INTRODUCTION

Congress created the Base Realignment and Closure (BRAC) process in 1988 to help reduce the expensive burden of unneeded infrastructure required to support a smaller military. Because of its size and military value, Redstone Arsenal has always received attention as the country has gone through the various rounds of BRAC studies and decisions. The 1988 BRAC had no impact on operations at the Arsenal. The 1991 BRAC Commission recommended moving 1,200 positions from Rock Island to Redstone Arsenal, a decision that was reversed by the BRAC Commission in 1993. The 1995 BRAC process, however, resulted in the realignment of the Army’s Aviation Command and affiliated components (and 1,600 jobs) from St. Louis to the Arsenal. An estimated 3,000+ military contractors’ jobs also relocated to the greater Huntsville area in the wake of the consolidation of the Aviation Command with the Missile Command.

The projected growth at Redstone Arsenal resulting from the 2005 BRAC process will have a significant impact on infrastructure and services in the counties surrounding Redstone Arsenal (Limestone, Madison, and Morgan counties) and throughout the Tennessee Valley. The Madison County Commission received funding from the Office of Economic Adjustment, Department of Defense, for a planning grant to support growth management planning for the Tennessee Valley region. The Tennessee Valley Regional Growth Coordination Plan (TVRGCP) has been developed to determine the impacts of the 2005 BRAC process on the region. Table ES-1 summarizes the anticipated moves to Redstone Arsenal.

<table>
<thead>
<tr>
<th>Elements Moving to Redstone Arsenal</th>
<th>Moving From</th>
<th>New Jobs</th>
<th>Investment ($ Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd Recruiting Brigade</td>
<td>Atlanta, GA</td>
<td>130</td>
<td>$9.4</td>
</tr>
<tr>
<td>Army Materiel Command (AMC)</td>
<td>Alexandria, VA</td>
<td>1,340</td>
<td>$127.0</td>
</tr>
<tr>
<td>Aviation Technical Test Center (ATTC)</td>
<td>Dothan, AL</td>
<td>323</td>
<td>$45.0</td>
</tr>
<tr>
<td>Missile Defense Agency (MDA)</td>
<td>Arlington, VA</td>
<td>2,248</td>
<td>$221.8</td>
</tr>
<tr>
<td>Rotary Wing Air Platform</td>
<td>Macon, GA</td>
<td>50</td>
<td>Included in ATTC</td>
</tr>
<tr>
<td>Security Assistance Command</td>
<td>Alexandria, VA</td>
<td>340</td>
<td>Included in AMC</td>
</tr>
<tr>
<td>Space &amp; Missile Defense Command</td>
<td>Arlington, VA</td>
<td>180</td>
<td>Included in MDA</td>
</tr>
<tr>
<td>TOTAL BRAC 2005 MOVES</td>
<td>~4,700</td>
<td></td>
<td>$403.2</td>
</tr>
<tr>
<td>Estimated DOD Contractor Tail</td>
<td>~5,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The impacts of an influx of this many people in a relatively short timeframe (2007 to 2011) are obviously major. The Madison County Commission (MCC), through a competitive process, selected the Chamber of Commerce of Huntsville/Madison County (Chamber) as the lead consultant in developing this growth management plan with Wadley-Donovan GrowthTech, LLC (WDG) serving as a subcontractor.

The Tennessee Valley Study Area for this project includes thirteen counties in northern Alabama and southern Tennessee within an eighty-mile-radius of the Arsenal. The Primary Study Area (PSA) includes the three Alabama counties of Limestone, Madison, and Morgan. The Broader Impact Region (BIR) includes the additional six counties in Alabama (Colbert, Cullman, Jackson, Lauderdale, Lawrence, and Marshall) and four counties in Tennessee (Franklin, Giles, Lawrence, and Lincoln). A map of the Study Area is shown in Figure ES-1.

Figure ES-1
Tennessee Valley Regional Growth Coordination Plan Study Area
PRIMARY STUDY AREA

The Primary Study Area (PSA) is the three-county area (Limestone, Madison and Morgan) surrounding Redstone Arsenal. Figure ES-2 shows the relationship of the Arsenal to the three counties.

Figure ES-2
Primary Study Area

ECONOMIC IMPACT OF BRAC 2005 ON THE STUDY AREA

The 2005 decisions of the Base Realignment and Closure Commission (BRAC) will result in significant economic growth in the thirteen counties of the Tennessee Valley (TV) region over the next five years. However, the new missions at the Redstone Arsenal and new contractor jobs will require housing, create a need to educate more K-12 students, and create more demand on municipal and transportation services. Estimates were prepared by Taimerica Management Company, as part of the consultant team, in early 2008 using the best and most current data available. Some assumptions were modified during the course of the preparation of this plan based on new information and input from the Advisory Committee that oversaw the planning process. Because of the complexity of the project, uncertainty of the source data and assumptions, and changing conditions in the national economy at the time the analysis was prepared, these estimates are subject to significant variances.
The following highlights are discussed in more detail in Chapter 1 of the TVRGCP:

- Other organizations have estimated that population from non-BRAC growth will total over 34,000 in the BIR between 2007 and 2012. New projects announced by chambers in Limestone, Madison and Morgan Counties (the Primary Study Area, or PSA) demonstrate that economic growth is indeed accelerating and diversifying. When combined with projected BRAC growth of 19,700 jobs and an increase in population of 37,000, the region should grow by a combined total of 33,000 jobs and 70,000 population, mostly in the PSA between 2008 and 2011. The following chart depicts percent of BRAC impact by year.

- The BRAC process will generate about $2 billion of new construction in the region over the next four years. That spending will generate about 12,000 jobs at the peak of construction in 2011. The job impacts from construction will end as construction work ends in 2012.

- The thirteen counties in the BIR will witness a permanent increase of 19,700 jobs as a result of new BRAC missions at the Arsenal and the corresponding Contractor Tail. About half these jobs are spinoff jobs outside of the contractor, military, and civil service workforce. About 22% of these jobs had already landed in the region as of January 2008 when this project was begun; only the balance of 15,400 permanent jobs is expected between 2008 and 2011.

- While the majority of new jobs will occur in the PSA, about 1,350 of the new jobs will be held by residents of the Broader Impact Region, or BIR (the counties in the region excluding Limestone, Madison, and Morgan Counties in AL).
• Not all of the jobs will be filled by new residents. Based on past BRACs at the Arsenal, it is likely that some of the contractor and civilian jobs will be filled by military or civil service retirees already residing in the region who re-enter the workforce or those employed elsewhere in or outside the region. It is estimated that about 5% of the total jobs will be filled by local hires. This estimate is important for estimating future population and housing needs. The model used in this project estimates that the BRAC-related population in the entire 13-county region will grow by 37,000 between 2005 and 2011. About 78% of this population (29,000 people) will relocate to the region between 2008 and 2011. These new residents will occupy 10,000 housing units between 2008 and 2011.

• The new households will bring additional K-12 students into public school systems in the 13-county region. Between 5,000 and 6,200 new students are estimated to attend regional schools, or a 4,000 to 4,800 increase over 2007-08 enrollment levels. Most of the new students will attend schools in Madison County.

• Because of the overlap between construction and permanent jobs, job growth will peak in 2010 and decline by about 20% by 2012, topping out at a permanent job growth of about 20,000.

• The addition of over $1.1 billion of new payroll (BRAC, Contractor Tail and Spin-off jobs) in the region will generate additional retail sales and sales taxes of various kinds. State sales tax revenues will grow permanently by about $18 million per year in the region. Local sales taxes in the PSA will grow permanently by about $18 million per year.
Overall Fiscal Impact on New $1.1B Payroll

<table>
<thead>
<tr>
<th></th>
<th>STATE ($ millions)</th>
<th>LOCAL ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal income tax</td>
<td>$43.4</td>
<td>-</td>
</tr>
<tr>
<td>Sales taxes</td>
<td>$18.0</td>
<td>$17.6</td>
</tr>
<tr>
<td>Property tax</td>
<td>$3.4</td>
<td>$10.9</td>
</tr>
<tr>
<td>School tax</td>
<td>-</td>
<td>$7.9</td>
</tr>
<tr>
<td>Gasoline tax</td>
<td>$4.0</td>
<td>NA</td>
</tr>
<tr>
<td>Lodging tax</td>
<td>$0.4</td>
<td>NA</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$69.2</td>
<td>$36.4</td>
</tr>
</tbody>
</table>

• State income tax revenues in Alabama from BRAC are estimated at $43.4 million per year by 2011.

• Property taxes will also grow with new population and commercial activity. State property tax is estimated to grow by $3.4 million per year in the PSA, while county property taxes will grow by $10.9 million per year during the same time period.

• School taxes will also grow by about $8 million per year in the PSA between 2005 and 2011. Note that these estimates do not include commercial or personal property or vehicles. They only estimate the increased value in real property assessments. State tax collections should exceed $69 million annually from the permanent impact of BRAC—about twice the tax collections by counties, cities, and school districts combined.

• As noted above and in more detail in the body of this report, this growth will have impacts on many other aspects of the region’s (especially the PSA’s) infrastructure and services, in particular roadways and public utilities.

VISION FOR THE TENNESSEE VALLEY REGION

The Tennessee Valley Region is a globally competitive community, as evidenced by an outstanding education system, a highly educated and skilled workforce, a transportation system that provides smooth traffic flow and connectivity with the rest of the U.S. and the world, an affordable, available and high quality health care system, an outstanding quality of life and a high level of cooperation and collaboration among the various local governments and stakeholders that serve the region.
The above sentence summarizes the essence of the vision for the Tennessee Valley region, with a focus on five priority vision characteristics.

As the impact of the expansion of Redstone Arsenal (Arsenal) unfolds, it is important to understand how the Tennessee Valley Region (Study Area) can maximize the benefits from this unique opportunity. As a first step in this process, the Consultant Team analyzed the dimensions and extent of the demographic, economic, and infrastructure impact of this major expansion. Task forces convened to determine the specific issues of this impact for education institutions, local governments, and infrastructure planning.

Ultimately, a plan was developed that prescribes what needs to be done to move forward to capture the benefits of growth in the region. However, a plan without a vision is of little value. What do the leaders, government officials, businesses, and citizens of this region want the future to look like? In other words, where should the plan head? The value of the vision is to set forth a direction for future planning.

KEY ELEMENTS AND RECOMMENDATIONS

The Tennessee Valley Regional Growth Coordination Plan includes detailed reports on Issue Identification and Assessment of Existing Conditions, Regional Visioning Process, Housing, Education, Public Utilities and Infrastructure, Transportation, Public Safety and Emergency Services, Health and Social Services, Cultural and Recreational Opportunities, and Economic Development. The Regional Vision Statement focuses on five key elements: Education, Workforce Development, Transportation, Health Care, and regional collaboration. The key elements and recommendations are highlighted below.

Education

The PSA is served by eight public school systems that vary significantly in the size of their student enrollment. The expected impact of the BRAC 2005 relocation will vary among these school systems. The Consultant Team’s forecast shows that the three school systems in Madison County will attract 81.5% (3,135) of the 3,848 students expected to move into the PSA between 2008 and 2011 as a result of the relocation of BRAC personnel to the area. Of the balance, the three school systems in Morgan County are expected to receive 370 students (9.6%), and the two systems in Limestone County are forecasted to receive 343 students, or 8.9% of the total. This growth is attributable to the 4,700 direct BRAC positions and does not include the other BRAC related growth of the contractor tail and spinoff jobs or the increase from other unrelated economic conditions.

The BRAC expansion will put a serious strain on the PSA’s eight school systems. Most–if not all–of the systems will have financial difficulties meeting the facility and staffing needs generated by the BRAC and other growth while advancing program content and quality to meet the requirements of relocating BRAC personnel and future needs of the region’s employers. The current reliance on retail sales taxes to supply the needed revenues is not a viable or dependable system. The PSA’s school systems must improve their programs and
product quality to meet the expectations of the BRAC-relocated personnel and the needs of an advancing technology center.

The eight PSA school systems have itemized the necessary permanent physical improvements needed to accommodate the student growth and the costs for those improvements. Improvements range from construction of new schools to renovations of existing buildings.

The total estimated cost for the improvements to meet the student growth is $455,111,100. Funding for these improvements is expected by some systems to come from locally generated revenues and bonding. However, most of the systems do not know at this time how they will fund their improvements. The majority of local school revenues in Alabama are provided through local retail sales taxes, which are insufficient to fund operating and capital requirements in high-growth areas such as the PSA.

**Priority Action Item**
The area should expand its public education funding base so there is less dependency on retail sales taxes. To support this effort, the school systems must show high levels of financial accountability, and a high level of educator/business community cooperation and communication should be developed.

**Priority Action Item**
The quality of the public school systems throughout the area should meet the standards of the best schools within the top tier of the nation’s most distinguished technology centers, as measured by standardized tests and other qualifiers. The area’s school systems should provide excellent programs in Science, Technology, Engineering and Mathematics (STEM), compared to national standards.

**Priority Action Item:**
The area should increase the number of graduates and students in vocational/technical programs. More high school programs are recommended, and special emphasis should be made to get more students interested in machine trades and other manufacturing disciplines. Best practices from around the country should be considered in building a stronger local program.

**Transportation**

Eighty-nine (89) roadway-improvement projects related to BRAC growth have been identified in the PSA. While most of these projects are not needed solely because of BRAC-related growth in the region, this growth is causing either a need to increase the scope of many projects or to undertake them sooner than they would otherwise be needed. These 89 projects have a combined total cost of more than $3.5 billion, of which more than $1 billion is attributable to BRAC-related growth. A very small portion of these projects is already funded, leaving a gap of more than $3.3 billion for completely or partially unfunded projects. Of this gap, nearly $954 million is a result of BRAC-related growth.

The top six regional transportation projects include the following:
• **Martin Road** (on Redstone Arsenal from Gate 7 to Rideout Road and from Gate 7 to Wall Triana Highway; Airport I-565 Connector to Wall Triana Highway)
• **Memorial Parkway** (Weatherly to Whitesburg Overpass, service roads and overpasses at Byrd Springs/Lily Flagg/Martin Roads)
• **Highway 53** (Interchange at Research Park Blvd., Research Park Blvd S. to Jeff Rd, intersection at Jeff Rd, south of Jeff Rd & south of Harvest, Harvest to Railroad Bed Rd, Mckee Rd to AL State line)
• **Winchester Road** (Dominion Circle to Naugher Rd, Naugher Rd to Bell Factory Rd, Bell Factory Rd to Maysville Rd, Maysville Rd to TN State line)
• **Zeirdt Road** (Martin Rd to Madison Blvd, Martin Rd to Beadle Lane)
• **US 72 East and West** (Oakwood Ave to Eastern Bypass, East Overpass to Jordan Rd, East Overpass to Moontown Rd, East Overpass to Brock Rd, East Overpass to Eastern Bypass, West from Providence Main St to Nance Rd, West from Nance Rd to County Line Rd, West from County Line Rd to Mooresville Rd)

**Health and Social Services**

There is an anticipated need for 59 additional primary care physicians and approximately 100 specialists and subspecialists, based on growth projections for the region. However, 113 physicians practicing medicine in the PSA do not list a specialty or practice area, making it difficult to say with certainty what types of physicians will be needed.

Further population increases will exacerbate the need for additional nursing home, psychiatric, and general assisted living beds in the PSA.

**Priority Action**
Develop additional healthcare beds (nursing home, assisted living, psychiatric) in the region to meet documented needs. State Health Planners need revised data to reflect population gains already occurring in the PSA. The state’s moratorium on new nursing home beds should be lifted for Madison County, given the documented need for additional beds in this region.

**Priority Action**
Retain local medical residency program and nursing school graduates through ongoing outreach efforts. Increase hospital-physician-recruitment campaigns.

**Economic Development**

The combination of enviable assets has given the area an economic prosperity arising from a high concentration of technical talent, a low-cost environment, and good management. The PSA has been able to attract and retain world-class technical talent while maintaining a low-cost location for manufacturing and technology companies. As a result, the PSA has a diverse economy with 11 employment clusters, an unusually large number for a region of 500,000 residents.
The area also has a diverse economy. Based on these factors, the Consultant Team recommends six target industries for the PSA. These targets were selected as those best suited to the area’s unique mix of strengths and challenges identified in this report, and are built upon the area’s growing economic clusters.

1. Aerospace/Defense  
2. Distribution and Logistics  
3. Life Sciences – Biotechnology and Genetics; Pharmaceutical Manufacturing; and Healthcare  
4. Administrative Office Support Services/Back Offices  
5. Scientific and Technical Consulting Services  
6. Advanced Manufacturing

**Priority Action**  
The efforts underway by some area stakeholders to encourage as many current BRAC and contractor employees as possible to move to the area should continue. These efforts, however, should be expanded to include more of the area’s economic development and university/college-related stakeholders to ensure a coordinated area-wide effort.

**Priority Action**  
The efforts being conducted by the Chamber of Commerce of Huntsville/Madison County to recruit labor to the area from across the country should continue. These efforts should be expanded to include more of the area’s economic development and university/college-related stakeholders to ensure a coordinated area-wide effort. Labor recruitment should be directed at all working-age groups. Special marketing messages for each group should be developed that address their key issues. One area entity should serve as the facilitator and coordinator of special recruitment efforts for area employers, including the new BRAC-related contractors.

**Priority Action**  
It is recommended that the area’s economic development community make a very concerted effort to attract more residents in their 20’s and 30’s in order to strengthen the area’s demographic depth in this cohort that is sought by firms in all industry groups, particularly those in the technology sectors.

The local governments’ ability to meet basic needs is critical to the quality of life priorities for both the general public as well as the Arsenal’s employees. The investment from the Department of Defense at Redstone Arsenal and the parallel investment from the contractors serving the Redstone expansion, plus the natural expansion of the region’s growing and successful companies, put enormous pressure on the area’s workforce, education system, and infrastructure to meet the demands generated by sharply increased growth. The TVRGCP determines the impact of significant regional growth in a short period of time; and provides justification for potential funding sources to address the needs resulting from this growth.

_This report is intended as an aid to planners, managers, elected officials, and other decision makers in the Tennessee Valley/Redstone Arsenal 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.

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Bios for TVRGCP Team Members

William A. Fredrick

Bill Fredrick is the founder and managing director of Wadley-Donovan GrowthTech, doing business as The Wadley-Donovan Group. Bill has been a WDG partner for 12 years.

At WDG, Bill is responsible for delivery of economic development services, including locational assessments, target industry identification, target marketing strategy, high-technology growth strategy, business recruitment strategy, and workforce/labor market evaluations. Bill has been actively involved in corporate location and economic development for 24 years. He began his career with the Fantus Company, eventually moving to Moran Stahl & Bayer. Bill became a partner of Wadley Donovan Consulting in 1992.

During his career, Bill has advised numerous corporations on office and industrial location. He has also counseled a host of economic development organizations on business retention/expansion and recruitment strategies. Clientele has included cities, countries, regions, utilities, and states.

Leading WDG's economic development practice, Bill is responsible for quality assurance, client relations, oversight of client engagement managers, managing strategic alliance partners (e.g., image and labor market surveys, marketing strategies, and technology resource assessment), and advancing the state-of-the art on economic development services.

Bill has published several articles on corporate locational issues and on international aspects of facilities planning in US and foreign journals. He is a frequent speaker on economic development and corporate relocation topics. Bill earned his bachelor's degree from Franklin & Marshall College, and a master's degree in Urban Planning from New York University.

Mr. Fredrick is a member of the International Economic Development Council, Southern Economic Development Council, the Northeastern Economic Development Association, the New Jersey Industrial Development Association, Urban Land Institute, and the Institute of Electrical and Electronics Engineers.
Mark D. Waterhouse, CEcD, FM, HLM

Mark D. Waterhouse, CEcD, FM, HLM has been active in the field of economic development since 1972, in both the public and private sectors. He is President and one of the founders of Garnet Consulting Services, Inc., an economic development consulting firm that works internationally.

Mark is a graduate of Dartmouth College, The University of Oklahoma’s Economic Development Institute (OU/EDI) and the National Council for Equal Business Opportunity’s Minority Business and Economic Development Internship Program. He holds a Bachelor of Laws Degree and is a qualified Myers-Briggs counselor. He is the only person to have served as both Chair of the American Economic Development Council and Dean of the University of Oklahoma’s Economic Development Institute. He is on the faculty of both OU/EDI and CETYS University’s Instituto de Desarrollo Economico, as well as four of the IEDC accredited Basic Courses.

He served as the Executive Director of the Northeastern Economic Developers Association (NEDA) for 10 years and is currently Vice President of the Connecticut Economic Development Association (CEDAS), on whose board he has served for more than 15 years. He is the 2007 recipient of the International Economic Development Council’s Edward DeLuca Lifetime Achievement Award and has been similarly honored by NEDA and CEDAS. He is a frequent lecturer or speaker at economic development programs and is the author of many articles about economic development. A Captain in the United States Marine Corps, Mark was Company Commander of a Combat Engineer Company in Vietnam.

Ed Bee, CEcD

Ed Bee, CEcD, is President and founder of Taimerica Management Company. Taimerica is a nationally recognized consulting firm headquartered in Slidell and Mandeville, Louisiana. The firm counsels development groups and businesses worldwide on issues of strategic planning, cluster and technology studies, corporate site selection, organizational design and best practices evaluations, and economic development strategy. Ed offers economic development groups sophisticated but practical strategies for economic development that are executable at the regional and local level.

Bee has earned a number of achievements and awards during his career, including a Distinguished Service Award conferred by the American Economic Development Council in 1994 and the Alumni of the Year Award in 2004 by the Geography Department of Youngstown State University. He has authored nine peer reviewed articles on leading edge economic development topics in globally recognized publications such as Economic Development Quarterly, the Economic Development Journal and Economic Development Review.
David R. Kolzow, Ph.D
Dr. Kolzow has been involved in economic development consulting for over 30 years. He has managed the economic development practices of consulting firms, the research and marketing efforts of a regional economic development organization, a university department, and, most recently, the Tennessee Leadership Center. In addition, he has conducted training in organizational management for the International Economic Development Council (IEDC), where he has been the primary instructor of their two-day management course for the past ten years. He also teaches the management module for the Basic Economic Development Courses in several states, and the Community Development Institute, and he conducted the first web seminar for IEDC on outcome-based performance for economic development organizations. Dr. Kolzow’s strategic planning experience is unequaled. Besides being involved in strategic planning for states, regions, and communities, he has assisted economic development organizations in their strategic plans. Dr. Kolzow set up a statewide strategic planning program for North Dakota and trained over 60 facilitators to implement the process, and more recently worked closely with the Tennessee Department of Economic and Community Development on their state-wide Three-Star strategic planning program.