

KFH GROUP, INC.

Fort Meade/Base Realignment and Closure (BRAC) Transit and Ridesharing Planning Study

Final Report

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In Association with:

ICF International

Prepared for:

Anne Arundel County

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Chapter 1

Introduction and Background

INTRODUCTION

The Base Realignment and Closure (BRAC) recommendations for Fort Meade are expected to bring thousands of jobs and new households to western Anne Arundel County and surrounding areas starting in 2010. Many of the BRAC-related jobs are moving to Fort Meade from the Metropolitan Washington, D.C. area, where employees are accustomed to using an extensive transit network and ridesharing. Moving a large number of jobs over 30 miles to Fort Meade poses a serious challenge, given the heavy traffic and congestion and lack of direct transit connections or High Occupancy Vehicle (HOV) facilities en route to the installation. This study aims to guide Fort Meade in providing transit and ridesharing options to accommodate the growth anticipated from BRAC, and to facilitate commute transitions for employees whose billets are moving to Fort Meade. The study recommendations will also address requirements established in the November 2007 Record of Decision for the Environmental Impact Statement regarding BRAC and Enhanced Use Lease (EUL) actions at Fort Meade.

The main focus of this study was to outline improvements for work and work-related travel generated by BRAC recommendations at Fort Meade, including a Request for Proposals (RFP) to establish a Commuter Clearinghouse to provide transit and ridesharing resources. The proposed transit services for Fort Meade also address general local and regional transit needs in Central Maryland to a degree. This region is among the fastest growing in the State and will continue to develop with the contributions of BRAC at Fort Meade. Transit and ridesharing represent key components of the transportation solution to maintain an attractive quality of life and opportunities for continued economic development in the Fort Meade region. These transportation alternatives will be especially important in the near-term as major

highway improvements near Fort Meade have longer time frames, and the growth associated with BRAC recommendations at Fort Meade will commence shortly.

This report consists of multiple chapters, with this first chapter providing background information on the BRAC process and planned activities at Fort Meade. The second chapter examines service area characteristics including current demographics and land uses, and the anticipated changes as a result of BRAC. A thorough analysis of transportation needs promotes an understanding of the transit potential at Fort Meade. The third chapter reviews existing transit and ridesharing resources in Central Maryland and the Metropolitan Washington, D.C. area, including Northern Virginia where many employees impacted by the BRAC recommendations currently work and live. The potential transit commutes by existing services prove to be quite long and inconvenient, which calls for the development of new or improved transit services that serve Fort Meade directly, presented in Chapter 4. Several ridesharing resources also currently exist, though their scopes are limited for reaching Fort Meade. The unique circumstances of this BRAC process, including Fort Meade's geographic location between two metropolitan planning areas and the high security employers involved, justify a separate approach for promoting ridesharing to the installation. Chapter 4 also provides ridesharing strategies to facilitate implementation of the BRAC recommendations as well as accommodate other expected growth at Fort Meade.

In Chapter 4, the recommended transit and ridesharing improvements are outlined in phases for implementation based on the urgency of transportation needs, the effectiveness of various strategies to meet these needs, and the potential availability of funding and resources. The report also recognizes several challenges to implementing these improvements that must be overcome to improve the commuting options to Fort Meade. Chapter 5 details the requirements established in the Record of Decision regarding BRAC and EUL actions at the garrison. A Fort Meade-specific transit and ridesharing Commuter Clearinghouse is recommended, including an operating plan, organizational work plan, and marketing plan that could be incorporated into a RFP to develop such a clearinghouse. The report concludes with Appendices of examples from across the country of local transit routes that serve military installations and the DoD regulations on transit services, for reference.

BACKGROUND

In 1998 the Pentagon determined that it had 20-25% more installation capacity than it needed or would need in the future. They figured they could save \$7 billion a

year by consolidating operations.¹ The Department of Defense (DoD) began to reorganize its installation structure or military towns so that they can more effectively support our forces, a process called BRAC. By law, the current BRAC process started in 2005 and must be completed by 2011. As a consequence of the BRAC process, the number of jobs at Fort Meade is slated to increase substantially.

Three major activities are identified to relocate to Fort Meade:

- Defense Information Systems Agency (DISA)
- DoD Consolidated Adjudication Activities (Adjudication)
- Defense Media Activity (Media)

BRAC will result in an increase of approximately 5,700 military, DoD civilian, and contractor employees that will work at Fort Meade. Three new facilities, one for each of the BRAC activities, will be constructed. DISA, expected to move 4,272 employees to Fort Meade, will construct a 1.1 million square foot multi-story facility.² A \$370 million construction contract was awarded to Hensel-Phelps in February 2008, and the headquarters is scheduled for completion in September 2010. Adjudication is moving 760 positions to Fort Meade and constructing a 152,000 square foot building at an estimated cost of \$52 million. Construction was scheduled to start in the first quarter of 2009 with occupation scheduled for September 2011. Media is expected to move 663 positions to Fort Meade and to construct a 186,000 square foot building. With a projected cost of \$60 million, the building is scheduled for an August 2010 completion. All BRAC activities are to relocate to Fort Meade by September 15, 2011.

Additionally, three other activities will also lead to growth at Fort Meade: the National Security Agency (NSA) is expected to add 4,000 or more employees; the EUL, discussed further in the next chapter, is expected to generate 10,000 positions; and additional growth at Fort Meade outside of the BRAC process will account for 2,000 or

¹ Anne Arundel County, Maryland BRAC Information Center Website, <http://www.aacounty.org/BRAC/index.cfm>.

² Most figures in this paragraph were taken from the BRAC Task Force Meeting presentation, dated January 21, 2009, available on the BRAC Resources page of the Anne Arundel County Website: http://www.aacounty.org/BRAC/Resources/TaskForce_20090121.pdf. The number of DISA employees was taken from the Anne Arundel County BRAC/Growth at Fort Meade Working Plan, dated April 30, 2008, accessed on the BRAC Resources Page on the Anne Arundel County Website: http://www.aacounty.org/BRAC/Resources/BRAC_WorkingPlan_20080430.pdf. This number was used, instead of the 4,252 number in the January 21, 2009 BRAC Task Force Meeting presentation, because it adds up correctly with the Adjudication and Media numbers to the total BRAC positions moving to Fort Meade: 5,695.

more employees. The total new jobs from BRAC and these three activities, arriving at Fort Meade during the next five to seven years is about 22,000.³

The Maryland Department of Transportation (MDOT), Maryland Transit Administration (MTA), and State Highway Administration (SHA) have been working with the Fort Meade region and Maryland's other BRAC impacted regions to identify BRAC-related transportation priorities, including studies on intersection improvements and other transit needs.

Historically, transit planning in this region has focused on moving people northbound and southbound to jobs in Baltimore and Washington, D.C. However, the service analysis needs to address a variety of origins and destinations as the total transit capabilities must now accommodate workers inbound to central/western Anne Arundel County from areas across the region: within Anne Arundel County; the Washington, D.C. region, including Northern Virginia and Prince George's County, Maryland; the Baltimore region, including Carroll, Harford, Baltimore, and Howard Counties; Charles and Calvert Counties to the south; Washington, Frederick, and Montgomery Counties to the west; and Cecil, Queen Anne's, and Talbot Counties to the east. A few commuters will even be traveling from Pennsylvania and Delaware. While commutes from some of the outlying areas listed above are acknowledged and assessed, the proposed transit services in this report are meant to serve areas with the highest commuting demands -- mostly the counties adjacent to Fort Meade and specifically targeted areas with high concentrations of employees such as Northern Virginia, from where most DISA employees will initially commute, and Southern Maryland.

The next chapters will address the transportation needs associated with BRAC growth at Fort Meade and examine the existing transit and ridesharing resources that are available. The analyses of these major issues are then used to develop transit services and ridesharing strategies geared toward new commuters whose jobs are moving to Fort Meade as a result of BRAC. These improvements will also support subsequent growth including contractor positions, induced employment, and the significant number of new households expected to move to Central Maryland.

³Anne Arundel County BRAC/Growth at Fort Meade Working Plan, dated April 30, 2008.

Chapter 2

Service Area Characteristics and Needs Analysis

This chapter provides an overview of the service area, and then delves into the transit needs assessment, which outlines specific origins of commuters traveling to Fort Meade as well as major travel corridors. Other studies are also reviewed for related transportation needs, including a housing study specific to the BRAC-related growth at Fort Meade. This needs analysis in conjunction with the review of existing services in the next chapter will help identify transit potential and inform the development of service alternatives in Chapter 4. Potential ridesharing needs are discussed separately in Chapters 4 and 5, which guide the development of a propose transit and ridesharing Commuter Clearinghouse for Fort Meade.

GEOGRAPHICAL AREA

Fort Meade is located in Anne Arundel County, midway between Baltimore and Washington, D.C. and near the communities of Odenton, Laurel, Columbia, and Jessup. Approximately four miles east of Interstate 95 and a half mile east of the Baltimore Washington Parkway, the installation consists of 5,067 acres including over 65 miles of paved roads and nearly 1,300 buildings.¹ See Figure 2-1 for a map of the Fort Meade Area.

The impact area for BRAC-related changes at Fort Meade traverses two major metropolitan areas – Washington, D.C. (including Northern Virginia) and Baltimore. Undeniably, the area most impacted will be Anne Arundel County.

¹ Fort Meade EUL – Notice of Availability to Lease, dated August 24, 2006, accessed on the Army EUL Program Website, http://eul.army.mil/ftmeade/finalNOL_Aug06.pdf.

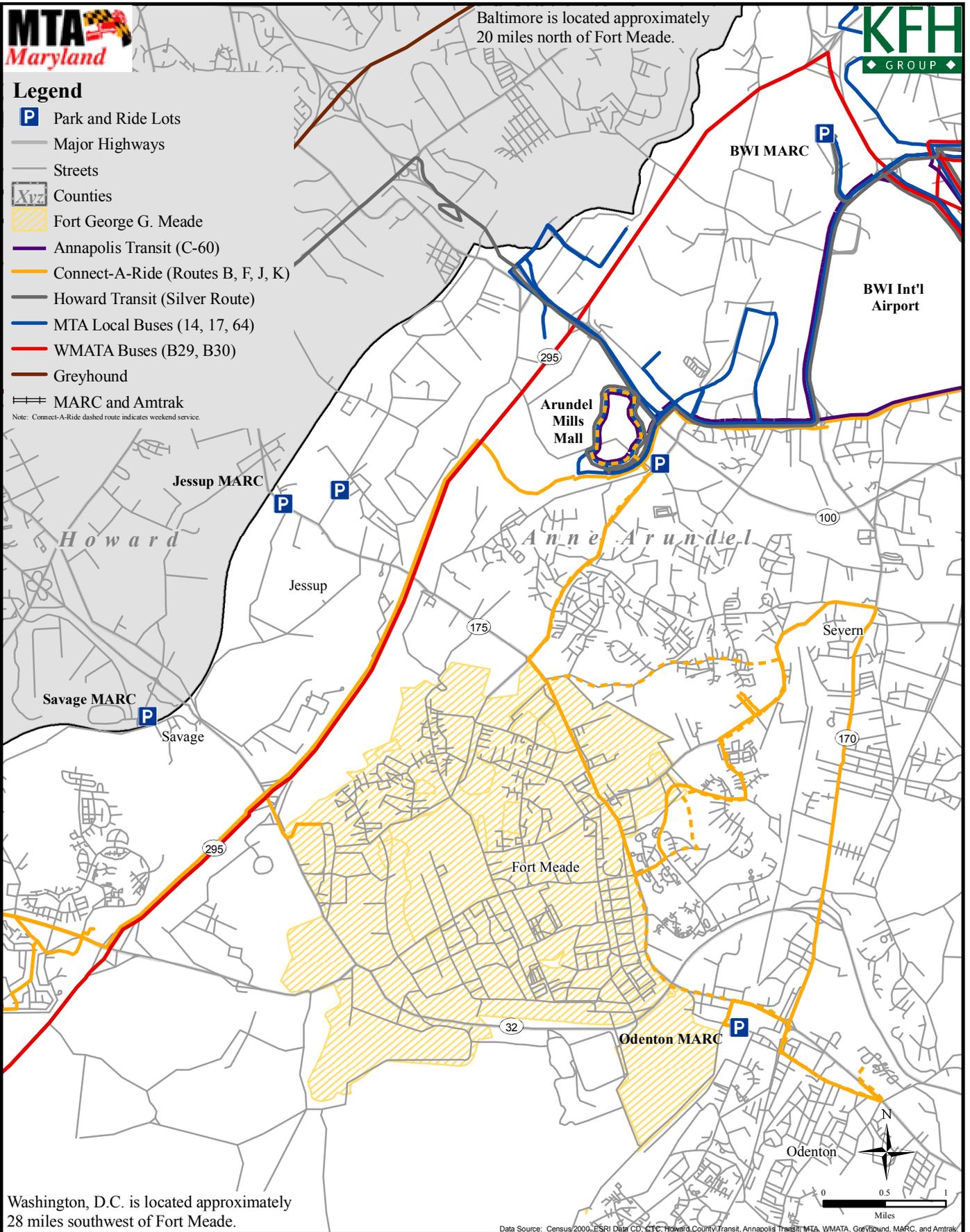


Baltimore is located approximately 20 miles north of Fort Meade.



Legend

-  Park and Ride Lots
 -  Major Highways
 -  Streets
 -  Counties
 -  Fort George G. Meade
 -  Annapolis Transit (C-60)
 -  Connect-A-Ride (Routes B, F, J, K)
 -  Howard Transit (Silver Route)
 -  MTA Local Buses (14, 17, 64)
 -  WMATA Buses (B29, B30)
 -  Greyhound
 -  MARC and Amtrak
- Note: Connect-A-Ride dashed route indicates weekend service.



Washington, D.C. is located approximately 28 miles southwest of Fort Meade.

Data Source: Census 2000, ESRI Data CD, CTC, Howard County Transit, Annapolis Transit, MTA, WMATA, Greyhound, MARC, and Amtrak.

Figure 2-1: Fort Meade Area

DEMOGRAPHIC ANALYSIS - DESTINATIONS, ORIGINS, AND TRAVEL PATTERNS

Destinations - How Many New Jobs Will Be Created and Where Will They Be Located?

An active Army installation since 1917, Fort Meade has experienced significant growth in recent years that has spurred greater awareness of the installation's importance and potential in Central Maryland.² According to a 2006 report, Fort Meade contributes almost \$4 billion annually to the regional economy through salaries, contracts, construction, and other activities in and around the installation.³ Fort Meade is Anne Arundel County's largest employer, with approximately 40,000 current employees among 80 tenant organizations.⁴ Fort Meade and NSA together constitute the largest employer in the State, and are closely tied to the economic success of the central Maryland region.⁵

Fort Meade's existing population (who currently works, patronizes, or resides at Fort Meade) includes:

- Service members: 10,564
- Civilian employees: 21,129
- Contractors: 5,853
- Family members: 22,278
- Retirees: 48,694
- **Total People:** 108,518⁶

Fort Meade is gaining nearly 5,700 jobs, which are scheduled to arrive by September 2011 as outlined in the BRAC recommendations. Of the three agencies that DoD is moving to Fort Meade, DISA is the largest, relocating about 4,300 employees. These include mainly DoD employees, some military personnel, and some embedded contractors. Adjudication is relocating 760 employees and Media 660 employees. The two smaller agencies are about a year behind DISA in terms of relocation and

² Fort Meade Alliance Website

http://www.ftmeadealliance.org/index.php?option=com_content&task=view&id=68&Itemid=91.

³ Fort Meade EUL - Notice of Availability to Lease, dated August 24, 2006.

⁴ The 40,000 include military, civilian, and contractor personnel, according to Fort Meade's Website: <http://www.ftmeade.army.mil/pages/about/about.html>.

⁵ Fort Meade EUL - Notice of Availability to Lease, dated August 24, 2006.

⁶ These numbers from the Howard County, Maryland Website,

http://www.howardcountymd.gov/PortalServices/HCG_ExecutiveBRAC_FortMeade.htm, are up to date as of 2007. As current figures were unavailable, these numbers give an approximation of the existing population.

construction. This was a purposeful part of the BRAC plan in order to carry out construction at Fort Meade in phases.

It is anticipated that by 2013 or 2015 there will be about 22,000 new jobs at the installation.⁷ This includes military jobs and contractor support, both on and off the post, which is expected to increase by about 10,000 jobs.⁸ The majority of the new contractor jobs are expected to be located in the EUL sites, which are shown in Exhibit 2-1. 1.7 million square feet of secured office space adjacent to Fort Meade is already planned and will take ten years to complete.⁹ The number of contractor jobs potentially located at the EUL sites at Fort Meade could account for 5,000 jobs by 2011 and 5,000 more jobs in the years beyond 2011. DISA alone has approximately 5,000 contractors that are expected to move to Fort Meade from Northern Virginia.¹⁰

Outside of the BRAC process, NSA is expected to employ 4,000 more people, and Fort Meade is estimated to employ 2,000 more people. According to Anne Arundel County's 2008 BRAC/Growth at Fort Meade Working Plan, the 22,000 total new jobs are projected to arrive on the Fort Meade installation in the next five to seven years. The following analysis examines the likely origins of employees relocating to Fort Meade as part of the BRAC process, as well as major commuting corridors, which will guide development of transit improvements to support this growth.

Origins - Where Will People Live?

Where new employees will live is still being determined. The local Maryland jurisdictions in the Baltimore region have identified where they assume the new BRAC-related housing will be located and provided these assumptions as inputs to the Baltimore Metropolitan Council (BMC) travel demand model. A few studies have developed projections for housing related to BRAC at Fort Meade, and the findings are summarized below.

Sage Policy Group Report - The Sage Policy Group (Sage) drafted a report in November 2008 titled, *Fort Meade Area Housing Demand from BRAC*. The report outlines the 5,700 new jobs at Fort Meade with the relocation of Adjudication, Media, and DISA. For the "contractor tail," consisting of contractors who work with these DoD agencies and will also move to Fort Meade and the EUL sites, the report only includes estimates

⁷This estimate does not include indirect jobs – secondary jobs – needed to support the growth (e.g. in the restaurants, retail areas surrounding the base).

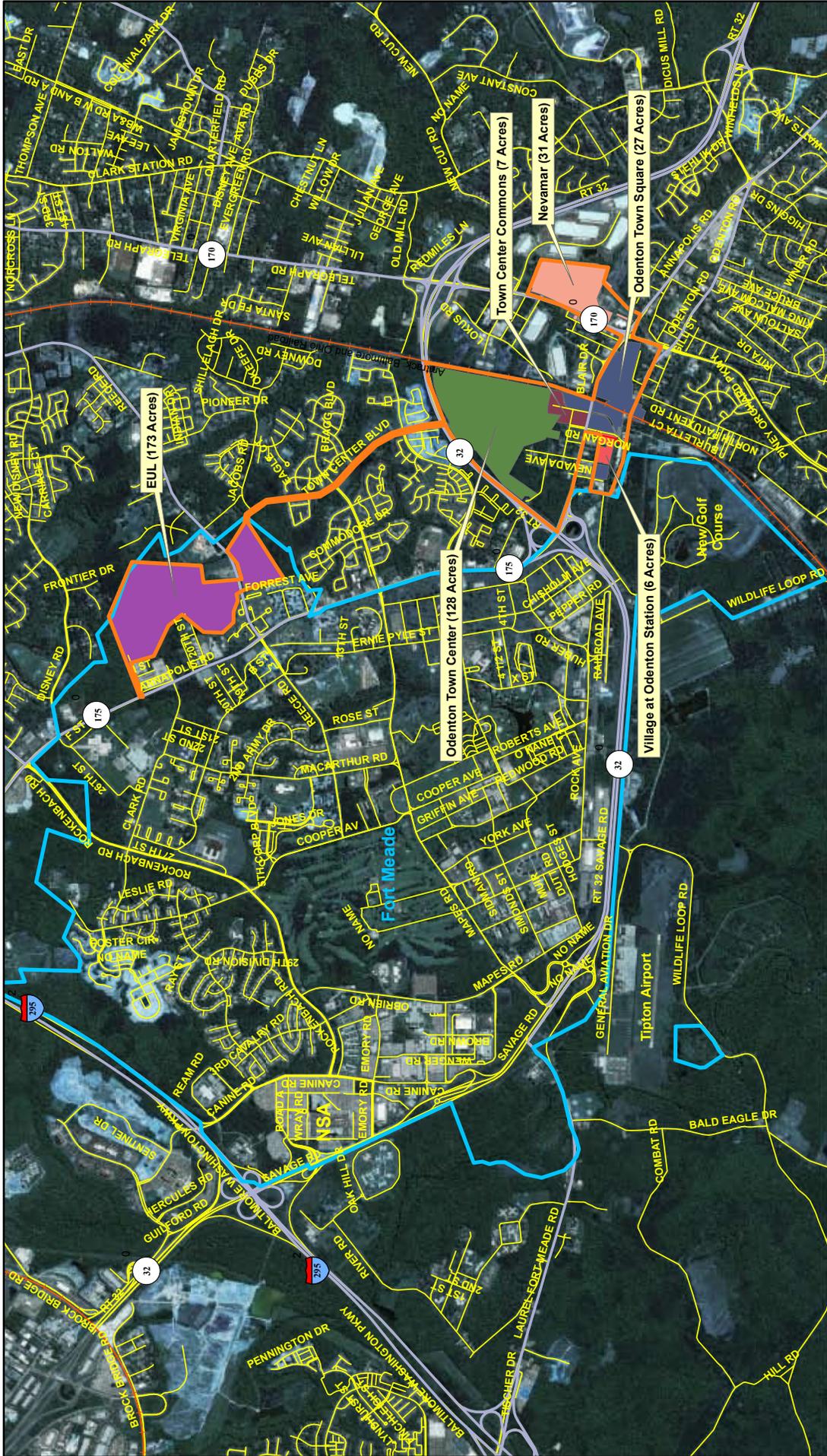
⁸ Anne Arundel County BRAC & Growth at Fort Meade presentation, dated August 1, 2008, accessed on the BRAC Resources Page on the Anne Arundel County Website:
http://www.aacounty.org/BRAC/Resources/BRAC_20080801.pdf.

⁹ Based on discussion with Bert Rice, Installation Executive Officer at Fort Meade, at this study's initiation meeting on April 3, 2008.

¹⁰ Fort Meade EUL - Notice of Availability to Lease, dated August 24, 2006.



Exhibit 2-1: EUL Sites at Fort Meade



Date: July 23, 2007
Prepared by: Anne Arundel County
Copyright: 2007

Source: Anne Arundel County BRAC/Growth at Fort Meade Working Plan, April 30, 2008. Retrieved from Anne Arundel County BRAC Resources Website, <http://www.aacounty.org/BRAC/Resources.cfm>

based on DISA, which expects 3,000 to 5,000 non-embedded contractor positions to move to Fort Meade. The most likely “mid-case” scenario projects about 9,700 jobs (on-base and contractor tail) moving to Fort Meade due to BRAC.

Using a May 2008 survey of DISA workers, currently located in Northern Virginia, Sage reported that about 40% of employees indicated that they would transfer to Fort Meade, but remain in their current residence. While new hires for employees that choose to retire instead of transferring to Fort Meade are expected to live in the Central Maryland region, in the initial phase of job relocations, only about 3,400 of the on-base positions transitioning to Fort Meade due to BRAC are estimated to create new demands for housing in Maryland. Applying similar relocation rates to the contractor tail, about 2,300 contractor positions will seek housing in Maryland in the initial stages of transition. In the long-term, however, about 5,400 on-base and 3,800 contractor tail positions, for an approximate total of 9,200 positions, are estimated to create permanent housing demand in Maryland.¹¹

The relocation of both on-base and contractor positions to Fort Meade will also have indirect and induced impacts on the region surrounding the installation. The BRAC-related population growth to the area, specifically the positions that create new housing demand in Maryland, will increase the need for goods and services, thereby creating another set of jobs at local and regional businesses, which are indirectly affected by the BRAC process. These indirect and induced impacts will likely be modest in the initial stages, as many employees will remain in their current Northern Virginia residences and are unlikely to change their spending patterns. Approximately 4,200 indirect and induced jobs will be created in the initial period of the BRAC relocation, though this figure increases to about 6,900 over the long run.

Combining the estimated number of positions related to new housing demand in Maryland, the BRAC process will bring over 16,000 jobs to Fort Meade and the surrounding region over the long-term. The report then utilizes the zip code breakdown of current employees at Fort Meade to determine the allocation of housing demand for employees that will relocate in the BRAC process. While this methodology may be accurate in predicting the housing demand of on-base and contractor positions that are relocating to Fort Meade, Sage assumes that housing demand for indirect and induced positions will be similar. Though, Sage does take into account the lower average income of indirect and induced positions and reallocates housing demand based on the average housing prices in various Central Maryland jurisdictions. Table 2-1 outlines the results of Sage’s estimated location for BRAC-related housing demand.

¹¹ The other 300 positions moving to Fort Meade in the BRAC process consist of two agencies that are already located in Anne Arundel County and are not expected to move from their current residences.

Table 2-1: Estimated Location of All BRAC-Related Housing Demand

Jurisdiction	Share of Direct and Contractor-Tail Demand	Share of Indirect and Induced Demand	Share of all Housing Demand
Anne Arundel County	38.5%	30.8%	35.2%
Howard County	20.6%	16.5%	18.9%
Baltimore County	9.4%	13.1%	11.0%
Carroll County	7.1%	10.0%	8.3%
Baltimore City	4.1%	5.7%	4.8%
Other Prince George's County	3.0%	4.2%	3.5%
Montgomery County	3.2%	2.6%	2.9%
Harford County	1.9%	2.7%	2.2%
Laurel (Prince George's County)	1.0%	1.4%	1.2%
Other Maryland	3.9%	5.4%	4.5%
Virginia	3.6%	3.6%	3.6%
Pennsylvania	2.4%	2.4%	2.4%
Washington, D.C.	1.0%	1.4%	1.2%
West Virginia	0.1%	0.1%	0.1%
Delaware	0.0%	0.0%	0.0%

Sources: FGM data on housing location of current workers, Sage.

Anne Arundel and Howard Counties account for more than half of the estimated total housing demand related to BRAC, while Baltimore and Carroll Counties account for nearly one-fifth of the housing demand. In addition to these four counties, Baltimore City, Prince George's County, Montgomery County, and Harford County are estimated to contain 88% of the BRAC housing demand. The remaining housing demand will be located in other parts of Maryland, Virginia, Pennsylvania, Washington, D.C., West Virginia, and Delaware.

Sage then applied the housing demand allocation in Table 2-1 to the estimated increase in households due to BRAC: approximately 6,000 in the initial stages and almost 9,800 in the long-term. Tables 2-2 and 2-3 describe the net increases in housing demand, the number of households, by jurisdiction for the short and long terms, respectively. The mid-case, or the most likely, scenario shows estimated demand at 2,100 to 3,450 housing units in Anne Arundel County, 1,100 to 1,850 in Howard County, and 660 to 1,100 in Baltimore County over the course of the BRAC relocation, from the initial stages to the long run.

Table 2-2: Net Increase in Housing Demand by Jurisdiction: Initial Demand

Jurisdiction	Estimated Net Housing Demand (Households)		
	Mid-Case	Low-Case	High-Case
Anne Arundel County	2,122	1,908	2,335
Howard County	1,135	1,021	1,250
Baltimore County	660	594	727
Carroll County	502	451	553
Baltimore City	290	260	319
Laurel (Prince George's Co.)	72	65	79
Other Prince George's County	212	190	233
Montgomery County	176	158	193
Harford County	134	120	147
Other Maryland	273	246	301
Virginia	219	197	241
Pennsylvania	144	129	158
Washington, D.C.	73	65	80
West Virginia	7	6	8
Delaware	3	3	3
Total	6,021	5,415	6,627
Source: Sage.			

Table 2-3: Net Increase in Housing Demand by Jurisdiction: Long-Term Demand

Jurisdiction	Estimated Net Housing Demand (Households)		
	Mid-Case	Low-Case	High-Case
Anne Arundel County	3,451	3,096	3,806
Howard County	1,847	1,657	2,037
Baltimore County	1,074	963	1,184
Carroll County	816	732	901
Baltimore City	471	423	519
Laurel (Prince George's Co.)	117	105	130
Other Prince George's County	344	309	380
Montgomery County	286	256	315
Harford County	218	195	240
Other Maryland	444	398	490
Virginia	356	319	393
Pennsylvania	234	210	258
Washington, D.C.	118	106	130
West Virginia	12	10	13
Delaware	5	4	5
Total	9,793	8,785	10,801
Source: Sage.			

The Sage Report also determined the average income of BRAC-related households in 2008 dollars:

• Induced workers	\$64,780
• GS 1-11, up to 1st Lieutenant	\$69,690
• Indirect workers	\$84,192
• GS 12, Captain	\$102,788
• GS 13, Major	\$122,233
• GS 14-18, up to Major General	\$156,519 ¹²

Combined with estimates of the commuting times for Fort Meade employees, described in the Travel Patterns section later in this report, this data may be used to gauge the neighborhoods that relocating employees may move to based on the average income of existing households in each jurisdiction. Another relevant finding is that nearly one in five households will rent, while the others will seek to own. In the short-term, BRAC will increase demand for owner-occupied housing by 4,900 units and for rental housing by 1,100 units. In the long-term, owner-occupied housing demand will increase to nearly 8,000 units and rental housing demand to 1,800. While these numbers include demand outside Maryland, more than 90% of the housing demand for both owner-occupied and rental units is located in Maryland and the majority in Anne Arundel, Howard, Baltimore, and Carroll Counties.

Maryland BRAC Report - In February 2007, the Maryland Department of Planning (MDP) released the *Maryland BRAC Report*, which outlines impacts on local jurisdictions due to BRAC initiatives at four military installations in the State, including Fort Meade. This MDP study estimated that between 2009 and 2015 the Fort Meade Region will receive approximately 10,700 households. Anne Arundel County is expected to receive about 4,500 households as a result of the BRAC process. The MDP projects that nearly all of these households will be within a 45-minute commute to Fort Meade. Based on current traffic patterns, most of Anne Arundel County lies within this commuting time span with the exception of the Muddy Creek Road corridor and communities beyond this area, such as Mayo and places south of Lothian.

The Maryland BRAC Report also includes projections for the number of new households that will move to various parts of the County due to BRAC at Fort Meade:

- 400 - 700 households along the MARC rail line as it extends north to BWI and the Laurel Area, with the greatest concentration of 100 - 150 households in Russett

¹² Figures represent the mid-case scenario.

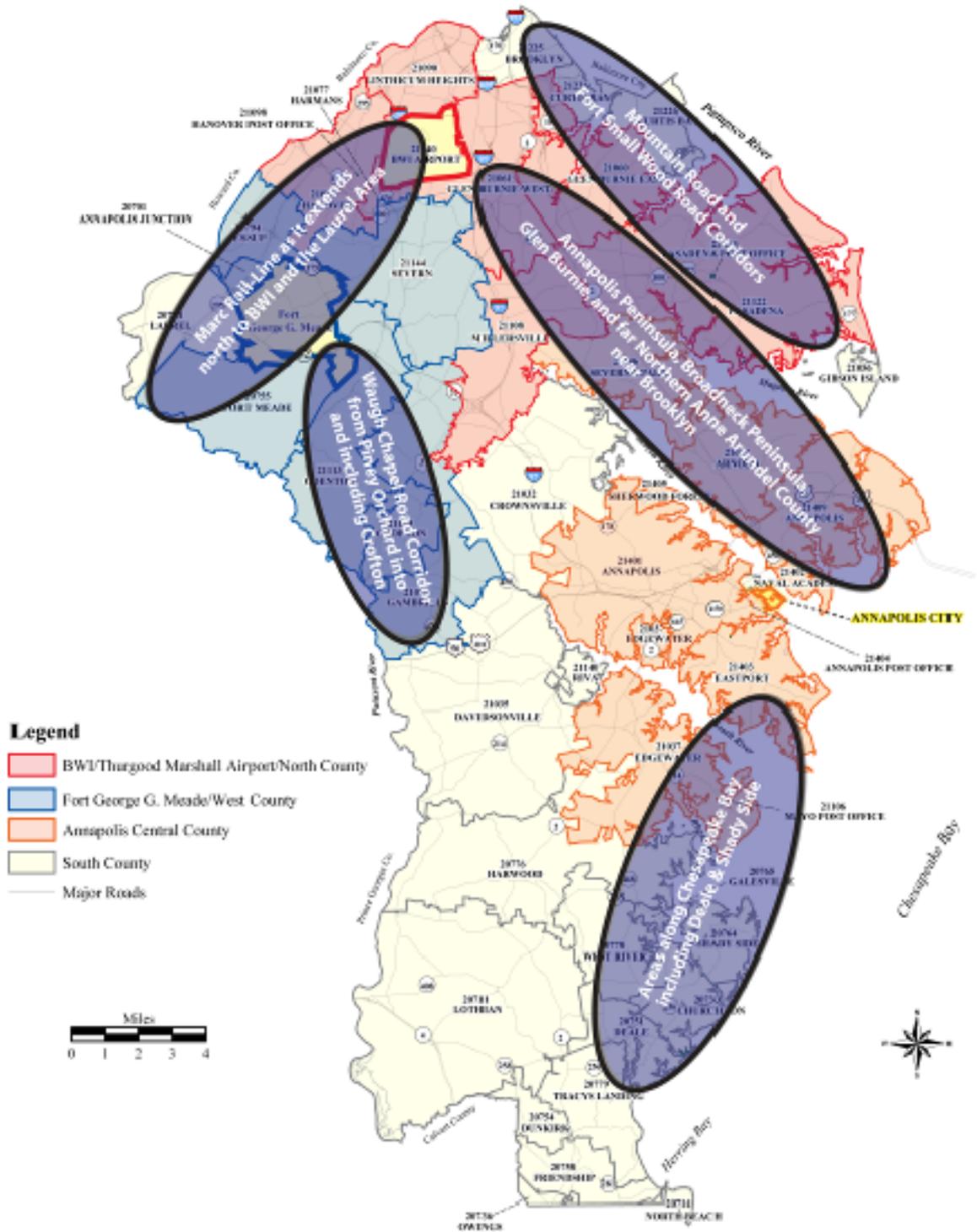
- 400 - 700 households in the Waugh Chapel Road corridor from Piney Orchard into and including Crofton
- 200 - 400 households in the Mountain Road and Fort Small Wood Road Corridors, including Tanyard Cove and Tanyard Springs
- 200 - 400 households in the Annapolis Peninsula, Broadneck Peninsula, Glen Burnie, and far Northern Anne Arundel County near Brooklyn
- Near 200 households in areas along the Chesapeake Bay including Deale and Shady Side
- Fewer than 200 households in the rest of the County

Exhibit 2-2 is a map from the Maryland BRAC Report that portrays these general areas.

Demographic and Housing Data from the Anne Arundel County Transit Development Plan (TDP) - The current update of the TDP looked at population density as an indicator of locations where fixed-route transit services might be appropriate in the County. Typically, the rule of thumb is that areas with population densities of 1,000 persons per square mile may be able to support some form of fixed-route service, albeit at relatively low frequencies. Places with 2,000 persons per square mile or greater may be able to support fixed-route transit with higher frequencies. Areas with such population densities are likely established communities that may attract employees who are moving to the Fort Meade area due to BRAC. Thus areas in Anne Arundel County with higher population densities can be considered potential origins for both employees new to Fort Meade, due to BRAC, and for existing employees at Fort Meade. Exhibit 2-3 from the TDP indicates that several areas within the County have sufficient population densities to support fixed-route services, and could be considered potential origins for employees to Fort Meade: Brooklyn Park, Pumphrey, Linthicum, Ferndale, Glen Burnie, South Gate, Green Haven, Riviera Beach, Severn, Jessup, Maryland City, Odenton, Crofton, Arnold, Cape St. Claire, Naval Academy, Annapolis, Highland Beach, Hillsmere Shores, Londontowne, and Selby-on-the-Bay.

The TDP also examined high density housing in Anne Arundel County to identify origins from which people may need or use transit services. High density housing facilities include major apartment complexes, subsidized housing facilities, and mobile home parks. See Exhibit 2-4 for a map of high density housing in the County. Areas that include clusters of such housing are potential origins for employees relocating closer to Fort Meade, especially since, according to the Sage Policy Group Report, nearly 20% of housing demanded in the BRAC process at Fort Meade will be for rental units like the apartments identified in Anne Arundel County. Though most

Exhibit 2-2: Projected Areas in Anne Arundel County that New Households Will Move to Due to BRAC at Fort Meade



Source: Image taken directly from PowerPoint by Anne Arundel County, titled “BRAC & Growth at Fort George G. Meade”, dated August 1, 2008. The PowerPoint cites the Maryland BRAC Report, December 28, 2006, Maryland Department of Planning.

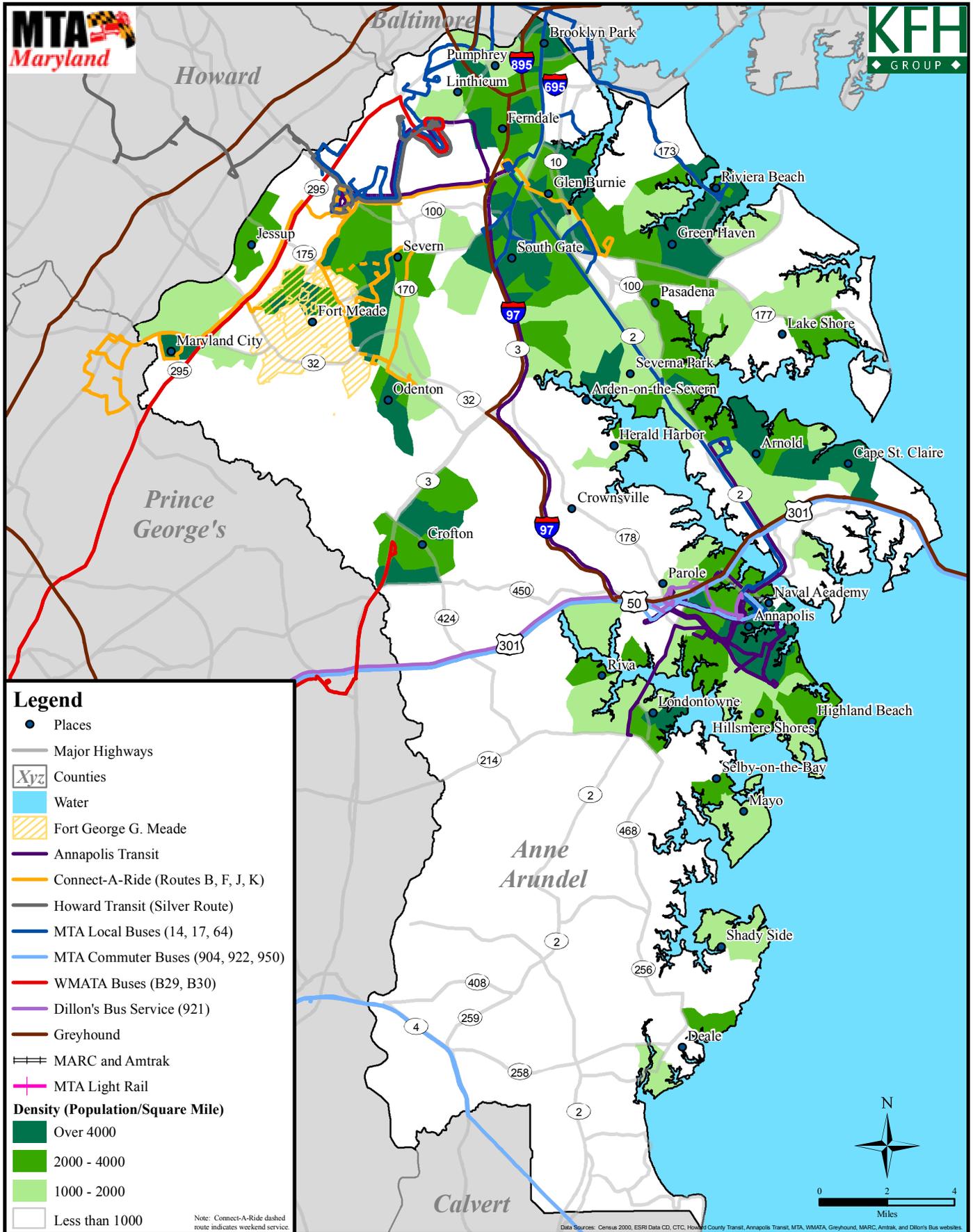


Exhibit 2-3: Population Density Overlaid with Existing Transit Routes

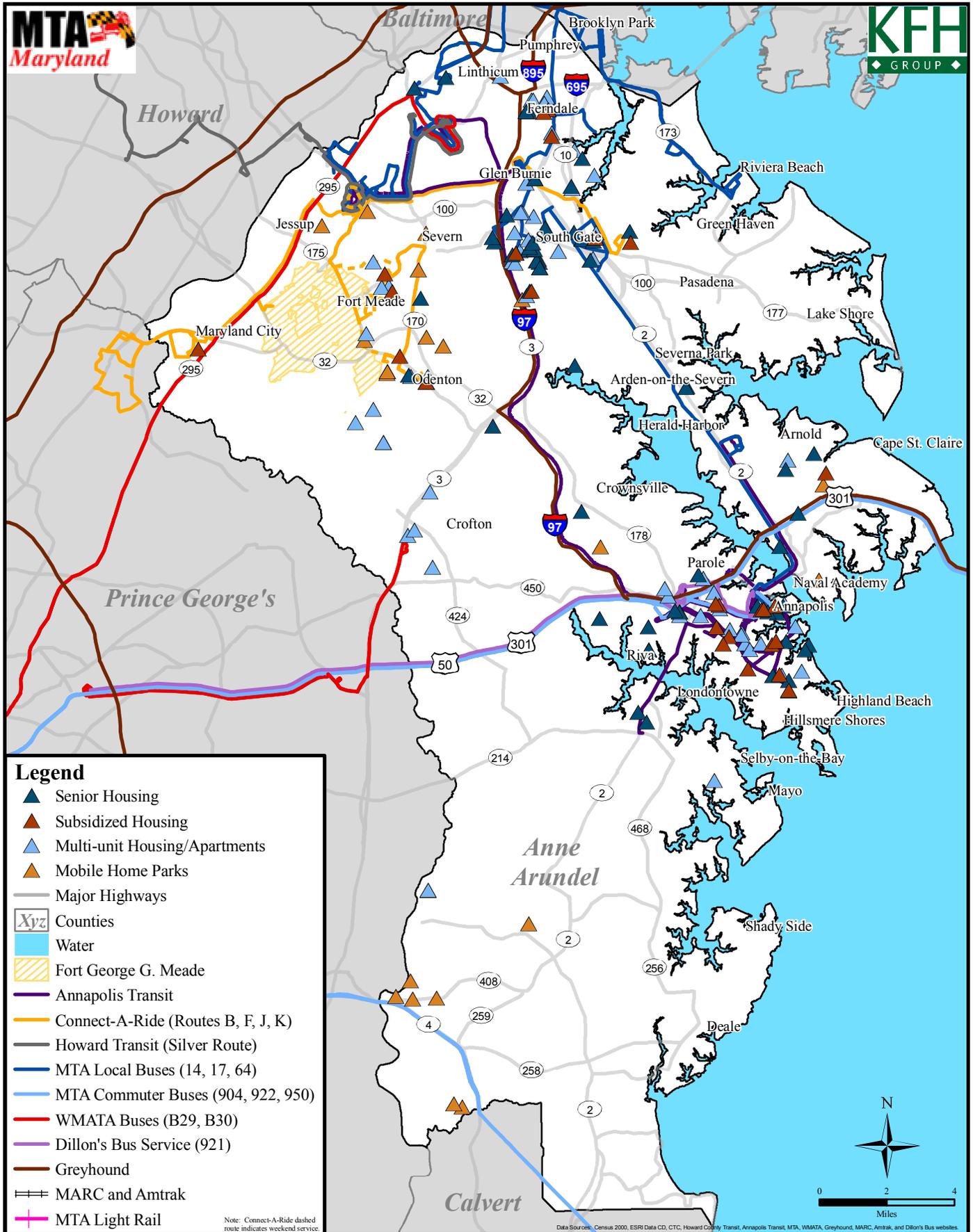


Exhibit 2-4: High Density Housing Overlaid on Existing Transit Services

employees relocating for BRAC are expected to move into new housing developments, existing high density housing still serves as a feasible option for indirect and induced positions, particularly in the outlying years after build-out at Fort Meade.

Existing clusters of apartments within Anne Arundel County are primarily located in Ferndale, Glen Burnie, South Gate, Fort Meade, Odenton, Parole, and Annapolis. Glen Burnie, South Gate, and Annapolis have the largest concentrations of high density housing, including senior housing and other subsidized housing facilities. Arnold and Crofton also have some multi-unit and senior housing, while mobile home parks are located near Waysons Corner, Lothian, and Odenton.

Travel Patterns - Linking Origins with Destinations

Travel Patterns to/from Fort Meade - Anne Arundel County also has a model that uses 2005 data to predict home-based work (HBW) trips between Regional Planning Districts (RPDs), which are larger areas that include several Traffic Analysis Zones (TAZs), in 2015. The RPD that contains Fort Meade, number 209, actually equates to the TAZ that represents the installation; RPD 209 only encompasses one TAZ. Figure 2-2 portrays the number of HBW trips from other RPDs in the County to Fort Meade in 2005 and 2015. The area within RPD 209 that is outside Fort Meade is the Patuxent Research Refuge, which is not considered a major destination; so the majority of trips to RPD 209 represent those to the garrison. While the 2005 data reflects current commuting patterns, the 2015 data is more useful in planning for BRAC because it estimates the commuting patterns of the future population including BRAC-related growth. Employees transferring to Fort Meade are expected to begin arriving in 2010, and continue moving to the region for the next several years. EUL contractors may prolong growth to the area as the construction of EUL facilities is slated to take ten years to complete.

Assuming transit might be able to capture 5% of the trips, only those areas that have more than 1,000 HBW trips going to the installation would warrant some type of local fixed-route service to the installation. Based on this criterion, major corridors to be considered for local fixed-route service to Fort Meade include:

- Jessup to Fort Meade: MD-175 S
- Severn to Fort Meade: MD-174/Reece Road
- Odenton to Fort Meade: Waugh Chapel Road to Piney Orchard Parkway to MD 175/Annapolis Road
- Crofton to Fort Meade: MD-3/Crain Highway and/or MD-424/ Davidsonville Road and/or Riedel Road then through Odenton
- Riva to Fort Meade: MD-424 through Crofton; or Riva Road through Parole to I-97N and MD-32 W (more like commuter route)

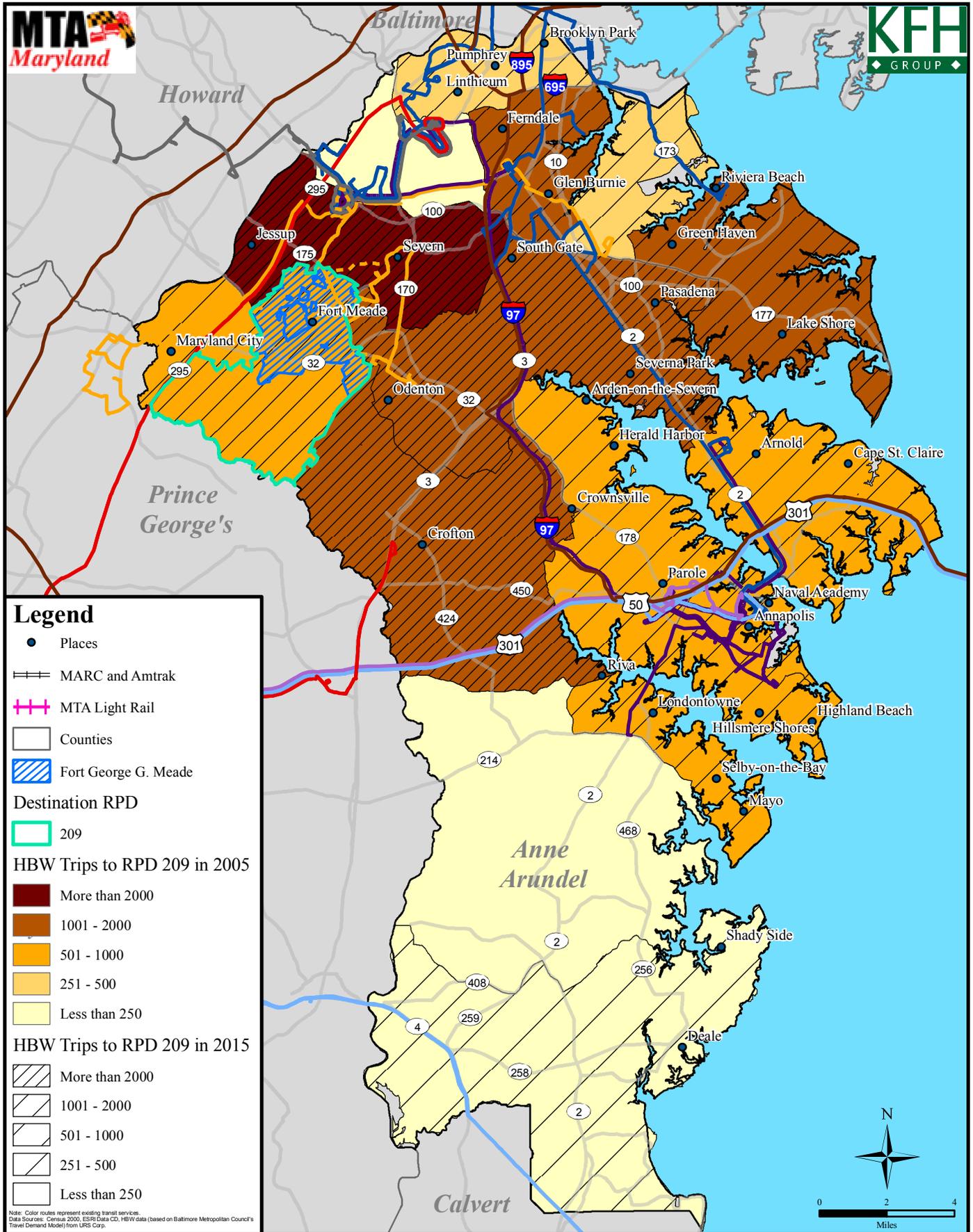


Figure 2-2: Home-Based Work (HBW) Trips from All Regional Planning Districts (RPDs) TO RPD 209 (Fort Meade) in 2005 and 2015

- South Gate to Fort Meade: MD-100 W or local roads to MD-174, which changes from Quarterfield Road to Donaldson Avenue to Reece Road
- Pasadena to Fort Meade: Similar route to South Gate - Fort Meade but begins further east on MD-100 and goes through South Gate; or takes local roads through Severna Park (see next)
- Severna Park to Fort Meade: Jumpers Hold Road to Benfield Road to I-97 S to MD-32 W
- Green Haven to Fort Meade: Catherine Avenue to MD-177/Mountain Road to MD-100 W (through South Gate) to MD-170/Telegraph Road to MD-174/Reece Road (through Severn)
- Lake Shore to Fort Meade: Similar to Green Haven - Fort Meade but begin farther east on MD-177/Mountain Road
- Ferndale to Fort Meade: I-97 S to MD-174; or take local roads to MD-648 through western Glen Burnie (see next)
- Glen Burnie to Fort Meade: MD-270 to MD-648 to MD-3/Crain Highway South to MD-174

Areas that contain 500 to 1,000 HBW trips are additional candidates that may be considered. The major corridors in these areas include:

- Linthicum to Fort Meade: MD-170 past BWI Airport to I-195 W to MD-295 S to MD-175
- Pumphrey to Fort Meade: I-695 W to MD-295 S and continue like Linthicum - Fort Meade; or take MD-170 through Linthicum and continue Linthicum - Fort Meade route
- Brooklyn Park: Similar to Glen Burnie - Fort Meade, but start farther north on MD-2 and connect to MD-3
- Parole to Fort Meade: MD-665 W/Aris Allen Blvd to I-97N and MD-32 W (more like commuter route); or take MD-450 to MD-424/Davidsonville Road through Crofton and Odenton (see corridors above)
- Annapolis: Similar to Parole - Fort Meade, but start further east on Forest Drive and/or West Street to MD-665 W
- Arnold to Fort Meade: Similar to Parole - Fort Meade but start father east at College Parkway to Bay Dale Drive to US-301 S/US-50 W through Parole
- Cape St. Claire: Similar to Arnold - Fort Meade, but start farther east on College Parkway to US-301 S/US-50 W
- Crownsville to Fort Meade: MD-178/Generals Highway to MD-32 W
- Arden-on-the-Severn to Fort Meade: Similar to Crownsville - Fort Meade but start at Sunrise Beach Road to MD-178
- Herald Harbor: Similar to Crownsville - Fort Meade, but start at Herald Harbor Road to MD-178

- Highland Beach: Similar to Annapolis – Fort Meade, but start farther southeast on Arundel on the Bay Road to Forest Drive
- Hillsmere Shores: Similar to Annapolis – Fort Meade, but start farther southeast on Hillsmere Drive to Forest Drive

Please note that these lists of places do not indicate that a significant number of employees relocating to Fort Meade will necessarily move to each of these towns. Rather, these towns are located in the RPDs from which at least 500 HBW trips to the garrison will originate in 2015, according to the County's model.

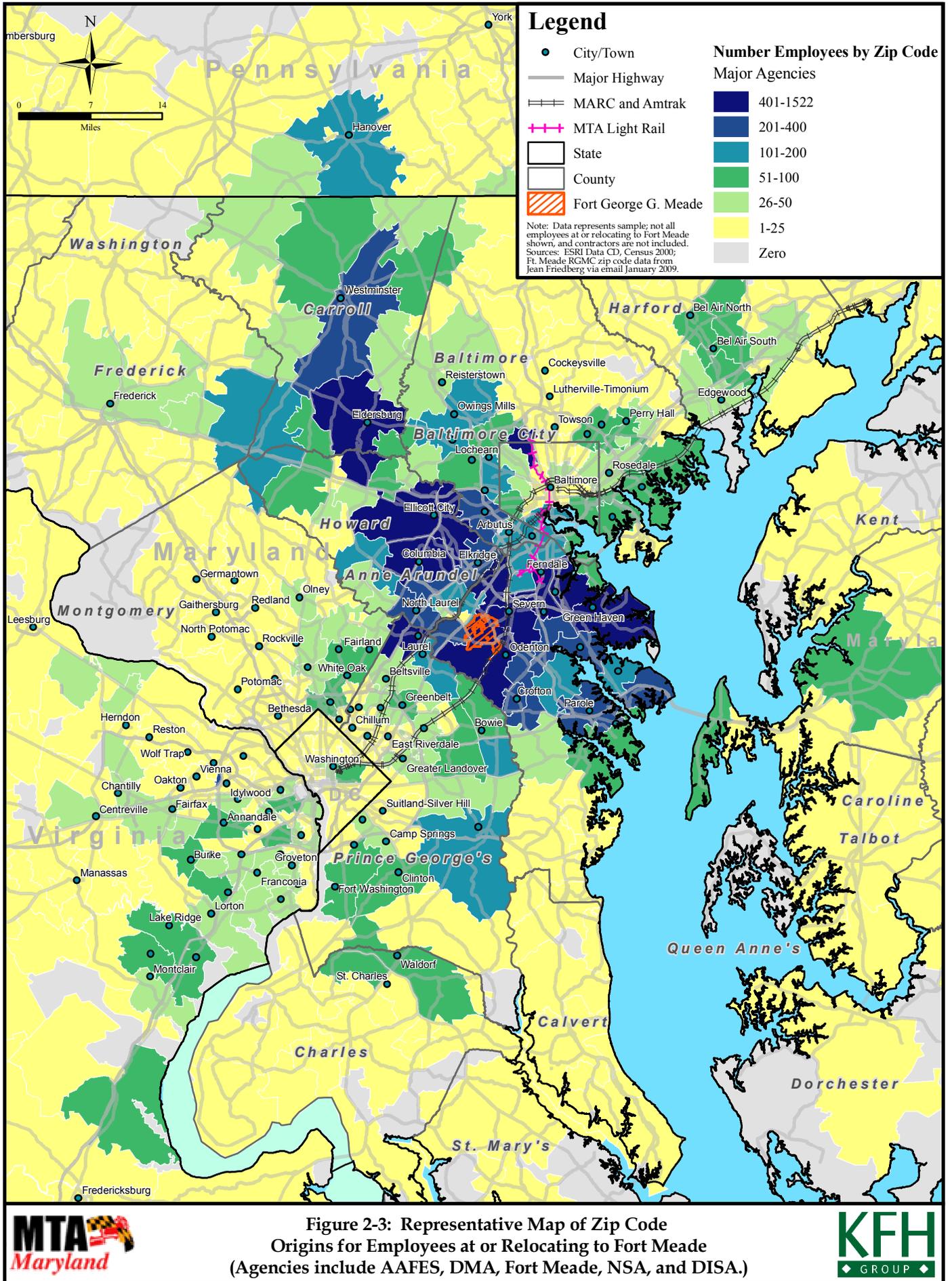
Origins of Employees at Agencies Currently at or Planning to Move to Fort Meade – Representing 10 jurisdictions, the Fort Meade Regional Growth Management Committee (RGMC) is charged with overseeing development of a regional growth management strategy for the BRAC process at Fort Meade.¹³ The RGMC shared zip code data for two samples of employees: 1) Those currently working at Fort Meade, and 2) Those working at agencies whose jobs will be relocated to Fort Meade as a result of BRAC recommendations.¹⁴ The primary sources for the data were NSA, DISA, and DMA. The current zip code origins for these employees are mapped in Figure 2-3.

Approximately 40% of current Fort Meade employees are concentrated in Anne Arundel County. Another 20% in Howard County, and the remainder throughout the region extending from Southern Pennsylvania to Northern Virginia and from West Virginia to the Eastern Shore. Many employees who will be relocating to Fort Meade as a result of BRAC currently work and live in Northern Virginia and Southern Maryland. Origins in these areas are a particular point of focus, since the commute distance to Fort Meade is significant. As seen in Figure 2-3, origins in Northern Virginia include Lake Ridge (Woodbridge), Burke, Annandale, Fairfax, and Dunn Loring, and those in Southern Maryland include Waldorf, Fort Washington, Clinton, and Upper Marlboro.

While Northern Virginia is already served by several transit providers, described in the next chapter, most services do not currently travel north to Fort Meade. Commuters from Northern Virginia do have transit options, based on existing services, to reach the installation, but long commute times and multiple transfers make these alternatives unfeasible, much less appealing, for most commuters. (These transit options are outlined further in the next chapter; see Table 3-13.) Some zip code origins in Southern Maryland also have existing transit options to get to Fort Meade, though the commute times and transfers make these alternatives quite unappealing as well.

¹³ The ten jurisdictions considered within the Fort Meade Region include Anne Arundel County, Baltimore City, Baltimore County, Carroll County, Howard County, City of Laurel, Montgomery County, Prince George's County, Talbot County, and Queen Anne's County. Source: January 2008 RGMC PowerPoint, titled *Growth Impacts, Opportunities, and Reality*, by Bob Leib, Regional Coordinator, and Kent Menser, Deputy Coordinator for the Fort Meade Region.

¹⁴ The samples include about half of the estimated total employees.



Other areas in Southern Maryland currently have limited transit services, making driving or ridesharing more feasible commuting options. While the transit improvements proposed in Chapter 4 will increase direct transit access to Fort Meade, carpool and vanpool alternatives may be more time-efficient and cost-effective options, particularly for employees commuting the longest distances.

Commute Corridors Identified in the Anne Arundel County TDP – Though the Census 2000 journey-to-work data does not specify commutes to and from areas smaller than the County level, examining the journey-to-work data for Anne Arundel County can help identify existing major commute corridors, which can aid planning efforts for the growth at Fort Meade if future commuters new to the region take similar routes. The data of “inflow” commuters to Anne Arundel County is pertinent for this study. The major origins from which commuters traveled to Anne Arundel County in 2000 included Baltimore County (24%), Howard County (17.2%), Baltimore City (16.8%), and Prince George’s County (11.1%). Sample routes from these origins to Fort Meade, which would be candidates for commuter bus services, include:

- From Baltimore County: MD-295 S to MD-175 E; or I-695 E to I-95 S to I-895 S to I-97 S to MD-32 W to MD-175 W
- From Howard County: MD-100 E to MD-295 S to MD-175 E; or MD-32 E to MD-295 N to MD-175 E
- From Baltimore City: MD-295 S to MD-175 E
- From Prince George’s County: MD-3 N to MD-32 W to MD-175 W; or MD-295 N to MD-175 E

Sage Policy Group Report – The November 2008 Sage Report also included estimates of commuting times for employees relocating to Fort Meade. Table 2-4 includes data from the May 2008 DISA Survey, in which employees indicated their current commutes and potential maximum commutes, and 2000 U.S. Census data on travel time to work.

Table 2-4: Commuting Times for Relocating Workers

Minutes	Current Commutes	Maximum Commutes	Census Data
Up to 10	6.2%	1.1%	8.7%
11-30	23.4%	17.8%	43.4%
31-45	22.9%	23.3%	23.6%
46-60	24.5%	34.4%	11.6%
Over 60	22.0%	20.0%	12.6%
No response	1.1%	3.4%	

Sources: Sage, May 2008 DISA/JTP-GNO BRAC survey, U.S. Census Bureau.

The DISA survey responses likely capture recent trends compared to the 2000 Census data and indicate that nearly half the employees that will be relocating to Fort Meade are accustomed to current commutes longer than 45 minutes, and more than half indicate that they would consider maximum commute times over 45 minutes. Locations within a 45-minute commute to Fort Meade include Odenton, Crofton, Annapolis, Glen Burnie, Upper Marlboro, Columbia, Ellicott City, Baltimore city, metropolitan Baltimore County, eastern Montgomery County, Washington, D.C., and portions of Alexandria city and Arlington County, Virginia. Many of these cities in Central Maryland are closer to 30-minute commutes and may thus provide more appealing locations for employees that choose to relocate their residences. Locations within an hour commute to Fort Meade include Harford, Frederick, and Queen Anne’s (Eastern Shore) Counties, Southern Maryland, and Fairfax County, Virginia.

SUMMARY OF TRANSPORTATION NEEDS ANALYSIS

Most of the new jobs at Fort Meade will be filled by people with a choice of auto over transit – often referred to as “choice riders.” Attracting this group of people to transit could help decrease congestion at Fort Meade and the surrounding area. However, in order to entice this group onto transit, transit alternatives need to be convenient, frequent, and provide some benefit over auto travel (e.g., the ability for buses to move through congested gate areas faster than cars). Another transit market includes people employed at the secondary or induced jobs at the retail establishments that will follow employment growth at the installation. These employees may include people who are transit dependent, thus boosting the transit mode share and increasing demand for transit services to Fort Meade.

This chapter provided analysis using various data sources and approaches to examine the origins, both general counties and more specific places, and likely commuting patterns of workers who will be relocating to Fort Meade due to BRAC. The development of new and improved transit services will focus on Anne Arundel and Howard Counties, which were determined to be the major potential origins for employees relocating to Fort Meade. While additional transit improvements connecting other origins to the installation will also be considered, ridesharing may be a more feasible and attractive option for longer commutes, particularly to help employees from Northern Virginia and Southern Maryland initially transition to Fort Meade.

Chapter 3

Existing Transit Services

This chapter reviews the transportation resources available in the Fort Meade region including bus, commuter rail, shared ride services, taxi/intercity bus, and other private transportation. Existing transit services in the Metropolitan Washington, D.C. area, including Northern Virginia, are also examined to account for transit options for employees that will initially commute from these areas to Fort Meade. An overview of existing ridesharing resources in Anne Arundel County is provided, though available ridesharing services will be reiterated in Chapter 5 when discussing the Commuter Clearinghouse for Fort Meade.

EXISTING PUBLIC TRANSPORTATION SERVICES

This section presents the existing transit services available for commuters in the Fort Meade region. While only one transit route, Connect-A-Ride Route K, currently serves the main gate of the installation at Reece Road, the other routes represent opportunities for future transportation to Fort Meade through route expansions and changes and the development of new complementary transit services.

Connect-A-Ride

Connect-A-Ride is the Laurel/Anne Arundel-based portion of transit services managed by the Corridor Transportation Corporation (CTC). Connect-A-Ride routes serve a four county area in Central Maryland, including Anne Arundel, Howard, Montgomery, and Prince George's Counties. Four Connect-A-Ride routes provide service in Anne Arundel County: the B, F, J, and K. (Due to a budget deficit, CTC eliminated the Connect-A-Ride Laurel Loop in October 2008.¹) Table 3-1 provides a summary of basic service characteristics for these routes. While the B, J, and K Routes provide service throughout the day during the week and weekend, the F Route runs

¹ http://www.gazette.net/stories/10302008/laurnew133044_32472.shtml.

Table 3-1: Service Characteristics of Connect-A-Ride Routes in Anne Arundel County

Route	Origin/Destination	Major Stops	Hours of Service	Frequency of Service	Fares	FY07 Ridership
B	Laurel Mall Transit Center to Maryland City	Cherry Ln & US 1, Laurel Plaza, Maryland City Plaza, Brock Bridge Rd, also Wal-Mart, Target, and Weis Market on Saturdays	M-F 6:00 a.m. to 6:00 p.m. Sat 9:00 a.m. to 6:00 p.m.	M-F 30 minutes Sat 45 minutes	\$2.00 Base Fare, \$1.00 Reduced Fare (S/D)	50,346
F	Weekday peak-only service from Route 197 Park & Ride Lot to the National Security Agency	Montpelier, Laurel Lakes, Laurel Mall	M-F To NSA 6:15 a.m. to 7:46 a.m. To Laurel 3:39 p.m. to 5:15 p.m.	60 minutes	Same as above	6,299
J	Laurel Mall Transit Center to Glen Burnie/Pasadena Severna Park Park & Ride area	Maryland City, Corridor Marketplace, Arundel Mills Mall, Cromwell Light Rail Station, Glen Burnie, Marley, Sun Valley, and Freetown	M-F 6:00 a.m. to 10:50 p.m. Sat 8:40 a.m. to 10:50 p.m. Sun/Holidays 10:00 a.m. to 7:54 p.m.	M-F 60 minutes Sat/Sun/Holidays 120 minutes	Same as above	130,548
K	Arundel Mills Mall to Odenton	Severn, Meade Village, Pioneer City, Seven Oaks, Fort Meade, Telegraph Rd, Odenton MARC Rail Station, and Johns Hopkins Medical Center	M-F 6:30 a.m. to 11:02 p.m. Sat 8:15 a.m. to 10:59 p.m. Sun/Holidays 9:10 a.m. to 9:59 p.m.	Approximately 60 minutes	Same as above	81,502

Source: CTC Website, <http://www.corridortransit.com>. Ridership data from Howard County.

Notes: S/D = Reduced fares for seniors and persons with disabilities.

only during peak hours on weekdays. The K Route is the only existing transit route that directly serves Fort Meade via the main gate at Reece Road and Annapolis Road.

Route profiles for these routes are shown in Figures 3-1a to 3-1d. The route profiles provide a snapshot of each route, including the major trip generators, origins and destinations for which transportation may be requested, near the route; a service description; and productivity data.

Howard Transit

Howard Transit is also managed by CTC and provides service mainly in Howard County with some crossover into Anne Arundel and Prince George's Counties. Formerly known as the Red Express, the Silver Route is the only Howard Transit route that serves Anne Arundel County. The Silver Route runs between Columbia Mall and BWI Airport. The major stops in Anne Arundel County include Arundel Mills, Anne Arundel Community College at Arundel Mills, Dorsey Road, the BWI Amtrak/MARC Rail Station, BWI Airport, and the BWI Business District Light Rail Station. Riders can also access major service points in Howard County including Columbia Mall, Snowden Square, and the Maryland Food Center. The Silver Route operates every day: Monday to Friday from 6:00 a.m. to 10:59 p.m., Saturday from 8:00 a.m. to 10:59 p.m., and Sunday from 9:03 a.m. to 6:59 p.m. Trips run every 60 minutes from Monday to Saturday and every 120 minutes on Sunday. A route profile of the Silver Route is available in Figure 3-2.

Maryland Transit Administration

Local Bus Service

The MTA operates three local bus routes in northern Anne Arundel County: Routes 14, 17, and 64. Table 3-2 provides a summary of basic service characteristics for these routes and the commuter bus services described below. Route 14 runs from Patapsco Light Rail Station to Annapolis, serving Glen Burnie and Anne Arundel Community College. Route 17 runs from Patapsco Light Rail Station and the University of Maryland Transit Center (Sundays only) to BWI Airport and Arundel Mills Mall. Route 64 runs between downtown Baltimore, Curtis Bay, and Riviera Beach.

Commuter Bus

The MTA operates three commuter buses in Anne Arundel County: Routes 904, 922, and 950. (Route 921, serving Annapolis and the New Carrollton Metro Station in Prince George's County, was discontinued as an MTA service on January 12, 2009. However, MTA's contractor, Dillon's Bus Service, Inc. will continue to operate the service for another 30 days while negotiating funding with the City of Annapolis and

Figure 3-1a: Route Profile for Connect-A-Ride Route B

3-4

MAJOR TRIP GENERATORS

High Density Housing
 Drexel Park Apts-Ashley Apts

Medical Centers
 (None)

Major Employers
 Maryland Jockey Club/Laurel Park

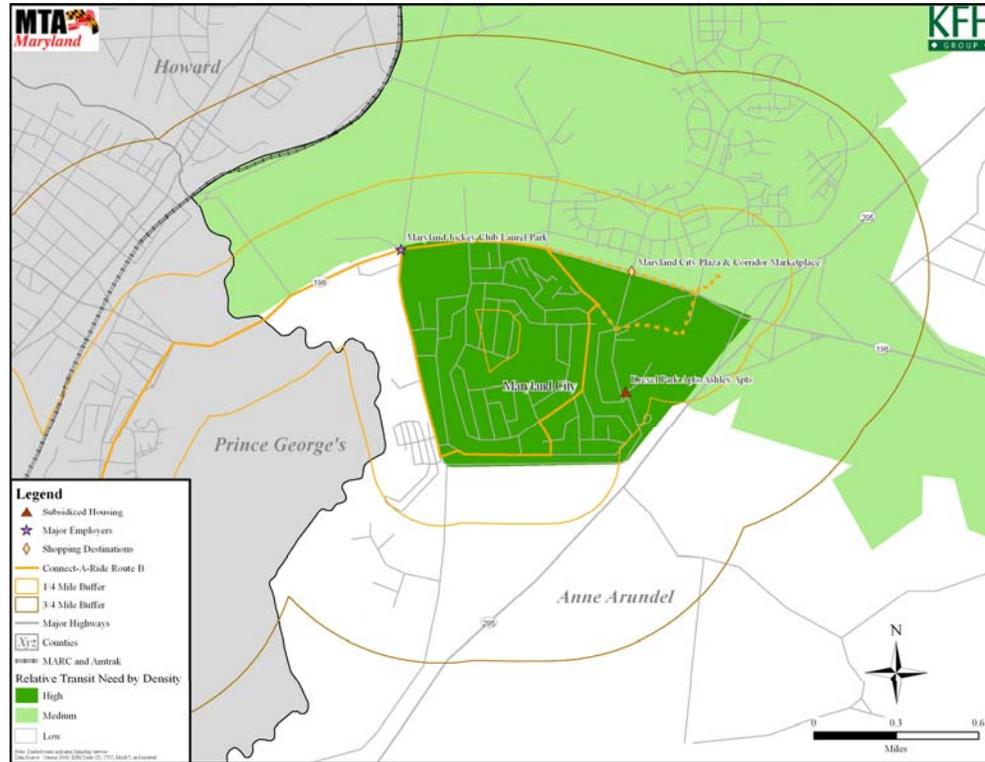
Educational Facilities
 (None)

Human Service Agencies
 (None)

Shopping Centers
 Maryland City Plaza & Corridor Marketplace

Park & Ride Lot Locations
 (None)

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



SERVICE DESCRIPTIONS

Service Type: Fixed-Route
 Service Description: General Public
 Area Description: Laurel Mall to Maryland City
 6am-6pm Mon-Fri, 9am-6pm Sat
 Hours of Service: Sat
 Days of Service: Mon-Sat
 Fares: \$2.00 for General Public
 \$1.00 for Seniors
 Round Trip Miles: 10

PRODUCTIVITY DATA (FY 2006)

Annual Passenger Trips:	60,181
Annual Revenue Hours:	3,755
Annual Revenue Miles:	61,862
Annual Operating Cost:	\$231,865
Passenger Trips per Revenue Hour:	16.03
Operating Cost per Revenue Hour:	\$61.75
Operating Cost per Revenue Mile:	\$3.75
Operating Cost per Passenger Trip:	\$3.85

*Data from CTC's FY08 Grant Application to MTA, Form 2a.

Figure 3-1b: Route Profile for Connect-A-Ride Route F

MAJOR TRIP GENERATORS

High Density Housing
 Drexel Park Apts-Ashley
 Apts

Medical Centers
 (None)

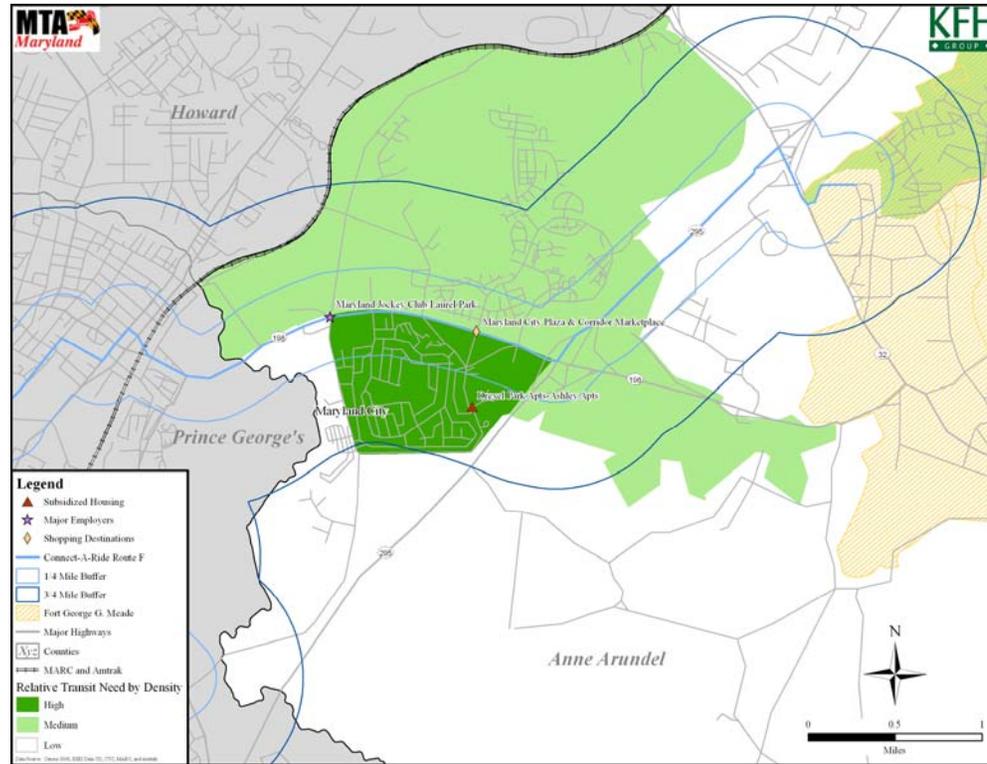
Major Employers
 Maryland Jockey Club/Laurel Park
 National Security Agency (NSA)

Educational Facilities
 (None)

Human Service Agencies
 (None)

Shopping Centers
 Maryland City Plaza &
 Corridor Marketplace

**Park & Ride Lot
 Locations**
 (None)



3-15

SERVICE DESCRIPTIONS

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

Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Rte 197 PnR NSA
Hours of Service:	6:15-7:15am and 3:26-4:33pm
Days of Service:	Mon-Fri
Fares:	\$2.00 for General Public \$1.00 for Seniors
Round Trip Miles:	21

PRODUCTIVITY DATA (FY 2006)

Annual Passenger Trips:	7,018
Annual Revenue Hours:	920
Annual Revenue Miles:	16,168
Annual Operating Cost:	\$61,380
Passenger Trips per Revenue Hour:	7.63
Operating Cost per Revenue Hour:	\$66.72
Operating Cost per Revenue Mile:	\$3.80
Operating Cost per Passenger Trip:	\$8.75

*Data from CTC's FY08 Grant Application to MTA, Form 2A.

Figure 3-1c: Route Profile for Connect-A-Ride Route J

3-6

MAJOR TRIP GENERATORS

High Density Housing

- American Southdale Apts
- Bello Machre
- Chesapeake Mobile Court
- Country Club Apts
- Coursey Station Apts
- Drexel Park Apts-Ashley Apts
- Glen Burnie Town Apts
- Holiday Mobile Estates
- Homeplace Estate
- Marley Run Apts
- Rose Hill of Pasadena
- Villages at Marley Station

Medical Centers

(None)

Major Employers

- Coca Cola Enterprises, Inc.
- Kop Flex, Inc.
- Maryland Jockey Club/Laurel Park
- Northwest Airlines, Inc.
- Sears Roebuck & Co. District Office

Educational Facilities

- Calvary Baptist Church Academy
- Center for Workforce Solutions @ AACC
- Glen Burnie High School
- Glen Burnie Nazarene Christian
- Glen Burnie One-Stop Career Center
- Pasadena Freetown Village
- Sales & Service Training Center

Human Service Agencies

- Bello Machre, Inc.
- CASOS, Inc.
- Family & Children's Services of Central MD
- Maryland Korean Social Services Ctr
- NCEON, Inc.
- Salvation Army
- Winter Relief

Shopping Centers

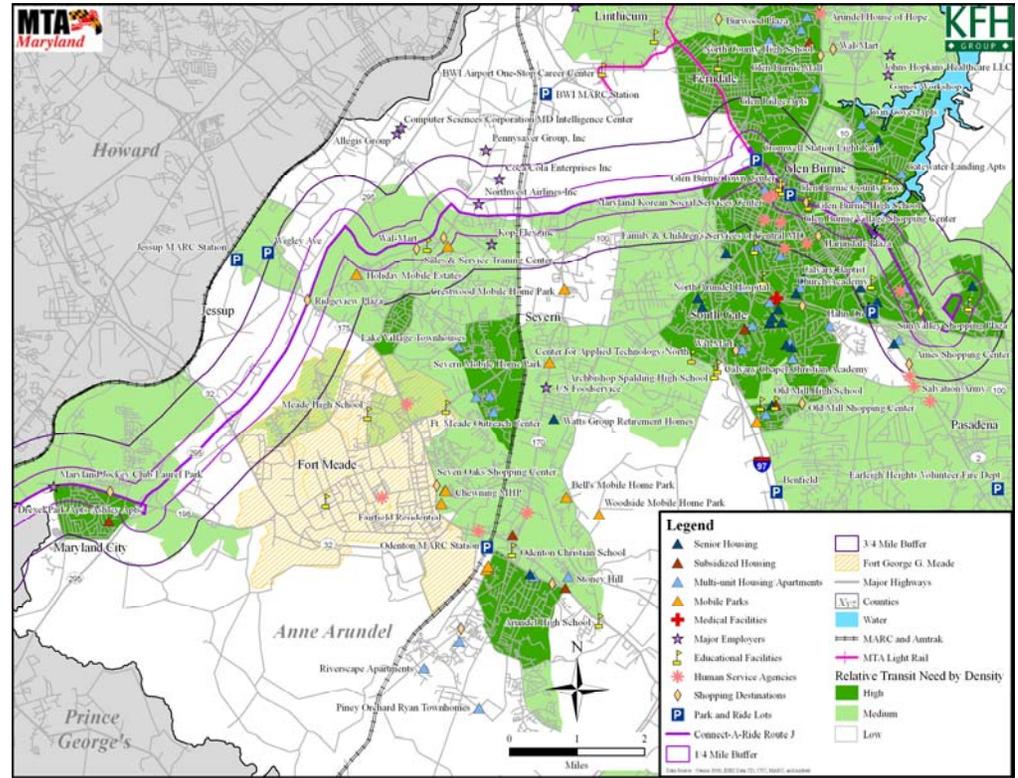
- Ames Shopping Ctr & Festival at Pasadena
- Arundel Mills
- Cromwell Shopping Center
- Glen Burnie Town Center
- Glen Burnie Village Shopping Ctr
- Harundale Plaza
- Marley Station
- Maryland City Plaza & Corridor Marketplace
- Patriot Plaza & Pasadena Crossroads
- Ridgeview Plaza
- Southdale Shopping Center
- Sun Valley Shopping Plaza
- Wal-Mart

Park & Ride Lot Locations

- Cromwell Station Light Rail
- Glen Burnie County Gov.
- Hahn Dr.

**Within 1/4 Mile of Route*

**Within 3/4 Mile of Route*



SERVICE DESCRIPTIONS

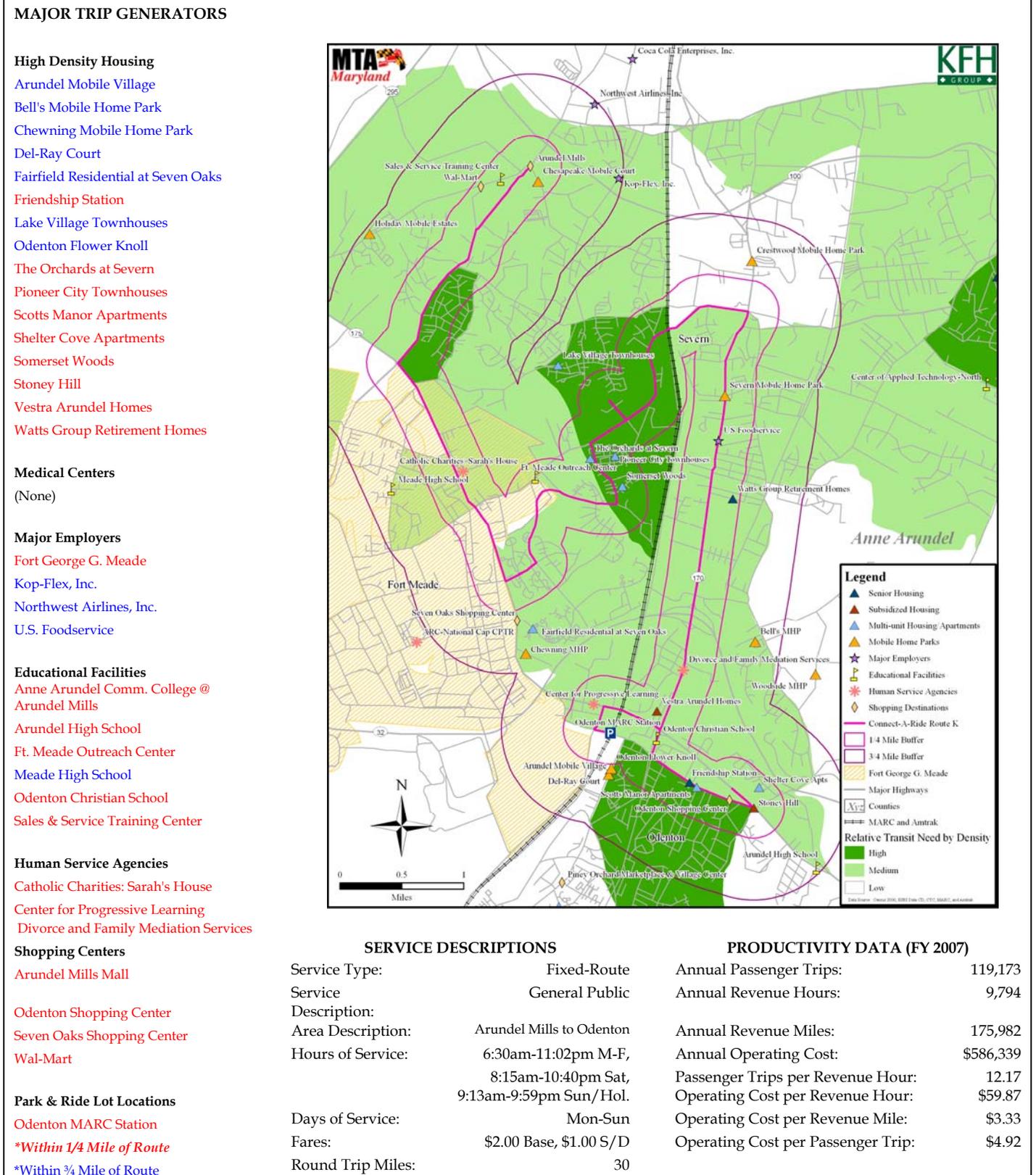
Service Type:	Fixed-Route
Service Description:	General Public
Area Description:	Laurel Mall-Glen Burnie/ Pasadena
Hours of Service:	6am-10:58pm Mon-Fri, 8:40am-11:54pm Sat, 10am-7:54pm Sun/Holidays
Days of Service:	Mon-Sun
Fares:	\$2.00 Gen. Public, \$1.00 S/D
Round Trip Miles:	42

PRODUCTIVITY DATA (FY 2006)

Annual Passenger Trips:	200,367
Annual Revenue Hours:	11,741
Annual Revenue Miles:	236,606
Annual Operating Cost:	\$669,001
Passenger Trips per Revenue Hour:	17.07
Operating Cost per Revenue Hour:	\$56.98
Operating Cost per Revenue Mile:	\$2.83
Operating Cost per Passenger Trip:	\$3.34

*Data from CTC's FY08 Grant Application to MTA, Form 2a.

Figure 3-1d: Route Profile for Connect-A-Ride Route K



*Data from CTC's FY08 Grant Application to MTA, Form 2a.

Figure 3-2: Route Profile for Howard Transit Silver Route

8-3

MAJOR TRIP GENERATORS

High Density Housing
(None)

Medical Centers
(None)

Major Employers
 Northwest Airlines, Inc.
 Allegis Group
 Computer Sciences Corporation
 MD Intelligence Center
 Coca Cola Enterprises, Inc.
 Pennysaver Group, Inc.
 Kop-Flex, Inc.

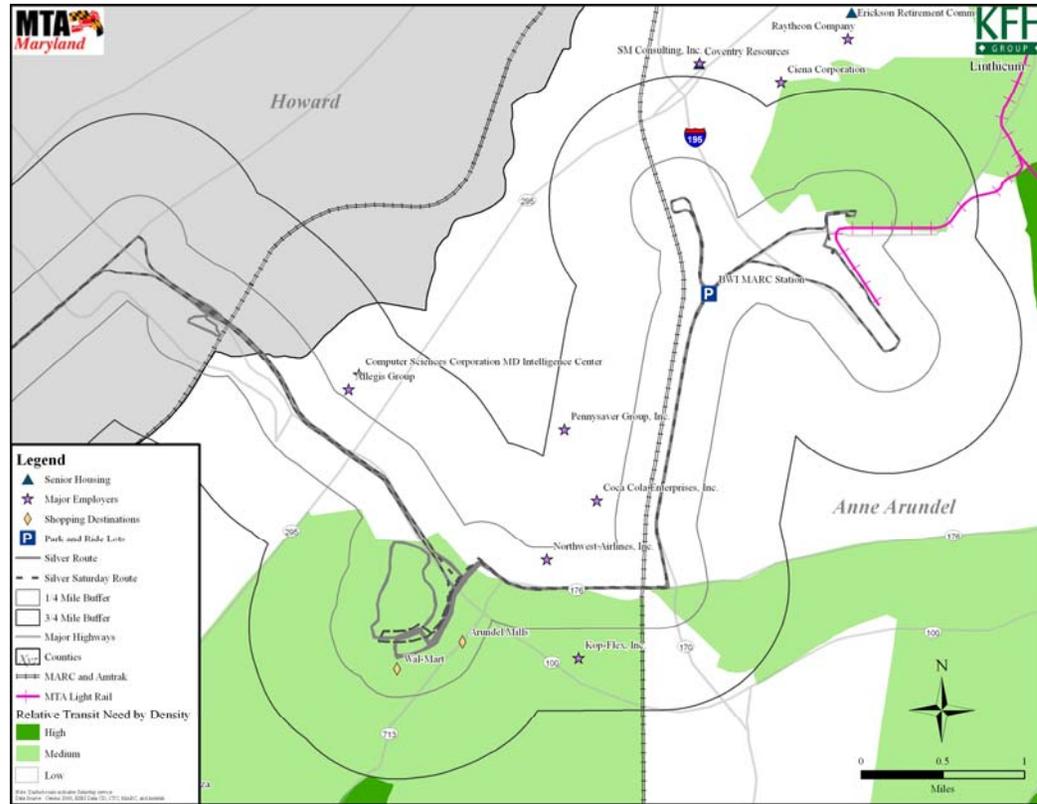
Educational Facilities
(None)

Human Service Agencies
(None)

Shopping Centers
 Arundel Mills
 Wal-Mart

Park & Ride Lot Locations
 BWI MARC Station

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



SERVICE DESCRIPTIONS

Service Type: Fixed-Route
 Service Description: General Public
 Area Description: Columbia Mall to BWI Airport
 Hours of Service: 6am-11pm Mon-Fri,
 8am-11pm Sat, 9am-7pm Sun
 Days of Service: Mon-Sun
 Fares: \$1.50 General Public, \$0.50 S/D
 Round Trip Miles: 52

PRODUCTIVITY DATA (FY 2007)

Annual Passenger Trips: 154,683
 Annual Revenue Hours: 15,457
 Annual Revenue Miles: 264,141
 Annual Operating Cost: \$967,960
 Passenger Trips per Revenue Hour: 10.01
 Operating Cost per Revenue Hour: \$62.62
 Operating Cost per Revenue Mile: \$3.66
 Operating Cost per Passenger Trip: \$6.26

*Data from Howard Transit's FY09 Grant Application to MTA, Form 2a.

Table 3-2: Service Characteristics of MTA Fixed-Route Bus Services in Anne Arundel County

Service Type	Route	Origin/Destination	Major Stops	Hours of Service	Frequency of Service	Fares	Annual Ridership
Local	14	Annapolis to Patapsco Light Rail Stop	Anne Arundel Comm. College, Severna Park Park & Ride Lot, Pasadena, Marley Station Mall, Harundale, Glen Burnie, Baltimore Washington Medical Center, Cromwell Station Light Rail Stop, Bayview Industrial Park, MVA, and Brooklyn	M-F 4:48 a.m. to 1:27 a.m. Sat 6:13 a.m. to 11:38 p.m. Sun/H 6:46 a.m. to 9:23 p.m.	M-F 30 minutes Sat 45 minutes Sun/H about 90 minutes	\$1.60 one-way, \$0.55 for seniors and individuals with disabilities (S/D); \$3.50 Day Pass, \$1.20 for S/D	818,540
Local	17	Univ. of Md. Transit Center (Sundays)/Patapsco Light Rail Stop/BWI Airport/Parkway Center/Arundel Mills Mall	Baltimore Highlands, Nursery Rd. Light Rail Stop, Airport Square, Embassy Suites, BWI Business District, BWI MARC Train Sta., Baltimore Commons, Business Park, Parkways Center South, State Employees Credit Union (SECU)	M-F 5:43 a.m. to 4:24 a.m. Sat 6:00 a.m. to 4:20 a.m. Sun/H 5:50 a.m. to 4:20 a.m.	M-F 30- 60 mins Sat about 60 mins Sun/H 60 mins	Same as above	252,122
Local	64	Curtis Bay/Riviera Beach to North Ave	Downtown/North Ave, Penn MARC Station, Inner Harbor, Port Covington, Harbor Hospital Center, Baltimore Park & Ride, Brooklyn, Brooklyn Homes, Energy Parkway	M-F 4:19 a.m. to 2:19 a.m. Sat 5:03 a.m. to 2:11 a.m. Sun/H 5:32 a.m. to 2:10 a.m.	M-F 11-60 mins Sat 20-50 mins Sun/H 50 mins	Same as above	1,205,206

Table 3-2 (continued)

Service Type	Route	Origin/Destination	Major Stops	Hours of Service	Frequency of Service	Fares	Annual Ridership
Commuter	904	North Beach (Calvert Co.)/ Pindell to D.C.	Owings (Calvert Co.); Pindell P&R, Bristol P&R, Wayson's Corner P&R; Prince George's Equestrian Ctr. (PG Co.); D.C.--Capitol Hill, L'Enfant Plaza, Federal Triangle, Farragut Square, State Dept.	M-F To D.C. 5:15 to 9:09 a.m. From D.C. 12:15 to 1:40 p.m. and 3:00 to 7:01 p.m.	To D.C. 10-15 minutes From D.C. 10-25 minutes	\$3.50 one-way or \$2.45 S/D for stops b/w Pindell and Equestrian Center (Zone 2), \$4.25 one-way or \$3.20 S/D for stops b/w N. Beach and Owings (Zone 3)*	223,232
Commuter	922	Kent Island (Queen Anne's Co.)/ Annapolis to D.C.	Navy-Marine Corps Memorial Stadium; West St.; Harry S. Truman Park & Ride; D.C.--Capitol Hill, Independence Ave., Federal Triangle, Pennsylvania Ave, Union Station, Union Center Plaza	M-F To D.C. 5:05 to 8:49 a.m. From D.C. 3:20 to 7:37 p.m.	To D.C. 25-40 minutes From D.C. 15-40 minutes	\$4.25 one-way or \$3.20 S/D from Annapolis (Zone 3), \$5.00 one- way or \$3.95 S/D from Kent Island (Zone 4)*	148,103
Commuter	950	Kent Island (Queen Anne's Co.)/ Annapolis to D.C.	West St.; Harry S. Truman Park & Ride; D.C. – Mount Vernon Square, K Street, McPherson Square, Farragut Square, George Washington Univ., State Department	M-F To D.C. 4:55 to 9:11 a.m. From D.C. 12:15 to 1:45 p.m. and 3:00 to 7:50 p.m.	To D.C. 15-45 minutes From D.C. 5-30 minutes	Same as above	240,829

*Ten-Trip Tickets, Monthly Passes, and Transit Link Cards also available.

Note: Ridership for local bus routes approximated from 2006 data on average weekday, Saturday, and Sunday daily boardings. Ridership for commuter bus routes from FY 2007. Source for ridership numbers: MTA via email communication on April 23, 2008.

Anne Arundel County to continue the service.² With the possibility of being discontinued, this route is included as a recommended transit service in the next chapter.) The MTA commuter buses generally run in peak directions, toward DC in the morning and toward Anne Arundel in the afternoon and evening. The commuter buses are operated by Dillon’s Bus Service, Inc. and serve the central and southern parts of the County. Route 904 runs between North Beach (Calvert County), Pindell, and Washington, D.C. Routes 922 and 950 run between Kent Island (Queen Anne’s County), Annapolis, and Washington, D.C.

Rail Service

The MTA also provides two types of rail service in Anne Arundel County. Light Rail service connects Baltimore County and Baltimore City to northern Anne Arundel, serving BWI Airport and Glen Burnie. The MARC Train service runs from Harford County and Baltimore City through Anne Arundel County to Washington, D.C., also serving BWI Airport en route. Exhibit 3-1 portrays the MARC Train and Light Rail services. See the Camden and Penn Lines and the Light Rail lines, which run from Hunt Valley to Cromwell Station/Glen Burnie, on the right side of the map. Table -3-3a summarizes the service characteristics of the MTA Light Rail and the MARC Commuter Rail that serve Anne Arundel County. While Light Rail operates daily, MARC service runs Monday through Friday only.

At BWI, free shuttle buses take passengers from the MARC station and the Light Rail station to the airport terminal. The Odenton MARC Station is served by Connect-A-Ride Route K, as well as an NSA-operated shuttle that takes passengers with DoD identification to Fort Meade and NSA. This service is described in more detail in the next chapter as a transit improvement that is already in operation.

Table 3-3b outlines the stations for rail service in Anne Arundel County, including connectivity to other transit options. More details about public transit connectivity are included below, but some connections at the MTA rail stations are described here. Passengers can make several connections between MTA Light Rail and local buses:

- The Nursery Road Light Rail station is served by MTA Route 17;
- The BWI Business District and BWI Airport Light Rail stations are served by MTA Route 17, Howard Transit’s Silver Route, and WMATA’s B30 Route;
- The BWI Business Partnership’s LINK Shuttle also services the BWI Business District Light Rail; and

² http://www.dillonbus.com/schedule_info.asp

Table 3-3a: Service Characteristics of MTA Rail Service in Anne Arundel County

Service Type	Line	Origin/Destination	Major Stops	Hours of Service	Frequency of Service	Fares
Light Rail	Blue	Hunt Valley (Baltimore Co.) to BWI Airport	Timonium, Lutherville, North Avenue, Univ. of Baltimore/Mt. Royal, Lexington Market, Camden Yards, Patapsco, North Linthicum	M-F 4:10 a.m. to 1:24 a.m. Sat 4:21 a.m. to 1:22 a.m. Sun/H 9:51 a.m. to 9:22 p.m.	M-F 15-30 minutes Sat 30 minutes Sun/H 30 minutes	\$1.60 one-way, \$0.55 for seniors and individuals with disabilities (S/D); \$3.50 Day Pass, \$1.20 for S/D
Light Rail	Yellow	Hunt Valley/ Timonium (Baltimore Co.) to Cromwell Station/ Glen Burnie	Lutherville, North Avenue, Univ. of Baltimore/Mt. Royal, Lexington Market, Camden Yards, Patapsco, North Linthicum	M-F 4:35 a.m. to 1:07 a.m. Sat 4:36 a.m. to 1:07 a.m. Sun/H 10:06 a.m. to 9:37 p.m.	M-F 12-30 minutes Sat 30 minutes Sun/H 30 minutes	Same as above
MARC	Camden	Baltimore Camden Station (Baltimore City) to Washington Union Station (D.C.)	St. Denis (Balt. Co.); Dorsey, Jessup, Savage (Howard and A.A. County border); Laurel Racetrack, Laurel, Muirkirk, Greenbelt, College Park, Riverdale (PG Co.)	M-F Northbound 6:42 a.m. to 8:50 p.m. Southbound 5:10 a.m. to 7:22 p.m.	Northbound 25-70 minutes Southbound 26-105 minutes	\$4.00-\$7.00 depending on the origin and destination
MARC	Penn	Perryville (Harford Co.) to Washington Union Station (D.C.)	Aberdeen, Edgewood (Harford Co.); Martin Airport, Halethorpe (Balt. Co.); Baltimore/Penn Station, West Baltimore (Balt. City); BWI Airport, Odenton; Bowie State, Seabrook, New Carrollton (PG Co.)	M-F Northbound 5:54 a.m. to 12:40 a.m. Southbound 4:40 a.m. to 11:30 p.m.	Northbound 9-125 minutes Southbound 26-105 minutes	\$4.00-\$11.00 depending on the origin and destination

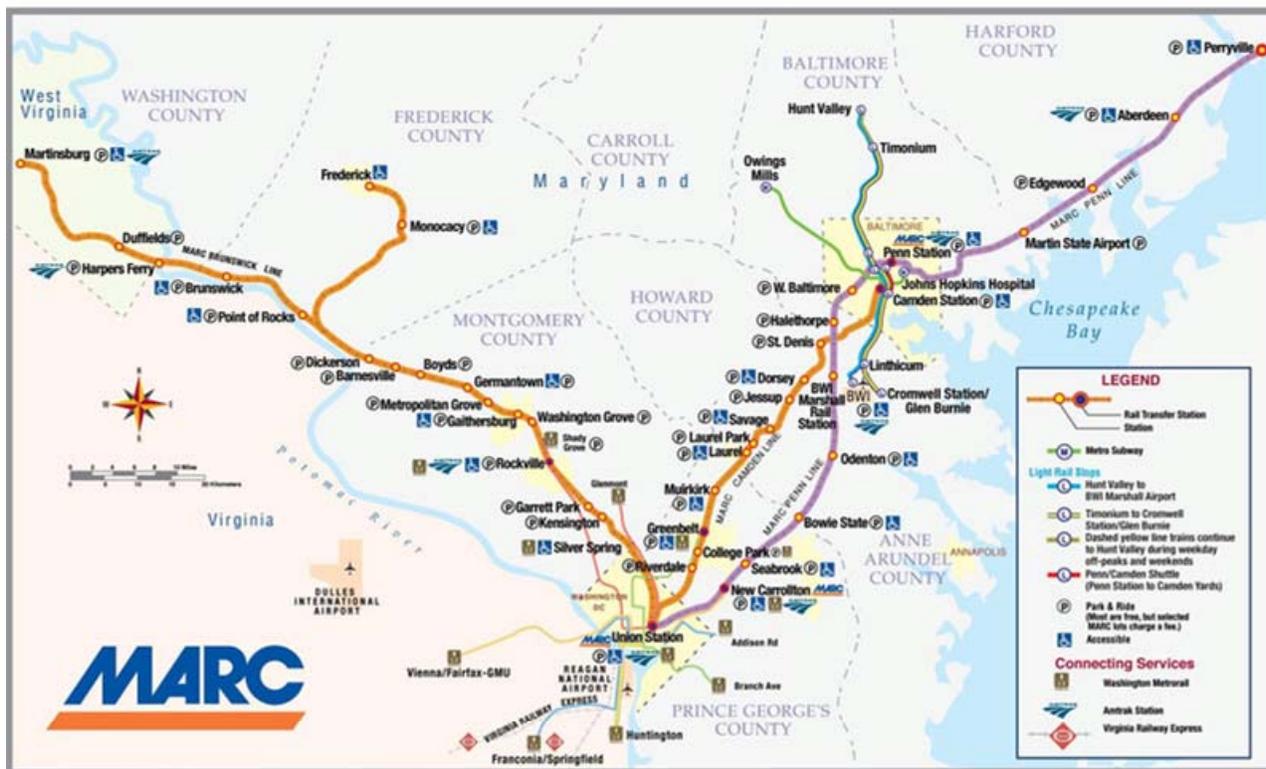
Source: MTA Website, Light Rail service, <http://www.mtmaryland.com/services/lightrail/>, and MARC Train service, <http://www.mtmaryland.com/services/marc/>.

Table 3-3b: MTA Rail Stations in Anne Arundel County

Service Type	Line	Stop	Address	Station Hours	Parking Spaces (Free or Paid)	Connecting Services
Light Rail	Blue & Yellow	Nursery Road	6825 Balto.-Annap. Blvd. Linthicum, Md. 21090	Separate station hours unavailable. See Table 3b for Hours of Service.	37 Free	MTA 17
Light Rail	Blue & Yellow	North Linthicum	450 N. Camp Meade Road Linthicum Heights, Md. 21090	Same as above	347 Free	None
Light Rail	Blue & Yellow	Linthicum	595 Camp Meade Road Linthicum Heights, Md. 21090	Same as above	None	None
Light Rail	Blue	BWI Business District	678 Elkridge Landing Road Linthicum, Md. 21090	Same as above	36 Free	MTA 17, HT Silver Route, WMATA B30 Route, LINK Shuttle (weekdays only)
Light Rail	Blue	BWI Airport	International Pier at BWI Terminal	Same as above	A general purpose paid garage is adjacent to the stop.	MTA 17, HT Silver Route, WMATA B30 Route
Light Rail	Yellow	Ferndale	10 Broadview Blvd. Glen Burnie, Md. 21061	Same as above	None	None
Light Rail	Yellow	Cromwell Station/Glen Burnie	7378 Baltimore Annapolis-Boulevard Road Glen Burnie, Md. 21060	Same as above	795 Free	MTA 14, Connect-A-Ride Route J, Annapolis Transit C-60
MARC	Camden	Dorsey	7000 Deerpath Rd. at MD 100 between US 1 & MD 295 Dorsey, MD 21076	M-F 5:15 a.m. to 8:45 a.m.	802 Free	HT Purple and Silver Routes
MARC	Camden	Jessup	8 Old Jessup Rd. Jessup, MD 20794	Unstaffed	75 Free	None
MARC	Camden	Savage	9009 Dorsey Run Rd. Savage, MD 20723	T & Th 5:00 to 10:00 a.m.	914 Free	HT Purple Route
MARC	Penn	BWI Rail Station	MD Rt. 170 & Amtrak Way BWI Airport, MD 21240	Daily 5:30 a.m. to 9:30 p.m.	3,200 Paid	MTA 17, HT Silver Route (weekdays only), Annapolis Transit C-60 (on request), BWI Airport Shuttle, LINK Shuttle (weekdays only)
MARC	Penn	Odenton	1400 Odenton Rd. Odenton, MD 21113	M-F 5:00 a.m. to 8:30 p.m.	2,000 Free	Connect-A-Ride Route K, , NSA Transportation Shuttle (to Fort Meade and NSA)

Source: MTA Website. Light rail stations: <https://www.mtmaryland.com/services/lightrail/parking/> and MARC stations: <http://www.mtmaryland.com/services/marc/schedulesSystemMaps/marcTrainSystemMap.cfm> and <http://www.mtmaryland.com/services/marc/serviceInformation/stationinfo.cfm?&printer=1>

Exhibit 3-1: Map of MARC Train and Light Rail Services



Source: MTA MARC Train Website,

<http://www.mtmaryland.com/services/marc/schedulesSystemMaps/marcTrainSystemMap.cfm>

- The Cromwell Station/Glen Burnie Light Rail stop is served by MTA Route 14, Connect-A-Ride Route J, and Annapolis Transit Route C-60.

Several connections also exist between the MARC trains and local buses:

- Howard Transit's Purple and Silver Routes along the MARC Camden Line.
- On the Penn Line, the BWI Station is served by MTA Route 17, Howard Transit's Silver Route, Annapolis Transit Route C60, the free BWI Shuttle, and the BWI Business Partnership's LINK Shuttle.
- The Odenton MARC Station is served by Connect-A-Ride Route K.
- NSA Transportation Services also operates a shuttle for Fort Meade employees and visitors to and from the Odenton MARC Station. See the Private Transportation section below for further information on this service.

Exhibit 3-2 is the current schedule for the MARC Penn Line, which is highlighted because this route provides one of the easiest existing transit options to access Fort Meade. Further details related to the MARC train service are described in the Existing Transit in Northern Virginia section below, which outlines how Northern Virginia residents can reach Fort Meade, as well as in the next chapter on planned transit improvements, which include a shuttle option between the Odenton MARC Station and Fort Meade. This service is currently operated for employees with valid DoD identification but not open to the public.

Washington Metropolitan Area Transit Authority (WMATA)

WMATA operates two bus routes that serve Anne Arundel County. Route B29 connects Crofton to the New Carrollton Metro station in Prince George's County, and Route B30 provides express service between the Greenbelt Metro station and BWI Airport. See Table 3-4 for a summary of the routes' service characteristics. The B30 Express service runs daily, providing 25 trips each weekday and 21 trips on Saturdays and Sundays. Route B30 stops at the lower level International Pier of the airport and at the BWI Business District Light Rail station, allowing transfers to MTA Light Rail, MTA local bus 17, and Howard Transit's Silver Route.

Public Transit Connectivity

As mentioned at the beginning of this section, only one existing transit route in the area serves Fort Meade directly. Connect-A-Ride's Route K currently stops at the installation's main gate at Reece Road and Annapolis Road. (The recent shuttle operated by NSA from the Odenton MARC Station onto Fort Meade is not open to the public, but serves employees and visitors with valid DoD identification only.) However, existing public transit services in Anne Arundel County do have decent connectivity in areas near the installation, including the Odenton MARC Station, Arundel Mills Mall, and BWI Airport. Table 3-5 displays existing services that connect at these modal transfer points. New and adjusted transit alternatives, discussed in the next section, could also make connections at these transfer points, not only providing service directly to Fort Meade but also expanding the regional public transit network.

While the Odenton MARC Station, Arundel Mills Mall, and BWI Airport host the most connections with existing transit services, the Savage and Dorsey MARC Stations, Linthicum, and the Annapolis Towne Centre at Parole provide additional options for major transfer points. Expanding such transfer points would increase public transit connectivity in the southern and eastern parts of Anne Arundel County, where significant numbers of employees at Fort Meade currently do or will live once they relocate for BRAC.

Exhibit 3-2: Schedule for the MARC Penn Line

PENN LINE NORTHBOUND Monday through Friday only

Effective 1/12/09

TRAIN NUMBER	400	402	506	406	408	410	414	416	418	520	422	424	A148	426	428	530	432	450	534	436	538	440	A188	442	544	446
Washington	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	S	Amttrak	S/O	Q	Q	S/O	Q	S/O	Q	S/O	Q	Amttrak	S/O	Q	Q
New Carrollton	DP	6:05	6:55	7:23	7:49	8:41	9:41	10:41	11:26	12:26	1:20	2:15	23:02	3:27	4:15	4:28	4:46	5:10	5:20	5:34	6:05	6:40	27:10	7:30	9:00	10:30
Seabrook	DP	6:08	6:58	7:23	7:53	8:46	9:45	10:45	11:30	12:40	1:35	2:30	23:05	3:42	4:30	4:35	4:58	5:20	5:30	5:45	6:16	6:51	27:22	7:41	9:11	10:41
Bowie State	DP	6:14	7:04	7:29	7:59	8:53	9:50	10:50	11:35	12:47	1:42	2:37	23:10	3:49	4:39	4:46	5:08	5:25	5:35	5:50	6:21	6:56	27:27	7:46	9:16	10:46
Odenton	DP	6:19	7:09	7:34	8:04	8:99	9:06	10:06	11:01	12:12	1:07	2:02	23:15	3:54	4:44	4:51	5:13	5:30	5:40	5:55	6:26	7:01	27:32	7:52	9:22	10:53
BWI Marshall Airport	DP	6:26	7:10	7:35	8:05	8:59	9:06	10:06	11:01	12:12	1:07	2:02	23:20	3:59	4:49	4:56	5:18	5:35	5:45	6:00	6:31	7:06	27:37	7:59	9:29	10:59
Halethorpe	DP	6:31	7:15	7:40	8:10	9:04	10:01	11:01	11:56	12:56	1:06	2:01	23:25	4:04	4:54	5:01	5:23	5:40	5:50	6:05	6:36	7:11	27:42	8:07	9:37	11:07
West Baltimore	DP	6:36	7:20	7:45	8:15	9:09	10:06	11:06	12:01	13:01	1:06	2:01	23:30	4:09	4:59	5:06	5:28	5:45	5:55	6:10	6:41	7:16	27:47	8:12	9:42	11:12
Baltimore/Penn	DP	6:45	7:25	8:00	8:30	9:27	10:27	11:27	12:12	13:12	1:06	2:01	23:35	4:14	5:04	5:11	5:33	5:50	6:00	6:15	6:46	7:21	27:52	8:17	9:47	11:17
Martin Airport	DP			8:12						d1:34			23:40	4:19	5:09	5:16	5:38	5:55	6:05	6:20	6:51	7:26	27:57	8:22	9:52	11:22
Edgewood	DP			8:25						d1:46			23:45	4:24	5:14	5:21	5:43	6:00	6:10	6:25	6:56	7:31	28:02	8:27	9:57	11:27
Aberdeen	DP			8:33						d1:58			23:50	4:29	5:19	5:26	5:48	6:05	6:15	6:30	7:01	7:36	28:07	8:32	10:02	11:32
Perryville	AR			8:46						2:10			23:55	4:34	5:24	5:31	5:53	6:10	6:20	6:35	7:06	7:41	28:12	8:37	10:07	11:37

PENN LINE SOUTHBOUND Monday through Friday Only

Effective 1/12/09

TRAIN NUMBER	401	503	405	407	509	411	513	A151	415	417	A181	419	521	423	425	427	429	431	433	535	437	439	A85	441	443	A137	445
Perryville	AM	AM	AM	AM	AM	AM	AM	Amttrak	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
Aberdeen	DP	4:40	4:48	5:48	5:48	6:38	6:38	6:50	7:52	8:21	8:37	9:01	9:08	10:02	10:56	11:46	12:46	1:46	2:51	3:51	4:50	5:43	6:25	7:25	8:50	9:21	
Edgewood	DP	4:58	5:58	6:10	6:10	7:00	7:00	7:15	8:17	8:46	9:02	9:27	9:34	10:28	11:18	12:08	13:08	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14	
Martin Airport	DP	4:40	5:25	5:55	6:17	6:25	7:00	7:15	8:17	8:46	9:02	9:27	9:34	10:28	11:18	12:08	13:08	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14	
Baltimore/Penn	DP	4:47	5:32	6:02	6:25	6:33	7:07	7:22	8:21	8:50	9:06	9:31	9:56	10:50	11:40	12:40	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
West Baltimore	DP	4:53	5:38	6:08	6:31	6:39	7:13	7:28	8:26	8:55	9:11	9:36	10:30	11:20	12:10	13:10	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
Halethorpe	DP	4:59	5:44	6:14	6:37	6:45	7:19	7:35	8:33	9:02	9:18	9:43	10:37	11:27	12:17	13:17	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
BWI Marshall Airport	DP	5:06	5:52	6:22	6:45	6:53	7:27	7:43	8:41	9:10	9:26	9:51	10:45	11:35	12:25	13:25	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
Odenton	DP	5:13	5:59	6:29	6:52	7:00	7:34	7:50	8:48	9:17	9:33	10:08	10:43	11:33	12:23	13:23	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
Bowie State	DP	5:19	6:06	6:36	7:01	7:14	7:48	8:04	9:02	9:31	9:47	10:22	10:57	11:47	12:37	13:37	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
Seabrook	DP	5:24	6:10	6:41	7:06	7:19	7:53	8:09	9:07	9:36	9:52	10:27	11:02	11:52	12:42	13:42	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14		
New Carrollton	DP	5:37	6:23	6:54	7:09	7:25	8:00	8:15	9:13	9:42	10:08	10:43	11:18	12:08	13:08	1:40	2:45	3:45	4:43	5:36	6:18	7:18	8:43	9:14	10:40		
Washington	AR			8:46							2:10		23:55	4:34	5:24	5:31	5:53	6:10	6:20	6:35	7:06	7:41	28:12	8:37	10:07	11:37	

- d** Train will stop to discharge passengers only. Passengers must notify conductor upon boarding.
- f** Flag stop at this station: trains will pick up passengers standing on platform, and visible to engineer. Trains will discharge passengers at this station if passengers have notified conductor upon boarding.
- L** Train may leave 5 minutes early.
- Q** Trains operating with a "Quiet Car". No cell phones, electronic devices that make noise, or loud conversations. Quiet Car is adjacent to locomotive. "Quiet Car" is a registered service mark of Amtrak.
- r** Train stops at this station only to receive passengers.
- S** ONLY trains designated with an S at the top of the column will operate when severe weather conditions or special circumstances warrant. On days of heavy snowfall or other severe weather, MARC will operate this special schedule.
 - On these days only, train 509 will stop at Odenton at 6:50; train 513 at Odenton at 7:40; train 423 at Halethorpe at 11:02 and Seabrook at 11:24; train 437 at West Baltimore at 4:55; Halethorpe at 5:00 train 441 at West Baltimore at 6:30 and Seabrook at 6:55; train 534 at New Carrollton at 5:29 and Odenton at 5:37.
 - There will be no MARC train service on New Year's Day, Martin Luther King Jr. Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veteran's Day (observed), Thanksgiving Day, the Friday after Thanksgiving and Christmas Day.
- MARC tickets are not valid on AMTRAK trains on days when MARC service does not operate.

- X** Amtrak Train 151 - Travel is restricted to Monthly/Weekly ticket holders boarding at PERRYVILLE, ABERDEEN, and EDGEWOOD STATIONS ONLY. Boarding is NOT permitted at Baltimore, BWI, and New Carrollton; discharge only at those locations. Arrival times in Baltimore at 7:22 AM, BWI at 7:48 AM, New Carrollton at 8:02 AM, and Washington at 8:15 AM. MARC tickets are NOT valid on Amtrak trains for travel entirely between Baltimore and Washington. MARC one-way and 10 trip tickets are NEVER valid on Amtrak trains. For more information go to www.mtarmyland.com <<http://www.mtarmyland.com>> and click on "MARC Train," then "Amtrak Cross Honoring Policies."
- Y** Amtrak Train 181 - Travel is restricted to Monthly/Weekly ticket holders boarding at ABERDEEN STATION ONLY. Boarding is NOT permitted at Baltimore, BWI, and New Carrollton; discharge only at those locations. Arrival times in Baltimore at 8:58 AM, BWI at 9:11 AM, New Carrollton at 9:26 AM, and Washington at 9:42 AM. MARC tickets are NOT valid on Amtrak trains for travel entirely between Baltimore and Washington. MARC one-way and 10 trip tickets are NEVER valid on Amtrak trains. For more information go to www.mtarmyland.com <<http://www.mtarmyland.com>> and click on "MARC Train," then "Amtrak Cross Honoring Policies."
- Z** Amtrak Trains 148 & 188 - Travel is restricted to Monthly/Weekly ticket holders whose destination is ABERDEEN STATION ONLY. Train will NOT discharge any MARC ticket holders at Baltimore, BWI, and New Carrollton; boarding only at those locations on route to Aberdeen. MARC tickets are NOT valid on Amtrak trains for travel entirely between Washington and Baltimore. MARC one-way and 10 trip tickets are NEVER valid on Amtrak trains. For more information go to www.mtarmyland.com <<http://www.mtarmyland.com>> and click on "MARC Train," then "Amtrak Cross Honoring Policies."

Table 3-4: Service Characteristics of WMATA Routes in Anne Arundel County

Route	Origin/Destination	Major Stops	Hours of Service	Frequency of Service	Fares	Annual Ridership (FY09)
B29	Crofton to New Carrollton	Crofton Country Club Park & Ride Lot; Gateway Center, Bowie, Covington, Bowie Town Center, Bowie Park & Ride Lot, New Carrollton Metro station (PG Co.)	M-F 6:00 a.m. to 8:04 a.m. and 4:15 p.m. to 6:58 p.m.	30-40 minutes	\$1.25 one-way using SmarTrip, \$1.35 using cash, \$0.60 S/D	69,088
B30	Greenbelt to BWI Airport Express	Greenbelt Metro station, Greenbelt Metro Drive & Cherrywood Ln., BWI Business District Light Rail station	M-F 6:10 a.m. to 11:19 p.m. Sat/Sun 8:45 a.m. to 11:21 p.m.	30-40 minutes	\$3.00 one-way using SmarTrip, \$3.10 using cash, \$0.60 S/D	252,626

Sources: WMATA Bus—Maryland Timetables Website: <http://www.wmata.com/bus/timetables/timetables-state.cfm?State=MD>, and ridership information from WMATA Planning and Joint Development via email communication on March 3, 2009.

Notes: Ridership for B29 includes ridership for Route B31 as well. The FY09 annual ridership was approximated by multiplying the averages for weekday daily, Saturday, and Sunday ridership (from the first half of FY09, July through December 2008) by the corresponding number of service days, i.e. multiplying the weekday daily average ridership by 254 weekdays of service per year.

Table 3-5: Connectivity of Existing Routes

Provider	Route	Connects to	Connection Location(s)
Annapolis Transit	Red	AT Gold AT Brown AT Green Dillon's Bus Service 921 MTA 922 MTA 950	Annapolis Mall, Anne Arundel Medical Center West Street, Annapolis Mall West Street West Street West Street West Street
Note: All Annapolis Transit routes meet at the Spa Road Transfer Point, except for the Brown Route.	Yellow	AT Brown AT Green AT Gold AT Orange MTA 14 Dillon's Bus Service 921 MTA 922 MTA 950	West St, Church Circle, Spa Creek Bridge, West St, Church Circle, Eastport Plaza Church Circle Hilltop Lane Near Calvert St. and Bladen St. (less than a 300 meter walk to transfer) West Street West Street West Street
	Green	AT Brown AT Gold AT Orange AT Yellow AT Red MTA 14 Dillon's Bus Service 921 MTA 922 MTA 950	Church Circle, West St, Riva Rd, Forest Dr, Bay Forest Plaza, Eastport Plaza Church Circle, Riva Road Forest Drive West St, Church Circle, Eastport Plaza West Street Near Calvert St. and Bladen St. (less than a 300 meter walk to transfer) West Street West Street West Street
	Orange	AT Brown AT Gold AT Green AT Yellow	Forest Drive Forest Drive Forest Drive Hilltop Lane
	Gold	AT Brown AT Green AT Orange AT Red AT Yellow MTA 14 Dillon's Bus Service 921 MTA 922 MTA 950	Church Circle, Annapolis Mall, Riva Rd, Forest Dr and Center St Church Circle, Riva Road Forest Drive Annapolis Mall, Anne Arundel Medical Center Church Circle Near Calvert St. and Bladen St. (less than a 300 meter walk to transfer) West Street West Street West Street
	Brown	AT Green AT Gold	Church Circle, West St, Riva Rd, Forest Dr, Bay Forest Plaza, Eastport Plaza Church Circle, Annapolis Mall, Riva Rd, Forest Dr and Center St

Provider	Route	Connects to	Connection Location(s)
		AT Orange AT Red AT Yellow MTA 14 Dillon's Bus Service 921 MTA 922 MTA 950	Forest Drive West Street, Annapolis Mall West St, Church Circle, Spa Creek Bridge, Eastport Plaza Near Calvert St. and Bladen St. (less than a 300 meter walk to transfer) West Street West Street West Street
	C-40	MTA 14	AACC at Arnold
	C-60	CAR Route J CAR Route K MTA 14 MTA LR-Cromwell Line MTA LR-BWI Airport Line HT Silver MTA MARC-Penn Line Amtrak MTA 17 Dillon's Bus Service 921 MTA 922 MTA 950	Arundel Mills Mall and Cromwell LR Station/Glen Burnie Arundel Mills Mall Cromwell LR Station/Glen Burnie Cromwell LR Station/Glen Burnie BWI Busin. District LR Station, BWI International Terminal (LR Station outside terminal) Arundel Mills Mall, AACC at Arundel Mills, BWI International Terminal, BWI MARC/ Amtrak Station (C-60 by request) BWI MARC/ Amtrak Station (C-60 by request) BWI MARC/ Amtrak Station (C-60 by request) Arundel Mills Mall, BWI Airport Terminal, BWI MARC/ Amtrak Station (C-60 by request) Navy-Marine Corps Stadium, West St. Navy-Marine Corps Stadium, West St. Navy-Marine Corps Stadium, West St.
Connect-A-Ride	B	CAR Route F CAR Route J	Laurel Mall Laurel Mall
	F	CAR Route B CAR Route J	Laurel Mall Laurel Mall
	J	AT C-60 MTA 14 MTA LR-Cromwell Line CAR Route B CAR Route F CAR Route K HT Silver Route MTA 17	Arundel Mills Mall and Cromwell LR Station/Glen Burnie Cromwell LR Station/Glen Burnie, Marley Station Rd. and Baltimore Annapolis Blvd. Cromwell LR Station/Glen Burnie Laurel Mall Laurel Mall Arundel Mills Mall Arundel Mills Mall, Dorsey Rd and Candlewood Dr Arundel Mills Mall

Provider	Route	Connects to	Connection Location(s)
	K	MTA MARC-Penn Line NSA Shuttle-Odenton AT C-60 CAR Route J MTA 17 HT Silver Route	Odenton MARC Station Odenton MARC Station Arundel Mills Mall Arundel Mills Mall Arundel Mills Mall Arundel Mills Mall
Howard Transit	Silver	AT C-60 LINK Shuttle MTA 17 MTA LR-BWI Airport Line WMATA B30 MTA MARC-Penn Line Amtrak MTA MARC-Camden Line CAR Route J CAR Route K	Arundel Mills Mall, AACC at Arundel Mills, BWI International Terminal, BWI MARC/ Amtrak Station (C-60 by request) BWI Busin. District LR Station, BWI MARC/ Amtrak Station Arundel Mills Mall, BWI Business District and BWI LR Stations, BWI MARC/ Amtrak Station, BWI Airport Terminal BWI Busin. District and BWI LR Stations BWI Busin. District and BWI LR Stations, BWI International Terminal BWI MARC/ Amtrak Station BWI MARC/ Amtrak Station Dorsey MARC Station Arundel Mills Mall, Dorsey Rd and Candlewood Dr Arundel Mills Mall
MTA	14	AT C-40 AT C-60 AT Brown, Gold, Green, and Yellow Routes CAR Route J MTA LR-Cromwell Line MTA LR-BWI Airport Line MTA 17	AACC at Arnold Cromwell LR Station/Glen Burnie Near Calvert St. and Bladen St. (less than a 300 meter walk to transfer) Cromwell LR Station/Glen Burnie, Marley Station Road and Baltimore Annapolis Blvd. Cromwell LR Station/Glen Burnie and Patapsco LR Station Patapsco LR Station Patapsco LR Station
	17	LINK Shuttle HT Silver Route WMATA B30 MTA LR-BWI Airport Line MTA MARC-Penn Line	BWI Busin. District LR Station, BWI MARC/ Amtrak Station Arundel Mills Mall, BWI Business District and BWI LR Stations, BWI MARC/ Amtrak Station, BWI Airport Terminal BWI Busin. District LR Station, BWI Airport Terminal/LR Station BWI Busin. District and BWI LR Stations BWI MARC/ Amtrak Station

Provider	Route	Connects to	Connection Location(s)
		Amtrak AT C-60 CAR Route J CAR Route K MTA LR-BWI Airport Line MTA LR-Cromwell Line MTA 14	BWI MARC/ Amtrak Station Arundel Mills Mall, BWI Airport Terminal, BWI MARC/ Amtrak Station (C-60 by request) Arundel Mills Mall Arundel Mills Mall Patapsco LR Station Patapsco LR Station Patapsco LR Station
	64	MTA LR-Penn Station Line MTA MARC-Penn Line Other MTA local routes	Penn Station Penn Station Penn Station
	904	None in the County Calvert County Transportation Service Prince George's County – The Bus, Routes 21 and 51 WMATA Metro and Metrobus	Near the Municipal Lot in North Beach (two blocks from the local bus route) Prince George's Equestrian Center Archives-Navy Memorial, Federal Triangle, Metro Center, Farragut North Metro Stations
	922	AT Green Route AT Red Route AT Brown Route AT Gold Route AT Yellow Route AT C-60 Dillon's Bus Service 921 MTA 950	Riva Rd., West St. West St. and Admiral Dr., West St. and Cherry Grove Ave. (library) Riva Rd. and Forest Dr., West St. West St. and Calvert St. West St. (east of Westgate Circle) Navy-Marine Corps Stadium Harry S. Truman Park and Ride, Navy-Marine Corps Stadium, West St. Harry S. Truman Park and Ride, Navy-Marine Corps Stadium, West St.
	950	AT Green Route AT Red Route AT Brown Route AT Gold Route AT Yellow Route AT C-60 Dillon's Bus Service 921 MTA 922	Riva Rd., West St. West St. and Admiral Dr., West St. and Cherry Grove Ave. (library) Riva Rd. and Forest Dr., West St. West St. and Calvert St. West St. (east of Westgate Circle) Navy-Marine Corps Stadium Harry S. Truman Park and Ride, Navy-Marine Corps Stadium, West St. Harry S. Truman Park and Ride, Navy-Marine Corps Stadium, West St.
WMATA	B29	Dillon's Bus Service 921 MTA MARC-Penn Line WMATA Metro-Orange Line	New Carrollton Station New Carrollton Station New Carrollton Station

Provider	Route	Connects to	Connection Location(s)
	B30	AT C-60 LINK Shuttle HT Silver Route MTA 17	BWI Southwest and International Terminals BWI Busin. District LR Station BWI Busin. District and BWI LR Stations, BWI International Terminal BWI Busin. District and BWI LR Stations, BWI Airport Terminal
BWI Business Partnership	LINK Shuttle	AT C-60 HT Silver Route MTA 17 WMATA B30 MTA MARC-Penn Line Amtrak	BWI MARC/Amtrak Station (C-60 by request) BWI Busin. District LR Station, BWI MARC/Amtrak Station BWI Busin. District LR Station, BWI MARC/Amtrak Station BWI Busin. District LR Station BWI MARC/Amtrak Station BWI MARC/Amtrak Station
Dillon's Bus Service, Inc.	921	AT Green Route AT Red Route AT Brown Route AT Gold Route AT Yellow Route AT C-60 MTA 922 MTA 950 MTA MARC-Penn Line WMATA B29 WMATA Metro-Orange Line	Riva Rd., West St. West St. and Admiral Dr., West St. and Cherry Grove Ave. (library) Riva Rd. and Forest Dr., West St. West St. and Calvert St. West St. (east of Westgate Circle) Navy-Marine Corps Stadium Harry S. Truman Park and Ride, Navy-Marine Corps Stadium, West St. Harry S. Truman Park and Ride, Navy-Marine Corps Stadium, West St. New Carrollton Station New Carrollton Station New Carrollton Station
NSA Transportation	Odenton MARC-VCC1	MTA MARC-Penn Line	Odenton MARC Station
	Savage MARC-CANX	MTA MARC-Camden Line	Savage MARC Station

Notes: The LINK Shuttle runs on weekdays only. The connection between CAR Routes B and J at Laurel Mall lies outside of Anne Arundel County.

Key:

AT = Annapolis Transit

CAR = Connect-A-Ride

HT = Howard Transit

LR = Light Rail

MTA = Maryland Transit Administration

WMATA = Washington Metropolitan Area Transportation Authority

Park and Ride Lots

The Park and Ride lots in Anne Arundel County are generally used by workers commuting into Annapolis and Washington, D.C. Park and Ride lots are used when parking and congestion are a problem at the destination, or when the lots are located at commuter rail stations. Figure 3-3 depicts the locations of the 25 Park and Ride lots located in Anne Arundel County. Table 3-6 lists the addresses, parking, and transit connections available at each lot; those marked with an asterisk are served by MTA commuter bus. The Savage and Odenton MARC Stations are the most feasible transit access points for commuters traveling to the Fort Meade area. After taking the MARC train to these stations, commuters could potentially complete their trip to Fort Meade on private shuttles such as the existing NSA shuttle (see below), if they have valid DoD identification, or on future transit services that have yet to be implemented.

LOCAL RIDESHARING RESOURCES

BWI Business Partnership

The BWI Business Partnership is a non-profit, membership organization that includes nearly 175 local and regional businesses and government agencies. The oldest Transportation Management Association (TMA) in the country according to the Association of Commuter Transportation, the BWI Business Partnership works with major employers in North Anne Arundel County to promote ridesharing and transit use. The organization promotes public policy that centers on good transportation resources and business infrastructure in the BWI area, which includes the airport, NSA, Fort Meade, and Arundel Mills Mall. The BWI Business Partnership supports improvements to transportation in the corridor, including operating employment-targeted shuttle service and promoting commuting alternatives. The organization offers ridesharing assistance to help employees in northern Anne Arundel County link up with carpools or vanpools. Those who use transit or shared rides, and whose employer is a member of the Partnership, may also take advantage of the Emergency Ride Home (ERH) Program, which offers taxis or rental cars to commuters who need to get home in emergency situations. The MTA provides Congestion Mitigation and Air Quality (CMAQ) Improvement Program pass-through funds to the BWI Business Partnership through the County.

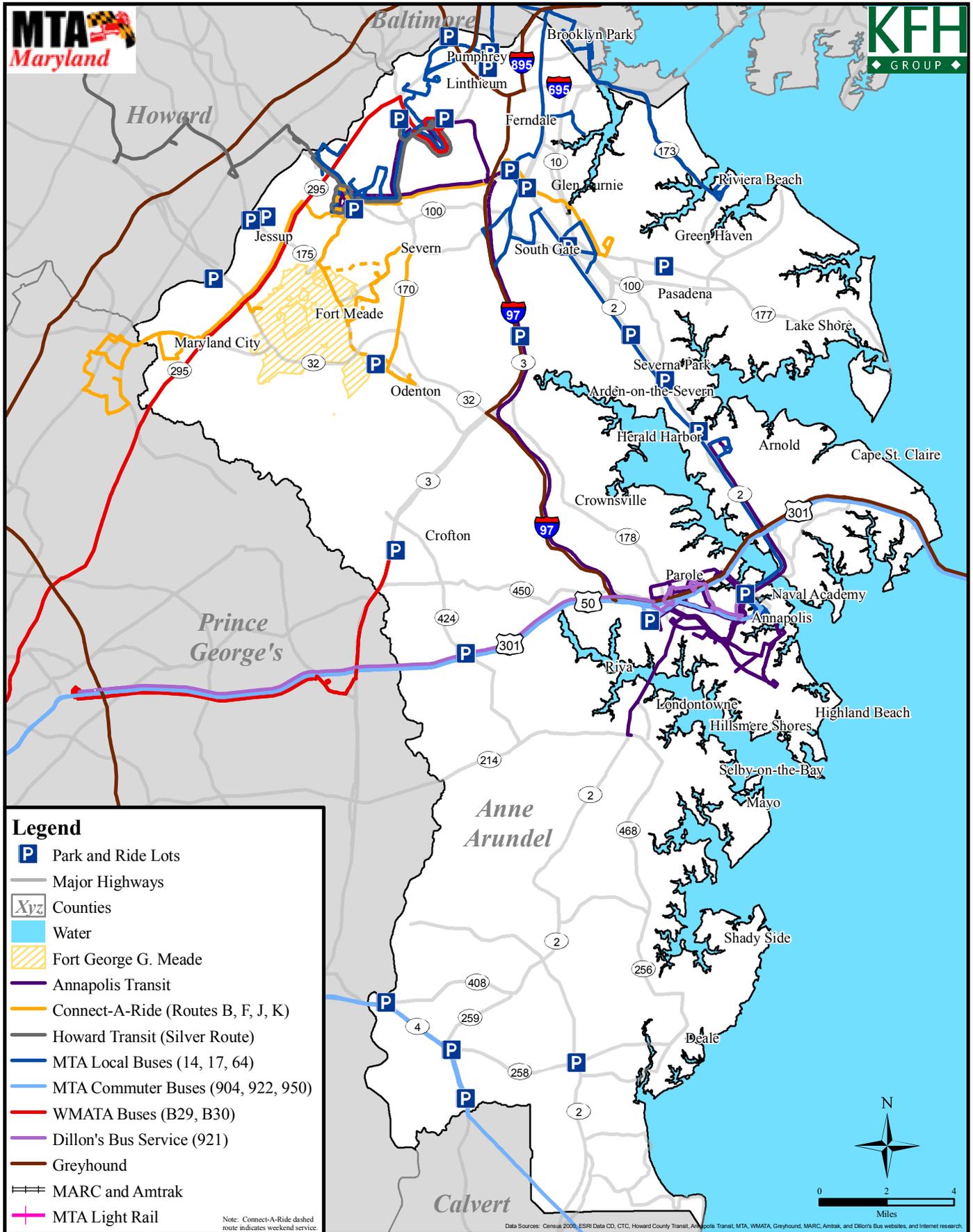


Figure 3-3: Anne Arundel County Park and Ride Lots

Table 3-6: Park & Ride Lots in Anne Arundel County

Name	Address	City/Town	Zip Code	# of Spaces	Commuter Service	
					Rail	Bus
Arundel Mills Mall	7000 Arundel Mills Circle	Hanover	21076	n/a	N	Y (HT Silver, MTA 17, AT C-60, CAR Rt K)
Benfield	I-97 & Benfield Blvd	Odenton	21113	93	N	N
Bristol	MD 4 & MD 258	Lothian	20711	100	N	Y (MTA 904)
BWI Airport	Flightime Dr & MD 170	BWI	21240	n/a	Y*	Y (BWI Shuttle) Y (HT Silver, MTA 17, AT C-60 on request, BWI Shuttle, LINK Shuttle)
BWI Amtrak/MARC Station	Aviation Blvd & Amtrak Way	BWI	21240	3,200	Y	Y (WMATA B29)
Crofton	Crofton Pkwy & Crain Hwy	Crofton	21114	100	N	Y (AT C-60, CAR Route J, MTA 14)
Cromwell Station Light Rail	7378 Baltimore Annapolis Blvd	Glen Burnie	21061	795	Y	Y (Dillon's 921)
Davidsonville	John Hanson Hwy & Davidsonville Rd	Davidsonville	21035	199	N	
Earleigh Heights Volunteer Fire Dept	Gov Ritchie Hwy & Earleigh Heights Rd	Severna Park	21146	50	N	N
Glen Burnie County Gov.	Baltimore Annap. Blvd & Gov Ritchie Hwy	Glen Burnie	21061	555	N	N
Hahn Dr	7920 Ritchie Hwy	Glen Burnie	21061	200	N	N
Hammonds Ferry Rd	Hammonds Ferry Rd & Baltimore	Linthicum	21090	203	N	N
Harry S Truman	Harry S Truman Pkwy & Riva Rd	Annapolis	21401	500	N	Y (MTA 922 and 950, Dillon's 921)
Jessup MARC Station	Jessup Rd & Old Jessup Rd	Jessup	20794	100	Y	N
Lower Pindell Rd	MD 4 & Lower Pindell Rd	Lothian	20711	100	N	Y (MTA 904)
Mountain Rd	Mountain Rd & Catherine Ave	Pasadena	21122	n/a	N	N
Naval Academy Stadium	Rowe Blvd & Taylor Ave	Naval Academy	21402	400	N	Y (AT C-60; MTA 922, 950)
North Linthicum Light Rail	Camp Meade Rd & Baltimore Annap. Blvd	Linthicum	21090	347	Y	N
Nursery Rd Light Rail	Baltimore Annapolis Blvd & Nursery Rd	Linthicum	21090	37	Y	Y (MTA 17) Y (CAR Route K, NSA Transportation Shuttle)
Odenton MARC Station	1400 Odenton Rd	Odenton	21113	2,000	Y	Y (MTA 14)
Severna Park	Ritchie Hwy & Jones Station Rd	Severna Park	21146	158	N	N
Severna Park Mall	Arundel Beach Rd & MD 2	Severna Park	21146	n/a	N	N
Tracy's Landing	Solomons Island Rd & Bay Front Rd	Tracy's Landing	20779	64	N	N
Wayson's Corner	MD 4 near MD 408	Lothian	20711	60	N	Y (MTA 904)
Wigley Ave	Jessup Rd & Wigley Ave	Jessup	20794	10	N	N

KEY: AT = Annapolis Transit, CAR = Connect-A-Ride, MTA = Maryland Transit Administration (Local and Commuter Buses), WMATA = Washington Metropolitan Area Transit Authority, n/a = not available. Notes: Rail includes commuter and light rail services. At Odenton MARC Station, NSA Shuttle is for employees with valid DoD identification only. *BWI Airport park and ride lot has indirect access to Amtrak, MARC, and Light Rail via airport shuttles. Source: Rideshare, <http://www.baltometro.org/rideshare/prlocations/prlist.html#anne>, MTA MARC Website, <http://www.mtamaryland.com/services/marc/serviceInformation/stationinfo.cfm>, and 2006 Anne Arundel County ADC Map.

The BWI Business Partnership also operates the LINK Shuttle, which serves the BWI Amtrak/MARC Station, the BWI Business District Light Rail stop, nearby employment sites in the Nursery Road corridor, and NSA at Fort Meade. Figure 3-4a portrays the service area of the LINK Shuttle, and Figure 3-4b includes the service schedule. The LINK Shuttle operates 250 weekdays per year, Monday through Friday from 5:45 a.m. to 5:55 p.m. Ridership is approximately 5,000 per month. The LINK Shuttle is primarily funded by NSA and dues paid by corporate members whose offices are served by the shuttle. The LINK Shuttle is open to the public and free of charge to all passengers. At one time there was service to the Jessup and Savage MARC Stations via the Spirit Shuttle, though the BWI Business Partnership discontinued this service in 2004 due to lack of funding.

Annapolis Regional Transportation Management Association (ARTMA)

Founded in 1992, ARTMA is a non-profit member organization that serves as the TMA for southern Anne Arundel County including Annapolis. ARTMA promotes transportation options and transit expansion throughout Anne Arundel County to increase mobility, reduce traffic congestion, and improve air quality. Close to 1,000 Anne Arundel County residents participate in the Commuter Connections rideshare program which serves to connect people with carpool, vanpool, and free guaranteed ride home services within the Washington, DC and Baltimore regions. Commuters who regularly use an alternative transportation mode for work trips, including rideshare, mass transit, biking, or walking, are eligible for the Washington Council of Governments' Guaranteed Ride Home (GRH) Program. ARTMA has partnered with the City of Annapolis Transportation Department to offer 'fare-free' rides for Annapolis area employees. This offer supplements the GRH Program and the BWI Business Partnership's ERH Program, in which commuters who qualify for the GRH Program can get a free ride up to four times a year via taxi or rental car in case of an emergency or unscheduled overtime.

ARTMA's members consist largely of businesses, including "developers, corporations, commercial property owners, and private and public sector employers" (ARTMA Website). The organization is directed by a volunteer Board of Directors. The MTA provides CMAQ Improvement Program pass-through funds to ARTMA through the County.

OTHER EXISTING TRANSPORTATION

This section reviews private transportation options in the Fort Meade area, as well as services provided at the installation. Other existing transportation options for

Figure 3-4a: THE BWI BUSINESS PARTNERSHIP'S LINK SHUTTLE



Figure 3-4b: THE LINK SHUTTLE SCHEDULE

		■ From Ft. Meade to Rail Stations					▲ From Rail Stations to Ft. Meade								
Departure Times	NSA Visitor's Center Gate 2	APS 20 Microtel	Across from Building 881 Elk. Land. Rd.	FANX 3 Building	MTA bus stop Elk. Land. Rd near W. Nursery Rd	Business District Light Rail	MARC @ BWI Amtrak Station	MARC @ BWI Amtrak Station	Business District Light Rail	Across from Building 881 Elk. Land. Rd.	Marriott/ Country Inn W. Nursery	FANX 3 Building	APS 20 Homewood Suites	NSA Visitor's Center Gate 2	
									5:45	5:50			5:55	6:00	6:15
									6:20	6:25			6:30	6:35	6:50
	6:20	6:35		6:40		6:45	6:50		6:55	7:00			7:05	7:10	7:25
	6:55	7:10		7:15		7:20	7:25		7:30	7:35			7:40	7:45	8:00
	7:30	7:45		7:50		7:55	8:00		8:05	8:10			8:15	8:20	8:35
	8:05	8:20		8:25		8:30	8:35		8:40	8:45			8:50	8:55	9:10
	8:40	8:55		9:00		9:05	9:10		9:15	9:20			9:25	9:30	9:45
	9:15	9:30		9:35		9:40	9:45		9:50	9:55			10:00	10:05	10:20
	9:50	10:05		10:10		10:15	10:20		10:25	10:30			10:35	10:40	10:55
	10:25	10:40		10:45		10:50	10:55		11:00	11:05			11:10	11:15	11:30
	11:00	11:15		11:20		11:25	11:30		11:35	11:40			11:45	11:50	12:05
	11:35	11:50		11:55		12:00	12:05		12:10	12:15			12:20	12:25	12:40
	12:10	12:25		12:30		12:35	12:40		12:45	12:50			12:55	1:00	1:15
	12:45	1:00		1:05		1:10	1:15		1:20	1:25			1:30	1:35	1:50
	1:20	1:35		1:40		1:45	1:50		1:55	2:00			2:05	2:10	2:25
	1:55	2:10		2:15		2:20	2:25		2:30	2:35			2:40	2:45	3:00
2:30	2:45		2:50		2:55	3:00		3:05	3:10			3:15	3:20	3:35	
3:05	3:20		3:25		3:30	3:35		3:40	3:45			3:50	3:55	4:10	
3:40	3:55		4:00		4:05	4:10		4:15	4:20			4:25	4:30	4:45	
4:15	4:30		4:35		4:40	4:45		4:50	5:55			5:00	5:05	5:20	
4:50	5:05		5:10		5:15	5:20		5:25	5:30			5:35	5:40	5:55	

employees that will be commuting from Northern Virginia are described in the next section.

Taxi and Intercity Bus

There are 32 taxi and sedan companies listed in Anne Arundel County, many of which serve the Fort Meade area including County Cab, Neighoff Transportation Taxi Service, and Yellow Cab Company LLC of Anne Arundel County. Greyhound provides intercity bus service in the County through its Baltimore-Eastern Shore Route that serves Annapolis. Located at 308 Chinquapin Round Road, the Annapolis Station is served four times daily, twice each in the north- and south-bound directions. The north-bound trips stop in Annapolis at 2:00 p.m. and 8:40 p.m. The south-bound trips stop in Annapolis at 12:01 p.m. and 5:30 p.m. The station and ticketing hours are from 8:30 a.m. to 4:30 p.m. Monday through Friday; the station is closed during the weekend and on holidays. Carolina Trailways is the carrier for this route, which stops in Baltimore, Annapolis, Easton, Salisbury, and Ocean City, with connections to and from Philadelphia and New York available in Salisbury.

Fort Meade/NSA-Sponsored Services

At the start of this study, NSA Transportation Services provided two in-house shuttles for employees only. One shuttle ran between the Odenton MARC Station and the NSA Visitor Control Center (VCC-1) off MD Route 32. The trips left approximately every 30 minutes and appeared scheduled to meet the trains. According to the February 2008 schedule, this shuttle provided six trips in the morning, departing the Odenton MARC Station between 6:05 a.m. and 8:45 a.m. Seven trips were provided in the evening, departing VCC-1 between 3:45 p.m. and 7:20 p.m. This NSA shuttle was recently opened to Fort Meade employees as well and is further described in the Transit Improvements Already Planned section below.

NSA Transportation Services operates another shuttle, which runs between NSA (OPS2A), CANX, the National Business Park, and the Savage MARC Station. The morning trips leave every 40 minutes. The midday trips leave every hour and do not serve the Savage MARC Station. The evening trips leave approximately every hour. All trips appear scheduled to meet the trains. According to the June 2007 schedule, this shuttle provides:

- Five trips in the morning, departing the Savage MARC Station and CANX between 6:05 a.m. and 9:00 a.m.;
- Six trips during the midday period, departing the National Business Park between 9:15 a.m. and 2:15 p.m.; and

- Three trips in the evening, departing the National Business Park between 3:15 p.m. and 5:20 p.m.

NSA also provides significant funding for the BWI Business Partnership's LINK Shuttle, described earlier, which is free and open to the public.

Defense Information School (DINFOS) Transportation Services at Fort Meade

The Defense Information School at Fort Meade provides a shuttle service for its students that serves several points on the installation including the Visitor's Center, the PX/Commissary, and Kimbrough Ambulatory Care Center. The shuttle runs everyday, but the schedules and stops vary. The most recent schedule available shows that the shuttle operates on weekdays from 6:45 a.m. to 8:30 p.m. at 20-minute intervals in the morning and evening peak periods and 40-minute intervals during the mid-day period.³ The morning trips from 6:45 a.m. to 8:30 a.m. include fewer stops, while the remaining trips provide more extensive service around the installation.

On Saturdays, the shuttle operates from 9:45 a.m. to 9:20 p.m. with trips approximately every 40 minutes. On Sundays, the shuttle runs from 8:10 a.m. to 5:00 p.m. with more trips scheduled in the morning to serve chapels on the installation; the shuttle makes trips every 25 to 40 minutes. An extra trip after 5:00 p.m. is available only on the first and third Sundays of the month. On Holidays, the shuttle operates from 9:10 a.m. to 5:45 p.m. with trips every 20 to 40 minutes.

The shuttle has a scheduled lunch break around 1:00 p.m. everyday and scheduled dinner breaks around 6:30 p.m. on weekdays and 5:00 p.m. on Sundays; Saturday and Holiday schedules only include a lunch break. Operated by IAP World Services, the shuttle was designed, financed, and operated to serve the needs of DINFOS students. Anecdotally, employees at Fort Meade also ride the shuttle after showing valid identification.

Walter Reed Army Medical Center (WRAMC) Shuttle

A free shuttle is provided between WRAMC in Washington, D.C. and other DoD medical facilities including Kimbrough Ambulatory Care Center at Fort Meade. The shuttle operates eight trips a day between WRAMC and Fort Meade, four in each direction. Based on the WRAMC Website as of October 2008, the trips from Walter Reed leave at 6:00 a.m., 9:00 a.m., 1:00 p.m., and 3:10 p.m., while the trips from Fort Meade leave at 7:10 a.m., 10:10 a.m., 2:10 p.m., and 4:10 p.m. The shuttle operates on Monday through Saturday except for holidays.

³ The most recent schedule available was update in August 2008.

EXISTING TRANSIT IN NORTHERN VIRGINIA

As described previously, DISA positions account for the majority of employees moving to Fort Meade due to BRAC. Since most DISA employees are currently located in Northern Virginia, it is important to assess existing transit options from Northern Virginia to Fort Meade, as many of these employees plan to keep their current residence and commute. This long-distance commuting pattern is expected only for the short-term though, as current employees and future new employees filling the positions at Fort Meade choose to relocate closer to the installation. While public transportation options exist to access Fort Meade from Northern Virginia, these commutes are long and require several transfers, making public transportation an unacceptable option for many commuters.

Many of the transit services outlined below provide connections to the other transit systems. Please check the systems' websites for the most updated information on services and schedules. The last part of this section describes potential transit commutes for commuters from Northern Virginia to reach Fort Meade.

MTA MARC Train – Penn Line

The primary means of transportation available to Northern Virginia residents to reach Fort Meade by transit is to take the Penn Line of the MTA MARC Train from Union Station in Washington, D.C. to the Odenton MARC Station. From the Odenton MARC Station, employees with valid DoD identification and people with Fort Meade visitor passes can take the NSA-operated shuttle to the installation. Several transit options, described below, are available for passengers to get to Union Station from various parts of Northern Virginia. Many possible commutes involve taking a local bus to connect with the WMATA Metrorail or the Virginia Railway Express to get to Union Station.⁴

WMATA

Commuters from Northern Virginia will most likely take the Orange, Blue, or Yellow lines on WMATA's Metrorail system (Metro) to reach Union Station, which requires a transfer to the Red line at the Metro Center stop (if taking the Orange or Blue lines) or the Gallery Place-Chinatown stop (if taking the Yellow line). Metro service begins at 5:00 a.m. on weekdays 7:00 a.m. during the weekend. The service closes at midnight from Sunday through Thursday and at 3:00 a.m. on Friday and Saturday.

⁴ Most transit providers described here were listed on WMATA's Regional Transportation Website: http://www.wmata.com/getting_around/regional_transit.cfm.

Alexandria Transit Company - DASH

DASH provides bus service within the City of Alexandria, including connections to Metro, the VRE, and other bus services. Table 3-7 includes descriptions and basic service characteristics of DASH routes. The base fare is \$1.25, and children age 4 and under ride for free when accompanied with an adult. A monthly pass for unlimited rides on DASH is also available for \$30 a month. Transfers within DASH are free for up to four hours. Transfers to participating local bus systems via SmarTrip cards are valid for three hours, though additional charges may apply if transferring to services with higher fares than DASH.⁵

Arlington Transit (ART)

ART provides local bus service in Arlington County, which supplements WMATA's Metrobus service in the jurisdiction. ART routes provide access to Metro and VRE stations. Table 3-8 provides basic service characteristics of ART routes. The regular cash fare is \$1.35 or \$1.25 with a SmarTrip card. With a SmarTrip card, transfers from Metro to ART cost 75 cents, while transfers between Metrobus and ART are free. Transfers are charged the full fare without a SmarTrip card. Children under age five ride for free. Senior citizens, age 65 and over, and persons with disabilities have a discounted fare of 60 cents, and transfers from Metro or Metrobus are free. Teens with a middle school or high school ID also get a discounted fare of 60 cents. Gold ART tokens, Metrobus tokens, and the Metrobus Flash Pass are also acceptable fare on ART routes.⁶

CUE Bus System

CUE Bus provides service in the City of Fairfax, serving George Mason University and various shopping centers, and provides feeder service to the Vienna/Fairfax-GMU Metro Station. Table 3-9 includes basic service characteristics of CUE Bus routes. The base fare is \$1.35, while elementary, intermediate, and high school students, senior citizens age 60 and older, and persons with disabilities receive a discounted fare of 65 cents. GMU students, faculty, and staff with a valid ID ride for free, as do children who are three and under. Transfers are available with SmarTrip cards only and are valid within the CUE bus system, to Metrobus, and other participating regional bus systems within three hours. Transfers between bus and rail are also available through SmarTrip cards; the fare is reduced by 50 cents using SmarTrip.⁷

⁵ DASH Website, <http://www.dashbus.com/>.

⁶ ART Website, <http://www.commuterpage.com/art/fares.htm>

⁷ CUE Bus System Website, <http://www.fairfaxva.gov/CUEBus/CUEBus.asp>.

Table 3-7: Alexandria Transit Company - DASH Service Characteristics

Route	Description	Other Stops	Frequency	Schedule
AT 1	Seminary Plaza to Van Dorn and Eisenhower Metros	Southern Towers, William Ramsay Rec. Center, Landmark Mall, Stevenson & Whiting	M-F 30 minutes Sat 1 hour Sun 1 hour	M-F 5:09 a.m.-11:11 p.m. Sat 7:28 a.m.-11:07 p.m. Sun 8:19 a.m.-8:11 p.m.
AT 2	Lincolnia to Braddock Metro via Old Town	Landmark Plaza, William Ramsay Rec. Center, Southern Towers, Alexandria Hospital, King St. Metro, King St. & Washington St., Fairfax & Pendleton	M-F 20-30 mins Sat 45-60 mins Sun 1 hour	M-F 5:40 a.m.-11:26 p.m. Sat 7:04 a.m.-11:20 p.m. Sun 7:59 a.m.-7:55 p.m.
AT 3	Hunting Towers to Parkfairfax and Pentagon Metro	City Hall, Braddock Metro, Russell & W. Glebe, Shirlington	M-F 20 minutes	M-F 5:32 a.m.-10:00 a.m. 3:09 p.m.-8:10 p.m.
AT 4	Old Town via Slaters Ln to Parkfairfax and Pentagon Metro	Nannie J. Lee Center, City Hall, Slaters & Abingdon, Braddock Metro, Chalfonte & Gunston, Martha Custis & Gunston	M-F 20-60 mins Sat 1 hour	M-F 5:50 a.m.-9:50 p.m. Sat 7:19 a.m.-9:30 p.m.
AT 3-4 Loop	To and From Old Town Alexandria via Parkfairfax (Midday, Evening, Weekend Service)	Hunting Towers, City Hall, Braddock Metro, Russell & W. Glebe, Martha Custis & Gunston, Chalfonte & Gunston	M-Sun 1 hour	M-F 10:26 a.m.-3:10 p.m. 8:18 p.m.-10:27 p.m. Sat 8:38 a.m.-8:02 p.m. Sun 9:07 a.m.-6:51 p.m.
AT 5	Van Dorn Metro to Braddock Metro via Old Town Alexandria	Landmark Mall, Van Dorn & Sanger, Alexandria Hospital, Bradlee Shopping Ctr., King St. Metro, King & Washington, Fairfax & Pendleton	M-F 20-30 mins Sat 30 minutes Sun 1 hour	M-F 5:15 a.m.-11:09 p.m. Sat 6:54 a.m.-11:37 p.m. Sun 7:44 a.m.-7:59 p.m.
AT 6	Northern Virginia Community College (NVCC) to King Street and Eisenhower Metros	Hampton & Braddock, Bradlee Shopping Center, Meridian Apartments	M-F 30 minutes	M-F 5:51 a.m.-11:03 p.m.

Table 3-7 (continued)

Route	Description	Other Stops	Frequency	Schedule
AT 7	Landmark Mall to Nannie J. Lee Ctr. via Old Town	Duke & N. Ripley, Beatley Library, Van Dorn Metro, Eisenhower Metro, Meridian Apts., King St. Metro, City Hall	M-F 30-60 mins Sat 1 hour	M-F 5:14 a.m.-8:49 p.m. Sat 7:06 a.m.-8:02 p.m.
AT 8	Van Dorn Metro to Old Town	Edsall & S. Whiting, Landmark Mall, Duke & Jordan, Duke & Quaker, King St. Metro, Washington & King, Fairfax & Pendleton	M-F 10-30 mins, 1 hour last 6 trips Sat 20-60 mins Sun 30-60 mins	M-F 5:23 a.m.-12:30 a.m. Sat 6:25 a.m.-11:46 p.m. Sun 6:52 a.m.-11:28 p.m.
AT 10	Potomac Yard Shopping Center to King St. Metro	Mt. Vernon & Hume, Monroe & Commonwealth	M-F 30-60 mins Sat 1 hour Sun 1 hour	M-F 6:35 a.m.-9:25 p.m. Sat 8:00 a.m.-9:40 p.m. Sun 9:10 a.m.-6:55 p.m.

Source: DASH Website, <http://www.dashbus.com/>.

Notes: Other stops listed represent stops along the routes in the direction of the metro stations. The routes make similar stops nearby in the other direction, if not serving the same stop. Not every stop is served on every trip per route. Transfers within DASH are free and valid for four hours. Transfers to Metrobus and participating local bus systems are valid for three hours; additional charges may apply if prices for other services are higher.

Table 3-8: ART Service Characteristics

Route	Description	Other Stops	Frequency	Schedule
41	Columbia Pike-Ballston-Court House	Columbia Pike & Dinwiddie, Glebe & Columbia Pike, Glebe & Arlington Blvd., Ballston Common Mall, Wilson & Highland, Court House Metro	M-F 15 minutes Sat 20 minutes Sun 30-60 mins	M-F 6:30 a.m.-8:12 p.m. Sat 7:00 a.m.-7:56 p.m. Sun 8:00 a.m.-7:31 p.m.
42	Ballston-Pentagon Saturday Shuttle	Pentagon Metro, Navy Annex, Courthouse & S. 2 nd , Clarendon Metro, Ballston-MU Metro	M-F 20-30 mins (midday 1 hour) Sat 1 hour	M-F 5:50 a.m.-7:22 p.m. Sat 6:30 a.m.-7:17 p.m.
51-52	Ballston-Virginia Hospital Center-East Falls Church	Ballston-MU Metro, Glebe & 16 th St., Washington Blvd. & Glebe, Virginia Hospital Center, George Mason & Lee Hwy, George mason & Yorktown, Williamsburg & Sycamore, Sycamore & Lee Hwy., East Falls Church Metro	M-F 15-30 mins Sat/Sun 30 mins	M-F 6:05 a.m.-12:30 a.m. Sat 6:05 a.m.-12:15 a.m. Sun 6:45 a.m.-10:25 p.m.
53	Ballston-Old Glebe-East Falls Church	East Falls Church Metro, Williamsburg & Old Dominion, Old Glebe & Military, N. Glebe & River, Quincy & Lee Hwy., Ballston-MU Metro	M-F 30 minutes (midday 1 hour)	M-F 6:00 a.m.-9:25 p.m.
61	Rosslyn-Court House Metro Shuttle	Rosslyn Metro, N. Queen & 12 th , Court House Metro, 21 st & Scott, Rosslyn Metro	M-Sat 25-35 mins	M-F 6:00 a.m.-7:00 p.m. Sat 10:15 a.m.-3:10 p.m.
62	Court House Metro-Lorcom Lane-Ballston Metro	Ballston-MU Metro, N. Utah & 15 th , Lorcum & Military, Lee Hwy. & Spout Run, Court House Metro	M-F 30 minutes	M-F 6:22 a.m.-7:22 p.m.
74	Douglas Park-Arlington Village-Pentagon City	Pentagon City Metro, Monroe St. & 16 th St. S., 15 th St. S. & Barton, 12 th St. S & Quinn	M-F 15-36 mins	M-F 6:05 a.m.-9:12 a.m. 3:30 p.m.-7:55 p.m.
75	Wakefield H.S.-Carling Springs Rd.-Ballston	Dinwiddie & 9 th St., Carlin Springs & 5 th Rd., Kensington & 4 th St., Ballston-MU Metro	M-F 30 minutes	M-F 6:00 a.m.-9:25 a.m. 3:10 p.m.-7:52 p.m.
82	Shirlington-Nauck-Pentagon City	Pentagon City Metro, Shirlington, 24 th Rd. & S. Glebe, Pentagon City Metro	M-F 15-30 mins	M-F 6:20 a.m.-9:35 a.m. 3:40 p.m.-6:54 p.m.

Source: ART Website, <http://www.commuterpage.com/ART/schedules.htm>.

Table 3-9: CUE Bus Service Characteristics

Route	Description	Other Stops	Frequency	Schedule
Green	Vienna Metro-Fairfax Circle-GMU	Main St. & Pickett Rd., Lee Hwy. & Chain Bridge Rd.	M-F 30 minutes Sat 1 hour Sun 1 hour	M-F 5:15 a.m.-11:46 p.m. (till 12:42 a.m. on Friday) Sat 8:02 a.m.-8:35 p.m. Sun 9:37 a.m.-5:55 p.m.
Gold	Vienna Metro-Fairfax High School-Jermantown Rd. & Fairfax Blvd.	GMU, Fairfax Blvd. & Chain Bridge Rd., Draper Dr. & Fairfax Blvd.	M-F 30 minutes Sat 1 hour Sun 1 hour	M-F 5:25 a.m.-11:44 p.m. (till 12:46 a.m. on Friday) Sat 8:00 a.m.-8:52 p.m. Sun 9:33 a.m.-6:28 p.m.

Source: CUE Website, <http://www.fairfaxva.gov/CUEBus/CUEBus.asp>.

Fairfax Connector

The Fairfax Connector provides service in Fairfax County. Table 3-10 provides basic service characteristics for Fairfax Connector routes that serve Metro stations, and therefore could provide connections to Union Station to take the MARC to Odenton and Fort Meade. Effective January 2009, the fares and transfer policies are as follows:

FARES:	Base fare for local routes: \$1.35 (Cash), \$1.25 (SmarTrip) Express fare (Routes 380, 595, 597): \$3.10 (Cash), \$3.00 (SmarTrip) Senior/Disabled fares: \$0.60 for all routes using Cash or SmarTrip Up to 2 children ages 4 and under, traveling with adult paying full fare, travel for free. Children age 5 and older pay adult fare.
TRANSFERS:	Rail-to-Bus, Local Bus: \$1.35 (Cash), \$0.75 (SmarTrip) Rail-to-Bus, Express Bus: \$3.10 (Cash), \$2.50 (SmarTrip) Bus-to-Bus, Local Bus: \$1.35 (Cash), Free up to 3 hours (SmarTrip) Bus-to-Bus, Express Bus: \$3.10 (Cash), \$1.75 (SmarTrip) VRE Transfers are free, except for Express Route 380--\$1.75.

LINK (Reston)

Funded by the Reston Town Center Association, LINK does not provide bus service itself, but serves as a transportation resource. The LINK Website provides information on local bus services that serve Reston, mostly Fairfax Connector services (see Table 3-10, though services that do not serve Metro stations are not included), as well as ridesharing services.

Loudoun Commuter Bus

Loudoun County Transit provides commuter bus services from park and ride lots in Loudoun County to Metro stations, including West Falls Church, Rosslyn, and Pentagon, and into Washington, D.C. Table 3-11 includes the basic service characteristics for Loudoun Commuter Bus services. Fares for commuter routes to Rosslyn, Pentagon, and Washington, D.C. are \$8.00 one way, or \$7.00 with a SmarTrip card. The fare for the Broad Run Farms, Cascades, and Lowes Island route to West Falls Church Metro is \$2.25 one way, or \$1.75 with a SmarTrip card.⁸ (Loudoun Commuter Bus also provides a Reverse Commute route from West Falls Church Metro to Loudoun County destinations, but this route is not applicable as a transit option for commuters to get to Fort Meade.)

⁸ Loudoun County Transit, Commuter Bus Service Website, <http://www.loudoun.gov/Default.aspx?tabid=969>.

Table 3-10: Fairfax Connector Service Characteristics

Route	Description	Other Stops	Frequency	Schedule
NORTH COUNTY ROUTES				
402, 403	Vienna-Merrifield-Dunn Loring	402: Moore Ave. & Park St., Park St. & Cedar Ln., Old Lee Hwy. & Hilltop Rd. 403: Navy Federal Credit Union, Maple Ave. & Beulah Rd., Lawyers Rd. & Blackstone Terrace, Rt. 123 & James Madison Dr.	M-F 30 minutes	M-F 5:50 a.m.-8:44 a.m. 3:55 p.m.-7:25 p.m.
425, 427	Tysons-West Park Transit Station/ West Falls Church Metro	Jones Branch Dr. @ McLean Hilton Hotel	M-F 20 minutes Sat 35 minutes Sun 30-35 mins	M-F 5:16 a.m.-11:44 p.m. Sat 8:18 a.m.-11:41 p.m. Sun 8:20 a.m.-11:21 p.m.
505, 556	Reston Town Center	Bennington Woods Rd. & Walnut Branch Rd., Center Harbor Rd. & Church Hill Place, Reston East @ Wiehle Ave. Park & Ride, West Falls Church Metro	M-F 15-30 mins Sat/Sun 30 mins	M-F 5:05 a.m.-11:58 p.m. Sat 7:30 a.m.-1:15 a.m. Sun 7:30 a.m.-11:10 p.m.
551, 553, 557	South Reston	Herndon-Monroe Park & Ride, Lawyers Rd. & Viking Dr., Franklin Farm Rd. & Fairfax County Pky., Glade Dr. & Freetown Dr., Reston South Park & Ride, South Lakes Dr., Glade Dr., South Lakes Dr. & Twin Branches Rd., Reston East @ Wiehle Ave. Park & Ride, Sunrise Valley Dr. & Post Oak Trail, West Falls Church Metro	M-F 30-35 mins	M-F 4:50 a.m.-9:39 a.m. 3:05 p.m.-8:55 p.m.
552, 554	North Reston	Ring Rd. & North Shore Dr., North Shore Dr. & Fellowship Sq., North Shore Dr. & Wedge Dr., Wiehle Ave. & Center Harbor Rd., Wiehle Ave. & North Shore Dr., Reston East @ Wiehle Ave. Park & Ride, West Falls Church Metro	M-F 30 minutes	M-F 5:40 a.m.-9:00 a.m. 3:12 p.m.-8:18 p.m.
585	Reston South Park & Ride to West Falls Church Metro	Reston Pky. & Sunrise Valley Dr., Sunrise Valley Dr. & Reston Sheraton Hotel, Sunrise Valley Dr. & Post Oak Trail	M-F 20 mins	M-F 5:35 a.m.-9:59 a.m. 1:15 p.m.-9:00 p.m.

Table 3-10 (continued)

Route	Description	Other Stops	Frequency	Schedule
595	Pentagon Express	Reston East @ Wiehle Ave. Park & Ride, Pentagon Metro	M-F 30 minutes	M-F 5:35 a.m.-8:40 a.m. 3:50 p.m.-7:32 p.m.
597	Crystal City Express	Reston East @ Wiehle Ave. Park & Ride, Army-Navy Dr. & Eads St., South Clark St. & 26 th St., Crystal Dr. & 18 th St. (walking distance to Crystal City Metro)	M-F 30-35 mins	M-F 5:58 a.m.-8:50 a.m. 3:30 p.m.-6:38 p.m.
621, 622, 623	Fairfax County Gov. Center	Vienna Metro, S. Penderbrook Dr. & Greenlook Ct., Fairfax Towne Center, Monument Dr. & Monument Hills Dr., Fairfax County Government Center Park & Ride, West Ox Rd. & Fair Lakes Pky., Legato Rd., Fair Ridge Dr. & Apple Orchard Ct.	M-F 20-30 mins	M-F 5:20 a.m.-10:42 p.m.
950, 980	Herndon/Reston Town Center	Reston Town Center Transit Station, Elden St. & Alabama Dr., Herndon-Monroe Park & Ride, West Falls Church Metro	M-F 20-30 mins Sat/Sun 30 mins	M-F 4:35 a.m.-12:55 a.m. Sat 5:56 a.m.-1:59 a.m. Sun 5:56 a.m.-12:05 a.m.
SOUTH COUNTY ROUTES				
101	Fort Hunt Line	Mt. Vernon Estate, Vernon View at Bushrod, Ft. Hunt at Sherwood Hall, Wakefield at Potomac, Huntington Metro	M-F 30 mins, Sat/Sun 1 hour	M-F 4:26 a.m.-10:00 p.m. Sat 6:22 a.m.-10:25 p.m. Sun 6:22 a.m.-8:19 p.m.
109	Rose Hill Line	Van Dorn Metro, Crown Royal at High Meadow, Franconia Rd. at Edison High School, Telegraph at Rose Hill, Huntington Metro	M-F 30 mins Sat/Sun 1 hour	M-F 4:59 a.m.-11:32 p.m. Sat 6:30 a.m.-10:54 p.m. Sun 7:00 a.m.-10:25 p.m.
151, 152	Richmond Highway Circulator	Huntington Metro, Richmond Hwy. at Beacon Hill, Richmond Hwy. at Ladson, Lawrence St. & Russell Rd., Sacramento at Richmond Hwy., Mt. Vernon Estate	M-F 15-30 mins Sat/Sun 1 hour	M-F 4:08 a.m.-11:56 p.m. Sat/Sun 5:39 a.m.-12:25 a.m.
161, 162	Richmond Highway Circulator	Huntington Metro, Kings Hwy. at Southgate, Harrison at Lockheed, Fordson at Richmond Hwy., Mt. Vernon Hospital, Mt. Vernon Square Apartments	M-F 30 mins Sat/Sun 1 hour	M-F 4:34 a.m.-11:24 p.m. Sat/Sun 6:34 a.m.-10:55 p.m.
171	Richmond Highway Line	Franconia-Springfield Metro, Lorton Market & Shoppers Food, Lorton VRE Station, Defense	M-Sun 30 mins	M-F 3:23 a.m.-1:31 a.m. Sat 5:40 a.m.-3:02 a.m.

Table 3-10 (continued)

Route	Description	Other Stops	Frequency	Schedule
		Logistics Agency, Richmond Hwy. & Ladson, Richmond Hwy. & Beacon Center, Huntington Metro		Sun 5:40 a.m.-1:11 a.m.
231, 232	Kingstowne Line	Franconia-Springfield Metro, Crestleigh at Birchleigh, Summer Ridge at Worsley Way, Van Dorn Metro, Flat Rock at Fleet	M-F 30-60 mins	M-F 4:39 a.m.-10:03 a.m. 2:27 p.m.-10:18 p.m.
301	Telegraph Road Line	Franconia-Springfield Metro, Hayfield at Kingstowne Village Pky., Leaf & Kingman Building, Helmsdale at Telegraph, South Kings Hwy. at Lantern, Vantage Dr. at Vantage Ct., Telegraph at Wilton, Huntington Metro	M-F 30 minutes	M-F 4:30 a.m.-10:30 a.m. 3:10 p.m.-10:06 p.m.
303	Island Creek Line	Mt. Air at Telegraph, Morning View Ln. at Morning View Ct., Hillary at Silver Ridge, Beulah at Kingstowne Commons, Franconia-Springfield Metro	M-F 30 minutes	M-F 4:29 a.m.-9:53 a.m. 3:34 p.m.-10:04 p.m.
304	Saratoga Line	Franconia-Springfield Metro, Alban at Boudinot, Northumberland at Rolling Rd., Donegal at Rolling Rd.	M-F 30 minutes	M-F 5:19 a.m.-9:16 a.m. 3:50 p.m.-8:30 p.m.
305	Newington Forest Line	South Run at Newington Commons, Hooes Rd. at Newington Forest, Gambrill Park & Ride, Franconia-Springfield Metro	M-F 30 minutes	M-F 5:35 a.m.-9:04 a.m. 3:34 p.m.-8:05 p.m.
306	GMU Line	University Dr. at GMU, Braddock Rd. at Tapestry Dr., Twinbrook Rd. at Twinwood Run Dr., Burke Lake Rd. at Rolling Rd., Braddock Rd. at Inverchapel Rd., Braddock Rd. at Ravensworth Rd., Braddock Rd. at Irvin Ct., Landmark Center, Pentagon Metro	M-F 1 hour	M-F 9:50 a.m.-3:56 p.m.
307	Laurel Hill/Lorton Line	Laurel Crest at Silverbook, Lorton Park & Ride, Lorton VRE Station, Sheffield Green at Waldren	M-F 30 minutes	M-F 4:41 a.m.-9:31 a.m. 3:10 p.m.-7:51 p.m.
310	Rolling Valley Line	Rolling Valley Park & Ride, Old Keene Mill & Rolling Rd., Commerce & Amherst, Backlick &	M-F 30 mins Sat/Sun 1 hour	M-F 4:14 a.m.-12:50 a.m. Sat 5:54 a.m.-12:54 a.m.

Table 3-10 (continued)

Route	Description	Other Stops	Frequency	Schedule
		Spring Garden, Franconia-Springfield Metro, Deepford & Wayles, Franconia & Beulah, Franconia & Westchester, Franconia & Norton, Huntington Metro		Sun 5:54 a.m.-11:54 p.m.
321, 322	Greater Springfield Circulator	Van Dorn Metro, Bren Mar at Merle, Edsall at Montgomery, Industrial at Commercial, Hanover at Monticello, Brandon at Commerce, Franconia-Springfield, Manchester Lakes at Manchester Blvd., Kingstowne Blvd. at Sir Viceroy, Van Dorn Metro	M-F 30 mins Sat/Sun 1 hour	M-F 4:02 a.m.-10:55 p.m. Sat 6:03 a.m.-11:35 p.m. Sun 6:03 a.m.-10:17 p.m.
331, 332	I-95 Circulator	Franconia-Springfield Metro, Bland at Amherst, Boston Blvd. at Corporate Ct., Defense Logistics Agency, Gateway 95, Medical College	M-F 30 minutes	M-F 5:44 a.m.-10:27 p.m.
380	Franconia-Springfield/Pentagon Express	Franconia-Springfield and Pentagon Metro Stations	M-F 15 minutes	M-F 5:53 a.m.-9:00 a.m. 3:54 p.m.-7:45 p.m.
401	Backlick-Gallows Road Line	Franconia-Springfield Metro, Springfield Mall, Backlick Rd. & Hechinger Dr., Backlick Rd. & Jayhawk St., Little River Turnpike & Hummer Rd., Fairfax Hospital, Dunn-Loring Metro, Gallows Rd. & Madrillon Rd., Tysons Corner Center, Tysons West Park Transit Center (served weekends only)	M-F 30 mins Sat/Sun 1 hour	M-F 4:03 a.m.-12:47 a.m. Sat 5:50 a.m.-10:52 p.m. Sun 5:51 a.m.-9:20 p.m.

Notes: Only routes that serve Metro stations are included here. Many routes operate hourly during midday and at night.

Source: Fairfax Connector Website, <http://www.fairfaxcounty.gov/connector/schedulesmaps.htm>.

Table 3-11: Loudoun Commuter Bus Service Characteristics

Route	Other Stops	Frequency	Schedule
Purcellville to Rosslyn, Crystal City, the Pentagon, D.C., and West Falls Church Metro	Purcellville-Franklin Park and St. Andrew Presbyterian Church Park and Rides, Rosslyn-19 th & Moore Streets, Army Navy Dr. & Fern St., Crystal Dr. & 20 th St., Eads St. & Army Navy Dr., Pentagon Metro, State Department (21 st St & Virginia Ave.), 18 th & E Streets NW, 18 th & G Streets NW, 18 th & K Streets NW (near Farragut Metros), K & 17 th Streets NW, K & 15 th Streets NW, K & 14 th Streets NW, 14 th & H Streets NW, 14 th & F Streets NW (National Press Building), 14 th & Pennsylvania NW (Willard Hotel), 14 th & Constitution NW (Ronald Reagan Building), Independence & 12 th St SW (Smithsonian Metro), Independence & L'Enfant Promenade SW, Independence & 7 th St SW (FAA), Independence & 6 th St SW (NASA), Navy Yard Metro, 3 rd & C Streets NW (Courthouse Complex), E & New Jersey Ave NW, N Capitol and Mass. Ave. NE (near Union Station), H & N Capitol Streets NW, H & 4 th Streets NW, Convention Center-L & 7 th Streets NW	M-F 5-20 mins	M-F 4:43 a.m.-9:24 a.m. M-Th 3:32 p.m.-8:40 p.m. F 12:32 p.m.-8:40 p.m.
Leesburg to Crystal City, Rosslyn, the Pentagon, D.C., and West Falls Church Metro	Leesburg Park and Ride-Catoctin Circle SE, other stops the same as above starting at Rosslyn	M-F 5-20 mins	M-F 5:03 a.m.-9:55 a.m. M-Th 1:32 p.m.-8:17 p.m. F 12:32 p.m.-8:17 p.m.
Dulles North Transit Center to Crystal City, Rosslyn, the Pentagon, D.C., and West Falls Church Metro	Dulles North Transit Center (Moran Rd. & Lockridge Rd.), other stops the same as above starting at Rosslyn	M-F 5-25 mins	M-F 5:20 a.m.-9:55 a.m. M-Th 1:32 p.m.-7:57 p.m. F 12:32 p.m.-7:57 p.m.
Dulles South to Rosslyn, Crystal City, the Pentagon, and D.C.	Dulles South-Stone Ridge (Millstream Dr. & Village Center Pl.), Dulles North Transit Center, other stops the same as above starting at Rosslyn	M-F 5-40 mins	M-F 5:20 a.m.-9:27 a.m. 3:26 p.m.-7:00 p.m.
Broad Run Farms, Cascades, and Lowes Island to West Falls Church Metro	Broad Run Farms (Galilee Methodist Church), Cascades (Palisade Parkway Bus Shelter), Our Lady of Hope, Lowes Island Front and Back Lots (Great Falls Plaza)	M-F 20-40 mins	M-F 5:08 a.m.-8:50 a.m. M-Th 4:00 p.m.-8:00 p.m. F 2:30 p.m.-8:00 p.m.

Notes: Every run for a route may not make the same stops, and some runs leave from different park and ride lots.

Source: Loudoun Commuter Bus Website, <http://www.loudoun.gov/Default.aspx?tabid=969>. Schedules dated September 2, 2008.

Potomac and Rappahannock Transportation Commission (PRTC)

A multi-jurisdictional agency representing Prince William and Stafford Counties and the Cities of Manassas, Manassas Park, and Fredericksburg, PRTC provides commuter and local bus services, as well as a free ridesharing service. Table 3-12 outlines the basic service characteristics of PRTC's OmniRide and MetroDirect services, which provide commuter service and connections to Metro stations. The regular one-way fare for OmniRide services is \$6.50 with cash or \$4.75 using a SmarTrip card. A reduced fare of \$3.25 is available for senior citizens age 65 and older, for eligible persons with disabilities, and for travel from 9:30 a.m. to 3:00 p.m. and after 7:00 p.m. The regular one-way fare for MetroDirect services is \$3.00 or \$2.40 using a SmarTrip card. The same eligibility for a reduced fare, described above, applies, though the reduced fare for MetroDirect services is \$1.50.⁹

PRTC, in partnership with the Northern Virginia Transportation Commission, also oversees the Virginia Railway Express, described below.¹⁰

Virginia Railway Express (VRE)

The VRE is commuter rail service that provides another option for Northern Virginia commuters to reach Union Station, from where they could take the MARC train to Odenton and Fort Meade. VRE trains run on weekdays only, heading north toward Washington, D.C. in the morning and south toward Northern Virginia suburbs in the evenings. The two VRE lines are named for their final destinations in Virginia: the Fredericksburg Line, running along I-95, stops at L'Enfant, Crystal City, Alexandria, Franconia/Springfield, Lorton, Woodbridge, Rippon, Quantico, Brooke, Leeland Road, and Fredericksburg; while the Manassas Line, running along I-66, serves L'Enfant, Crystal City, Alexandria, Backlick Road, Rolling Road, Burke Centre, Manassas Park, Manassas, and Broad Run Airport.

VRE has an agreement with Amtrak, which allows VRE riders with certain passes (i.e., ten-trip, five-day, and monthly) and a ten-dollar Step-Up ticket to use Amtrak trains. The Fredericksburg Line operates from 5:15 a.m. to 9:19 a.m. and from 12:55 p.m. to 8:08 p.m. The Amtrak trains extend northbound service hours to 8:25 p.m., and southbound Amtrak trains begin at 7:30 a.m. and end at 8:10 p.m. The Amtrak trains have a 2.5- to 3-hour frequency and only stop at Union Station, Alexandria, Franconia/Springfield, Woodbridge, Quantico, Fredericksburg, and Manassas.¹¹

⁹ PRTC Commuter Bus Fares Website, <http://www.prtctransit.org/commuter-bus/fares.php>.

¹⁰ PRTC Website, <http://www.prtctransit.org/about-us/index.php>.

¹¹ VRE Website, <http://www.vre.org/service/schedule.htm>.

Table 3-12: PRTC OmniRide and MetroDirect Service Characteristics

Route	Description	Other Stops	Frequency	Schedule
Capitol Hill and Late Evening	Capitol Hill to Lake Ridge/Dale City (Washington/Pentagon to Eastern Prince William Co.)	Dale City Commuter Lot, Old Bridge and Titania, Lake Ridge Commuter Lot, Route 123 & Old Bridge Commuter Lot, C St. & 14 th St., 3 rd St. & Constitution, E St. & N. Capitol (Union Station Metro), 7 th St. & Independence	1 trip in a.m. and 1 trip in p.m.	M-F 6:13 a.m.-7:39 a.m.
Dale City-Pentagon and Crystal City	Connecting service between Dale City, Pentagon, and Crystal City	Lindendale Commuter Lot, Mapledale & Dale Blvd., Dale City Commuter Lot, Cloverdale & Dale Blvd., PRTC Transit Center, Horner Rd./I-95 Commuter Lot, Pentagon Bus Bay/Metro, Clark & 23 rd St., Crystal Mall 3, 12 th St. & Old Jeff Davis	M-F 20-30 minutes	M-F 4:25 a.m.-8:46 a.m. 12:19 p.m.-9:05 p.m.
Dale City-Washington	Connecting service between Dale City and Downtown Washington	Lindendale Commuter Lot, Mapledale & Dale Blvd., Dale City Commuter Lot, Cloverdale & Dale Blvd., PRTC Transit Center, Horner Rd./I-95 Commuter Lot, 14 th St. & Independence (Agriculture Dept. near Smithsonian Metro), 14 th St. & New York, (serves McPherson Square and Farragut West Metros), 19 th St. & H St., Virginia & 21 st St. (State Dept.)	M-F 10-20 minutes	M-F 4:20 a.m.-9:16 a.m. 12:20 p.m.-9:05 p.m.
Dale City-Washington Navy Yard/Bolling AFB	Connecting service between Dale City, Pentagon, Washington Navy Yard, Bolling AFB, and Anacostia NAS	Lindendale Commuter Lot, Mapledale & Dale Blvd., Dale City Commuter Lot, Cloverdale & Dale Blvd., PRTC Transit Center, Horner Rd./I-95 Commuter Lot, Pentagon Bus Bay/Metro, C St. & 14 th St., M St. & 3 rd St., M St. & Half St. (Navy Yard Metro), S. Capitol St. & Malcolm X Ave. (Bolling AFB)	M-F 40-50 minutes	M-F 4:36 a.m.-8:27 a.m. 2:52 p.m.-9:05 p.m.
Lake Ridge-Pentagon and Crystal City	Connecting service between Lake Ridge, Pentagon, and Crystal City	Festival at Old Bridge, Oakwood a& Old Bridge, Lake Ridge Commuter Lot, Rt. 123 & I-95 Commuter Lot, Pentagon Bus Bay/Metro, Clark & 23 rd , Crystal Mall 3, 12 th & Old Jefferson Davis. (Two trips also stop at Dale City Commuter Lot, Old Bridge & Titania.)	M-F 20-35 minutes	M-F 5:20 a.m.-9:39 a.m. 12:19 p.m.-8:58 p.m.
Lake Ridge-Washington	Connecting service between Lake Ridge and Downtown Washington	Festival at Old Bridge, Oakwood & Old Bridge, Lake Ridge Commuter Lot, Rt. 123 & I-95 Commuter Lot, Pentagon Bus Bay, 14 th & Independence (Agric.	M-F 20 minutes	M-F 5:15 a.m.-10:11 a.m. 12:07 p.m.-8:58 p.m.

Table 3-12 (continued)

Route	Description	Other Stops	Frequency	Schedule
		Dept. near Smithsonian Metro), 14 th and New York, (serves McPherson Square and Farragut West Metros), 19 th & H, Virginia and 21 st (State Dept.). (Two trips also stop at Dale City Commuter Lot, Old Bridge & Titania.)		
Manassas	Connecting service between Manassas, Pentagon, and Downtown Washington (with connections to Crystal City)	Manassas Mall, Portsmouth Commuter Lot, Williamson & Stonehouse, Pentagon Bus Bay/Metro, 14 th St. & Independence (Agric. Dept. near Smithsonian Metro), 14 th St. & New York, (serves McPherson Square and Farragut West Metros), 19 th St. & H St., Virginia & 21 st St. (Two trips also stop at 18 th St. & Pennsylvania, 14 th St. & Pennsylvania.)	M-F 15-25 minutes	M-F 4:45 a.m.-8:58 a.m. 12:07 p.m.-8:56 p.m.
Montclair	Connecting service between Montclair, Pentagon, and Downtown Washington	Dale City Commuter Lot, Ashgrove & Waterway, South Lake & Waterway, Rt. 234 & Rt. 1 Commuter Lot, Pentagon Bus Bay/Metro, 14 th St. & Independence (near Smithsonian Metro), 14 th St. & New York (serves Metro Center Metro), Pennsylvania & 7 th St. (Archives/Navy Memorial Metro), D St. & 9 th St. SW (Near L'Enfant Plaza Metro)	M-F 15-35 minutes	M-F 4:26 a.m.-9:21 a.m. 12:06 p.m.-9:01 p.m.
North Route 1	Connecting service between Dale City, Montclair, Woodbridge, and Downtown Washington	Cardinal Dr. & Bonneville, Benita Fitzgerald & Cloverdale, Route 1 & Maryland, PW Pkwy. & Church Hill, Horner Rd./I-95 Commuter Lot, Pentagon Bus Bay, 14 th St. & Independence (near Smithsonian Metro), 14 th St. & New York, (serves McPherson Square and Farragut West Metros), 19 th St. and H St., Virginia & 21 st St. (State Dept.)	M-F 45-65 minutes	M-F 5:02 a.m.-8:21 a.m. 3:50 p.m.-7:35 p.m.
Dale City and Woodbridge to Pentagon and Rosslyn/Ballston	Connecting service between Dale City, Woodbridge, and Pentagon/Rosslyn/Ballston	Pfizer Stadium Commuter Lot, Dale Blvd. & Lindendale, Dale City Commuter Lot, Prince William Pkwy. & Malta, Horner Rd./I-95 Commuter Lot, Pentagon Bus Bay/Metro, Wilson Blvd. & N. Kent. (Rosslyn Metro), (Serves Courthouse and Clarendon Metros). Fairfax & N. Taylor (Ballston Metro)	M-F 45-50 minutes	M-F 5:10 a.m.-8:44 a.m. 3:28 p.m.-7:31 p.m.
Route 1/South Route 1	Connecting service between Triangle, Dumfries,	Route 1: Wendy's in Triangle, River Ridge & Route 1, Blackburn & Maryland, Route 1 & Mt. Pleasant,	M-F 45 minutes	M-F 5:08 a.m.-8:55 a.m. 12:06 p.m.-8:56 p.m.

Table 3-12 (continued)

Route	Description	Other Stops	Frequency	Schedule
	Woodbridge, Pentagon, and Downtown Washington	Rt. 123/I-95 Commuter Lot, Pentagon Bus Bay/Metro, 14 th St. & Independence (near Smithsonian Metro), 14 th St. & New York, (serves McPherson Square and Farragut West Metros), 19 th St. & H, Virginia and 21 st St. (State Dept.) South Route 1: Fox Lair Apartments, River Ridge & Rt. 1, Allen Dent & John Pary, Wayside & Route 1, Rt. 234 & Rt. 1 Commuter Lot, Pentagon Bus Bay, 14 th St. & Independence (near Smithsonian Metro), 14 th St. & New York (serves Metro Center), Pennsylvania & 7 th St. (Archives/Navy Memorial Metro), D St. & 9 th St. SW (near L'Enfant Plaza Metro)		
Linton Hall Metro Direct	Connecting service between Gainesville and West Falls Church Metro	Limestone Dr. Commuter Lot, Linton Hall & Hunting Cove Place, West Falls Church Metro	M-F 45-60 minutes	M-F 4:40 a.m.-8:36 a.m. 4:00 p.m.-7:26 p.m.
Manassas Metro Direct	Connecting service between Manassas and West Falls Church Metro (with AM only service to Vienna Metro)	Liberia & Centreville, Church & West, VRE Station, Manassas Mall, Portsmouth Commuter Lot, Williamson & Stonehouse, Vienna Metro (AM service only), West Falls Church Metro	M-F 30-70 minutes	M-F 4:14 a.m.-10:25 p.m.
Prince William Metro Direct	Connecting service between Dale City, Woodbridge, and Franconia-Springfield	PRTC Transit Center, Potomac Mills, Horner Road Lot, Franconia-Springfield Metro, Rt. 1 & Gordon, Rt. 1 & Sandra	M-F 40-45 minutes	M-F 5:10 a.m.-11:13 p.m.

Note: Only time points are listed as other stops here. Additional stops are served on routes.

Source: PRTC Website, <http://www.prtctransit.org/commuter-bus/schedules/index.php>.

Transfers between VRE and PRTC buses are free, with a valid VRE ticket or pass, when traveling to or from the bus stop nearest the VRE station. Up to two children age five and under, traveling with a paying adult, ride for free.

Private Providers

Private providers that operate commuter buses in Virginia include:

- D & B Bus/Quick Commuter Bus (Falmouth)
- L & J Transport (Front Royal)
- Lee Coaches (Fredericksburg)
- Mantua Citizens Association (Fairfax)
- National Coach Works Inc. of VA dba Martz Bus (Fredericksburg VA)
- Reston Bus Express (RIBS) (Springfield)
- Schrock Tour & Charter (Winchester)¹²

Many of these commuter routes pick up passengers at park and ride lots in suburban Northern Virginia. These routes typically operate during the morning and evening peak periods, possibly providing one or two midday trips as well. A sample fare, for Martz Bus, is \$21.50 one-way, though monthly passes and ticket books provide more affordable fares per trip.¹³

Potential Transit Commutes from Northern Virginia to Fort Meade

Table 3-13 outlines potential transit options based on existing services that commuters in Northern Virginia can use to reach Fort Meade. Transit commutes from the top ten origins of DISA commuters are described in the table. The local segment of each commute to reach the Metro or VRE station may differ depending on the specific areas where employees live within each town. More time may need to be added to these transit commutes if employees need to drive to a park and ride lot or to be dropped off at a transit stop. Several sample commutes were taken from DISA's BRAC Information Portal Website that was created for employees transitioning to Fort Meade.¹⁴ The website provides helpful links for ridesharing and transit options for the commute from Northern Virginia to the installation.

As seen in Table 3-13, the sample transit commutes are quite long and require at least three or four transfers, which make transit an unattractive option. Compared to some driving commute times estimated on DISA's BRAC Information Portal Website,

¹² WMATA Regional Transportation Website, http://www.wmata.com/getting_around/regional_transit.cfm#va_commuter_bus.

¹³ MARTZ Virginia Website, <http://www.martzgroupva.com/ticket-prices.asp>.

¹⁴ DISA's BRAC Information Portal Website, <http://www.disa.mil/brac/commuting/index.html>.

Table 3-13: Potential Transit Commutes from Northern Virginia to Fort Meade

Origin	Potential Transit Commute Including Transfers	Estimated Morning Commute Time (hours:mins)	Estimated Evening Commute Time (hours:mins)
Alexandria	Start/End at Van Dorn St. Metro. Take Blue Line Metro toward Largo Town Center. Transfer to the Red Line at Metro Center toward Glenmont; arrive at Union Station. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	1:29	2:05
Woodbridge	Start/End at Woodbridge VRE Station. Take VRE Fredericksburg Line Northbound to Union Station. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	1:57	2:15
Springfield	Start/End at Franconia/Springfield Metro. Take Blue Line Metro toward Largo Town Center. Transfer to the Red Line at Metro Center toward Glenmont; arrive at Union Station. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	1:34	2:10
Fairfax City	Start/End at Woodbridge VRE Station Vienna/Fairfax Metro. Take the Orange Line Metro toward New Carrollton, and transfer to the Red Line at Metro Center; arrive at Union Station. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	1:41	2:02
Arlington	Start/End at Ballston/MU Metro. Take Orange Line Metro toward New Carrollton; arrive at New Carrollton. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	1:20	1:21
Falls Church	Start/End at West Falls Church Metro. Take Orange Line Metro toward New Carrollton; arrive at New Carrollton. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	1:27	1:28
Stafford City	Start/End at Brooke VRE Station. Take VRE Fredericksburg Line Northbound to Union Station. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	2:23	2:38
Manassas	Start/End at Manassas VRE Station. Take VRE Manassas Line Northbound to Union Station. Transfer to the MARC Penn Line Northbound; arrive at Odenton Station. Take the shuttle to DISA facility. (Return trip by same carriers in Southbound direction.)	2:09	2:45

Origin	Potential Transit Commute Including Transfers	Estimated Morning Commute Time (hours:mins)	Estimated Evening Commute Time (hours:mins)
Sterling	Start/End at Herndon Monroe Park and Ride Lot (10-15 min drive from Sterling). Take Fairfax Connector Route 980 to West Falls Church Metro (5:44 - 6:01am, every 6 mins). Take Orange Line Metro toward New Carrollton; arrive at New Carrollton (6:20 - 7:10am). Transfer to the MARC Penn Line Northbound; arrive at Odenton Station (7:23 - 7:35am). Take the shuttle to DISA facility (arrive 7:50 am). (Return trip by same carriers in Southbound direction.)	2:20	2:15 - 2:20
Centreville	Take a WMATA 12 (C, E, or F) route from Centreville to the Vienna Metro (about 5:20 - 6:00am). Take Orange Line Metro toward New Carrollton; arrive at New Carrollton (6:20 - 7:10am). Transfer to the MARC Penn Line Northbound; arrive at Odenton Station (7:23 - 7:35am). Take the shuttle to DISA facility (arrive 7:50 am). (Return trip by same carriers in Southbound direction.)	2:30	2:25

Sources: DISA BRAC Information Portal Website, <http://www.disa.mil/brac/commuting/samples.html>; WMATA Trip Planner, http://www.wmata.com/rider_tools/tripplanner/, and local provider websites.

the transit options take about twice as long as driving. However, these driving commute times on the website were based on commutes during the summer of 2008, and traffic is likely heavier during other times of the year when schools are in session.

SUMMARY OF EXISTING TRANSIT

Though a notable public transportation network exists in Central Maryland, only one bus route serves Fort Meade at the Reece Road gate, requiring riders to walk a significant distance to their final destination within the campus. Private shuttles for those with valid DoD identification transport passengers from the Odenton and Savage MARC stations to destinations within and around Fort Meade. While the private shuttles provide an important connection for commuters that may travel by MARC train, there is still a need to provide direct transit service from local origins where BRAC-impacted employees are increasingly expected to move their households. The analysis also demonstrated that existing transit commutes from Northern Virginia would be exceedingly long with multiple transfers. Ridesharing may therefore present more palatable options, which are explored further in the next chapter.

Chapter 4

Planned Transit Improvements and Ridesharing Options

This chapter describes several transit and ridesharing improvements planned for the Fort Meade region, which will help accommodate the influx of employees and growth anticipated due to the BRAC process. Using the transit needs assessment along with input from stakeholders, this chapter identifies new transit services and transit improvements that could potentially start in 2011 and operate through 2020, given available funding. These transit services will mainly support work and work-related travel to Fort Meade. The transit services are mostly local in nature and will best serve relocating employees once they move closer to the installation, but will also serve current employees that live in proximity to Fort Meade.

Ridesharing options address other longer distance commuting needs, including those of employees that choose to keep their residences in the Metropolitan Washington, D.C. area even after their positions move to Fort Meade. Such commutes are expected to be short-term though, and employees currently living in Northern Virginia and Southern Maryland are anticipated to relocate their residences closer to Fort Meade over the next five to ten years.¹ Many of the proposed transit services were developed as part of the transit development plans (TDPs) in Anne Arundel and Howard Counties, which were updated around the same that this study was conducted. Numerous local and regional transportation planning studies that include service improvements pertinent to Fort Meade are also described in this chapter.

¹ Based on discussion with Bert Rice, Installation Executive Officer at Fort Meade, at this study's initiation meeting on April 3, 2008. This expected housing relocation is confirmed in the Sage Policy Group housing report described in the next chapter.

TRANSIT IMPROVEMENTS

Fort Meade/NSA-Sponsored Services

NSA and other agencies at or moving to Fort Meade initiated discussions regarding the possible expansion of NSA's in-house employee shuttle for other Fort employees in April 2008. Launched as a pilot program with a 15-seat van on January 5, 2009, the service was finalized and began as a commuter shuttle service on February 17, 2009 using a 28-seat shuttle.² Operated by NSA, the shuttle serves employees and residents at Fort Meade, taking passengers with valid DoD identification or a Fort Meade visitor pass from the Odenton MARC station to the garrison.

The fare-free shuttle runs during the peak periods from Monday through Friday, except for federal holidays, with seven roundtrips daily from the Odenton MARC station to Fort Meade and NSA, starting at 5:55 a.m. Return trips to the MARC station begin at 3:25 p.m. Shuttle stops include the Post Theater, Kimbrough Ambulatory Care Center, and the intersection of Ernie Pyle Street and Mapes Road. With no end date planned, the service, if successful, will be an important component in accommodating the pending increase of commuters to the Fort Meade related to BRAC.

Anne Arundel County and Howard County TDPs

The TDPs for Anne Arundel County and Howard County include several route concepts for services to Fort Meade in an effort to plan local transit alternatives to accommodate the expected BRAC growth in each county. The routes described here comprise the proposed initial network that has been recommended by KFH Group and has yet to be approved by the counties. The routes were developed in part based on the Baltimore Metropolitan Council's Regional Travel Demand Model forecast of 2015 Morning Peak Trips to Fort Meade and on stakeholder input, which included requests for service between Fort Meade and nearby MARC stations, Arundel Mills, and BWI Airport. Expected productivity for the proposed routes was included where available, based on comparisons with similar existing transit services in the region.

See Figures 4-1a to 4-1i for maps of the route concepts in the proposed initial network. The routes are currently designed to serve NSA and/or the EUL sites before entering the Fort and serving several stops on the installation; the conceptual routing is shown in the maps as a loop that begins and ends at the Visitor Control Center at the Reece Road gate. The routes have been designed to end at Fort Meade due to security concerns; only DoD I.D. card holders can get on the installation, so members of the public cannot ride a public bus that travels onto the garrison. Thus, these routes will

² Alan J. McCombs. "Going Green: Fort Meade launches commuter shuttle service." February 19, 2009. <http://www.ftmeade.army.mil/pages/news/stories/2009/feb/shuttle.html>.

end at Fort Meade based on the assumption that only authorized employees and visitors will still be on the public bus by the time it reaches the installation. Similar security concerns potentially exist for public transit service to NSA, but the current route concepts are designed to stop at the NSA Visitor Control Center at the Canine Road gate and do not enter NSA.

Table 4-1 provides a summary of the estimated annual operating costs and capital costs associated with the services in the proposed initial network. The operating costs are based on the current CTC rate with First Transit, plus the CTC management fee. All proposed routes are designed to operate Monday through Friday except for the restructured Connect-A-Ride Route K, which runs during the weekend as well. Unless otherwise noted in the descriptions below, the services are generally proposed to run 13 hours per day, at 30-minute headways during the peak periods and at hourly headways during non-peak periods.

Many proposed routes could potentially serve the EUL given available funding or financial support from EUL site occupants. The TDPs also contain other route concepts, including extensions to the routes included here for Anne Arundel County and a related route that serves Dorsey MARC for Howard County. These other route concepts are described in the TDPs and may be considered for implementation beyond the proposed initial network. See the Challenges section below for concerns and standing issues related to providing transit service to Fort Meade, which have been identified in the TDP processes in Anne Arundel and Howard Counties.

Anne Arundel County Fixed-Route Service Alternatives

North Crofton - Odenton - EUL - Fort Meade. Shown in Figure 4-1a, this proposed route serves the largely residential area in North Crofton and travels along Waugh Chapel Road through Odenton. In the short-term, this route may end at the Odenton MARC station and allow passengers to connect with the NSA-operated shuttle that runs between Fort Meade, NSA, and the MARC station. In the longer term, the route could be extended to serve the EUL and Fort Meade, thereby providing commuters with a one-seat ride. This route would connect with Connect-A-Ride Route K and MARC trains. The expected productivity is nine passenger boardings per vehicle service hour.

Russett Green - Odenton MARC - EUL - Fort Meade. See Figure 4-1b. This route serves the residential area in Russett Green, making a stop at the Odenton MARC Station before serving the EUL and Fort Meade. This route provides service for residents in Russett Green to access the MARC Train or travel to the Fort. This service would potentially connect with Connect-A-Ride Routes B and J, allowing commuters from Laurel, Glen Burnie, and Freetown to access Fort Meade by transit. The expected productivity is eight passenger boardings per vehicle service hour.

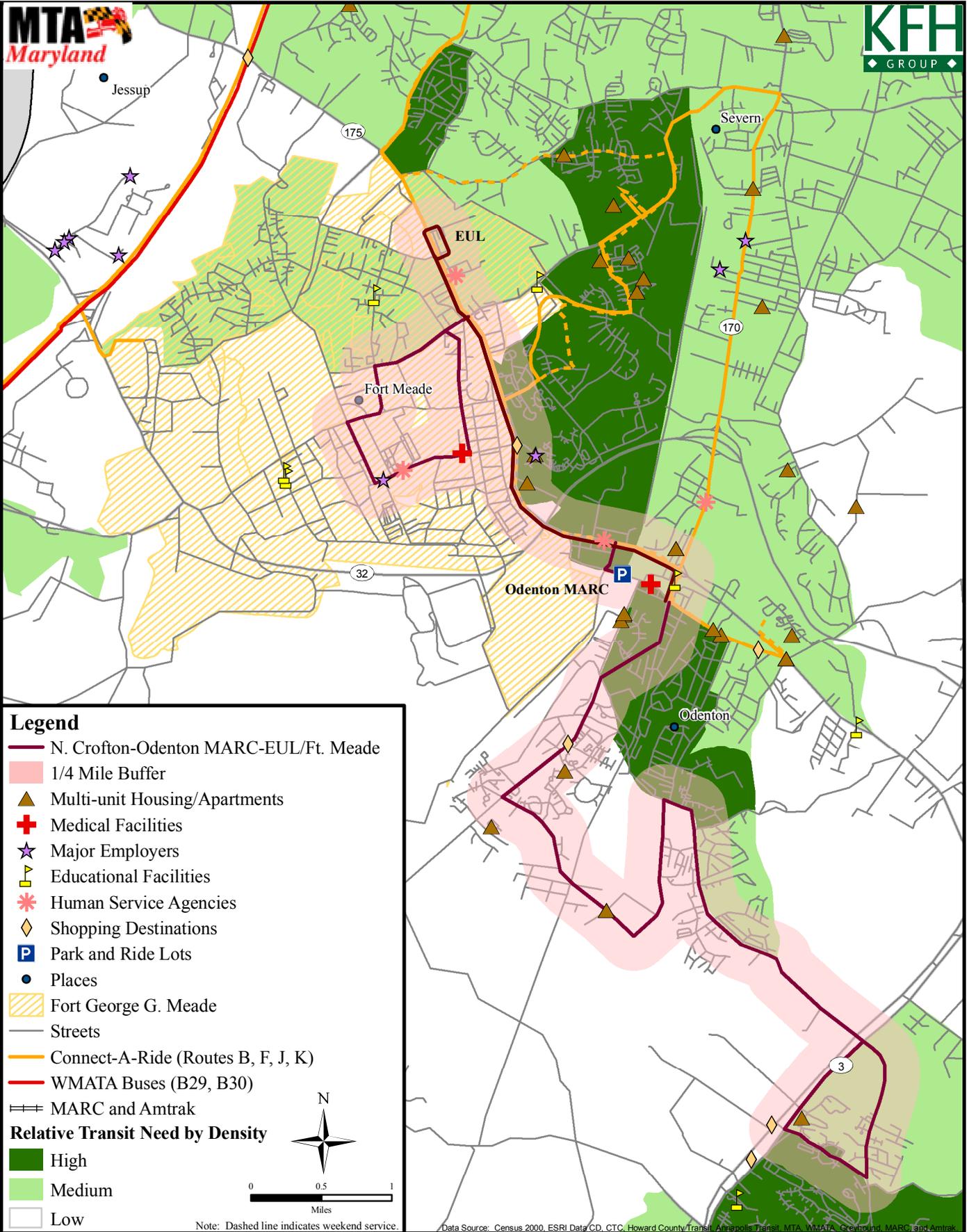
Table 4-1: Proposed Initial BRAC Network

Route	Estimated Annual Operating Cost	Estimated Capital Cost
ANNE ARUNDEL COUNTY		
North Crofton-Odenton MARC-EUL-Ft. Meade	\$1,070,907	\$1,055,000
Russett Green-Odenton MARC-EUL-Ft. Meade	\$797,931	\$844,000
High Frequency Shuttle: Odenton MARC-EUL-Ft. Meade (meet most trains)	\$755,934	\$633,000
Total Incremental Cost of Restructured CTC Route K (Increase from Existing Route)	\$565,463	\$422,000
Ft. Meade/EUL-Arundel Mills-BWI	\$1,130,926	\$844,000
Odenton-Arundel Mills (via Pioneer City)	\$1,130,926	\$844,000
Harry S. Truman Park & Ride-EUL-Ft. Meade (peak hours only)	\$503,956	\$844,000
Arnold/Severna Park-Odenton MARC (peak hours only)	\$377,967	\$633,000
Piney Orchard-Odenton MARC-EUL-Ft. Meade (peak hours only)	\$125,989	\$211,000
<i>Total for Anne Arundel County Services</i>	<i>\$4,198,147</i>	<i>\$4,642,000</i>
HOWARD COUNTY		
Columbia Gateway - Dorsey MARC - Fort Meade	\$293,975	\$720,000
Blue (Columbia Town Center - the Garrison)	\$335,971	\$720,000
Blue (Clarksville - the Garrison)	\$335,971	\$720,000
<i>Total for Howard County Services</i>	<i>\$965,917</i>	<i>\$2,160,000</i>
Total for Proposed Initial BRAC Network	\$5,164,064	\$6,802,000

Notes:

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

2) Anne Arundel County is interested in purchasing medium duty, low floor <30', 10-year/350,000 miles bus, diesel, cubic/GFI Odyssey farebox, air-ride suspension, bike rack, misc. options - FY 2010 = \$210,736/vehicle. Howard County is interested in purchasing Hybrid medium duty, low floor 30', 10-year/350,000 miles bus, cubic/GFI Odyssey farebox, air-ride suspension, bike rack, misc. options - FY 2010 = \$360,000/vehicle.



Legend

- N. Crofton-Odenton MARC-EUL/Ft. Meade
- 1/4 Mile Buffer
- ▲ Multi-unit Housing/Apartments
- ⊕ Medical Facilities
- ☆ Major Employers
- ▴ Educational Facilities
- ✱ Human Service Agencies
- ◆ Shopping Destinations
- P Park and Ride Lots
- Places
- ▨ Fort George G. Meade
- Streets
- Connect-A-Ride (Routes B, F, J, K)
- WMATA Buses (B29, B30)
- ≡≡≡ MARC and Amtrak

Relative Transit Need by Density

- High
- Medium
- Low

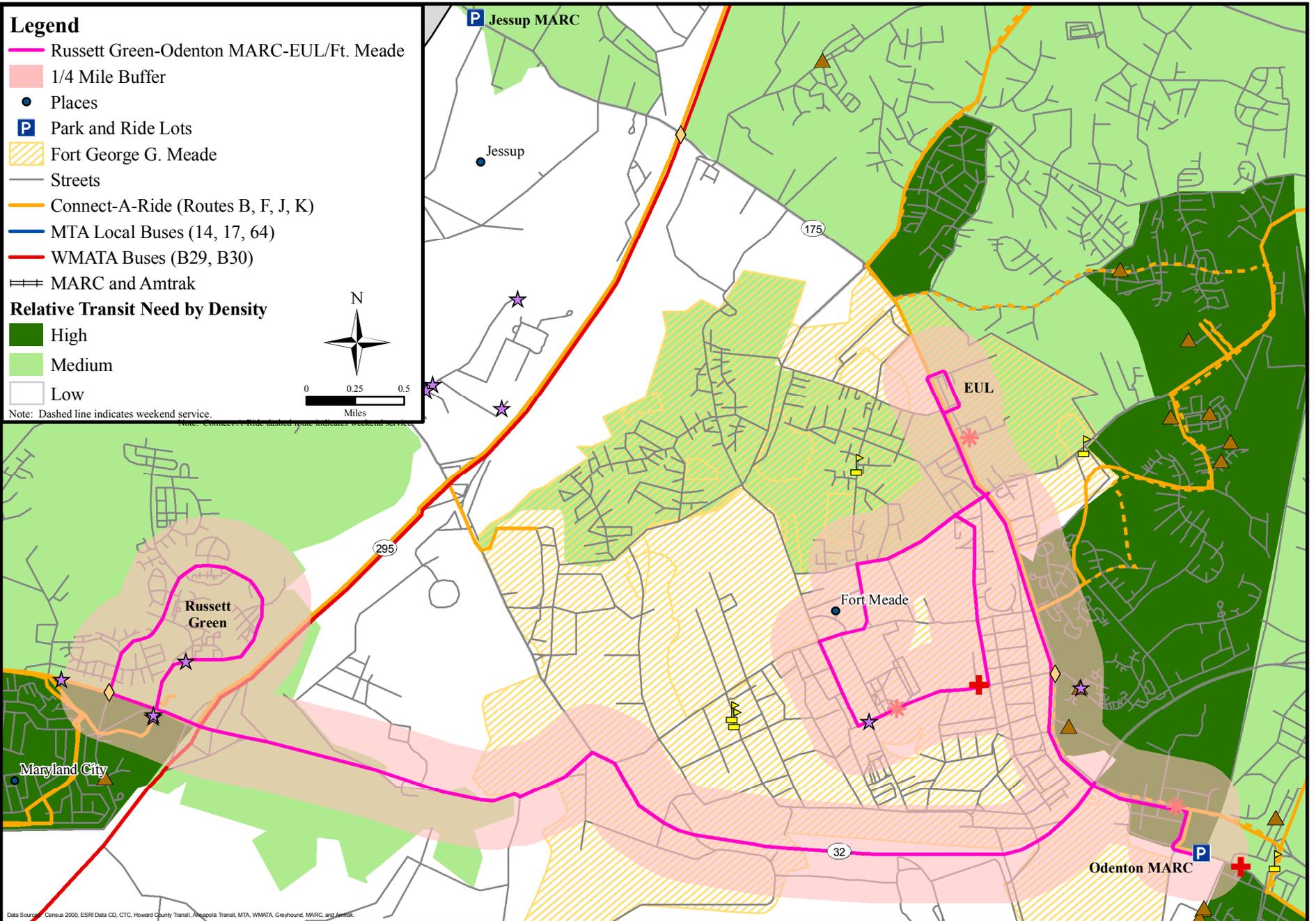
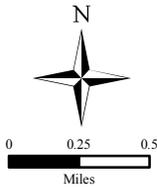
Note: Dashed line indicates weekend service.

Data Source: Census 2000, ESRI Data CD, CTC, Howard County Transit, Annapolis Transit, MTA, WMATA, Greenland, MARC, and Amtrak.

Figure 4-1a: North Crofton - Odenton MARC - EUL/Fort Meade

Legend

- Russett Green-Odenton MARC-EUL/Ft. Meade
 - 1/4 Mile Buffer
 - Places
 - P Park and Ride Lots
 - Fort George G. Meade
 - Streets
 - Connect-A-Ride (Routes B, F, J, K)
 - MTA Local Buses (14, 17, 64)
 - WMATA Buses (B29, B30)
 - MARC and Amtrak
- Relative Transit Need by Density**
- High
 - Medium
 - Low
- Note: Dashed line indicates weekend service.



Data Source: Census 2000, ESRI Data CD, CTC, Howard County Transit, Annapolis Transit, MTA, WMATA, Greyhound, MARC, and Amtrak.

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Figure 4-1b: Russett Green - Odenton MARC - EUL/Fort Meade



High Frequency Shuttle: Odenton MARC - EUL - Fort Meade. Portrayed in Figure 4-1c, this high frequency shuttle travels between the Odenton MARC Station, the EUL, and Fort Meade. The headways are designed to be 15 minutes during peak periods, and 30 minutes during non-peak periods, with 15 hours of service each weekday. The shuttle would be scheduled to meet most trains at the Odenton MARC Station, and provide a connection to Connect-A-Ride Route K. A similar service is currently provided by NSA Transportation Services for NSA employees and Fort Meade employees and visitors with valid DoD identification. The proposed route in the TDP would be open to the public and could possibly serve the EUL as well. The expected productivity is ten passenger boardings per vehicle service hour.

Restructured Connect-A-Ride Route K: Fort Meade/EUL - Arundel Mills - BWI. This proposed concept actually consists of two routes, where the existing Connect-A-Ride Route K was split into two routes with slight modifications. The restructured route that serves Fort Meade is the purple route shown in Figure 4-1d. This service between the Fort, the EUL, Arundel Mills Mall, and BWI specifically responds to requests made through stakeholder input. This route would connect with Connect-A-Ride Route J, Howard Transit's Silver Route, Annapolis Transit Route C60, MTA Local Route 17, MTA Light Rail, MTA MARC train, Amtrak, WMATA's B30 Route, and the BWI Business Partnership's LINK Shuttle. The expected productivity is nine passenger boardings per vehicle service hour.

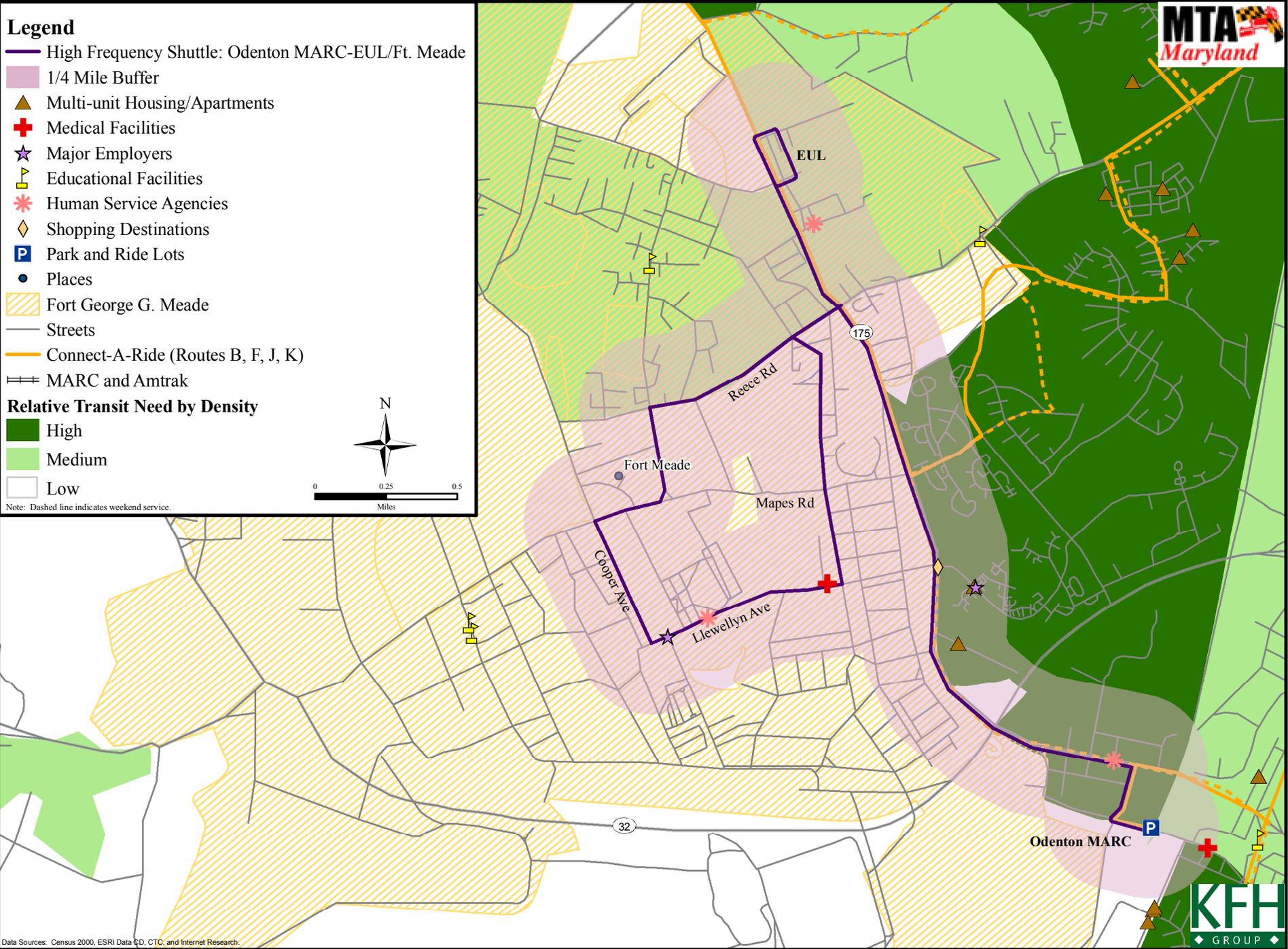
The other new route that would result after restructuring the existing Route K is mapped in light blue in Figure 4-1d. This route does not serve Fort Meade, but travels between the Odenton MARC Station and Arundel Mills Mall, serving residential areas such as Pioneer City and Meade Village. Both these routes would operate seven days a week, providing important access to employment and shopping during weekends as well.

Harry S. Truman Park and Ride Lot - EUL - Fort Meade. Shown in Figure 4-1e, this route travels between the Harry S. Truman Park and Ride Lot in Parole and Fort Meade. It would only run during the peak hours on weekdays essentially as express bus service; the estimated costs reflect 30-minute headways. Potential connections with other transit providers include Connect-A-Ride Route K and Annapolis Transit. This route could also be extended to serve the Navy-Marine Corps Stadium Park and Ride Lot in Annapolis and the Annapolis Towne Centre at Parole given available funding. The expected productivity is six to eight passenger boardings per vehicle service hour.

Arnold/Severna Park - Odenton MARC Station. See Figure 4-1f. This express service would start at the Severna Park Park and Ride Lot at Ritchie Highway and Jones Station Road, northwest of Arnold. The route would travel north on Ritchie Highway and turn west via Benfield Road to MD-178/Veterans Highway. Then the route would take MD-32 west to Sappington Station Road and continue on MD-175/Annapolis Road to the Odenton MARC. This service would only run during the peak hours on

Legend

-  High Frequency Shuttle: Odenton MARC-EUL/Ft. Meade
 -  1/4 Mile Buffer
 -  Multi-unit Housing/Apartments
 -  Medical Facilities
 -  Major Employers
 -  Educational Facilities
 -  Human Service Agencies
 -  Shopping Destinations
 -  Park and Ride Lots
 -  Places
 -  Fort George G. Meade
 -  Streets
 -  Connect-A-Ride (Routes B, F, J, K)
 -  MARC and Amtrak
- Relative Transit Need by Density**
-  High
 -  Medium
 -  Low
- Note: Dashed line indicates weekend service.



Data Sources: Census 2000, ESRI Data CD, CTC, and Internet Research.



Figure 4-1c: High Frequency Shuttle: Odenton MARC - EUL/Fort Meade

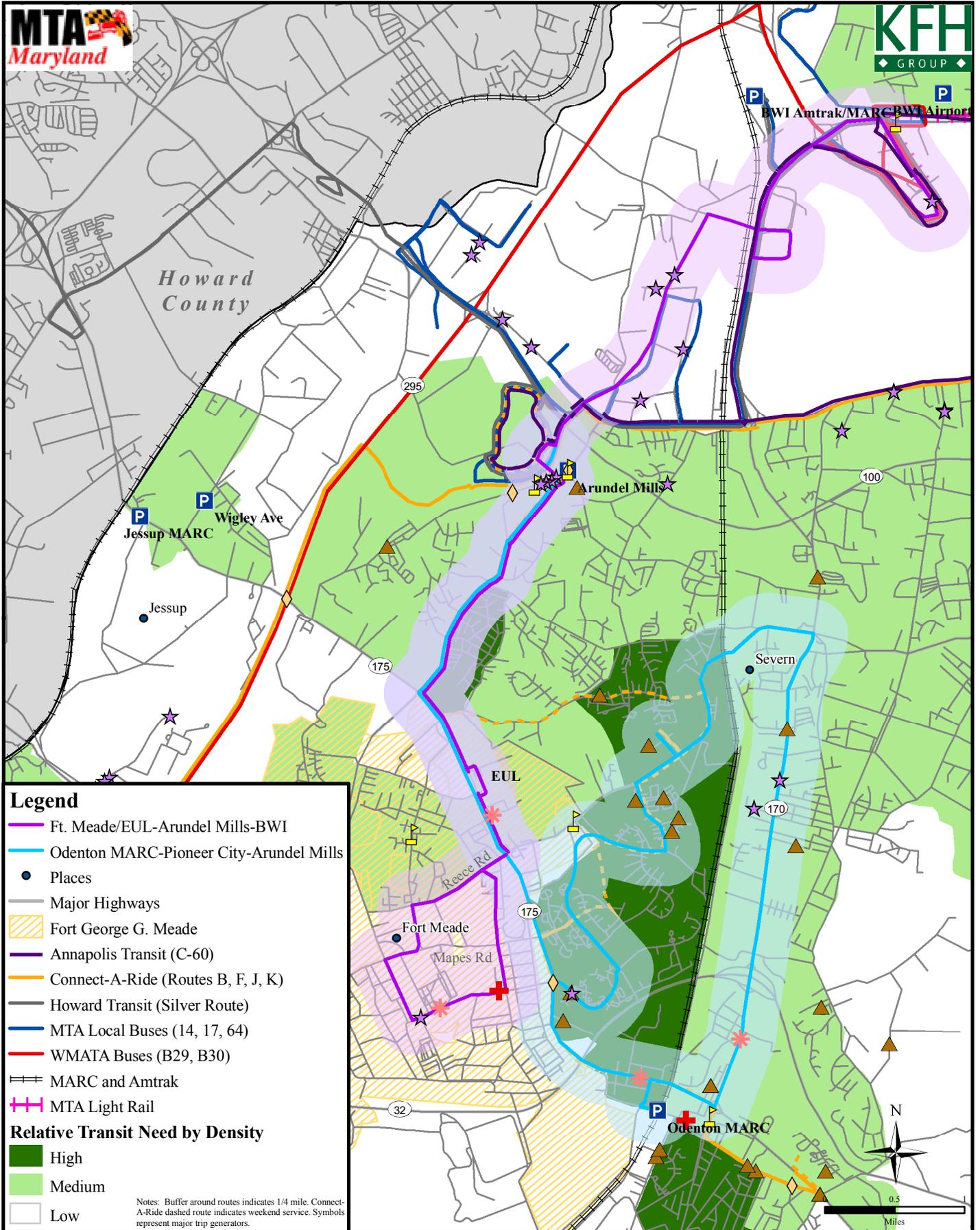
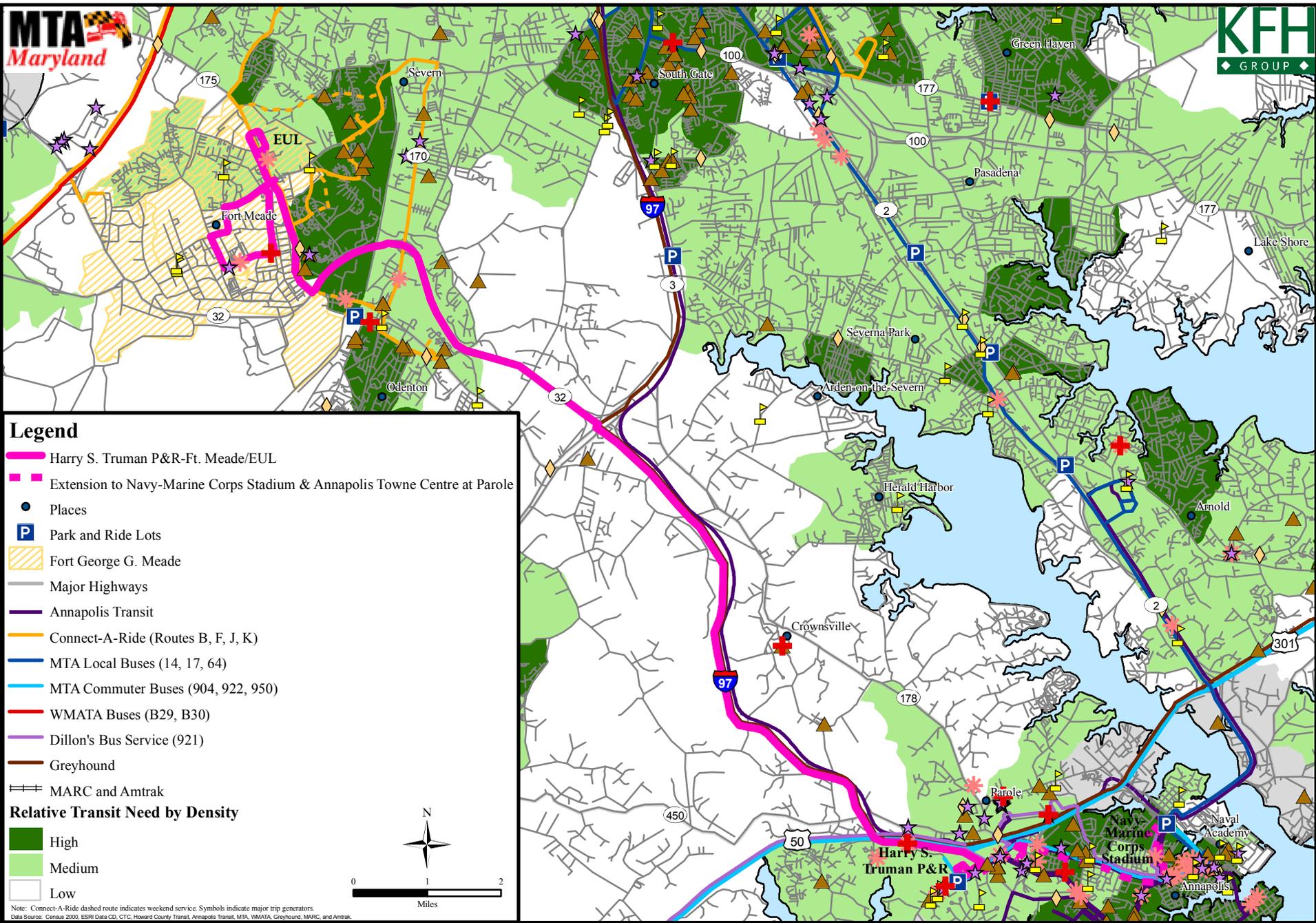


Figure 4-1d: Restructured Connect-A-Ride Route K, Fort Meade/EUL - Arundel Mills - BWI



4-10

Figure 4-1e: Harry S. Truman Park And Ride Lot - Fort Meade/EUL

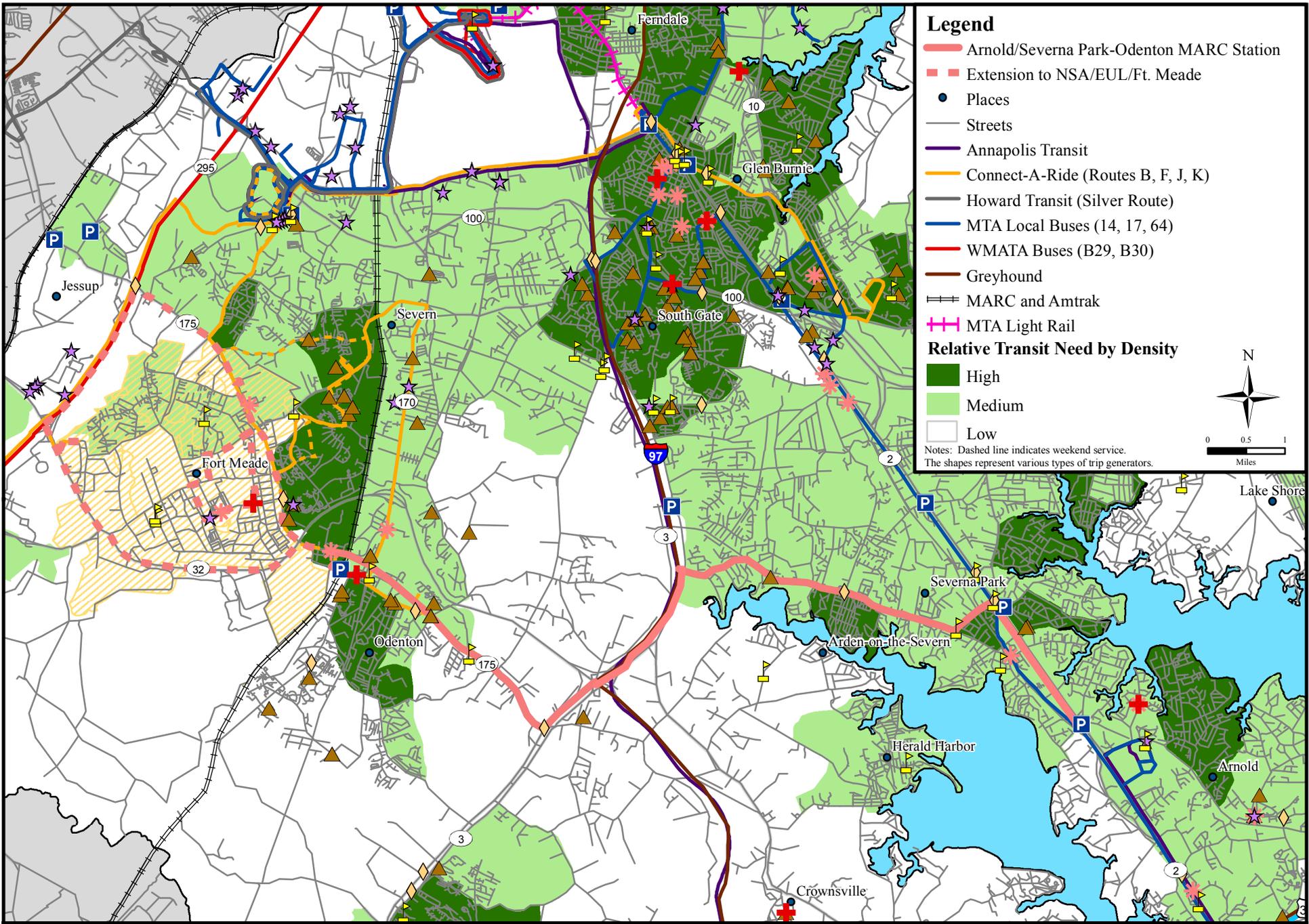


Figure 4-1f: Arnold/Severna Park - Odenton MARC Station

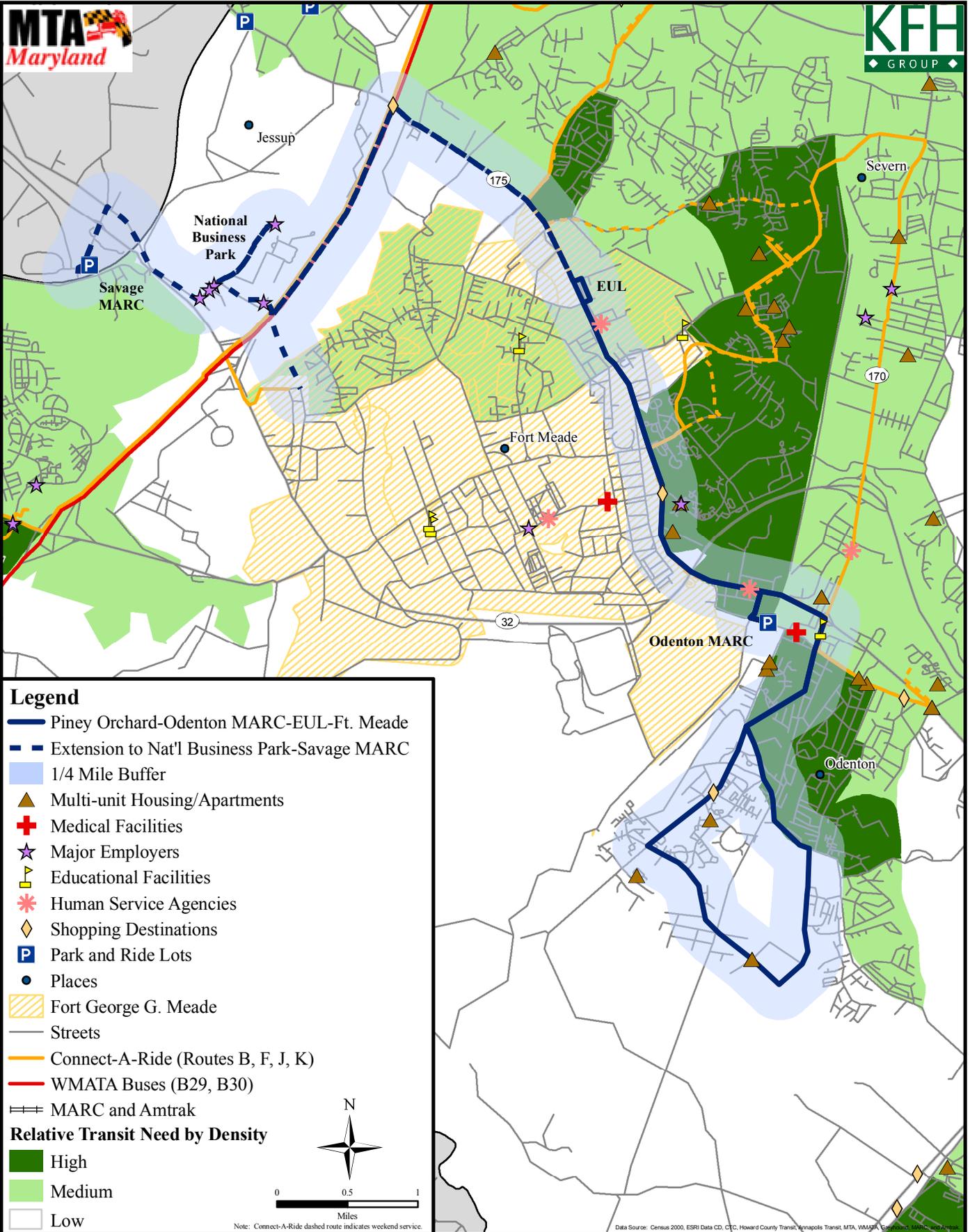
weekdays, and the estimated costs reflect 30-minute headways. It provides a direct trip for commuters living in Arnold and Severna Park to the Odenton MARC Station. At the station, commuters could transfer to the NSA-operated shuttle that serves the garrison, or the route could be extended to serve these major employers given available funding. Other potential connections include MTA Local Route 14, Connect-A-Ride Route K, and MARC trains on the Penn Line. The expected productivity is five to seven passenger boardings per vehicle service hour.

Piney Orchard – Odenton MARC Station – EUL – Fort Meade. Shown in Figure 4-1g, this route travels from the residential area of Piney Orchard to the Odenton MARC Station, before potentially serving the EUL and continuing to the main gate (Reece Road and Annapolis Road) at Fort Meade. This route would only run during the peak hours on weekdays, and the estimated costs reflect hourly headways. Potential connections with other transit services include Connect-A-Ride Route K, MARC trains on the Penn Line, and the NSA-operated shuttle between the Odenton MARC Station and the installation. This route could be extended to serve the National Business Park, the Savage MARC Station, and the Visitor Control Center at NSA given available funding. The expected productivity is six to eight passenger boardings per vehicle service hour.

Howard County Fixed-Route Service Alternatives

Columbia Gateway – Dorsey MARC – Fort Meade. Depicted in Figure 4-1h, this route serves a dense residential area at Columbia Gateway, the Dorsey MARC Station, and Fort Meade. This route would run during the peak hours on weekdays, and the estimated costs reflect hourly headways for a seven-hour span. This service provides connections to Howard Transit’s Gold, Purple, and Grey Routes, the MARC train, and Connect-A-Ride Route K. The expected productivity is eight passenger boardings per vehicle service hour.

Blue: Columbia Town Center and Clarksville – Fort Meade. Portrayed in Figure 4-1i, these two routes represent a restructuring of Howard Transit’s existing Blue Route. The dark blue route serves residential areas in Clarksville, the Clarksville Park and Ride Lot, the Savage MARC Station, and the garrison. The lighter blue route serves Columbia Town Center, the Broken Land East and West Park and Ride Lots, the Savage MARC Station, and the garrison. Both routes would essentially run as express bus services during the peak hours on weekdays. The estimated costs reflect hourly headways for an eight-hour span. These routes connect to the MARC train and could potentially connect with Howard Transit’s Orange, Silver, Brown, and Purple Routes and Connect-A-Ride Route K. The expected productivity for both routes is eight passenger boardings per vehicle service hour.



Legend

- Piney Orchard-Odenton MARC-EUL-Ft. Meade
- - - Extension to Nat'l Business Park-Savage MARC
- 1/4 Mile Buffer
- ▲ Multi-unit Housing/Apartments
- ⊕ Medical Facilities
- ☆ Major Employers
- Educational Facilities
- ★ Human Service Agencies
- ◇ Shopping Destinations
- P Park and Ride Lots
- Places
- ▨ Fort George G. Meade
- Streets
- Connect-A-Ride (Routes B, F, J, K)
- WMATA Buses (B29, B30)
- MARC and Amtrak

Relative Transit Need by Density

- High
- Medium
- Low

0 0.5 1
Miles

Note: Connect-A-Ride dashed route indicates weekend service.

Data Source: Census 2000, ESRI Data CD, CTC, Howard County Transit, Annapolis Transit, MTA, WMATA, etc.

Figure 4-1g: Piney Orchard - Odenton MARC - EUL - Fort Meade

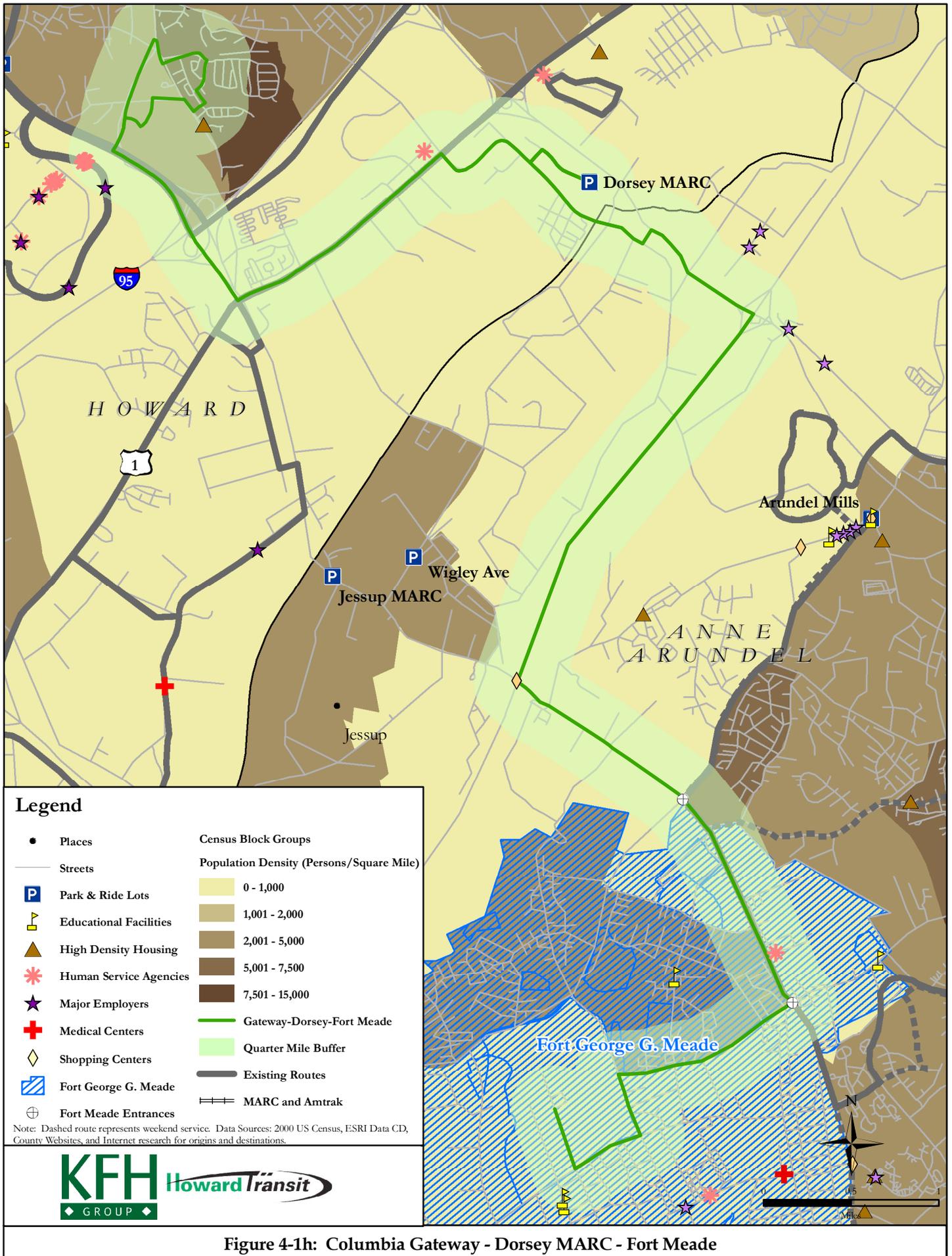


Figure 4-1h: Columbia Gateway - Dorsey MARC - Fort Meade

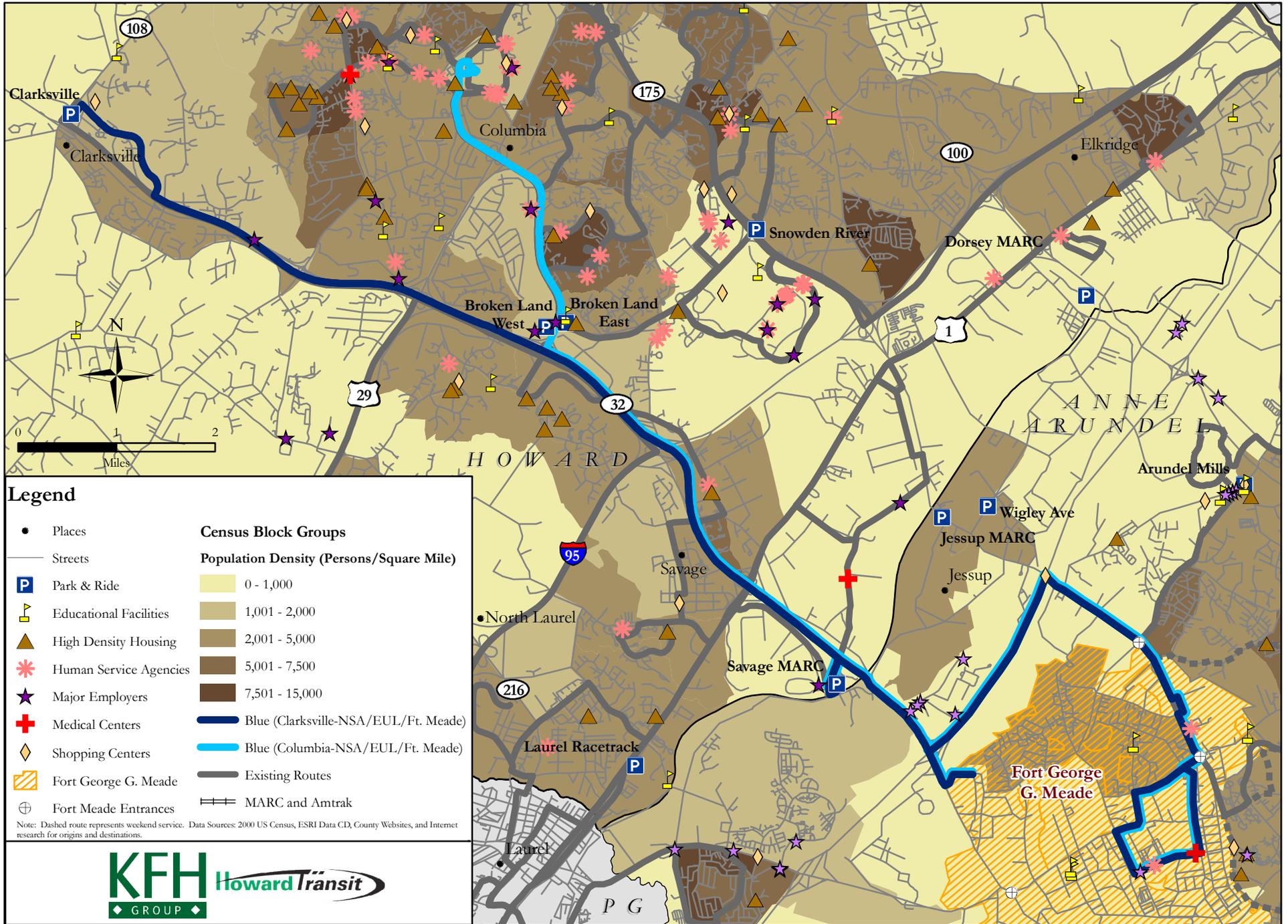


Figure 4-1i: Columbia Town Center and Clarksville - NSA/EUL/Fort Meade

An additional recommendation based on feedback from the study's Project Management Team was to adjust stop locations on existing services near Fort Meade, such as Connect-A-Ride routes, to serve the installation (i.e., stop at the Visitor Control Center at Reece Road gate, or even travel onto the campus given resolution of security issues).

MARC Growth and Investment Plan (MGIP)

The MARC Penn Line represents one of the easiest commuting options for employees relocating to Fort Meade, assuming a high frequency shuttle is provided between the Odenton MARC Station and the installation. Dated September 2007, the MGIP includes among its objectives increased service on the Penn Line, specifically to 15-minute headways during the peak period and 30-minute headways during the off-peak period. Short-term goals on the Penn Line include increased service for the evening peak, late evening, and new service on weekends. The MGIP outlines a number of programmed investments that will impact the Penn Line:

- Improvements to the Odenton Station - 2015
- Improved track capacity (\$30M) - 2011
- Mid-life overhaul of coaches (\$25M) - 2012
- Mid-life overhaul or new locomotives (\$61M) - 2012

It is important to note that these programmed improvements are required to **maintain the existing** level of service on MARC and are not intended to meet future growth.

The MGIP also has planned immediate improvements for the Penn Line that will be initiated or completed within nine months, though the funding for these improvements has not been confirmed:

- Adding one PM peak train
- Adding one late evening train
- Initiating weekend service
- Purchasing additional capacity on Amtrak off-peak trains for MARC passengers

By 2010, the Penn Line could offer:

- Additional seating capacity of 3,400 daily seats,
- Additional peak and reverse-peak service, and
- Late evening and weekend service.

By 2015, the Penn Line could offer:

- Additional seating capacity of 12,000 daily seats,
- Increased peak and reverse-peak service to 15- to 20- minute headways,
- 30-minute headway off-peak service,
- Connectivity with the MTA Red Line, and
- Significant service targeted toward the BRAC market including enhanced service at Odenton.

By 2020, the Penn Line service affecting Fort Meade could include:

- Additional seating capacity of 16,000 daily seats,
- Expanded service, such as limited-stop trains at 30-minute headways, targeted toward the BRAC market,
- Additional peak express service,
- Off-peak local and limited stop service, and
- Service extensions to L'Enfant Plaza and Northern Virginia.

Capital investments slated for 2020 include:

- Station modifications at Odenton to support the main tracks, and
- Expansion of parking at Odenton Station.

Given that existing MARC services are already over capacity, it is difficult to determine whether the planned capacity improvements described above will accommodate the expected increase in MARC ridership from BRAC growth at Fort Meade. The planned increases in service frequency and daily seating capacity would promote transit use among employees relocating to Fort Meade for BRAC, but this transit use depends on continuing a shuttle service to final destinations and funding availability for the MARC improvements.

MTA Commuter Bus Improvements

A BRAC Transit Plan update was presented to MTA in April of 2008 that proposed new commuter buses that would travel between significant residential areas and Fort Meade. While several routes were proposed, three were ultimately recommended:

- Route 1: Gaithersburg
- Route 2: Greenbelt Metro
- Route 3: Harry S. Truman Park and Ride

A map of these recommended routes is included in Exhibit 4-1. With six daily trips proposed for each route, the annual operating cost for all three routes is estimated at \$1,237,000. The breakdown is \$693,000 for Gaithersburg, \$248,000 for Greenbelt, and \$296,000 for Harry S. Truman Park and Ride. MTA is funding three roundtrips on the Gaithersburg route, but no further decisions to operate the other recommended routes have been made to date.³

It should be noted that a Carroll County route, from the Eldersburg Park and Ride Lot to Fort Meade via MD-32 was also considered in MTA's commuter bus study. Carroll County contains relatively high need origins for Fort Meade employees, as described in the zip code analysis in Chapter 2. However, the proposed route from Eldersburg was not included among the MTA's recommended commuter bus routes. This study therefore does not pursue a fixed-route service alternative from Carroll County, but employees that move there once their job relocates due to BRAC may utilize ridesharing resources or connect to a proposed Howard County transit service to reach Fort Meade.

Central Maryland Maintenance Facility

A study looking at the need for and location of a Central Maryland Maintenance Facility is being conducted. Howard County, Anne Arundel County, the Laurel Area, and MTA are involved in the process. A central facility for the region provides potential benefits including public ownership of the facility and increased competition for operating contracts. A Central Maryland Maintenance Facility could benefit Fort Meade through the provision of more cost-efficient services and a transit hub or transfer point nearby the installation.

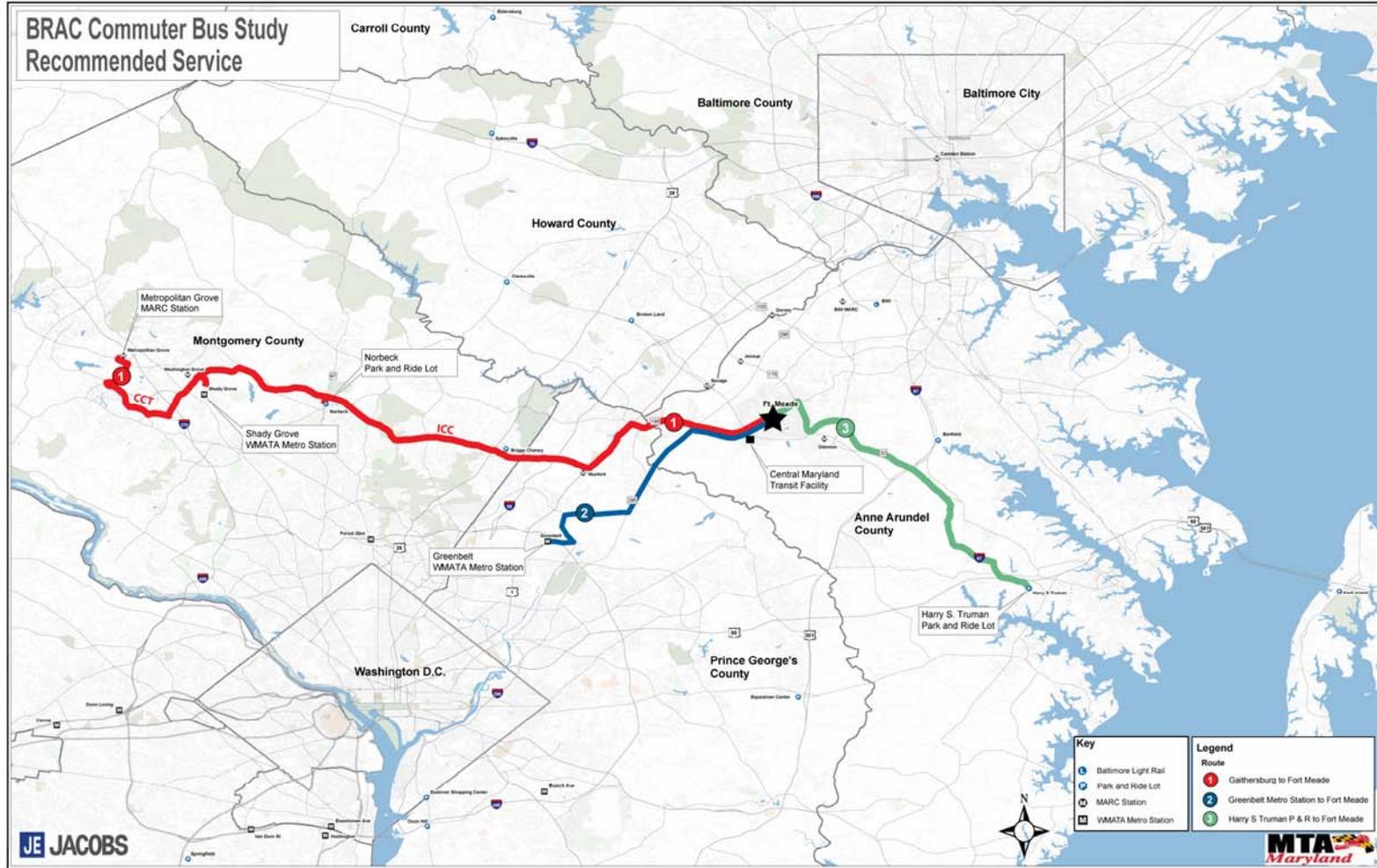
Other Possible BRAC Improvements

Maryland Consolidated Transportation Program (CTP)

The 2007 - 2012 CTP identified 54 "BRAC-Related" projects that have since been refined to include projects that are truly only BRAC-related for the 2008 - 2013 CTP. The main transit-related project that has construction funding programmed in the current CTP involves MARC improvements, including Odenton Station parking improvements and the design and engineering of a structured parking garage. The CTP originally also contained \$6.8M to support BRAC-related Locally Operated Transit Systems (LOTS) services statewide. However, this funding was cut due to statewide budget cuts in the fall of 2008. The CTP also includes various studies on the assessment of transit needs for BRAC (Statewide).

³ Update on funding for the Gaithersburg route from Gerald Cichy, MTA BRAC Coordinator, at the July 29, 2009 meeting of the RGMC's Regional Transportation Committee.

Fort Meade Service



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Statewide Transportation Improvement Program (STIP)

The 2007 STIP had the same projects listed in the CTP with the addition of a Job Access Reverse Commute (JARC) Program. The status of the JARC Program is “ongoing” and funds are distributed to counties and agencies around the State.

State BRAC Action Plan

The State of Maryland BRAC Plan includes two action items related to transit improvements:

- Evaluate additional transit service to Fort Meade through local transit systems (Anne Arundel and Howard TDPs), and
- Conduct BRAC commuter bus study (the results of which are described above under MTA Commuter Bus Improvements).

Local BRAC Plans

Anne Arundel County. Anne Arundel County’s BRAC/Growth at Fort Meade Working Plan, dated April 2008, described several transit-related actions that the County has planned:

- Increasing MARC train service in the Odenton, Fort Meade, and BWI Corridor,
- Partnering with Fort Meade and Howard County to develop a Fort Meade Central Maryland Transit Facility (same as the Central Maryland Maintenance Facility described above),
- Expanding the Odenton MARC Station,
- Conducting a feasibility study to extend support of the Green Line Metro to Fort Meade,
- Reviewing Light Rail expansion plans including the feasibility of extending from BWI to Fort Meade,
- Conducting a Transit and Rideshare Study (this study),

- Supporting implementation of an enhanced mass transit program between Fort Meade and surrounding cities such as Baltimore and Annapolis, and
- Evaluating the BRAC-related needs of or the impact on Tipton Airfield and BWI and freight movements including the Port of Baltimore.

These actions are planned for completion over different time horizons, ranging from two to 13 years. Most of the transit improvements listed above have been identified as high priorities with the exception of the feasibility study on extending the Green Line Metro to Fort Meade, which is a medium priority.

Howard County. According to a December 2007 presentation by the Howard County BRAC Task Force, Howard County has planned a number of transit actions related to BRAC:

- Improving MARC frequency, reliability, and scope of service,
- Continuing to evaluate options to extend the Washington Metro Green Line,
- Restructuring and expanding local and regional bus services, including express routes from park and ride lots,
- Creating fare incentives for bus services and parking disincentives at Fort Meade, and
- Developing a joint-use Transit Operations Facility at Fort Meade (same as the Central Maryland Maintenance Facility described above).

As seen in the descriptions of BRAC-related studies above, most planned actions are related and complementary to each other. In general, the various planned transit improvements aim to provide an effective transit network for Fort Meade and the surrounding areas to encourage employees, both those relocating for BRAC and existing, to use alternatives to driving alone. The proposed transit routes for Anne Arundel and Howard Counties provide an initial local network, which would be complemented by existing transit services as well as other proposed services and improvements, as described above.

RIDESHARING STRATEGIES

The analysis captured within the existing BRAC reports and surveys helped provide insight into the housing and commuting preferences of current and future Fort Meade area employees. Predominantly, these individuals have a choice between driving their personal automobile or taking transit. Based on their history of travel as a single occupancy vehicle (SOV) commuter, it would be prudent to offer a comprehensive ridesharing program alternative. The survey responses from DISA, considered with the current level of HOV travel to Fort Meade, indicate that ridesharing programs would be attractive to commuters to the installation. There are already three strong ridesharing programs available in the area – one offered by the BWI Business Partnership, another sponsored by NSA, as well as one by ARTMA. These will be continued in the future and could be strengthened to support new employees and staff as they move as a result of the BRAC process.

The most glaring question is why should a SOV commuter rideshare? Ridesharing offers many valuable incentives that are often overlooked:

- Reduction in traffic congestion
- Less stressful commute (if you are not the driver)
- Improved air quality for the region
- Lower overall commute cost – save on the cost of gas, tolls, and parking
- Reduction of wear and tear on personal vehicle
- Potentially a discounted rate on automobile insurance
- Use commute time for other tasks – option to work, read the paper, or even sleep
- Receive tax benefits as well, if employer participates in the program

Most vanpool programs work best where:

- One-way trip lengths exceed 20 miles,
- Work schedules are fixed and regular,
- Employer size is sufficient to allow matching of 5 to 12 people from the same residential area,
- Public transit is inadequate, and
- Some congestion or parking problems exist.

Buspools require about three times the density of travel demand, but otherwise the indicators of likely success are comparable.⁴ Vanpool service generally serves areas far outside the normal bus service area, or intra-suburban trips where bus service

⁴ TCRP REPORT 95, *Vanpools and Buspools Traveler Response to Transportation System Changes*, Chapter 5, 2005.

cannot be justified. The average trip length is nearly 35 miles, and trips well over 50 miles are not uncommon (trip length averages mostly fall within the range of 20 to 55 miles one-way).⁵

Carpools

A carpool is made up of two or more people sharing the ride to work. Carpools are as flexible as the riders need it to be – shared ride every day, once a week, or another arrangement. One person is the volunteer driver of the car and an agreement is made between the driver and other rider(s) to share the monthly carpool cost.

According to the American Automobile Association (AAA), the average cost of owning and operating a new vehicle in 2008 was 54.1 cents a mile, or \$8,115 per year based on 15,000 miles of driving. A quick comparison of carpooling versus driving alone reveals the following savings as shown in Table 4-2:

Table 4-2: Carpooling Versus Driving Alone
(yearly expense per person based on 22.5 working days per month)

Round-Trip Miles Per Day	Cost To Drive Alone	Cost if 2 People Carpool	Cost if 3 People Carpool
10	\$1,461	\$730	\$487
20	\$2,921	\$1,461	\$974
30	\$4,382	\$2,191	\$1,461
40	\$5,843	\$2,921	\$1,948
50	\$7,304	\$3,652	\$2,435
100	\$14,607	\$7,304	\$4,869

Vanpools

A vanpool usually consists of a group of 6 to 15 people who commute to and from work together in a van. As noted earlier, vanpools work best for those who live at least 20 miles away from their workplace and have a consistent work schedule. Each vanpool typically has a primary driver and one or more alternate drivers. Similar to the carpool, the vanpool participants share the cost of the van and all other operating expenses. Riders usually meet at designated pick-up locations, such as park and ride lots. Because the riders share the cost, vanpooling is typically less expensive than driving alone, and depending upon the number of passengers, even less expensive than carpooling.

⁵ *Public Transportation Fact Book, 2007, American Public Transportation Association*

Potential Origins for Ridesharing to Fort Meade

Based on RGMC's employee zip code data, described earlier in Chapter 2 and mapped in Figure 2-3, several areas in Northern Virginia and Southern Maryland were identified as potential origins for BRAC-related carpools and vanpools to Fort Meade. This analysis involved applying three different scenarios – low, medium, and high – to the zip code data based on survey responses from DISA employees that expressed interest in ridesharing.⁶ The zip code data helped portray those employees that will be relocating to Fort Meade during the BRAC process.⁷ Data from the DISA survey were used because the survey captured the most recent data on a portion of employees that will be relocating to Fort Meade and because DISA employees constitute the majority of workers currently living in Northern Virginia and a significant portion of workers living in Southern Maryland.

The purpose of this zip code analysis was to determine origin areas in Northern Virginia and Southern Maryland, where sufficient numbers of employees whose jobs are moving to Fort Meade due to BRAC would potentially participate in ridesharing. The low scenario assumed that 5% of the total employees in each zip code would participate in a carpool or vanpool. This percentage was based on the ridesharing mode share at Fort Belvoir, Virginia. The medium scenario assumed that 9.9% of the employees in each zip code would participate in a carpool or vanpool. This percentage was extracted from the DISA survey, in which 9.9% of respondents indicated that they preferred to take part in a carpool or vanpool for their commute to Fort Meade. The high scenario assumed that 33.3% of employees would participate in ridesharing. Though this scenario appears extremely optimistic, the percentage was based on responses to the DISA survey in which 9.9% of employees preferred to take a carpool or vanpool, and 23.4% preferred to take chartered bus transportation. The chartered bus percentage was included in the ridesharing analysis due to the similarities in the type and quality of service, as a potential “one-seat” ride, between chartered bus transportation and vanpools.

The recommendations for ridesharing strategies are based on the low and medium scenarios, though past experience with vanpools and ridesharing at other installations implies that the low scenario, where 5% of employees participate, is the most likely. Table 4-3 lists over 30 areas that are potential carpool and vanpool origins based on the low and medium scenarios described above. Overall, the analysis estimated that 19 to 27 vanpools and 10 carpools from Northern Virginia and 5 to 7

⁶ The survey referenced is the DISA/JTF-GNO Base Realignment and Closure Awareness Survey, which was conducted in May 2008.

⁷ The zip code data provided represented several major agencies, including DMA, NSA, and DISA, which exist at Fort Meade or will be relocating due to BRAC; the data did not include the employees of all agencies that are at Fort Meade or will be relocating.

vanpools and 4 carpools from Southern Maryland could operate to Fort Meade. These numbers were based on approximations of six or more passengers in a vanpool and five or fewer passengers in a carpool. NSA's ridesharing program currently has vanpools of at least seven passengers, or one driver and six passengers.⁸

Table 4-3: Origins for Potential Vanpools and Carpools

Origin	Total Employees from All Agencies	Low Scenario (5%)	Medium Scenario (9.9%)	High Scenario (33.3%)	# Potential Carpools/Vanpools (Based on Low and Medium Scenarios)
<i>NORTHERN VIRGINIA</i>					
Alexandria	411	21	41	137	3-6 vanpools
Annandale	57	3	6	19	1 vanpool
Arlington	226	11	22	75	2-3 vanpools
Ashburn	33	2	3	11	1 carpool
Burke	54	3	5	18	1 carpool
Centreville	60	3	6	20	1 vanpool
Chantilly	33	2	3	11	1 carpool
Dumfries	46	2	5	15	1 carpool
Dunn Loring	286	14	28	95	2-4 vanpools
Fairfax*	165	8	16	55	1-2 vanpools
Falls Church	109	5	11	36	1-2 vanpools
Fort Belvoir	27	1	3	9	1 carpool
Fredericksburg	60	3	6	20	1 vanpool
Herndon	49	2	5	16	1 carpool
Leesburg	32	2	3	11	1 carpool
Lorton	35	2	3	12	1 carpool
Manassas	77	4	8	26	1 vanpool
Reston	39	2	4	13	1 carpool
Springfield	150	8	15	50	2 vanpools
Stafford	88	4	9	29	1 vanpool
Sterling	71	4	7	24	1 vanpool
Vienna	47	2	5	16	1 carpool
Woodbridge	196	10	19	65	2-3 vanpools
Total Northern VA	2,351	118	233	783	19-27 vanpools, 10 carpools
<i>SOUTHERN MARYLAND</i>					
Clinton	86	4	9	29	1 vanpool
Deale	16	1	2	5	1 potential carpool with Lothian and Harwood
District Heights	17	1	2	6	1 potential carpool with Suitland and Oxon Hill

⁸ Based on meeting between study consultants and various NSA representatives on March 10, 2009.

Origin	Total Employees from All Agencies	Low Scenario (5%)	Medium Scenario (9.9%)	High Scenario (33.3%)	# Potential Carpools/Vanpools (Based on Low and Medium Scenarios)
Edgewater	91	5	9	30	1 vanpool
Fort Washington	75	4	7	25	1 vanpool
Harwood	17	1	2	6	Potential carpool with Lothian and Deale
La Plata	24	1	2	8	1 potential carpool with White Plains
Lothian	17	1	2	6	Potential carpool with Deale and Harwood
Oxon Hill	20	1	2	7	Potential carpool with Suitland and District Heights
Suitland	23	1	2	8	Potential carpool with Oxon Hill and District Heights
Temple Hills	35	2	3	12	1 carpool
Upper Marlboro	155	8	15	52	1-2 vanpools
Waldorf	144	7	14	48	1-2 vanpools
White Plains	17	1	2	6	Potential carpool with La Plata
Total Southern MD	737	37	73	245	5-7 vanpools, 4 carpools
TOTALS	3,088	154	306	1,028	24-34 vanpools, 14 carpools

*Includes employees living in Fairfax Station, zip code 22039.

Notes for Northern VA: Clifton, Culpeper, Front Royal, Gainesville, Haymarket, King George, McLean, Nokesville, Oakton, Spotsylvania, and Warrenton were additional zip codes examined in this analysis, but these places had zero or only one employee under the low scenario and only 1-2 under the medium scenario. These numbers were insufficient to form a vanpool or carpool. Also, the total number of employees listed only includes data for zip codes with at least 1 potential rider in the medium scenario. Notes for Southern MD: Pomfret, Prince Frederick, Churchton, and West River were additional zip codes examined in this analysis, but these places had zero or only one employee under the low scenario and only 1-2 under the medium scenario. Vanpools or carpools could be organized for employees living in adjacent areas, but with only 1 potential rider in the medium scenario, ridesharing from these zip codes was not calculated here.

Employees that reside in several of these places also have existing transit options to get to Fort Meade, as described in Table 3-13, though ridesharing provides a competitive alternative in terms of time and cost savings. Please note that the actual number of vanpools and carpools from Northern Virginia and Southern Maryland, if ridesharing is implemented in Fort Meade's BRAC process, will vary depending on employees' ultimate commuting decisions and preferences for vanpools, carpools, or other options including transit and commuter buses. The likelihood of having a sufficient number of employees to form a carpool or vanpool in this analysis was based on employee responses in DISA's May 2008 survey results. This zip code analysis

focused on origins in Northern Virginia and Southern Maryland to facilitate the transition of BRAC-impacted employees to Fort Meade. Current Fort Meade employees that live in other parts of Maryland, Pennsylvania, and Delaware may already engage in ridesharing or have at least had ridesharing resources available to them through the BWI Business Partnership, ARTMA, and NSA.

Buspool Option

Another alternative that DISA has considered to help their employees commute from Northern Virginia to Fort Meade is providing dedicated, non-stop buses from the Pentagon.⁹ Using the same RGMC zip code data described above, an estimate of potential riders for such buses was developed, also with low, medium, and high scenarios. This analysis counted employees that live in Virginia zip codes contained within approximately seven miles of I-95, from Arlington to Dumfries; the total was 1,634. The low and high scenario percentages described in the carpool and vanpool analysis were applied to the total number of employees in these zip codes, though the medium scenario assumed 23.4% of employees would take a buspool; this was the percentage in the survey that indicated they prefer chartered bus transportation.

Again, the low scenario (5%), with 82 potential riders, is deemed the most likely to occur. Under this scenario, six bus trips per day (three each during the a.m. and p.m. peak periods) would suffice for these commuters, whether using a 40-seat transit vehicle or a 55-seat over-the-road coach. Under the medium scenario (23.4%), 20 to 22 bus trips per day, depending on the type of bus used, would be required to transport 382 commuters. In the high scenario (33.3%), 544 potential riders would commute from the Pentagon to Fort Meade, requiring 28 to 30 bus trips per day.

Comparing the Costs of Buspools and Vanpools

Tables 4-4a and 4-4b outline the costs for operating buspools from the Pentagon to Fort Meade and vanpools for the same group of potential riders along the I-95 corridor, respectively. (Note that Table 4-4b does *not* outline the operating costs for potential vanpools from Northern Virginia and Southern Maryland that were discussed earlier.) The purpose of this analysis was to compare the costs of operating buspools from the Pentagon to Fort Meade and operating vanpools for the same potential riders, who might travel to the Pentagon for the buspools, and to determine whether one option is more cost-effective than the other. In both tables, the annual operating costs for operating the buspools and vanpools were calculated, as well as the amount of transit benefits that riders could receive, which would go toward paying for the

⁹ Brewin, Bob. "Magic Bus." Article from GovernmentExecutive.com on June 30, 2008.

http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0608/063008wb.htm

buspool and vanpool operations.¹⁰ The net operating costs, after taking the transit benefits into account, were also included in the tables.

Table 4-4a: Estimated Cost of Buspools

	Low (5%)	Medium (23.4%)	High (33.3%)
Potential Riders in I-95 Corridor	82	382	544
Number of 40-seat vehicles needed	3	10	14
Number of 55-seat coaches needed*	3	11	15
<i>Operating Cost of Buspools (55-seat coach):</i>			
Number of Daily Trips (a.m. and p.m.)	6	22	30
x 31 miles/One-way Trip			
Miles Per Day	186	682	930
x \$9.27/Mile**			
Daily Operating Cost	\$1,724	\$6,322	\$8,621
x 254 Days of Service Annually			
Total Annual Operating Cost	\$438,000	\$1,606,000	\$2,190,000
<i>Total Transit Benefits for Potential Riders:</i>			
Number of Potential Riders	82	382	544
x \$230/Month			
Transit Benefits/Month	\$18,860	\$87,860	\$125,120
x 12 Months/Year			
Total Annual Transit Benefits	\$226,320	\$1,054,320	\$1,501,440
Net Operating Cost for Buspools	\$212,000	\$552,000	\$688,000

*Calculated assuming each coach would be filled to 70% capacity, or 38 seats, which is more realistic than filling each coach to its 55-person capacity. This also allows more trips to be offered to better fit a range of work schedules.

**MTA's average contract rate with Dillon for 45-foot bus. This is the rate for revenue miles.

Notes: The operating costs are rounded to the nearest thousand. The net operating cost equals the total annual operating cost minus the total annual transit benefits, which can potentially be used toward operating the buspools. The 31 miles per one-way trip from the Pentagon to Fort Meade was estimated using Google Maps. Commuters would also have to pay additional out-of-pocket costs for transit to reach the Pentagon, assuming all of their federal transit benefit goes to operate the buspool.

¹⁰ Beginning on March 1, 2009, the transit benefit allowance that employers can offer to employees increased from \$120 per month to \$230 per month. (Source: WMATA Website, http://www.wmata.com/about_metro/news/PressReleaseDetail.cfm?ReleaseID=2474.) The new transit benefit amount of \$230 per month was used in the calculations for buspool and vanpool operating costs.

Table 4-4b: Estimated Cost of Vanpools for Same Potential Buspool Riders

	Low (5%)	Annual Operating Cost for Vanpools*	Net Operating Cost	Medium (23.4%)	Annual Operating Cost for Vanpools*	Net Operating Cost	High (33.3%)	Annual Operating Cost for Vanpools*	Net Operating Cost
Potential Riders in I-95 Corridor	82			382			544		
Total Transit Benefits for Riders Per Year	\$226,320			\$1,054,320			\$1,501,440		
Number of 7-person vanpools needed	12	\$259,200	\$32,880	55	\$1,188,000	\$133,680	78	\$1,684,800	\$183,360
Number of 8-person vanpools needed	11	\$237,600	\$11,280	48	\$1,036,800	Fully covered by transit benefits	68	\$1,468,800	Fully covered by transit benefits
Number of 9-person vanpools needed	10	\$216,000	Fully covered by transit benefits	43	\$928,800	Fully covered	61	\$1,317,600	Fully covered
Number of 10-person vanpools needed	9	\$194,400	Fully covered	39	\$842,400	Fully covered	55	\$1,188,000	Fully covered
Number of 11-person vanpools needed	8	\$172,800	Fully covered	35	\$756,000	Fully covered	50	\$1,080,000	Fully covered
Number of 12-person vanpools needed	7	\$151,200	Fully covered	32	\$691,200	Fully covered	46	\$993,600	Fully covered

*Calculated by multiplying the number of vanpools needed by the annual operating cost per vanpool. The annual operating cost per vanpool is estimated at \$21,600, based an estimated cost of \$1,800/month to operate a vanpool.

Focusing on the most likely scenario, the low scenario of 5% of employees choosing to rideshare, Table 4-4a indicates that the net operating cost to run three 55-seat coaches for six daily trips (three during the a.m. peak and three in the p.m. peak) is about \$212,000. See the notes in Table 4-4a for details about how the operating costs were calculated. One particular item to note is that the cost per mile of commuter bus service used (\$9.27) was based on MTA's average rate for commuter bus services currently contracted with Dillon Bus Service, Inc.¹¹ These rates for commuter services from Columbia, MD and Howard County traveling south should be comparable to the cost of contracting a potential Pentagon – Fort Meade buspool service.

Table 4-4b shows that the net operating cost to transport the same 82 employees (see the low scenario) by vanpools depends on the number of people per vanpool. The operating cost to run vanpools becomes cheaper with more riders per vanpool because fewer vans are needed. While the cost to operate a vanpool varies depending on several factors, including distance driven, gas prices, and lease or purchase of the vans, an estimate of \$1,800 per month was used in the calculations in Table 4-4b.¹² As seen in the table, the riders' transit benefits fully cover the costs to operate the vanpools except for vanpools of seven or eight people, which would have net operating costs of approximately \$33,000 and \$11,000, respectively.

A comparison of estimated costs shows that vanpools can be significantly more affordable and may even be fully covered through transit benefit allowances. The actual costs of providing buspool or vanpool services to Fort Meade may differ depending on the number of employees that choose to participate, the distances driven, and other logistics. However, this analysis demonstrated that vanpools may be a more cost-effective way to provide transportation for employees that will have a long-distance commute to Fort Meade from areas such as Northern Virginia and Southern Maryland.

CHALLENGES

A major challenge related to providing transit and ridesharing services for Fort Meade is to begin to see the Fort Meade area, particularly the Odenton MARC Station, as a destination rather than an origin. Much of the transit services provided by MTA,

¹¹ The average cost per mile for commuter service, using 45-foot Dillon buses, was calculated from five of MTA's existing routes commuter routes: 915, 922, 929, 950, 995. Data received from MTA in March 2009.

¹² Appendix I of the 2007 Panhandle Transportation Coordination Study includes a "Bare-bones Estimate of Van Pool Operations Costs," which totaled about \$1,800 per month for a 7-person vanpool using a leased vehicle, driving 40 miles one way with gas at \$2.89/gallon. Source: Panhandle Regional Transportation Advisory Group Website, <http://www.panhandlertag.com/Regional%20Coordination%20Plan%202007/Appendix%20I%20Van%20and%20Bus%20Pool%20Workshop.pdf>.

MARC, and the LOTS have focused on commuters reaching the MARC stations en route to jobs south, in Washington, D.C. Only one transit route currently serves the Reece Road gate; the large size of the installation, the distribution of employers and services on the installation, and security concerns complicate further provision of transit services. Ridesharing is a promising solution to manage BRAC-related transportation needs at Fort Meade, but it may be difficult to implement due to the coordination required among high security agencies and the need to change a predominantly single occupancy vehicle commuting culture.

A number of additional challenges related to the BRAC plans and changes on the installation are described below:

The Nature of EULs

Although EUL projects are not technically BRAC-related because they involve private developers, these developers are building on federal lands that impact the community on the post. Because the EUL sites are federal property, developers are not subject to any local permits, including the local requirement to mitigate the traffic impacts of their new developments. However, both Fort Meade and the EUL are required by the Record of Decision to reduce and mitigate their traffic impacts by evaluating and implementing expanded transit service on the Post and coordinating this service with off-Post transit providers.¹³

Getting Transit onto the Installation

There are issues of both who comes on the installation as well as where vehicles from outside can access Fort Meade. If commuter buses or shuttle buses are allowed to transport passengers to the gates, security issues concerning transit vehicles carrying passengers or drivers without security clearances will need to be addressed. If it is decided that transit buses will not be allowed onto the installation, then an internal shuttle will be vital to the success of proposed transit services, which will drop passengers off at the Reece Road gate. The internal shuttle will be necessary to help transit riders complete their trips to their offices, which are a few miles farther onto the Fort Meade campus.

There is some precedent where transit services are allowed on the installation. Fort Belvoir recently negotiated with Fairfax Connector/ WMATA to allow Fairfax Connector/Metrobus routes to serve four stops on the installation. Fort Belvoir worked out an agreement that allows the public buses onto the post after a Military Police Office

¹³ The Record of Decision outlines the Army's actions following completion of the environmental impact statement for *Implementation of Base Realignment and Closure Recommendations and Department of Defense Enhanced Use Lease Actions at Fort Meade, Maryland*.

clears those on board. A similar arrangement could be implemented for transit service directly onto Fort Meade, which would be the most convenient option for riders and help draw commuters to transit. Otherwise, transit riders will depend on continuation of the NSA/Fort Meade shuttle, described previously, or a new internal shuttle service will be necessary to transport riders from the Reece Road gate to their workplaces within Fort Meade. Another issue to consider if public transit service is provided onto the garrison is the requirement for complementary ADA paratransit service, with the option of developing the public transit services as deviated fixed-route service to meet this requirement.

Appendix A presents a brief overview of some experiences at installations in other parts of the country. Appendix B includes DoD regulations regarding provision of shuttle bus and mass transit services to, from, and on installations. Specifically pertinent are the regulations for shuttle bus service (Section B) and mass transit services (Section C). Shuttle bus service may be established to meet local DoD requirements – the Secretary of Defense has determined that the effective conduct of the affairs of the Military Departments and DoD Agencies/Activities may warrant a modified shuttle bus transportation support for military personnel, DoD civilians, and contractors between their office and transit centers. Mass transit service is designed to fulfill requirements beyond the scope of shuttle bus service. Mass transit service may be used to provide other “non-duty” types of transportation within a military installation or between subinstallations on a fare basis.

Attracting Choice Riders

The difficulty of attracting choice transit riders is another challenge in implementing the proposed transit improvements. Fort Meade has ample parking, the lack of which typically creates a strong incentive for commuters to use alternatives to driving alone. It is important to note that a DoD requirement exists where Fort Meade is not supposed to provide parking for more than 60% of its employees.¹⁴ Such parking limitations would help boost the transit market and the success of proposed transit services, but no further details have been given about such a parking restriction. With such a large campus at Fort Meade, it is unclear whether the parking restrictions will come to fruition. Transit services to Fort Meade will also lack travel time benefits over driving because no dedicated bus or High Occupancy Vehicle lanes are currently available. The need to transfer among transit services multiple times, particularly for employees commuting longer distances, presents another challenge for increasing the transit mode share at Fort Meade.

¹⁴ Based on discussion with Bert Rice, Installation Executive Officer at Fort Meade.

Other Challenges

Despite projections of growth related to BRAC, some uncertainty still exists regarding both the number and location of jobs in and around Fort Meade. The transit improvements developed in the TDP updates for Anne Arundel and Howard Counties are still conceptual, and the specific routing to be implemented may depend on the realities associated with these questions:

- Where will the support and contract jobs be located? (i.e., proposed services may also serve nearby business parks)
- Which gates will be involved? (i.e., proposed services may make additional stops at gates)
- Will the jobs be inside or outside the fence? (i.e., may need more or less service to EUL sites than the concepts propose)

Funding is another challenge to providing transit services to Fort Meade. Depending on the operators of the proposed services, it may be difficult to provide service across county lines and share costs between counties and other stakeholders, such as employers located at Fort Meade and the EUL. Given the budget difficulties that many local governments have experienced in the current economic downturn, contributions from Fort Meade and EUL site occupants could help provide the local match for the proposed transit services that directly benefit their employees.

The cost-effectiveness of ridesharing versus fixed-route services is another funding-related issue to consider. The earlier comparison of buspool versus vanpool costs indicated that vanpools may be significantly less costly for transporting the same number of commuters. However, the preference of potential riders must also be taken into account when evaluating the cost-effectiveness of transit or ridesharing improvements. For example, buspools could turn out to be cost-effective despite their higher cost if more commuters are drawn to this option than vanpools. Stakeholders will want to ensure that invested dollars make the largest contribution possible to facilitating employee commutes and relieving traffic problems anticipated around Fort Meade due to BRAC growth.

POTENTIAL BENEFITS

The estimated daily ridership of the proposed initial BRAC transit network in Anne Arundel and Howard Counties is about 1,900.¹⁵ This estimate is predicated on the provision of transit services without parking restrictions for employees relocating to Fort Meade or other prioritization for transit, such as HOV facilities, traffic signal priority, or a separate transit line at the installation gate to pass through security. If all riders on the proposed transit routes were employees moving to Fort Meade in the BRAC process, then transit would account for one-third of these commuters relocating to Fort Meade. Even considering the broader employment growth of 22,000 jobs at Fort Meade, expected over the next five to seven years, this daily transit ridership would account for nearly nine percent of new commutes to the installation.

Until employees whose jobs are relocating to Fort Meade decide to also move their households to Central Maryland, the transit mode share may start closer to two percent, which typically accounts for the transit dependent population. The transit services that offer direct connections to Fort Meade from the MARC stations will likely be most effective at the outset. As BRAC-impacted employees move closer to Fort Meade, the other proposed local transit services will provide more convenient commuting options. The attractiveness of transit as a commuting option would increase greatly with the implementation of transit prioritization measures, as mentioned earlier.

Regardless, each new commuter to Fort Meade that chooses to take transit translates into one less car on the area's roads, which already operate at poor service levels. Transit will help reduce the traffic impacts expected with the growth of employment at Fort Meade due to BRAC. The transit services will not only provide important commuting alternatives, but will also reduce the air pollution and emissions that would otherwise be generated from the increase in single occupancy vehicles on the roads. These benefits contribute to the quality of life of employees relocating to Fort Meade as well as existing employees and local residents in the area.

Aside from the proposed local transit services, there may be additional opportunities to build on existing commuter bus and MARC service for new commuter bus services. While these new services would be designed to primarily transport BRAC-impacted employees from the Metropolitan Washington, D.C. area to Fort Meade, the deadhead back toward D.C. could also serve reverse commute needs.

¹⁵ Estimated the daily ridership per proposed service by multiplying the expected productivity, boardings per hour, by the daily hours of service; then summed the estimated daily ridership for all proposed routes to determine that of the initial BRAC network. This estimate is also on the conservative side, and used the lower number where a range was estimated for boardings per hour.

RECOMMENDATIONS

The analysis completed in earlier chapters demonstrated that considerable transportation needs exist with regard to the BRAC process at Fort Meade, specifically for employees and contractors that will be relocating, but also for indirect and induced employment in the years following BRAC. The growth in population and jobs in the area surrounding Fort Meade will serve as a boon to the regional economy, but will also lead to more traffic and congestion and a greater demand for transportation alternatives. The following recommendations are made in light of the current funding climate. While Maryland had originally allotted \$6.7 million for BRAC-related transit projects, the current economic difficulties led to budget cuts, and this funding is no longer available. Therefore, the recommendations below are organized by those that can be implemented relatively easily in the short term and those that may be implemented in the medium and long terms given that funding becomes available in the future.

Short-Term Recommendations: Ridesharing and Buspools

Ridesharing is the main strategy recommended for the short term to address the commuting needs of persons transferred from Northern Virginia and Southern Maryland who are not moving closer to Fort Meade. The analysis above demonstrated that vanpools are very cost-effective for long-distance commutes, such as those made by employees who live in Northern Virginia or Southern Maryland to Fort Meade. Table 4-3 outlined several possible origins where sufficient numbers of employees, whose positions will be transferred to Fort Meade due to BRAC, live and can organize vanpools. The transit benefit allowances that employees receive may even cover the entire cost of operating vanpools or offset the cost such that vanpools are considerably more affordable than driving alone, especially when gas prices are high.

Incorporating input from stakeholders such as NSA and DISA, the study team has developed a Request for Proposals (RFP) for a transit and ridesharing Commuter Clearinghouse that could serve employees working at Fort Meade. While some agencies that are currently at or will be moving to Fort Meade have existing ridesharing resources, several stakeholders have highlighted the importance of having a clear-cut point of contact for transportation alternatives on the garrison. The RFP that has been developed as part of this study is presented in the next chapter.

Buspools from the Pentagon are another option for commuters from Northern Virginia to access Fort Meade. DISA is currently considering this alternative including providing wireless internet on the buses so that employees can potentially work during their commutes. The analysis on buspools described earlier showed that, even under the low scenario, there may be potential employee demand for as many as six daily bus

trips, and the net operating cost would be relatively affordable compared to implementing the proposed initial transit network to accommodate the BRAC growth at Fort Meade.

Ridesharing and buspools were also recommended for the short term because stakeholder input and housing studies have indicated that employees relocating to Fort Meade will increasingly decide to move closer to the installation in the five years after the BRAC process is complete. Therefore, ridesharing and buspools as long-distance commuter strategies to accommodate employees, whose jobs are relocating due to BRAC but who choose to keep their residences in Northern Virginia and Southern Maryland, will become less applicable over time.

One transit alternative, the Piney Orchard-Odenton MARC-Fort Meade/EUL-Savage MARC route, is recommended for the short-term, particularly because it connects two MARC train stations in the vicinity of Fort Meade. The MARC train is the primary existing transit service available to access Fort Meade. Most employees commuting from the south to Fort Meade will likely take the MARC Penn Line to Odenton and transfer to the NSA-operated shuttle, which serves Fort Meade and NSA. The proposed transit service will not only help transport long-distance commuters to the installation from the MARC stations, but will also provide employees that live in Piney Orchard with local bus service to the Reece Road gate or a timed transfer to the NSA-operated shuttle at Odenton MARC station. This route also provides an option for the general public living in Piney Orchard to access the MARC services.

Medium-Term Recommendations: High Priority Transit Alternatives

The other transit alternatives in the proposed initial BRAC network are recommended in the medium and long terms partly due to the higher costs of implementing these services, but also because local demand for these services is likely to increase in the years after the BRAC process is complete, as employees relocate their residences closer to the installation and increase demand for local transit. The transit alternatives that serve the Odenton MARC station are recommended for the medium-term because the Penn Line operates significantly more trips than the Camden Line, which serves the Savage and Dorsey MARC stations, and because the NSA-operated shuttle provides direct service from the Odenton station to Fort Meade.

The higher priority transit alternatives include:

- North Crofton-Odenton MARC-EUL/Fort Meade
- Russett Green-Odenton MARC-EUL/Fort Meade
- High Frequency Shuttle: Odenton MARC-EUL/Fort Meade
- Columbia Gateway-Dorsey MARC-Fort Meade

- Blue Route: Clarksville and Columbia Town Center to NSA/EUL/Fort Meade

The North Crofton route could be implemented as a simple extension of the Piney Orchard route, recommended for the short-term, extending the route east on Waugh Chapel Road and serving the residential area near MD-3. The Russett Green route would provide direct access for employees living in Russett Green to Fort Meade and the EUL, as well as service for others living in Russett Green to reach the Odenton MARC Station. Though the Russett Green alternative does not serve Maryland City directly, the route travels relatively close to stops served by Connect-A-Ride Routes B and J. Connect-A-Ride riders could then potentially transfer to the Russett Green alternative to access the Odenton MARC station. The High Frequency Shuttle alternative is similar to the existing NSA-operated shuttle between the Odenton MARC Station and Fort Meade, except that the High Frequency Shuttle would be open to the public and would serve the EUL before traveling onto the post. The Howard County routes are also recommended in the medium-term because relatively high concentrations of existing employees at Fort Meade live in Columbia and Clarksville, as seen in Figure 2-3. The Howard County alternatives would provide direct transit service for NSA and Fort Meade employees to reach the installation.

Most of the proposed transit routes travel onto and end on the post, which is still in the process of being approved by Fort Meade. A Memorandum of Understanding (MOU) between public transit providers and Fort Meade is being drafted and would likely include at least the following conditions:

- Buses would terminate on Fort Meade and not travel through.
- Buses would stop before the installation, at a location such as MD-175, so that riders without valid DoD identification would exit the bus before it went onto the installation. The intent would be for very few riders to have to exit the bus at the installation gate.
- Fort Meade security personnel would board the bus to inspect riders' identification and badges. Riders that do not have valid identification would be asked to exit the bus, or if they had business on the installation, they would be directed to the Visitor Control Center and scheduled for pickup later (the logistics of which still need to be determined).
- The bus driver may need a certain degree of security clearance.
- Other Fort Meade requirements may also apply.¹⁶

¹⁶ Email communication from Gerald Cichy, MTA BRAC Specialist, in March 2009.

Please note that the actual operating costs may differ from those outlined in Table 4-1 depending on the service characteristics, such as frequency, service hours, and speed, at the time of implementation. Table 4-1 estimates the annual operating costs for most alternatives operating for 13 hours daily with 30-minute headways during the peak period, hourly headways during non-peak periods, and at a speed of about 12 miles per hour.

Long-Term Recommendations: Medium Priority Transit Alternatives

The transit alternatives recommended in the long-term are medium priority because they have longer distances and demand is expected to increase, making the transit services more feasible and productive in the areas served after the BRAC process has been completed. The recommended transit alternatives for the long-term include:

- Restructured Connect-A-Ride Route K
 - The segment of the restructured Route K that impacts Fort Meade would run from the installation to the EUL, Arundel Mills, and BWI Airport.
 - The other piece of the restructuring, a route serving the Odenton MARC Station, the residential area of Pioneer City, and Arundel Mills, might apply to induced or indirect employees, whose positions are created as a result of the additional service needed for the population growth expected in the area due to BRAC.
- Harry S. Truman Park and Ride-Fort Meade/EUL
 - With a potential extension in Annapolis from the Harry S. Truman Park and Ride to the Annapolis Towne Centre at Parole and the Navy-Marine Corps Stadium (Navy-Marine Corps Memorial Stadium), where a large park and ride lot exists.
- Arnold/Severna Park-Odenton MARC Station
 - With a potential extension from the Odenton MARC to NSA, the EUL, and Fort Meade.

The restructured Route K would provide an important transit option from Fort Meade to Arundel Mills and BWI for employees and residents on the installation that need to access Anne Arundel Community College at Arundel Mills, shopping and employment opportunities at Arundel Mills, business parks near BWI, and BWI Airport services. However, this route is contingent on public transit gaining access onto the installation. It is also recommended as a medium priority because the other segment of the restructuring is not directly related to the BRAC process, but would augment transit

options for secondary employment positions expected after more build out around Fort Meade.

The Harry S. Truman and Arnold/Severna Park routes are recommended for the long-term because employees that reside in these origin areas most likely currently drive to the installation or participate in ridesharing, so the recommended transit alternatives would provide additional options for their commutes. However, the transit alternatives would need to compete with automobile travel times, convenience, and affordability in order to be viable. The feasibility of these transit services is more likely to increase several years after the BRAC process has been completed as the population in the region grows and traffic and congestion worsen. Transit alternatives could then provide a less stressful commuting option as well as time savings if transit services receive priority along congested roads (potentially in the form of traffic signal prioritization or even dedicated bus lanes).

Chapter 5

Commuter Clearinghouse Recommendations

PURPOSE

As highlighted within this report, Fort Meade will be adding many new activities, personnel, and families to its installation community. This increase in the local population will clearly add demand to the present transportation system in Anne Arundel County and the greater Central Maryland region.

It is important to reiterate that many of these new commuters are from the Metropolitan Washington, D.C. area are accustomed to an extensive transit and ridesharing infrastructure (i.e., Metro-rail, extensive bus services, HOV lanes) and commuter services (i.e., transit benefits, guaranteed ride home programs). As they transfer to their new work locations at Fort Meade, they will find that such an extensive array of commute options will not be available. Many will be commuting from Northern Virginia, over 40 miles from Fort Meade and without any direct transit connection. Given this situation, ridesharing (i.e., carpools and vanpools) will be an increasingly attractive alternative for many of these employees.¹ The planned central transit use/ridesharing Commuter Clearinghouse will help facilitate this transition by offering commuters comprehensive information about their available options. Specifically, it will provide outreach and support to employees as well as residents of the Fort Meade area, to take advantage of options that reduce single occupant vehicle (SOV) travel.

The Commuter Clearinghouse will also help Fort Meade follow the regulations outlined in the EIS Record of Decision regarding BRAC and EUL actions at Fort Meade. The Record of Decision directed the Army to “evaluate and implement local versions of successful rideshare/commuter programs, including evaluating and implementing, where feasible, strategies to reduce single occupant vehicle use generated by the preferred alternative of BRAC and EUL actions.” The purpose of this chapter is to provide recommendations, including an operational structure, for a central transit/ridesharing Commuter Clearinghouse for the Fort Meade area, the

¹ For purposes of this report, ridesharing is defined as a form of transportation, other than public transport, in which more than one person shares the use of a vehicle, such as a van or car, to make a trip.

implementation of which would carry out the rideshare program stipulation in the EIS Record of Decision.

This chapter reviews existing ridesharing services and needs, and then outlines a number of recommendations including:

- Objectives, clientele/customer base, structure, and tasks for the Commuter Clearinghouse;
- Required skills needed to operate the Clearinghouse; and
- A suggested communications plan, identifying examples of specific marketing messages, activities, and costs associated with these activities.

This document can be used as a basis for the Fort Meade community to develop a Commuter Clearinghouse that cohesively and strategically addresses its transportation and quality of life issues. It provides a structure that Anne Arundel County or another entity could use as a basis for developing a request for proposals (RFP) or contract for operating such a service.

RESEARCH APPROACH

The recommended structure and activities for the Commuter Clearinghouse were developed based on an extensive research and outreach effort that involved gathering input from stakeholders throughout the Fort Meade community and surrounding areas. The study team's approach involved the following efforts:

1. *Research on best practices being used to promote ridesharing and other options, particularly in suburban employment locations* – This included reviews of transportation demand management (TDM) resources describing structures for offering commuter services and ways in which transportation management organizations/associations are organized. These resources included documents available from:
 - the Association for Commuter Transportation (ACT),
 - the American Public Transportation Association (APTA),
 - University Transportation Research Centers,
 - the Transportation Research Board (TRB), and
 - the Victoria Transport Policy Institute.

2. *Reviews of information from local transportation management associations (TMAs) in Anne Arundel County and other TDM service providers within the greater Washington, D.C. and Baltimore, MD metro areas, including:*
 - the Annapolis Regional Transportation Management Association (ARTMA),
 - the BWI Business Partnership,
 - the Baltimore Metropolitan Council (BMC), and its rideshare program,
 - the Metropolitan Washington Council of Governments (MWCOG), and its Commuter Connections Program, and
 - Commuter service programs available in Northern Virginia Counties and Maryland counties, specifically Anne Arundel, Frederick, and Howard Counties.

3. *Reviews of the experience of other military installations that face similar issues as Fort Meade or have strong ridesharing programs:*
 - Picatinny Arsenal, NJ,
 - Fort Belvoir, VA, and
 - Coronado Naval Station, CA.

4. *Interviews with various stakeholders in the Fort Meade area, including staff from organizations providing transportation services, agencies located at Fort Meade, and others:* These interviews were designed to understand existing employer and agency commuter services, explore the best ways to incorporate Fort Meade specific TDM activities into the larger mobility management structure in the region, and discuss the Fort Meade areas' specific challenges, and included conversations with staff from:
 - the BMC rideshare program,
 - the MWCOG's Commuter Connections Program,
 - the BWI Business Partnership,
 - ARTMA,
 - the Maryland Department of Transportation,
 - Fort Meade Installation Security,
 - the National Security Agency (NSA),
 - Defense Information Systems Agency (DISA), and
 - Fort Meade Regional Growth Management Committee.

In addition, over the course of this effort, the study team updated and gathered input from the project oversight panel, consisting of staff from Anne Arundel County, the Maryland Transit Administration, BMC, and other organizations.

NEED FOR RIDESHARING AND COMMUTER SERVICES

As mentioned previously, an estimated additional 22,000 jobs will be relocated directly to Fort Meade between 2006 and 2015 as a result of BRAC recommendations. These jobs do not include other multiplier positions or general employment growth; it is easy to see how this number may be a very conservative description of the expected transportation demand en route to Fort Meade. Furthermore, few existing transit options serve the installation directly, as described in Chapter 3, and a limited ability to construct new transportation capacity to accommodate the new demands. These conditions make ridesharing – defined as shared ride arrangements such as carpools and vanpools – a very attractive commuting option for these new and transplanted employees to Fort Meade. In addition, these new employees are skilled clearance-based employees and will generally have long commutes. The agencies will want to retain these employees; one way to ease some of these transportation pressures for employees is to provide support for ridesharing and other commuting options.

The Environmental Impact Statement for BRAC and EUL actions at Fort Meade recognized the adverse traffic impacts that would occur from growth at the installation. With traffic delays already commonplace at intersections near Fort Meade, major road segments to access the post are projected to reach Level of Service “F”, or failing conditions, during peak periods once BRAC and EUL traffic enter the area. The Record of Decision for the EIS accordingly directed the Army to address off-post roadways and traffic and installation transportation:

- The Army will coordinate with all appropriate transportation agencies on an ongoing basis and the Army is committed to the process of information sharing and design coordination.
- The Army will evaluate and implement local versions of successful rideshare/commuter programs, including evaluating and implementing, where feasible, strategies to reduce single occupant vehicle use generated by the preferred alternative of BRAC and EUL actions.
- Fort Meade will analyze highway and transit mitigation projects to determine if any would meet the requirements of the Defense Access Roads (DAR) Program.
- The Army will evaluate and implement expanded transit service on the Post, as warranted, coordinated with off-Post services such as a regular shuttle from the Odenton MARC station.

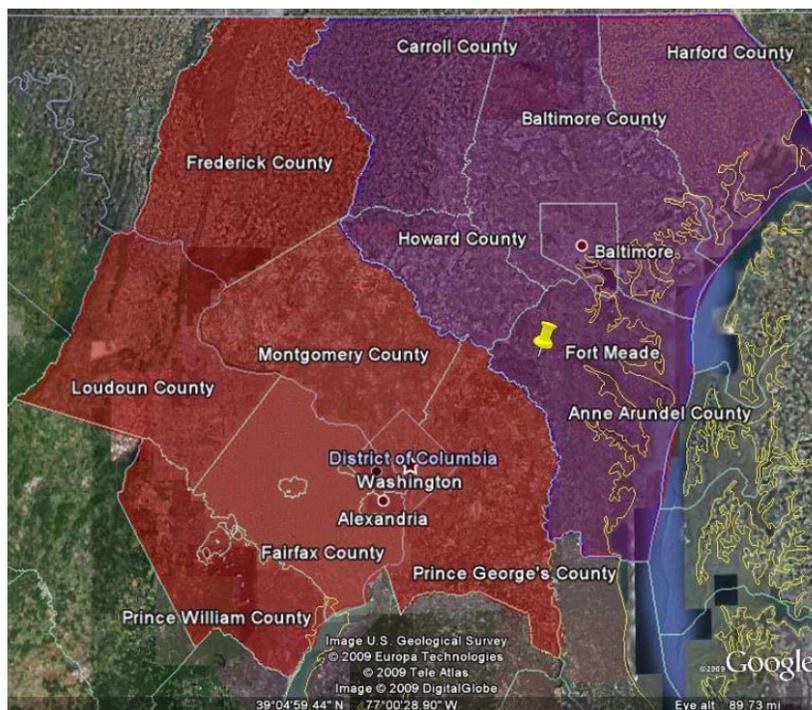
Area-wide and employer-based TDM programs can play an important role in reducing the share of employees who commute to work by driving alone. The U.S.

Environmental Protection Agency's COMMUTER Model estimates single occupancy vehicle (SOV) trip reductions for a wide range of programs, including guaranteed ride home, transit and vanpool financial incentives, rideshare matching, preferential parking for carpools/vanpools, and secure bicycle parking and showers. These measures were considered in developing a potential Commuter Clearinghouse for Fort Meade.

RELEVANT RIDESHARING AND COMMUTER SERVICES IN THE WASHINGTON, D.C. AND BALTIMORE REGIONS

Various organizational structures and services exist that facilitate ridesharing and promote other alternatives to driving alone in the Baltimore and Washington, D.C. metropolitan areas. The two metropolitan planning organizations (MPOs) – BMC and MWCOG run separate commuter outreach programs, but share the same ridematching database. Since many people commute across MPO boundaries -- particularly from the Baltimore metro area to the D.C. metro area -- the expanded geographic coverage improves the database's matching potential and matches more commuters' behaviors. The coverage of the two MPOs, along with the location of Fort Meade, is shown in Figure 5-1.

Figure 5-1: MPO Boundaries



MWCOG operates Commuter Connections, which is a regional network of transportation organizations, including county governments (i.e., Montgomery County Commuter Services, Fairfax County RideSources) and TMAs (i.e., Bethesda Transportation Solutions, Dulles Area Transportation Association). Commuter Connections primarily serves its member jurisdictions, but recognizes that some commuters may live and work in non-member areas or jurisdictions, such as Anne Arundel County, and some services are available to those locales. (<http://www.mwcog.org/commuter2/index.html>)

Commuter Connections offers the following regional TDM services:

- *Ridesharing Program* functions as a means for commuters to find out about others who live and work nearby, have similar work schedules, and are interested in carpooling and/or vanpooling to and from work. Commuter Connections' ridesharing technology allows one to view an interactive and comprehensive list of potential ridesharing partners. The Commuter Connections' ridesharing database is used throughout the MWCOG and BMC service areas. Over 20,000 commuters rely on Commuter Connections to provide free ridesharing information at no cost.²
 - The market for vanpooling is primarily commuters with longer-than-average commutes, normally over 20 miles each way. Vanpooling programs are most successful where work schedules are regular, where employer size is sufficient to allow matching 5 to 12 people from the same residential area, where public transit is limited, and where some congestion or parking problems exist. In the absence of HOV lanes, vanpool riders generally experience longer travel times than they would via SOV travel since they must travel to a pick-up location, or pick up or drop off other riders. However, the cost advantages of vanpooling over automobile travel increase with distance, and many vanpoolers cite the reduction in stress associated with long-distance commuting as a primary motivation.³
- *Commuter Connection Bulletin Board* is for those commuters who have short-term commuting needs or do not want to participate in the structured ridesharing program.

² Commuter Connections website: <http://www.mwcog.org/commuter2/commuter/index.html>

³ Source: Transit Cooperative Research Program, Report 95. *Traveler Response to Transportation System Changes: Chapter 5 - Vanpools and Buspools*. Prepared by Evans, Jay et al., 2005. p. 5-5.

- *Guaranteed Ride Home (GRH)* is a program that helps commuters get home in the event of an emergency. The program provides commuters who regularly (at least twice a week) carpool, vanpool, bike, walk, or take transit to work with a free and reliable ride home when unexpected emergencies arise. Commuters may take advantage of GRH up to four times per year to get home for emergencies such as a personal illness or a sick child. GRH can also be used for unscheduled overtime. The GRH service is available to commuters who physically work in the Washington, DC Metropolitan Statistical Area (MSA), and does not include employment in Anne Arundel County. Residents of Anne Arundel County and other jurisdictions outside of the Washington, D.C. MSA, however, are eligible for GRH as long as they work in the Washington D.C. MSA. The GRH program is estimated to reduce 227,000 vehicle miles traveled daily through the elimination of 8,600 daily trips.⁴
- General commuting information for other commuter options such as mass transit link, park and ride lot locations, telework locations, and bicycling and walking information.

Anne Arundel County is a member of the BMC. The BMC promotes commuter options through its Rideshare program (<http://www.baltometro.org/rideshare/>), which focuses on providing direct services for those who live in Baltimore and Carroll County. If a commuter is not “covered” by this service, then they are referred to other members of the Maryland Commuter Assistance Program, based on county of residence. Each jurisdiction has one or more commuter assistance organizations that offer targeted commuter information, programs, and ridematching services to residents in their communities. The BMC does not provide a GRH program.

Anne Arundel County has two TMAs that provide commuter assistance: the BWI Business Partnership, which generally serves the northern part of the county, and ARTMA, which generally services the southern part of the county. Both are member organizations that are funded in part by membership dues, as well as through funding from the MTA and Anne Arundel County.

The BWI Business Partnership, Inc. (<http://www.bwipartner.org/>) works with major employers to promote ridesharing and transit use in the BWI area, which includes the BWI Airport, Fort Meade (including the NSA), and Arundel Mills Mall; this is generally the northern part of Anne Arundel County. For its business members

⁴ Commuter Connections, 2009. Transportation Emission Reduction Measure (TERM) Analysis Report: FY 2006-2008. Available at: <http://www.mwco.org/commuter2/pdf/2008%20TERM%20Analysis%20FINAL%20Report%20012709.pdf>. (Accessed 3/27/09.)

including NSA, it offers an Emergency Ride Home program, analogous to Commuter Connection's GRH. The Partnership also operates local shuttles from some major transportation hubs. The BWI Business Partnership uses the Commuter Connections ridesharing database for ridematching. Recently in collaboration with the Corridor Transportation Corporation (CTC), the BWI Business Partnership released a Central Maryland Transportation Resource and Information Point that integrates the transportation information from all transit systems in the Baltimore-Washington corridor and surrounding jurisdictions, including MTA, locally operated transit systems, Washington Metropolitan Area Transit Authority (WMATA), and those services operated by human service agencies.

ARTMA (<http://www.artma.org/>) serves areas around Annapolis and the surrounding southern portion of the county, and promotes transportation options and transit expansion. It also uses the Commuter Connections database, and residents who work in the Washington, D.C. MSA coverage area are included in GRH.

FORT MEADE SPECIFIC RIDESHARING SERVICES

On Fort Meade itself, some ridesharing resources already exist. The Fort Meade Installation Command has set up a ridesharing bulletin board on its Family and Morale, Welfare, and Recreation website (<http://www.ftmeademwr.com/>), which focuses on the quality of life for personnel and the greater Fort Meade community. They also have advertised the transportation incentive program (TIP), which subsidizes transportation benefits.⁵ Participating employees receive transit passes equal to their commuting costs, not to exceed \$230/month.⁶

NSA offers a wide variety of commuting resources to its employees. They have on-site commuter counseling, staffed by two to three people for extended workday coverage. The counselor helps to create carpool and vanpool matches and assists with other commuting concerns. NSA also sponsors over 40 vanpools all with seven passengers. The agency also offers the monthly distribution of federal transit benefits of up to \$230/month and several local shuttles to transit hubs. Through its BWI Business Partnership membership, NSA offers GRH coverage for up to six trips per year at a maximum of \$300 total.⁷ The agency also runs an on-demand shuttle to the Pentagon in Northern Virginia for work-related meetings.

⁵ Executive Order 13150 requires Federal agencies to establish transportation incentive program in order to reduce Federal employees' contribution to traffic congestion and air pollution and to expand their commuting alternatives. The purpose of the program is to encourage commuting by mass transportation and provide financial incentives to members/employees.

⁶ More information on this program is available at:
<http://www.whs.mil/DFD/Info/NCRTransitSubsidy.cfm>

⁷ From meetings with selected NSA staff.

DISA, which has begun the transition from Northern Virginia to Fort Meade due to BRAC, outlined a number of public transportation options for commutes from home locations to the work site (<http://www.disa.mil/brac>), which are expected to continue at the new location. A multi-faceted ridesharing program is available to match drivers with riders. The DISA website promotes three different ridesharing options: carpooling, vanpooling, and slugging.⁸

- *Carpooling:* By registering on the DISA Carpool Web site, DISA employees are matched with other DISA employees in their area who are interested in carpooling (2-4 people per ride).
- *Vanpooling:* DISA additionally encourages vanpooling, for groups of 7-15 people willing to commit to commuting together on a daily basis. Riders share a fee that covers the vanpool fare, and meet at one or more designated pick-up locations. A volunteer is in charge of driving and coordination, and vans are leased from a third-party vanpool vendor who ensures regular service.
- *Slugging:* A third method of ridesharing endorsed on DISA's website is "slugging." A driver needing additional passengers to meet the required HOV lane minimum pulls up to a designated "slug lane" location where riders wait, lowers their window to call out their final destination, and the "slugs" first in line for that destination get in the car. Because both parties benefit, no money is exchanged, and no recurring commitment for drivers or passengers exists.

Department of Defense employees in the National Capital Region who take mass transportation (transit or vanpools) to work are eligible to receive a fare subsidy of up to \$230/month. Fort Meade is outside of the National Capital Region, but DISA may continue, and should be encouraged to continue, to offer the commuter subsidy. In addition to Metrorail, Virginia Railway Express, and the Maryland Area Regional Commuter (MARC) train, the commuter subsidy may also be applied to over 100 area bus and vanpool services.

In its EIS about the BRAC transition at Fort Meade, the Army has committed to include dedicated preferred parking areas for carpools and vanpools, to continue transit subsidies, and to provide shuttle service from the nearby MARC train station, which is currently in operation. The Army has also committed to information sharing and design coordination for the appropriate transportation services, including transit and ridesharing services that are deemed feasible. As mentioned previously, the Army will

⁸ More information is available at: <http://www.disa.mil/brac>.

also implement local versions of successful rideshare/commuter programs, which will include strategies to reduce SOV trips generated by BRAC and EUL actions.⁹

An additional parking management measure that the Army might consider implementing at Fort Meade follows experiences in California. California state law has required employers that provide subsidized parking for their employees to also offer a cash allowance in lieu of a parking space. A follow-up study showed that in eight cases, solo driving to work fell by 17%, carpooling increased by 64%, transit ridership increased by 50%, walking and bicycling increased by 33%, and commuter parking demand fell by 11%.¹⁰ A combination of expanded ridesharing resources, new transit services, and parking management could help yield similar results at Fort Meade, and minimize the traffic impacts of the BRAC and EUL recommendations.

UNIQUE CHALLENGES OF THE FORT MEADE AREA

Although a wide range of commuter services exists across the Baltimore and Washington, D.C. regions, which include the commuter sheds to Fort Meade, a few conditions suggest the need for a Fort Meade focused Commuter Clearinghouse.

Wide Commuting Area Spanning Two Metro Areas

At the regional level, Fort Meade commuters will be crossing over two regional agency jurisdictions. Many of the BRAC related commuter trips will begin in the MWCOG's planning and geographic area, and commuters may be aware of Commuter Connections programs, such as the GRH program. However, Fort Meade employees are not eligible for the Washington, D.C. regional GRH program. Moreover, employees may be confused about where to get appropriate information about travel options, due to several factors:

- The wide range of transit agencies and services across this commuting area;
- The large number of government jurisdictions, including two different states and multiple counties; and
- The lack of a specific commuter service focused on the Fort Meade area.

Coordinating amongst the different jurisdictions that may serve Fort Meade commuters is a difficult task, and even more difficult given the different transportation

⁹ Record of Decision for Fort Meade BRAC Transition, November 2007. Available at:

http://www.hqda.army.mil/acsim/brac/nepa_eis_docs.htm

¹⁰ Source: Shoup, Donald. 1998. "Evaluating the Effects of Parking Cash Out: Eight Case Studies."

Available at: <http://www.arb.ca.gov/research/abstracts/93-308.htm>. (Accessed 3/27/09.)

programs offered by Fort Meade, NSA, DISA, and other agencies and organizations likely to come to Fort Meade in response to BRAC.

Need for More Specific Ridematching Support

Another challenge for individual commuters relates to the structure and nature of the Commuter Connections ridesharing database and services. The targeted commuter/customer with Commuter Connections is one of two types: 1) from suburban or outlying areas into the Washington, D.C. inner region (both the District and inner suburbs); and 2) more localized suburban-to-suburban commuting. These patterns are different from those to Fort Meade. The Commuter Connections rideshare system starts with a common origin and then focuses on nearby destinations as its means of matching riders. By contrast, ridesharing at Fort Meade will be more effectively served by focusing on the common destination and looking for employees with nearby origins. For instance, employees at various locations within Northern Virginia may be able to meet at a park and ride lot and share a ride to Fort Meade. The Commuter Connections database does not preclude a strong match, but it does not necessarily mean it will create the best matches for long-distance reverse commuters to destinations outside its primary geographic area.

Security Issues

Fort Meade has unusually high security and privacy requirements for its ridesharing program. Carpooling and vanpooling usually depend on sharing employees' basic information, such as zip code or home city. However, many high security agencies do not allow this information outside of their secure systems, creating a dilemma for many TDM activities. Many of the agencies on-site or moving to Fort Meade also have high security and privacy requirements. Coordinating amongst these changing and different requirements will be challenging; there will be many agencies located on Fort Meade and not all are affiliated with the Army (i.e. NSA, Environmental Protection Agency). It can also be reasonably assumed that these security requirements are not static and as such may affect transportation demand activities differently in the future.

RECOMMENDED OPERATING PLAN

Based on these investigations, the study team proposes the following objectives, structure, and services provision for a Fort Meade area Commuter Clearinghouse that addresses the challenges outlined above. The Clearinghouse should emphasize its focus on the Fort Meade commuter and provide tailored services for the Fort Meade commuting experience, particularly long-distance commuting issues associated with BRAC. The Clearinghouse will also create a network of transportation coordinators to

leverage agency-specific resources. This network will help the greater Fort Meade community address these transportation issues, including privacy and security, cohesively and cost-effectively. The Clearinghouse should also be “branded” and marketed to the Fort Meade commuters so that it is a recognizable service for these employees.

Objectives

The Fort Meade Commuter Clearinghouse’s objectives should include:

- Establish a dedicated, customized Commute Information Center that coordinates and facilitates necessary services for Fort Meade customers.
- Improve travel, mobility, and accessibility for the greater Fort Meade community.
- Educate the Fort Meade community about alternative transportation options and promote their use to increase the use of non-single occupancy use vehicles.
- Help to reduce congestion and improve air quality in the greater metropolitan region.
- Retain and enhance the employees’ quality of life during and after relocation.

Clientele/Customer Base

The Commuter Clearinghouse will serve several different customer groups over the short, medium, and long terms.

- BRAC Commuters or those employees who will be commuting from Virginia home locations to Fort Meade as part of the BRAC transition. This will also include government consultants and contractors that move office locations to Fort Meade and mimic the BRAC transition (short-term).
- Present and future employees at Fort Meade and the EUL sites that follow the more traditional commuting patterns from Maryland cities and counties (medium- to long-term).
- On-site and nearby residents affiliated with Fort Meade or its families (medium- to long-term).

Each one of these customer groups may require customized strategies based on their origins and transportation needs. It is important to note that the Army has committed to evaluate and implement local rideshare/commuter programs to reduce SOV use generated by EUL actions, as well as BRAC actions. EUL tenants will therefore need to either participate in implementing the Fort Meade Commuter Clearinghouse, or provide their own ridesharing solutions to manage employees' commutes and minimize the anticipated detrimental impacts outlined in the EIS. The first option, participating in a Fort Meade Commuter Clearinghouse, will likely utilize resources more efficiently and provide better opportunities for employee ridesharing matches.

Structure

A centralized commuter information center will have the ability to leverage existing efforts while providing a Fort Meade-based focus. The study team recommends that the Fort Meade Commuter Clearinghouse maintain its presence via:

- Rotating location for an on-site drop-in center with a live Commuter Counselor. It is recommended that the center be located on a rotation basis at several of the larger agency locations, such as NSA, the Fort Meade Family and Morale, Welfare, and Recreation (FMWR) center, and the EUL locations. Another option would be to have a central location that would be staffed more frequently, such as at the FMWR center, with rotations at the other locations on a staggered basis. Another similar mechanism to rotate the clearinghouse would be a "Commuter-Mobile," similar to the one in Arlington County, VA. Instead of providing a rotating location, the vehicle would be a one-stop shop in a branded van or larger truck that could physically visit agencies and offices on a scheduled basis to work with their employees. This mobile commuter store could provide commuter counseling services, as well as sell transit fares and provide transit schedules and maps and information on alternatives such as teleworking.¹¹
- Online access to a Commuter Counselor, available via web, email, and through a telephone hotline and instant messenger.
- Website with all relevant inventoried information and services.

The most effective ridematching system for Fort Meade would be all-inclusive for all agencies located on the installation. It is clear that the greater number of people in the database, the better the matches will be, leading to closer alignments for home location, times, and work location. However, participation in one ridematching database may not be an option with Fort Meade's high security agencies. Individual

¹¹ Arlington's Mobile Commuter Store website, <http://www.commuterpage.com/mobilestore.htm>

agencies, such as NSA, may need or want to maintain their own ridematching databases and procedures. The Commuter Clearinghouse, therefore, will coordinate with agency transportation managers on an on-going basis to ensure coordination among the multiple agency-specific ridesharing programs, as well as maintaining a central database and other services. The Commuter Clearinghouse's broader services, such as commute counseling, will be available to all Fort Meade installation staff, contractors, EUL tenants, and other nearby personnel, as identified. These terms would need to be negotiated amongst the installation agencies. Furthermore, the Commuter Clearinghouse will coordinate with the various local and regional programs, agencies, employers, and local governments (i.e., Anne Arundel, Prince George's, and Howard Counties) in the Fort Meade area.

Recommended Work Plan

Within this structure, the following tasks identify the core activities of this organization customized to the Fort Meade region circumstances.

Task 1: Strategic Planning, On-going Management, and Reporting

The purpose of this task is to create a long-term strategic plan for the Commuter Clearinghouse to last through and past the BRAC transition, as well as annual work program plans and progress reporting. The necessary activities of this task include the following:

- Development of a strategic performance plan for the Fort Meade Commuter Clearinghouse – The strategic plan should outline the specific performance targets and metrics that will be used to measure performance, objectives for the Commuter Clearinghouse, and the necessary procedures and operation to achieve that future.¹² As part of this plan, the Commuter Clearinghouse organization should be prepared to deal with transportation and congestion issues past the BRAC transitions, and into the larger TDM for the Fort Meade region; specifically, how to expand from serving the primary customer base (BRAC-related) to include the secondary ones (general employment growth). This report's recommendations could start as the basis for this long-term strategic plan with the following Tasks (2-4) serving as the foundation for building such an organization.
- Development of monthly progress reports, which provide information on the activities and accomplishments of the Commuter Clearinghouse, including reporting on metrics established in the strategic performance plan.

¹² Goodstein, Leonard, Timothy Nolan, and J. Pfeiffer. *Applied Strategic Planning*
<http://www.amazon.com/Applied-Strategic-Planning-Develop-Really/dp/0070240205>

- Development of an annual report and work program plan, which reports on the accomplishments of the Commuter Clearinghouse for the past year and outlines specific objectives and activities to be accomplished for the following year.

Task 2: Develop, Maintain, and Support a Network of Agency Transportation Coordinators

This task aims to support the development, coordination, and expansion of agency and employer-based programs for those agencies and employment sites located in the Fort Meade area. The focus of this task is to develop, maintain, and support a network of employer-based transportation coordinators to leverage in-house agency activities and build synergies among individual programs. The creation of a network of transportation coordinators will improve the success of the Commuter Clearinghouse's outreach and participation rates.

It is important to note that this Clearinghouse will not replicate specific agency activities nor decrease the need for agency specific transportation commitments; rather, it will build synergies amongst agencies and use focused marketing/communications techniques to improve the programs' TDM success. One example of the necessity of this network is that there is no one common communication method to reach all tenants at Fort Meade. Different security standards, operating procedures, and agency directives make a common method very difficult and impractical at this time. The only way to send a Fort Meade-wide email blast would be via these agencies' coordinators, who would then send them out internally. Without this network, Fort Meade area efforts would be less effective. Furthermore, this network builds on the preexisting relationships between Fort Meade-located agencies and existing TMAs.

This network will be particularly critical for agencies that will be moving to Fort Meade due to BRAC. It is recommended that vanpools and carpools be organized prior to the switch so that employees in Northern Virginia automatically choose ridesharing. Activities of the Clearinghouse will include working with the agencies and their employees to provide information on commuting options prior to the relocation of jobs to Fort Meade, and during the transition time. After the BRAC transition, the Clearinghouse will work with the network of transportation coordinators to expand participation in commute options programs and coordinate marketing efforts.

Task 3: Offer Commuter Assistance Services and Solutions

The purpose of this task is to increase participation in options that reduce SOV travel through the provision of commuter assistance services. Such options include carpools, vanpools, transit, bicycling and walking, telecommuting, and compressed

work schedules, as well as information on “live near your work” for employees who wish to move to a new home closer to the installation. These activities will be coordinated with the local TMAs, as well as transit agencies and other county rideshare programs. The services to be provided shall include:

Offering personalized transportation solutions through a Commuter Counselor.

The Commuter Clearinghouse should offer access to a live Commuter Counselor who can help Fort Meade area commuters find the best option for their travel needs. The counselor should be available via phone, the website, and email. The Counselor would provide information on all the possible options available to that particular person, including possible financial incentives available. Furthermore, the Commuter Counselor should engage in significant outreach activities, such as educating the Fort Meade community on the available programs and trying to create ridesharing matches. Prior to the BRAC transition, the Counselor should be available to the future tenant agencies.

Creating ridesharing matches across the Fort Meade Region.

The Commuter Clearinghouse will assist with matching employees into carpools and vanpools, and making employees aware of agency-specific ridematching programs. The Clearinghouse will maintain a Fort Meade region ridesharing database to create the best matches for Fort Meade area employees. For agencies with specific security concerns, matching can be done through protocols determined on a case-by-case basis. For consistency with the regional database, the Commuter Counselor will also use the Commuter Connections database. In addition to facilitating ride matches, the Clearinghouse should also provide assistance in establishing new vanpool routes and creating likely carpools through proactive efforts to locate ridematching starting points and drop off locations. For instance, vanpool and carpool routes could originate from many of the park and ride lots in Northern Virginia.¹³ The Clearinghouse will work to identify appropriate starting points for vanpools and pickup points for carpools that are convenient and accessible for employees.

Studies have shown that the success of vanpool programs in particular is heavily influenced by the degree of employer support. Employers can provide financial incentives, preferential parking, or work schedules that support vanpool arrangements. As with carpools, the personal relationships involved in a vanpool

¹³ Approximately 100 Park-And-Ride Lots exist in Virginia, as of July 2008. Source: Commuter Connections Directory: Transportation Demand Management Resources for the Greater Washington Metropolitan Region.

can affect its success and longevity. Some vanpoolers report that the social aspects of the vanpool are what they like about the mode.¹⁴

Providing information regarding transit, ridesharing, bicycle/pedestrian, and other options and incentives.

The Commuter Clearinghouse should provide information on available transit, ridesharing, and bicycle/pedestrian options and services that are available. For instance, the Commuter Clearinghouse should provide information on transit routes, maps, and schedules. To support bicycle commuting, the Commuter Clearinghouse should compile resource documents for bicyclists, identifying routes, showers, lockers, etc. It could also include information on the new bicycle commuting reimbursement. Participating employees can receive up to \$20/month on qualified bicycle expenses.¹⁵ To support ridesharing, the Clearinghouse should also provide information about available incentives, such as NuRide, an incentive-based ridematching service that provides rewards for employees who self-report ridesharing.

The Commuter Clearinghouse could also work with the transportation coordinators to explore a carsharing program for those that do carpool/vanpool. Carsharing can allow employees who do not drive daily to continue to run errands during lunch breaks or after work, helping to maintain the flexibility they have when they drive.

Initiating and maintaining a Guaranteed Ride Home program.

A GRH program is critical to the success in getting employees to participate in transit or ridesharing options. Presently, GRH is only available in this area to members of the BWI Business Partnership. The Commuter Clearinghouse should provide this service to all Fort Meade-based employees providing a maximum of four rides per year and \$100 per ride.¹⁶ The GRH program should have commuters register to participate in the program or approved based on proof of employment within the Fort Meade area. The Commuter Clearinghouse will establish rules for the program and maintain agreements with taxi companies and rental car companies to provide the ride home.

¹⁴ Transit Cooperative Research Program, Report 95 “Traveler Response to Transportation System Changes: Chapter 5 – Vanpools and Buspools. Prepared by Evans, Jay et al., 2005.

¹⁵ More information is available at:

http://www.irs.gov/publications/p15b/ar02.html#en_US_publink1000101852:

¹⁶ Assuming that there are 4,000 employees that participate in the GRH program, and approximately 2% will use the program over the year, this equal 80 rides per year, and requires an \$8,000 annual budget.

Studies have shown that a commuter’s fear of being “stranded” at work if they or a family member become ill, or if they must work unexpected overtime, is one of the most compelling reasons commuters do not rideshare or use transit to travel to work. A GRH program eliminates this barrier by providing a free ride home in the event of an unexpected personal emergency or unscheduled overtime. GRH programs can encourage SOV drivers to switch to ridesharing or take transit, and encourage current ridesharing and transit users to increase the usage of these options.¹⁷

Providing support for “Live Near Work” efforts, including referrals for housing and relocation services.

The Commuter Clearinghouse, working with the Fort Meade Housing Office and other county-based BRAC initiatives, should provide information on the benefits of living near work including guidance to those interested in relocating.

Continuing to identify future TDM possibilities.

Potential future programs include:

- Expedited access and preferred parking for high-occupancy vehicles and other parking management initiatives;
- Support in integrating transit with bicycle connections, and in working through security issues to enable more direct access for transit services to the garrison;
- Support in establishing appropriate TDM measures and necessary infrastructure for new office, residential, and commercial developments in the Fort Meade area, including improving connections with local transit-oriented development (TOD) efforts, such as Odenton Town Center;
- Alternative work schedules (i.e., compressed work week, flex work week, or telework); and
- Gap analysis in internal transit/vanpool benefits offered at each agency.¹⁸

¹⁷ Source: Metropolitan Washington Council of Governments, *Work Program for the Commuter Connections Program for the Greater Washington Metropolitan Region, Fiscal Year 2010*. March 18, 2009.

¹⁸ Since Fort Meade is outside of the National Capital Region, the federal agencies are not required to supply transit/vanpool subsidies. However, individual agencies are not prohibited from doing so and the major agencies do provide these subsidies.

Task 4: Marketing and Outreach Activities

This task involves creating and promoting the Commuter Clearinghouse's activities and services through comprehensive communications and outreach, including but not limited to:

- Developing a notable "brand" image for the Clearinghouse so that it is recognizable and easily accessible;
- Providing and updating relevant transportation information via website, email, or hard copies, or other relevant mediums; and
- Engaging in on-site promotions and outreach for all customer groups over time.

This task focuses the Commuter Clearinghouse's efforts on two activities to educate the Fort Meade region community and increase participation in these alternative transportation programs. (See the Marketing and Communications Plan section below for identifying specific elements of this task). Examples of outreach mechanisms include the Commuter Clearinghouse website, emails, and collateral materials, updated as necessary. The following information should be provided through these mediums:

- Available alternative modes of travel such as transit, ridesharing, and bicycle/pedestrian options.
- Financial incentives, such as the federal vanpooling/transit subsidy and other pre-tax benefits, as well as the Maryland Commuter credit.¹⁹ In addition, a centralized pick-up location for non-SmartBenefits customers to receive their relevant transit passes.
- Information on outreach promotions.
- Commute Counseling contact information.
- Regional resources, such as the Federal Agency Commuter Connection website, Maryland's Commuter Choice website, and Commuter Connections.
- Consistent marketing and branding activities.

¹⁹ <http://business.marylandtaxes.com/taxinfo/taxcredit/commuter/default.asp>

Some other activities that can be undertaken include transportation fairs, benefits training presentations for new hires, creating commuter competitions, participating in larger regional initiatives (i.e. bike to work day), and creating an award program for the best commuter agency practices/activities.

Picatinny Arsenal in Morris County, New Jersey, demonstrated ridesharing success in a similar base relocation experience, though on a smaller scale than the BRAC activity planned at Fort Meade. Several years ago, a number of activities from the Tobyhanna Army Depot in Pennsylvania relocated to the Picatinny Arsenal approximately 55 miles away. This was and is an ideal case for vanpooling. In the last three to four years, the installation has formed 26 vanpools and subsidizes vanpool users at \$230 per month today. Additionally, these vanpools receive \$175 per month from NJ Transit through their Vanpool Sponsorship program. These vanpools not only provide reliable transportation for more than 200 employees, but they also alleviate the need for more than 180 parking spaces and reduce traffic congestion by the same number of cars each day, in each direction on Interstate 80. This amounts to an estimated reduction of 420,420 VMT each month or more than five million VMT each year.²⁰

BUILDING THE COMMUTER CLEARINGHOUSE

To create the Fort Meade Commuter Clearinghouse, several options exist:

1. Source internally through the installation/federal property owner;
2. Fund through the present transportation management association, the BWI Business Partnership, as add-ons; or
3. Contract and fund outside of the installation through an RFP process for a dedicated service provider.

Table 5-1 describes the advantages and disadvantages of each option.

²⁰ Interview with Kathy Drury, Transportation Officer, Picatinny Arsenal, Morris county, NJ on October 15, 2008. Calculations for estimated VMT reduction – 182 vehicles reduced, traveling an average of 55 miles each way; 110 miles per day reduced x 21 business days each month x 182 vehicles = 420,420 VMT.

Table 5-1: Comparison of Options to Build the Commuter Clearinghouse

	Advantages	Disadvantages
Internally	<p>Would meet security requirements</p> <p>Would be located on-site at all times</p>	<p>May not have the resources necessary to maintain the Commuter Clearinghouse</p>
Local/Existing Transportation Management Agencies	<p>Would have institutional support and local knowledge</p> <p>May already be doing some of these activities as part of their daily operations for local organizations</p>	<p>May not be located on site as the main location</p> <p>May require additional funding</p> <p>Organization mission would not be exclusive to the Fort Meade Region</p>
RFP for outside contract and dedicated service provider	<p>Could meet both privacy/security concerns, and have requisite transportation management expertise</p> <p>Would clearly be tasked with serving the entire Fort Meade community, and not housed within one agency</p>	<p>May not have dedicated funding, may need to identify and secure through federal or state funds (i.e., the federal Congestion Mitigation and Air Quality Improvement (CMAQ) Program).</p>

This chapter does not make a specific recommendation on this issue, as this will depend on the funding structure and lead agency responsible for overseeing the Clearinghouse. Under any of these options, it is recommended that the structure include the following:

- Cooperation and clear definition of roles,
- Predictable funding,
- Accountability to funding agencies and policymakers,
- Current and realistic program goals,
- Effective evaluation, and
- Effectiveness and cost-effectiveness.

These recommended components were based on ICF's previous review of nine commuter assistance organizations around the country to determine the organizational models in use and their relative effectiveness. The review found that successful commuter assistance programs included the above components.²¹ These elements can be used to evaluate the possible proposals for providing commuter services in the Fort Meade area.

REQUIRED SKILLS

Each applicant should also demonstrate their overall understanding of the components provided within the Commuter Clearinghouse, including:

- Expertise in implementing transportation demand management programs;
- Experience working with transportation management associations and transit agencies to maximize participation;
- Knowledge of transportation services and TDM program in the Washington, D.C. and Baltimore, MD regions;
- Demonstrated ability to create and manage a dynamic one-stop information clearinghouse; and
- Demonstrated ability to aid regional air quality efforts, reducing congestion and the nation's oil dependency, to support Congestion Mitigation Air Quality reporting.

Using these criteria for the technical approach and qualifications of the applicants will help to ensure the best choice for the Commuter Clearinghouse provider.

MARKETING AND COMMUNICATIONS PLAN

This marketing and communications plan provides a roadmap to communicating the benefits of TDM activities and the services available for the Fort Meade community.

Communications Objectives and Goals

²¹ ICF conducted this research as part of a 2004 project for the Maryland Department of Transportation to determine characteristics of effective commuter assistance programs.

The objective of this program is to offer commuters comprehensive information about their available options and to assist them with choosing the most appropriate travel alternative, specifically to:

- Inform the Fort Meade community about their non-SOV transportation menu of options.
- Help reduce the number of SOVs entering the Fort Meade area through increasing participation in alternative travel modes through outreach activities.

Target Audiences

Primary Audience: BRAC-related commuters. BRAC Commuters or those employees who will be commuting from home locations in Northern Virginia or Southern Maryland to the Fort Meade area as part of the BRAC transition. This will also include government consultants and contractors that mimic the BRAC transition through current projects.

Secondary Audience: General employment. Present and future employees at Fort Meade and the EUL sites that follow the more traditional commuting patterns from Maryland cities and counties. Additionally, on-site and nearby residents affiliated with Fort Meade or its families.

Over time, as BRAC commuters will settle into commuting patterns, these two audiences will merge into the larger Fort Meade commuting populations.

Key Messages

The following are the key messages to communicate to employees throughout the program – Ridesharing, transit, and other alternatives to driving will:

- Help save you money.
- Help the environment -- They reduce congestion, improve air quality, and reduce emissions that contribute to climate change.
- Improve the United States' energy security by reducing reliance on imported fossil fuels.
- Reduce the stress of driving and improve quality of life.

Marketing Tactics

In today's proliferating, multimedia, and multitasking marketing environment, it is important to reach the personnel at Fort Meade and the surrounding area using targeted communications touch points that are relevant, compelling, effective, cost-efficient, and measurable. The following proposed tactics have the objective of increasing commuters' use of public transportation and ridesharing programs for traveling to and within the Fort Meade region, and reflect tactics that are commonly used by TMAs and other commuter organizations.

- **Collateral and Materials Development:**
 - Create a transportation options brochure for Fort Meade commuters. It can be one full document with all the options, but then can have smaller breakaway flyers for individual options (i.e., a transit options brochure).
 - Produce a very small take-away business card with the most basic information on how to contact the commuter counselor.
 - Print as needed flyers and other transportation collateral.
 - Create a toolbox for transportation coordinators to start/improve their agencies' commuter programs and services.
 - Banners and posters for booths at transportation fairs.

- **Direct Community Outreach, Social Marketing, and Events:**
 - Engage in on-site promotions for all customer groups over time in Northern Virginia (prior to BRAC transition) and Maryland.
 - Create commuter competitions and an award program.
 - Participate in larger regional initiatives (i.e., bike to work day).
 - Conduct promotions such as raffles, contests, etc. to improve participation.
 - Use social networking sites (i.e., Facebook, Twitter, etc.) to reach out to the Fort Meade community.

- **Web:**
 - Create a website with all relevant inventoried information and services and Commuter Counselor link. Provide maps, schedules, links to resources, calendar of events, schedule changes, and emergency information.
 - Email Fort Meade-wide blasts with TDM information through the agencies' transportation coordinators.
 - Provide full access to a Commuter Counselor, via web, email, and instant messenger.

- **Public Relations:**
 - Develop educational articles embedding the Commuter Clearinghouse messaging in a subtle way to promote its services and its benefits such as Sound Off! Potential for success stories. Inform commuters through community and print outlets.
 - Produce quarterly newsletters for all commuters to provide update messages, information on new services, promote outreach activities, or advertise incentives.

A noteworthy program called Clean Air NY, exemplifies a TDM program that has undergone intensive marketing efforts that helped reduce vehicle miles traveled (VMT) and improve air quality. The program's marketing tactics, implemented between July 2006 and July 2009, included a new program website and a 24-hour customer service hotline that provides information on various travel options, workplace and community events, and other outreach activities. Over this period, the number of employers participating in the Clean Air Network increased by more than 750% to over 5,400, reducing 3.9 million VMT per day, or 2.1% of the 188 million miles traveled each day in the region.²²

Target Campaign Period and Seasonality

Target Campaign Period: One Year

Seasonality: Rideshare planning and coordination will be a continuous process in order to improve mobility and accessibility in and around Fort Meade and increase participation in alternative modes of travel through identifying and creating transportation improvements and options.

- **May/Spring:** Commuter Clearinghouse kick-off; Earth Day, Bike to Work Month, Green Commuting Awareness Month: speakers on green commuting, contest to promote ridesharing, personalized human contact to encourage participation.
- **Summer:** Engage and build relationships with transportation resources in the Fort Meade region; match commuters to best ridesharing option.
- **Fall:** "Car Free Day"; continued promotion of Commuter Clearinghouse's activities and services through outreach and transportation/commute fairs.
- **Winter:** Public transportation contest among employees.

²² Clean Air New York 2008 Annual Report. Submitted to New York State Department of Transportation by ICF International.

Evaluation

Evaluation is an important component of successful marketing and outreach programs. Evaluation can serve two purposes: 1) To identify the success of marketing activities, both for specific outreach efforts and the program as a whole; and 2) To help inform future planning for outreach activities, including on-going revisions to the marketing/communications plan, by building on lessons learned.

The following metrics will help identify the level of effectiveness/success of the Commuter Clearinghouse, and should be incorporated into the annual report and work program.

Programmatic

- Number of transportation coordinators in the Fort Meade region, out of total possible
- Number of participants in various programs/modes – measured through program tracking efforts, working with agency coordinators:
 - GRH – number of participants, number of rides offered
 - Vanpools – number of vanpools established and number of participants
 - Transit – number of riders for services (collected in coordination with transit agencies)
- Overall mode share (drive alone, carpool, vanpool, bicycle/walk, telecommute) for employees working in the Fort Meade area – to be measured through surveys, implemented through agency coordinators

In terms of measuring programmatic success, the ridesharing mode split for the Fort Meade area might be compared to NSA's mode split, since this agency's longstanding ridesharing program is generally considered successful. Described earlier, NSA sponsors approximately 40 seven-passenger vanpools. Using 280 vanpool participants as a conservative estimate for ridesharing participants at NSA, the agency's ridesharing mode split is approximately 2%.²³ Fort Belvoir's experience in Virginia has been a 4.4% vanpool share and a 5.5% carpool share. Given that the NSA mode split is likely higher when carpoolers are included, the range for a successful ridesharing mode split after program implementation may be between 2% and 5% for vanpools, and an additional similar percentage for carpools, so a minimum rideshare mode split of 4%, with a goal of 10% participation.

²³ Based on an estimate that NSA has a total of 16,000 employees, provided by Anne Arundel County planning staff.

Communications/Marketing

- Website
 - Hits
 - Requests for general information
 - Other online outreach measures
- Listserves/E-mail based communication through transportation coordinators
 - Responses
- Transportation Fairs
 - Number of collateral distributed
 - Persons contacted
 - New sign-ups for each program promoted
- Commuter Clearinghouse Counselor
 - Number of people contacting directly (via email, web, phone, or in-person)
 - Number of people signed up to various programs because of contacting the Commuter Counselor
- Promotions
 - Number of participants by promotion
- Other Outreach
 - Number of newsletters produced
 - Number of articles produced and published

These communications and marketing measures may generally be considered more successful with higher numbers of each measure. A baseline may be determined after the first year that the Commuter Clearinghouse is in operation, after which targets for a percentage increase in each measure will be developed based on available resources.

RESOURCE ESTIMATES

Table 5-2 provides an estimate of the costs associated with the Commuter Clearinghouse and its services. The median range of annual expenditures for TMAs in 2003 was between \$150,000 and \$200,000; many of these TMAs are similar in scope and size to the Clearinghouse proposed.²⁴ This is not an actual/proposed budget for these services and should only be used as general guidance for rough planning purposes. These services would likely have to be bid competitively in order to determine what can be accomplished with finite funding. Note that the majority of the cost differential is in staffing. For the most part, the budget could be determined by the number of commuter counselors/staff to be employed and the related communications/outreach work desired. Note that this estimate does not include any leasing or office rental costs.

CONCLUSION

Fort Meade will be undergoing an intensive and dramatic BRAC process. The central transit and ridesharing Commuter Clearinghouse will help facilitate this transition by offering commuters comprehensive information about all of their available options and helping them to use options that reduce SOV travel. Many of these future Fort Meade commuters are accustomed to well-established transit and HOV networks that do not exist in the Fort Meade area. This Commuter Clearinghouse aims to support them in choosing options such as carpooling, vanpooling, transit, bicycling and walking, and telecommuting, which help to reduce vehicle travel and improve employee satisfaction and retention. This chapter has outlined the necessary steps to cohesively address the transit and ridesharing needs of the Fort Meade community.

The work plan shows the necessary first steps for such a Clearinghouse to succeed in the Fort Meade environment. The implementation options and evaluation criteria help the sponsoring agency or agencies understand the best ways to start this Clearinghouse on the right path. The communications plan outlines the sample mechanisms for outreach, and the resource estimates provide a rudimentary assessment of the costs of this initiative. Using the results of this report, the Commuter Clearinghouse can provide a unified, consistent voice to address BRAC- and EUL-related commuting, air quality, and quality of life issues in the Fort Meade area.

²⁴ Association for Commuter Transportation, 2003 Transportation Management Association Survey. Available at: <http://www.nctr.usf.edu/clearinghouse/pdf/526-101.pdf>

Table 5-2: Estimated Costs for a Fort Meade Commuter Clearinghouse

Component	Estimated Cost
1-3 full-time Commuter Clearinghouse staff (can include just coordinators or also marketing and program managers)	\$68,800-\$206,400 ²⁵
Collateral and Materials Development <ul style="list-style-type: none"> ▪ Transportation options brochures (2) ▪ Clearinghouse Business Cards ▪ General Printing/Reproduction (200) copies of booth materials ▪ Agency Toolboxes 	\$10,000
Direct Community Outreach <ul style="list-style-type: none"> ▪ Engage in on-site promotions for all customer groups over time in Northern Virginia (prior to BRAC transition) and Maryland ▪ Create commuter competitions and an award program. ▪ Participate in larger regional initiatives (i.e. bike to work day) ▪ Promotions (raffles, giveaways, etc.) 	Included in labor costs with staff
Web and Telecommunications. <ul style="list-style-type: none"> ▪ Website Creation, Design, Updating ▪ Additional real-time online and telephone access for Commuter Counselor 	\$15,000 (infrastructure and web service cost)
Public Relations <ul style="list-style-type: none"> ▪ Articles and Quarterly Newsletters 	\$8,000
Guaranteed Ride Home Program	\$58,000 ²⁶ (cost for providing rides and marketing)
Employee/Participant Survey Design and Implementation	\$9,000
Ridesharing Database	\$4,000 average ²⁷
Estimated Total	\$172,800-\$310,400
Optional: Commuter Mobile ²⁸	\$225,000
Estimated Total with Optional Commuter Mobile	\$397,800-\$535,400

²⁵ Assumes a per employee cost of \$68,800 for 1,600 hours at an hourly rate of \$43 (blended rate of a project manager and rideshare coordinator including fringe and overhead).

²⁶ Assumes that there are 4,000 employees on the installation who participate in the GRH program, estimated based on experiences at other installations. Also assumes that approximately 2% will use the program over the year, equaling 80 rides per year. Assuming an average of \$100 per trip, this requires an \$8,000 annual budget to provide rides. \$50,000 was estimated as the annual marketing budget after reviewing MWCOC's marketing budget for its GRH program.

²⁷ Based on Commuter Connections pricing annual cost for use of the database.

²⁸ Based on discussions with Arlington County.

APPENDIX A

SUMMARY OF EXPERIENCES AT OTHER INSTALLATIONS

Fort Lewis, Washington

Pierce Transit provides service from Lakewood to Fort Lewis via Madigan Hospital along Route 207 (Route 206 travels between Lakewood and Madigan Hospital and Route 207 between Madigan Hospital and Fort Lewis). Route 7 service is provided only on weekdays from around 6:00 am to 7:00 pm. The weekday shuttle bus between Madigan Hospital and Fort Lewis Bus Depot requires a transfer for passengers taking Route 206. The timetable also includes the following note: "IMPORTANT NOTE: Passengers wishing to enter Ft. Lewis MUST have a Department of Defense ID Card." Serves Fort Lewis Bus Depot/Madigan Hospital.

Pierce Transit has a long tradition of providing service to the post, though it has been a struggle. At the gate, security checks the military IDs of the passengers and the driver's Pierce Transit ID (list of personnel is kept at the gate). There are no through routed buses, all terminate at Fort Lewis. Any individual without proper ID is asked to exit the vehicle. After 9/11 they had a military person on board, though this has been scaled down and is only required after security alert warnings.

It is interesting to note that the Fort Lewis Route is the system's least productive route but is continued for goodwill and community support. Also, to address the ADA complementary paratransit requirement and meet the security restrictions, a separate zone was developed in their scheduling software for ADA service to the post.

Contact: George Patton, 253-581-8080

Fort Benning, Georgia

Fort Benning is located in Columbus, Georgia where transit service is provided by METRA. Specifically, METRA's Route 4 provides service from downtown Columbus (the transfer center) to Fort Benning (transfer center on the base). Service is provided hourly from 5:00 a.m. to 8:00 p.m.

This route is open to everyone, however, Fort Benning security checks all passengers at the gate. This security seems to be more lenient than other installations, since a picture ID is all that is required - i.e. driver's license or a picture ID issued by METRA.

Fort Benning provides an internal shuttle bus for transportation on the installation. One glaring issue concerning the shuttle bus is that it is not accessible.

Contact: Saundra Hunter, Transportation Director, 706-653-4410

Kirtland Air Force Base, New Mexico

ABQ RIDE, Albuquerque, New Mexico, provides service along three routes to Kirtland Air Force Base – Route 3-157, Route 222, and Route 317.

- Route 3-157 provides service from Uptown to Kirtland AFB weekdays from 5:30 a.m. to 5:40 p.m.
- Route 222 provides service from southwest Albuquerque via the Rail Runner Station and airport to Kirtland AFB. Service is provided weekdays on two AM and two afternoon trips towards Kirtland AFB and two AM and three afternoon trips towards the airport and train station (commuter route).
- Route 317 provides service from downtown (Alvarado Transportation Center) to Kirtland AFB. Service is provided weekdays on two AM and one afternoon trip towards Kirtland AFB and one AM and two afternoon trips towards downtown (commuter route).

Timetable notes “People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base”.

All three routes serving Kirtland AFB terminate at the installation. At the security gate, military security checks each passenger for a military ID and asks them to exit the bus if they do not have sufficient identification.

Complementary paratransit service is provided on the post where they allow other passengers (if aboard) to continue in past the security gate.

Contact: Andrew DeGarmo, 505-243-7433

Puget Sound Naval Shipyard (PSNS), Bremerton, Washington

Kitsap Transit public fixed-route, fixed-schedule buses provide service to the gate, and passengers can go through the gate and catch internal shuttles. However, Kitsap Transit has an extensive network of worker-driver buses. Kitsap Transit's Worker/Driver buses are driven by **PSNS employees** and can enter PSNS. The Worker Driver's are full-time PSNS employees and part-time Kitsap Transit employees.

Kitsap Transit hires and trains the Worker Drivers to operate 35' and 40' transit buses. They operate 28 routes throughout Kitsap County carrying PSNS employees to and from work.

The Worker Drivers go through Badge Inspection Training (deputization) and are responsible for inspecting all badges as passengers board the bus. They also receive

security inspection training from PSNS security and are responsible for doing security/IED inspections on the buses daily.

The badge inspection training (deputization) the drivers receive enables them to do all badge inspections for their passengers. This keeps PSNS security from having to inspect the badges of over 1,000 riders a day that enter PSNS.

This program works because PSNS employees operate the buses that enter PSNS. Security policies at PSNS will not allow routed operators to enter PSNS. Even if routed operators could gain access to PSNS it would be an administrative burden for routed operations to get and maintain the proper security requirements for all the routed drivers that would operate buses into PSNS.

APPENDIX B

DoD REGULATIONS ON SHUTTLES AND MASS TRANSIT

DOD Regulations on Shuttle Bus Service and Mass Transit Services

A. Generally. (10 U.S.C. § 2632, DOD 4500.36-R, CHAP. 5)

1. **Primarily Three Types of Service: Group Transportation, Shuttle Bus Service, and Mass Transit.**
2. **Generally, a reasonable fare must be charged. 10 U.S.C. § 2632(a)(3).**
 - a. **Fares must be accounted for and deposited as miscellaneous receipts. DoD 4500.36-R, ¶¶ 5-2d; 5-4e.**
 - b. **The fare system will be structured to recover all costs of providing the group transportation service, including capital investment, salaries, operations, and maintenance.**
 - (1) **If the transportation vehicle is used for both operational (mission) and fare-based transportation, only the costs directly related to the fare-based transportation must be recovered. DoD 4500.36-R, ¶¶ 5-2e; 5-4d.**
 - (2) **Since these vehicles are acquired in direct support of the defense mission, acquisition costs will not be recovered through the fare system.**
 - c. **Exceptions to the requirement of a fare.**
 - (1) **Shuttle bus or mass transit transportation that is incident to the performance of duty. 10 U.S.C. § 2632 (b)(3).**
 - (2) **Mass transit services where the Secretary determines that the area of the installation is not adequately served by “regularly scheduled and timely commercial municipal services.”**
 - (a) **The Secretary of the Army has authorized MACOM commanders to establish such fare-free bus service if certain specific, objective criteria are met. AR 58-1, ¶ 5-4g. This authority may not be further delegated. AR 58-1, ¶ 5-4i.**
 - (i) **The sending location does not have adequate medical, dental, commissary, or Post Exchange facilities and/or, the rider's place of work is located on the receiving installation and/or the use of privately owned vehicles is restricted in the area served.**
 - (ii) **The receiving installation is more than one mile from the sending installation.**
 - (iii) **Fare charged per DOD Regulation 4500.36R EXCEEDS \$1.00 per passenger per round trip.**

- (1) Mass transit services overseas where the Secretary determines that the area is “inadequately served by public transit.” DoD 4500.36-R, ¶ 5-4d.
 2. The Service Secretary must determine that the service is needed for the effective conduct of affairs within that service. 10 U.S.C. § 2632(a)(1).
 3. Transportation services provided must be reviewed locally on an annual basis.
- B. Shuttle Bus Service - 10 U.S.C. § 2632(a)(2)(A)
1. Uses & Limits.
 - a. The capability to transport groups of individuals on official business between offices on installations **or** between nearby installations is a recognized requirement and is essential to mission support.
 - (1) Shuttle busses may only operate in duty areas for the Army. AR 58-1, ¶ 5-1b.
 - b. Shuttle bus service may be provided on or between installations for the transportation of:
 - (1) Military personnel and DoD employees between offices and work areas of the installation(s) or activity during designated hours when justified by the ridership.
 - (2) Enlisted personnel between troop billets and work areas.
 - (3) DoD contractor personnel conducting official defense business.
 - (4) Employees of non-DoD Federal Agencies on official business. Such transportation will only be provided over routes established for primary support of the defense mission.
 - c. In isolated sites with limited support facilities where DoD personnel and dependents need additional life support (medical, commissary, and religious) which directly affects health, morale and welfare of the family, shuttle bus service may be provided.
 - d. *Space-available transportation* on existing, scheduled shuttle buses may be provided to the following categories of passengers:
 - (1) Off-duty military personnel or DoD civilian employees.
 - (2) Reserve and National Guard members.
 - (3) Dependents of active duty personnel.
 - (4) Retirees.

- (1) Visitors to the base (intra-installation only).
 - (2) In overseas areas volunteers of Type 2 – Affiliated Private Organization.
2. Approval. The following instructions apply in establishing and maintaining shuttle bus routes:
- a. Established routes and schedules must be based on a validated need to transport authorized passengers.
 - b. Shuttle bus routes (see 5-6.b. (2), above) will not be used to provide domicile-to-duty travel, except when supporting enlisted personnel between troop billets and work areas.
 - c. The conveyance used must be no larger than the most economical available to accommodate “duty” passengers.
 - d. Surveys must be conducted at least annually to ensure that need for the service remains valid.

B. Mass Transit Services - 10 U.S.C. § 2632(a)(2)(C)

1. Uses & Limits

- a. Designed to fulfill requirements beyond the scope of shuttle bus service.
- b. May be used to provide other “non-duty” types of transportation within a military installation or between subinstallations on a fare basis.
 - (1) The mass transportation may be used to provide domicile-to-duty transportation on military installations or between subinstallations in reasonable proximity.
 - (2) The service may also be used to provide transportation:
 - (a) To and from places of duty and employment on a military installation.
 - (b) To and from a military installation in a remote area determined by the Secretary of the Military Department not to be adequately served by regularly scheduled commercial mass transit.
 - (c) Between places of employment for persons attached to, and employed in, a private plant that is manufacturing material for the Department, ***but only during war or national emergency declared by Congress.***
- c. May be provided to military personnel, DoD civilians, contractors, and their dependents.

1. Approval. To authorize the establishment of such systems, the Secretary must determine that:
 - a. There exists a potential for saving energy and for reducing air pollution;
 - b. A reasonable, but unsuccessful, effort has been made to induce operators of private companies to provide the necessary transportation; and
 - c. The services to be furnished will make proper use of and provide the most efficient transportation.

2. *Army-specific Guidance.* AR 58-1, ¶ 5-4a. – e.
 - a. The Secretary of the Army has determined that the effective conduct of the affairs of the Army may warrant mass transportation support for military personnel, DOD civilians, contractors, and their dependents, who are assigned, employed, or residing at isolated installations **if**:
 - (1) There is no regularly scheduled mass transportation twice a day, five times a week between the sending or receiving installations that picks up and drops off passengers within 1/2 mile of the installations, provides pick-up from the sending installation not later than 0800 hours and provides last departure from the receiving location not later than 1900 and is licensed and operates in accordance with reasonable maintenance and safety standards.
 - (2) Other mass transportation providers are unable or have declined to provide adequate transportation facilities or service after a reasonable effort has been made to induce them to do so.
 - (3) The service will save unproductive person-hours.
 - (4) The service will enhance the rider's quality of life.
 - b. MACOM commanders may implement mass transportation service if the objective criteria in the AR are met.
 - c. Vehicles used will hold 12 or more riders and operate at 50 percent of capacity on a monthly basis. For example, service scheduled for three times a week using a 16 pax bus would require a minimum monthly ridership of 96 (8x3x4) passengers to justify use.
 - d. Annual cost of the bus service provided as calculated in Chapter 12 will not exceed \$100,000. For USAREUR based units, the ceiling is waived. For EUSA, the ceiling is \$250,000.