FORT BRAGG AND POPE AIR FORCE BASE
BRAC REGIONAL TASK FORCE
COMMUNITY PLANNING FOR BRAC IMPLEMENTATION

Comprehensive Regional Growth Plan for the Fort Bragg Region

Assessment and Recommendations

Chapter 4
Transportation

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DISCLAIMER

This report is intended as an aid to planners, managers, elected officials, and other decision makers in the Fort Bragg region. Our aim is not to dictate what should be done, but to assist in ongoing efforts to achieve goals and objectives identified and valued by the residents of the region. The recommendations presented in this report are suggestions for how the region could work towards those goals and objectives, based on best available information and current understandings.

The information, projections and estimates in this report are based upon publicly available data and have been prepared using generally accepted methodologies and formulas. The projections and needs presented in this report are based upon best estimates using the available data. It is important to note that currently available information and understandings are incomplete and cannot account for the inevitable, but unpredictable, impacts of unexpected global, national, state, and/or local events. Actual results and needs may differ significantly from the projections of this report due to such unforeseen factors and conditions, as well as inaccuracy of available data, and/or factors and conditions not within the scope of this project. Persons using this information to make business and financial decisions are cautioned to examine the available data for themselves and not to rely solely on this report.

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Chapter 4: Transportation

Transportation planning is a critical element in any effort to move the region towards sustainability. A 2005 report released by the Transportation Research Board of the National Academy of Sciences[1] noted that mobility is necessary for the economy and for social and cultural interaction, but points out that current trends in transportation contribute to unstable conditions, including climate change, energy insecurity, congestion, noise pollution, and ecological impacts. The recent rise in gasoline prices highlights the immediate need to reconsider our priorities with regard to transportation planning so that the region has the long-term capacity to thrive in an unpredictable world.

The Transportation Research Board recommended two adjustments that would greatly help integrate sustainability concepts into transportation planning practices: (a) taking a broader view with full concern for transportation's impacts on public health, equity, and the environment; and (b) taking a longer-term view with full concern for future generations. Transportation planning should be proactive and promote sustainability through practices such as integrated land use and transportation planning and cross-modal planning. The report notes that while some emerging practices embrace these concepts, most current practices are still rooted in more limited, traditional technical methods, evaluation schemes, and time horizons.

Although it will be challenging to achieve the necessary shifts in the thinking of decision makers and the public regarding transportation planning, it is worth the effort. As the Transportation Research Board notes, innovative solutions can be developed that enable reasonable growth while addressing sustainability when transportation's full range of effects is considered in the planning process.

1. Transportation Research Board of the National Academy of Sciences (2005) *Integrating Sustainability into the Transportation Planning Process*. Conference Proceedings 37. [Available online at http://www.trb.org/news/blurb_detail.asp?id=5790]

This report represents a first step in the process of moving the region towards integrative and proactive transportation planning with sustainability in mind. The chapter is divided into three parts: (1) Roadways, Transit, and Access to Fort Bragg; (2) Rail Service; a and (3) Air Service.

I. Roadways, Transit, and Access to Fort Bragg

The military-related growth in the region will have a significant impact on traffic in the region. The Spring Lake area and the access roadways south of Fort Bragg will bear the brunt of the traffic inflow. Wayside Road in Hoke County will also be heavily impacted. The extension of I-295, an interstate highway, along the southern post border will increase east-west capacity and spread out traffic at the base's southern access points. The Murchison Road improvements should distribute north-south traffic flow more evenly to the eastern access control points. Transportation projects that have already been identified as critical for the region (TIP projects) should be fully supported Increased availability and usage of mass transit could help alleviate the growing congestion and decrease the time needed to access Fort Bragg. Currently, Cumberland County and Fort Bragg are the only parts of the region with a public transit system. Coordination of transit planning among jurisdictions and a proactive and integrative approach that links transportation planning with other planning and development activities is needed in order for the region to achieve the full benefits of potential transit improvements; this would be facilitated by establishment of a designated regional advisory team. Collection of data to support long-range planning is important

The intent of this section is to provide recommendations for regional transportation needs specific to Fort Bragg along with data and analysis for future use. The information is provided in a form that is compatible with information used by the North Carolina Department of Transportation (NCDOT)

so that Comprehensive Transportation Plans can be developed for the counties and transportation improvement projects can be supported.

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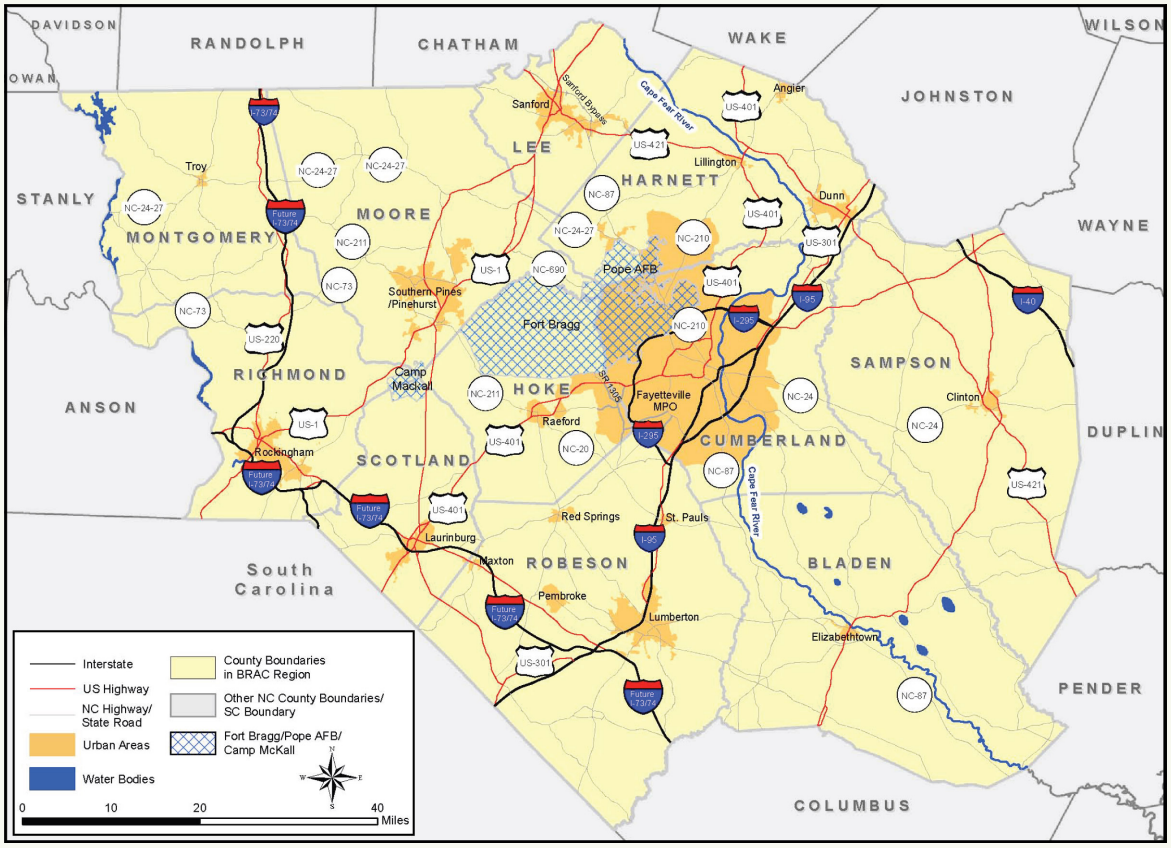
Transportation planning in North Carolina is led by the NCDOT Transportation Planning Branch in consultation with the metropolitan planning organizations (MPO) and rural planning organizations (RPO). These local planning organizations represent all counties in the state by identifying transportation needs and interests to NCDOT. The Fort Bragg Region is represented by one MPO and four RPOs[3]. Each planning organization was represented in the Transportation Working Group and provided the core support for technical analysis as well as an understanding of the detailed transportation structure in each of the eleven counties.

Along with the RPO and MPO planners, the Transportation Working Group consists of individuals representing Fort Bragg, public transportation, land use considerations, air quality considerations, NCDOT, and other areas of special interest. The Working Group was an essential part of the development of the transportation recommendations, and met four times over a seven month period.

At the first meeting the Working Group established a list of guiding considerations for the effort: the regional transportation plan should be sustainable, include air quality considerations, provide multi-modal options, and adhere to current mandates. These considerations were intended to encourage the identification of broad opportunities for improvement of the regional transportation system in accordance with the existing rules and regulations. Although the study centered on the technical aspects of the

3. Fayetteville Area MPO (FAMPO); Triangle Area RPO (TARPO); Lumber River RPO; and Mid-Carolina RPO, and Piedmont Triad RPO

Figure 1. Regional Road Network



highway network, recommendations for improvement include strategies beyond adding pavement and single occupancy vehicle use and are intended to offer further support for these guiding considerations.

This report focuses on roads of regional importance within the eleven-county Fort Bragg region—the primary road network made up of interstate, U.S., and N.C. routes. Consideration of the complete network of primary and secondary roads in the region was beyond the scope of this study. The regional road network is shown on **Figure 1**.

A. Current Conditions

The primary transportation issues apparent in the Fort Bragg region are congestion and access to Fort Bragg. These issues are apparent both at the access points around the base and in the urbanizing areas of the region where road improvements have not kept pace with growth.

Several sources of information were used in this study. Traffic counts, made by the North Carolina Department of Transportation (NCDOT), provide an order-of-magnitude perspective on the amount of travel at a given point or roadway and were the primary source of data for the regional network. Roadway characteristics were provided by the RPO planners in the rural area as a means of identifying the current capacity of the regional roads. In addition, a traffic study produced by the firm Onyx Group, entitled Fort Bragg Comprehensive Traffic Plan, includes traffic analyses for the post's roadways and intersections for several operating scenarios. These analyses are made in terms of six levels of traffic delay, Levels of Service (LOS) A-F, due to congestion. LOS A represents no delay, D is minimally acceptable and F is extreme delay. Finally, the Fayetteville Metropolitan Planning Organization (FAMPO), the agency which the federal government charges with the region's transportation planning and disbursement of transportation funds, has developed

a travel demand model for analysis of the highway system. The model was utilized to examine the traffic volume to capacity ratios for several highways.

The primary transportation issues in the Fort Bragg region are congestion and access to Fort Bragg. These issues are apparent both at the access points around Fort Bragg and in the urbanizing areas of the counties where road improvements have not kept pace with growth. In the larger region these issues are recognized in "hot spots" of congestion and in the use of two-lane rural roads to remotely access Fort Bragg.

In the immediate vicinity of Fort Bragg three primary issues are apparent. Traffic queues at key Access Control Points (ACP) entering post during the morning commute lengthen onto adjoining roadways, causing disruption of vehicle flow. The convergence of Highways 24/87, 210, Murchison Road, and Bragg Boulevard in Spring Lake causes intense traffic congestion during the day and especially during peak military personnel commute times. Several in-progress roadway projects will also have a major impact on the region. These issues are discussed in more detail later in the report.

1. Regional Traffic "Hot Spots"

Congestion in Sanford and Southern Pines are two examples of where an urban area is growing rapidly and the major highway corridor runs through the downtown. In both Lee and Moore County improvement to US 1 outside the downtown area has facilitated access to the broader region; however, access to Fort Bragg is hampered by the congestion in Sanford on US 24/87. In Hoke County US 401 has been improved in the eastern portion of the county to support the growth in that area; however, the road remains a two-lane facility through Raeford and to the western county boundary.

Other areas in the region experiencing growing roadway congestion are those places where the secondary roads provide access to pockets of intense development and growth. The area in western Cumberland County and eastern Hoke County has attracted new residential population largely in response to the local schools and new housing development. Although these roads were not considered as a part of the regional network, they ultimately allow access to US 401 and NC 59 where congestion will continue to grow

2. Access to Fort Bragg

The six primary access points to Fort Bragg experience long traffic delays during peak conditions and, when combined with existing security procedures, produce significant traffic queues.

Area roadways that provide immediate access to Fort Bragg include Murchison Road, Bragg Boulevard, Highways 210 and 24/87 (**Figure 2**). Entry onto the base is through six gates: Manchester, Butner, Randolph, Reilly, Knox, and All American.

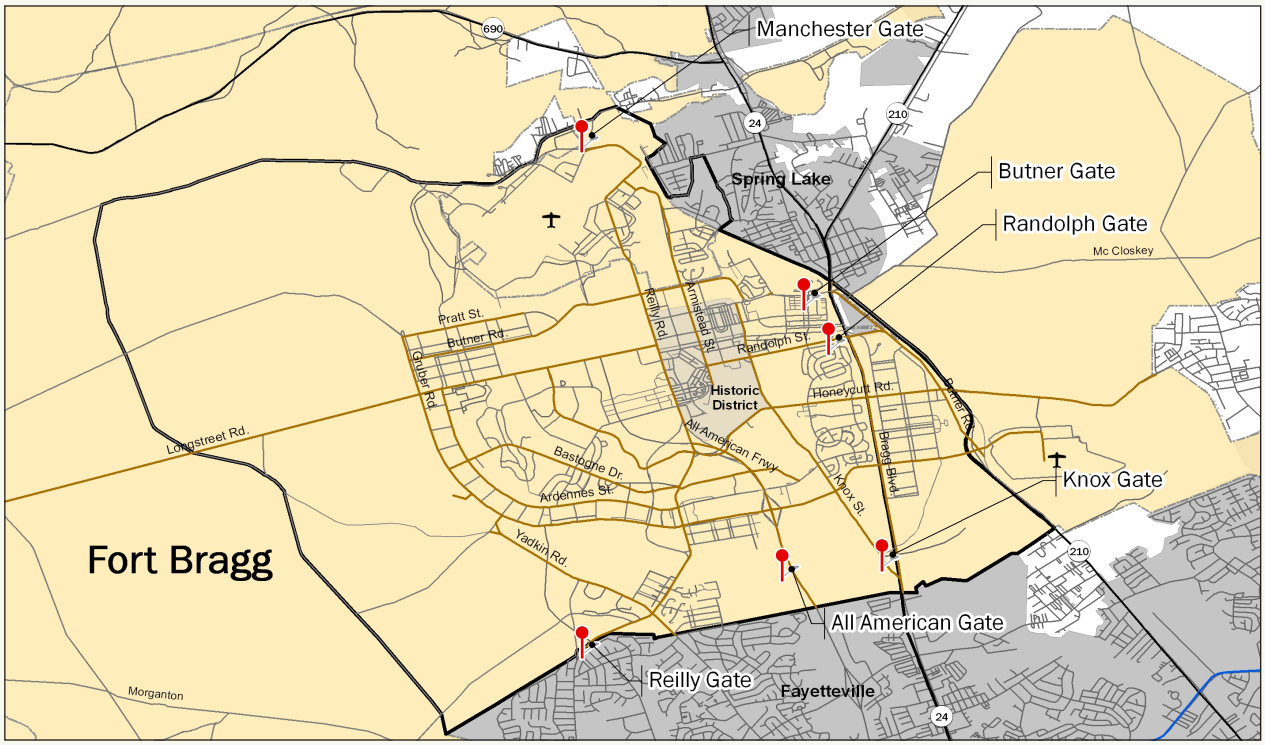
A discussion of the six primary ACP gates providing access to Fort Bragg in terms of their usage and existing conditions follows.

Manchester Gate – This gate, located along Manchester Road west of Highway 24/87, is the northernmost access to Fort Bragg and is adjacent to Pope Air Force Base. Manchester Road connects with Highway 24/87 north of Spring Lake and serves traffic coming to the post from northern Cumberland, southwest Harnett, northern Moore and Lee Counties.

- In 2000, NCDOT counted the traffic volume on Manchester Road at 5,000 vehicles per day. This access is limited in its function due to the congested and circuitous route traffic follows on-post from this point. The *Fort Bragg Comprehensive Traffic Plan* presents a capacity analysis for 2007 that shows the downstream on-post intersection at Butner and Reilly Roads to have unacceptable delay.

- Butner Gate - This gate is located just west of the Bragg Boulevard and Butner Road intersection. This is the primary gate accessed by traffic coming from north of the post from northern Cumberland, Harnett, northern Moore and Lee Counties. This traffic travels primarily via Highways 24/87 and 210 through Spring Lake,

Figure 2. Access to Fort Bragg



on the very congested South Bragg Boulevard. Before entering the post, the traffic proceeds through the compact area of the Murchison Road and Butner Road intersections with Bragg Boulevard.

- In 2006, NCDOT counted the daily traffic on Butner Road near the Butner Gate at 17,000 vehicles per day. That count occurred during a period when a large number of active duty military personnel from Fort Bragg were deployed oversees, and thus represents a lower traffic volume than typical. In order to account for this and gain a clearer understanding of the typical traffic, as identified by the *Fort Bragg Comprehensive Traffic Plan,* this count was increased by 40%[4] to 23,800. The report also shows the Bragg/Butner intersection to be rated LOS D/E resulting in long delays during peak congestion.

- *Randolph Gate* - This gate is located just west of the Bragg Boulevard and Randolph Road intersection, south of the Butner gate. This gate serves as a secondary access point for traffic from the north. This northern traffic proceeds through the congested Spring Lake region before entering the post.

- NCDOT counted the daily traffic on Randolph Street near the gate in 2006 at 7,800 vehicles per day. Adjusting for deployments brings this to 10,920 vehicles per day. The Onyx report shows the Bragg/Randolph intersection to be rated LOS D/E or having long delays during times of peak congestion in 2007.

- *Reilly Gate* - This gate is located just south of the Canopy Lane and Reilly Street intersection at the base's southern border. It currently serves traffic coming from western Cumberland, Hoke, and southern Monroe Counties. Reilly Street is a highly congested roadway; with an adjusted daily traffic volume of 30,800 vehicles per day in 2006. The Reilly Road gate was rated as LOS F in the afternoon peak in 2007 in the Onyx report.

4. *Fort Bragg Comprehensive Traffic Plan*, Onyx Group, p.13.

- *Knox Gate* - This gate is located just west of the *Bragg Boulevard and Knox Street intersection*. The gate serves traffic in Cumberland County to the northwest of Fayetteville. In 2006, an adjusted traffic count of 7,980 vehicles per day was measured near the Knox gate. The Bragg/ Knox intersection also was shown to have a rating of LOS D/E or having long delays in the Onyx report.

- *All American Gate* - This gate is located at the All American Freeway south of the Gruber Road interchange. This freeway serves traffic entering the post from Cumberland and Robeson Counties.

In 2006, the adjusted average daily traffic near the All American Gate was 53,200 vehicles per day. Several intersections or ramps along the All American Freeway on-post were rated to have LOS D/E or F or having long delays in 2007 in the Onyx report.

This access information is summarized in **Table 1.**

These primary gates have long traffic delays during peak conditions and combined with existing security procedures produce significant traffic queues.

3. Congestion in the Town of Spring Lake

The Spring Lake area access roadways and access points show that the system is under stress during existing or expected conditions.

Several arterials that traverse the Spring Lake area carry substantial Fort Bragg traffic, and will be impacted by military-related growth. Among those roadways are Bragg Boulevard, Murchison Road, NC 87/24, and NC 210.

- *Bragg Boulevard* – This roadway is a primary throughway for north-south traffic in the area. From Santa Fe Drive in the south heading northward, Bragg Boulevard is a divided arterial with three northbound lanes and two southbound lanes. Between Knox Street and Butner Road, Bragg Boulevard becomes two lanes in each direction. Additional turn lanes are added at several intervening cross street intersections. Adjusted 2006 traffic counts were 57,400 vehicles per day along Bragg Boulevard just north of Santa Fe Drive, 49,000 north of Knox Street, and 49,000 between Randolph Street and Butner Road.

- *Murchison Road* – This highway intersects Bragg Boulevard just north of Butner Road and proceeds in a southeasterly direction into downtown Fayetteville. Murchison Road is a 4-lane divided arterial with turn lanes added at key intersections. Adjusted 2006 traffic counts were 22,400 between Randolph Street and Honeycutt Road, 21,000 just south of the Gruber Road intersection, and 18,200 north of the Shaw Road intersection.

Table 1. Access information for Fort Bragg's six primary gates.

Gate	Type of Access	2006 Adjusted Traffic Count	County of Origin for Traffic
Manchester/ Armistead	ID only	5,000	Cumberland, Harnett, Moore, Lee
Butner	ID only	23,800	Cumberland, Harnett
Randolph	ID & Visitor	10,920	Cumberland, Harnett
Reilly	ID only	30,800	Cumberland, Hoke, Moore, Richmond, Robeson
Knox	ID only	7,980	Cumberland
All American	ID & Visitor	53,200	Cumberland, Hoke, Richmond, Robeson

- *NC 87/24* – Highway 87/24 is an extension of Bragg Boulevard north of the intersection with Murchison Road to Harnett County. The highway has four northbound lanes and five southbound lanes between Murchison Road and Wilson Avenue, three lanes in each direction from Wilson Road to the intersection with Highway 210, two lanes northbound and two lanes southbound from Highway 210 northward. Adjusted 2006 traffic counts were 67,200

between Murchison Road and Spring Avenue, 43,400 south of Odell Road, and 33,600 north of Vass Road.

- NC 210 – Highway 210 is Murchison Road south of the intersection with Bragg Boulevard and turns northeast beyond Spring Avenue into Harnett County. This latter section is a 4-lane divided arterial roadway. Adjusted 2006 traffic counts were 33,600 north of Spring Avenue, 28,000 north of Samuel Drive, and 23,800 north of Chapel Hill Road.

Highway 24/87, Highway 210, Murchison Road and Bragg Boulevard all have current traffic volumes greater than the roadways capacities. Other area roadway volumes that were approaching their highway's capacity near Fort Bragg ACPs include Reilly, Manchester, and Butner Roads as well as Randolph Street.

In summary, the traffic counts and model results from the Spring Lake area access roadways and access points show that the system is under stress during existing or expected conditions. Planned roadway improvements should increase system capacity and improve traffic flow along the perimeter of the base. However, increased traffic due to military-related growth will add congestion to the area's roadways.

4. Planned Roadway Improvements

Planned improvements to Murchison Road and the I-295 extension along with the closure of Bragg Boulevard will have a major impact on traffic in the Fort Bragg area.

Several roadway projects are planned that will have a major impact on traffic in the Fort Bragg area.

- *I-295 Extension* – This roadway improvement will bring a multilane freeway to the southern boundary of Fort Bragg and will ultimately connect the area to I-95 to the north and south. This freeway will spread out traffic accessing the base along the southern boundary. The sections from U. S. 401 north of Fayetteville to Bragg Boulevard are due to be completed in fiscal year 2011. The sections to the west and south to connect with I-95 in Hoke County have a long term horizon. Highway interchanges will be constructed at Murchison Road, Bragg Boulevard, and the All American Freeway. This is a very important project that will aid the region in addressing traffic congestion at the base's southern periphery.

- *Murchison Road Improvements* – NCDOT's Transportation Improvement Program (TIP), the state's seven year transportation construction program, calls for this highway to be upgraded to a six-lane, interstate-standard facility. The southern portion of the project from the Fayetteville Outer Loop (I-295) to the interchange with Honeycutt Road is due for completion in fiscal year 2009. The northern portion to the Highway 24/87-Highway 210 separation in Spring Lake is currently unfunded. With the closure of Bragg Boulevard, this would be the only highway in the area available for civilian north-south travel. The short term improvements should help distribute traffic more evenly to the eastern gates. When fully implemented and combined with the I-295 extension, traffic will more easily be able to access gates along the southern and eastern border of Fort Bragg.

- *Closure of Bragg Boulevard* – This crucial link in the highway network is due to be closed to non-base traffic from north of the Knox Street intersection to south of the intersection with Butner Road. The timing of this project is contingent upon the completion of the Murchison Road improvements. The closure will reduce overall north-south capacity, but the effect on base access and on other area roadways is uncertain without a more complete traffic analysis.

Fort Bragg Post Wide Thoroughfare Plan Recommendations – The Fort Bragg Comprehensive Traffic Plan includes a number of recommended roadway improvements.

- *Spring Lake/Odell Road ACP* – A suggested project is the connection of Odell Road with

Armistead Street to the east of Pope Air Force Base. Odell Road is located south of and parallel to Manchester Road. An additional access point along Armistead Street is part of the project, which would allow traffic in northern Cumberland and Harnett Counties to enter the base without traveling through the Spring Lake congested area. The Manchester ACP would be closed as a result. As part of this project Armistead Street would be widened to four lanes which should increase the throughput of this northern ACP over the existing situation.

- *Other Improvements* – The Onyx report identified a number of internal base intersection improvements and roadway realignments which would allow for smoother post traffic flow. Included in the recommendations is extending All American Freeway west of and parallel to Reilly Road and connecting to Butner Road. This addition would improve access to the northwestern post area from the south. Longstreet Road would be extended and realigned to promote easier east-west travel through the base, a needed improvement with the FORSCOM development, which will add to the traffic in the post's Historic District.

5. Mass Transit

Mass transportation (bus transit) in the region around Fort Bragg is still developing. Transit on Fort Bragg itself is also in its initial phase of development.

a. On-Post/Fort Bragg

There is only one shuttle bus service operating on the post. The shuttle bus is fare-free and circulates among twelve stops twice an hour. It interfaces with FAST at the Butner ACP. There are no known plans for the system's expansion in the future.

b. Off Post/Fayetteville Metropolitan Area

Currently, the Fayetteville Area System of Transit (FAST) operates a very basic radial fixed route system. Ridership is good for what is offered, with 356,803 new passenger trips generated in the last ten years (1,103,648 passengers for FY 1996 and 1,460,451 passengers for FY 2006). The FAST system is under stress at this time to service the area outside of Fort Bragg. There is no obvious improvement to FAST that would enable it to provide more service to Fort Bragg at this time.

B. Future Needs

The population growth anticipated as a result of the expansion at Fort Bragg will exacerbate stresses on the region's transportation system. The additional personnel that will move to the Fayetteville area will have a wide-ranging impact on traffic, particularly on on-post roadways, Access Control Points (ACP), and the major travel corridors surrounding the base. Throughout the larger region, roadways that support Fort Bragg's transportation needs as well as the ability of residents to access the post will require improvement to provide regional connectivity. Cumberland County will continue to offer the primary access points to Fort Bragg for both civilian and military access; however, entrance to the installation from other counties is desirable with a primary benefit being reduction of congestion in the Spring Lake area. There are a considerable number of identified Transportation Improvement Program (TIP) projects in the Fort Bragg Region in various stages of completion and funding that must be aggressively supported in order to maintain mobility throughout the region. In addition, increased availability and usage of mass transit could help alleviate the growing congestion and decrease the time needed to access the base.

1. Impacts of Military-Related Growth on Access to Fort Bragg

The military-related growth in the region will have a significant impact on traffic in the region. The Spring Lake area and the access roadways south of Fort Bragg will bear the brunt of the traffic inflow. Wayside Road in Hoke County will also be heavily impacted. The extension of I-295, an interstate highway, along the southern post border will increase

east-west capacity and spread out traffic at the base's southern access points. The Murchison Road improvements should distribute north-south traffic flow more evenly to the eastern access control points.

The additional personnel that will move to the Fayetteville area due to military-related growth will have a wide-ranging impact on traffic, particularly on on-post roadways, ACPs, and the major travel corridors surrounding the base. Projections presented elsewhere in this Report indicate that over 40,000 new residents will arrive to the region by 2013 as a result of the military realignment. The majority of these new residents would live off-base in Cumberland County and the surrounding counties. The remaining nearly 9,000 residents would live in military housing; either on-base, in rental housing, in the Linden Oaks community or in other privatized housing.

For the most part access to the post is expected to follow the major travel corridors in the area. Residents of the Linden Oaks community, located six miles north of the Manchester gate, would access the base via Highway 24/87 to the Butner, Manchester, or the proposed Armistead Street ACPs. Over 1,500 homes are planned for this area, which will have a significant traffic impact in Spring Lake. Other Harnett County residents will access the base from Highways 24/87 or 210 likely through the Butner or Randolph ACPs. Residents of Hoke, Richmond, southern Moore, and Robeson Counties will enter Fort Bragg via a southern route. Residents of northern Moore and Lee Counties could come to the base via the Armistead Street gate or potentially a new ACP to the west along Vass Road. **Figure 3** summarizes these routes.

Both Spring Lake and the access roadways south of Fort Bragg will bear the brunt of this traffic inflow. With the planned improvements of Murchison Road and the I-295 extension, the southern area will be better able to handle the additional traffic demand. The ACPs already experiencing long delays will need to deal with the added traffic as well.

There are a growing number of military-related personnel living outside Cumberland County particularly in Hoke and Harnett Counties. US 87/24 offers a freeway connection for Harnett County which adds to the congestion in Spring Lake. In Hoke County access is often used via Wayside Road which connects to Plank Road on the post. Wayside Road is a two-lane road with significant development and many driveways. Increasing use of this road to access Fort Bragg poses both safety and congestion issues for the future.

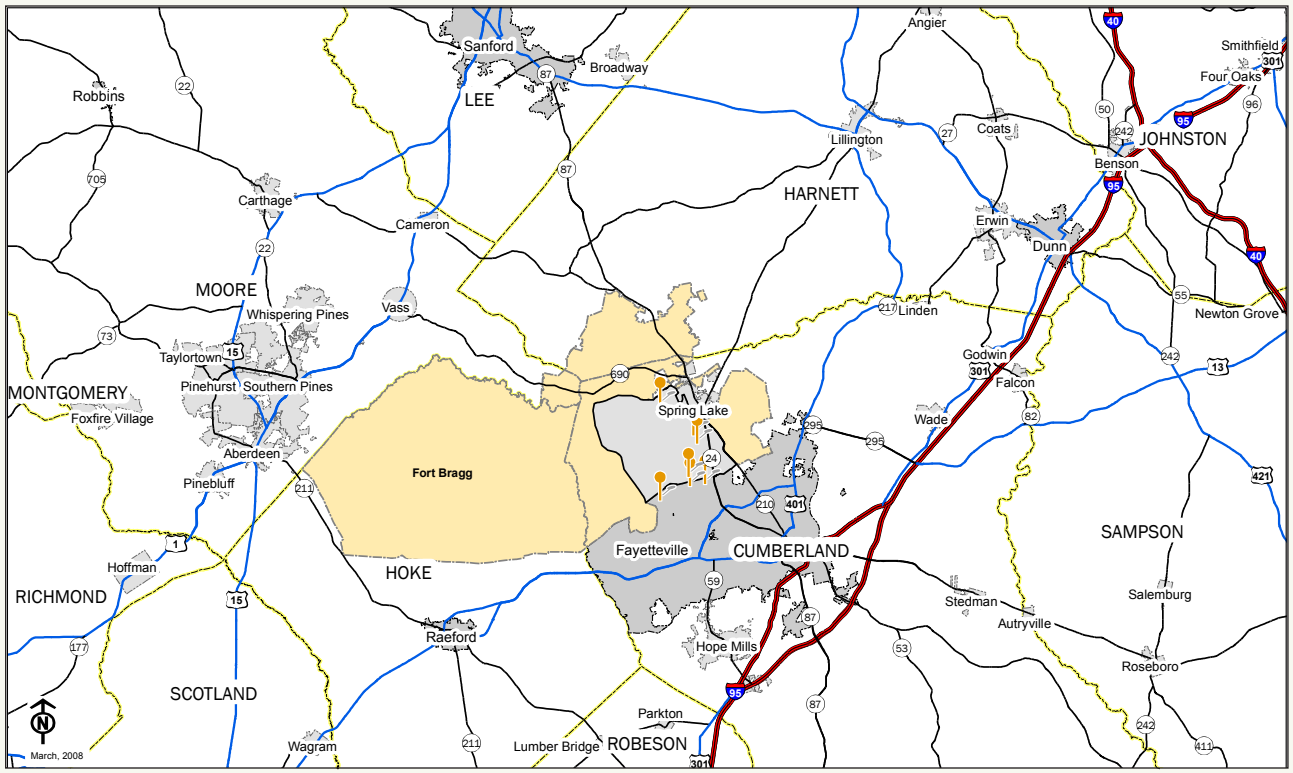
Access to Fort Bragg from more remote counties will be increasingly important as both residential and commercial development occur. Although there is access via both Plank Road and Vass Road (NC 690) these facilities may not be adequate for a growing demand.

It is not possible to quantitatively predict all of the impacts of NCDOT and on-post highway projects at this time. The FAMPO travel demand model does not include sufficient detail about traffic into and on Fort Bragg to test the improvements in the Thoroughfare Plan or to analyze the area's peaking conditions, and the Onyx model does not cover all of the areas of Fayetteville needed to test the impact of the I-295 extension or regional impacts of the military-related growth. In addition, the plan for the Murchison Road improvements has not yet been finalized and the total impact of the planned Bragg Boulevard closure is uncertain. Further study is needed to provide a comprehensive assessment of the on- and off-post projects.

Several important points can be made in regard to the planned roadway projects, however. It is apparent that having I-295—an interstate highway—on the southern post border with interchanges at Murchison Road, Bragg Boulevard, and All American Freeway, would greatly increase east-west capacity and would spread out the traffic at the base's southern access points. In addition, the Murchison Road improvements have the potential to distribute north-south traffic flow more evenly to the eastern ACPs.

The on-post improvements recommended in the Onyx report should improve access in the northern base area with the Odell Road and Armistead Street connection. Other on-post realignments would provide some improvements in flow, though several roadway corridors would continue to be impediments to efficient traffic flow inside the post.

Figure 3. Major Travel Corridors in the Fort Bragg Area



2. Transportation Improvement Projects

There are a considerable number of identified TIP projects in the Fort Bragg Region in various stages of completion and funding. Projects that provide significant support to the growth at Fort Bragg, regional connectivity, and/or connectivity to external areas of importance will require ongoing support. Those projects that represent an immediate need and provide direct support of the expansion at Fort Bragg are ranked as the highest priority.

The technical analysis supporting this planning effort is based on the existing capacity of the regional highway network (supply) compared to the existing traffic volume on these roads (demand). The current balance of supply and demand allows a comparison between the amount of unused capacity that is present today and the reasonably foreseeable impacts of population growth on a county by county basis. The assessment of regional roadway needs is developed from the transportation planning structure provided by the North Carolina Department of Transportation (NCDOT).

Transportation projects that have been approved by the Board of Transportation for funding are identified in the Transportation Improvement Program (TIP), which is a federally mandated program developed by NCDOT in consultation with the MPOs and RPOs. The TIP provides both funding and schedule for those transportation construction projects that are selected for planning, design, or construction over a seven year period. The document is updated biannually to reflect schedule and/or funding changes, and to allow for public comment. Each planning organization provides to NCDOT a list of project priorities for each two-year cycle of the TIP. The priority lists represent those projects that have already been designated by a TIP number as well as new needs identified locally.

There are a considerable number of identified TIP projects in the Fort Bragg Region in various stages of completion and funding. While each county and planning region has a substantiated need for the selected projects, not all projects provide a region-wide benefit. In order to capture a relative importance with regard to the expansion at Fort Bragg, a tiered

grouping has been developed for this report. Projects that provide significant support to the growth at Fort Bragg, regional connectivity, and/or connectivity to external areas of importance are included in this prioritization.

The three project priority groups are:

- Level 1: Represent an immediate need and provide direct support of the expansion at Fort Bragg
- Level 2: Improve connectivity between Tier I counties and Fort Bragg
- Level 3: Improve connectivity across the full Fort Bragg Region

This study is intended to result in a series of transportation recommendations that are mutually agreed to by the state and the local area so that the required actions can be taken with a consistent understanding and support. At the county and municipal level, NCDOT uses County Transportation Plan (CTP) studies to identify transportation needs. Every effort was made in this study to ensure that the planning recommendations are consistent with state practice and can assist in the development and adoption of local CTP maps.

a. Level 1 Priority TIP Projects

The most immediate transportation need of the region is to provide easy access to Fort Bragg from those counties anticipated to be most significantly affected by the military-related growth—Cumberland, Harnett, Lee, Moore, and Hoke Counties. These counties are adjacent to the installation boundary, and represent opportunities for access as well as unique challenges. Direct access to Fort Bragg from these counties while providing relief to the congestion in Spring Lake is the most urgent transportation need of the region. The most important Level 1 projects are listed in **Table 2**.

Table 2. Level 1 transportation projects in the Fort Bragg region.

Regional Highway	County	Related TIP Projects
Murchison Road (NC 210)	Cumberland	U-4444
Fayetteville Outer Loop, I-295	Cumberland	X-0002, U-2519
Sanford Bypass (NC 87 – US 421)	Lee	R-2417C, R-2417AA

Cumberland County has a large number of transportation improvement projects that will support increased access to Fort Bragg. The most significant of these are the Murchison Road Project. In addition the completion of the Outer Loop is active in the eastern portion of Cumberland County with construction of several sections to begin in fiscal year 2009. The section of the project in western Cumberland County with connection to Hoke County remains unfunded in the 2009-2015 Draft TIP. For this reason, those counties to the west of Cumberland County will continue to rely heavily on US 401 for access to Fort Bragg.

The intent to close the section of Bragg Boulevard through Fort Bragg has resulted in an acceleration of the Murchison Road project to handle the increased traffic demand. Improvements to Murchison Road have been identified for some time but have a heightened level of importance based on the intent to close a portion of Bragg Boulevard. Every effort is being made to escalate the design and construction of this project, and the Department of the Army has agreed to provide supporting funds. Linked to this project is the completion of I-295, which ultimately will benefit the entire region by providing improved access to Fort Bragg and Fayetteville.

The completion of the Sanford Bypass represents the highest priority for the Triangle Area RPO[5]. The two associated projects will provide a high mobility corridor for NC 87 into the Fort Bragg region for residents of Lee County as well as supporting connectivity to US 1 and the Triangle Region. Both Harnett and Lee Counties depend heavily on NC 87 for access to Fort Bragg. Traffic on this road will continue to increase as a result of the military-related growth. NC 87 provides a high mobility corridor from the rural area, but will ultimately place more traffic in the Spring Lake area. Congestion in Spring Lake is currently a problem and this will be exacerbated as growth continues.

5. The Triangle RPO represents Moore, Lee, Orange, and Chatham Counties.

Moore and Hoke Counties have several routes that provide access Fort Bragg; however, reliance on Access Control Points (ACP) in Cumberland County will continue to stress the road network in that area. Hoke County residents are able to access Fort Bragg using Wayside Road (SR 1305) as a connection to Plank Road on the installation. Moore County residents also rely on Plank Road, using its connection to NC 211. Although these access points are not heavily utilized, the road currently has minimal shoulders and has other safety concerns in isolated areas. Vass Road (NC 690) in Moore County currently provides access to Fort Bragg through connection to NC 24/87 in Harnett County.

b. Additional Access Points

Access to the installation from other counties is desirable with potential benefits in the reduction of the congestion in the Spring Lake area as well as the opportunity for both active and retired military personnel to live in the more rural areas of the region.

Cumberland County will continue to offer the primary access points to Fort Bragg for both civilian and military access; however, entrance to the installation from other counties is desirable. The primary benefit would be reduction of the congestion in the Spring Lake area. Secondary benefits include the opportunity for both active and retired military personnel to live in the more rural areas of the region. Access to the north and west of Fort Bragg is available at this time, but could be improved to facilitate a broader distribution of trips both on and off the base.

Vass Road (NC 690) provides a connection to NC 87 for traffic originating in the Southern Pines area and currently accessing Fort Bragg at the Manchester ACP. An existing gravel road provides a connection between Vass Road and W. Manchester Road just west of the intersection of W. Manchester and Lamont Road. Consideration has been given to upgrading the gravel road to a paved roadway and replacing the existing temporary bridge over the creek. Included in this consideration is realignment of both the gravel road and the intersection of Lamont and W. Manchester to provide a single intersection. This connection would provide improved access on the western side of the post.

Vass Road is a priority for Moore County for more reasons than just the need for access to Fort Bragg. The County intends to develop an industrial park on the east side of Southern Pines, and Vass Road would provide convenient access to both Fayetteville and the Research Triangle Park. Concerns expressed with regard to Vass Road improvements include impacts on training activities in the western part of Fort Bragg, as well as environmental issues. The Triangle Area RPO endorses the need for horizontal and vertical alignment improvements from US 1 to the Harnett County line to support the projected traffic needs while improving the safety of the road. The interests of Moore County and Fort Bragg may be served with such improvements along with consideration of corridor protection and future improvement needs.

Wayside Road (SR 1305) is currently utilized by Hoke County residents as a connection to Plank Road, an east-west artery within Fort Bragg. Plank Road also provides a connection to NC 211, and therefore allows access by Moore County residents in the Aberdeen area. Although Wayside Road currently has sufficient capacity to handle anticipated traffic volumes, the road is densely developed with many driveways. Some improvement may be necessary in order to ensure safe travel along this facility. Potential changes to the intersection of Wayside Road and Plank Road that would increase safety have been identified in discussions between NCDOT and Fort Bragg, although funding has not been designated. The Lumber River RPO considers improvement to this road important, it is not currently ranked as a priority project. Wayside Road is within the FAMPO boundary, and has not been identified for improvement in the current Long Range Transportation Plan. **Figure 4** identifies the relationship between these two roadways.

Consideration may be given to accessing Plank Road in other areas of Hoke County. Hobson Road intersects US 401 less than three miles west of Wayside Road and also provides access to Plank Road. Hobson Road is less densely developed than Wayside Road and therefore may offer more options for increased traffic.

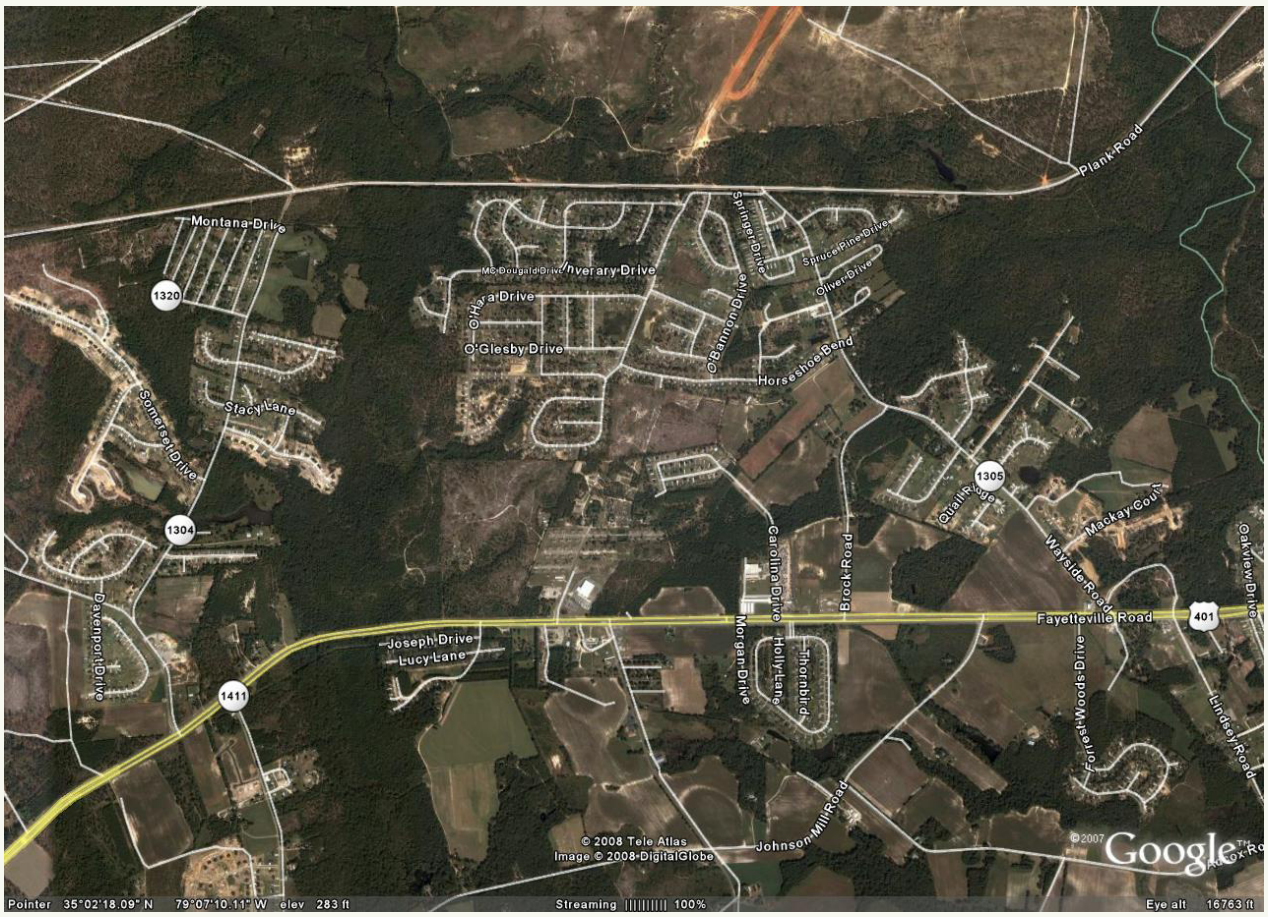
c. Level 2 and 3 Priority TIP Projects

Level 2 and 3 Priority TIP are equally important but more complex and extensive than Level 1 projects, and provide a larger system improvement. They are also significantly more costly and time-consuming to implement.

Increased connectivity with centers of commerce and transportation hubs outside of the region is important for long-term economic development in the Fort Bragg region. The Research Triangle Park (RTP) and the port at Wilmington are activity centers of importance to the Fort Bragg region. Level 2 TIP projects (**Table 3**) represent important improvements to NCDOT's Strategic Highway Corridor system that are either underway or planned for the Fort Bragg region. The state has made a commitment to implementation of the Strategic Highway Corridor plan through adoption by the NC Board of Transportation; however, completion is subject to the constraints of schedule and funding. Local support can positively affect the progress of these projects through planning and design by reducing public controversy and right-of-way impacts.

Level 3 TIP projects (**Table 4**) represent those identified improvements that support connectivity to the interstate system, thus providing access to a larger area for the entire region. Also included in this group is NC 20, which is important as a regional connection to I-95 for commercial traffic. Although this highway does not currently require improvement, this highway provides a shortest path connection to I-95 for trucks in a portion of the Tier I rural area in the region and this use may impact local travel in the future.

Figure 4. Aerial of Wayside and Hobson Roads



3. Mass Transit

Increased availability and usage of mass transit could help alleviate the growing congestion and decrease the time needed to access Fort Bragg. Currently, Cumberland County and Fort Bragg are the only parts of the region with a public transit system. Transit service needs to be planned and implemented both on- and off-post due to the military-related expansion as well as natural growth of the region. Additional bus interfaces with Fort Bragg would make it more convenient for people to commute to the base by bus.

The military-related growth will exacerbate stresses on the region's transportation system. Increased usage of mass transit could help alleviate the growing congestion and decrease the time needed to access the base; further increases in gasoline prices could boost transit usage. On-base transit will face the same challenges that now face the Fayetteville Area System of Transit (FAST) if transit is not incorporated into the traffic planning for on-post circulation. At this time, there are no plans to actively manage parking, transit, and traffic operations in a coordinated and complimentary fashion with supporting linkages to the Access Control Points (ACPs) or gates and the external transportation system. Transit service needs to be planned and implemented both on- and off-post due to the military-related expansion as well as natural growth of the region.

Table 3. Level 2 transportation projects in the Fort Bragg region

Regional Highway	County	Related TIP Projects	Project Status
US 401	Cumberland, Hoke, Harnett, Scotland	R-2508 R-3333 R-2609	Unfunded Unfunded Unfunded
US 1	Richmond, Moore	R-2501 R-2502 U-5010	Construction 2013 Construction Active Construction 2013
NC 24/27	Montgomery, Moore, Harnett	R-0623 R-2107 R-2527 R-2528 R-2529 R-2212	Construction 2011 Construction 2009 Construction 2014 Unfunded Construction Unfunded Construction 2013
NC 87	Harnett, Cumberland, Bladen	R-2561 R-2562	Right of Way 2013 Construction Active
NC 211	Moore, Hoke	R-2592	Construction Unfunded

Table 4. Level 3 transportation projects in the Fort Bragg region

Regional Highway	County	Related TIP Projects	Project Status
I-73/74	Montgomery, Scotland, Richmond, Robeson, Bladen	I-3801 I-4923 R-3421 R-0513 I-4406	Construction unfunded Unfunded Right of Way 2010 Construction Unfunded Construction 2011
I-95	Robeson	I-3806	Unfunded
NC 24	Cumberland, Sampson	R-2303	Construction 2011

a. On-Post/Fort Bragg

A near-term and significant improvement to the on-post shuttle bus service would be to provide fifteen minute headways (time between buses). Another gate interface to connect to FAST would also be a significant improvement. The Reilly ACP is very close to the existing FAST Route 17, so there is an opportunity, should Reilly Road be improved, for the Reilly Road ACP to provide another internal/external bus interface.

b. Off-Post/Fayetteville

On November 24, 2003, the City of Fayetteville increased its population by annexing approximately 43,000 persons. As a result, a Countywide Transit System Plan[6] was developed for FAMPO. The most significant recommendations of the report were to convert the current radial transit system to a feeder/mainline system. While it is feasible to implement a new transit system, it is very expensive. The proposed system would incorporate small vehicles to provide curbside demand-response transportation within transit zones and standard transit vehicles to transport passengers between zones. The service standard would be fifteen minutes response time and no more than fifteen minute travel time to the transfer point. The new system would include the 43,000 new city residents as well as service to previously annexed

6. Fayetteville Area MPO. (2004). *Countywide Transit System Plan*

areas (Tiffany Pines, Warrenwood, Westgate, etc.) that are currently without public transportation.

FAST needs to expand in the same way to include Fort Bragg as another community that needs public transportation, with more service to gate interfaces at Fort Bragg to include ACPs at Reilly, Honeycutt, and Bragg Boulevard. As documented in the 2030 Cumberland County Joint Growth Strategy Plan[7] FAST should expand and develop express bus service along the following routes: NC 24 to Stedman; I-95 by way of I-295 to Godwin, Falcon and Wade; and by way of Ramsey Street to the Linden Community Growth Areas. These express bus services would also benefit Fort Bragg.

c. Off- to On-Post Transit (ACP) Interface

At this time there is only one internal-to-external bus transfer interface at Fort Bragg, located at the ACP on Butner Road. There are no existing bus interchange passenger counts available at this time. There has been some discussion at community meetings of the possibility of modifying ACP locations based upon security and traffic queuing. However there has been no discussion of bus interfaces being further developed at key ACPs.

All transportation-related plans for Fort Bragg should include transit interface planning in concert with on-/off-post traffic congestion analysis. True multi-modal transportation planning will require unimpeded bus circulation on-post and to the Bus ACPs. FAMPO should also consider revising the County-Wide Transit System Plan to include Bus ACPs to service/connect FAST to Fort Bragg.

d. Possible Transit Linkages to Surrounding Counties

The opportunities to make transit connections to Hoke and Harnett Counties include: express bus to Bus ACPs, park-and-ride lots in the counties, vanpools, and carpool matching. Park-and-ride lots should be planned and implemented in areas approximately twenty minutes travel time from the Fort Bragg ACPs. It is well documented that commuters are more willing to carpool if their travel times are over twenty minutes in length.

Service to connect the Heritage Village living quarters to Fort Bragg and the FAST system via the Butner ACP bus interface has been discussed by Hoke Area Transit Services. The next step in planning for the service would be conducting a survey of Heritage Village residents to determine the type of service (frequency of buses, span of service, and types of buses) that may be implemented.. There is no schedule or funding for study completion at this time.

e. Parking On and Adjacent to Fort Bragg

At this time there is no overall management of parking facilities at Fort Bragg as a system. Maintenance of parking is centralized, but the management of individual parking spaces is often left up to the command structure of the adjacent buildings. Management commonly consists of no more than the reservation of a few selected spaces adjacent to the buildings for use by high ranking officers and/or principle command staff members.

f. Future Trolley or Light Rail to Fort Bragg

A previous light rail study[8] indicated that the existing rail lines and previous station locations did not generate the ridership necessary to obtain federal funding. The study examined the possible ridership that would be generated by connecting light rail stations from Fort Bragg to Cross Creek Mall to Downtown Fayetteville to a Riverfront Tourist Area. Because the amount of ridership did not justify the great expense of constructing a rail system, the project has been postponed. The projected travel and population increases resulting from the military expansion would not likely create an increase in the ridership sufficient to justify the expense of a new fixed guideway system in Fayetteville. However, a new light rail study that includes express bus services with bus feeder plans should be conducted to determine if light rail will become feasible in the next ten to twenty years. Land use plans and a source of permanent local transit funding will also have to be in place prior to developing a financial feasibility study with new ridership forecasts. The local revenue

7. Cumberland County Joint Planning Board. (2007). *2030 Growth Strategy Plan*

8. Fayetteville Area Metropolitan Planning Organization. (unknown). *Fayetteville Alternative Transportation Feasibility Study*

sources for the FAST system are strained at this time, and there is some discussion by local elected officials about finding additional resources for the bus system.

C. Gaps

Key area roadways in the immediate vicinity of Fort Bragg and access points to the post are currently at or beyond their capacity levels. Measures that could help alleviate issues at the access points include modifications at the existing gates as well as increasing the number of ACPs around the post. Because of the limited ability to expand the cantonment area due to its historic and environmental restrictions, it is highly recommended that a comprehensive parking plan be developed for the cantonment area of Fort Bragg. Mobility and access to Fort Bragg from the broader region is currently impacted by areas of congestion where high growth is experienced. Actions that can optimize mobility corridors in conjunction with NCDOT include the extensive use of access management techniques; land development planning that considers impacts to the transportation system, and corridor protection where road expansion is the most reasonable solution. A Travel Demand Program initiated by Fort Bragg and inclusive of the entire region will greatly enhance the transportation system.

D. Access to Fort Bragg

Measures that could help alleviate congestion and queuing issues at the post's access points are: 1) modification of security activities at individual gates during peak travel times, 2) increasing the number of lanes at each gate, and 3)increasing the number of ACP gates around the post.

Key area roadways in the immediate vicinity of Fort Bragg and access points to the post are currently at or beyond their capacity levels. Planned highway improvements should alleviate some of the capacity issues on the southern border, but traffic in Spring Lake will remain a major issue. The additional traffic due to military-related growth will exacerbate roadway congestion and Access Control Points (ACP) traffic queues.

Three measures could help alleviate congestion and queuing issues at the post's access points. One is to modify the security activities at the individual gates during peak travel times. The more intense the security measures taken at the gate stations, the more time they require, thus lengthening the traffic queue. During peak travel times, the queues can extend onto adjacent roadways and impede travel over a wide area. An examination of security procedures with a goal of reducing base access time requires a management policy change rather than an engineering solution.

Secondly, increasing the number of lanes at each gate would increase the throughput of the ACP, especially during times of peak congestion, and thus reduce the traffic queue. This solution, however, would increase the amount of land required for each existing gate. Further study would need to be made to determine if land is available adjacent to the ACPs onto which the gates could expand.

Finally, an increase in the number of ACP gates would also reduce congestion. A new APC will be created with the addition of the Odell-Armistead connection, while the Manchester gate is to be closed. Depending upon the new gate efficiencies, a gain in overall throughput could be achieved. A new roadway connection between Vass Road (609) and Lamont Road is an alternative for improving access to the APC at Longstreet on the western side of the cantonment area. This new connection and use of the Longstreet APC would provide an alternative access for military personnel living in Moore and Lee Counties. This traffic currently enters the post either through the Manchester gate or further south, coming though Spring Lake, so this western gate would reduce traffic congestion in the area. Additionally, the nearby roadway geometrics at other access points could be improved to increase the volume of traffic that the ACPs would allow.

Further study is needed to quantify the traffic implications of the military growth in more detail. This study would be complemented by a comprehensive analysis of all base ACPs that assessed their function and security procedures, and by a

critical examination of expanding the number of ACPs toward key growth locations.

1. Strategies for Enhancing Mobility

Actions that can be taken in conjunction with NCDOT to reduce traffic congestion so that mobility corridors are optimized are: access management, land development planning, and corridor protection.

The following actions can be taken in conjunction with NCDOT to reduce traffic congestion so that mobility corridors are optimized.

- *Access Management*: In order to maintain a high level of mobility on the regional corridors regardless of the number of lanes present, interruptions in the normal flow of traffic need to be minimized. Traffic flow is strongly affected by the number of driveways, number of traffic signals, left-hand turning traffic, and the corresponding reduction in speed limit. Although traffic operation is largely controlled by NCDOT, there are a number of ways local jurisdictions can positively influence decisions made in this regard.

- *Land Development*: Land development has a strong impact on traffic flow on the surrounding road system. Local ordinances and permitting requirements can be used to allow development with the least possible impact to traffic flow. Development which limits the number of access points to a location and considers the impact of left-hand turning traffic on the major roadway will improve traffic flow in areas of growing density. Some counties and municipalities are adopting access management practices to consider along with zoning and permitting requests.

- *Corridor Protection*: NCDOT has a limited ability to protect the right of way needed for highway expansion. In contrast, local jurisdictions can act to safeguard needed right of way during the planning phase of highway improvements by requiring setbacks or setting other restrictions on development.

2. Travel Demand Management (TDM) Program

For TDM to work at Fort Bragg, it needs to work across the FAMPO region and into the adjoining counties. Three TDM program packages are recommended as an example of what could be done at Fort Bragg

Travel Demand Management (TDM) is a set or package of complimentary programs designed to achieve a common goal, a reduction in the number of people driving alone to work. For TDM to work at Fort Bragg, it needs to work across the FAMPO region and into the adjoining counties. Three TDM program packages, summarized in **Table 5**, were developed for the Research Triangle region and are recommended as an example of what could be done at Fort Bragg: The Basic Package would be applied to the entire FAMPO region. The Moderate package includes additional measures that could be targeted specifically to Fort Bragg. The Aggressive package would add further measures in the cantonment area.

The Triangle TDM Plan estimated the changes of travel modes from single occupant vehicles to either shared ride vehicles, transit, or bicycle/pedestrian modes. Any of these shifts would result in reduction in parking demand. As noted in the Triangle Region Long Range TDM Plan, carpools are less efficient at reducing Vehicle Miles Traveled (VMT) than other alternative modes, because carpools still produce a significant amount of vehicle travel.

With the influx of new post personnel and their families, it is highly recommended that Fort Bragg hire a TDM Coordinator and develop one or more Transit Centers near or at the possible bus interface ACPs, no matter which package of TDM programs are adopted by Fort Bragg and the region around the base.

- *Base TDM Coordinator* – There needs to be at least one full-time staff person to develop the initial TDM programs tailored to Fort Bragg's

unique needs. The TDM Coordinator will need to encourage the FAMPO to develop a Regional TDM program, with a coordinator, in concert with the Fort Bragg TDM Plan. This will enable a broader range of TDM services in the region. The Coordinator will also need to be included in any parking or bus service planning performed on or for Fort Bragg.

- *Transit Center\Rideshare Facility(s)* – Fort Bragg's internal street structure could support a hub-and-spoke transit system. Critical to the hub-and-spoke type of transit system is a transit center that enables convenient and efficient bus transfers between routes. Ridesharing facilities (park & ride lots) could be located at the outer edges of the post near ACPs or in between the ACPs and the cantonment area. This type of a system combined with parking management, frequent transit, and TDM programs would enable a "park once" mobility schema for Fort Bragg.

3. On-Base Parking

The most effective package of measures to reduce military commuter parking demand is likely to include: using the supply and price of commuter parking to regulate demand, providing good-quality, attractive alternative modes of travel, and continuing to develop TDM programs to support people who use the alternatives.

Parking expansion plans and future parking management strategies have not been provided for review in this analysis or have not been developed. Because of the limited ability to expand the land use portions of the developed area of the base (the cantonment area) due to its historic and environmental restrictions, it is highly recommended that a comprehensive parking plan be developed for the cantonment area of Fort Bragg. In response to the shift in mission and increase in personnel, parts of the base are expected to become more densely built.

Table 5. Travel Demand Management programs that could be adapted for use in the Fort Bragg region.

Basic Package	Moderate Package	Aggressive Package:
Applies to entire FAMPO Region	Specific measures for Fort Bragg	Specific measures for Cantonment Area
• Ridematching tool enhancements • Travel/trip planning tool enhancements • Emergency ride home (ERH) program enhancements • General marketing support • Annual regional 'try it' marketing campaign • Regional telework program and pilots (also addressing alternative work hours) • Regional reward/incentive based program for alternative commuters • Regional awards program for employers and developers • Regional K-12 schoolpool and Saferides program • Regional assistance with trip reduction programs and development of growth management strategies • Improvements to vanpool product • Regional trainings and workshops	• Increased marketing, promotion and outreach targeted to downtown Raleigh employers • Voluntary site design improvements (preferential parking, bike lockers, transit amenities, etc) and other trip reduction strategies • Carsharing promotion (attracting carshare company and infrastructure) • Special events assistance	• Individualized agency/unit outreach • Financial incentives for alternative transportation strategies • TDM ordinances & Park N Ride ordinances • Mandatory site design improvements (for new and re-development) and trip reduction strategies • Parking Management (including promotion of unbundled leases, cash out programs and fees in lieu of programs) • Develop unit/agency shuttles connecting to on- and off-post transit • Improved transit service and signal prioritization • Fare-Free Transit Policies • Improve network of bicycle lanes and sidewalks • Commuter Store

Source: Triangle Region Long Range TDM Plan (2007), Tables 18 and 20

Some surface parking in these areas will become parking structures; these structures, along with areas of shared parking between facilities, should be documented in the plan.. The recommended parking plan should also mark the beginning of the process to actively manage the parking areas on Fort Bragg.

There currently are no parking occupancy studies or future parking demand studies to determine the most likely areas that could support a structured parking facility on Fort Bragg. However, it should be noted that structured parking is expensive and thus is most feasible in areas of high demand with few options for the expansion of surface parking. Because of the expense, the usual financing of public structures almost always requires a user fee. If a user fee is to be charged, then a free transit alternative with free parking at a park-and-ride lot should be provided simultaneously with the new parking deck.

One concept for a parking deck to service the new FORSCOM headquarters would be to build a secured deck at the ACP nearest the FORSCOM building, and have FORSCOM personnel be shuttled from the deck to their building. This would have to be a mandatory or command-directed activity; despite the much more robust transit system available in the Atlanta Metro Area, 88% of the existing FORSCOM personnel currently use their personal vehicles for commuting to work. Because of the rank structure (mostly field grade and senior NCO) at a Command headquarters, this may not be a feasible parking management strategy. However, it might be possible to implement mandatory deck usage by command as a component of an overall parking management system for the whole post.

The supply and price of parking will be the single largest factor in encouraging greater use of transit or other alternative modes for commuting. That is, 'carrots' in the form of improved transit and other alternatives will have some effect, but a greater effect will come from 'sticks' of limited and/or more expensive parking:

> "Overall, the most important factor influencing modal choice appears to be parking price…. Parking supply also has an important, although less visibly strong, effect. The role of parking supply in establishing parking prices needs to be factored into the evaluation. While the scarcity of parking apparently isn't the most directly compelling signal to travelers, the higher prices it seemingly induces produce the signal that most influences mode choice." *(Traveler Response to Transportation System Changes (TCRP report 95), p. 18-43).*

Ample parking supply makes it hard to introduce effective commute management programs, since it is difficult to price or otherwise restrict the use of parking that employees know to be available. Experience has also shown, however, that other factors such as transit availability and concurrent incentives or programs will also influence traveler response to parking pricing. Raising parking fees substantially without providing reasonable alternatives will have little effect on travel, but will simply serve to generate more funds from parking.

In summary, the most effective package of measures to reduce military commuter parking demand is likely to include:

- Using the supply and price of commuter parking to regulate demand.
- Providing good-quality, attractive alternative modes of travel, so that people can and will respond to the price signals.
- Continuing to develop TDM programs to support people who use the alternatives, as shown in the Triangle Region TDM Plan.

No one alternative mode will be suitable for everybody, so a balanced system of alternatives is needed. The ideal system would include:

- Pedestrian and bicycle access around and to/from the post – this targets people living nearby.
- Incremental improvements to the existing local transit service – this targets people living region-wide.

- Developing key corridors where there are opportunities to be competitive with car travel, with frequent high-quality services aimed at maximizing commuter ridership – this targets particular corridors where additional inroads into parking demand can be made and where there are synergies with other transit needs.

- Developing park-and-ride locations with frequent express service to Fort Bragg – this targets people living in suburban Fayetteville or the wider region for which other transit services are not available or suitable. It also provides park-and-pool opportunities.

4. Regional Transportation Planning

To address the immediate transportation needs in response to the military-related growth, it is recommended that TIP projects are supported using all available means, additional access points to the north and west of Fort Bragg are provided to help relieve the current congestion, and a consolidated sub-area planning study is initiated to provide detailed analysis of the Fort Bragg transportation system in conjunction with the surrounding road network and land use.

In order to address the immediate transportation needs in response to the military-related growth, a three part strategy is recommended:

- Use all available means to support completion of current Transportation Improvement Program (TIP) projects that increase accessibility to Fort Bragg.

- Provide additional access points to the north and west of Fort Bragg to allow dispersion of traffic entering the installation.

- Initiate a consolidated sub-area planning study that provides detailed analysis of the transportation structure and supporting land use around and within the Fort Bragg area.

In combination, these three approaches represent a regional consideration of traffic patterns around the installation supported by the degree of analysis necessary to initiate action by NCDOT and to assist land development decisions in the surrounding counties.

a. Consolidated Sub-Area Planning Study

Transportation planning is ongoing for both Fort Bragg and the extended area around the base; however, this planning does not currently provide a consolidated approach or analysis. Fort Bragg is in the process of updating its Master Plan using the Onyx Group consulting firm; this update includes revision to the base Thoroughfare Plan. This planning addresses the roadway needs within Fort Bragg as well as access point locations on a very detailed level. Concurrently, FAMPO is updating its Long Range Transportation Plan for Cumberland County transportation as well as portions of Harnett and Hoke Counties. Moore County is beginning development of a CTP study for the southern portion of the county including Southern Pines, Pinehurst, and Aberdeen, and both Harnett and Lee have CTP studies in process.

The entire region is expected to experience growth as a result of the military expansion in the short term. In addition to the lack of coordination between these planning efforts, there is no single analysis tool that can evaluate alternative scenarios for roadway needs, base access, as well as land development considerations.

A strong recommendation of this study is to undertake a regional planning study for Fort Bragg and the surrounding area. This study should be limited to the area of these counties that are most affected by transportation around and to Fort Bragg, and should include the development of a travel demand model that can serve the area in the future. This tool will allow ongoing testing of alternative approaches to traffic problems as well as provide a depository for data elements needed to support this level of planning. A period of eighteen months to two years will be needed to complete the study in order to provide appropriate public and stakeholder involvement. The sub-area study and analysis will require oversight outside the present transportation planning structure, which is already heavily burdened in meeting ongoing

planning requirements. The BRAC Regional Task Force can provide great benefit to the local area as well as to Fort Bragg by undertaking leadership of this study.

b. Management of Data for Long Range Planning

Employment data and GIS layers from this study provide technical support for future CTP studies in the region along with data available from Sustainable Sandhills and other individual planning efforts.

Transportation planning has a 20-year minimum timeframe. This period is established by the federal requirements for transportation planning within all metropolitan areas, and takes into consideration the time required to implement a transportation improvement on the highway network. In North Carolina, it takes between eight and ten years to plan, design, and construct an average highway improvement project after funding has been allocated. Environmental issues, public controversy, and other unforeseen circumstances may lengthen this period. Rural areas do not have the federal requirement for a 20-year planning horizon; however NCDOT planning studies are used in this area to provide a similar time frame. Growth within the region related to the expansion at Fort Bragg is projected to peak in 2013. This is too soon for implementation of any highway improvements that have not already been identified.

Collection of data to support long-range planning should also be considered a priority for the region. NCDOT has adopted a planning instrument, the Comprehensive Transportation Plan (CTP) that allows both metropolitan and rural areas to establish their long range goals and visions in a way that that can be mutually adopted by the local jurisdiction and the Board of Transportation. This instrument is not tied to funding restrictions. When a planning study is initiated to develop a CTP, NCDOT requires local governments to provide information and data related to residential and commercial development for the current year as well as projected development twenty years in the future.

Technical support for future CTP studies in the Fort Bragg region that was collected or developed for this analysis is available to MPO and RPO Planners. This information includes:

- InfoUSA employment data for 2006 which identifies number of employees and type of businesses in the Tier I counties. This data is identified by SIC/NAICS code to allow categorization and can be enhanced by placing it into GIS format.

- Projections of future employment in response to the military-related growth. This information will be provided in the appropriate employment category used in transportation planning in North Carolina.

- Shapefiles representing the primary regional highway network used in this study along with road attribute data, traffic count locations, and current volume to capacity comparisons.

This data is supported by other initiatives in the region. Sustainable Sandhills has established a large database of resource and infrastructure information that can support the environmental screening effort that is part of the CTP development. This level of information early in the transportation planning process will allow identification of project alternatives that have fatal flaws due to environmental or development considerations. Discussions have been initiated between Sustainable Sandhills and NCDOT to further enhance the environmental screening by using the same environmental resource layers considered during project development.

North Carolina counties have been encouraged through the One NC GIS initiative to develop a Traffic Analysis Zone (TAZ) structure for the rural areas. This structure is used in all metropolitan areas to capture census data as well as employment data. Harnett, Sampson, and Bladen Counties have completed the development of a TAZ structure, and Cumberland County TAZ is active. In addition, Moore and Lee County TAZ delineations have been provided to Fort Bragg. This structure for socio-economic data will enhance the capability to develop a CTP study for the jurisdiction as well as support on-going planning efforts.

The question remains as to who will take the responsibility for maintaining and updating this data in order to continue supporting planning. Without substantial resource allocation as well as a region-wide reliance on the data, it will quickly become obsolete and a valuable resource will be lost.

c. Unified Transit Planning

The area has a demonstrated interest in public transportation, and air quality issues provide additional incentive to develop a larger public transportation system..

Air quality concerns along with the intended closure of Bragg Boulevard and the congestion in Spring Lake has resulted in efforts to develop a unified approach to transportation issues in the region. A key development occurred in September 2007, when Sustainable Sandhills, the Sustainable Fort Bragg Air Team, and the FAMPO Early Action Compact Air Awareness group came together with a number of stakeholder groups to form the Combined Air Team (CAT).

Among the initiatives CAT is pursuing to improve air quality are two that are particularly relevant to transit planning for Fort Bragg:

- Increase ridership on Fayetteville Area System Transit (FAST) Route 40 which serves Fort Bragg

- Connect Heritage Village, an off-site military housing area in Hoke County, to both FAST Route 40 and the Fort Bragg Shuttle Express

Through involvement of the local residents that this system hopes to serve, CAT has made an effort to establish a concept of the need prior to initiating service. If successful, this could prove to be a model strategy for other areas where off-base housing is provided to Fort Bragg personnel. CAT is supportive of strategies that involve public transportation, park and ride, and innovative partnerships with private developers.

Another concept for improvement of public transportation in the region is a privately-led initiative to add bus rapid transit (BRT) service to the Bragg Boulevard corridor. The "Bragg Innovation Corridor" (BIC) was the inspiration of Fayetteville citizen Menno Pinnick and architect Ron Morgan of Urban Ventures. The concept, based on electric-powered bus rapid transit, called for a series of transit oriented developments along Bragg Boulevard, which would serve 'feeder' bus routes from other parts of the city. The BIC elicited a great deal of interest from local developers as well as elected officials. A major obstacle for this concept is funding. The Federal Transit Administration (FTA) New Starts program is the traditional source for this type of revenue; however, this program has strict requirements for demonstrating system sustainability and national competition for limited funds. These factors make it unlikely that this particular BRT concept could be supported in this manner. Other options for funding include local fund contributions through tax or other revenue and private revenue.

The area has a demonstrated interest in public transportation, and air quality issues provide additional incentive to develop a larger public transportation system. It is recommended that a designated regional advisory team identify future opportunities for the use of public transportation as well as explore funding possibilities.

E. Regional Collaboration

Coordination of transit planning among jurisdictions and integration with other types of planning activities is needed in order for the region to achieve the full benefits of potential transit improvements; this would be facilitated by establishment of a designated regional advisory team

The formation of the Combined Air Team in 2007 demonstrated a strong interest in regional collaboration with respect to transportation issues. A challenge facing all who are involved in transportation planning is that stakeholders have limited time, resources, and ability to affect change in the short term. The BRAC Regional Task Force, through the development of this report, has sought to supplement the capacity of the existing collaborative effort through provision of a forum for discussion

and information sharing among the key transportation planning organizations within the region (Table 6). It is highly recommended that this type of forum be continued so that these organizations can more effectively tackle issues on a regional basis. This forum would be an appropriate venue for exploring how to more fully integrate sustainability concepts into the region's transportation planning, building upon the ongoing efforts of the Combined Air Team.

Access to Fort Bragg will remain an important consideration for the region; local roads that interface with the road system on post are of particular importance. While Fort Bragg has a need to maintain both security and support of its activities, the roads surrounding the installation are also important corridors for county development. It is recommended that Fort Bragg and the surrounding counties develop memoranda of understanding to both protect and support these highways. Improvements to sparsely developed roads will not necessarily increase development; however, agreements in place will protect the environment, the military mission, and the county interest in development. **Table 6**, on the following page lists the members of the Transportation Working Group.

Table 6. Members of the Transportation Working Group

Organization	Representing
Fayetteville Area MPO	Cumberland, Harnett, Hoke
Mid-Carolina RPO	Cumberland, Bladen, Sampson, Harnett
Lumber River RPO	Hoke, Robeson, Scotland, Richmond
Triangle J RPO	Moore, Lee
Piedmont Triad RPO	Montgomery
Fort Bragg	Public Works; Logistics; Sustainable Transportation; Plans, Training, and Mobilization
NC DOT	Transportation Planning Branch, Division 6, Division of Public Transportation
Fayetteville Airport	Assistant Director
Fayetteville Area System of Transit	Director, Planning
Moore County	Planning Department, Chamber of Commerce
Sustainable Sandhills	Director, GIS
Fayetteville / Cumberland County	Engineering, BRAC Project Committee
Fort Bragg Land Use Advisory Commission	Director
Private Sector	Development, Consulting
BRAC RTF	Planning
Fish and Wildlife Service	Sandhills Office

II. Recommended Actions

Critical Action 1: Initiate a sub-area transportation planning and traffic study for the area adjacent to the perimeter of Fort Bragg

Description: This study would require the development of a sub-area travel-demand model to be used for analysis purposes. The area of study would include portions of Cumberland, Hoke, Moore, and Harnett Counties. This model would measure the potential impacts of both NCDOT and on-post highway projects, providing enough detail—about traffic into as well as within Fort Bragg—to support the posing and evaluating of alternative traffic scenarios. The model would be comprehensive enough to analyze the area's peak conditions and dynamically measure the impacts of the I-295 extension, the planned Murchison Road improvements, and the closure of Bragg Boulevard. In order to evaluate the traffic flows and queues at the ACP locations and impacted intersections, the sub-area model will be supplemented with a traffic simulation model such as Syncro. The modeling of alternative traffic and land-use scenarios would allow coordinated recommendations to be made regarding new ACPs, additional traffic lanes at the existing ACPs, and an improved transit interface between the on-base shuttle system and the FAST. Participation in the effort by all affected counties and agencies would increase the likelihood of their supporting the study's recommendations.

Responsible Parties: Development and maintenance of the model, to be coordinated by the BRAC Regional Task Force, would be the responsibility of the Fayetteville Area Metropolitan Planning Organization, Fort Bragg Garrison, NC Department of Transportation, and other transportation decision makers.

Critical Action 2: Improve Access to and Integration of the Fayetteville Area System of Transit (FAST) and the On-Base Shuttle Service

Description: The following actions are necessary to promote a more accessible and integrated public transit system that will better serve the Fort Bragg population.

The FAST should consider:

- Expanding and developing express bus service along the following routes: NC 24 to Stedman; I-95 by way of I-295 to Godwin, Falcon, and Wade; and I-95 by way of Ramsey Street to the Linden Community Growth Areas.

- The feasibility of modifying the existing FAST Route 17 to accommodate an additional transit interface with the on-base shuttle at the Reilly Road ACP.

Army Transportation Planners should consider:

- Reducing the on-base shuttle's current headway time (time between buses) from 30 minutes to 15 minutes

- Conducting a survey of the residents of Heritage Village (located in Hoke County) to determine the type of Army shuttle service that may be provided off base. Finally, a fiscal impact analysis should be developed that will identify financial requirements, estimate the costs of providing additional service, and explain the net benefit to the region and to Fort Bragg specifically.

Responsible Parties: The Combined Air Team (CAT) has been planning adjustments that would improve transit access to the base. The BRAC Regional Task Force will facilitate the CAT's efforts and the implementation of any additional actions described in this report in cooperation with the City of Fayetteville, the Fayetteville Area Metropolitan Planning Organization, the Fort Bragg Transportation Office, and other transportation stakeholders.

Important Action 3: Closure of Bragg Boulevard and the Widening/ Improvement of Murchison Road

Description: The closure of Bragg Boulevard though the installation has been a priority element of the Force Protection Plan since 9/11. The BRAC 2005 addition of a four-star FORSCOM/USARC headquarters to be located less than one mile from Bragg Boulevard makes the requirement to close Bragg Boulevard even more critical. In order to accommodate the traffic that currently uses Bragg Boulevard, Murchison Road—a parallel highway—will require significant improvements. Improvements to this roadway were already programmed by the Fayetteville Metropolitan Planning Organization and the NCDOT; however, the increase in traffic demand due to the BRAC and other growth at Fort Bragg will result in much higher than previously projected traffic volumes. The net result of this increase is the need to construct grade-separated interchanges on Murchison Road at Randolph and Honeycutt Roads rather than the originally planned for at-grade intersections. The resultant increase in costs means that the project has been significantly underfunded by the NCDOT. A separate White Paper requesting additional funding for this project has been prepared by the BRAC RTF. It is important that the funding for the $16.26 million shortfall be funded and that the Murchison Road improvements proceed in a timely manner.

Responsible Parties: Murchison Road is a state roadway and the primary agency responsible for improvements and maintenance is the NCDOT. They have committed funding for the project and the Defense Access Road (DAR) program has requested funding.

Critical Action 4: Hire Base TDM Coordinator

Description: There is a need for a Travel Demand Management (TDM) Coordinator at Fort Bragg to oversee the development and implementation of TDM Programs (carpool, vanpool, priority parking, transit interface at the ACPs, etc.).

The primary purpose of this position will be to develop and market alternative transportation options for the Fort Bragg community. This would include the planning and regional coordination for transit center facilities and transit interfaces at the ACPs. The TDM Coordinator should also develop annual reports that are included in base sustainability reports. The reports should include annual surveys or assessments of commuting by mode (carpool, vanpool, bus, drive alone, bike, walk, etc.). The TDM Coordinator should be available to all the commands and agencies on Fort Bragg to develop individualized TDM programs. Such programs could include flexible work hours that allow employees to carpool more easily, or work-at-home programs for those agencies that are capable of this flexibility.

In addition, the TDM coordinator should develop a TDM web page for Fort Bragg. It should be modeled on the "Militaryonesource" program[9] and be a significant link on the main Fort Bragg web page. All of the programs available to the Fort Bragg community should be listed on the web page.

Sample Job Announcement

> Community Planner
>
> SALARY RANGE: 68,625.00 - 89,217.00 USD per year
>
> SERIES & GRADE: similar to: YX-0020-2/2
>
> MAJOR DUTIES:
> The Fort Bragg TDM Coordinator has responsibility for coordinating with other DOD and DOA agencies and command professional staff consisting of engineers, planners, and related disciplines, technicians, and clerks in furnishing professiona1 support in connection with the collection, compilation, interpretation, and analysis of transportation data related to transportation planning and TDM activities. Performs the continuing transportation data analyses required for Sustainability and TDM Reports; budgeting submissions; feasibility reports; and other

9. http://www.militaryonesource.com/skins/MOS/home.aspx

reports. Plans, directs, coordinates, supervises, reviews and carries out benefit evaluations, ability-to-pay analyses, regional impact assessments, risk and uncertainty analyses, sensitivity analyses, socio-economic, and transportation studies of existing and proposed civil works projects. Prepare analytical reports of findings, including interpretations and conclusions and recommendations. Conducts transit and traffic surveys for justification of transit centers and park & ride lot projects.

Responsible Party: DOA, Army Corps of Engineers. This position would represent Fort Bragg's facilities planning and programming in the development of the transit centers and park & ride facilities, and so it should be a DOD position.

Important Action 5: Support TIP Projects Identified for the Region.

Description: Transportation Improvement Program (TIP) projects across the region are at various stages of completion. A number of these projects are essential for the support of the BRAC effort. TIP projects that are a high priority for supporting the BRAC related growth have been identified at three levels. The Level 1 Priority selected projects represent immediate needs and provide direct support to the growth resulting from BRAC. These projects increase accessibility to Fort Bragg should be supported through all available means. Level 2 and 3 Priority TIP projects are more complex and extensive projects that provide a larger system improvement. These additional projects increase connectivity across the region as well as provide access to the surrounding freeway system and will require local support as well. They are also significantly more costly and time consuming to implement.

Responsible Party: NCDOT has ultimate authority to implement TIP projects. Support for priority projects can be provided through funding allocation beyond those provided by federal and state sources as well as through local support and protection of needed right of way. The Fayetteville Area MPO and Rural Planning Organizations provide local representation in project decision making within the region.

III. Rail Service

The military-related growth in the Fort Bragg region will increase demand for convenient travel options, particularly between Fort Bragg and Washington, DC. As traffic congestion increases in the region in response to population growth, passenger rail also has the potential to be an attractive alternative for people commuting to work within the region. The infrastructure needed for passenger rail service is largely in place, since North Carolina has a relatively high level of existing freight capacity. The current level of available service is insufficient to meet the growing demand. A number of passenger rail initiatives have been proposed in North Carolina that would have a positive impact in the Fort Bragg region, but funding is needed in order to implement these improvements.

As existing highways in North Carolina reach and exceed capacity, and air quality continues decline, transportation planners have shown increasing interest in rail as a sensible alternative to highways. The infrastructure needed for rail is comparatively minimal, as is its impact on the environment.

North Carolina has a relatively high level of existing freight capacity and a modest passenger system upon which to build a rail network to serve every corner of the state,10 including the Fort Bragg region. Importantly, the North Carolina Department of Transportation (NCDOT) is among the nation's leaders in state support for both freight and passenger rail growth.11 North Carolina ranks nineteenth in the nation for total rail miles (approximately 3,200 miles in 2004). An increase in railroad capacity through track and signal improvements is critical to the efficient movement of passengers and goods; over the next twenty-five years the state's freight rail investment will require over $545 million, and passenger rail modernization needs currently top $2.9 billion. Nonetheless, the American Society of Civil Engineers gives the state's rail infrastructure a grade of B-, ranking it higher than North Carolina roads, airports, bridges, and schools.[12]

Railroad freight services contribute significantly to North Carolina's economy. Customers using freight services spend $74.6 million, with a statewide economic impact of $143 million. Freight rail in North Carolina is dominated by Norfolk Southern Corporation and CSX Transportation. Several 'short-line' railroads serve the Fort Bragg region. The Aberdeen Carolina & Western Railway contains 160 miles of track serving the animal processing and mining industries in the area. The Aberdeen Rockfish Railroad connects Fayetteville, Raeford, and Aberdeen, with a connection to Laurinburg.

Although this section deals primarily with the issue of passenger rail and its value to the needs of both the region's military and civilian populations, it is important to recognize that freight rail will play an essential role in any increases in passenger rail service. Outside of Amtrak's Northeast Corridor, which runs from Washington, DC to Boston, practically all of Amtrak's national trains operate over tracks owned by private freight carriers. These access rights, which are non-transferable, were among the conditions of the Rail Passenger Service Act (RPSA, PL 91-518), under which Amtrak13 was created in 1970 and the private carriers relieved of passenger responsibilities.

As noted in various ASSHTO and other reports,14 the freight railroads are operating at or near capacity, and growth is expected to continue. Although Amtrak pays for use of the freight railroad's tracks (a RPSA formula which the private carriers claim is too low), passenger business is relatively small when compared to the freight railroads' core business. This issue is

10. North Carolina Rail Map, December 2007, (http://www.bytrain.org/quicklinks/pdf/railmapdec07.pdf)
11. Southeastern North Carolina Passenger Rail Study, July 2005 (http://www.bytrain.org/future/pdf/July05SENCRPT.pdf)
12. North Carolina Rail Infrastructure Report Card, American Society of Civil Engineers – NC Section, 2006 (http://sections.asce.org/n_carolina/ReportCard/rail.pdf)
13. National Railroad Passenger Corporation (Amtrak) (http://www.amtrak.com)
14. Transportation – Investment in America: Freight-Rail Bottom Line Report, American Association of State Highway and Transportation Officials, 2001 (http://www.camsys.com/kb_cases_freightrail.htm)

magnified when congestion dictates that either the passenger train or the host railroad's freight train be delayed. These congestion issues must be addressed before major capital investments are made toward passenger rail infrastructure.

A. Current Conditions

Long-distance passenger rail service is marginal at best in the Fort Bragg region, with inconvenient arrival and departure times.

Amtrak operates four daily long-distance trains in North Carolina. Two of these serve Fayetteville, providing twice-daily departures north to Washington D.C., the Northeast Corridor and New York City, and south to Savannah and Miami. Southern Pines and Hamlet are served by a single train with endpoints in New York City and Miami. This is marginal service at best, with two-thirds of the arrivals/departures being late at night or very early in the morning. There is no service to the east (Wilmington), or to the west to Raleigh (from Fayetteville), Charlotte, or Atlanta.

Under contract with Amtrak, NCDOT sponsors two daily trains. The *Carolinian* provides service between Charlotte, the Triad, the Triangle and the Northeast Corridor. The *Piedmont* provides service between Charlotte and Raleigh. Near-term goals include several additional Charlotte-to-Raleigh frequencies. (On June 4, 2008 Governor Easley announced the addition of a third Raleigh to Charlotte frequency to start later this year.) Longer-range goals include higher-speed service to the Northeast Corridor in partnership with Virginia, and service to Asheville and the rest of Western North Carolina. Service between Raleigh and Wilmington, with routes via Fayetteville and Goldsboro, is also being considered.

B. Future Needs

A number of passenger rail initiatives have been proposed in North Carolina that would benefit the Fort Bragg region by providing enhanced service to other parts of the state, and to Washington, DC, and the Northeast Corridor. Funding is needed to implement these improvements.

As the population in the Fort Bragg region increases, there will be increasing need of, and support for, passenger rail service. In particular, the transfer of FORSCOM to Fort Bragg is likely to increase the demand for transit options between Fayetteville and Washington, DC. Passenger rail has the potential to satisfy a significant part of that demand.

A number of passenger rail initiatives, described below, have been proposed in North Carolina that would impact the Fort Bragg Region. Funding is needed in order for any of these initiatives to move forward.

Raleigh-Wilmington Service: The one active NCDOT passenger rail program that includes Fayetteville/ Fort Bragg is the proposed service from Raleigh-to-Wilmington via Fayetteville. This route is presently unfunded and of relatively low priority, although a needed connecting track at Pembroke is being undertaken as a freight project to permit better military access to the port at Wilmington.

Raleigh-Fayetteville Commuter Rail Alternatives: NCDOT's 1999 study, Potential North Carolina Commuter Rail Corridors15 provided a brief overview of two alternative commuter lines to connect Fayetteville and Raleigh. Alternative A is a 63-mile route that runs along U.S. 401 through Fuquay-Varina and Lillington. Alternative B runs for 77 miles, paralleling U.S. 70 to Selma, and then running along I-95 to Fayetteville.

Both of the proposed routes between Raleigh and Fayetteville are over existing freight lines. By way of Selma, the route follows Norfolk Southern and CSX tracks that are signaled and maintained for passenger speeds of 79 mph. However, the Fayetteville-to-Selma segment is approaching maximum capacity and the route is approximately fourteen miles longer than the route via Lillington and Fuquay-Varina. This route, in addition to being much shorter, is a lightly used Norfolk Southern spur line with only modest potential for freight traffic growth. Maximum passenger speed, however, is in the 49 mph range, which will require upgrading for competitive passenger service.

15. http://www.bytrain.org/quicklinks/reports/commuter.pdf

The largest number of potential rail commuters (**Table 7**) for the Lillington Route commute from Harnett County to Wake and Cumberland Counties. By far the largest number of potential rail commuters on the Selma route commute from Johnston County to Wake County.

The Southeast High Speed Rail Corridor (SEHSR): The Southeast High-Speed Rail Corridor is one of eleven Federally-designated high-speed corridors.[16] The first leg of this corridor would provide high-speed passenger rail service from Washington, DC to Charlotte, NC with top speeds of 110 mph and average speeds between 85-87 mph. Future routes within the SEHSR include Charlotte-to-Atlanta and Raleigh-to-Savannah. To benefit Fayetteville and the Fort Bragg region, a third leg running from Raleigh through Fayetteville and along the South Carolina coast via Florence and Charleston to Savannah should be considered. It is anticipated that the Washington, DC-to-Raleigh portion of the SEHSR corridor will be one of the first designated corridors to receive funding when it becomes available, due to its advanced level of design.

Additional New Services: Over the past several months, Amtrak has received numerous requests for studies of new passenger rail services. These include new routes as well as additional service on existing routes. Undoubtedly, much of this interest has been driven by increased highway congestion and the rise in gas prices. Amtrak, which has set new ridership records for five consecutive years, is currently experiencing double-digit growth over last year. On some corridor trains, including the Carolinian, growth is exceeding 20% (the Piedmont is close at 18%).

C. Gaps

The expansion at Fort Bragg is expected to increase the demand for rail service that meets the special needs of the military and business community.

Although Fayetteville is served by two daily northbound trains to Washington, DC and the Northeast Corridor, neither meets the needs of the military and civilian business community. Their schedules are incompatible with doing business in the Washington area and, since they originate several hundred miles before arriving in Fayetteville, their on-time reliability is questionable. Rail service tailored to the military and civilian business market should be investigated.

16. http://www.sehsr.org/

Table 7. The number of potential rail commuters along the two lines, by place of residence and workplace, according to the 2000 census.

Lillington Route				Selma Route			
Residence	Workplace			Residence	Workplace		
	Wake	Harnett	Cumberland		Wake	Johnston	Cumberland
Cumberland	1,451	2,060	N/A	Cumberland	1,451	352	N/A
Harnett	8,841	N/A	7,214	Johnston	23,628	N/A	422
Wake	N/A	916	466	Wake	N/A	4,050	466

D. Recommended Actions

Critical Action 1: Support proposed passenger rail initiatives.

Description: The region should actively support the following initiatives: (a) funding Raleigh-Wilmington service via Fayetteville; (b) the investigation of Fayetteville-to-Raleigh Commuter rail service alternatives; and (c) the inclusion of Fayetteville in a third leg of the Southeast High Speed Rail Corridor.

A study should be conducted to determine the feasibility of combining infrastructure investment for these initiatives into a single corridor. Cost-benefit analysis of both the Selma and Lillington-Fuquay Varina routes should be conducted. Also, proposed US Highway 401 improvements should be considered where they would affect the parallel rail alignment. The BRAC Regional Task Force and its regional partners should remain vigilant of other opportunities to enhance the region's passenger rail component of the overall transportation system.

Responsible Parties: The BRAC Regional Task Force should convene a working group consisting of representatives of key rail companies and relevant local and state agencies.

Critical Action 2: Identify the particular needs of the military and civilian business community associated with the expansion at Fort Bragg, and develop a plan to meet those needs

Description: Conduct a study to identify the travel patterns and requirements of the military and civilian business community that are moving to the region in response to the expansion at Fort Bragg. Based on the results, develop a plan to enhance intercity passenger service between Fayetteville and the Washington, DC area and the Northeast Corridor.

Responsible Parties: The BRAC Regional Task Force should convene a working group consisting of representatives of key rail companies and relevant local and state agencies.

IV. Air Service

A number of factors limit Fayetteville Airport's ability to serve some of destinations most important to regional travelers. These are based ultimately in the limited extent of regional air demand which results in scheduling inflexibility, longer travel times, and higher costs to those choosing to use the airport. For many air passengers, especially to those traveling between Fayetteville and Washington DC, Raleigh-Durham Airport offers the more attractive option with the positives counter-balanced only by the costs and stresses of driving to the more distant airport. Nevertheless, recent data indicate that, if cost differentials can be controlled and more convenient service offered, the number of passengers choosing Fayetteville Airport may increase dramatically. With the military-related growth, the region could be approaching the critical mass that would make improved service possible.

Although aviation is only a small part of planning concern, it impinges upon the productivity of the more highly paid personnel and those whose positions in the command structure is central. Excess time spent traveling detracts from the personal productivity of businesses and military personnel, and thereby has deleterious effects that can reverberate throughout the entire region and can impact mission performance at Fort Bragg.

This section describes the service area of Fayetteville Regional Airport, summarizes the service provided in the recent past, and discusses the options for the future. The section summarizes an analysis performed by researchers at the Keenan Institute at the UNC Keenan-Flagler Business School. **The tables and figures in this air service section are located in the Appendix and are preceded with the letter A.**

A. Current Conditions

The Fort Bragg region is served by three airports: Fayetteville Regional Airport, Moore County Airport, and Raleigh-Durham International Airport. Charlotte and Atlanta, the two regional airline hubs, are the leading immediate destinations for Fayetteville air travelers. Service to Washington DC is particularly important for personnel at Fort Bragg, but there are no direct flights from Fayetteville Regional Airport to any of the three airports in the Washington DC area. Connections are not always convenient in the Atlanta and Charlotte hubs, leading many drive to Raleigh-Durham International airport (RDU) rather than flying out of Fayetteville. Military traffic in particular has become increasingly concentrated at RDU both for convenience and because of more favorable government fares.

1. Key Facilities in the Fort Bragg Region

Three airports serve the Fort Bragg region: Fayetteville Regional Airport, Moore County Airport, and Raleigh-Durham International Airport. Fayetteville Airport is closest to Fort Bragg. Moore County Airport serves a desired residential and tourist area. Raleigh-Durham Airport is outside the region but can (and does) attract a significant number of passengers from Cumberland County. Airports in Greensboro and Charlotte might draw passengers from the region, but the driving time (two and three hours, respectively) prevents a large amount of leakage to these airports from the Fort Bragg Region.

a. Fayetteville Regional Airport (FAY)

Fayetteville Regional Airport is located 5.75 miles south of Fayetteville near the I-95 corridor, approximately seventeen miles from Fort Bragg's main gate. The airport is served by two main airlines: US Airways through US Airways Express, with service to its Charlotte hub, and Delta through Atlantic Southeast Airlines (ASA), with service to its Atlanta hub. Other airlines provide occasional service to select destinations. The airport has two runways. The longest (04/22) is 7,712 feet long and 150 feet wide. The second (10/28) is 4,801 feet long and 150 feet wide. The airport is equipped with visual and instrument navigation aids.

b. Moore County Airport (SOP)

The Moore County Airport is located five miles northeast of Pinehurst and three miles north of Southern Pines, approximately thirty-seven miles from Fort Bragg's main gate. The airport operates

from 6:00 a.m. until 10:00 p.m. daily and is oriented mainly towards general aviation. The airport has one runway (5/23) which is 5,503 feet long and 150 feet wide. The airport is equipped with visual and instrument navigation aids.

c. Raleigh-Durham International Airport (RDU)

Raleigh-Durham International Airport is located approximately fourteen miles northwest of Raleigh and seventy-two miles, by road, north of Fort Bragg. The airport covers 4,929 acres and operates three runways: 5L/23R which is 10,000 feet long, 5R/23L which is 7,500 feet long, and 14/32 which is 3,570 feet and used mainly for general aviation. RDU is served by thirteen airlines, including American, Delta, US Airways, Southwest, Continental, United, and Northwest. Direct service to over forty-five domestic and international destinations is provided on more than 240 daily flights.

d. Air Passenger Service Demand at Fayetteville Regional Airport

Commercial passenger aircraft departures from Fayetteville Regional Airport (FAY) grew at a rate of 2.8% annually between 2002 and 2007 (Figure 2), more than keeping pace with the national rate of 2.7%.[17] Passenger enplanements (the number of passengers boarding an aircraft at an airport) lagged somewhat at a 1.5% average annual increase, compared with a national rate of 2.5% annually. The growth trajectory at FAY has been uneven, with deep drops coinciding roughly with the recessions of the early 1990s and 2000s. Air passenger growth was extremely strong between 2002 and 2006.

In addition to the level of economic activity, which affects demand for air passenger service in general, the ups and downs of air service at FAY reflect the changing structure and changing structure and strategy of the airline industry. In the early 1990s, United provided service to Dulles for eighteen months. It did so again in 1996 using 30-seat turboprop aircraft. Air service was disrupted when American pulled out of its hub at RDU and discontinued the connecting service to Fayetteville. The airline also eliminated its direct flights to Dallas-Fort Worth via Greensboro. Fayetteville service may have also been hurt by the arrival of Southwest Airlines at RDU which may have exerted a downward pressure on airfares at that airport, drawing a greater number of passengers from the FAY service area.[18]

Demand has been sufficiently strong that Delta introduced all-jet service to FAY in the late 1990s. USAirways followed later with 50-seat regional jets. Currently, both USAirways and Delta are tentatively providing service with 70-seat regional jets. The increase in service also corresponds to a change in pricing policy trends that has slowed the generally rising relative cost of flying from Fayetteville Regional Airport. Passenger enplanements at FAY are increasing much faster than population or regional personal income.[19]

Charlotte Douglass International Airport, located in North Carolina's most populous metropolitan area and the state's only significant airline transfer hub, enplanes the largest number of passengers by far of any airport in the state (**Figure A-3**). As an airline transfer hub that serves many passengers that are just traveling through, the Charlotte area has the highest flying intensity (passenger enplanements per metropolitan area resident). The number of passengers enplaned grew at an annual rate of 4.6% annually between 1990 and 2007.

The growth in number of passengers at Raleigh-Durham and Greensboro has been more modest than at Charlotte. Raleigh-Durham Airport, the state's busiest airport that is not now an airline transfer hub, has fluctuated around 3.0 enplanements annually per metropolitan area resident.

Fayetteville Regional Airport is the smallest of the

17. The data are taken from the Bureau of Transportation Statistics T-100 series. This dataset contains non-stop segment data by aircraft type for transported passengers, freight and mail, available capacity, scheduled departures, departures performed, aircraft hours, and load factor.

18. Information on the service history of Fayetteville Regional Airport was taken from Fayetteville Regional Airport Master Plan, HNTB, September 2005 and Fayetteville Regional Airport: Air Service Analysis, Kramer Associates in Association with Wilbur Smith Associates, November 1994.

19. FAY has bucked recent trends in commercial aviation by continuing to see an increase in passenger travel. It is unclear why the passenger count is increasing while it is decreasing nationally. Some of the additional travel may be due to Base Realignment efforts but FAY's passenger numbers were increasing prior to those efforts.

larger airports in North Carolina. FAY enplanes approximately 0.5 persons per regional resident. It has been growing rapidly, especially over the past five years (**Table 3**). According to a 1994 passenger survey, Cumberland County accounts for three-fourths of the passengers at Fayetteville Airport while Robeson County adds another 9%. The rest of the passengers are sprinkled across several counties. Moore County and Harnett County sent very few passengers to Fayetteville.20

Moore County Airport enjoyed a dramatic increase in passenger traffic in the mid and late 1990s. Like other smaller airports, service has dropped dramatically at Moore Airport with the nation-wide trend of replacing turboprop aircraft with regional jets. Airline operating cost increases have also led to service termination at many smaller airports throughout the country.

Several factors account for the low air intensity of the Fayetteville region. The absence of many firms with a broad geographical focus and the relatively lower level of personal income compared to major metropolitan areas are important. Another critical factor is the proximity of other airports, especially Raleigh-Durham. Figure # shows an estimate of the service areas of selected North Carolina airports. Many of the potential air passengers in the region, including those in Fayetteville itself, "leak" to other airports. In fact, a survey of tickets issued by regional travel agencies indicated that almost 20% of regional fliers (almost 25% of non-military fliers) used other airports, with Raleigh-Durham attracting the large majority of those fliers.21

2. Air Passenger Service Demand at FAY

Fayetteville Regional Airport is now regularly served by USAirways with seven daily roundtrip flights to its Charlotte hub and by Delta with six roundtrip flights to its Atlanta hub. The schedules of both airlines allow for early morning departures and mid-evening returns. Both destinations are served primarily by 50-seat regional jets and by a few aircraft with somewhat larger capacities. More recently, 70-seat aircraft have been employed. Fayetteville Airport can clearly handle larger aircraft, including the popular Boeing 737 with a seating capacity of approximately 120.

The seat occupancy is 75.59% on the Atlanta route and 65.66% on the Charlotte route (**Table 8**). These routes, served with more frequency in the past, are shown as points of comparison.

The trend is generally upward with the possibility of some lag as airlines increase the capacity of equipment being used. The percentage of seats occupied on both routes is lower than the overall national average of 78.85% in 2006. The lower load factor of Fayetteville flights could result in a somewhat average higher cost of per passenger service, and thus airfares, than otherwise.

Charlotte and Atlanta are the leading immediate destinations for Fayetteville air travelers (**Tables A-4 and A-5**), the two hubs serving over 97% of the passengers enplaning at Fayetteville Regional Airport. Many other destinations have been served over the past several years, but demand was insufficient to support routine flights for sustained periods of time.

> [Table #: …The history of previous airline attempts at services, including the service to Greensboro and RDU along with United's service to Dulles in the early 1990s, can be seen moving from left to the right on the tables.

Travelers from FAY going through the two hubs went onward to over 150 different domestic destinations in all regions of the U.S. (**Table A-9**). Although the final destinations were diverse, twenty cities account for half the traffic (**Table A-10**). Atlanta, with direct service, was the most common destination for Fayetteville air travelers, accounting for 8% of the air passengers (**Table A-11**). Route capacity has recently been increased because of growing demand. Washington DC was the second-most common destination with Reagan National, Baltimore-Washington, and Dulles feeding into that metropolitan area. Charlotte is, by far, the predominant hub choice for those traveling to Washington DC. Many travelers

20. At the time of the study, Moore County Airport was well-served by feeder airlines.
21. *Fayetteville Regional Airport: Air Service Analysis*, Kramer Associates in Association with Wilbur Smith Associates, November 1994. Unfortunately, similar data is difficult to collect now that few passengers actually use travel agencies.

require a third leg to complete their journeys.

3. Alternative Routs to Washington DC

Service to Washington DC is more problematic than that between Fayetteville and Atlanta. The Washington DC area includes three major airports, and there currently are no direct flights to any of them from Fayetteville. Transfer service is provided via the two main hubs, Atlanta and Charlotte, but the connections are not always convenient (**Table A-12**).

Leakage of Washington-bound passengers from the Fayetteville Regional Airport to Raleigh-Durham Airport may be large due to the comparative travel times and differences in flight schedules. There has been a rapidly decreasing number of enplanements at FAY between 1997 and 2002. Convenience and travel time are one reason for this. Flights to Washington DC via the hubs can take from three to over four hours, depending upon the speed of connection at the hubs. Driving time from Fort Bragg's main gate adds another half hour to the trip.[22] A trip from Fort Bragg to Washington National Airport via FAY thus may take four hours and fifteen minutes (assuming thirty minutes processing time at the Fayetteville Airport and three hours and fifteen minutes flight time).

Driving time to RDU is approximately one hour and twenty-three minutes. The flights are just over an hour to National and an hour and fifteen minutes to Dulles. A trip from Fort Bragg to Washington National via RDU might take three hours and fifteen minutes or less (assuming fourty-five minutes processing time at RDU and a direct flight of slightly longer than one hour). The drive to RDU saves an hour or more of total travel time in each direction. Therefore, it may be often worthwhile for travelers to drive the seventy-two miles from Fort Bragg to RDU and catch one of the sixteen daily flights to Reagan National (the most popular Washington DC airport for Fayetteville air passengers), six flights to Baltimore-Washington, or five flights to Dulles (**Table A-13**).

Driving time from Fort Bragg to the Pentagon is approximately five and a half hours, making an automobile trip a viable option for anyone whose destination is not near one of the Washington area airports. Driving may not be a realistic option for single-day return trips but, for multiple day trips with uncertain or inconvenient schedules, driving can be the preferred option. Driving offers considerable cost advantages for multiple travelers. As seen above, the time disadvantage is small once waiting time is included.

Another reason for the leakage is an increasingly unfavorable fare imbalance between FAY and RDU. Overall, per-mile air fare costs are over 50% higher at FAY than they are at RDU (weighted by passenger destinations). The costs of flying per route mile to Washington area airports (Washington National and Dulles) are nearly equal at both airports but a flight from FAY requires a stopover at a hub and significantly more miles flown, resulting in a premium cost of almost 50%. Therefore, passengers traveling via Fayetteville Airport must have a strong preference not to drive to Raleigh-Durham Airport.

4. Military Travel

Military traffic accounted for approximately 70% of the air traffic between Fayetteville Regional Airport and Washington DC airports in 2007 (**Tables A-11 and A-16**). In recent years, approximately 3,250 military passengers have flown from Fort Bragg to the Washington DC area, with about 70% as many traveling in the opposite direction. This adds up an average annual traffic of about 5,600 in both directions. Assuming that all travel takes place on workdays, this works out to an average daily traffic of approximately twenty-two persons, eleven in each direction.

Air traffic between Fort Bragg and Washington DC has been decreasing over the past several years. The decreasing traffic may signal a shift away from air travel, perhaps in favor of automobile trips or video conferencing. Deployments are unlikely to be the cause, since deployments have been occurring for a longer time period.

As Fort Bragg-Washington D.C. military traffic has decreased, it has become increasingly concentrated at RDU. In Fiscal Year 2007, 60% of the military air

22. All driving times were estimated using MapQuest.com

passengers to Washington D.C. used RDU, rather than FAY. One reason for this is that the government fare for the FAY-BWI route is substantially higher than for the RDU-BWI route. In addition, the substantial time penalty imposed by lengthy hub connection times discourages travel through Fayetteville Regional Airport.

B. Future Needs

The region's rising population and the expansion of Fort Bragg's mission will combine to increase the demand for air passenger service. In particular, the move of FORSCOM to Fort Bragg will increase the demand for convenient and reasonably priced service to Washington DC. A particular challenge for air service planners is accommodating needs generated by conferences scheduled nearly every week. Increased daily demand can be accommodated by airlines; weekly spikes in demand are less readily accommodated.

It is not possible to accurately predict future air service demand. Past experience has shown demand to be highly sensitive to short-term economic conditions. For example, changes in fuel prices have had important recent impacts on air fares and thus service. The time entailed by security processing can shift the balance of factors away from flying, especially for shorter flights, as it has since late 2001. Regulations and the competitive environment can affect air fares and service frequency which can, in turn affect, demand. The relative prices of air travel from a nearby airport is another significant factor in determining demand in Fayetteville. Projecting the travel needs of the military adds to the challenge. Missions change, patterns of implementation evolve, and the demand for air travel reacts to changing costs and safety concerns.

Despite the uncertainty, it is clear that the region's rising population and the expansion of Fort Bragg's mission will combine to increase the demand for air passenger service.

Military Travel: In recent years, FORSCOM has been responsible for approximately 3,600 outbound air trips annually. Approximately 26% (934 trips annually) of the outward air travel has been between Atlanta and the Washington DC area; the rest were spread over a very diverse set of destinations. FORSCOM was the destination for 583 inbound air trips in 2007. USARC was responsible for 7,327 outbound air trips in Fiscal Year 2007. Approximately 9% of the outward air trips (665 trips annually) were between Atlanta and Washington DC.

The transfer of FORSCOM and USARC to Fort Bragg will have important effects on commercial air service demand in the Fort Bragg region. Assuming that future travel patterns will remain roughly the same as in the past few years, a need will be created for an additional forty-five aircraft seats per workday. FORSCOM travel has been on a downward trend; if this continues, future demand could be lower than this estimate.

Much of FORSCOM's and USARC's air travel, like that of Fort Bragg, is concentrated on the Washington DC area. Outbound traffic from these two commands could reach as high as 18.4 persons per workday. At present, Fort Bragg is responsible for approximately twenty-two passengers per day traveling between Washington DC and Fort Bragg. If inbound traffic were generated by FORSCOM and USARC at the same rate as Fort Bragg has done so, total traffic between Fort Bragg and Washington DC could reach as high as 31.7 persons per workday in both directions. Thus, the expansion at Fort Bragg could increase air traffic demand by ten persons per day, or five in each direction.

In addition to routine travel, FORSCOM also sponsors approximately forty-five conferences per year which require air travel on the part of attendees.[23] An average of 100 people attends each of these conferences, which can last two to three days each. These conferences will create near weekly spikes in demand for seats to Fayetteville and corresponding spikes in demand for seats leaving Fayetteville a few days later. While such spikes were easily absorbed by the average daily passenger flow at Atlanta, that will not be the case at Fort Bragg where the largest aircraft currently on regularly scheduled service is a 70-seat regional jet. This poses a challenge for the

23. As communicated in a telephone conversation with Joelle Garlow 25 April 2008.

planning of workshops and conferences at Fort Bragg. Careful scheduling to take advantage of unused seats during slack travel times will be needed. Increasing the number of available seats will be difficult; airlines need to be able to efficiently use aircraft, and so cannot run routinely with empty seats in order to accommodate occasional travel peaks.

C. Gaps

Enhanced air passenger service from Fayetteville will be needed to meet the increased demand associated with military-related growth in the Fort Bragg region. However, the increased demand is likely to be insufficient to persuade an airline to add service at Fayetteville Regional Airport. Several options for dealing with the demand have been identified, including adding direct service to Dulles Airport, improving connection times in Charlotte, and starting vanpool service to RDU. Many of the potential service improvements will require cooperation between the region and the airlines.

The analysis of current usage presented above points to a challenge facing the region as it prepares for military-related growth. Fort Bragg is located in a relatively small metropolitan area, and the population has a below average propensity to fly (at least as measured by available statistics). The relative "thinness" of this market is accentuated by the common propensity to drive to busier airports outside of the Fort Bragg region. The expansion at Fort Bragg will bring modest increases in the region's population and workforce, but it will bring a significant increase in the number of people likely to fly. In addition, the units relocating to Fort Bragg will attract substantial numbers of guests who prefer to fly to and from the region. These new demands may not dovetail well with existing capacity and the possible means of supply.

The cost and inconvenience of service between Fayetteville Regional Airport and Washington DC area airports will be a particular problem for FORSCOM personnel. The hidden costs to the military of placing important command functions at Fort Bragg include costly airfares and, more importantly, excess time needed for travel even to central locations. It will not be possible for Fayetteville Regional Airport to come close to matching the service to Washington DC provided by the Atlanta airport. However, some improvement is necessary.

Seven options for dealing with the anticipated increase in travel have been identified. The first, and possibly most desired, would be to add direct service to one of the most important military travel destinations, Washington DC. A direct flight between Fayetteville Regional Airport and Reagan Washington National Airport would provide a clear benefit to military travelers since a substantial portion of travel is and will be between Fort Bragg and the Pentagon. Two related obstacles need to be overcome in order for this service to be viable. The first is obtaining favorable landing and take-off slots. DCA is a very popular airport that must accommodate same-day travelers from many, more populous, regions. Without favorable slots, direct FAY-DCA service may offer little advantage compared to alternatives. The second is meeting the bi-directional flow needed to sustain direct service. Fort Bragg traffic might support an estimated maximum of thirty-two military seats per day to and from Washington D.C. Contractors may increase demand a little, but that increase cannot be predicted at this time. The additional traffic demand may not be sufficient to support a daily non-stop flight.

A second, and possibly more viable option, would be to add direct service to Dulles International Airport. Military passengers, who would certainly be a substantial portion of the travelers, would need ground shuttle service to the Pentagon. This would add at least an extra forty minutes to the travel time, comparable to the option of driving from Fort Bragg to RDU. Dulles Airport also would allow the possibility of traveling though Charlotte, should scheduling difficulties or disruptions affect the preferred travel itinerary. Dulles has unused capacity and would be more likely than Reagan National to grant attractive landing slots. Dulles also has the advantage of being an airline hub that could potentially accommodate those traveling onward to more distant airports. Dulles service would give Fayetteville passengers access to a third hub and a third airline. Transfer passengers who are

flying onward to United Airlines destinations could sufficiently augment those flying to the Washington DC area to cross-subsidize direct flights to Dulles.

A third option would be to improve connection times at Charlotte. Improved connection times to popular Fayetteville traveler destinations have long been identified as a need. The ability to complete same-day return trips to Washington DC is hampered by lengthy transfer wait times. Improved transfer times, particularly when combined with more equitable pricing from FAY relative to RDU would offer an attractive price/flexibility/time alternative. A strong argument could be made to USAirways that the benefits of lower prices and more timely connections, particularly to Washington DC. and back would generate a sizeable increase in passengers for the airline. These passengers are presumably now largely lost to its competitor, American Airlines, at RDU.

A fourth option would be to institute service between Moore County Airport and Dulles. The attraction of service from Moore County Airport is the potential to cross-subsidize the service with the large numbers of leisure travelers to Pinehurst and Southern Pines. Although there is no regularly scheduled service to the airport now, Moore County Airport has been served in the past (as shown in Appendix Table 1). One disadvantage of Moore County service is that such service would likely be with turboprop aircraft, given the potential numbers of passengers. These have not been popular with passengers or airlines for quite some time.

A fifth option would be to make it more convenient to take advantage of the service frequency and price advantages of RDU airport. Regularly scheduled van pool service, while not ideal, might be the best choice for overall price, service frequency, and passenger time. Hourly service, perhaps with more frequent service during busy periods, might be sufficient to satisfy military needs. An RDU routing may be especially advantageous for the workshops and conferences. The peaks in demand resulting from the large meetings will be especially difficult for airlines to satisfactorily process at Fayetteville Regional Airport. The dollar and time cost savings realized may be sufficient motivation to consider locating the workshops and conferences elsewhere, perhaps near RDU, or even Atlanta.

A sixth option would be to arrange air taxi or taxi-like service between FAY and Washington DC. The State of North Carolina has marketed "on-demand" services in several communities. Such service has the advantage of allowing flexible departure and arrival times but has not, so far, been implemented on a cost-effective basis despite on-going attempts throughout the United States. The FAY-DCA route may have sufficient traffic to support scheduled service on an aircraft that is smaller than a regional jet. However, it is unclear whether turboprop service could attract customers.

The final option is to make no pro-active adjustment, letting airlines and others "muddle through" the changing air travel situation. The number of additional passengers that can be expected is small relative to the uncertainties of demand. Moreover, the additional traffic might be accommodated by the aggregate unused capacity of the aircraft servicing Fayetteville. As demand increases, airlines can add incremental capacity at their own discretion in the form of more frequent service and larger aircraft. A critical drawback to this option is the relatively low costs to airlines and the correspondingly high costs to Fayetteville and Fort Bragg of sub-optimal airline service.

D. Recommended Actions

Critical Action 1: Collect detailed data needed to better estimate air travel demands associated with the military-related growth in the Fort Bragg area.

Description: There is a need to obtain clear, well-documented, and detailed data on all facets of air travel related to the base realignment from the military. Such data is not currently available. Even before the recent rise in fuel costs, airlines have been under financial stress. That situation is likely to continue. Airlines, therefore, are not eager to experiment with new routes that offer uncertain revenue potential. Credible documentation of demand will be necessary for any negotiation with airlines. More comprehensive data is needed from the military, military dependents, and contractors.

Additional information is also needed about the travel behavior of those in the FAY market area. Such data used to be obtained from travel agencies but gathering information has become more difficult since the rise of internet booking. A survey, possibly conducted via telephone of the long distance travel behavior of the residents of the Greater Fort Bragg region would provide valuable strategic planning information. As noted above, driving long distances can often be a viable alternative to flying given the cost and inconvenience. Passenger surveys conducted at FAY and RDU would yield less complete data at a more modest cost.

Responsible Parties: The regional airport authorities are encouraged to work closely with the BRAC Regional Task Force and local community leaders on this action.

Critical Action 2: Negotiate for more advantageous government fares.

Description: Negotiate for government fares that are more closely aligned with airline cost and traveler value. The high government fares have been an important factor in the migration of a large proportion of military travelers from FAY to RDU service. Without adjusted fares, the exodus to RDU may continue, costing the military in lost productivity.

Responsible Parties: The regional airport authorities are encouraged to work closely with the BRAC Regional Task Force and local community leaders on this action.

Critical Action 3: Seek supplementary funding for service to Washington DC.

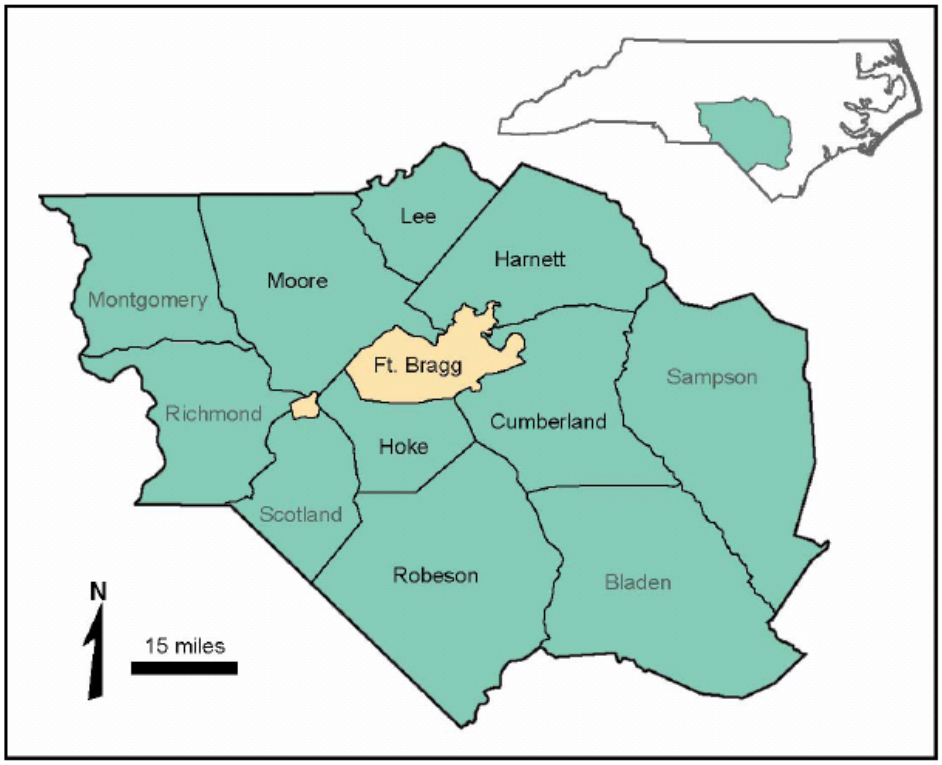
Description: Explore the possibilities for supplementary funding for Washington D.C. service. This may come in the form of bundling Washington and onward passengers on flights to Dulles. Another possibility is to make FAY a short, intermediate stop along a longer route. Such service has not been popular over the last several years but the changed circumstances in the airline industry may bring about a revival of interest. A third possibility is to secure non-operational funds to help support direct service to Washington DC. Many of the sources of such funds have disappeared over the past several years but, given the military interest, monies may be made available. Possible options include the Department of Transportation's Essential Air Service Program and its Small Community Air Service Development Program. These programs have different intents and criteria. The first program subsidizes service that would not be viable without extra funding while the second provides support for marketing programs. Fayetteville meets at least some of the criteria for each program but applications are competitive. A case could be made for support to each program.

Responsible Parties: The regional airport authorities are encouraged to work closely with the BRAC Regional Task Force and local community leaders on this action.

V. Appendix A - Aviation Maps, Tables and Figures

Map 1

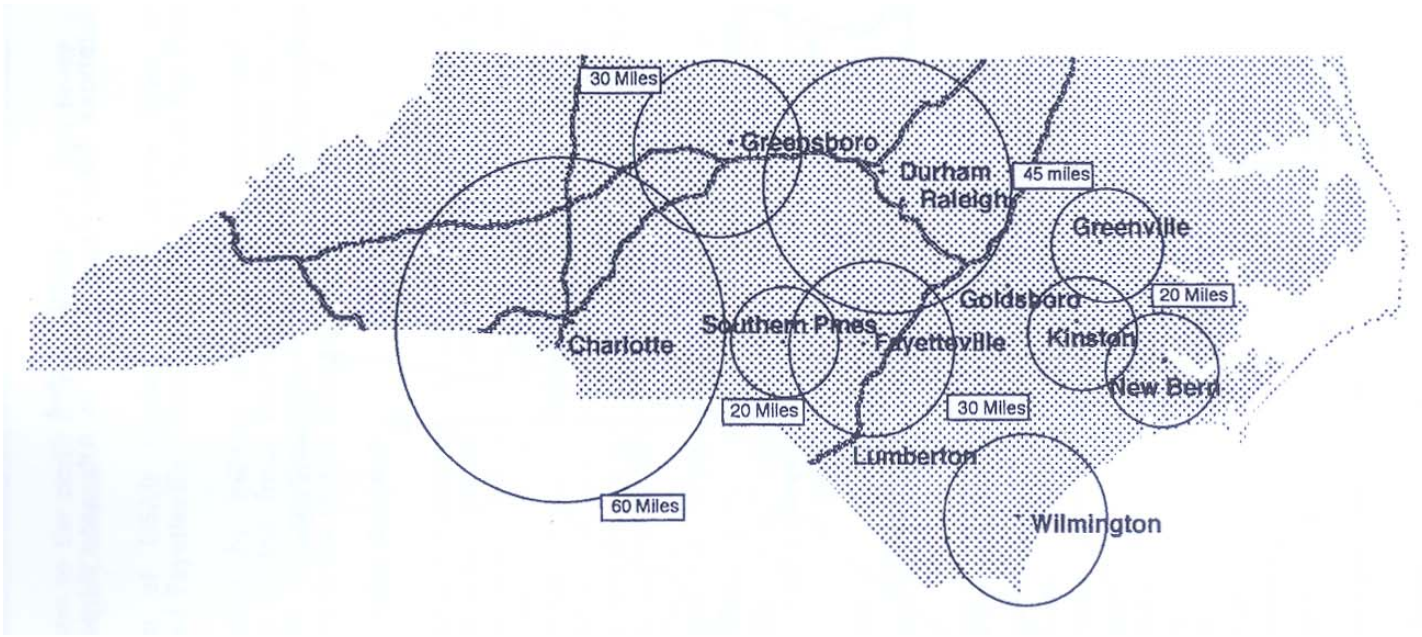
Fort Bragg in Regional Context



Source: *Preliminary Impact Assessment for the Fort Bragg Region*

Map 2

Regional Airport Market Area Approximations



Source: *Fayetteville Regional Airport: Air Service Analysis*

Figure 1

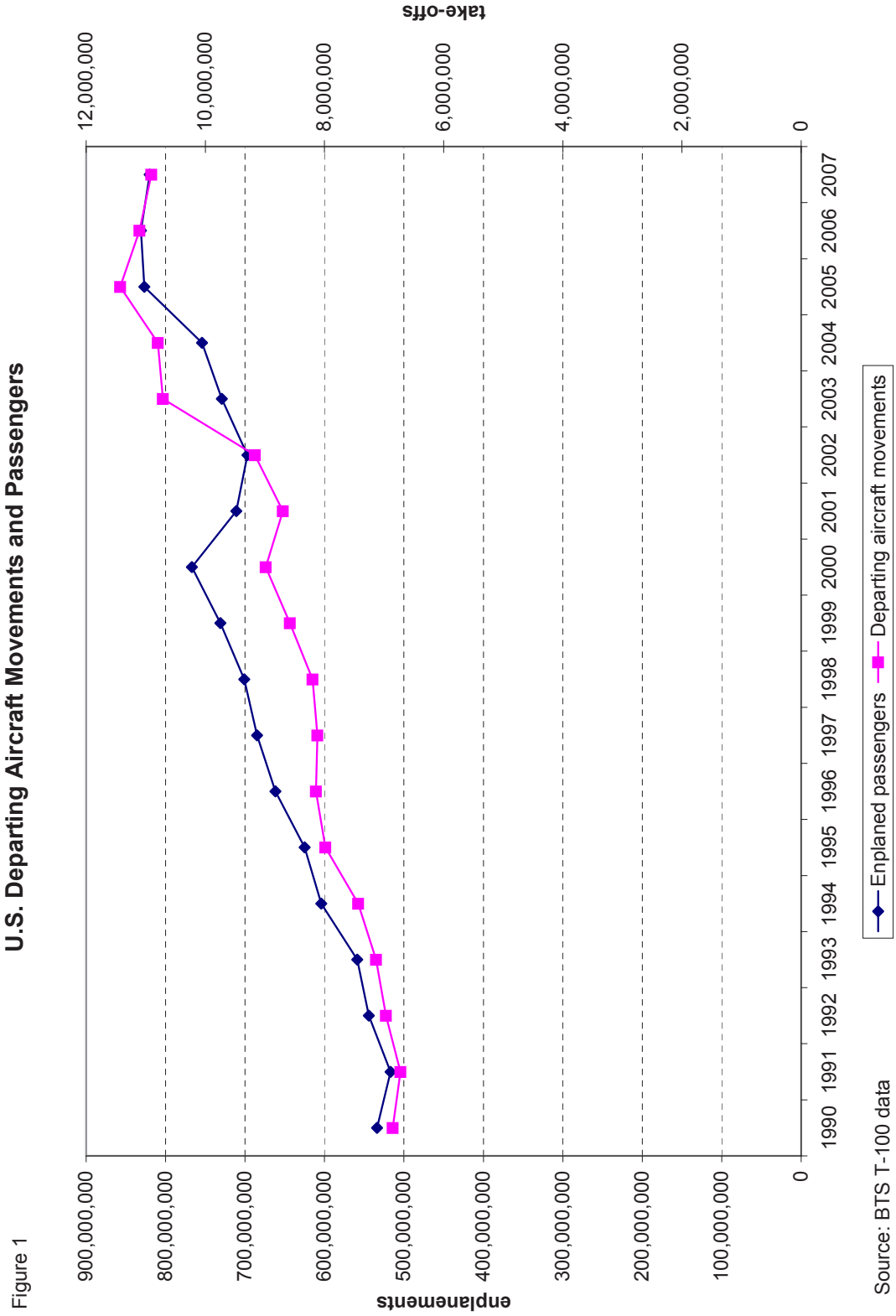
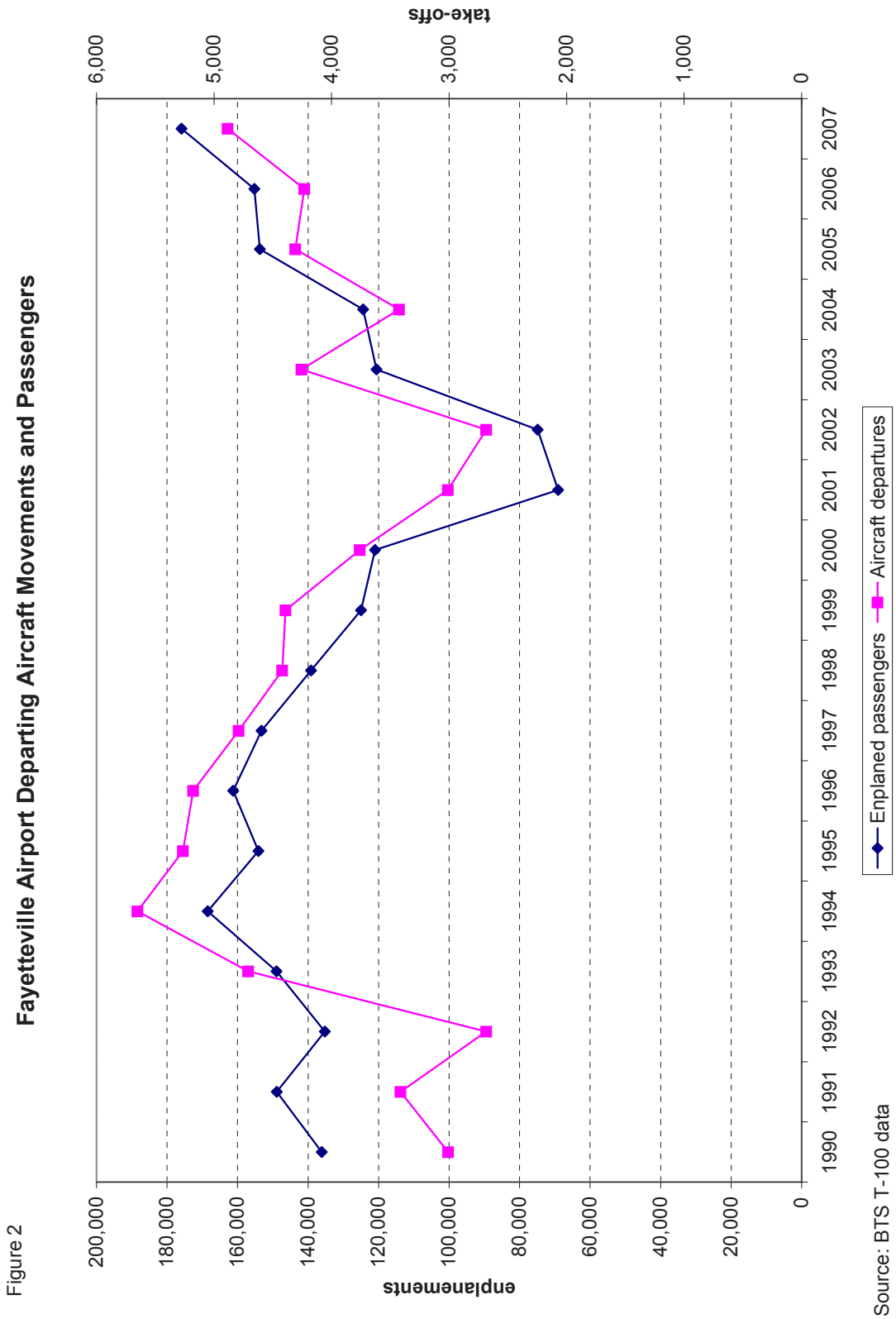

U.S. Departing Aircraft Movements and Passengers
enplanements
take-offs
900,000,000
800,000,000
700,000,000
600,000,000
500,000,000
400,000,000
300,000,000
200,000,000
100,000,000
0
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007
Enplaned passengers
Departing aircraft movements
Source: BTS T-100 data

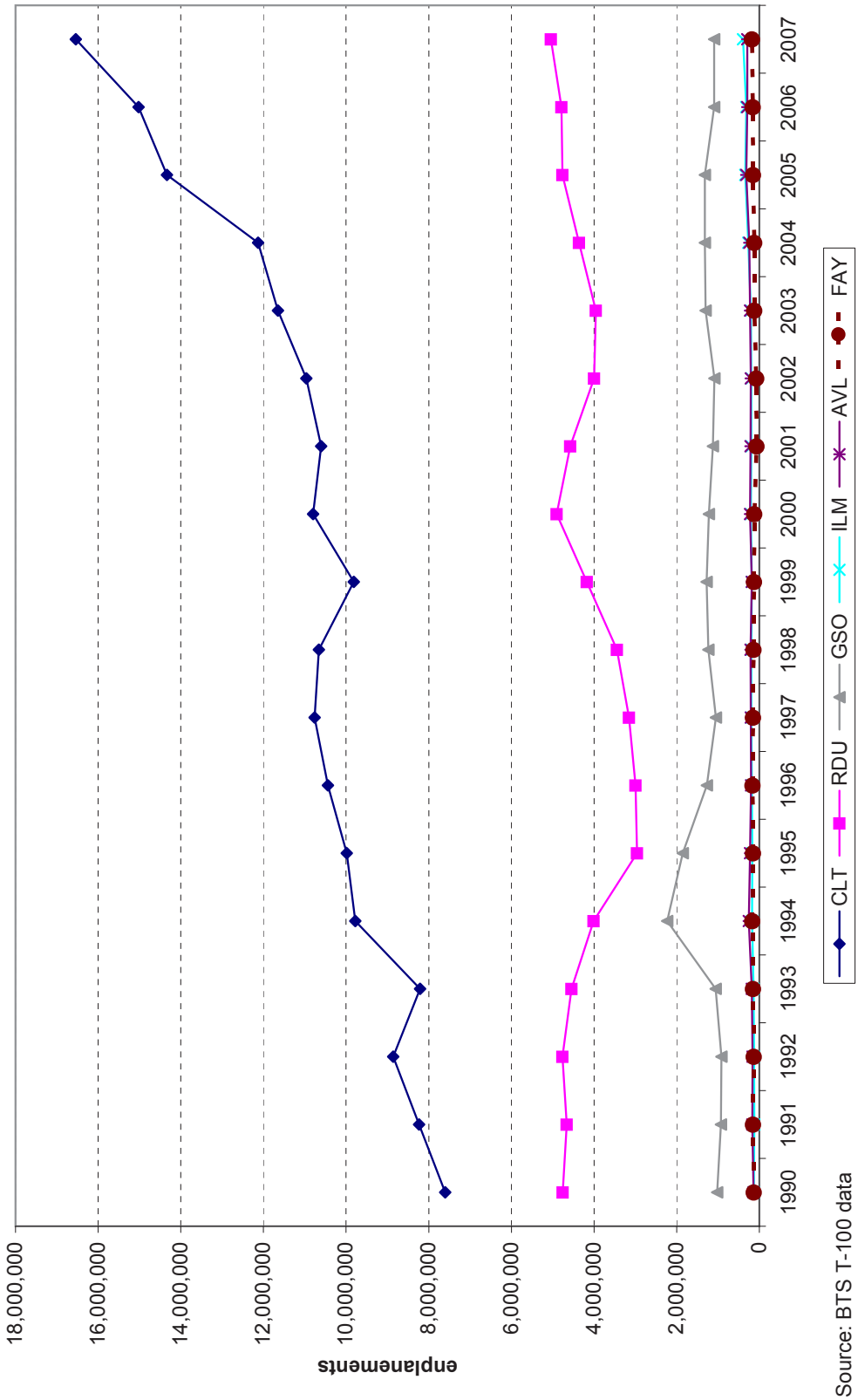
Figure 2



Source: BTS T-100 data

Figure 3

Passengers enplaned at selected North Carolina airports, 1990-2007



Source: BTS T-100 data

Figure 4

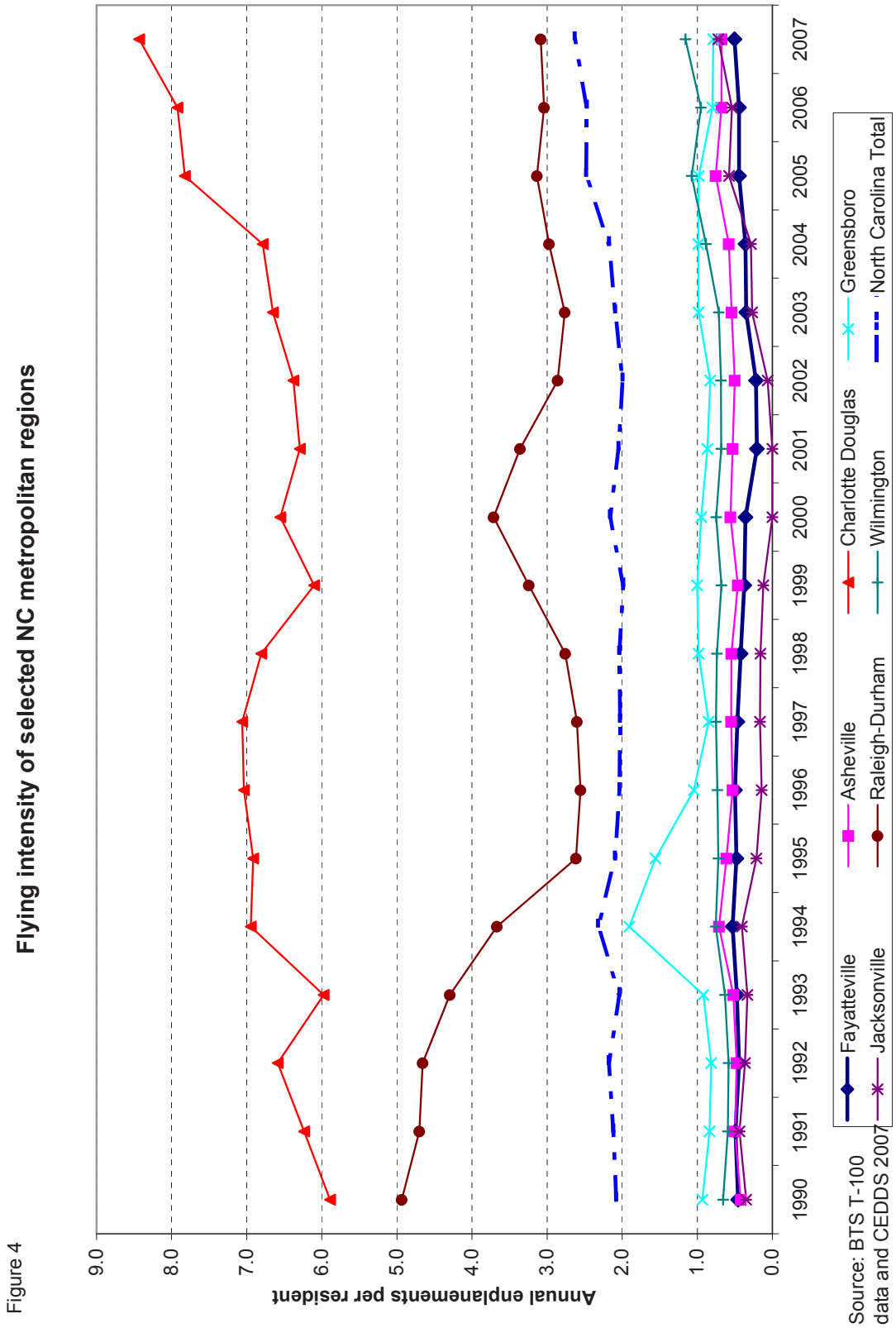
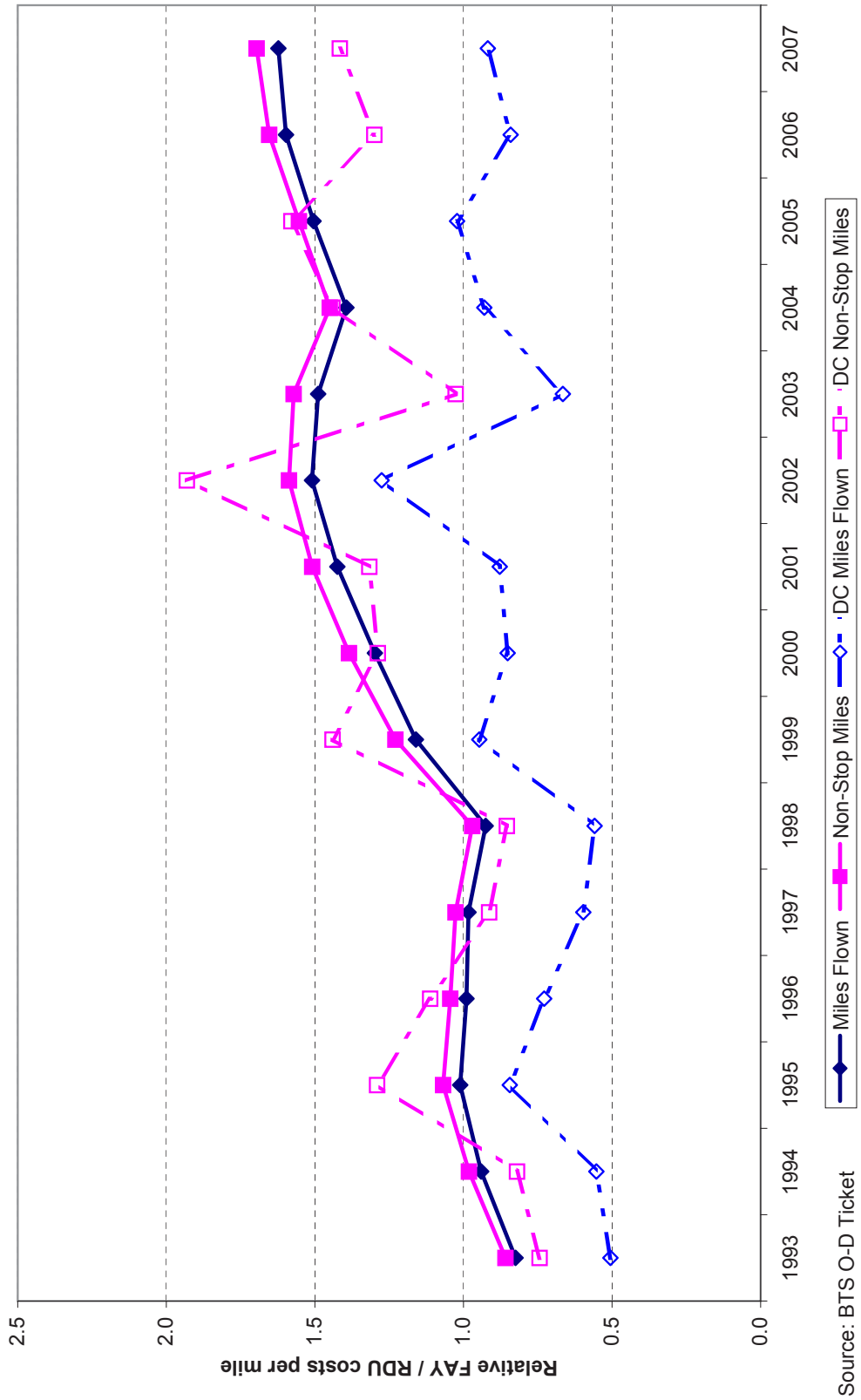

Flying intensity of selected NC metropolitan regions
Annual enplanements per resident
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Fayatteville
Asheville
Charlotte Douglas
Greensboro
Jacksonville
Raleigh-Durham
Wilmington
North Carolina Total
Source: BTS T-100 data and CEDDS 2007

Figure 5

Relative Air Fare per Mile at FAY and RDU



Source: BTS O-D Ticket

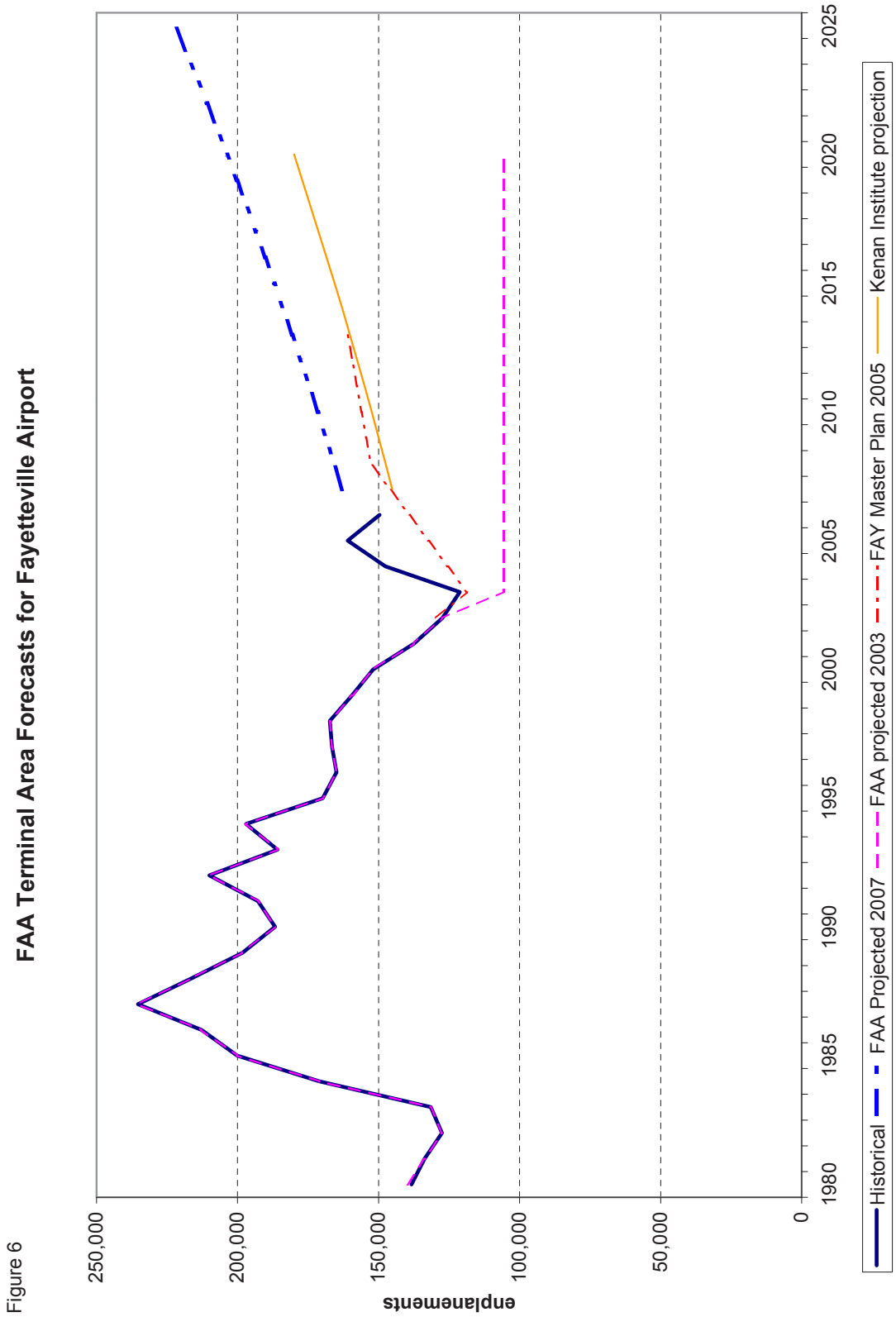

FAA Terminal Area Forecasts for Fayetteville Airport
enplanements
250,000
200,000
150,000
100,000
50,000
0
1980
1985
1990
1995
2000
2005
2010
2015
2020
2025
Historical
FAA Projected 2007
FAA projected 2003
FAY Master Plan 2005
Kenan Institute projection

Figure 6

Table 1: Summary of regional population population and employment

	1970	1975	1980	1985	1990	1995	2000	2005	2006	2007	2008
Fort Bragg Region											
Total Population (Thousands)	474.10	523.68	561.72	590.07	617.86	674.95	722.87	755.01	763.29	774.02	782.83
Total Employment (Thousands)	214.35	230.36	259.62	276.35	306.23	349.77	375.24	393.49	398.82	404.15	409.49
Federal Civilian Govt	8.05	9.33	8.53	9.53	10.59	11.22	11.60	11.40	11.50	11.59	11.69
Federal Military Govt	48.74	46.79	47.57	49.55	42.58	50.92	45.84	49.07	49.17	49.26	49.36
Cumberland County											
Total Population (Thousands)	212.47	233.66	247.66	261.68	275.83	294.09	302.79	299.03	299.06	303.27	306.73
Total Employment (Thousands)	107.01	116.26	126.05	137.39	146.20	170.30	181.41	194.08	196.24	198.42	200.59
Federal Civilian Govt	7.30	8.59	7.76	8.76	9.62	10.01	10.31	10.49	10.57	10.66	10.74
Federal Military Govt	47.37	45.60	46.48	48.29	41.29	49.66	44.70	47.97	48.06	48.15	48.25
Total Population (Thousands)	0.4482	0.4462	0.4409	0.4435	0.4464	0.4357	0.4189	0.3961	0.3918	0.3918	0.3918
Total Employment (Thousands)	0.4993	0.5047	0.4855	0.4972	0.4774	0.4869	0.4834	0.4932	0.4921	0.4910	0.4899
Federal Civilian Govt	0.9064	0.9201	0.9100	0.9192	0.9087	0.8925	0.8894	0.9200	0.9198	0.9197	0.9195
Federal Military Govt	0.9718	0.9747	0.9770	0.9745	0.9697	0.9754	0.9750	0.9775	0.9775	0.9775	0.9775
Harnett County											
Total Population (Thousands)	49.88	55.73	59.78	63.54	68.03	78.35	91.63	103.77	106.28	108.66	110.77
Total Employment (Thousands)	17.88	18.81	20.53	21.37	25.52	29.06	35.30	38.95	39.81	40.68	41.55
Federal Civilian Govt	0.12	0.11	0.11	0.10	0.14	0.12	0.17	0.13	0.13	0.13	0.13
Federal Military Govt	0.24	0.21	0.21	0.25	0.26	0.26	0.25	0.26	0.26	0.26	0.26
Hoke County											
Total Population (Thousands)	16.53	19.13	20.42	21.61	22.95	28.45	33.90	40.68	42.30	42.94	43.46
Total Employment (Thousands)	5.93	6.76	6.69	6.92	8.29	9.32	11.00	12.54	12.72	12.90	13.08
Federal Civilian Govt	0.05	0.05	0.04	0.05	0.05	0.04	0.08	0.05	0.05	0.05	0.05
Federal Military Govt	0.08	0.08	0.07	0.08	0.09	0.09	0.09	0.10	0.10	0.10	0.10
Lee County											
Total Population (Thousands)	30.61	33.57	36.78	39.72	41.55	45.70	49.40	55.75	56.91	57.28	57.51
Total Employment (Thousands)	16.39	17.70	21.60	22.91	26.13	32.09	34.05	35.07	35.45	35.83	36.22
Federal Civilian Govt	0.09	0.11	0.12	0.12	0.16	0.15	0.20	0.16	0.16	0.16	0.17
Federal Military Govt	0.18	0.15	0.13	0.15	0.16	0.15	0.13	0.13	0.13	0.13	0.14
Moore County											
Total Population (Thousands)	39.37	44.59	50.60	53.95	59.35	67.69	75.16	81.34	83.16	84.43	85.49
Total Employment (Thousands)	17.69	19.94	25.38	27.60	33.03	36.26	41.53	42.94	43.71	44.48	45.25
Federal Civilian Govt	0.13	0.12	0.13	0.14	0.18	0.16	0.23	0.18	0.19	0.19	0.20
Federal Military Govt	0.20	0.18	0.17	0.21	0.22	0.22	0.20	0.20	0.20	0.20	0.20
Richmond County]											
Total Population (Thousands)	40.00	41.75	45.13	45.10	44.61	45.73	46.57	46.71	46.56	46.77	46.88
Total Employment (Thousands)	16.84	16.73	18.55	18.70	21.91	20.68	20.33	19.38	19.62	19.87	20.12
Federal Civilian Govt	0.12	0.11	0.10	0.10	0.14	0.13	0.17	0.11	0.11	0.11	0.11
Federal Military Govt	0.21	0.17	0.16	0.17	0.17	0.15	0.13	0.11	0.11	0.11	0.11
Robeson County, 37155]											
Total Population (Thousands)	85.24	95.25	101.36	104.47	105.54	114.94	123.42	127.75	129.02	130.67	131.99
Total Employment (Thousands)	32.60	34.17	40.82	41.46	45.16	52.07	51.62	50.53	51.25	51.97	52.69
Federal Civilian Govt	0.25	0.25	0.27	0.26	0.30	0.59	0.44	0.29	0.29	0.29	0.29
Federal Military Govt	0.46	0.40	0.35	0.40	0.40	0.38	0.34	0.31	0.31	0.31	0.31
North Carolina											
Total Population (Thousands)	5,106.70	5,535.44	5,896.17	6,254.00	6,664.02	7,344.67	8,078.91	8,672.46	8,856.51	8,988.43	9,098.05
Total Employment (Thousands)	2,468.52	2,647.46	3,059.87	3,409.92	3,928.13	4,380.50	4,924.92	5,119.50	5,213.77	5,308.04	5,402.28
Federal Civilian Govt	46.19	48.32	48.94	51.25	58.49	60.45	66.49	61.80	62.30	62.79	63.28
Federal Military Govt	134.27	122.57	118.12	128.08	114.23	124.97	116.61	126.37	126.60	126.85	127.09
United States											
Total Population (Thousands)	203,982.31	215,465.21	227,225.62	237,924.75	249,622.81	266,278.39	282,216.95	296,507.06	299,398.48	303,096.74	306,044.99
Total Employment (Thousands)	91,281.60	98,906.59	114,231.19	124,509.69	139,380.89	148,982.79	166,758.78	174,249.50	176,969.94	179,885.52	182,801.29
Federal Civilian Govt	2,902.01	2,912.00	2,993.99	3,008.00	3,233.00	2,942.00	2,891.98	2,789.99	2,790.75	2,799.20	2,807.63
Federal Military Govt	3,231.99	2,656.00	2,501.01	2,746.00	2,718.00	2,293.00	2,075.02	2,027.01	2,026.62	2,030.99	2,035.40

Source: Woods and Poole Demographics CEDDS 2007

Table 1: Summary of regional po

Fort Bragg Region	2009	2010	2011	2012	2013	2014	2015	2020	2025	2030	Average annual growth rates 1990-2007	1995-2007
Total Population (Thousands)	791.55	800.29	809.18	818.24	827.49	836.56	845.94	893.11	942.26	994.72	1.33%	1.14%
Total Employment (Thousands)	414.83	420.18	425.52	430.88	436.23	441.58	446.93	473.71	500.47	527.21	1.63%	1.20%
Federal Civilian Govt	11.78	11.87	11.97	12.06	12.16	12.25	12.35	12.82	13.29	13.76	0.53%	0.27%
Federal Military Govt	49.45	49.55	49.65	49.74	49.84	49.93	50.03	50.50	50.98	51.46	0.86%	-0.27%
Cumberland County					0.0789						1990-2007	1995-2007
Total Population (Thousands)	310.15	313.58	317.07	320.63	324.26	327.82	331.51	350.04	369.36	389.99	0.56%	0.26%
Total Employment (Thousands)	202.77	204.96	207.14	209.33	211.51	213.70	215.89	226.85	237.82	248.78	1.80%	1.27%
Federal Civilian Govt	10.83	10.91	11.00	11.08	11.17	11.25	11.34	11.77	12.19	12.62	0.60%	0.52%
Federal Military Govt	48.34	48.43	48.53	48.62	48.71	48.81	48.90	49.37	49.83	50.30	0.90%	-0.26%
Total Population (Thousands)	0.3918	0.3918	0.3918	0.3919	0.3919	0.3919	0.3919	0.3919	0.3920	0.3921		
Total Employment (Thousands)	0.4888	0.4878	0.4868	0.4858	0.4849	0.4840	0.4831	0.4789	0.4752	0.4719		
Federal Civilian Govt	0.9194	0.9192	0.9190	0.9189	0.9187	0.9186	0.9184	0.9178	0.9173	0.9167		
Federal Military Govt	0.9775	0.9775	0.9775	0.9775	0.9775	0.9775	0.9775	0.9775	0.9775	0.9775		
Harnett County											1990-2007	1995-2007
Total Population (Thousands)	112.87	114.96	117.07	119.20	121.36	123.48	125.66	136.53	147.67	159.33	2.75%	2.73%
Total Employment (Thousands)	42.41	43.28	44.15	45.02	45.89	46.76	47.62	51.97	56.31	60.65	2.74%	2.80%
Federal Civilian Govt	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.14	0.15	0.15	-0.45%	0.33%
Federal Military Govt	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.27	0.27	-0.09%	-0.19%
Hoke County											1990-2007	1995-2007
Total Population (Thousands)	43.98	44.50	45.03	45.57	46.12	46.66	47.22	50.02	52.94	56.04	3.68%	3.43%
Total Employment (Thousands)	13.26	13.44	13.62	13.80	13.97	14.15	14.33	15.23	16.13	17.03	2.60%	2.71%
Federal Civilian Govt	0.05	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.06	0.06	-0.12%	1.26%
Federal Military Govt	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.90%	0.61%
Lee County											1990-2007	1995-2007
Total Population (Thousands)	57.74	57.97	58.21	58.46	58.72	58.98	59.25	60.65	62.18	63.92	1.89%	1.88%
Total Employment (Thousands)	36.60	36.99	37.37	37.75	38.13	38.51	38.90	40.79	42.68	44.56	1.86%	0.92%
Federal Civilian Govt	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.18	0.00%	0.52%
Federal Military Govt	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	-0.89%	-0.94%
Moore County											1990-2007	1995-2007
Total Population (Thousands)	86.54	87.59	88.66	89.74	90.85	91.93	93.05	98.66	104.48	110.66	2.07%	1.84%
Total Employment (Thousands)	46.02	46.79	47.55	48.32	49.09	49.86	50.63	54.47	58.31	62.16	1.75%	1.70%
Federal Civilian Govt	0.20	0.21	0.21	0.21	0.22	0.22	0.23	0.25	0.27	0.29	0.48%	1.46%
Federal Military Govt	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.21	0.21	-0.70%	-0.95%
Richmond County]											1990-2007	1995-2007
Total Population (Thousands)	46.98	47.08	47.19	47.32	47.46	47.59	47.74	48.52	49.43	50.52	0.28%	0.19%
Total Employment (Thousands)	20.36	20.60	20.84	21.09	21.33	21.58	21.82	23.04	24.25	25.47	-0.57%	-0.33%
Federal Civilian Govt	0.11	0.12	0.12	0.12	0.12	0.12	0.13	0.14	0.15	0.16	-1.20%	-1.46%
Federal Military Govt	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	-2.37%	-2.36%
Robeson County, 37155]											1990-2007	1995-2007
Total Population (Thousands)	133.30	134.61	135.95	137.32	138.72	140.09	141.52	148.69	156.20	164.27	1.26%	1.07%
Total Employment (Thousands)	53.41	54.13	54.86	55.58	56.30	57.02	57.75	61.36	64.96	68.57	0.83%	-0.02%
Federal Civilian Govt	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.31	-0.30%	-6.06%
Federal Military Govt	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.32	0.32	0.32	-1.49%	-1.68%
North Carolina											1990-2007	1995-2007
Total Population (Thousands)	9,206.59	9,315.24	9,425.72	9,538.11	9,652.78	9,765.26	9,881.42	10,464.78	11,071.28	11,716.55	1.76%	1.68%
Total Employment (Thousands)	5,496.52	5,590.74	5,684.94	5,779.13	5,873.30	5,967.47	6,061.63	6,532.35	7,002.98	7,473.58	1.77%	1.60%
Federal Civilian Govt	63.78	64.28	64.78	65.28	65.77	66.26	66.76	69.24	71.70	74.17	0.42%	0.32%
Federal Military Govt	127.33	127.57	127.82	128.06	128.30	128.54	128.79	129.99	131.19	132.40	0.62%	0.12%
United States											1990-2007	1995-2007
Total Population (Thousands)	308,960.90	311,884.33	314,872.09	317,926.95	321,059.94	324,123.35	327,310.60	343,360.10	360,201.78	378,316.82	1.14%	1.08%
Total Employment (Thousands)	185,717.08	188,632.67	191,548.53	194,464.19	197,380.00	200,295.60	203,211.42	217,790.44	232,369.64	246,949.03	1.50%	1.57%
Federal Civilian Govt	2,816.06	2,824.48	2,832.91	2,841.33	2,849.75	2,858.17	2,866.60	2,908.71	2,950.84	2,992.96	-0.85%	-0.41%
Federal Military Govt	2,039.80	2,044.17	2,048.59	2,052.94	2,057.28	2,061.65	2,066.04	2,087.81	2,109.63	2,131.38	-1.71%	-1.01%

Source: Woods and Poole Demoç

Table 2: Distribution of Expected Incoming Population by County, 2006-2013

Table 9: Population Distribution by County (2006-2013)

	Category of new resident									
	In military housing	Civilian Personnel	Military Personnel	Civilian Dependent	Military Dependent	Civilian Total	Military Total	Off-base Total	Total	
Cumberland	941	1,779	966	3,557	1,488	5,336	2,454	7,790	8,731	34.13%
Harnett	8,000	888	283	1,775	437	2,663	720	3,383	11,383	44.50%
Hoke		413	146	826	225	1,239	371	1,610	1,610	6.29%
Lee		360	88	719	135	1,079	223	1,302	1,302	5.09%
Moore		472	123	945	189	1,417	311	1,729	1,729	6.76%
Richmond		46	12	91	18	137	30	167	167	0.65%
Robeson		162	68	324	105	486	173	658	658	2.57%
Total	8,941	4,119	1,686	8,238	2,596	12,357	4,282	16,639	25,580	

2013 Baseline	Federal Civilian Employment	Federal Military Employment	Total Employment	Total Population
Cumberland County	11,169	48,713	211,514	324,261
Harnett County	134	259	45,889	121,356
Hoke County	54	100	13,974	46,124
Lee County	168	136	38,131	58,724
Moore County	218	200	49,089	90,845
Richmond County	122	115	21,331	47,458
Robeson County	292	313	56,301	138,722
Total	12,157	49,836	436,229	827,490

2013 Base Realigbnment			Total Employment		Total Population	
				Percent additional		Percent additional
Cumberland County	12,948	49,679	214,259	1.28%	332,992	2.62%
Harnett County	1,022	542	47,060	2.49%	132,739	8.58%
Hoke County	467	246	14,533	3.85%	47,734	3.37%
Lee County	528	224	38,579	1.16%	60,026	2.17%
Moore County	690	323	49,684	1.20%	92,574	1.87%
Richmond County	168	127	21,389	0.27%	47,625	0.35%
Robeson County	454	381	56,531	0.41%	139,380	0.47%
Total	16,276	51,522	442,034	1.31%	853,070	3.00%

Source: BRAC database and W&P CEDDS data

Table 3: Number of Passengers Enplaning at Selected North Carolina Airports, 1990-2007

Year	Charlotte Douglas (CLT)	Raleigh-Durham (RDU)	Greensboro (GSO)	Wilmington ILM)	Asheville (AVL)	Fayatteville (FAY)	Jacksonville (OAJ)	North Carolina Total
1990	7,603,940	4,757,685	1,019,648	132,005	140,938	136,107	52,496	13,866,292
1991	8,232,494	4,663,060	929,422	123,119	169,505	148,886	66,038	14,371,953
1992	8,858,257	4,763,663	917,791	124,598	164,945	135,253	53,436	15,027,028
1993	8,211,563	4,546,263	1,055,248	139,950	184,983	148,956	49,009	14,336,334
1994	9,779,746	4,013,274	2,227,500	174,233	257,010	168,468	59,428	16,680,430
1995	9,986,542	2,961,455	1,856,311	172,802	225,707	154,062	31,142	15,389,404
1996	10,440,723	2,995,230	1,270,747	182,242	198,471	161,236	21,028	15,275,943
1997	10,762,753	3,152,118	1,050,153	193,358	209,510	153,217	24,603	15,546,530
1998	10,656,913	3,444,452	1,234,001	195,592	211,391	139,162	23,660	15,905,765
1999	9,813,466	4,172,489	1,275,905	183,260	180,930	124,975	17,999	15,770,439
2000	10,796,069	4,905,798	1,222,133	206,597	222,863	121,032		17,477,101
2001	10,605,069	4,576,543	1,124,963	191,512	213,534	69,054		16,783,480
2002	10,965,196	4,001,392	1,085,130	196,938	204,020	74,870	9,387	16,567,606
2003	11,651,255	3,958,277	1,301,332	209,280	223,199	120,609	40,913	17,613,055
2004	12,129,528	4,362,927	1,316,453	268,364	241,639	124,374	44,015	18,584,945
2005	14,335,916	4,762,982	1,318,538	340,181	316,901	153,699	92,325	21,508,008
2006	15,020,047	4,789,034	1,092,547	313,093	290,508	155,264	87,418	21,909,365
2007	16,544,281	5,045,131	1,095,365	393,086	293,454	175,922	117,123	23,844,003
Average annual growth in numbers of passengers								
1990-2007	4.57%	0.35%	0.42%	6.42%	4.31%	1.51%	4.72%	3.19%
2003-2007	7.01%	4.85%	-3.45%	12.61%	5.47%	7.55%	21.04%	6.06%

Source: BTS T-100 data

Table 4: Passengers enplaning at FAY by immediate destination, 1990-2007

Destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Albany, GA						15												39
Asheville, NC							31											
Atlanta, GA				22,793	50,136	50,243	49,434	53,720	56,157	60,126	50,972	47,799	55,898	59,040	66,209	52,932	64,253	80,708
Atlantic City, NJ													229	1,275	1,351	1,384	2,167	1,569
Augusta, GA						54	37	53	22	9								61
Baltimore, MD	10,978	3,346																
Bristol/Kngsprt/Jhnsn Cty, TN	52																	
Camp Springs, MD													48					
Charleston, SC	134						49	68			79							
Charleston/Dunbar, WV																44		
Charlotte, NC	106,903	116,260	107,110	100,704	110,736	103,493	111,052	99,051	82,353	64,145	69,160	21,051	17,998	59,013	55,248	96,941	85,614	89,220
Chattanooga, TN							20	22			16							
Columbia, SC			43	39			4	16	99		25		3			46	50	46
Columbus, GA					38				12		10	19	4					45
Columbus, OH							7											
Dallas/Ft.Worth, TX	196	63	82	47														
Dayton, OH							6											
Denver, CO																108		
Florence, SC				9	10		104	16	110	42	12		15			17		
Fort Kobbe, Panama Republic				78														
Gander, Canada							115						94					
Greensboro/High Point, NC	17,370	24,090	26,913	24,525	6,705		59			67	4							48
Greenville/Spartanburg, SC	58	18				16												
Gulfport/Biloxi, MS											104		209			319		
Hilton Head, SC																3		
Houston, TX															44			
Jacksonville/Camp Lejeune, NC		69	35	88			8	3	33	29						45	41	39
Kinston, NC	11																	373
Knoxville, TN														28				35
Macon, GA					109	159	247	87	2	121	12		18	17			49	75
Memphis, TN											314		325	305	547			
Mission/Mcallen/Edinburg, TX														32	66	61		
Myrtle Beach, SC				38	15	48	34			102	16	58						
Nashville, TN		14	69															
New Bern/Morehead/Beaufort, NC														39				
Norfolk, VA												42						
Oakland, CA															54			
Orlando, FL				11														
Philadelphia, PA	14				41											1,148	274	296
Pittsburgh, PA									72						34			
Raleigh/Durham, NC	391	638	968	561	362	34			143	147	130	50		159	62		31	137
Richmond, VA														12				
Rocky Mount, NC													4	47				
Sanford, FL																	1,726	2,588
Savannah, GA		42			26					28								83
St. Louis, MO																18		
Toronto, Canada															33	8		
Washington, DC		4,346						10			3							
Wilmington, NC			33	63	290		29	171	159	159	175	35	25	642	726	625	1,059	560
Fayetteville Total	136,107	148,886	135,253	148,956	168,468	154,062	161,236	153,217	139,162	124,975	121,032	69,054	74,870	120,609	124,374	153,699	155,264	175,922

Source: BTS T-100 data

Table 5: Aircraft departures at FAY by immediate destination, 1990-2007

Destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Albany, GA						1												1
Asheville, NC							1											
Atlanta, GA				1,578	3,130	3,092	2,977	2,993	2,980	3,065	2,376	2,520	2,019	1,724	1,728	1,438	1,629	2,138
Atlantic City, NJ													4	13	12	12	23	15
Augusta, GA						3	2	2	1	1								2
Baltimore, MD	359	120																
Bristol/Kngsprt/Jhnsn Cty, TN	1																	
Camp Springs, MD													1					
Charleston, SC	2						1	1			1							
Charleston/Dunbar, WV																1		
Charlotte, NC	2,098	1,797	1,795	2,045	2,160	2,158	2,170	1,780	1,420	1,307	1,366	486	646	2,484	1,658	2,791	2,533	2,657
Chattanooga, TN							1	1			1							
Columbia, SC			1	1			2	1	1		1		1			1	1	1
Columbus, GA					2				1		1	1	1					1
Columbus, OH							1											
Dallas/Ft.Worth, TX	6	2	3	6														
Dayton, OH							1											
Denver, CO																1		
Florence, SC				1	1		5	1	4	2	1		2			2		
Fort Kobbe, Panama Republic				1														
Gander, Canada							1						1					
Greensboro/High Point, NC	534	714	870	1,060	341		1			2	1							1
Greenville/Spartanburg, SC	1	1				1												
Gulfport/Biloxi, MS											1		2			4		
Hilton Head, SC																1		
Houston, TX															1			
Jacksonville/Camp Lejeune, NC		1	1	3			1	1	2	1						1	1	1
Kinston, NC	1																	9
Knoxville, TN														1				1
Macon, GA					5	8	11	4	1	5	1		1	1			1	2
Memphis, TN											2		4	3	5			
Mission/Mcallen/Edinburg, TX														1	2	1		
Myrtle Beach, SC				1	1	1	2			3	2	1						
Nashville, TN		1	3															
New Bern/Morehead/Beaufort, NC														1				
Norfolk, VA												1						
Oakland, CA															1			
Orlando, FL				1														
Philadelphia, PA	1				1											42	8	10
Pittsburgh, PA									1						1			
Raleigh/Durham, NC	5	9	10	10	4	1			4	2	1	1		12	2		1	3
Richmond, VA														1				
Rocky Mount, NC													1	3				
Sanford, FL																	21	31
Savannah, GA		1			1					1								1
St. Louis, MO																1		
Toronto, Canada															1	1		
Washington, DC		768						1			1							
Wilmington, NC			1	2	5		1	6	4	3	4	1	1	12	15	12	14	9
Fayetteville Total	3,008	3,414	2,684	4,709	5,651	5,265	5,178	4,791	4,419	4,392	3,760	3,011	2,684	4,256	3,426	4,309	4,232	4,883

Source: BTS T-100 data

Table: 6: Destinations Served from Fayetteville Regional Airport by Carrier and Equipment Usec

Destination	Carrier	Aircraft model	Aircraft departures in 2007	Passengers enplaned in 2007	Available seats in 2007	Aircraft capacity	Seats occupied
Albany, GA	Atlantic Southeast Airline	Canadair Rj-200er /Rj-440	1	39	50	50	0.78
	Destination Total		1	39	50	50	0.78
Atlanta, GA	Atlantic Southeast Airline	Aerospatiale/Aeritalia Atr-72	1	36	66	66	0.55
		Canadair Rj-200er /Rj-440	2,137	80,672	106,710	50	0.76
	Destination Total		2,138	80,708	106,776	51	0.74
Atlantic City, NJ	Pace Airlines	Boeing 737-100/200	3	331	366	122	0.87
	Ryan International Airline	Boeing 737-100/200	5	445	610	122	0.70
	Sky King Inc.	Boeing 737-100/200	7	793	848	121	0.94
	Destination Total		15	1,569	1,824	122	0.85
Augusta, GA	Atlantic Southeast Airline	Canadair Rj-200er /Rj-440	2	61	100	50	0.61
	Destination Total		2	61	100	50	0.61
Charlotte, NC	Air Wisconsin Airlines Cor	Canadair Rj-200er /Rj-440	92	2,533	4,650	50	0.56
	Chautauqua Airlines Inc.	Embraer-145	92	2,035	4,600	50	0.40
	PSA Airlines Inc.	Canadair Rj-200er /Rj-440	2,324	78,499	116,200	50	0.67
		Canadair Rj-700	149	6,153	10,430	70	0.63
	Destination Total		2,657	89,220	135,880	55	0.57
Columbia, SC	PSA Airlines Inc.	Canadair Rj-200er /Rj-440	1	46	50	50	0.92
	Destination Total		1	46	50	50	0.92
Columbus, GA	Atlantic Southeast Airline	Canadair Rj-200er /Rj-440	1	45	50	50	0.90
	Destination Total		1	45	50	50	0.90
Greensboro/High Point, NC	PSA Airlines Inc.	Canadair Rj-200er /Rj-440	1	48	50	50	0.96
	Destination Total		1	48	50	50	0.96
Jacksonville/Camp Lejeune, NC	Atlantic Southeast Airline	Canadair Rj-200er /Rj-440	1	39	40	40	0.98
	Destination Total		1	39	40	40	0.98
Kinston, NC	Pace Airlines	Boeing 737-100/200	2	44	244	122	0.18
	Ryan International Airline	Boeing 727-200/231a	1	26	122	122	0.21
	Sky King Inc.	Boeing 737-100/200	6	303	722	121	0.40
	Destination Total		9	373	1,088	121	0.31
Knoxville, TN	Atlantic Southeast Airline	Canadair Rj-200er /Rj-440	1	35	50	50	0.70
	Destination Total		1	35	50	50	0.70
Macon, GA	Atlantic Southeast Airline	Canadair Rj-200er /Rj-440	2	75	100	50	0.75
	Destination Total		2	75	100	50	0.75
Philadelphia, PA	Air Wisconsin Airlines Cor	Canadair Rj-200er /Rj-440	7	239	350	50	0.68
	PSA Airlines Inc.	Canadair Rj-200er /Rj-440	3	57	150	50	0.38
	Destination Total		10	296	500	50	0.53
Raleigh/Durham, NC	Air Wisconsin Airlines Cor	Canadair Rj-200er /Rj-440	1	50	50	50	1.00
	Pace Airlines	Boeing 737-100/200	1	40	122	122	0.33
	Sky King Inc.	Boeing 737-100/200	1	47	120	120	0.39
	Destination Total		3	137	292	97	0.57
Sanford, FL	Allegiant Air	Mcdonnell Douglas Dc9 Su	31	2,588	4,650	150	0.58
	Destination Total		31	2,588	4,650	150	0.58
Savannah, GA	American Airlines Inc.	Mcdonnell Douglas Dc9 Su	1	83	136	136	0.61
	Destination Total		1	83	136	136	0.61
Wilmington, NC	PSA Airlines Inc.	Canadair Rj-200er /Rj-440	1	50	50	50	1.00
	Pace Airlines	Boeing 737-100/200	4	234	488	122	0.48
	Ryan International Airline	Boeing 737-100/200	1	115	122	122	0.94
	Sky King Inc.	Boeing 737-100/200	3	161	364	121	0.44
	Destination Total		9	560	1,024	114	0.58
Fayetteville Total			4,883	175,922	252,660	76	0.62

Source: BTS T-100 data

Table 7: Fayetteville Regional Airport Service, Spring 2008

Departure	Origin	Destination	Arrival	Duration	Flight	Codeshare
Charlotte to Fayetteville						
8:05 AM	(CLT)	(FAY)	8:57 AM	0hr 52mn	US Airways 2566	United 3756
9:55 AM	(CLT)	(FAY)	10:52 AM	0hr 57mn	US Airways 2558	United 2984
11:25 AM	(CLT)	(FAY)	12:15 PM	0hr 50mn	US Airways 2273	United 3520
1:05 PM	(CLT)	(FAY)	1:53 PM	0hr 48mn	US Airways 2354	United 3527
2:30 PM	(CLT)	(FAY)	3:19 PM	0hr 49mn	US Airways 2556	United 3377
5:55 PM	(CLT)	(FAY)	6:45 PM	0hr 50mn	US Airways 2568	United 3772
10:35 PM	(CLT)	(FAY)	11:21 PM	0hr 46mn	US Airways 2202	United 3526
Atlanta to Fayetteville						
9:28 AM	(ATL)	(FAY)	10:48 AM	1hr 20mn	Delta 4536	
11:53 AM	(ATL)	(FAY)	1:04 PM	1hr 11mn	Delta 4640	
1:36 PM	(ATL)	(FAY)	2:44 PM	1hr 8mn	Delta 4460	
3:31 PM	(ATL)	(FAY)	4:49 PM	1hr 18mn	Delta 4196	
6:15 PM	(ATL)	(FAY)	7:28 PM	1hr 13mn	Delta 4278	
8:30 PM	(ATL)	(FAY)	9:43 PM	1hr 13mn	Delta 4513	

Departure	Arrival	Duration	Flight	Codeshare
Fayetteville to Charlotte				
5:50 AM	6:40 AM	0hr 50mn	US Airways	United 3406
9:42 AM	10:32 AM	0hr 50mn	US Airways	United 3331
11:27 AM	12:17 PM	0hr 50mn	US Airways	United 3754
12:55 PM	1:45 PM	0hr 50mn	US Airways	United 3525
2:40 PM	3:30 PM	0hr 50mn	US Airways	United 3571
3:51 PM	4:41 PM	0hr 50mn	US Airways	United 3573
7:20 PM	8:10 PM	0hr 50mn	US Airways	United 3836
Fayetteville to Atlanta				
6:00 AM	7:19 AM	1hr 19mn	Delta 4368	
8:00 AM	9:25 AM	1hr 25mn	Delta 4525	
11:13 AM	12:30 PM	1hr 17mn	Delta 4738	
1:30 PM	2:50 PM	1hr 20mn	Delta 4640	
3:10 PM	4:30 PM	1hr 20mn	Delta 4460	
5:15 PM	6:37 PM	1hr 22mn	Delta 4678	

Source: Expedia.com

Table 8: Load Factors (Average Seat Occupancy) on Flights from Fayetteville Regional Airport, 1990-2007

	Atlanta	Charlotte	Greensboro/ High Point	Raleigh/ Durham	Fayetteville Total
1990		44.07%	22.91%	56.34%	38.09%
1991		52.74%	23.76%	52.21%	42.96%
1992		50.59%	21.79%	69.19%	40.04%
1993	48.15%	47.04%	16.31%	41.65%	35.88%
1994	53.35%	53.18%	14.09%	69.22%	47.96%
1995	54.16%	53.50%		33.66%	53.72%
1996	53.33%	59.67%	53.64%		57.49%
1997	47.03%	56.35%			52.66%
1998	51.81%	54.43%		58.13%	53.32%
1999	47.42%	46.65%	32.68%	54.44%	46.99%
2000	47.96%	51.71%	3.64%	93.53%	50.08%
2001	49.96%	44.28%		51.55%	48.08%
2002	55.18%	62.80%			56.81%
2003	66.50%	54.82%		29.12%	60.12%
2004	73.55%	73.43%		62.00%	73.38%
2005	75.22%	63.57%			67.10%
2006	75.33%	66.25%		62.00%	69.72%
2007	75.59%	65.66%	96.00%	46.92%	69.63%

Source: BTS T-100 data

Table 9: Destinations of FAY Air Passengers Traveling through Hubs

	Departing	147,480	
	Flying to hubs	143,100	
	Hub		
	CLT	83,560	
	ATL	59,540	
	Destination	Passengers	Cumulative percent
1	Wash DC	7,250	5.07%
2	NYC	5,680	9.04%
3	TPA	5,320	12.75%
4	DFW	4,940	16.21%
5	Chicago	4,560	19.39%
6	PHL	4,410	22.47%
7	MCI	3,790	25.12%
8	PHX	3,670	27.69%
9	BNA	3,550	30.17%
10	SEA	3,500	32.61%
11	LAS	3,370	34.97%
12	LAX	3,300	37.27%
13	MCO	3,100	39.44%
14	DEN	3,080	41.59%
15	STL	2,970	43.67%
16	*LGA*	2,710	45.56%
17	IAH	2,350	47.20%
18	MSP	2,330	48.83%
19	DTW	2,230	50.39%
20	SAT	2,170	51.91%

Source: BTS Origin-Destination Ticket Survey

Table 10: Popular Destinations of Passengers Travelling through Hubs Directly Connected to Fayetteville.

	Hub	Passengers			Hub	Passengers		
	CLT	83,560			ATL	59,540		
	Destination	Passengers	Percent of those travelling to hub	Cumulative percent	Destination	Passengers	Percent of those travelling to hub	Cumulative percent
1	Wash DC	6,650	7.96%	7.96%	SEA	2,480	4.17%	4.17%
2	TPA	4,510	5.40%	13.36%	SAT	2,170	3.64%	7.81%
3	PHL	4,170	4.99%	18.35%	DFW	2,140	3.59%	11.40%
4	NYC	4,150	4.97%	23.31%	MCI	1,420	2.38%	13.79%
5	Chi	3,700	4.43%	27.74%	LAX	1,230	2.07%	15.85%
6	PHX	2,850	3.41%	31.15%	SLC	1,170	1.97%	17.82%
7	DFW	2,800	3.35%	34.50%	LAS	1,140	1.91%	19.73%
8	BNA	2,640	3.16%	37.66%	NYC	1,140	1.91%	21.65%
9	MCO	2,460	2.94%	40.61%	IAH	1,100	1.85%	23.50%
10	MCI	2,370	2.84%	43.44%	MSP	1,090	1.83%	25.33%
11	STL	2,270	2.72%	46.16%	DEN	960	1.61%	26.94%
12	LAS	2,230	2.67%	48.83%	HNL	930	1.56%	28.50%
13	DEN	2,120	2.54%	51.36%	ELP	920	1.55%	30.05%
14	LAX	2,070	2.48%	53.84%	BNA	910	1.53%	31.58%
15	IND	1,780	2.13%	55.97%	CSG	860	1.44%	33.02%
16	BOS	1,640	1.96%	57.93%	Chi	860	1.44%	34.46%
17	DTW	1,640	1.96%	59.90%	AUS	850	1.43%	35.89%
18	PIT	1,290	1.54%	61.44%	VPS	830	1.39%	37.29%
19	SFO	1,270	1.52%	62.96%	PHX	820	1.38%	38.66%
20	IAH	1,250	1.50%	64.46%	TPA	810	1.36%	40.02%

Source: BTS Origin-Destination Ticket Survey

Table 11: Most Popular Destinations for Fayetteville Air Travelers

	Destination	Passengers	Percent of total	Cumulative percent of total
1	ATL	10,910	7.75%	7.75%
2	Wash	5,320	3.78%	11.54%
3	TPA	5,210	3.70%	15.24%
4	NYC	3,960	2.81%	18.05%
5	DFW	3,750	2.67%	20.72%
6	MCI	3,510	2.49%	23.21%
7	BNA	3,460	2.46%	25.67%
8	SEA	3,450	2.45%	28.13%
9	PHL	3,120	2.22%	30.34%
10	LAX	3,000	2.13%	32.48%
11	MCO	2,920	2.08%	34.55%
12	STL	2,820	2.00%	36.56%
13	LAS	2,810	2.00%	38.55%
14	Chi	2,730	1.94%	40.49%
15	Bay	2,370	1.68%	42.18%
16	SAT	2,250	1.60%	43.78%
17	DTW	2,130	1.51%	45.29%
18	MSP	2,130	1.51%	46.81%
19	IND	2,050	1.46%	48.26%
20	DEN	1,980	1.41%	49.67%
21	BOS	1,860	1.32%	50.99%
22	MIA	1,730	1.23%	52.22%
23	IAH	1,700	1.21%	53.43%
24	PHX	1,630	1.16%	54.59%
25	BDL	1,610	1.14%	55.73%
		78,410	55.73%	55.73%
		62,280	44.27%	100.00%
		140,690		

Source: BTS Origin-Destination Ticket Survey
Note: See discussion in text

Table 12: FAY-Washington Service

Northward

Departure	Fayetteville	Washington DC	Arrival	Duration	Flight	Codeshare	Transfer hub
5:50 AM	(FAY)	(DCA)	9:26 AM	3hr 36mn	US Airways 2203 / 1732		Charlotte (CLT)
		(BWI)	9:31 AM	3hr 41mn	US Airways 2203 / 1889		Charlotte (CLT)
		(IAD)	10:04 AM	4hr 14mn	US Airways 2203 / 2682		Charlotte (CLT)
6:00 AM	(FAY)	(DCA)	9:59 AM	3hr 59mn	Delta 4368 / 804		Atlanta (Hartsfield Intl.)
		(IAD)	10:00 AM	4hr 0mn	Delta 4368 / 2020		Atlanta (Hartsfield Intl.)
		(BWI)	10:25 AM	4hr 25mn	Delta 4368 / 1294		Atlanta (Hartsfield Intl.)
8:00 AM	(FAY)	(BWI)	11:57 AM	3hr 57mn	Delta 4525 / 790		Atlanta (Hartsfield Intl.)
9:42 AM	(FAY)	(DCA)	12:44 PM	3hr 2mn	US Airways 2571 / 1702		Charlotte (CLT)
		(IAD)	1:20 PM	3hr 38mn	US Airways 2571 / 2620		Charlotte (CLT)
11:13 AM	(FAY)	(DCA)	2:59 PM	3hr 46mn	Delta 4738 / 818		Atlanta (Hartsfield Intl.)
		(BWI)	4:35 PM	5hr 22mn	Delta 4738 / 1200		Atlanta (Hartsfield Intl.)
11:27 AM	(FAY)	(DCA)	2:22 PM	2hr 55mn	US Airways 2367 / 775		Charlotte (CLT)
		(IAD)	3:15 PM	3hr 48mn	US Airways 2367 / 2236	United 3754 / 3149	Charlotte (CLT)
12:55 PM	(FAY)	(DCA)	3:59 PM	3hr 4mn	US Airways 2290 / 975		Charlotte (CLT)
1:30 PM	(FAY)	(BWI)	5:53 PM	4hr 23mn	Delta 4640 / 1542		Atlanta (Hartsfield Intl.)
2:40 PM	(FAY)	(IAD)	5:27 PM	2hr 47mn	US Airways 2415 / 2640		Charlotte (CLT)
		(DCA)	5:39 PM	2hr 59mn	US Airways 2415 / 1768		Charlotte (CLT)
		(BWI)	5:54 PM	3hr 14mn	United 3571 / 2442		Charlotte (CLT)
3:10 PM	(FAY)	(DCA)	7:07 PM	3hr 57mn	Delta 4460 / 117		Atlanta (Hartsfield Intl.)
3:51 PM	(FAY)	(DCA)	7:06 PM	3hr 15mn	US Airways 2556 / 756		Charlotte (CLT)
		(BWI)	7:15 PM	3hr 24mn	United 3573 / 1711		Charlotte (CLT)
		(IAD)	7:24 PM	3hr 33mn	US Airways 2556 / 2282	United 3573 / 3380	Charlotte (CLT)
5:15 PM	(FAY)	(BWI)	9:11 PM	3hr 56mn	Delta 4678 / 848		Atlanta (Hartsfield Intl.)
7:20 PM	(FAY)	(DCA)	11:21 PM	4hr 1mn	US Airways 2599 / 1480		Charlotte (CLT)
		(IAD)	11:46 PM	4hr 26mn	US Airways 2599 / 1774	United 3836 / 1790	Charlotte (CLT)
		(BWI)	11:51 PM	4hr 31mn	United 3836 / 1992		Charlotte (CLT)

Southward

Departure	Washington DC	Fayetteville	Arrival	Duration	Flight	Codeshare	Transfer hub
5:30 AM	(BWI)			3hr 27mn	United 2102 / 3756		Charlotte (CLT)
5:45 AM	(DCA)	(FAY)	8:57 AM	3hr 12mn	US Airways 1242 / 2566		Charlotte (CLT)
6:00 AM	(BWI)	(FAY)	10:48 AM	4hr 48mn	Delta 953 / 4536		Atlanta (Hartsfield Intl.)
7:00 AM	(IAD)			3hr 52mn	US Airways 1601 / 2558	United 1998 / 2984	Charlotte (CLT)
7:15 AM	(DCA)	(FAY)	10:52 AM	3hr 37mn	US Airways 1680 / 2558		Charlotte (CLT)
8:10 AM	(BWI)			4hr 54mn	Delta 1051 / 4640		Atlanta (Hartsfield Intl.)
8:30 AM	(IAD)			4hr 34mn	Delta 6050 / 4640		Atlanta (Hartsfield Intl.)
9:00 AM	(DCA)	(FAY)	1:04 PM	4hr 4mn	Delta 807 / 4640		Atlanta (Hartsfield Intl.)
10:40 AM	(IAD)			3hr 13mn	US Airways 2615 / 2354		Charlotte (CLT)
10:40 AM	(DCA)	(FAY)	1:53 PM	3hr 13mn	US Airways 1939 / 2354		Charlotte (CLT)
9:00 AM	(IAD)	(FAY)	12:15 PM	3hr 15mn	US Airways 1442 / 2273	United 2610 / 3520	Charlotte (CLT)
10:30 AM	(IAD)			4hr 14mn	Delta 2035 / 4460		Atlanta (Hartsfield Intl.)
11:00 AM	(DCA)			3hr 44mn	Delta 811 / 4460		Atlanta (Hartsfield Intl.)
11:05 AM	(BWI)	(FAY)	2:44 PM	3hr 39mn	Delta 739 / 4460		Atlanta (Hartsfield Intl.)
12:00 PM	(DCA)	(FAY)	3:19 PM	3hr 19mn	US Airways 862 / 2556		Charlotte (CLT)
12:20 PM	(IAD)			4hr 29mn	Delta 861 / 4196		Atlanta (Hartsfield Intl.)
12:50 PM	(BWI)			3hr 59mn	Delta 1676 / 4196		Atlanta (Hartsfield Intl.)
12:55 PM	(DCA)	(FAY)	4:49 PM	3hr 54mn	Delta 815 / 4196		Atlanta (Hartsfield Intl.)
3:25 PM	(BWI)			3hr 20mn	US Airways 2679 / 2568		Charlotte (CLT)
3:30 PM	(DCA)			3hr 15mn	US Airways 1657 / 2568		Charlotte (CLT)
3:49 PM	(IAD)	(FAY)	6:45 PM	2hr 56mn	US Airways 2277 / 2568	United 3167 / 3772	Charlotte (CLT)
3:25 PM	(BWI)	(FAY)	7:28 PM	4hr 3mn	Delta 1281 / 4278		Atlanta (Hartsfield Intl.)
5:40 PM	(BWI)			4hr 3mn	Delta 1755 / 4513		Atlanta (Hartsfield Intl.)
5:55 PM	(DCA)	(FAY)	9:43 PM	3hr 48mn	Delta 825 / 4513		Atlanta (Hartsfield Intl.)
7:57 PM	(IAD)			3hr 24mn	United 3774 / 3526		Charlotte (CLT)
7:59 PM	(BWI)	(FAY)	11:21 PM	3hr 22mn	US Airways 1554 / 2202	United 1909 / 3526	Charlotte (CLT)

Source: Expedia.com

Table 13: RDU-Washington DC Service

Northward

Departure	Raleigh	Washington DC	Arrival	Duration	Flight	
5:40 AM	(RDU)	(DCA)	6:44 AM	1hr 4mn	US Airways 3660	Nonstop
6:00 AM	(RDU)	(IAD)	7:05 AM	1hr 5mn	United 796	Nonstop
6:05 AM	(RDU)	(DCA)	7:05 AM	1hr 0mn	American Airlines 4629	Nonstop
6:15 AM	(RDU)	(BWI)	7:15 AM	1hr 0mn	Southwest 407	Nonstop
6:50 AM	(RDU)	(DCA)	7:58 AM	1hr 8mn	US Airways 3750	Nonstop
7:05 AM	(RDU)	(DCA)	8:05 AM	1hr 0mn	American Airlines 4654	Nonstop
8:05 AM	(RDU)	(DCA)	9:12 AM	1hr 7mn	US Airways 3956	Nonstop
8:05 AM	(RDU)	(DCA)	9:10 AM	1hr 5mn	American Airlines 4670	Nonstop
8:20 AM	(RDU)	(BWI)	9:20 AM	1hr 0mn	Southwest 2281	Nonstop
10:24 AM	(RDU)	(IAD)	11:29 AM	1hr 5mn	United 7139	Nonstop
10:25 AM	(RDU)	(DCA)	11:25 AM	1hr 0mn	American Airlines 4669	Nonstop
11:25 AM	(RDU)	(DCA)	12:32 PM	1hr 7mn	US Airways 4032	Nonstop
10:40 AM	(RDU)	(BWI)	11:40 AM	1hr 0mn	Southwest 3509	Nonstop
12:05 PM	(RDU)	(DCA)	1:05 PM	1hr 0mn	American Airlines 4631	Nonstop
1:40 PM	(RDU)	(DCA)	2:39 PM	0hr 59mn	US Airways 3404	Nonstop
1:50 PM	(RDU)	(DCA)	2:50 PM	1hr 0mn	American Airlines 4630	Nonstop
2:35 PM	(RDU)	(IAD)	3:50 PM	1hr 15mn	United 241	Nonstop
2:45 PM	(RDU)	(BWI)	3:45 PM	1hr 0mn	Southwest 3132	Nonstop
3:00 PM	(RDU)	(DCA)	3:59 PM	0hr 59mn	American Airlines 4633	Nonstop
4:00 PM	(RDU)	(DCA)	4:59 PM	0hr 59mn	American Airlines 4700	Nonstop
4:54 PM	(RDU)	(DCA)	5:59 PM	1hr 5mn	US Airways 3852	Nonstop
4:59 PM	(RDU)	(IAD)	6:09 PM	1hr 10mn	United 7237	Nonstop
6:10 PM	(RDU)	(DCA)	7:10 PM	1hr 0mn	American Airlines 4678	Nonstop
6:15 PM	(RDU)	(BWI)	7:15 PM	1hr 0mn	Southwest 431	Nonstop
6:55 PM	(RDU)	(DCA)	7:55 PM	1hr 0mn	US Airways 3210	Nonstop
7:30 PM	(RDU)	(IAD)	8:36 PM	1hr 6mn	United 404	Nonstop
9:30 PM	(RDU)	(BWI)	10:30 PM	1hr 0mn	Southwest 3582	Nonstop

Southward

Departure	Washington DC	Raleigh	Arrival	Duration	Flight	
6:00 AM	(DCA)	(RDU)	7:00 AM	1hr 0mn	American Airlines 4660	Nonstop
6:25 AM	(BWI)	(RDU)	7:25 AM	1hr 0mn	Southwest 354	Nonstop
6:25 AM	(DCA)	(RDU)	7:35 AM	1hr 10mn	US Airways 3805	Nonstop
7:30 AM	(DCA)	(RDU)	8:30 AM	1hr 0mn	American Airlines 4640	Nonstop
8:35 AM	(IAD)	(RDU)	9:48 AM	1hr 13mn	United 7139	Nonstop
8:45 AM	(DCA)	(RDU)	9:57 AM	1hr 12mn	US Airways 3825	Nonstop
9:00 AM	(BWI)	(RDU)	10:05 AM	1hr 5mn	Southwest 137	Nonstop
9:35 AM	(DCA)	(RDU)	10:35 AM	1hr 0mn	American Airlines 4688	Nonstop
11:05 AM	(DCA)	(RDU)	12:05 PM	1hr 0mn	American Airlines 4672	Nonstop
12:00 PM	(DCA)	(RDU)	1:04 PM	1hr 4mn	US Airways 3409	Nonstop
12:35 PM	(IAD)	(RDU)	1:46 PM	1hr 11mn	United 459	Nonstop
12:50 PM	(BWI)	(RDU)	1:50 PM	1hr 0mn	Southwest 228	Nonstop
12:55 PM	(DCA)	(RDU)	1:55 PM	1hr 0mn	American Airlines 4702	Nonstop
2:50 PM	(DCA)	(RDU)	4:00 PM	1hr 10mn	American Airlines 4667	Nonstop
3:15 PM	(BWI)	(RDU)	4:15 PM	1hr 0mn	Southwest 3592	Nonstop
3:15 PM	(DCA)	(RDU)	4:24 PM	1hr 9mn	US Airways 3889	Nonstop
3:15 PM	(IAD)	(RDU)	4:25 PM	1hr 10mn	United 7237	Nonstop
4:25 PM	(DCA)	(RDU)	5:25 PM	1hr 0mn	American Airlines 4647	Nonstop
5:05 PM	(DCA)	(RDU)	6:14 PM	1hr 9mn	US Airways 3109	Nonstop
5:20 PM	(IAD)	(RDU)	6:31 PM	1hr 11mn	United 240	Nonstop
5:25 PM	(DCA)	(RDU)	6:30 PM	1hr 5mn	American Airlines 4635	Nonstop
6:40 PM	(BWI)	(RDU)	7:40 PM	1hr 0mn	Southwest 3862	Nonstop
7:30 PM	(DCA)	(RDU)	8:39 PM	1hr 9mn	US Airways 3767	Nonstop
7:35 PM	(DCA)	(RDU)	8:40 PM	1hr 5mn	American Airlines 4628	Nonstop
8:45 PM	(BWI)	(RDU)	9:45 PM	1hr 0mn	Southwest 3164	Nonstop
8:50 PM	(DCA)	(RDU)	9:57 PM	1hr 7mn	US Airways 3821	Nonstop
10:18 PM	(IAD)	(RDU)	11:22 PM	1hr 4mn	United 795	Nonstop

Source: Expedia.com and Southwest.com

Table 14: Comparison of FAY and RDU Mean Market Fares to and from Popular FAY Destinations

Fayetteville Regional airport fares

	Atlanta	Washington D.C.			Tampa	New York City			Dallas-Fort Worth	Kansas City	Nashville	Seattle	Philadelphia	Los Angeles
	ATL	DCA	BWI	IAD	TPA	LGA	EWR	JFK	DFW	MCI	BNA	SEA	PHL	LAX
Year														
1993	$158.60	$153.52	$204.54	$204.83	$199.84	$157.82	$172.38	$171.31	$258.77	$209.87	$190.58	$325.20	$191.64	$267.93
1994	$145.24	$158.89	$145.49	$204.14	$174.55	$136.95	$136.68	$140.24	$276.36	$173.87	$185.16	$326.42	$182.03	$285.83
1995	$155.92	$147.68	$186.40	$176.63	$202.25	$151.13	$155.27	$152.55	$278.29	$207.22	$197.74	$315.06	$176.81	$303.47
1996	$157.24	$162.18	$181.79	$197.68	$169.37	$126.71	$138.28	$119.67	$197.34	$157.15	$172.79	$285.35	$152.52	$246.55
1997	$197.90	$194.92	$212.99	$232.70	$171.63	$135.27	$159.97	$196.40	$230.23	$192.65	$172.72	$320.78	$163.29	$222.65
1998	$184.46	$186.33	$205.18	$232.55	$159.61	$134.47	$166.99	$188.80	$199.11	$175.60	$185.09	$315.74	$209.37	$275.55
1999	$192.13	$194.61	$141.69	$233.94	$153.29	$136.08	$172.40	$128.95	$228.31	$179.56	$177.28	$365.03	$202.27	$288.43
2000	$252.91	$206.88	$124.61	$204.17	$149.65	$145.48	$193.73	$207.33	$289.96	$207.50	$189.83	$358.44	$237.57	$288.61
2001	$216.92	$248.07	$134.84	$220.73	$151.83	$156.37	$172.72	$245.57	$245.63	$169.26	$158.64	$336.31	$236.51	$270.64
2002	$200.59	$268.84	$161.15	$264.46	$146.15	$154.76	$173.08	$203.90	$234.42	$169.11	$172.02	$324.91	$252.03	$221.53
2003	$184.43	$276.32	$193.34	$231.24	$146.07	$163.69	$183.75	$168.80	$255.10	$183.89	$198.35	$370.72	$267.88	$282.93
2004	$187.55	$242.06	$174.99	$250.60	$154.18	$152.00	$191.31	$294.95	$198.08	$155.49	$169.27	$313.11	$175.47	$206.01
2005	$205.35	$222.12	$198.12	$201.23	$161.57	$194.06	$218.62	$226.19	$217.37	$170.84	$192.64	$338.81	$128.57	$226.07
2006	$263.45	$290.64	$253.63	$285.23	$218.18	$211.46	$242.19	$212.76	$244.16	$219.60	$248.82	$422.57	$198.08	$283.29
2007	$302.41	$312.22	$277.47	$321.47	$224.69	$194.07	$214.79	$203.24	$262.25	$253.15	$280.86	$361.24	$195.68	$289.21

Raleigh-Durham International Airport Fares

	ATL	DCA	BWI	IAD	TPA	LGA	EWR	JFK	DFW	MCI	BNA	SEA	PHL	LAX
Year														
1993	$217.10	$169.37	$187.74	$168.53	$218.41	$186.43	$180.15	$135.73	$326.82	$237.06	$199.09	$290.05	$177.60	$306.73
1994	$163.59	$160.35	$133.98	$150.49	$131.10	$140.13	$131.41	$111.42	$322.81	$177.44	$195.65	$308.82	$160.67	$303.43
1995	$136.21	$98.58	$211.84	$67.46	$132.70	$155.89	$147.69	$136.53	$285.93	$196.24	$180.02	$318.91	$174.42	$313.18
1996	$117.83	$129.20	$209.21	$64.29	$114.14	$149.54	$165.66	$127.17	$261.32	$171.83	$157.31	$309.40	$160.63	$262.41
1997	$140.59	$173.61	$204.50	$227.79	$132.06	$151.41	$186.93	$136.30	$256.09	$174.64	$146.19	$294.39	$185.57	$271.26
1998	$115.84	$181.76	$206.15	$168.37	$132.66	$163.95	$201.99	$133.61	$249.31	$182.38	$173.91	$319.93	$197.58	$316.24
1999	$107.86	$160.13	$92.68	$61.15	$113.22	$168.49	$206.80	$132.67	$258.12	$155.05	$105.94	$218.39	$200.08	$228.11
2000	$113.04	$144.91	$72.91	$75.35	$96.20	$166.30	$204.06	$142.12	$279.65	$144.88	$88.10	$203.86	$212.13	$211.00
2001	$103.86	$145.25	$71.75	$152.03	$92.02	$137.06	$181.52	$134.93	$237.12	$130.21	$85.89	$169.44	$194.79	$172.90
2002	$94.07	$111.22	$73.53	$96.47	$89.70	$100.67	$133.16	$121.56	$197.73	$129.09	$91.59	$164.50	$172.91	$177.70
2003	$111.53	$202.58	$80.80	$233.41	$101.99	$164.70	$217.57	$174.10	$205.52	$117.83	$96.46	$186.97	$193.45	$171.13
2004	$118.23	$137.93	$79.18	$124.73	$102.90	$143.35	$207.37	$129.29	$166.68	$126.19	$95.46	$177.52	$92.36	$172.36
2005	$137.97	$113.31	$80.79	$101.03	$106.59	$141.82	$183.39	$149.11	$168.49	$135.11	$99.31	$193.66	$74.34	$186.10
2006	$156.87	$171.06	$94.80	$193.54	$119.49	$152.11	$164.16	$129.96	$209.19	$155.77	$114.12	$218.30	$107.66	$204.65
2007	$153.06	$171.93	$100.69	$190.57	$123.29	$129.87	$139.22	$123.68	$204.63	$146.58	$117.66	$211.04	$98.61	$220.16

Comparison of FAY / RDU fares

Year														
1993	73.05%	90.64%	108.95%	121.54%	91.50%	84.65%	95.69%	126.21%	79.18%	88.53%	95.73%	112.12%	107.91%	87.35%
1994	88.78%	99.09%	108.59%	135.65%	133.14%	97.73%	104.01%	125.87%	85.61%	97.99%	94.64%	105.70%	113.29%	94.20%
1995	114.47%	149.81%	87.99%	261.83%	152.41%	96.95%	105.13%	111.73%	97.33%	105.60%	109.84%	98.79%	101.37%	96.90%
1996	133.45%	125.53%	86.89%	307.48%	148.39%	84.73%	83.47%	94.10%	75.52%	91.46%	109.84%	92.23%	94.95%	93.96%
1997	140.76%	112.27%	104.15%	102.16%	129.96%	89.34%	85.58%	144.09%	89.90%	110.31%	118.15%	108.96%	87.99%	82.08%
1998	159.24%	102.51%	99.53%	138.12%	120.32%	82.02%	82.67%	141.31%	79.86%	96.28%	106.43%	98.69%	105.97%	87.13%
1999	178.13%	121.53%	152.88%	382.57%	135.39%	80.76%	83.37%	97.20%	88.45%	115.81%	167.34%	167.15%	101.09%	126.44%
2000	223.73%	142.76%	170.91%	270.96%	155.56%	87.48%	94.94%	145.88%	103.69%	143.22%	215.47%	175.83%	111.99%	136.78%
2001	208.86%	170.79%	187.93%	145.19%	165.00%	114.09%	95.15%	182.00%	103.59%	129.99%	184.70%	198.48%	121.42%	156.53%
2002	213.23%	241.72%	219.16%	274.14%	162.93%	153.73%	129.98%	167.74%	118.56%	131.00%	187.82%	197.51%	145.76%	124.67%
2003	165.36%	136.40%	239.28%	99.07%	143.22%	99.39%	84.46%	96.96%	124.12%	156.06%	205.63%	198.28%	138.48%	165.33%
2004	158.63%	175.49%	221.00%	200.91%	149.83%	106.03%	92.26%	228.13%	118.84%	123.22%	177.32%	176.38%	189.98%	119.52%
2005	148.84%	196.03%	245.23%	199.18%	151.58%	136.84%	119.21%	151.69%	129.01%	126.45%	193.98%	174.95%	172.95%	121.48%
2006	167.94%	169.91%	267.54%	147.38%	182.59%	139.02%	147.53%	163.71%	116.72%	140.98%	218.03%	193.57%	183.99%	138.43%
2007	197.58%	181.60%	275.57%	168.69%	182.25%	149.43%	154.28%	164.33%	128.16%	172.70%	238.70%	171.17%	198.44%	131.36%

Source: Origin-Destination Survey Market data

Table 15: Data Available on Military Impact on Commercial Air Service

	to and from All Destinations Installation				to and from Washington D.C. Installation			
	present Fort Bragg	present FORSCOM	present USARC	effects of re-locating Fort Bragg and Pope AFB units	present Fort Bragg	present FORSCOM	present USARC	effects of re-locating Fort Bragg and Pope AFB units
Military Use								
Use for Operations								
Outbound		Fiscal years 04, 05, 06, 07	Fiscal year 07		Fiscal years 05, 06, 07	Fiscal years 04, 05, 06, 07	Fiscal year 07	
Inbound		Fiscal year 07			Fiscal years 05, 06, 07			
Conferences and Workshops (maily inbound)		Source?	Source?					
Dependent Use (in and outbound)								
Civillian Employee Use								
Use for Operations								
Outbound								
Inbound								
Conferences and Workshops (maily inbound)								
Dependent Use (in and outbound)								
Mobilized Reserves Use								
Use for Operations								
Outbound								
Inbound								
Conferences and Workshops (maily inbound)								
Dependent Use (in and outbound)								
Contractor Use								
Use for Operations								
Outbound								
Inbound								
Conferences and Workshops (maily inbound)								
Dependent Use (in and outbound)								

Note: Not all categories may apply

Table 16: Recent Military Air Travel between Fort Bragg and Washington D.C.

	FAY to BWI via CLT		FAY to DCA via CLT		FAY to IAD via CLT				
	Outbound FAY-CLT-BWI	Inbound visitors BWI-CLT-FAY	Outbound FAY-CLT-DCA	Inbound visitors DCA-CLT-FAY	Outbound FAY-CLT-IAD	Inbound visitors IAD-CLT-FAY	Outbound	Inbound visitors	Total
FY05	866	284	794	767	248	196	1,908	1,247	3,155
FY06	763	176	521	509	175	144	1,459	829	2,288
FY07	502	135	463	383	233	150	1,198	668	1,866
	36.45%		49.48%		14.07%				2,436
	41.04%		45.02%		13.94%				
	34.14%		45.34%		20.53%				

	RDU to BWI direct		RDU to DCA direct		RDU to IAD direct				
	Outbound	Inbound visitors	Outbound	Inbound visitors	Outbound	Inbound visitors	Outbound	Inbound visitors	Total
FY05	386	264	631	541	570	427	1,587	1,232	2,819
FY06	377	321	754	678	671	503	1,802	1,502	3,304
FY07	382	333	778	766	643	451	1,803	1,550	3,353
	23.06%		41.58%		35.37%				3,159
	21.13%		43.34%		35.53%				
	21.32%		46.05%		32.63%				

	Outbound	Inbound visitors	Outbound	Inbound visitors	Outbound	Inbound visitors	Outbound	Inbound visitors	Total	percent leakage to RDU	Military travelers both ways per work day
FY05	1,252	548	1,425	1,308	818	623	3,495	2,479	5,974	47.19%	22.98
FY06	1,140	497	1,275	1,187	846	647	3,261	2,331	5,592	59.08%	21.51
FY07	884	468	1,241	1,149	876	601	3,001	2,218	5,219	64.25%	20.07
	30.13%		45.75%		24.12%		3,252	2,343	5,595		21.52
	29.27%		44.03%		26.70%						
	25.91%		45.79%		28.30%						

Source: e-mails from military personnel

Table 17: Government Fares betwenn Fayetteville and Raleigh-Durham and Washington D.C.

Airport pair		City pair				Carrier	Approved fare	Ratio FAY/RDU
Fiscal Year 2007								
BWI	FAY	Washington	DC	Fayetteville	NC	US	$442	5.14
DCA	FAY	Washington	DC	Fayetteville	NC	US	$414	2.62
IAD	FAY	Washington	DC	Fayetteville	NC	US	$378	0.99
BWI	RDU	Washington	DC	Raleigh-Durham	NC	WN	$86	
DCA	RDU	Washington	DC	Raleigh-Durham	NC	AA	$158	
IAD	RDU	Washington	DC	Raleigh-Durham	NC	UA	$380	
Fiscal year 2008								
BWI	FAY	Washington	DC	Fayetteville	NC	US	$530	4.91
DCA	FAY	Washington	DC	Fayetteville	NC	US	$497	2.86
IAD	FAY	Washington	DC	Fayetteville	NC	US	$435	1.06
BWI	RDU	Washington	DC	Raleigh-Durham	NC	US	$108	
DCA	RDU	Washington	DC	Raleigh-Durham	NC	AA	$174	
IAD	RDU	Washington	DC	Raleigh-Durham	NC	UA	$409	

Source: GSA website

Table 18: Recent FORSCOM Outbound Air Travel

Arrival State	FY 04	FY05	FY06	FY 07	Travel to Washington DC (with percent of total) FY 04	FY 05	FY 06	FY 07
AK	0	4	3	10				
AL	121	190	173	142				
AR	84	100	18	57				
AZ	80	69	35	23				
CA	165	183	108	113				
CO	171	298	33	51				
CT	4	1	1	2				
DC	571	372	102	164	571	372	102	164
DE	2	4	0	0	34.36%	23.91%	17.26%	19.11%
FL	180	255	127	104				
GA	327	479	447	479				
HI	13	20	25	12				
IA	6	27	28	7				
ID	18	6	1	2				
IL	65	73	64	56				
IN	27	27	13	14				
KS	108	191	51	75				
KY	92	148	37	126				
LA	126	117	86	68				
MA	43	14	13	19				
MD	69	88	87	49	69	88	87	49
ME	0	0	6	9	4.15%	5.66%	14.72%	5.71%
MI	18	22	24	13				
MN	12	18	32	9				
MO	100	150	26	73				
MS	27	74	45	21				
MT	0	1	2	7				
NC	242	217	153	143				
ND	2	0	0	8				
NE	2	53	24	1				
NH	1	0	2	0				
NJ	29	46	15	23				
NM	11	30	19	3				
NV	63	98	20	27				
NY	124	125	82	66				
OH	19	15	9	7				
OK	29	19	50	24				
OR	1	4	6	13				
PA	56	70	48	22				
RI	7	4	1	0				
SC	131	57	124	97				
SD	6	5	5	1				
TN	116	70	82	107				
TX	526	651	265	263				
UT	14	10	9	30				
VA	1,022	1,096	402	645	1,022	1,096	402	645
VT	1	4	0	9	61.49%	70.44%	68.02%	75.17%
WA	135	118	101	92				
WI	88	36	79	19				
WV	9	8	13	0				
WY	0	0	0	12				
OCONUS	224	161	152	86				
Totals	5,287	5,828	3248	3403	1,662	1,556	591	858
					31.44%	26.70%	18.20%	25.21%
Mean Annual Flights				3,576			934	
							26.12%	

Source: John Bellamy via Wayne Freeman e-mail 7 November 2007 and Grant Steffan 6 June 2008

Table 19: Inbound Flights to Atlanta by FORSCOM Personnel at Subordinate Installations, FY07

Origin Airport	Installation/Location	Tickets
Baltimore, MD	Aberdeen, MD	95
El Paso, TX	Fort Bliss, TX	29
Nashville, TN	Fort Campbell, KY	11
Colorado Springs, CO	Fort Carson, CO	10
Syracuse, NY	Fort Drum, NY	79
Killeen and Austin, TX	Fort Hood, TX	174
Las Vegas, NV and Ontario, CA	Fort Irwin, CA	18
Seattle, Wa	Fort Lewis, WA	50
Alexandria, LA	Fort Polk, LA	48
Manhatten and Kansas City, KS	Fort Riley, KS	42
Dothan, AL	Fort Rucker, AL	23
Lawton, OK	Fort Sill, OK	4
Total Inward Flights		583

Source: e-mails from military personnel via John Bellamy

Table 20: Recent USARC Trips by Airport, FY07

Destination City	Destination Airport	Passengers	Total Passengers	Percent
Washington D.C.	DCA	525	665	9.08%
Washington D.C.	IAD	98		
Baltimore	BWI	42		
Orlando	MCO		345	4.71%
Birmingham	BHM		326	4.45%
Minneapolis	MSP		226	3.08%
Chicago	ORD		224	3.06%
Dallas	DFW		218	2.98%
New Orleans	MSY		214	2.92%
San Antonio	SAT		213	2.91%
Tampa	TPA		184	2.51%
Richmond	RIC		179	2.44%
El Paso	ELP		168	2.29%
Columbus	CSG		164	2.24%
San Juan	SJU		149	2.03%
Fayetteville*	FAY		146	1.99%
Philadelphia	PHL		143	1.95%
Columbia	CAE		141	1.92%
Gulfport	GPT		135	1.84%
Salt Lake City	SLC		133	1.82%
Augusta	AGS		128	1.75%
Saint Louis	STL		127	1.73%
Newport News	PHF		126	1.72%
Jacksonville	JAX		117	1.60%
Alexandria	AEX		116	1.58%
San Jose	SJC		110	1.50%
Jackson	JAN		109	1.49%
Louisville	SDF		105	1.43%
Nashville	BNA		98	1.34%
Little Rock	LIT		90	1.23%
Belize City	BZE		80	1.09%
Fort Lauderdale	FLL		76	1.04%
Savannah	SAV		72	0.98%
Frankfurt	FRA		63	0.86%
Kansas City	MCI		59	0.81%
Oakland	OAK		59	0.81%
Seattle	SEA		59	0.81%
Dothan	DHN		57	0.78%
Milwaukee	MKE		57	0.78%
Raleigh-Durham*	RDU		50	0.68%
Charleston	CHS		49	0.67%
Guatamala City	GUA		49	0.67%
Miami	MIA		46	0.63%
Charlotte	CLT		45	0.61%
Los Angeles	LAX		45	0.61%
Honolulu	HNL		44	0.60%
Denver	DEN		43	0.59%
Norfolk	ORF		42	0.57%
Montgomery	MGM		41	0.56%
Harrisburg	MDT		40	0.55%
Annual Total			7,327	

Source: E-mail from Grant Steffan, 6 June 2008
Note: * indicates probable Fort Bragg traffic

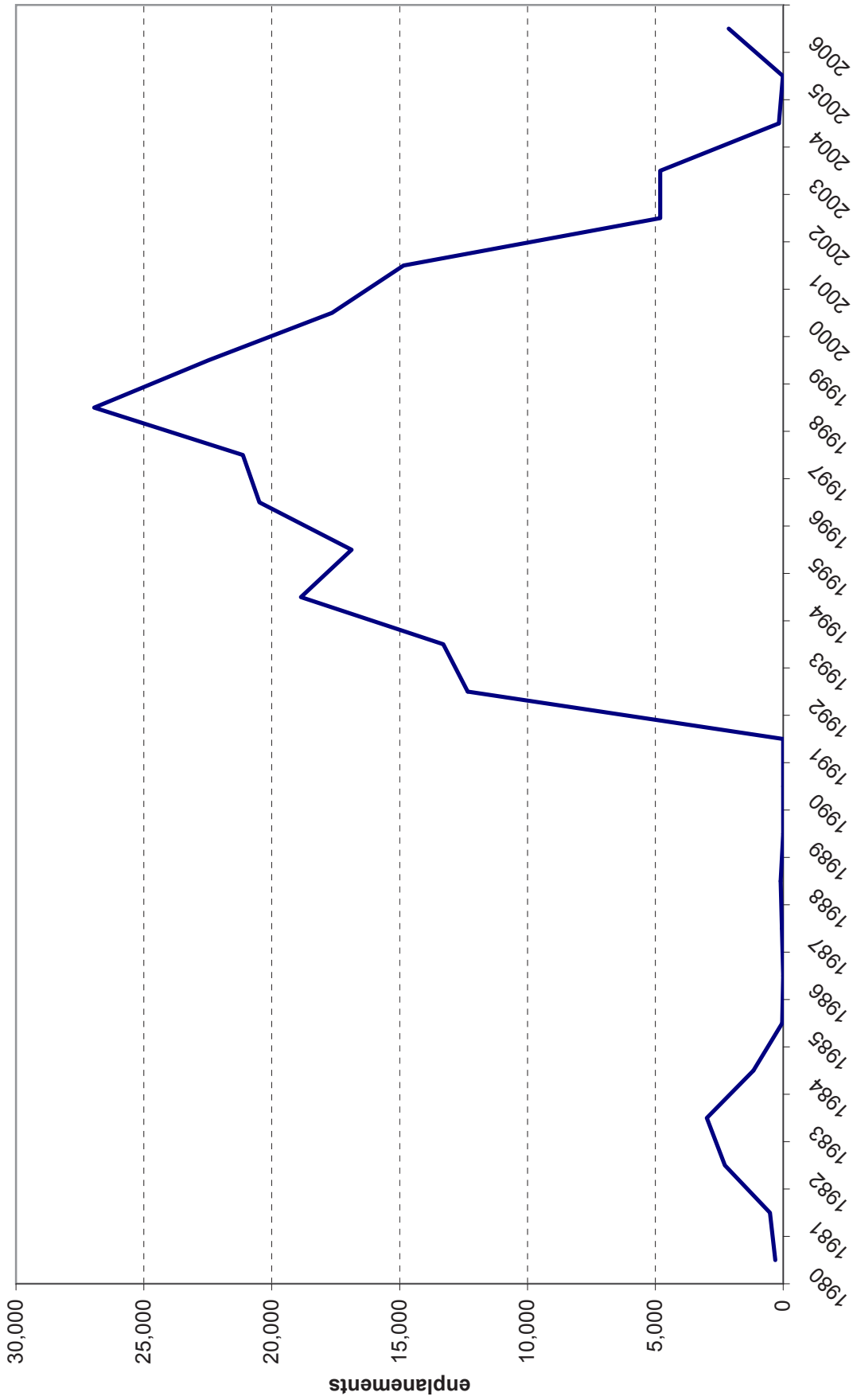
Table 21: Expectations for Fort Bragg Air Travel after Base Realignment

	Early expectations		Later expectations	
	FORSCOM/ USARC Projected Official Government Travel		FORSCOM/ USARC Projected Official Government Travel	
Outbound				
Annual traffic				
	Enplanements		Enplanements	
Northeast	168		336	
North Central	262		262	
Mid-Atlantic	1,732		1,932	
South Central	984		1,585	
Southest	1,495		1,778	
Southwest	425		450	
Northwest	145		235	
West	191		250	
Overseas	193		193	
Total	5,595		7,021	
Total daily traffic	21.52		27.00	
Inbound traffic				
			Estimate: double this amount	
Conferences and workshops				
FORSCOM	4,000			
USARC	6,000			
FORSCOM/ARC			11,000	13,000
Conferences and Workshops			95	
			daily video conferences	
			Constant flow of VIPs	
	2,200	flights		
Personal; trips				
Up to 40,000 potential travelers ???				
Total expected	17,000			

Source: BRAC presentations; bases unclear

	FORSCOM/USARC BRAC Transition
FORSCOM Projections Air Travel -- 2011 & Beyond	Update 11 March 2008

Appendix Figure 1



Appendix Figure 2

FAY forecasts: Kenan Institute predicted and actual enplanements