed transfers to facilitate movement throughout the county.

Costs – As proposed, this new service can operate at the same levels of service as the present time. Alternative strategies can reduce headways by adding service. The Committee will need to determine how much of an increase each route should have.

Service Alternative No. 3 - New Routes with Dial-a-Ride

This alternative substitutes immediate response dial-a-ride service for fixed-route service circulating in Edgewood, Joppatowne, and/or Bel Air. The purpose of the dial-a-ride service will be to circulate the community and focus service on the major transfer points to allow for seamless connections to fixed-route (Figure 3-2).

Dial-a-ride service is such that the customer calls for service and within an hour the vehicle arrives to take the customer to a variety of local destinations and the transfer point (one option can have service only to the transfer point during peak hours). It operates similar to a shared ride taxi. In fact, taxi providers can be used to supplement the service on a subcontract basis (if they meet Federal Transit Administration requirements as applicable). Often these services have the customer call the driver directly for service. The driver then logs in the trip and provides it in the proper order. This approach is used in a number of communities and works best if operating in a small well defined service area. The enhanced quality of this service and the real time scheduling will allow for higher productivity (at least four one-way trips per hour).

Cost – As with the other alternatives, the costs associated with this alternative will be similar to the current costs, albeit a little less as the cost to operate a paratransit vehicle is less than a fixed-route bus. Each dial-a-ride bus will eliminate a fixed-route bus. If the Committee chooses to increase the service levels, these costs will increase.

Service Alternative No. 4 – Fixed Schedule Service

To enhance rural service, a fixed schedule service can be implemented. This rural fixed schedule service operates in designated rural areas according to a posted schedule. The bus will be in a specific area at a specific time. Passengers can be picked up at their door or at designated stops in the area. The vehicle then proceeds to the designated destination area (typically the largest town in the county). Service is limited to specific days and times. The level of service would be dependent on the need. Fixed schedule service allows Harford Transit to group more trips and eliminate the one-on-one trips typical of rural demand-response service. This type of service could operate in the rural portions of the county. Some areas may receive five days a week service, while others may receive one day per week service.

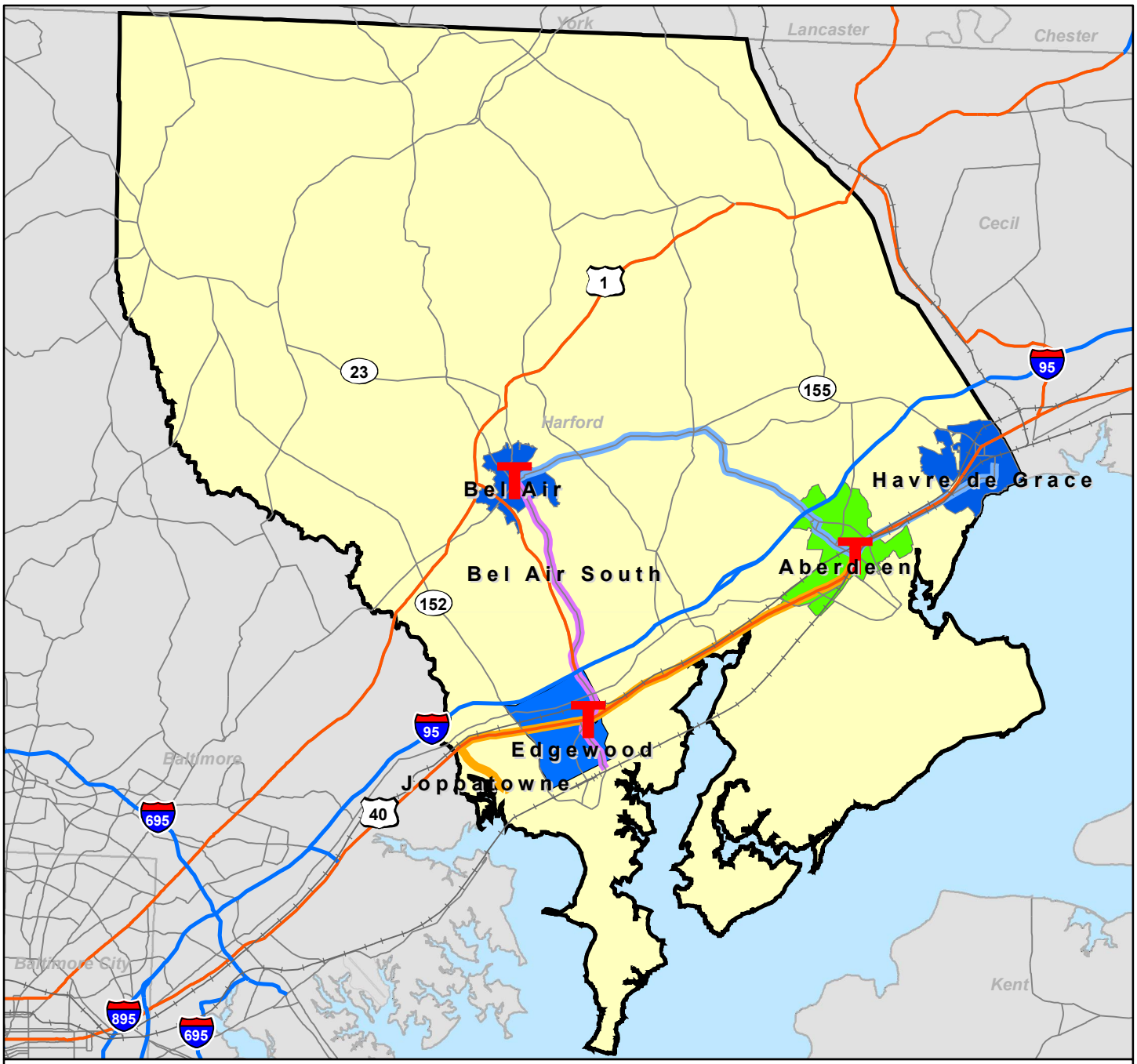


FIGURE 3-2
SERVICE ALTERNATIVE NO. 3
NEW ROUTES WITH DIAL- A -RIDE

Prepared by:
KFH GROUP

This service could take the place of countywide paratransit and increase productivity by grouping trips. This means that the service will be able to provide more rides through trip grouping.

Service Alternative No. 5 – Shopper Shuttles

With peak hour vehicles available for other services during mid day, it may be possible to offer shopper shuttle services to sponsors willing to support the transit system. The shopper shuttle targets neighborhoods with high numbers of transit dependent populations, typically elderly and persons with disabilities and frequent destinations (e.g. Wal-Mart, Giant, and medical centers), and can be very effective during off peak hours. Often these arrangements pay for themselves through funding from the retailers, who in return, receive the business, advertising/promotion, and they get involved in a positive way with their communities.

There are numerous examples of this type of service being successful with supermarkets and discount "big boxes." Typically, shuttles target transit dependent persons (elderly, disabled, and low-income persons) in their neighborhoods. Service is usually for shopping and medical.

A number of transit systems across the country have had success in developing sponsors and partners for service. Companies such as Wal-Mart and Giant (for example) have been known to sponsor transit service (sponsorship potential is detailed in the Appendix C).

Advertising, another form of private sector funding, is very popular in transit and has been done since the beginning of the 20th Century. There are many excellent examples. In Lubbock, Texas, the transit system generates over $200,000 in private funding of various types, including shopper shuttles, partnerships, and advertising.

Harford Transit should look at these possibilities for funding. The combination of public and private funding will help Harford Transit diversify its funding base.

Service Potential

BRAC

Based on experience at other military bases, it can be anticipated that Harford County buses would only be allowed to pass through the gates onto the Aberdeen Proving Ground base under very limited circumstances, such as the use of a base employee or other cleared person as a driver, restricted ridership, and with the need for continuing inspections of the vehicles as they enter the base grounds. Meeting such requirements could create operational and financial complications for the transit system that are out of proportion to the potential ridership, at least in the short run. It is recommended that Harford County establish stops within their route structure to serve pedestrian access points at the base.

Route to Cecil County

Although demand does not currently warrant a route from Harford County into Cecil County, it is important to explore this service as the region continues to grow. The potential for this service may come to fruition due to BRAC. Thus, an extension and/or new route from Harford County into Cecil County to Elkton has been included. This would provide an efficient, toll-free transfer to points north. Assuming the service would run from 6:30 a.m. to 7:00 p.m. on hour headways, it would cost approximately $168,750. This service option was included at the request of the MTA in the event that they obtain the funds to fully finance this route.

CHAPTER 4

CONCEPTUAL SERVICE PLAN

In Chapter 3 a number of service related alternatives were developed and assessed. This included options designed to improve service throughout the county, addressing areas of unmet need, performance issues, marketing, and other system improvements. In this chapter, the alternatives are combined into a series of annual service plans that are intended to serve as a guide for service development and capital programming for the next five years. The alternatives discussed in Chapter 3 were reviewed by Harford Transit staff and the TDP Advisory Committee, and then generally used as a basis for developing a plan.

SYSTEM IMPROVEMENT NEEDS

As demonstrated in Chapter 2, Harford Transit generally already provides a high level of coverage in the urban area. However, there are several potential areas for change in the service design, routes, and schedules that will help improve the service. The focus of these changes is in the Bel Air, Joppatowne, and Havre de Grace triangle.

The changes will promote greater connectivity by using through routes, timed transfers, and re-alignment of existing services. In addition, the plan calls for new marketing approaches with schedules and system maps that make it easier to connect from one part of the county to another. Initially, the service changes call for similar funding levels, with the potential for expansion through increased frequency of service in the later years of the plan.

Paratransit service needs continue to expand, as a growing population of seniors and rural residents continue to be active and need mobility. Harford Transit rural services will need to increase over time as the population continues to ascend. Eventually, longer hours and more vehicle access will be needed to improve access and connectivity.

Finally, this plan includes system improvements that are needed to support the development of the transit operations included in the plan. These include expanded marketing and promotional materials, including quality system maps, rider's guides, and an interactive web site. Further, Harford Transit should also look to the future in terms of providing appropriate passenger amenities such as benches, shelters, and signs.

DEVELOPMENT OF ALTERNATIVES

The alternatives were developed to address the following issues/needs:

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.

The service and improvement alternatives were developed based on the inventory and review of existing services, the assessment of current and near-term future demand; input from the TDP Advisory Committee; and anticipated land use changes identified from the current development pipeline.

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 in Chapter 2. The development of these alternatives is based in part on the following issue areas which were first presented in Chapter 3:

- **Connectivity Between Routes** – The routes are not designed to work as one system, they are more a collection of individual routes. The routes at times connect to each other and at other times do not, timed meets are rare. Where feasible buses should have a timed meet and be interlined (going as one route into a transfer station and leaving as another route). Because of the variety of focal points for transit (most of the U.S. 40 and Highway 24 corridors and the Bel Air area) it is important to ensure excellent connectivity between these routes to give customers the greatest options.

- **Circuitous Routing** – The services in Bel Air, Edgewood, Joppatowne, and Aberdeen operate on a very circuitous path of travel. These routes are very difficult to follow and understand. The meandering nature of these routes discourages potential customers and limits the route's productivity.

- **Flex Route Service** – There is some flex route service available which tends to slow service down and again make it more circuitous. There are ways to reduce the number of "flexes" through fare policy and other approaches, while still meeting the ADA.

- **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 Committee chooses a status quo option, at the very least routes and schedules will need to be modified to ensure an on time performance of 90% or better.

- **Service Area Suitability** – In some cases the routes should be revised, and in other cases there may be opportunities for dial-a-ride type service or shopper shuttles. Areas such as Edgewood could probably benefit from a dial-a-ride that connects to other routes allowing simple transfers.

- **Service to MARC/AMTRAK –** It may be valuable to institute routes that can serve the MARC station in Edgewood. Routes should be timed to meet both MARC in Edgewood and AMTRAK in Aberdeen.

- **BRAC Issues** – The Aberdeen Proving Ground is projected to experience considerable employment growth associated with the BRAC relocations. To meet this forecasted demand, Harford Transit should explore transit services to both the base and the Aberdeen multi-modal transit center (after completion).

- **Connectivity with Cecil County** – The northern connection between Harford and Cecil County is minimal. Currently, only paratransit trips go beyond the border. A route connecting the two neighboring counties should be explored.

- **Marketing Service and Riders Guide** – a very important consideration will be the development of coherent route and schedule guide(s) to allow for ease of use. We will also recommend a professionally produced web page with all route and scheduling information available – ultimately in an automated trip planner system.

Service Assumptions

The service assumptions were used to guide the alternatives and the final planning. The service assumptions will help insure success. These are as follows:

1. Funding levels will initially remain approximately the same, reflecting the same number of service hours/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. Flex routes will be limited through fare incentives to come out to the bus stop and buses will retrace their travel path to get back on route.

5. There will be significant marketing enhancements with comprehensive route and schedule guides to allow for a clear understanding of all of the routes. Information will also be available on the Web as well as by telephone.

Plan elements were developed in four general categories of service:

- County Transit – Revised Service
- Local Shuttles – Revised Service
- Paratransit – ADA and Rural
- Marketing Program

County Transit Service – Fixed-Route

The county service focuses on the most densely populated areas in a triangle with Aberdeen/Havre de Grace, Bel Air, and Edgewood/Joppatowne as the three focal points. This service will remain in place with significant changes to ensure increased ridership through dependability, timed transfer, and more direct service.

The four routes:

- Route 1: Havre de Grace, Aberdeen, Bel Air.

- Route 2: Joppatowne, Abingdon, Edgewood, and Bel Air (this route will run a modified service during am and pm peak hours to connect to MARC trains. Stops will be limited to major pick-up points, and park and ride lots to MARC and commuter bus service).

- Route 6: Aberdeen, Perryman, Riverside, Edgewood.

- Route 7: Job-Access Edgewood, Johns Hopkins Hospital, East Point Mall, White Marsh Mall. Limited commuter service.

The proposed new route structure will allow for:

- More direct routes – faster times with less meandering

- Combined with local service when in Bel Air, Edgewood and Aberdeen

- Easier to understand service
  - Flex rules will restrict flexes to those that need it based on ADA criteria
  - Easy to read maps and schedule guides
  - Consistent, on time service

- Timed transfers to facilitate movement throughout the county

- Expanded service hours in the morning and evening to accommodate commuters 5:00 a.m. to 8:00 p.m.

Local Circulators

The existing local circulators include:

- Route 3: Bel Air Town-Go-Around
- Route 4: Aberdeen Doodlebug
- Route 5: Edgewood Circular

These routes are typically slow meandering routes that are difficult to understand and use. Ridership is low on these routes. In the proposed service, these routes will be combined with the county wide routes to expand service in the towns. Hours will be expanded in these routes to accommodate commuters 6:00 a.m. to 8:00 p.m.

These three routes will serve a variety of different needs:

- Connecting/feeding to county bus for commuting and longer distance service
- Providing a local service for a variety of needs

These routes will have a transfer site in each of the towns to connect to the longer distance county service. Transfer points will continue to be the Aberdeen Amtrak station and the Edgewood Village shopping center as well as a transfer site recommended for the Harford Mall. Where possible, the local circulator buses will meet the county routes.

The Aberdeen transfer point will also serve as the major staging area for BRAC service. Based on experience at other military bases, it can be anticipated that Harford Transit buses would only be allowed to pass through the gates onto the Aberdeen Proving Ground base under very limited circumstances, such as the use of a base employee or other cleared person as a driver, restricted ridership, and with the need for continuing inspections of the vehicles as they enter the base grounds. Meeting such requirements could create operational and financial complications for the transit system that are out of proportion to the potential ridership, at least in the short run. It is recommended that Harford Transit establish stops within their route structure to serve pedestrian access points at the base.

Rural Service

As the rural areas continue to grow and suburbanize, demand-responsive transit becomes more difficult to provide in a cost effective manner. To enhance rural service, a fixed schedule service can be implemented. Paratransit is limited to 2 – 3 one-way trips per hour, making this service extremely unproductive. Fixed schedule service can double or triple productivity allowing for each vehicle and operator to pick up more trips per hour.

This rural fixed schedule service operates in designated rural/suburban areas according to a posted schedule. The bus will be in a specific area at a specific time. Passengers can be picked up at their door or at designated stops in the area. The vehicle then proceeds to the designated destination area (typically the largest town in the county). Service is limited to specific days and times. The level of service would be dependent on the need. Fixed schedule service allows Harford Transit to group more trips and eliminate the one-on-one trips typical of rural demand-response service. This type of service would operate in the rural portions of each county in the service area. Some areas may receive five days a week service, while others may receive one day per week service.

This service could take the place of countywide paratransit and increase productivity by grouping trips. This means that the service will be able to provide more rides through trip grouping. This service should be implemented in the later years of the plan.

THE PLAN

The following pages present the five-year TDP operating plan.

The enhancements include:

- Greater County Wide Connectivity – The new routes will be connected to each other through timed connections wherever possible.

- Schedule improvements to ensure that the buses run at least 90% on time. Dependability in terms of on-time performance as well as routing is essential to quality service.

- Enhanced marketing campaign touting the service, including a set of route and schedule guides so that riders can clearly understand the services available. A web site with all rider information should also be developed.

- Flex routes with some restrictions through increased fares (with an exemption for ADA eligible individuals).

Operating Plan – Year 1

County Service

Initiate new county service on the following routes (Figures 4-1 to 4-4):

- Route 1: Havre de Grace – Aberdeen – Bel Air (Figure 4-1)
- Route 2: Bel Air – Edgewood (Figure 4-2)
- Route 6: Joppatowne – Edgewood – Aberdeen (Figure 4-3)

Modify existing routes for greater connectivity to each other and institute new operating procedures. Figure 4-4 displays the three county routes on one map. No change in costs.

ADA paratransit should be instituted to fill in where flex route will not work. One vehicle is estimated for the service area, assuming the flex route service can provide some of the ADA service. Uses existing fleet.

Local Circulators

Initiate new local flex route circulator service in conjunction with new countywide service. The circulators will operate in Aberdeen (Figure 4-5), Bel Air (Figure 4-6) and Edgewood (Figure 4-7). These routes will be combined with the county service and schedules will be coordinated. Similar to the county service, this is a cost neutral change.

Development of Schedules, System Maps, and Riders Guide

Along with the new service will be new rules and procedures for customers. Critical to success will be the development of marketing materials, clear, concise system maps and accurate schedules.

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 Harford Transit budget be $65,000 for the initial year to develop and implement the marketing program.

Estimated Total Additional Operating Cost: $65,000

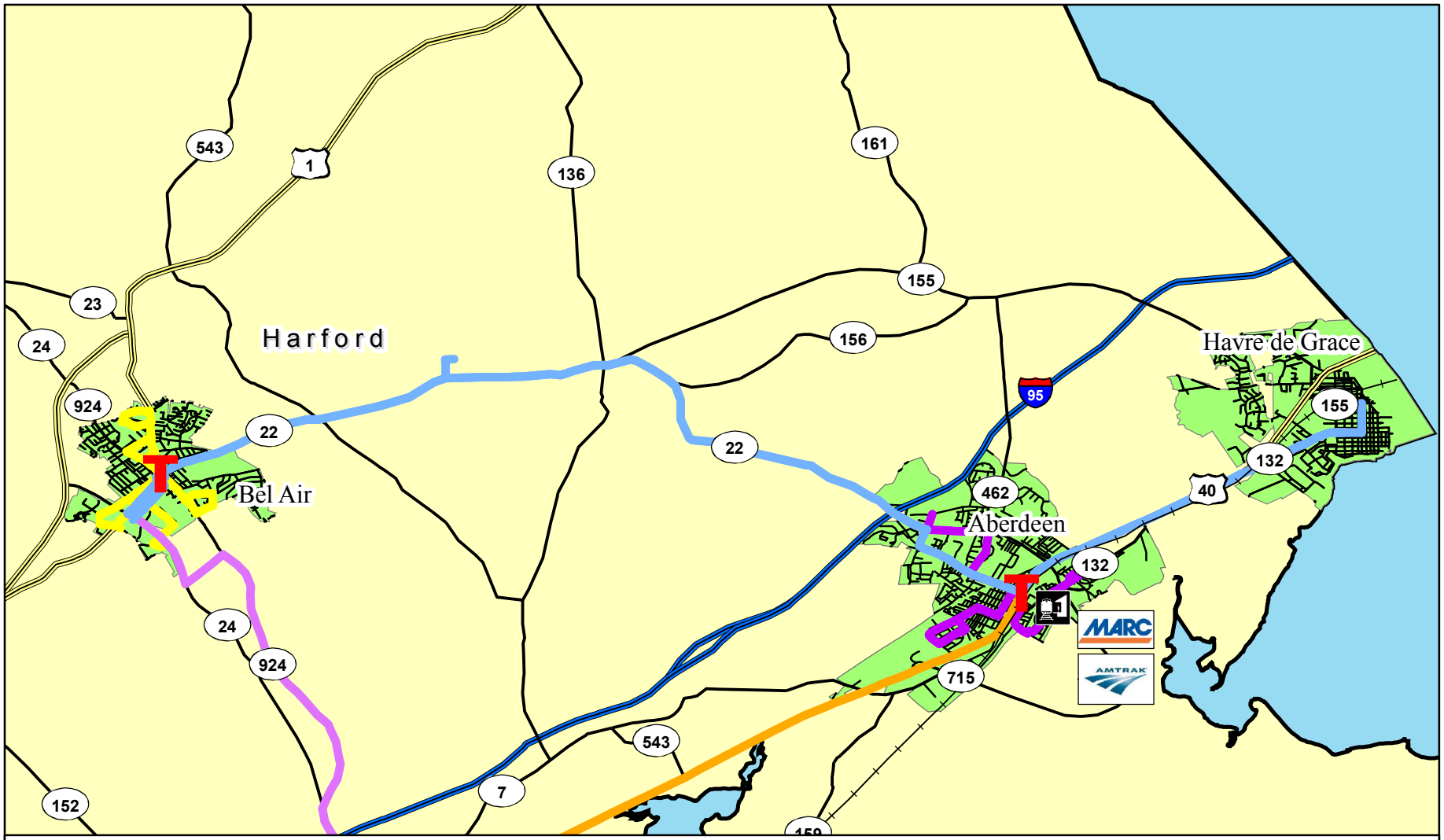


Figure 4-1
HAVRE DE GRACE - ABERDEEN - BEL AIR ROUTE

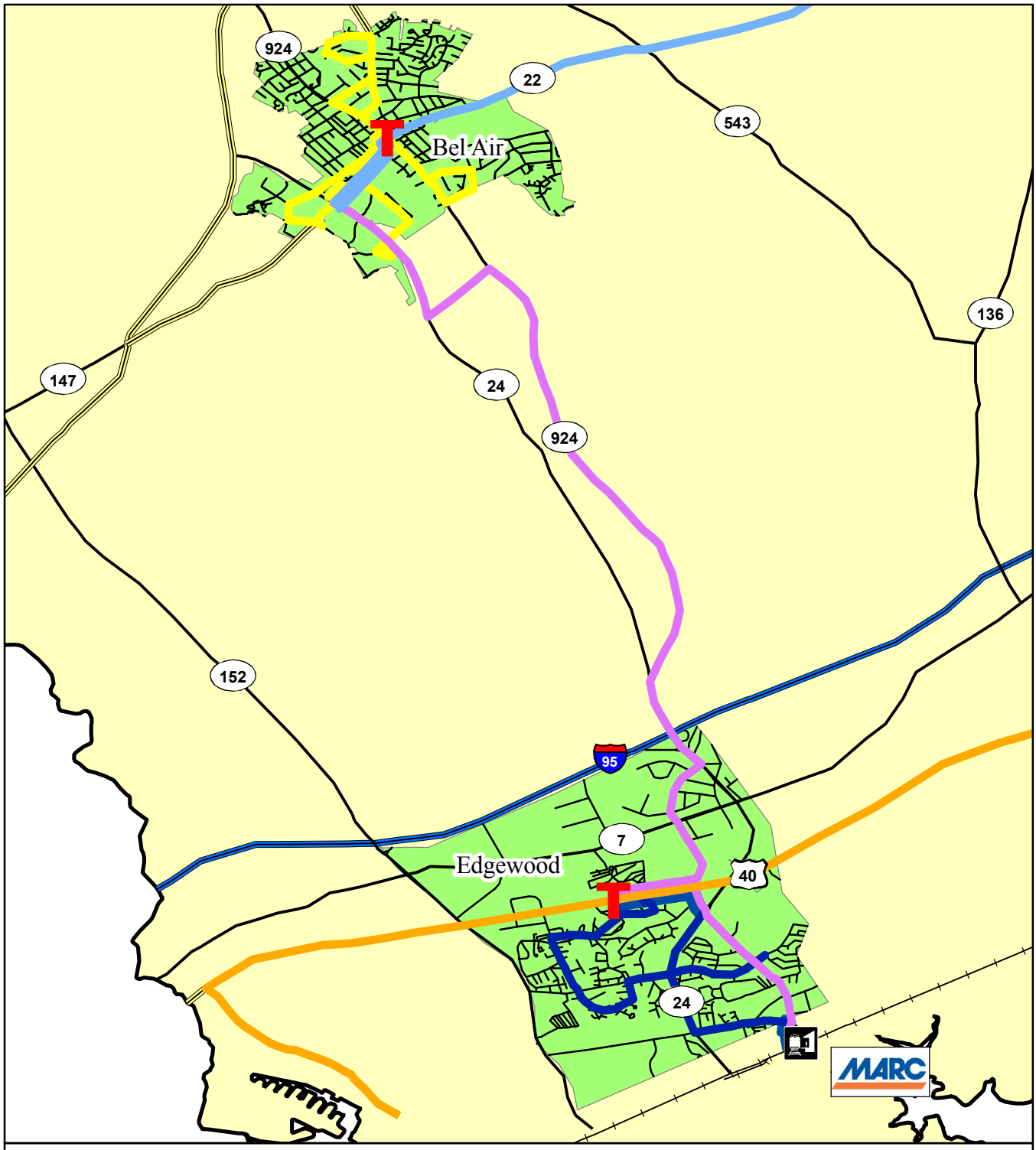


Figure 4-2
BEL AIR - EDGEWOOD ROUTE

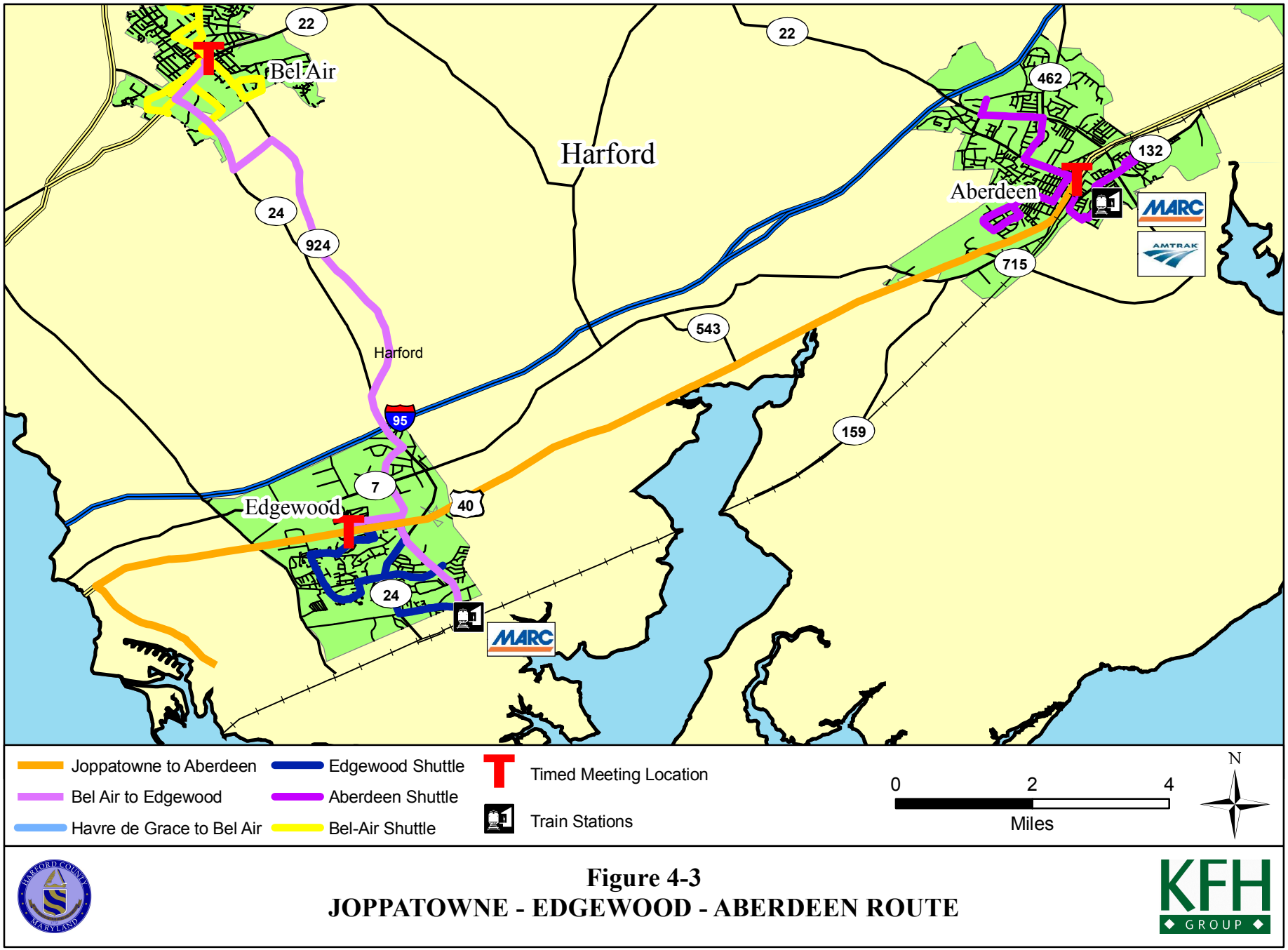


Figure 4-3
JOPPATOWNE - EDGEWOOD - ABERDEEN ROUTE

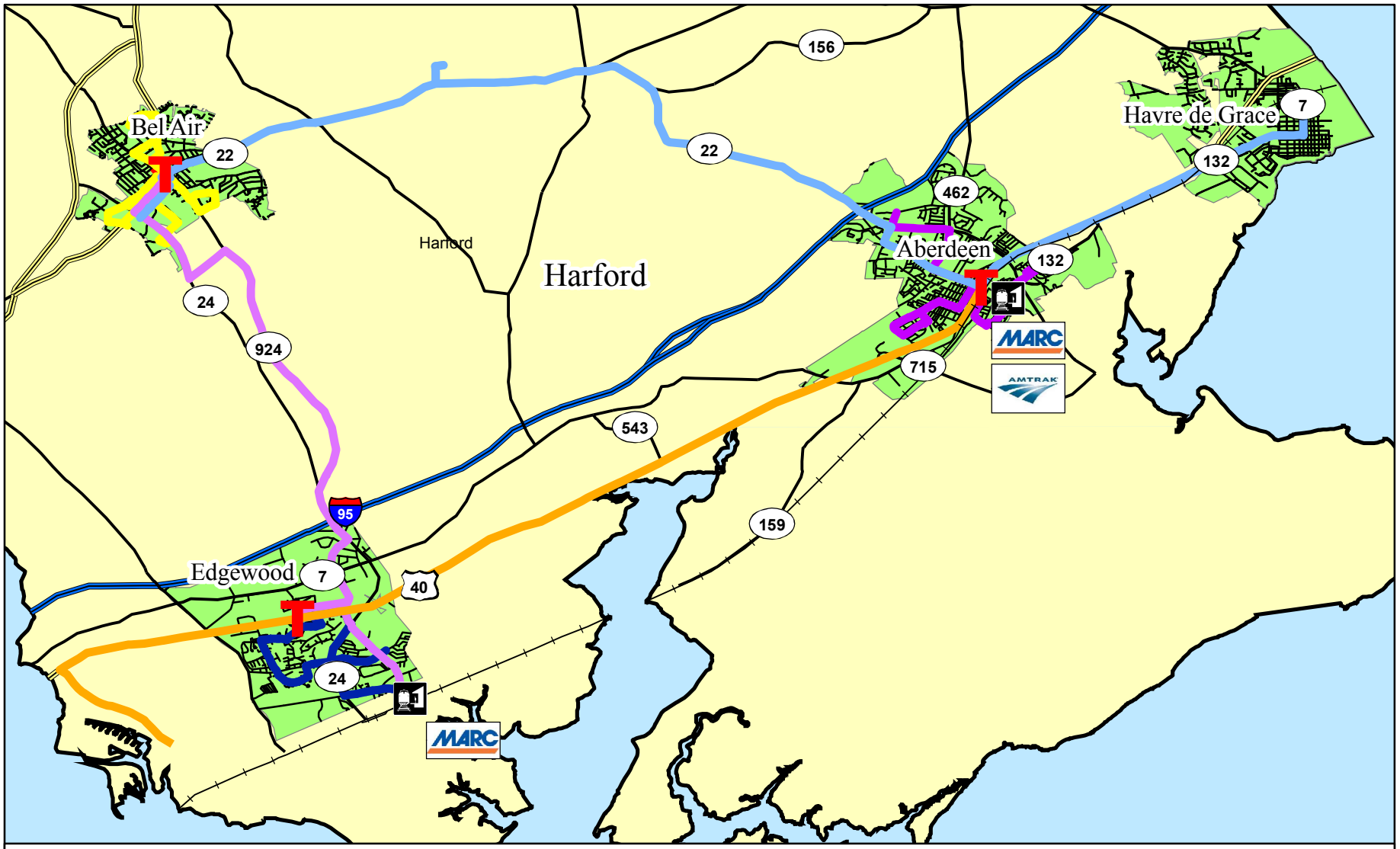


Figure 4-4
COUNTY ROUTES

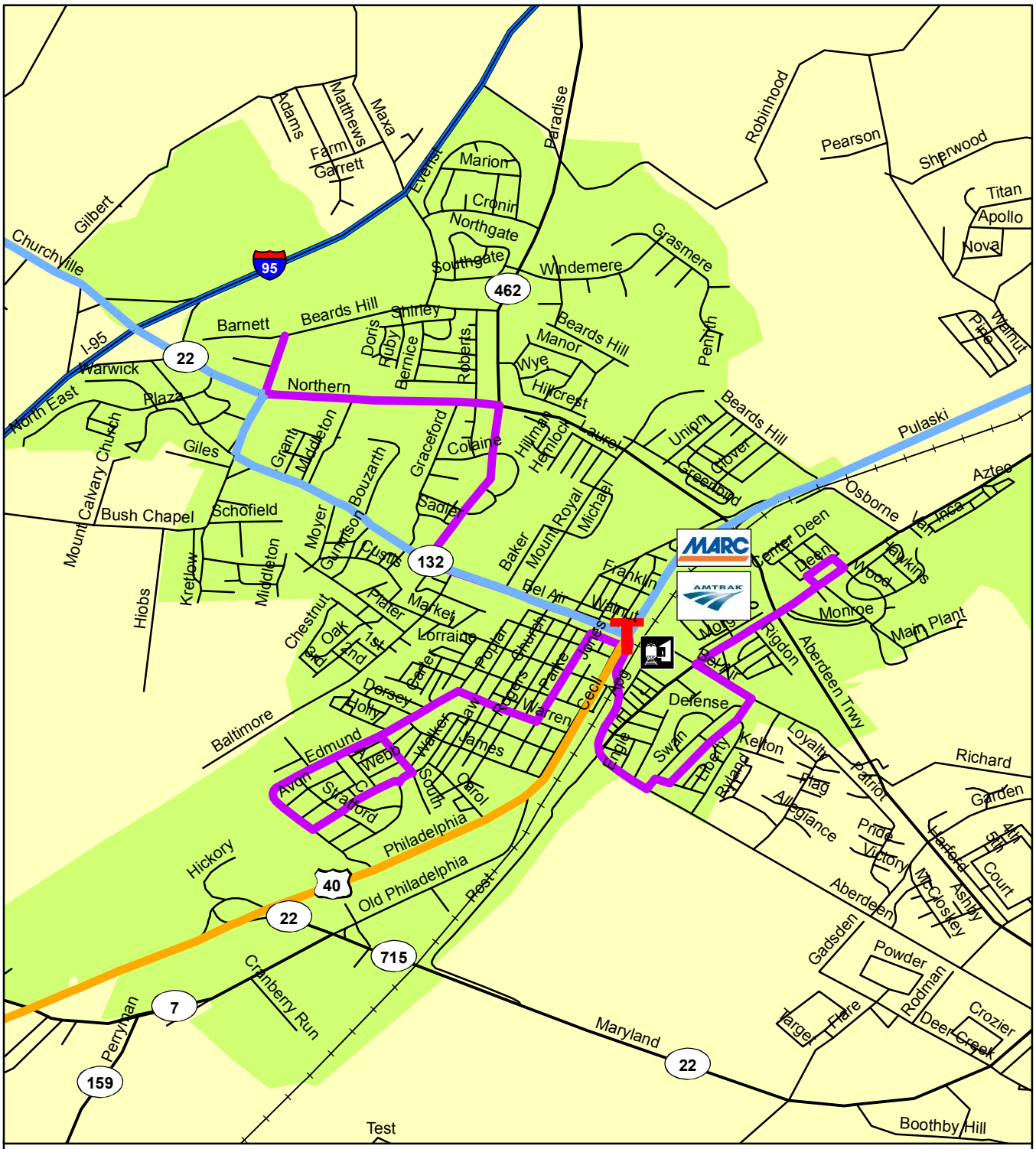


Figure 4-5
ABERDEEN

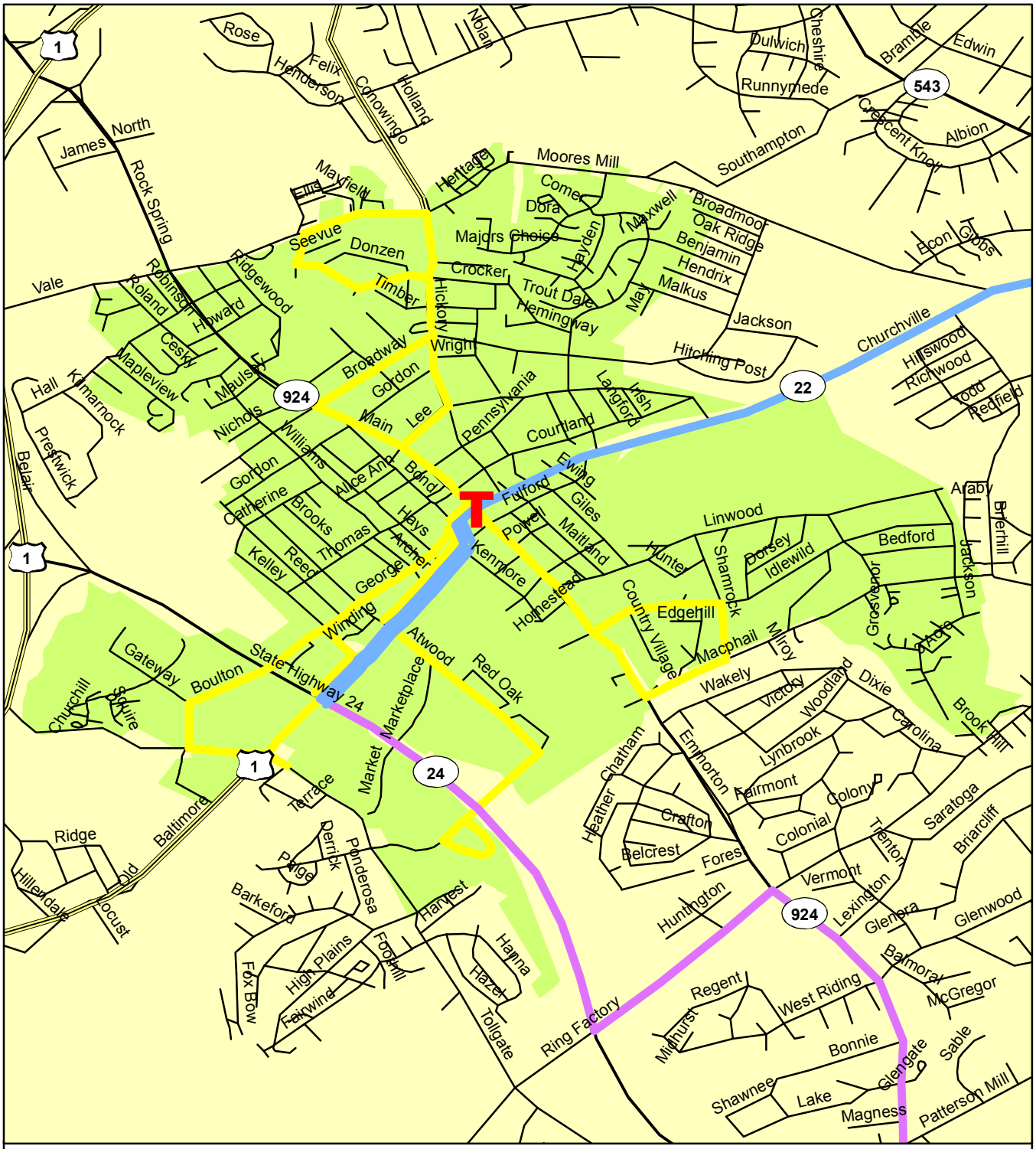


Figure 4-6
BEL AIR

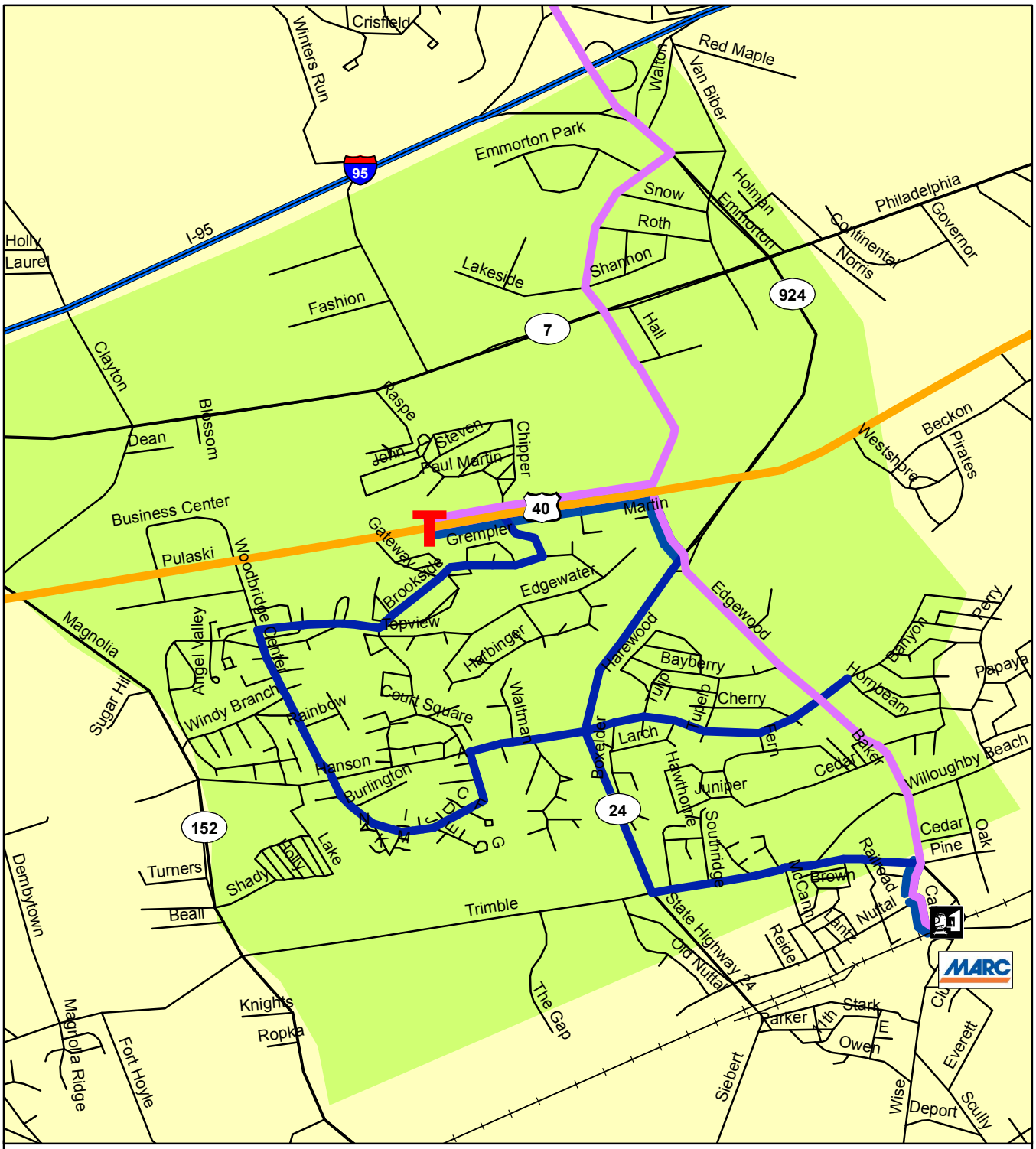


Figure 4-7
EDGEWOOD

Operating Plan – Year 2

County Service

Expand hours on the new county service. Add service hours to extend span in the morning starting at 5:00 a.m. and the early evening until 8:00 p.m. This would cost an additional $228,600. Uses existing fleet.

Local Circulators

Expand hours on the new local flex route circulator service (Aberdeen, Bel Air, and Edgewood). Add service hours to extend span in the morning starting at 6:00 a.m. and the early evening until 8:00 p.m. This would cost an additional $180,975. Uses existing fleet.

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 – $32,500 annually to continue the marketing program.

Estimated Total Annual Additional Operating Cost: $442,075

Operating Plan – Year 3

All Services

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

Estimated Total Annual Additional Operating Cost: $0

Operating Plan – Year 4

Rural Services

Initiate fixed schedule service after planning efforts determine best schedule. This should require one additional vehicle to expand rural service. This would cost an additional $177,800. Requires one expansion vehicle.

All Other Services

Minor adjustments as necessary.

Estimated Total Annual Additional Operating Cost: $177,800

Operating Plan – Year 5

County Service

Reduce headways from 1 hour and 20 minutes to no more than one hour. This would cost an additional $571,500. Requires three expansion vehicles (one for each route).

Local Circulators

No Changes.

Rural Services

No Changes.

Estimated Total Annual Additional Operating Cost: $571,500

ESTIMATED OPERATING COSTS

In the plan elements presented above, the increased operating costs of each plan element have been included. Table 4-1 presents the way in which these costs were estimated, including the hourly operating cost, the hourly cost escalation assumed over the five-year period, the number of service hours estimated for that service, and the resulting cost.

Table 4-2 presents the estimated base operating budget for each year, beginning with the existing service, incorporating each year's planned expansion into the base for the next year, and then showing the required expansion capital needs. This results in the estimated total operating budget for each year, assuming all expansions take place in the year planned, and at the level of service planned for that expansion.

Table 4-1: OPERATING COST OF SERVICE IMPROVEMENTS/EXPANSIONS

Description of Improvement	Proposed Change	Incre-mental Hours	Cost per Hour	Daily Operating Cost	Number of Service Days	Total Incremental Annual Cost
YEAR ONE:						
1) Initiate New County Service	Route 1: Havre de Grace, Aberdeen, Bel Air	0	$50	$0	254	$0
	Route 2: Joppatowne, Abingdon, Edgewood, Bel Air	0	$50	$0	254	$0
	Route 6: Aberdeen, Perryman, Riverside, Edgewood	0	$50	$0	254	$0
	Expansion of Route 1: Havre de Grace, Aberdeen, Bel Air to Connect with Perryville	13.5	$50	$675	254	$171,450
2) Local Circulators	Aberdeen	0	$50	$0	254	$0
	Bel Air	0	$50	$0	254	$0
	Edgewood	0	$50	$0	254	$0
3) Marketing Program	Development of Schedules, System Maps and Riders Guide					$65,000
Total Year One: Additional Operating Cost						$236,450
YEAR TWO:						
1) Expand New County Service Hours	Route 1: Havre de Grace, Aberdeen, Bel Air	6.5	$50	$325	254	$82,550
	Route 2: Joppatowne, Abingdon, Edgewood, Bel Air	7	$50	$350	254	$88,900
	Route 6: Aberdeen, Perryman, Riverside, Edgewood	4.5	$50	$225	254	$57,150
						$228,600
2) Expand Local Circulators Hours	Aberdeen	6	$50	$300	254	$76,200
	Bel Air	6.75	$50	$338	254	$85,725
	Edgewood	1.5	$50	$75	254	$19,050
						$180,975
3) Marketing Program	Annual Upkeep of Schedules, System Maps and Riders Guide					$32,500
Total Year Two: Additional Operating Cost:						$442,075

Table 4-1: OPERATING COST OF SERVICE IMPROVEMENTS/EXPANSIONS

Description of Improvement	Proposed Change	Incre-mental Hours	Cost per Hour	Daily Operating Cost	Number of Service Days	Total Incremental Annual Cost
YEAR THREE:						
1) All Services	On-Going Monitoring and Planning - Minor Route Adjustments					$0
Total Year Three: Additional Operating Cost:						$0
YEAR FOUR:						
1) Initiate Fixed Rural Scheduled Service	Rural Fixed Route Service, Requires One Additional Vehicle	14	$50	$700	254	$177,800
Total Year Four: Additional Operating Cost						$177,800
YEAR FIVE						
1) County Service - Reduce Headways to 60 minute headways	Route 1: Add One Bus, Hourly Service	15	$50	$750	254	$190,500
	Route 2: Add One Bus, Hourly Service	15	$50	$750	254	$190,500
	Route 6: Add One Bus, Hourly Service	15	$50	$750	254	$190,500
	Based on 15 hours per day, including report, check, and clear time.					
Total Year Five: Additional Operating Cost						$571,500

Table 4-2: PROJECTED OPERATING AND CAPITAL PLAN SUMMARY

	Operating Budget	TDP Planned Expansion	Expansion Capital	Total Operating Budget
Base	$6,539,223	n.a.	n.a.	$6,539,223
Plan Year 1	$6,801,000	$236,450	$200,000	$7,037,450
Plan Year 2	$7,319,000	$442,075	$0	$7,761,075
Plan Year 3	$8,072,000	$0	$0	$8,072,000
Plan Year 4	$8,395,000	$177,800	$70,000	$8,572,800
Plan Year 5	$8,916,000	$571,500	$600,000	$9,487,500

(Assumes 4% annual inflation).

It should be noted that Harford 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 County Executive and County 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 County share of the local operating deficit for these 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 Harford County is not easily done. Harford's annual proposals will have to compete in a discretionary program. Table 4-2 of service expansion represents a financially-unconstrained plan for growth to increase transit usage.

APPENDIX A

HARFORD COUNTY
DENSITY AND PERCENTAGE RANKING

Appendix A: HARFORD PERCENTAGE RANKING

Census Block Group ID	Total Population	Total Households	Elderly (65+)	Elderly %	Elderly % Ranking	Youth (12 to 17)	Youth %	Youth % Ranking	Disabled	Disabled %	Disabled % Ranking	Below Poverty	Below Poverty %	Below Poverty % Ranking	Autoless Households	Autoless Households %	Autoless Households % Ranking	Total Percentage Ranking
240253038003	895	402	155	17.32	**25**	88	9.83	**54**	89	9.94	**11**	60	6.70	**31**	82	20.40	**5**	**126**
240253061004	671	227	58	8.64	**97**	78	11.62	**18**	122	18.18	**1**	135	20.12	**7**	19	8.37	**27**	**150**
240253062002	827	368	117	14.15	**44**	80	9.67	**56**	53	6.41	**38**	149	18.02	**9**	67	18.21	**9**	**156**
240253062001	984	507	221	22.46	**7**	69	7.01	**118**	79	8.03	**20**	121	12.30	**15**	106	20.91	**3**	**163**
240253029022	1,387	627	161	11.61	**66**	146	10.53	**41**	86	6.20	**40**	237	17.09	**10**	118	18.82	**7**	**164**
240253037001	399	171	75	18.80	**13**	41	10.28	**45**	60	15.04	**2**	9	2.26	**87**	25	14.62	**17**	**164**
240253024002	1,132	475	140	12.37	**55**	88	7.77	**104**	149	13.16	**5**	298	26.33	**2**	106	22.32	**2**	**168**
240253038004	1,305	792	405	31.03	**1**	58	4.44	**137**	148	11.34	**6**	130	9.96	**20**	133	16.79	**14**	**178**
240253016012	1,320	458	66	5.00	**122**	154	11.67	**17**	104	7.88	**22**	314	23.79	**6**	77	16.81	**13**	**180**
240253052003	737	292	81	10.99	**72**	79	10.72	**36**	66	8.96	**16**	49	6.65	**32**	20	6.85	**34**	**190**
240253028023	3,225	1,479	420	13.02	**47**	263	8.16	**97**	255	7.91	**21**	439	13.61	**12**	229	15.48	**16**	**193**
240253053001	836	329	137	16.39	**30**	74	8.85	**83**	78	9.33	**15**	87	10.41	**19**	15	4.56	**51**	**198**
240253029011	850	379	106	12.47	**51**	65	7.65	**111**	61	7.18	**29**	218	25.65	**3**	72	19.00	**6**	**200**
240253013012	831	349	134	16.13	**31**	75	9.03	**78**	63	7.58	**25**	48	5.78	**38**	28	8.02	**28**	**200**
240253029023	2,402	885	251	10.45	**79**	256	10.66	**39**	183	7.62	**24**	239	9.95	**21**	55	6.21	**38**	**201**
240253061003	2,237	1,199	439	19.62	**12**	125	5.59	**130**	148	6.62	**35**	278	12.43	**14**	213	17.76	**11**	**202**
240253028021	646	280	134	20.74	**10**	57	8.82	**85**	87	13.47	**4**	27	4.18	**56**	12	4.29	**53**	**208**
240253053002	1,245	512	182	14.62	**40**	112	9.00	**79**	93	7.47	**27**	119	9.56	**22**	29	5.66	**42**	**210**
240253061001	629	247	97	15.42	**35**	56	8.90	**81**	29	4.61	**64**	66	10.49	**18**	35	14.17	**18**	**216**
240253013011	1,666	749	302	18.13	**17**	92	5.52	**131**	158	9.48	**13**	148	8.88	**24**	55	7.34	**32**	**217**
240253035003	2,586	1,061	407	15.74	**33**	243	9.40	**62**	126	4.87	**59**	228	8.82	**25**	62	5.84	**41**	**220**
240253052001	692	277	83	11.99	**62**	69	9.97	**50**	68	9.83	**12**	24	3.47	**64**	20	7.22	**33**	**221**
240253016014	2,231	805	79	3.54	**133**	239	10.71	**37**	116	5.20	**52**	569	25.50	**4**	216	26.83	**1**	**227**
240253029021	887	461	133	14.99	**36**	69	7.78	**103**	44	4.96	**54**	67	7.55	**29**	82	17.79	**10**	**232**
240253062003	1,011	477	129	12.76	**49**	71	7.02	**117**	58	5.74	**45**	198	19.58	**8**	79	16.56	**15**	**234**
240253039001	2,309	1,013	527	22.82	**6**	178	7.71	**108**	137	5.93	**43**	98	4.24	**54**	89	8.79	**24**	**235**
240253029012	1,414	617	108	7.64	**103**	137	9.69	**55**	64	4.53	**66**	345	24.40	**5**	115	18.64	**8**	**237**
240253014012	2,481	990	265	10.68	**76**	230	9.27	**68**	176	7.09	**30**	216	8.71	**27**	53	5.35	**45**	**246**
240253022003	457	186	82	17.94	**19**	35	7.66	**109**	22	4.81	**60**	36	7.88	**28**	14	7.53	**31**	**247**
240253016013	613	346	39	6.36	**111**	51	8.32	**96**	37	6.04	**42**	166	27.08	**1**	72	20.81	**4**	**254**
240253016011	645	247	128	19.85	**11**	55	8.53	**91**	65	10.08	**10**	32	4.96	**44**	0	0.00	**110**	**266**
240253051001	1,972	675	217	11.00	**71**	205	10.40	**42**	109	5.53	**48**	81	4.11	**57**	30	4.44	**52**	**270**
240253035004	2,732	1,018	427	15.63	**34**	271	9.92	**52**	105	3.84	**80**	61	2.23	**88**	140	13.75	**19**	**273**
240253016016	1,415	499	87	6.15	**114**	159	11.24	**21**	152	10.74	**7**	44	3.11	**68**	16	3.21	**65**	**275**
240253024001	366	147	60	16.39	**29**	28	7.65	**110**	10	2.73	**98**	26	7.10	**30**	26	17.69	**12**	**279**
240253061002	815	383	102	12.52	**50**	69	8.47	**93**	30	3.68	**84**	53	6.50	**33**	39	10.18	**22**	**282**
240253036022	2,006	716	209	10.42	**80**	219	10.92	**29**	118	5.88	**44**	48	2.39	**83**	34	4.75	**49**	**285**
240253022001	1,845	735	325	17.62	**24**	155	8.40	**94**	90	4.88	**58**	83	4.50	**50**	26	3.54	**61**	**287**
240253051003	1,392	474	143	10.27	**83**	152	10.92	**28**	61	4.38	**68**	53	3.81	**61**	22	4.64	**50**	**290**
240253052002	1,422	546	197	13.85	**45**	98	6.89	**121**	94	6.61	**36**	72	5.06	**43**	28	5.13	**46**	**291**
240253011042	3,124	1,547	334	10.69	**75**	144	4.61	**135**	216	6.91	**32**	201	6.43	**34**	196	12.67	**20**	**296**
240253013022	2,930	1,265	122	4.16	**127**	281	9.59	**57**	130	4.44	**67**	310	10.58	**17**	100	7.91	**29**	**297**
240253042014	452	158	43	9.51	**89**	55	12.17	**10**	8	1.77	**116**	27	5.97	**35**	8	5.06	**47**	**297**
240253063001	801	345	134	16.73	**26**	56	6.99	**119**	34	4.24	**71**	37	4.62	**47**	23	6.67	**35**	**298**
240253041004	772	275	96	12.44	**54**	68	8.81	**86**	27	3.50	**86**	96	12.44	**13**	10	3.64	**59**	**298**
240253032022	4,282	1,606	629	14.69	**39**	375	8.76	**88**	223	5.21	**51**	103	2.41	**82**	98	6.10	**39**	**299**
240253034001	1,512	548	242	16.01	**32**	144	9.52	**59**	109	7.21	**28**	56	3.70	**63**	0	0.00	**117**	**299**
240253036041	4,229	1,801	521	12.32	**57**	391	9.25	**70**	208	4.92	**55**	198	4.68	**46**	52	2.89	**72**	**300**
240253016023	2,513	836	118	4.70	**124**	282	11.22	**22**	119	4.74	**63**	301	11.98	**16**	21	2.51	**81**	**306**
240253038002	1,526	812	368	24.12	**5**	77	5.05	**134**	65	4.26	**70**	45	2.95	**72**	71	8.74	**26**	**307**
240253051004	1,739	594	183	10.52	**77**	186	10.70	**38**	94	5.41	**50**	79	4.54	**49**	10	1.68	**95**	**309**
240253014013	1,977	886	280	14.16	**43**	125	6.32	**125**	131	6.63	**34**	45	2.28	**86**	67	7.56	**30**	**318**
240253022002	212	96	38	17.92	**20**	13	6.13	**128**	22	10.38	**8**	0	0.00	**129**	6	6.25	**36**	**321**
240253024003	1,280	530	130	10.16	**84**	119	9.30	**64**	73	5.70	**47**	120	9.38	**23**	7	1.32	**103**	**321**
240253033003	1,503	528	187	12.44	**53**	164	10.91	**30**	125	8.32	**19**	13	0.86	**116**	6	1.14	**106**	**324**
240253064001	513	238	91	17.74	**21**	33	6.43	**124**	45	8.77	**17**	22	4.29	**52**	0	0.00	**113**	**327**
240253014022	1,789	611	108	6.04	**116**	226	12.63	**8**	111	6.20	**39**	76	4.25	**53**	0	0.00	**114**	**330**
240253016022	2,068	710	120	5.80	**117**	230	11.12	**24**	101	4.88	**57**	52	2.51	**79**	29	4.08	**54**	**331**
240253037003	3,072	1,128	440	14.32	**42**	310	10.09	**48**	151	4.92	**56**	70	2.28	**85**	13	1.15	**105**	**336**

Appendix A: HARFORD PERCENTAGE RANKING

Census Block Group ID	Total Population	Total Households	Elderly (65+)	Elderly %	Elderly % Ranking	Youth (12 to 17)	Youth %	Youth % Ranking	Disabled	Disabled %	Disabled % Ranking	Below Poverty	Below Poverty %	Below Poverty % Ranking	Autoless Households	Autoless Households %	Autoless Households % Ranking	Total Percentage Ranking
240253032025	2,151	914	319	14.83	**38**	133	6.18	**127**	161	7.48	**26**	12	0.56	**123**	89	9.74	**23**	**337**
240253033001	2,658	884	275	10.35	**81**	306	11.51	**19**	126	4.74	**62**	58	2.18	**91**	19	2.15	**86**	**339**
240253013023	2,339	903	85	3.63	**132**	183	7.82	**100**	90	3.85	**78**	346	14.79	**11**	102	11.30	**21**	**342**
240253031005	699	256	102	14.59	**41**	66	9.44	**61**	0	0.00	**134**	36	5.15	**41**	8	3.13	**67**	**344**
240253028012	594	259	129	21.72	**8**	32	5.39	**132**	52	8.75	**18**	9	1.52	**104**	6	2.32	**83**	**345**
240253014011	1,510	558	98	6.49	**109**	137	9.07	**76**	41	2.72	**100**	90	5.96	**36**	49	8.78	**25**	**346**
240253063002	153	62	27	17.65	**22**	13	8.50	**92**	6	3.92	**75**	7	4.58	**48**	0	0.00	**112**	**349**
240253017011	866	330	89	10.28	**82**	74	8.55	**90**	89	10.28	**9**	21	2.42	**81**	7	2.12	**88**	**350**
240253041001	969	363	104	10.73	**73**	91	9.39	**63**	60	6.19	**41**	14	1.44	**106**	11	3.03	**68**	**351**
240253034003	1,339	505	236	17.63	**23**	112	8.36	**95**	89	6.65	**33**	24	1.79	**99**	7	1.39	**102**	**352**
240253028011	1,316	534	146	11.09	**69**	120	9.12	**73**	50	3.80	**81**	115	8.74	**26**	7	1.31	**104**	**353**
240253028022	421	173	88	20.90	**9**	29	6.89	**122**	33	7.84	**23**	0	0.00	**130**	5	2.89	**71**	**355**
240253041005	1,909	648	193	10.11	**85**	196	10.27	**46**	52	2.72	**99**	42	2.20	**89**	38	5.86	**40**	**359**
240253041002	1,708	591	171	10.01	**86**	204	11.94	**13**	34	1.99	**110**	67	3.92	**60**	12	2.03	**90**	**359**
240253038005	2,285	820	147	6.43	**110**	301	13.17	**2**	69	3.02	**93**	68	2.98	**71**	18	2.20	**84**	**360**
240253031001	657	252	79	12.02	**61**	58	8.83	**84**	18	2.74	**97**	21	3.20	**67**	9	3.57	**60**	**369**
240253042021	3,209	1,082	299	9.32	**90**	383	11.94	**14**	103	3.21	**91**	39	1.22	**110**	35	3.23	**64**	**369**
240253036021	1,869	669	308	16.48	**28**	205	10.97	**26**	50	2.68	**101**	27	1.44	**107**	7	1.05	**107**	**369**
240253011022	835	312	103	12.34	**56**	73	8.74	**89**	40	4.79	**61**	15	1.80	**98**	10	3.21	**66**	**370**
240253042024	1,331	444	110	8.26	**98**	161	12.10	**11**	76	5.71	**46**	5	0.38	**126**	8	1.80	**93**	**374**
240253041003	2,562	885	269	10.50	**78**	278	10.85	**33**	141	5.50	**49**	51	1.99	**93**	0	0.00	**123**	**376**
240253042012	2,493	864	224	8.99	**93**	274	10.99	**25**	64	2.57	**102**	76	3.05	**70**	15	1.74	**94**	**384**
240253017022	2,359	924	212	8.99	**92**	225	9.54	**58**	81	3.43	**87**	132	5.60	**40**	0	0.00	**109**	**386**
240253011033	2,236	727	90	4.03	**128**	290	12.97	**5**	74	3.31	**88**	24	1.07	**111**	28	3.85	**57**	**389**
240253012012	1,129	445	147	13.02	**48**	85	7.53	**114**	79	7.00	**31**	15	1.33	**109**	9	2.02	**91**	**393**
240253042022	740	270	74	10.00	**87**	65	8.78	**87**	37	5.00	**53**	31	4.19	**55**	0	0.00	**115**	**397**
240253011021	925	331	107	11.57	**67**	96	10.38	**43**	60	6.49	**37**	7	0.76	**119**	0	0.00	**131**	**397**
240253014021	774	272	94	12.14	**59**	79	10.21	**47**	10	1.29	**124**	17	2.20	**90**	7	2.57	**78**	**398**
240253016021	1,633	636	197	12.06	**60**	151	9.25	**69**	28	1.71	**117**	46	2.82	**74**	16	2.52	**80**	**400**
240253033004	861	328	143	16.61	**27**	80	9.29	**65**	19	2.21	**109**	15	1.74	**101**	5	1.52	**99**	**401**
240253013013	637	274	116	18.21	**15**	37	5.81	**129**	0	0.00	**139**	21	3.30	**66**	10	3.65	**58**	**407**
240253029024	27	12	7	25.93	**3**	1	3.70	**139**	4	14.81	**3**	0	0.00	**128**	0	0.00	**135**	**408**
240253032013	1,594	519	118	7.40	**105**	171	10.73	**35**	62	3.89	77	12	0.75	**120**	14	2.70	**75**	**412**
240253042011	866	331	118	13.63	**46**	80	9.24	**71**	22	2.54	**103**	14	1.62	**103**	7	2.11	**89**	**412**
240253064002	4,118	1,468	318	7.72	**102**	382	9.28	**67**	179	4.35	**69**	113	2.74	**75**	22	1.50	**100**	**413**
240253032021	1,114	383	90	8.08	**99**	111	9.96	**51**	25	2.24	**108**	54	4.85	**45**	0	0.00	**111**	**414**
240253031004	1,754	595	163	9.29	**91**	191	10.89	**31**	58	3.31	**89**	0	0.00	**131**	17	2.86	**74**	**416**
240253042015	1,171	403	146	12.47	**52**	111	9.48	**60**	28	2.39	**105**	30	2.56	**78**	0	0.00	**121**	**416**
240253011031	1,397	533	108	7.73	**101**	108	7.73	**106**	45	3.22	**90**	62	4.44	**51**	16	3.00	**69**	**417**
240253038007	1,018	320	56	5.50	**119**	134	13.16	**3**	20	1.96	**112**	35	3.44	**65**	0	0.00	**118**	**417**
240253035001	3,466	1,164	178	5.14	**121**	446	12.87	**6**	41	1.18	**128**	131	3.78	**62**	17	1.46	**101**	**418**
240253032024	2,485	800	157	6.32	**112**	325	13.08	**4**	103	4.14	**73**	43	1.73	**102**	0	0.00	**127**	**418**
240253033002	721	263	86	11.93	**63**	72	9.99	**49**	0	0.00	**133**	29	4.02	**58**	0	0.00	**116**	**419**
240253017021	2,600	1,084	101	3.88	**129**	181	6.96	**120**	100	3.85	**79**	154	5.92	**37**	42	3.87	**56**	**421**
240253037002	496	204	74	14.92	**37**	36	7.26	**116**	21	4.23	**72**	13	2.62	**77**	0	0.00	**120**	**422**
240253051002	1,813	691	215	11.86	**64**	165	9.10	**74**	23	1.27	**126**	14	0.77	**118**	38	5.50	**44**	**426**
240253032014	1,340	495	96	7.16	**107**	100	7.46	**115**	21	1.57	**121**	69	5.15	**42**	28	5.66	**43**	**428**
240253025001	2,813	882	7	0.25	**138**	313	11.13	**23**	42	1.49	**122**	158	5.62	**39**	4	0.45	**108**	**430**
240253042023	1,050	339	76	7.24	**106**	113	10.76	**34**	41	3.90	**76**	20	1.90	**95**	0	0.00	**125**	**436**
240253011032	2,566	823	85	3.31	**135**	279	10.87	**32**	76	2.96	**94**	54	2.10	**92**	18	2.19	**85**	**438**
240253011034	1,966	664	86	4.37	**126**	204	10.38	**44**	185	9.41	**14**	13	0.66	**122**	0	0.00	**133**	**439**
240253017012	2,564	931	183	7.14	**108**	198	7.72	**107**	105	4.10	**74**	101	3.94	**59**	18	1.93	**92**	**440**
240253038006	335	144	84	25.07	**4**	21	6.27	**126**	0	0.00	**138**	0	0.00	**139**	9	6.25	**37**	**444**
240253021002	875	318	107	12.23	**58**	68	7.77	**105**	33	3.77	**83**	22	2.51	**80**	0	0.00	**122**	**448**
240253042013	994	347	87	8.75	**96**	105	10.56	**40**	16	1.61	**119**	27	2.72	**76**	0	0.00	**119**	**450**
240253028013	1,350	497	149	11.04	**70**	133	9.85	**53**	38	2.81	**96**	20	1.48	**105**	0	0.00	**128**	**452**
240253036042	2,021	675	95	4.70	**123**	228	11.28	**20**	6	0.30	**131**	9	0.45	**124**	27	4.00	**55**	**453**
240253032011	729	241	70	9.60	**88**	87	11.93	**15**	17	2.33	**106**	6	0.82	**117**	0	0.00	**130**	**456**

Appendix A: HARFORD PERCENTAGE RANKING

Census Block Group ID	Total Population	Total Households	Elderly (65+)	Elderly %	Elderly % Ranking	Youth (12 to 17)	Youth %	Youth % Ranking	Disabled	Disabled %	Disabled % Ranking	Below Poverty	Below Poverty %	Below Poverty % Ranking	Autoless Households	Autoless Households %	Autoless Households % Ranking	Total Percentage Ranking
240253034002	748	281	135	18.05	**18**	60	8.02	**99**	12	1.60	**120**	0	0.00	**134**	6	2.14	**87**	**458**
240253014014	1,392	590	112	8.05	**100**	105	7.54	**113**	34	2.44	**104**	41	2.95	**73**	17	2.88	**73**	**463**
240253021001	1,206	441	137	11.36	**68**	112	9.29	**66**	24	1.99	**111**	23	1.91	**94**	0	0.00	**124**	**463**
240253032012	802	284	86	10.72	**74**	74	9.23	**72**	9	1.12	**129**	11	1.37	**108**	7	2.46	**82**	**465**
240253031003	1,648	538	92	5.58	**118**	197	11.95	**12**	21	1.27	**125**	16	0.97	**112**	9	1.67	**98**	**465**
240253031002	3,009	1,105	270	8.97	**94**	243	8.08	**98**	114	3.79	**82**	27	0.90	**115**	28	2.53	**79**	**468**
240253036031	3,958	1,255	185	4.67	**125**	433	10.94	**27**	49	1.24	**127**	69	1.74	**100**	21	1.67	**97**	**476**
240253017013	3,592	1,409	194	5.40	**120**	240	6.68	**123**	164	4.57	**65**	67	1.87	**96**	37	2.63	**76**	**480**
240253012011	938	369	176	18.76	**14**	73	7.78	**102**	17	1.81	**114**	7	0.75	**121**	0	0.00	**132**	**483**
240253032023	1,045	344	78	7.46	**104**	132	12.63	**9**	7	0.67	**130**	10	0.96	**113**	0	0.00	**129**	**485**
240253038001	1,119	386	130	11.62	**65**	46	4.11	**138**	26	2.32	**107**	0	0.00	**132**	19	4.92	**48**	**490**
240253012021	4,295	1,745	383	8.92	**95**	324	7.54	**112**	135	3.14	**92**	41	0.95	**114**	45	2.58	**77**	**490**
240253012032	4,369	1,742	268	6.13	**115**	199	4.55	**136**	129	2.95	**95**	100	2.29	**84**	60	3.44	**63**	**493**
240253013021	1,857	649	59	3.18	**136**	168	9.05	77	65	3.50	**85**	8	0.43	**125**	19	2.93	**70**	**493**
240253035002	192	79	50	26.04	**2**	17	8.85	**82**	0	0.00	**136**	0	0.00	**137**	0	0.00	**139**	**496**
240253016015	33	20	6	18.18	**16**	3	9.09	**75**	0	0.00	**135**	0	0.00	**136**	0	0.00	**138**	**500**
240253015001	864	255	1	0.12	**139**	102	11.81	**16**	12	1.39	**123**	16	1.85	**97**	0	0.00	**126**	**501**
240253036032	1,851	570	69	3.73	**131**	238	12.86	7	33	1.78	**115**	0	0.00	**133**	0	0.00	**136**	**522**
240253012031	2,600	1,011	97	3.73	**130**	138	5.31	**133**	51	1.96	**113**	80	3.08	**69**	17	1.68	**96**	**541**
240253036043	207	63	5	2.42	**137**	30	14.49	**1**	0	0.00	**132**	0	0.00	**135**	0	0.00	**137**	**542**
240253011023	909	315	57	6.27	**113**	71	7.81	**101**	0	0.00	**137**	0	0.00	**138**	11	3.49	**62**	**551**
240253011041	3,388	1,073	117	3.45	**134**	303	8.94	**80**	55	1.62	**118**	3	0.09	**127**	0	0.00	**134**	**593**
240253025002	185	16	0	0.00	**140**	5	2.70	**140**	0	0.00	**140**	0	0.00	**140**	0	0.00	**140**	**700**
240253025003	118	4	0	0.00	**141**	3	2.54	**141**	0	0.00	**141**	0	0.00	**141**	0	0.00	**141**	**705**
240253029013	46	47	0	0.00	**142**	0	0.00	**142**	0	0.00	**142**	0	0.00	**142**	0	0.00	**142**	**710**

Appendix A: HARFORD DENSITY RANKING

2000 Census Block Group ID	Area (sq.mi)	Elderly (65+)	Elderly Density	Elderly Density Ranking	Youth (12 to 17)	Youth Density	Youth Density Ranking	Disabled	Disabled Density	Disabled Density Ranking	Below Poverty	Below Poverty Density	Below Poverty Density Ranking	Autoless Households	Autoless Households Density	Autoless Households Density Ranking	Total Density Ranking
240253061003	0.33	439	1,343.74	**1**	125	382.62	**18**	148	453.02	**4**	278	850.94	**6**	213	651.98	**2**	**31**
240253062002	0.17	117	695.69	**6**	80	475.69	**14**	53	315.14	**10**	149	885.96	**4**	67	398.39	**6**	**40**
240253013022	0.33	122	370.23	**20**	281	852.73	**2**	130	394.50	**6**	310	940.74	**3**	100	303.46	**10**	**41**
240253029022	0.28	161	568.76	**10**	146	515.77	**11**	86	303.81	**11**	237	837.24	**7**	118	416.85	**4**	**43**
240253062001	0.20	221	1,107.33	**3**	69	345.73	**23**	79	395.83	**5**	121	606.28	**10**	106	531.12	**3**	**44**
240253016014	0.32	79	248.60	**42**	239	752.10	**4**	116	365.04	**7**	569	1,790.58	**1**	216	679.73	**1**	**55**
240253061002	0.14	102	729.44	**4**	69	493.45	**12**	30	214.54	**21**	53	379.02	**14**	39	278.90	**12**	**63**
240253038004	0.33	405	1,242.25	**2**	58	177.90	**49**	148	453.96	**3**	130	398.75	**13**	133	407.95	**5**	**72**
240253013023	0.33	85	257.42	**39**	183	554.21	**9**	90	272.56	**13**	346	1,047.85	**2**	102	308.90	**9**	**72**
240253038003	0.27	155	566.91	**11**	88	321.86	**25**	89	325.52	**8**	60	219.45	**22**	82	299.92	**11**	**77**
240253029021	0.22	133	596.43	**9**	69	309.42	**27**	44	197.31	**27**	67	300.46	**20**	82	367.72	**7**	**90**
240253016012	0.36	66	183.35	**47**	154	427.81	**15**	104	288.91	**12**	314	872.28	**5**	77	213.90	**14**	**93**
240253038005	0.33	147	447.52	**16**	301	916.35	**1**	69	210.06	**22**	68	207.02	**23**	18	54.80	**35**	**97**
240253014012	0.69	265	383.53	**19**	230	332.87	**24**	176	254.72	**15**	216	312.61	**17**	53	76.71	**28**	**103**
240253014011	0.28	98	350.16	**22**	137	489.51	**13**	41	146.50	**36**	90	321.58	**16**	49	175.08	**17**	**104**
240253029023	0.72	251	348.14	**23**	256	355.08	**22**	183	253.82	**16**	239	331.50	**15**	55	76.29	**29**	**105**
240253016016	0.29	87	300.51	**32**	159	549.20	**10**	152	525.02	**2**	44	151.98	**28**	16	55.27	**34**	**106**
240253029011	0.32	106	335.24	**27**	65	205.57	**41**	61	192.92	**28**	218	689.46	**9**	72	227.71	**13**	**118**
240253036041	1.05	521	496.10	**13**	391	372.31	**19**	208	198.06	**26**	198	188.54	**24**	52	49.51	**37**	**119**
240253062003	0.38	129	341.38	**25**	71	187.89	**44**	58	153.49	**34**	198	523.97	**11**	79	209.06	**15**	**129**
240253014013	0.56	280	501.85	**12**	125	224.04	**38**	131	234.79	**18**	45	80.65	**41**	67	120.09	**20**	**129**
240253039001	0.80	527	656.88	**7**	178	221.87	**40**	137	170.76	**31**	98	122.15	**32**	89	110.93	**21**	**131**
240253036022	0.57	209	369.72	**21**	219	387.41	**17**	118	208.74	**23**	48	84.91	**39**	34	60.15	**32**	**132**
240253016013	0.22	39	175.18	**48**	51	229.08	**37**	37	166.20	**32**	166	745.64	**8**	72	323.41	**8**	**133**
240253011033	0.36	90	250.21	**41**	290	806.23	**3**	74	205.73	**24**	24	66.72	**48**	28	77.84	**27**	**143**
240253028023	1.43	420	293.07	**33**	263	183.52	**47**	255	177.94	**29**	439	306.33	**18**	229	159.79	**19**	**146**
240253011042	1.07	334	312.92	**30**	144	134.91	**61**	216	202.37	**25**	201	188.31	**25**	196	183.63	**16**	**157**
240253012032	0.84	268	317.67	**29**	199	235.88	**33**	129	152.91	**35**	100	118.53	**33**	60	71.12	**30**	**160**
240253013021	0.28	59	213.72	**45**	168	608.55	**7**	65	235.45	**17**	8	28.98	**63**	19	68.82	**31**	**163**
240253016021	0.42	197	463.83	**15**	151	355.53	**21**	28	65.93	**53**	46	108.31	**34**	16	37.67	**42**	**165**
240253029012	0.67	108	160.66	**52**	137	203.80	**42**	64	95.20	**44**	345	513.21	**12**	115	171.07	**18**	**168**
240253032022	1.63	629	385.92	**18**	375	230.08	**36**	223	136.82	**37**	103	63.20	**49**	98	60.13	**33**	**173**
240253014021	0.20	94	475.43	**14**	79	399.56	**16**	10	50.58	**61**	17	85.98	**38**	7	35.40	**44**	**173**
240253011031	0.41	108	263.17	**37**	108	263.17	**30**	45	109.65	**39**	62	151.08	**29**	16	38.99	**41**	**176**
240253061004	0.45	58	129.40	**56**	78	174.03	**50**	122	272.20	**14**	135	301.20	**19**	19	42.39	**38**	**177**
240253016011	0.20	128	638.30	**8**	55	274.27	**28**	65	324.14	**9**	32	159.58	**26**	0	0.00	**109**	**180**
240253017013	0.93	194	208.51	**46**	240	257.95	**31**	164	176.27	**30**	67	72.01	**45**	37	39.77	**40**	**192**
240253028021	0.39	134	343.46	**24**	57	146.10	**57**	87	222.99	**19**	27	69.20	**47**	12	30.76	**45**	**192**
240253032024	0.47	157	336.76	**26**	325	697.12	**5**	103	220.93	**20**	43	92.23	**36**	0	0.00	**110**	**197**
240253061001	0.42	97	231.75	**44**	56	133.79	**62**	29	69.29	**52**	66	157.68	**27**	35	83.62	**24**	**209**
240253016023	1.12	118	105.11	**66**	282	251.20	**32**	119	106.00	**40**	301	268.12	**21**	21	18.71	**52**	**211**
240253011034	0.32	86	267.12	**35**	204	633.63	**6**	185	574.61	**1**	13	40.38	**58**	0	0.00	**114**	**214**
240253038002	0.88	368	417.84	**17**	77	87.43	**70**	65	73.80	**49**	45	51.10	**55**	71	80.62	**25**	**216**
240253011032	0.77	85	110.38	**63**	279	362.31	**20**	76	98.69	**43**	54	70.13	**46**	18	23.38	**48**	**220**
240253035004	1.61	427	264.50	**36**	271	167.87	**51**	105	65.04	**55**	61	37.79	**59**	140	86.72	**22**	**223**
240253035003	1.67	407	243.54	**43**	243	145.40	**58**	126	75.39	**48**	228	136.43	**31**	62	37.10	**43**	**223**
240253032025	1.05	319	304.24	**31**	133	126.85	**64**	161	153.55	**33**	12	11.44	**80**	89	84.88	**23**	**231**
240253016022	0.98	120	122.23	**61**	230	234.27	**35**	101	102.87	**42**	52	52.96	**54**	29	29.54	**46**	**238**
240253036021	0.92	308	333.47	**28**	205	221.95	**39**	50	54.14	**60**	27	29.23	**61**	7	7.58	**65**	**253**
240253017012	1.35	183	135.30	**54**	198	146.39	**56**	105	77.63	**47**	101	74.68	**44**	18	13.31	**58**	**259**
240253012031	0.91	97	106.49	**64**	138	151.50	**52**	51	55.99	**59**	80	87.82	**37**	17	18.66	**53**	**265**
240253024002	2.09	140	66.88	**76**	88	42.04	**82**	149	71.18	**50**	298	142.35	**30**	106	50.64	**36**	**274**
240253035001	1.69	178	105.12	**65**	446	263.40	**29**	41	24.21	**78**	131	77.37	**43**	17	10.04	**62**	**277**
240253012021	2.19	383	174.85	**49**	324	147.92	**55**	135	61.63	**56**	41	18.72	**67**	45	20.54	**51**	**278**
240253028012	0.49	129	262.44	**38**	32	65.10	**74**	52	105.79	**41**	9	18.31	**69**	6	12.21	**60**	**282**

Appendix A: HARFORD DENSITY RANKING

2000 Census Block Group ID	Area (sq.mi)	Elderly (65+)	Elderly Density	Elderly Density Ranking	Youth (12 to 17)	Youth Density	Youth Density Ranking	Disabled	Disabled Density	Disabled Density Ranking	Below Poverty	Below Poverty Density	Below Poverty Density Ranking	Autoless Households	Autoless Households Density	Autoless Households Density Ranking	Total Density Ranking
240253064002	2.54	318	125.45	**58**	382	150.69	**54**	179	70.61	**51**	113	44.58	**57**	22	8.68	**64**	**284**
240253014014	0.81	112	139.01	**53**	105	130.32	**63**	34	42.20	**64**	41	50.89	**56**	17	21.10	**50**	**286**
240253014022	0.96	108	112.54	**62**	226	235.49	**34**	111	115.66	**38**	76	79.19	**42**	0	0.00	**112**	**288**
240253038007	0.42	56	132.10	**55**	134	316.09	**26**	20	47.18	**62**	35	82.56	**40**	0	0.00	**111**	**294**
240253013011	2.43	302	124.51	**59**	92	37.93	**90**	158	65.14	**54**	148	61.02	**50**	55	22.68	**49**	**302**
240253036031	2.34	185	79.03	**72**	433	184.98	**46**	49	20.93	**81**	69	29.48	**60**	21	8.97	**63**	**322**
240253038001	0.46	130	283.53	**34**	46	100.33	**66**	26	56.71	**57**	0	0.00	**130**	19	41.44	**39**	**326**
240253028022	0.35	88	253.50	**40**	29	83.54	**71**	33	95.06	**45**	0	0.00	**128**	5	14.40	**56**	**340**
240253038006	0.12	84	727.85	**5**	21	181.96	**48**	0	0.00	**132**	0	0.00	**135**	9	77.98	**26**	**346**
240253017021	2.86	101	35.29	**96**	181	63.25	**75**	100	34.94	**69**	154	53.81	**53**	42	14.68	**55**	**348**
240253033001	3.46	275	79.38	**71**	306	88.33	**69**	126	36.37	**67**	58	16.74	**71**	19	5.48	**70**	**348**
240253013012	1.88	134	71.45	**74**	75	39.99	**87**	63	33.59	**70**	48	25.59	**66**	28	14.93	**54**	**351**
240253034001	1.93	242	125.52	**57**	144	74.69	**72**	109	56.53	**58**	56	29.05	**62**	0	0.00	**115**	**364**
240253028011	2.13	146	68.39	**75**	120	56.21	**78**	50	23.42	**80**	115	53.87	**52**	7	3.28	**80**	**365**
240253017022	2.31	212	91.77	**68**	225	97.40	**68**	81	35.06	**68**	132	57.14	**51**	0	0.00	**113**	**368**
240253036032	0.42	69	166.16	**51**	238	573.12	**8**	33	79.47	**46**	0	0.00	**129**	0	0.00	**135**	**369**
240253036042	1.14	95	83.08	**69**	228	199.40	**43**	6	5.25	**119**	9	7.87	**97**	27	23.61	**47**	**375**
240253031003	1.41	92	65.42	**78**	197	140.09	**59**	21	14.93	**89**	16	11.38	**81**	9	6.40	**69**	**376**
240253025001	1.69	7	4.15	**138**	313	185.58	**45**	42	24.90	**76**	158	93.68	**35**	4	2.37	**90**	**384**
240253028013	1.20	149	123.72	**60**	133	110.43	**65**	38	31.55	**72**	20	16.61	**72**	0	0.00	**116**	**385**
240253034003	2.44	236	96.54	**67**	112	45.82	**79**	89	36.41	**66**	24	9.82	**91**	7	2.86	**86**	**389**
240253032014	2.43	96	39.46	**91**	100	41.10	**84**	21	8.63	**102**	69	28.36	**64**	28	11.51	**61**	**402**
240253052003	2.69	81	30.14	**102**	79	29.40	**98**	66	24.56	**77**	49	18.23	**70**	20	7.44	**66**	**413**
240253033003	2.80	187	66.75	**77**	164	58.54	**76**	125	44.62	**63**	13	4.64	**104**	6	2.14	**95**	**415**
240253037001	1.84	75	40.74	**89**	41	22.27	**106**	60	32.59	**71**	9	4.89	**103**	25	13.58	**57**	**426**
240253042023	1.52	76	50.05	**84**	113	74.42	**73**	41	27.00	**75**	20	13.17	**77**	0	0.00	**119**	**428**
240253017011	2.37	89	37.50	**93**	74	31.18	**96**	89	37.50	**65**	21	8.85	**94**	7	2.95	**85**	**433**
240253022001	6.65	325	48.88	**85**	155	23.31	**105**	90	13.54	**92**	83	12.48	**79**	26	3.91	**78**	**439**
240253032023	0.95	78	82.39	**70**	132	139.42	**60**	7	7.39	**106**	10	10.56	**89**	0	0.00	**122**	**447**
240253037003	7.90	440	55.70	**82**	310	39.24	**88**	151	19.11	**84**	70	8.86	**93**	13	1.65	**102**	**449**
240253063001	3.29	134	40.72	**90**	56	17.02	**113**	34	10.33	**96**	37	11.24	**85**	23	6.99	**67**	**451**
240253024003	4.24	130	30.67	**101**	119	28.08	**100**	73	17.22	**86**	120	28.31	**65**	7	1.65	**101**	**453**
240253064001	1.61	91	56.64	**81**	33	20.54	**108**	45	28.01	**73**	22	13.69	**76**	0	0.00	**118**	**456**
240253013013	1.51	116	76.91	**73**	37	24.53	**104**	0	0.00	**137**	21	13.92	**75**	10	6.63	**68**	**457**
240253042012	6.76	224	33.15	**97**	274	40.55	**86**	64	9.47	**100**	76	11.25	**84**	15	2.22	**93**	**460**
240253053001	4.73	137	28.97	**107**	74	15.65	**117**	78	16.49	**88**	87	18.40	**68**	15	3.17	**82**	**462**
240253011041	2.00	117	58.49	**80**	303	151.47	**53**	55	27.49	**74**	3	1.50	**124**	0	0.00	**133**	**464**
240253031004	4.23	163	38.54	**92**	191	45.16	**80**	58	13.71	**90**	0	0.00	**133**	17	4.02	**76**	**471**
240253042021	10.05	299	29.75	**104**	383	38.11	**89**	103	10.25	**98**	39	3.88	**107**	35	3.48	**79**	**477**
240253024001	2.01	60	29.80	**103**	28	13.91	**122**	10	4.97	**120**	26	12.91	**78**	26	12.91	**59**	**482**
240253042014	1.84	43	23.39	**115**	55	29.91	**97**	8	4.35	**122**	27	14.68	**74**	8	4.35	**74**	**482**
240253052002	6.92	197	28.46	**108**	98	14.16	**121**	94	13.58	**91**	72	10.40	**90**	28	4.04	**75**	**485**
240253012012	4.07	147	36.11	**94**	85	20.88	**107**	79	19.41	**83**	15	3.69	**110**	9	2.21	**94**	**488**
240253042024	3.88	110	28.37	**109**	161	41.53	**83**	76	19.60	**82**	5	1.29	**125**	8	2.06	**96**	**495**
240253033004	2.79	143	51.18	**83**	80	28.63	**99**	19	6.80	**112**	15	5.37	**101**	5	1.79	**100**	**495**
240253042013	2.46	87	35.40	**95**	105	42.73	**81**	16	6.51	**114**	27	10.99	**87**	0	0.00	**121**	**498**
240253031002	9.17	270	29.44	**105**	243	26.49	**103**	114	12.43	**93**	27	2.94	**114**	28	3.05	**84**	**499**
240253011021	2.54	107	42.17	**87**	96	37.83	**91**	60	23.65	**79**	7	2.76	**116**	0	0.00	**129**	**502**
240253022003	3.17	82	25.90	**111**	35	11.06	**128**	22	6.95	**111**	36	11.37	**82**	14	4.42	**73**	**505**
240253032013	5.03	118	23.47	**114**	171	34.01	**92**	62	12.33	**94**	12	2.39	**119**	14	2.78	**87**	**506**
240253042015	3.48	146	41.94	**88**	111	31.89	**94**	28	8.04	**104**	30	8.62	**96**	0	0.00	**124**	**506**
240253032021	3.56	90	25.29	**113**	111	31.19	**95**	25	7.03	**110**	54	15.17	**73**	0	0.00	**117**	**508**
240253022002	1.16	38	32.81	**99**	13	11.23	**126**	22	19.00	**85**	0	0.00	**131**	6	5.18	**71**	**512**
240253041005	9.59	193	20.12	**120**	196	20.44	**109**	52	5.42	**117**	42	4.38	**105**	38	3.96	**77**	**528**
240253032011	2.13	70	32.81	**100**	87	40.78	**85**	17	7.97	**105**	6	2.81	**115**	0	0.00	**128**	**533**

Appendix A: HARFORD DENSITY RANKING

2000 Census Block Group ID	Area (sq.mi)	Elderly (65+)	Elderly Density	Elderly Density Ranking	Youth (12 to 17)	Youth Density	Youth Density Ranking	Disabled	Disabled Density	Disabled Density Ranking	Below Poverty	Below Poverty Density	Below Poverty Density Ranking	Autoless Households	Autoless Households Density	Autoless Households Density Ranking	Total Density Ranking
240253035002	0.29	50	170.63	**50**	17	58.01	**77**	0	0.00	**134**	0	0.00	**137**	0	0.00	**138**	**536**
240253053002	11.24	182	16.20	**126**	112	9.97	**133**	93	8.28	**103**	119	10.59	**88**	29	2.58	**88**	**538**
240253011022	4.43	103	23.23	**116**	73	16.46	**116**	40	9.02	**101**	15	3.38	**113**	10	2.26	**92**	**538**
240253033002	2.61	86	33.01	**98**	72	27.63	**101**	0	0.00	**136**	29	11.13	**86**	0	0.00	**120**	**541**
240253052001	6.20	83	13.39	**131**	69	11.13	**127**	68	10.97	**95**	24	3.87	**108**	20	3.23	**81**	**542**
240253051003	9.05	143	15.80	**127**	152	16.80	**115**	61	6.74	**113**	53	5.86	**99**	22	2.43	**89**	**543**
240253042022	3.58	74	20.66	**118**	65	18.14	**112**	37	10.33	**97**	31	8.65	**95**	0	0.00	**123**	**545**
240253012011	2.73	176	64.43	**79**	73	26.72	**102**	17	6.22	**115**	7	2.56	**118**	0	0.00	**131**	**545**
240253011023	2.22	57	25.68	**112**	71	31.98	**93**	0	0.00	**135**	0	0.00	**138**	11	4.95	**72**	**550**
240253031005	3.90	102	26.17	**110**	66	16.94	**114**	0	0.00	**138**	36	9.24	**92**	8	2.05	**97**	**551**
240253031001	3.92	79	20.13	**119**	58	14.78	**119**	18	4.59	**121**	21	5.35	**102**	9	2.29	**91**	**552**
240253034002	3.03	135	44.58	**86**	60	19.81	**110**	12	3.96	**123**	0	0.00	**134**	6	1.98	**99**	**552**
240253051001	14.78	217	14.68	**128**	205	13.87	**123**	109	7.37	**107**	81	5.48	**100**	30	2.03	**98**	**556**
240253051004	12.85	183	14.24	**129**	186	14.47	**120**	94	7.31	**108**	79	6.15	**98**	10	0.78	**107**	**562**
240253041003	14.31	269	18.80	**121**	278	19.42	**111**	141	9.85	**99**	51	3.56	**111**	0	0.00	**126**	**568**
240253041004	8.48	96	11.32	**134**	68	8.02	**135**	27	3.18	**124**	96	11.32	**83**	10	1.18	**105**	**581**
240253051002	12.32	215	17.44	**122**	165	13.39	**124**	23	1.87	**129**	14	1.14	**126**	38	3.08	**83**	**584**
240253032012	4.99	86	17.25	**123**	74	14.84	**118**	9	1.81	**130**	11	2.21	**120**	7	1.40	**103**	**594**
240253041001	8.39	104	12.40	**133**	91	10.85	**130**	60	7.16	**109**	14	1.67	**122**	11	1.31	**104**	**598**
240253037002	3.40	74	21.79	**117**	36	10.60	**131**	21	6.18	**116**	13	3.83	**109**	0	0.00	**125**	**598**
240253036043	0.31	5	16.36	**125**	30	98.18	**67**	0	0.00	**133**	0	0.00	**136**	0	0.00	**137**	**598**
240253029024	0.24	7	29.41	**106**	1	4.20	**139**	4	16.80	**87**	0	0.00	**132**	0	0.00	**136**	**600**
240253041002	16.58	171	10.31	**136**	204	12.30	**125**	34	2.05	**128**	67	4.04	**106**	12	0.72	**108**	**603**
240253021002	6.26	107	17.08	**124**	68	10.86	**129**	33	5.27	**118**	22	3.51	**112**	0	0.00	**127**	**610**
240253042011	8.46	118	13.95	**130**	80	9.46	**134**	22	2.60	**125**	14	1.65	**123**	7	0.83	**106**	**618**
240253021001	11.02	137	12.43	**132**	112	10.16	**132**	24	2.18	**127**	23	2.09	**121**	0	0.00	**132**	**644**
240253063002	2.56	27	10.53	**135**	13	5.07	**137**	6	2.34	**126**	7	2.73	**117**	0	0.00	**130**	**645**
240253015001	16.32	1	0.06	**139**	102	6.25	**136**	12	0.74	**131**	16	0.98	**127**	0	0.00	**134**	**667**
240253016015	0.66	6	9.15	**137**	3	4.57	**138**	0	0.00	**139**	0	0.00	**139**	0	0.00	**139**	**692**
240253025002	9.24	0	0.00	**140**	5	0.54	**140**	0	0.00	**140**	0	0.00	**140**	0	0.00	**140**	**700**
240253025003	32.99	0	0.00	**141**	3	0.09	**141**	0	0.00	**141**	0	0.00	**141**	0	0.00	**141**	**705**
240253029013	0.63	0	0.00	**142**	0	0.00	**142**	0	0.00	**142**	0	0.00	**142**	0	0.00	**142**	**710**

APPENDIX B

HARFORD COUNTY
MAJOR TRIP GENERATORS

Table B-1: HARFORD COUNTY MAJOR TRIP GENERATORS

Type	Name	Address	City
Senior Housing	Burton Manor	601 Cornell St	Aberdeen
Senior Housing	Catholic Charities Senior Housing	901 Barnette Ln	Aberdeen
Senior Housing	Corner House Apartments	300 S Stokes St	Havre de Grace
Senior Housing	Fairbrooke Senior Apartments	700 W Bel Air Ave	Aberdeen
Senior Housing	Friendship Village Apartments	500 Ramblewood Dr	Abingdon
Senior Housing	Harborside Apartments	626 Towne Center Dr	Joppatowne
Senior Housing	Harford Senior Housing	300 Sunflower Dr	Bel Air
Senior Housing	Lafayette Project	515 Warren St	Havre de Grace
Senior Housing	Park View at Box Hill	20 Box Hill South Pkwy	Abingdon
Senior Housing	Park View at Bel Air	555 S Atwood Rd	Bel Air
Senior Housing	Saint John's Towers	505 Congress Ave	Havre de Grace
Senior Housing	Slate Ridge Apartment Building	1557 Main St	Whiteford
Senior Housing	Somerset Manor Apartments	101 Stansbury Ct	Havre de Grace
Senior Housing	The Graw	100 Revolution St	Havre de Grace
Senior Housing	Woodsdale Senior Housing	3801 Memory Ln	Abingdon
Subsidized Housing	Baldwin Manor	4 Taft St	Aberdeen
Subsidized Housing	Burton Manor	601 Cornell St	Aberdeen
Subsidized Housing	Old Post Washington Park Apts	101 Hanover St	Aberdeen
Subsidized Housing	Harborside Village Apts	600 Harborside Dr	Joppatowne
Subsidized Housing	Cedar Grove Apartments	Cedar Dr and Edgewood Rd	Edgewood
Subsidized Housing	Perrywood Garden Apartments	301 Mayberry Dr	Aberdeen
Subsidized Housing	Somerset Manor Apartments	101 Stansbury Ct	Havre de Grace
Subsidized Housing	Village at Lakeview	1881 Edgewater Dr	Edgewood
Subsidized Housing	Washington Park Apartments	101 Hanover St	Aberdeen
Subsidized Housing	Windsor Valley Apartments	525 Meadowood Dr	Edgewood
Multi-unit Housing	100 Revolution	100 Revolution St	Havre de Grace
Multi-unit Housing	Aberdeen Village Apartments	28 E Bel Air Ave	Aberdeen
Multi-unit Housing	AJ Fair Apts	100 Saint John St	Havre de Grace
Multi-unit Housing	Alpine Apts	5908 Saint Moritz Dr	Temple Hills
Multi-unit Housing	Annhurst Apts	4600 Annhurst Dr	Belcamp
Multi-unit Housing	Arbor View Apts	3466 Brinkley Rd	Temple Hills
Multi-unit Housing	Arborview at Riverside	1300 Liriope Ct	Belcamp
Multi-unit Housing	Baldwin Manor	4 Taft St	Aberdeen
Multi-unit Housing	Bowman's Apts	723 Carsins Run Rd	Aberdeen
Multi-unit Housing	Brinkley House	3051 Brinkley Rd	Temple Hills
Multi-unit Housing	Burton Manor Apts	601 Cornell St	Aberdeen
Multi-unit Housing	Calvert's Walk	200 Foxhall Dr	Bel Air
Multi-unit Housing	Cedar Ridge Apts	4637 Dallas Pl	Temple Hills
Multi-unit Housing	Country Village Apartments	201 Idlewild St	Bel Air
Multi-unit Housing	Cranberry Run	300 Stevens Cir	Aberdeen
Multi-unit Housing	Dennis Apts	229 N Union Ave	Havre de Grace
Multi-unit Housing	Dominion Constant Friendship	499 Crisfield Dr	Abingdon
Multi-unit Housing	Edgewood Park	611 Edgewood Rd	Edgewood
Multi-unit Housing	Emerald Woods at Durham Manor	2 Lockhart Cir	Forest Hill
Multi-unit Housing	English Country Manor Gatehouse	600 Squire Ln	Bel Air
Multi-unit Housing	Fairbrooke Apts	700 W Bel Air Ave	Aberdeen
Multi-unit Housing	Forsythia Court Apts	300 Forsythia Dr	Abingdon
Multi-unit Housing	Fox Run at Ashby Place	1600 Ashby Square	Edgewood
Multi-unit Housing	Friendship Village Apts	500 Ramblewood Dr	Abingdon
Multi-unit Housing	Harborside Village Apts	626 Towne Center Dr	Joppa
Multi-unit Housing	Harford Commons	2033 Armstrong St	Edgewood
Multi-unit Housing	Harford Village North Apts	1610 Michelle Ct	Forest Hill
Multi-unit Housing	Harford Village South Apts	800 Candlelight Dr	Bel Air
Multi-unit Housing	Heather Hill Apts	5837 Fisher Rd	Temple Hills
Multi-unit Housing	Heritage Woods	700 Heritage Ln	Bel Air
Multi-unit Housing	Hess of Harford	15 Aberdeen Ave	Aberdeen
Multi-unit Housing	Lynnhill Condominium	3103 Good Hope Ave	Temple Hills
Multi-unit Housing	Maplewood Park Apts	4513 23rd Pkwy	Temple Hills
Multi-unit Housing	Marlborough House Apts	3001 Branch Ave	Temple Hills
Multi-unit Housing	Marlow Heights Apts	4223 28th Ave	Temple Hills
Multi-unit Housing	Marlow Plaza Apts	2900 Saint Clair Dr	Temple Hills
Multi-unit Housing	Meadowood Associates Townhouses	1755 Dearwood Ct	Edgewood
Multi-unit Housing	Oxon Park Apts	2603 Southern Ave	Temple Hills
Multi-unit Housing	Perkins Place Apts	4460 Perkins Cir	Belcamp
Multi-unit Housing	Perrywood Garden Apts	301 Mayberry Dr	Aberdeen
Multi-unit Housing	Raleigh Court Apts	4431 23rd Pkwy	Temple Hills
Multi-unit Housing	Seasons at Bel Air	955 Sablewood Rd	Bel Air
Multi-unit Housing	Seven Oaks Townhomes	802 Kingston Ct	Edgewood
Multi-unit Housing	Shevet Manor Apts	4545 Wheeler Rd	Temple Hills
Multi-unit Housing	Sommerset Manor	101 Stansbury Ct	Havre de Grace
Multi-unit Housing	Terrace Garden Apts	706 Pulaski Hwy	Havre de Grace
Multi-unit Housing	The Village at Irvins Choice	400 Aggies Circle	Bel Air
Multi-unit Housing	Towne Plaza Apts	311 Trimble Rd	Joppa
Multi-unit Housing	Tranquility Place Townhomes	237 Wilson St	Havre de Grace
Multi-unit Housing	Village at Lakeview Apts	833 Fisherman Ln	Edgewood

Table B-1: HARFORD COUNTY MAJOR TRIP GENERATORS

Type	Name	Address	City
Multi-unit Housing	Wakefield Manor Apts	699 Red Oak Dr	Bel Air
Multi-unit Housing	Warwick Apts	1001 Warwick Dr	Aberdeen
Multi-unit Housing	Washington Park Apts	101 Hanover St	Aberdeen
Multi-unit Housing	Windsor Valley Apts	525 Meadowood Dr	Edgewood
Multi-unit Housing	Woodsdale Apartments	102 Waldon Rd	Abingdon
Major Employer	Aberdeen Proving Ground	Plater St and Palm St	Aberdeen
Major Employer	Aberdeen Proving Ground Federal Credit Union	1200 Agora Dr	Bel Air
Major Employer	Battelle Eastern Science & Technology Center	1204 Technology Dr	Aberdeen
Major Employer	Benfield Electric	400 Hickory Dr	Aberdeen
Major Employer	Blue Dot of Maryland	125 Industry Ln	Forest Hill
Major Employer	Bottcher America	4600 Mercedes Dr	Aberdeen
Major Employer	Clorox Products Manufacturing	1319 Perryman Rd	Aberdeen
Major Employer	Collins & Aikman	1601 Clark Rd	Havre de Grace
Major Employer	Constar	1801 Clark Rd	Havre de Grace
Major Employer	Custom Direct, Inc	1802 Fashion Ct	Joppa
Major Employer	Cytec Engineered Materials	1300 Revolution St	Havre de Grace
Major Employer	EAI Corporation	1308 Continental Dr	Abingdon
Major Employer	Frito-Lay, Inc	800 Hickory Dr	Aberdeen
Major Employer	Harford Community College	1201 Technology Dr	Aberdeen
Major Employer	Harford County Government	220 S Main St	Bel Air
Major Employer	Harford County Public Schools	102 S Hickory Ave	Bel Air
Major Employer	Huber Engineered Materials	907 Revolution St	Havre de Grace
Major Employer	Independent Can Company	4508 Wharf Point Ct	Belcamp
Major Employer	McCormick & Co	4607 Appliance Dr	Belcamp
Major Employer	Northrop Grumman/California Microwave	1362 Brass Mill Rd	Belcamp
Major Employer	Nutramax Laboratories, Inc	2208 Lakeside Blvd	Edgewood
Major Employer	Rite Aid MidAtlantic Distribution Center	601 Chelsea Rd	Perryman
Major Employer	SafeNet	4690 Millenium Dr	Belcamp
Major Employer	SAIC	15 S Parke St	Aberdeen
Major Employer	Saks Fifth Avenue	500 Hickory Dr	Aberdeen
Major Employer	Sephora Central Distributing Company	4622 Mercedes Dr	Belcamp
Major Employer	The May Company	600 Belair Rd	Bel Air
Major Employer	Upper Chesapeake Health System	501 S Union	Havre de Grace
Major Employer	Worthington Armstong Ventures (WAVE)	1415 Perryman Rd	Aberdeen
Industrial/Business Park	40 East Industrial Park	Ushy 40 and Loflin Rd	Aberdeen
Industrial/Business Park	Advantage Business Center	504 Advantage Way	Aberdeen
Industrial/Business Park	Box Hill Corporate center	3435 Box Hill Corporate Center Dr	Abingdon
Industrial/Business Park	Bulle Rock Corporate Park	Bulle Rock Pkwy	Havre de Grace
Industrial/Business Park	Chesapeake Industrial Park	Clark Rd	Havre de Grace
Industrial/Business Park	Cranberry Run Business Park	Sthy 7 and Perryman Rd	Aberdeen
Industrial/Business Park	Emmorton Business Park	Trimble Rd and Emmorton Rd	Edgewood
Industrial/Business Park	Enterprise Business Park	1501 Perryman Rd	Aberdeen
Industrial/Business Park	Fashion Park	3300 Fashion Way	Joppa
Industrial/Business Park	Hardee's Industrial Park	1100 Hardees Dr	Aberdeen
Industrial/Business Park	Harford Gateway	4608 Appliance Dr	Belcamp
Industrial/Business Park	HEAT Center	1201 Technology Dr	Aberdeen
Industrial/Business Park	Hickory Ridge Industrial Park	Ushy 40 and Sthy 715	Aberdeen
Industrial/Business Park	Joppa Commerce Center	Sthy 7 and Pauls Ln	Joppa
Industrial/Business Park	Lakeside Business Park	Lakeside Blvd and Quarry Rd	Edgewood
Industrial/Business Park	Park Avenue	2001 Emmorton Rd	Bel Air
Industrial/Business Park	Park Centre	Plumtree Rd	Bel Air
Industrial/Business Park	Perryman Industrial Park	1501 Perryman Rd	Aberdeen
Industrial/Business Park	Rock Glenn Business Park	Rock Glenn Blvd	Aberdeen
Industrial/Business Park	Water's Edge Corporate Campus	4685 Millenium Dr	Belcamp
Industrial/Business Park	William Paca Business Park	1311 Continental Dr	Abingdon
Medical Facility	Harford Memorial Hospital	501 S Union Ave	Havre de Grace
Medical Facility	Kirk US Army Health Clinic	2501 Oakington St	Aberdeen Proving Ground
Medical Facility	Upper Chesapeake Medical Center	500 Upper Chesapeake Dr	Bel Air
College/Vocational School	Harford Community College	401 Thomas Run Rd	Bel Air
College/Vocational School	Higher Education and Applied Technology Center	1201 Technology Dr	Aberdeen
High School	Aberdeen High School	251 Paradise Rd	Aberdeen
High School	Bel Air High School	100 Heighe St	Bel Air
High School	C. Milton Wright High School	1301 N Fountain Green Rd	Bel Air
High School	Edgewood High School	2415 Willoughby Beach Rd	Edgewood
High School	Fallston High School	2301 Carrs Mill Rd	Fallston
High School	Harford Technical High School	200 Thomas Run Rd	Bel Air
High School	Havre de Grace High School	700 Congress Ave	Havre de Grace
High School	John Archer School	100 Thomas Run Rd	Bel Air
High School	Joppatowne High School	555 Joppa Farm Rd	Joppa
High School	North Harford High School	211 Pylesville Rd	Pylesville
High School	Patterson Mill High School	Patterson Mill Rd and Sthy 924	Bel Air
High School	Restoration Academy High School	253 Paradise Rd	Aberdeen
Library	Aberdeen Branch	21 Franklin St	Aberdeen
Library	Abingdon Branch	2510 Tollgate Rd	Abingdon
Library	Bel Air Branch	100 E Pennsylvania Ave	Bel Air
Library	Darlington Branch	1134 Main St	Darlington
Library	Edgewood Branch	629 Edgewood Rd	Edgewood

Table B-1: HARFORD COUNTY MAJOR TRIP GENERATORS

Type	Name	Address	City
Library	Fallston Branch	1461 Fallston Rd	Fallston
Library	Havre de Grace Branch	120 N Union Ave	Havre de Grace
Library	Jarrettsville Branch	3722 Norrisville Rd	Jarrettsville
Library	Joppa Branch	655 Towne Center Dr	Joppa
Library	Norrisville Branch	5310 Norrisville Rd	White Hall
Library	Whiteford Branch	2407 Whiteford Rd	Whiteford
Human Services	American Red Cross	207 E Belcrest Pl	Bel Air
Human Services	American Red Cross-Central MD Chapter	122 S Main St	Bel Air
Human Services	Anna's House	607 N Tollgate Rd	Bel Air
Human Services	ARC-Northeastern Chesapeake Region	4513 Old Philadelphia Rd	Aberdeen
Human Services	Boys and Girls Club-Aberdeen	100 E Bel Air Ave	Aberdeen
Human Services	Boys and Girls Club-Bel Air	525 W MacPhail Rd	Bel Air
Human Services	Boys and Girls Club-Edgewood	2002 Cedar Dr	Edgewood
Human Services	Boys and Girls Club-Havre de Grace	401 Lewis Ln	Havre de Grace
Human Services	Caring Hands Inc	41 N Philadelphia Blvd	Aberdeen
Human Services	Center for family Services	1301 Continental Dr	Abingdon
Human Services	Child Care Links Resource and Referral Center	2105 Laurel Bush Rd	Bel Air
Human Services	Citizens Care Center	415 S Market St	Havre de Grace
Human Services	Facets Inc	1301 Continental Dr	Abingdon
Human Services	Family & Children's Services-Adult Day Care Services	309 Thomas Run Rd	Bel Air
Human Services	Family and Children's Services Adult Day Service	309 Thomas Run Rd	Bel Air
Human Services	Family and Children's Services of Central Maryland	44 E Gordon St	Bel Air
Human Services	Family Services Association, Grove Presbyterian Church	50 E Bel Air Ave	Aberdeen
Human Services	Friends in Self-Help (FISH) of Harford County	428 Battery Dr	Havre de Grace
Human Services	Harford County Community Action Agency	33 W Courtland St	Bel Air
Human Services	Harford County Health Department	34 N Philadelphia Blvd	Aberdeen
Human Services	Harford County Housing Agency	15 S Main St	Bel Air
Human Services	Harford County Office on Aging	145 N Hickory Ave	Bel Air
Human Services	Harford County Partnership for Families, Inc	134 Industry Ln	Forest Hill
Human Services	Harford County Women Infants & Children (WIC) & Head Start	34 N Philadelphia Blvd	Aberdeen
Human Services	Harford Family House	53 E Bel Air Ave	Aberdeen
Human Services	Head Start Maryland-Rural Development Program	349 Fountain St	Havre de Grace
Human Services	Holy Family House	53 E Bel Air Ave	Aberdeen
Human Services	Jessica Kaplin LCSW	260 Gateway Dr	Bel Air
Human Services	Legal Aid Bureau Inc: Harford County Elderly Senior Citizens La	5 N Main St	Bel Air
Human Services	Light House Ministries	803 Peppard Dr	Bel Air
Human Services	Local Soup Kitchen-Bel Air United Methodist Church	21 Linwood Ave	Bel Air
Human Services	Local Soup Kitchen-Calvary Baptist Church	206 E Courtland	Bel Air
Human Services	Local Soup Kitchen-Prince of Peace Church	2600 Willoughby Beach Rd	Edgewood
Human Services	Local Soup Kitchen-St John's Episcopal Church	114 Union Ave	Havre de Grace
Human Services	Lutheran Mission Society	531 Legion Dr	Havre de Grace
Human Services	Mason-Dixon Community Services	708 Highland Rd	Street
Human Services	Mid-Atlantic Asthma Foundation, Inc	1132 Pericles Dr	Bel Air
Human Services	Open Doors Career Center, Inc	219 W Bel Air Ave	Aberdeen
Human Services	Reruns Thrift Store	14 Aberdeen Ave	Aberdeen
Human Services	Rucha Inc	105 W Belair Ave	Aberdeen
Human Services	Salvation Army	300 Rear Seneca St	Havre de Grace
Human Services	SARC Inc (Sexual Assault, Spouse Abuse Resource Center)	18 S Main St	Bel Air
Human Services	Service Coordination System	508 Rock Spring Rd	Bel Air
Human Services	Sexual Assault/Spouse Abuse Resource Center	18 S Main St	Bel Air
Human Services	Shreffler House	224 N Main St	Bel Air
Human Services	St George's Episcopal Church's Parish House	1522 Perryman Rd	Perryman
Human Services	State Dept of Social Services	2 S Bond St	Bel Air
Human Services	State Dept of Social Services	975 Beards Hill Rd	Aberdeen
Human Services	Tabitha's House	112 Connolly Rd	Fallston
Human Services	Trinity Lutheran Church-Food Closet	1100 Old Philadelphia Rd	Joppa
Human Services	United Way of Central Maryland, Inc	108 S Bond St	Bel Air
Human Services	Uriah's Place, Inc	1837 Pulaski Hwy	Edgewood
Human Services	Wilson Ministry Center	1024 Main St	Darlington
Human Services	YMCA at Prospect Mill	101 Prospect Mill Rd	Bel Air
Human Services	YMCA Child Development Center	1311 Continental Dr	Abingdon
Human Services	Young Life-Harford County	400 S Main St	Bel Air
Senior Center	Aberdeen Senior Center	7 Franklin St	Aberdeen
Community Center	Edgewood Community Center	1980 Brookside Dr	Edgewood
Senior Center	Edgewood Senior Center	1000 Gateway Rd	Edgewood
Community/Senior Center	Havre de Grace Activities Center	351 Lewis Ln	Havre de Grace
Senior Center	Highland Senior Center	708 Highland Rd	Street
Community/Senior Center	McFaul Activities Center	525 W MacPhail Rd	Bel Air
Multi-Purpose Indoor Facility	Alice & William Longley Park	620 Long Bar Harbor Rd & Longley Rd	Abingdon
Multi-Purpose Indoor Facility	Churchville Recreation Complex	111 Glenville Rd	Churchville
Multi-Purpose Indoor Facility	Community Services Building/Aberdeen Festival Park	Howard St & Franklin St	Aberdeen
Multi-Purpose Indoor Facility	Eden Mill Park-Nature Center	1617 Eden Mill Rd	Pylesville
Multi-Purpose Indoor Facility	Edgewood Recreation and Community Center	1980 Brookside Dr	Edgewood
Multi-Purpose Indoor Facility	Emmorton Recreation and Tennis Center	2213 Old Emmorton Rd	Bel Air
Multi-Purpose Indoor Facility	Liriodendron	502 W Gordon St	Bel Air
Multi-Purpose Indoor Facility	Norrisville Recreation Complex	3840 Norrisville Road	White Hall
Multi-Purpose Indoor Facility	Rockfield Park	Route 22	Bel Air

Table B-1: HARFORD COUNTY MAJOR TRIP GENERATORS

Type	Name	Address	City
Multi-Purpose Indoor Facility	Swan Harbor Farm	401 Oakington Road	Havre de Grace
Multi-Purpose Indoor Facility	William N McFaul Activities Center	525 W. MacPhail Road	Bel Air
Shopping	Aberdeen Market Place	Beards Hill and Rt 22	Aberdeen
Shopping	Aberdeen Shopping Center	17 Aberdeen Shopping Pl	Aberdeen
Shopping	Ames Shopping Center	Gateway Dr and I40	Edgewood
Shopping	Bayside Antiques	230 N Washington St	Havre de Grace
Shopping	Bel Air Plaza	Atwood Rd and Marketplace Dr	Bel Air
Shopping	Bel Air Town Center	Manor Cir and Rt 24	Bel Air
Shopping	Bomboy's Home Made Candy	322 Market St	Havre de Grace
Shopping	Box Hill Sq	2913 Emmorton Rd	Abingdon
Shopping	Campus Hills Shopping Center	2408 Churchville Rd	Bel Air
Shopping	Constant Friendship	3470 Emmorton Rd	Abingdon
Shopping	Country Flower Shop	500 N Union Ave	Havre de Grace
Shopping	Cross Roads Station	2780 Fallston Rd	Fallston
Shopping	Edgewater Village	1845 Pulaski Hwy	Edgewood
Shopping	Edgewood Area Post Exchange	Wise Rd and Norris Rd	Aberdeen Proving Grd
Shopping	Edgewood Shopping Plaza	2290 Hanson Rd	Edgewood
Shopping	Fallston Mall	2300 Bel Air Rd	Fallston
Shopping	Festival at Bel Air	5 Bel Air South Pkwy	Bel Air
Shopping	Fountain Green Plaza	Churchville Rd and Moores Mill Rd	Bel Air
Shopping	Greenbrier	225 Brierhill Dr	Bel Air
Shopping	Harford Mall	600 Baltimore Pike	Bel Air
Shopping	Havre de Grace Plaza	400 Lewis Ln	Havre de Grace
Shopping	Hickory Village	Fountain Green Rd and Rt 1	Bel Air
Shopping	Jarrettsville Plaza	Jarrettsville Rd and Federal Hill Rd	Jarrettsville
Shopping	Moore's Candies	138 N Bond St	Bel Air
Shopping	Spenceola Antique Center	1445 Rockspring Rd	Bel Air
Shopping	Wal-Mart	401 Constant Friendship Blvd	Abingdon
Shopping	Wal-Mart	645 S Philadelphia Blvd	Aberdeen
Tourism: Landmark/Museum	Aberdeen Room Archives and Museum	18 Howard St	Aberdeen
Tourism: Landmark/Museum	Concord Point Lighthouse/O'Neil House	Concord St and Lafayette St	Havre de Grace
Tourism: Landmark/Museum	Havre de Grace Decoy Museum	215 Giles St	Havre de Grace
Tourism: Landmark/Museum	Havre de Grace Maritime Museum	100 Lafayette St	Havre de Grace
Tourism: Landmark/Museum	Hays House Museum	324 Kenmore Ave	Bel Air
Tourism: Landmark/Museum	Historic Jerusalem Mill Village/Gunpowder Falls State Park	2813 Jerusalem Rd	Kingsville
Tourism: Landmark/Museum	Liriodendron	502 W Gordon St	Bel Air
Tourism: Landmark/Museum	Steppingstone Museum	461 Quaker Bottom Rd	Havre de Grace
Tourism: Landmark/Museum	Susquehanna Museum of Havre de Grace at the Lockhouse	817 Conesteo St	Havre de Grace
Tourism: Landmark/Museum	Rockfield Manor	501 Churchville Rd	Bel Air
Tourism: Landmark/Museum	US Army Ordinance Museum	Aberdeen Blvd and Maryland Blvd	Aberdeen Proving Ground
Tourism: Parks & Trails	Anita C Leight Estuary Center	700 Otter Point Rd	Abingdon
Tourism: Parks & Trails	Eden Mill Park, Nature Center & Historic Mill	1617 Eden Mill Rd	Pylesville
Tourism: Parks & Trails	Lower Susquehanna Heritage Greenway	4948 Conowingo Rd	Darlington
Tourism: Parks & Trails	Rocks/Susquehanna State Park	3318 Rocks Chrome Hill Rd	Jarrettsville
Tourism: Marina	Tidewater Marina	100 Bourbon St	Havre de Grace
Tourism: Baseball	Ripken Stadium	873 Long Dr	Aberdeen
Tourism: Visitor Services	Havre de Grace Office of Tourism & Visitor Center	450 Pennington Ave	Havre de Grace
Military Base	Aberdeen Proving Ground	APG Rd	Aberdeen
Park and Ride Lot	Havre de Grace	Level Rd and I 95	Havre de Grace
Park and Ride Lot	Havre de Grace Juniata and Otsego	N Juniata St and Otsego St	Havre de Grace
Park and Ride Lot	Aberdeen MARC Train Station	Philadelphia Blvd and Sthy 22	Aberdeen
Park and Ride Lot	HEAT Center	Churchville Rd and I 95	Aberdeen
Park and Ride Lot	Riverside	Belcamp Rd and Old Philadelphia Rd	Belcamp
Park and Ride Lot	Abingdon	Emmorton Rd and Edgewood Rd	Abingdon
Park and Ride Lot	Route 152 Mountain Rd	Mountain Rd and I 95	Abingdon
Park and Ride Lot	Edgewood MARC Station	Edgewood Rd and Fairview Point Rd	Edgewood
Park and Ride Lot	Cheyenne	Mountain Rd and Old Joppa Rd	Joppa
Park and Ride Lot	Fallston	Fallston Rd and Harford Rd	Fallston
Park and Ride Lot	Motor Vehicle Administration (MVA) Bel Air	MacPhail Rd and Sthy 24	Bel Air
Park and Ride Lot	Marywood	Rock Spring Rd and Sthy 1	Bel Air
Park and Ride Lot	Bynum Run	Churchville Rd and Redfield Rd	Bel Air
Park and Ride Lot	Hickory	Conowingo Rd and Sthy 23	Bel Air
Park and Ride Lot	Pylesville	Old Pylesville Rd and Sthy 543	Pylesville

APPENDIX C

NEW SOURCES OF LOCAL REVENUE: DEVELOPING A SPONSORSHIP PROGRAM FOR TRANSIT

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NEW SOURCES OF LOCAL REVENUE: DEVELOPING A SPONSORSHIP PROGRAM FOR TRANSIT

Transit has a long history of providing advertising on and in buses for additional revenue for the system. Some rural systems have engaged in advertising over the years, but a sponsorship program is more than simply advertising. Instead of the usual selling of just one form of advertising, the system should sell sponsorship packages. Since sponsorship and advertising funds are an important source of local funding, this program should be implemented first, in order to determine the level of funding that can be attained.

IDENTIFYING THE SERVICE

As discussed above, the program is designed to sell a service to both public and private sponsors. Possible services for sale can include (but should not be limited to):

Sponsorship Services at Any Level

- Recognized as a sponsor on the system how to ride guide (system map and schedule)
- Sponsored by... on all system literature and advertising
- Decal on side or back of the bus
- Advertising on transit benches
- Advertising on shelters
- Adopt a shelter or route
- Internal bus advertising
- Dedicated shuttle
- Special promotions sponsorship

Higher Level Sponsorship Services

- Company logo on the system map
- Placing of a shelter for customers and/or employees
- Placing of a stop conducive to customers and/or employees - this could include going into a parking lot and stopping next to the facility
- Route named for sponsor
- Bus Wrap

If properly packaged, these services have considerable value to businesses such as:

1. *Large Retailers* – Wal-Mart, Target and Giant are excellent examples, the malls and other grocery stores are others.
2. *Hospitals* - There are a number of examples of wrapped buses for hospitals, medical groups, and pharmacies.

3. *Large Local Based Corporations* - Are there any large corporations based in the area?

4. *Small Local Based Companies* - Any local company can participate at a number of levels.

5. *Fast Food Restaurants* - Wrapped buses are popular with some of the largest chains

6. *Television, Radio Stations, and Local Newspapers* - There are also opportunities with these organizations. They can give the system valuable advertising.

Develop Sponsorship Levels and Packages

After determining what will be for sale, the following activities should be accomplished:

- **Price the Items** - Attach value to each item for sale. Check with firms that wrap buses to determine the cost of a wrap. Items should be priced competitively with similar types of advertisements, such as billboards, and television and radio advertising. Think big! Both large and small firms should have opportunities. Set up multi year packages for semi-permanent advertising such as bus wraps, shelter and bench signs.

- **Develop Sponsorship Packages** - After pricing the various services to be provided, the system should put them in sponsorship packages to maximize revenue. Each level of sponsorship should have a name to it. For example; gold, silver, bronze, etc, or a name to connote transit - Examples can include:
  -- High End Sponsor (Five star, platinum, etc.) - the value of these services is significant. High end services should only go to those sponsors willing to pay over $10,000 per year (with 3 year contracts). Various packages can be combined based on a customer/sponsors need. These high end services include, but are not limited to; bus wraps, a shelter in front of facility, with advertising, route named after sponsor (e.g. mall route, Hospital route or College route), routing conducive to the sponsors business, and logo on the system map. Each of these services should be worth up to $10,000 per year and more if they re combined.
  -- Mid Level Sponsors - These sponsors should have access to a variety of packages that include; advertising on a shelter(s), bench(s), and internal advertising. Decal on back of the bus, and name in the riders guide are also available. Other opportunities can include sponsoring special promotions.
  -- Entry Level Sponsor - Small local sponsors have a place in sponsorship as well. Packages can include; advertising on benches, and internal advertising. Certain special promotions should be priced for the entry level sponsor, and recognition as a sponsor should be on promotional material

- **Create Promotional Material** - Develop materials to sell the sponsorships. The material should be of high quality.

- **Recruit Supporters** - Community and political leaders as well as can be recruited to help sell the packages. Attempt to get local media outlets to assist.

- **Sell Sponsorships** - After all of the preparation has been completed, the sales can be initiated. Both large and small sponsors should be sought. For larger firms, first attempts should be with local contacts. If attempts with large firms fail at the local level - contact regional or corporate offices.

Limits on Advertising

The system should set up standards for advertising on the system. Advertising should be tasteful, within the normal bounds of advertising accepted in the community. It is recommended that the system refuse any advertising of a political, religious, or adult oriented content or intent. This will only cause controversy where none is wanted. For example, an urban transit system recently had a large advertisement on buses with the picture of a young man in his underwear (an underwear advertisement). While that might be acceptable in that city (although controversial), it definitely would not be acceptable in most rural areas (and most other places in the United States).

Advertising should be of a quality design and application. All advertising should meet quality standards developed through the system. It should be professionally designed and installed - it must look good.

Development and Implementation of the Program

The system will need to determine if it wants to develop and implement this program in house or work through an advertising/marketing firm to sell the sponsorships on a percentage agreement. Developing and implementing the program is a considerable effort, and therein lays the trade-offs of the two approaches. While the work is harder and time consuming, the potential revenues are greater (if properly implemented).

If the system chooses to seek outside assistance, they should first meet with a number of firms to determine their interest, and then seek quotes through a competitive procurement.