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DEFENSE INFRASTRUCTURE

Challenges Increase Risks for Providing Timely Infrastructure Support for Army Installations Expecting Substantial Personnel Growth





Highlights of GAO-07-1007, a report to congressional addressees

Why GAO Did This Study

The Army expects significant personnel growth, more than 50 percent in some cases, at 18 domestic bases through 2011 because of the effect of implementing base realignment and closure (BRAC), overseas force rebasing, and force modularity actions. This growth creates the need for additional support infrastructure at these bases and in nearby communities. Military construction costs of over \$17 billion are expected for new personnel, and communities will incur infrastructure costs as well.

GAO prepared this report under the Comptroller General's authority to conduct evaluations on his own initiative. It addresses (1) the challenges and associated risks the Army faces in providing for timely infrastructure support at its gaining installations and (2) how communities are planning and funding for infrastructure to support incoming personnel and their families. GAO analyzed personnel restationing numbers, discussed planning efforts with Army and community officials, and visited nine of the larger gaining bases and nearby communities.

What GAO Recommends

To better facilitate infrastructure planning, GAO recommends that DOD determine the causes for the variances in restationing numbers and ensure that agreement is reached within the Army on these numbers. DOD partially concurred with both recommendations.

www.gao.gov/cgi-bin/getrpt?GAO-07-1007.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Brian J. Lepore at (202) 512-4523 or leporeb@gao.gov.

DEFENSE INFRASTRUCTURE

Challenges Increase Risks for Providing Timely Infrastructure Support for Army Installations Expecting Substantial Personnel Growth

What GAO Found

The Army has developed plans to accommodate the growth of about 154,000 personnel at its domestic bases, but it faces several complex implementation challenges that risk late provision of needed infrastructure to adequately support incoming personnel. First, Army plans continue to evolve, and Army headquarters and each of the nine gaining bases we visited were relying on different numbers of personnel movements and were not fully aware of the causes for the variances. For example, Fort Benning officials expected more than 6,000 additional soldiers and military students than Army headquarters planned. Because consistency in the relocation numbers is important for properly determining not only base infrastructure support needs but those of nearby communities as well, inconsistent numbers could lead to an improperly sized facilities' infrastructure. Second, the Army faces challenges in synchronizing personnel movements with planned newly constructed onbase infrastructure improvements. Any significant delays in implementing planned actions could place the Army at risk of not meeting BRAC statutory deadlines. Third, competing priorities could lead the Army to redirect resources planned for needed infrastructure improvements and operations to such priorities as current operations in Iraq and Afghanistan, as has happened in the past. However, such redirection of resources could undermine the Army's ability to complete infrastructure improvements in time to support personnel movements and to meet planned timelines. Fourth, the Army Corps of Engineers, the primary construction agent for the Army, must manage an unprecedented volume of construction, implement a new construction strategy designed to save construction costs and time, and complete infrastructure improvements within available resources and planned timelines. The Army recognizes these challenges and is refining its implementation plans to overcome these challenges.

While communities surrounding growth bases GAO visited have generally proactively planned for anticipated growth, they have been hindered in fully identifying additional infrastructure requirements and associated costs by the evolving nature of the Army's plans and different interpretations of the plans. For example, while Army officials at Fort Benning, Georgia, project an influx of about 10,000 school-age children, DOD's November 2006 figures project only about 600. At the time of our review, these disparities remained unresolved. Communities surrounding growth bases have their own unique infrastructure improvement needs, such as schools, housing, or transportation, based on (1) the number of personnel to actually move to the nearby base, (2) the community's current capacity in its area(s) of need, and (3) the community's own capacity to finance additional infrastructure requirements and the availability of federal or state assistance to finance these needs. Some communities had already sought federal and state assistance to help finance construction efforts at the time of GAO's review even though the evolving nature of the Army's planning prevented the communities from having reasonable assurance that they knew the full scope of their infrastructure requirements.

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Abbreviations

ASIP	Army Stationing Installation Plan
BRAC	base realignment and closure
DOD	Department of Defense
OEA	Office of Economic Adjustment

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United States Government Accountability Office Washington, DC 20548

September 13, 2007

Congressional Addressees

The Army is implementing extensive worldwide transformation initiatives to enhance U.S. national security while conducting operations in Afghanistan, Iraq, and elsewhere. These initiatives are expected to lead to significantly increased military and civilian populations on certain domestic installations by 2011. Because of the combined effect of implementing base realignment and closure (BRAC); overseas force redeployments back to the United States under the Global Defense Posture Realignment, known as overseas rebasing; and a major Army force reorganization, known as force modularity, the Army expects to relocate over 150,000 personnel and increase 18 base populations by about 136,000.¹ Department of Defense (DOD) estimates that military construction costs will exceed \$17 billion through fiscal year 2011 at these 18 bases, and surrounding communities will likely incur costs to provide adequate schools, transportation, and other infrastructure improvements. These figures do not include personnel increases and added infrastructure costs as a result of Army actions to increase its active end strength authorization by 65,000 soldiers. Furthermore, family members and nonmission-related defense contractors, whose numbers are not included in the relocation figures cited above, will also relocate to areas surrounding these bases, thus fueling increased civilian infrastructure needs. Compounding the challenges of moving so many personnel is the statutory requirement to complete BRAC closures and realignments by September 15, 2011.² The Army expects to continue modularity-related moves beyond 2011. Senior Army officials consider appropriate infrastructure support as integral to maintaining operational readiness and quality of life for soldiers, DOD civilians, and their families.

This report is one in a series that addresses emerging issues associated with the implementation of the BRAC 2005 round, overseas rebasing, and force modularity initiatives. Because of the broad implications these

¹These 18 installations are those where the expected net personnel increase exceeds 2,000 over the period fiscal years 2006 through 2011, based on March 2007 data. The 18 installations account for nearly 90 percent of the expected total net increase of about 154,000 personnel across all domestic Army gaining bases.

²Pub. L. No. 101-510, Title XXIX, as amended by Pub. L. No. 107-107, Title XXX (2001).

initiatives have on the infrastructure support at the Army's domestic installations and surrounding communities and widespread congressional interest in this subject, we prepared this report under the authority of the Comptroller General to conduct evaluations on his own initiative.³ We are reporting the results to you in order to facilitate your oversight of the Army's efforts to address infrastructure needs as a result of the expected growth. Our objectives were to (1) identify the challenges and risks the Army faces in providing adequate infrastructure when needed at its major gaining bases and (2) describe surrounding communities' plans and funding for needed infrastructure to support incoming personnel and their families.

To achieve our objectives, we analyzed data on the expected number and timing of military and civilian personnel arrivals and departures at gaining installations and military construction plans and funding to support these moves. We also discussed implementation, funding, and personnel movement plans with officials from various Army organizations, including the Office of the Assistant Chief of Staff for Installation Management, the Installation Management Command and its four regional offices, the Office of the Deputy Chief of Staff for Operations and Plans, and the Army Corps of Engineers. We also discussed implementation challenges with installation officials at nine domestic bases expecting significant personnel growth and with local leaders in communities surrounding these bases. To address the surrounding communities' plans for needed schools, housing, transportation, and other infrastructure, we reviewed documents on community growth impacts and actions to address these impacts and data on financial grants provided by DOD's Office of Economic Adjustment (OEA) to communities surrounding the growth bases. We also met with community leaders and discussed their plans to meet DOD-prompted needs and with OEA officials to identify their interagency community impact assistance efforts with other federal agencies, such as the Departments of Transportation and Education.

We conducted our work from March 2006 through July 2007 in accordance with generally accepted government auditing standards. Business plans intended to direct the implementation of the BRAC recommendations affecting the gaining bases were in draft at the time of our review. In addition, other information the Army provided us was preliminary and subject to change. Nonetheless, Army officials told us that the information

³31 U.S.C. 717.

constituted their current plans at the time of our review and should be considered an approximation of projected personnel movement and funding. Similarly, because surrounding communities' plans depend on the Army's plans, community planning information is also considered preliminary and subject to change. Although we found some discrepancies in the Army's information, we concluded that, overall, it was sufficiently reliable for the purposes of this report. A more detailed description of our scope and methodology is included in appendix I.

Results in Brief

The Army has developed plans to accommodate growth of about 154,000 personnel at its domestic bases as a result of BRAC 2005, overseas rebasing, and force modularity actions, but it faces several complex challenges to the implementation of those plans and risks late provision of needed infrastructure to adequately support arriving personnel. First, some of the Army plans continue to evolve, particularly because the numbers continually change. Moreover, Army headquarters and the gaining bases we visited were relying on different numbers of personnel movements based on their understanding of the plans at the time of our review. For example, Fort Benning officials expected more than 6,000 additional soldiers and military students and trainees than Army headquarters planned to relocate there at the time of our review; however, officials could not fully determine the reasons for these discrepancies. Because consistency in the relocation numbers is important for properly determining not only base infrastructure support needs but also those of nearby communities, inconsistent numbers could lead to improperly sized facilities or overbuilding. Second, the Army faces certain complexities in synchronizing personnel movements with newly constructed on-base infrastructure improvements. Any significant delays in implementing planned actions could place the Army at risk of not meeting the statutory deadline for completing BRAC actions. Third, competing priorities could lead the Army to redirect resources planned for needed infrastructure improvements and operations to such priorities as current operations in Iraq and Afghanistan, as has happened in the past. However, such redirection of resources could undermine the Army's ability to complete infrastructure improvements in time to support personnel movements by the statutory or planned deadlines in 2011. Fourth, the Army Corps of Engineers, the primary construction agent for the Army, must manage an unprecedented volume of construction, implement a new construction strategy expected to save construction costs and time, and effectively manage construction to complete infrastructure improvements within available resources and planned timelines, with special attention paid to the statutory September 15, 2011, deadline for completing BRAC closures

and realignments. The Army recognizes these challenges and is refining its infrastructure implementation and funding plans to overcome these challenges.

While communities surrounding growth installations we visited have generally proactively planned for anticipated growth, they have been hindered from fully identifying additional infrastructure requirements and associated costs by the evolving nature of the Army's plans and different interpretations of the plans. For example, while Army officials at Fort Benning, Georgia, project an influx of about 10,000 school-age children, DOD's November 2006 figures project only about 600. At the time of our review, these disparities remained unresolved. Communities surrounding growth bases have unique infrastructure improvement needs, such as schools, housing, or transportation, based on (1) the number of personnel to actually move to the nearby base, (2) the community's current capacity in its area(s) of need, and (3) the community's own capacity to finance additional infrastructure requirements and the availability of federal or state assistance to finance these needs. Some communities had already sought federal and state assistance to help finance construction efforts at the time of our review even though the evolving nature of the Army's planning prevented the communities from having reasonable assurance that they knew the full scope of their infrastructure requirements.

To better facilitate infrastructure planning, we are making recommendations to the Secretary of Defense to direct the Secretary of the Army to (1) determine why there are differences between headquarters and gaining bases with respect to the number of arriving and departing personnel and (2) ensure that Army headquarters and gaining bases are collaborating to agree on Army personnel movement plans so that base commanders and surrounding communities can effectively plan for expected growth. This collaboration to reach agreement should continue as expected personnel movement actions are revised over time.

In commenting on a draft of this report, DOD partially concurred with both of our recommendations. It concurred with the findings of each recommendation but said that the Army had determined the cause of data differences and had already taken corrective actions. While the Army has taken some steps to produce compatible data between the headquarters and installation level, these corrective actions have not been fully effective. Following receipt of DOD's comments on our draft report in late August 2007, we contacted several of the bases we visited during our review and found that there were still some significant, long-standing problems with the variances in the data being used by the installations and

	headquarters. While the data differences have improved at some locations, other locations had data differences that exceeded 1,000 personnel and officials said that they had serious concerns with the headquarters data. Because disconnects still exist, we believe that our recommendations remain valid.
Background	BRAC, overseas rebasing, and Army modularity are all expected to generate significant personnel movements among numerous bases within the United States and from certain overseas locations back to the United States. Four primary organizations—the Army's Office of the Assistant Chief of Staff for Installation Management, the Army Corps of Engineers, OEA, and the President's Economic Adjustment Committee—are responsible for planning, managing construction, and assisting local communities affected by these moves.
Three Major Initiatives Are to Generate Significant Personnel Movements	First, DOD has undergone four BRAC rounds since 1988 and is implementing its fifth round, known as BRAC 2005, which was authorized by Congress in the National Defense Authorization Act for Fiscal Year 2002. ⁴ The BRAC Commission recommendations were accepted by the President and Congress and became effective on November 9, 2005. In accordance with BRAC statutory authority, DOD must complete closures and realignments by September 15, 2011. BRAC 2005's key goals were to (1) transform DOD by more closely aligning its infrastructure with defense strategy, (2) enhance joint operations, and (3) reduce excess infrastructure and produce savings. Traditionally, DOD relied on BRAC primarily to reduce excess property and save money since property that has been disposed of is no longer maintained by DOD. Conversely, due in part to the addition of the transformation and joint operations goals to BRAC 2005, this round led to more than twice the number of actions in all previous rounds combined, 837 distinct actions in all. These BRAC actions incorporate many of the more than 50,000 Army personnel expected to return from overseas locations to the United States as part of DOD's overseas rebasing initiative discussed below. Second, in August 2004, the President announced plans for sweeping changes to the number and locations of DOD's overseas-based facilities. Known as the Global Defense Posture Realignment, DOD plans to realign

 $^{^4\}mathrm{Pub.}$ L. No. 107-107, Title XXX (2001).

its overseas basing structure over a 6- to 8-year period from the legacy Cold War posture to one that would more effectively support current allies and strategies and address emerging threats. Under the overseas rebasing effort, the 50,000 Army personnel plus another 20,000 other defense personnel and about 100,000 family members are to relocate from overseas locations—primarily in Europe and Korea—to bases in the United States. Although some of these personnel have already relocated, many were still overseas at the time of our review. Army plans call for overseas relocations to the United States to be completed prior to September 15, 2011.

Third, similar to BRAC and overseas rebasing actions, implementation of Army force modularity will add to the personnel growth at some bases. The Army's modular transformation has been referred to as the largest Army reorganization in 50 years and affects the active Army, Army National Guard, and U.S. Army Reserve. The foundation for the modular force is the creation of brigade combat teams that while somewhat smaller than existing brigades, are expected to be more agile and deployable and better able to meet combatant commander requirements. Successful implementation of this initiative requires the movement of personnel across various units, new facilities and equipment, a different mix of skills and occupational specialties, and significant changes in doctrine and training. The Army began the modularity initiative in 2004 and expects to finish most associated reorganizations by 2011, but expects that some reorganizations will occur after 2011.

As a result of the three initiatives and certain other restationing moves, the Army expects a net gain of about 154,000 personnel at its domestic gaining bases from fiscal years 2006 through fiscal year 2011. These gains include active and reserve soldiers, military students and trainees, civilians, and mission contractors but do not include family members and non-mission-related contractors.⁵ Our analysis of March 2007 Army data on personnel restationing actions indicates that 18 domestic installations, as shown in table 1, are likely to experience a net gain of at least 2,000 military and civilian personnel for fiscal years 2006 through 2011 because of BRAC 2005, overseas rebasing, modularity, and other miscellaneous restationing actions. Personnel gains at individual locations are projected to range from 7 percent to 111 percent.

⁵This excludes personnel gains resulting from the Army's plans to increase its active end strength authorization by 65,000.

Installation	FY 2006 beginning population	Estimated FY 2011 population	Estimated net gain in population	Percentage of population increase
Fort Belvoir, VA	21,437	45,332	23,895	111
Fort Bliss, TX	20,130	38,063	17,933	89
Fort Bragg, NC	57,352	69,136	11,784	21
Fort Lewis, WA	36,147	47,110	10,963	30
Fort Sam Houston, TX	24,819	34,980	10,161	41
Fort Benning, GA	40,592	50,487	9,895	24
Fort Riley, KS	15,188	24,608	9,420	62
Fort Lee, VA	13,495	20,645	7,150	53
Fort Meade, MD	35,504	41,915	6,411	18
Fort Carson, CO	24,066	29,756	5,690	24
Fort Sill, OK	26,499	31,136	4,637	17
Schofield Barracks, HI	20,907	24,393	3,486	17
Redstone Arsenal, AL	26,210	29,268	3,058	12
Fort Shafter, HI	11,004	13,892	2,888	26
Fort Dix, NJ	7,279	9,777	2,498	34
National Training Center and Fort Irwin, CA	12,652	14,920	2,268	18
Fort Stewart and Hunter Army Airfield, GA	28,322	30,400	2,078	7
Aberdeen Proving Ground, MD	17,623	19,694	2,071	12
Total	439,226	575,512	136,286	31

Table 1: Army Installations Expecting Net Gains of at Least 2,000 Personnel for Fiscal Years 2006 through 2011 Because of BRAC, Overseas Rebasing, Modularity, and Other Miscellaneous Restationing Actions (as of March 2007)

Source: GAO analysis of Army headquarters-level data.

Notes: Personnel growth consists of Army military (active and reserve), military students and trainees and civilians, non-Army military and civilians, and mission contractors. Figures do not include family members and non-mission-related contractors and expected increases that may occur as a result of plans to increase the Army's active end strength authorization by 65,000 personnel.

As also shown in table 1, while the overall net gain in personnel at these installations averages 31 percent, Forts Belvoir, Bliss, Lee, and Riley are expected to experience a 53 percent or more growth rate. The expected personnel net gains at these 18 installations account for nearly 90 percent of the total expected personnel net gains across all Army domestic installations through 2011. Figure 1 shows the locations of the 18 installations.



Figure 1: Locations of 18 Army Installations Expecting Net Gains of at Least 2,000 Personnel for Fiscal Years 2006 through 2011 Because of BRAC, Overseas Rebasing, Modularity, and Other Miscellaneous Restationing Actions

Sources: U.S. Army (data); Map Resources (map).

Accommodating the expected large increase of personnel at these 18 Army locations over the next several years requires the expenditure of significant military construction funds for required facilities. Although the Army also will have procurement, operations and maintenance, and other associated cost increases at these bases because of the personnel increases, the scope of this report focuses on military construction funding. Our analysis of DOD data, as shown in table 2, indicates that DOD is planning to spend over \$17 billion to construct facilities at these locations through the fiscal year 2011 time frame.

Table 2: Planned Facilities Construction Costs for the 18 Army Domestic Installations Expecting Net Gains in Personnel of at Least 2,000 Because of BRAC, Overseas Rebasing, Modularity, and Other Miscellaneous Restationing Actions for Fiscal Years 2006 through 2011

Dollars in millions								
Initiative	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	Total dollars	Percentage of total dollars
Army BRAC ^a	\$506	\$1,962	\$2,007	\$1,615	\$1,126	\$0	\$7,215	42
Non-Army BRAC ^b	46	295	1,678	1,843	698	38	\$4,598	27
Army modularity ^c	31	169	247	361	468	725	\$1,999	12
Subtotal of the three initiatives	\$583	\$2,426	\$3,932	\$3,819	\$2,292	\$763	\$13,812	81
Other Army military construction ^d	580	496	414	355	223	1,137	\$3,205	19
Total	\$1,163	\$2,922	\$4,346	\$4,174	\$2,515	\$1,900	\$17,017	100

Source: GAO analysis of Army, Air Force, Navy, and defensewide agencies and activities budget data.

Note: Figures may not add precisely because of rounding.

^aIncludes overseas basing relocations included in BRAC 2005 actions.

^bIncludes planned expenditures by the departments of the Navy and Air Force as well as defense agencies and activities.

[°]Modularity funds presented are for permanent facilities only. Modularity funds were also expended in fiscal years 2004 and 2005 and plans exist to fund additional infrastructure in fiscal years 2012 and 2013.

^dThese amounts are military construction projects not part of BRAC or modularity that are planned by the Army during the years indicated. Amounts do not include any funds that may be necessary as a result of Army plans to increase the active force authorization by 65,000 personnel.

Also shown in table 2, the overwhelming majority, over 80 percent, of the planned construction expenditures at these Army installations are attributable to BRAC, overseas rebasing, and modularity actions. Moreover, as shown in the table, other military services or defense agencies and activities are planning to expend about \$4.6 billion for constructing BRAC facilities they expect to use at these Army installations. For example, several defense agencies are expecting to spend more than \$2.6 billion in facility construction at Fort Belvoir, Virginia, while the Air Force plans to spend in excess of \$600 million for facilities to house medical training personnel and students at Fort Sam Houston, Texas.

Four Organizations Are Primarily Responsible for Managing These Personnel Moves and Assisting Communities

The following four organizations are to manage personnel moves associated with BRAC, overseas rebasing, or Army modularity and to assist local communities affected by the movements:

- The Army's Office of the Assistant Chief of Staff for Installation Management provides policy guidance and program management on all matters relating to the management and funding of Army installations worldwide and to ensure the availability of installation services and facilities. To accomplish its mission, the office coordinates with other key Army headquarters organizations, including the Office of the Deputy Chief of Staff for Operations and Plans and the Army Budget Office, to respond to operational requirements and resource availability in providing for installation infrastructure. To assist in this role, the Installation Management Command provides needed installation services and facilities, including construction, family care, food management, environmental programs, well-being, logistics, public works, and installation funding to support readiness and mission execution.
- The Army Corps of Engineers is the Army's construction agent and is charged with contracting for infrastructure construction for the Army. The Corps also manages the construction process, including supervision and inspection as facilities construction progresses. It also functions as the construction agent for selected Air Force construction projects and fulfills a role as an agent for a civil works construction program involving flood control, water supply, hydroelectric power generation, navigation, recreation, wetlands regulation, and resource protection.
- OEA is a field activity within the Office of the Secretary of Defense that assists states and communities by providing technical and financial assistance in planning and carrying out adjustment strategies in response to defense actions. Much of that assistance in the past had been directed toward communities that lost military and civilian personnel because of the closure or major realignment of a base. Conversely, because the 2005 BRAC round, overseas rebasing, and Army modularity have created significant growth at many bases, OEA has assisted affected communities with growth planning.
- The President's Economic Adjustment Committee was established under Executive Order 12788 and comprises 22 federal agencies that are to facilitate the organization, planning, and execution of community-based defense adjustment strategies. The Deputy Under Secretary of Defense (Installations and Environment) chairs the committee, and the Secretaries of Labor and Commerce serve as Vice Chairmen. The Committee Chair has testified that the committee will likely conduct team visits to better

	understand local community adjustment challenges and to more capably address potential needs for federal assistance.
The Army Has Developed Plans but Faces Complex Implementation Challenges	The Army has developed plans to accommodate growth of about 154,000 personnel at its domestic bases as a result of BRAC 2005, overseas rebasing, and force modularity actions, but it faces several complex challenges to the implementation of those plans and risks late provision of needed infrastructure to adequately support arriving personnel. First, Army plans are still evolving, and officials at the gaining bases we visited did not agree with Army headquarters on personnel movements at their bases. Second, the synchronization of personnel movements across installations with the planned infrastructure construction is difficult because any unforeseen delays or disruptions in providing for necessary facilities can adversely affect synchronization plans. Third, competing resource demands could lead to redirection of resources that would have been used for infrastructure improvements to other priorities, as has happened in the past. Fourth, the Army Corps of Engineers may be at risk of not finishing all needed infrastructure projects within new cost and timeline goals because of the unprecedented volume of required construction.
Expected Personnel Movement Numbers Differ between Army Headquarters and Some Gaining Bases	Expected personnel movement numbers differ between Army headquarters and the bases where these people will move, thus affecting whether adequate infrastructure will be in place when personnel arrive. As of March 2007, the nine gaining bases we visited were expecting different numbers of personnel arrivals and departures than those generated by the Office of the Deputy Chief of Staff for Operations and Plans. Table 3 provides examples of these variances at six of these bases, five of which are planning for more personnel movement than Army headquarters' plans while one base expects slightly less. ⁶ While the other three bases we visited had personnel movement numbers that also differed from the Deputy Chief of Staff for Operations and Plans' numbers, the data were not as easily comparable as those presented in table 3.

 $^{^{\}rm 6}$ These installations are some of the Army's largest growth bases and were selected for our analyses primarily because data were readily available for comparison purposes.

Table 3: Comparison of Army Headquarters and Installation Expected Personnel Restationing Numbers at Selected
Installations for Fiscal Years 2006 through 2011 (as of March 2007)

		Expected pers	onnel restationing numbers	
Installation	Personnel category	Headquarters	Installation	Difference
Fort Benning, GA	Military	1,127	3,846	2,719
	Student	5,347	8,757	3,410
Fort Bliss, TX	Military	19,468	20,979	1,511
Fort Carson, CO	Military	5,394	5,209	(185)
Fort Lee, VA	Military	1,065	1,717	652
	Student	4,444	6,494	2,050
Fort Riley, KS	Military	7,907	8,490	583
Fort Sill, OK	Military	2,235	2,761	526
	Student	1,754	4,357	2,603

Source: GAO analysis of Army data.

Note: Only certain personnel categories are displayed in the table.

The examples in table 3 are not necessarily representative of all Army growth locations and all categories of arriving personnel, but they nonetheless could lead to unnecessary infrastructure improvements on some bases and inadequate improvements on others. Army headquarters officials explained that they program military construction funds based on their numbers while base-level officials and surrounding communities rely more on the base-level numbers for planning purposes. While we recognize that the numbers of personnel moving to Army growth installations will fluctuate, officials could fully explain the reasons for discrepancies as large as those shown in table 3, and inconsistent numbers can lead to under- or overbuilding by the base and the surrounding communities.

Expected personnel movements also can vary based on doctrinal changes that consequently lead to changes in operational unit sizes and organizational structures. For example, BRAC 2005 recommended the creation of certain Army training centers of excellence that consequently require consolidation of some training staff and facilities in certain locations. One such planned center of excellence—the Army Maneuver Center at Fort Benning, Georgia—is to be created through the consolidation of the Armor School and Center (currently located at Fort Knox, Kentucky) with the Infantry School and Center at Fort Benning. This consolidation is expected to lead to personnel movements from Fort Knox to Fort Benning. However, because the organizational framework for the centers of excellence had not been fully defined at the time of our review and was therefore still evolving, Army's headquarters and Training and Doctrine Command officials still had not reached agreement on the number of people to be assigned to each center. Thus, gaining base officials, such as those at Fort Benning, could not fully plan for incoming personnel movements based on the center's personnel numbers and associated personnel reductions until the final personnel numbers were approved. Table 4 shows the wide disparity in the proposed personnel reduction numbers and those ultimately approved by the Vice Chief of Staff for the Army in March 2007.

 Table 4: Comparison of Army Headquarters and Training and Doctrine Command

 Proposed and Approved Personnel Reduction Numbers for the Army's Centers of

 Excellence

	Personnel reduction numbers			
Training center of excellence	Headquarters- proposed	Training and Doctrine Command-proposed and approved ^a	Difference	
Maneuver – Fort Benning, GA	1,661	635	1,026	
Net Fires – Fort Sill, OK	293	300	(7)	
Combat Service Support – Fort Lee, VA	666	220	446	
Remaining centers	286	324	(38)	
Total	2,906	1,479	1,427	

Source: GAO analysis of Army data.

^aThe Vice Chief of Staff for the Army approved the numbers in March 2007.

Military planners and base operations and community officials require accurate personnel arrival information to ensure that they can effectively plan for and fund infrastructure improvements to provide adequate facilities for the new arrivals. To the extent that personnel numbers are inaccurate, the Army and the surrounding community could either plan for too much or too little space to meet infrastructure requirements. Army Faces Challenges in Synchronizing Personnel Restationing Plans with Planned Construction of Facilities

Synchronizing personnel movements with the completion of infrastructure needed to accommodate newly arriving personnel at gaining bases presents difficult challenges that must be overcome to ensure that facilities are ready when relocated personnel arrive. These challenges include developing plans to account for (1) the complexities inherent in coordinating the expected large number of individual movements prompted by BRAC, overseas rebasing, and modularity and (2) the need to manage interdependent BRAC actions affecting individual bases. Moreover, delays in constructing needed infrastructure, for reasons such as environmental assessments on gaining bases, can force delays in carrying out the personnel movements. Given the compressed time frames for completing construction of facilities and subsequently relocating personnel, any significant delays of BRAC actions could place the Army at risk of not completing personnel moves at some locations and not meeting the September 15, 2011, statutory deadline.

The Army faces a key challenge stemming from the sheer number of synchronized actions that must take place to successfully complete certain personnel movements. In congressional testimony, the Assistant Secretary of the Army (Installations and Environment) stated that the Army has to complete more than 1,300 discrete actions to successfully implement BRAC recommendations. For example, 14 separate BRAC recommendations involving 59 separate DOD organizations impact Fort Belvoir, Virginia, which is expected to gain nearly 24,000 personnel by September 15, 2011. Among the personnel moving to Fort Belvoir will be about 15,000 expected to arrive as late as August 2011 as the result of the closure of the Walter Reed Army Medical Center in Washington, D.C., to staff a newly constructed hospital, the collocation of various defense agencies and activities from leased space off base, and several National Geospatial-Intelligence Agency moves. These moves all depend on the completion of new construction at Fort Belvoir, much of which is expected to be completed only shortly before or at the same time as the relocations. For example, current plans call for construction to be complete in September 2011 for the collocation of about 9,000 personnel from various defense agencies and activities at the base. However, at the time of our review, the Army had not made a final decision whether to obtain General Services Administration land it owns near rail and transit stations in Springfield, Virginia, where the Army would move these personnel. If this process delays these moves, it could jeopardize meeting the statutory deadline.

The Army also has to overcome the challenge to planned synchronization from the interdependence of various BRAC recommendations. For example, the BRAC recommendation to close Fort Monmouth, New Jersey, includes the planned relocation of some personnel into renovated facilities at the Aberdeen Proving Ground, Maryland. However, the designated receiving facilities at Aberdeen cannot be renovated until the military organization currently occupying those facilities—the Ordnance Center and School—relocates. The school, however, cannot relocate—an action associated with another BRAC recommendation—until new space is provided at Fort Lee, Virginia. According to Army officials, the Ordnance Center and School is expected to move to Fort Lee in July 2009, and some personnel from Fort Monmouth are expected to move into the renovated space at Aberdeen in June 2011. Any delay could jeopardize these moves and meeting the September 15, 2011, deadline.

Another key synchronization challenge is the need to complete required environmental assessments, conduct any needed environmental cleanup, and undertake endangered species protection before construction commences. For example, construction of the new Maneuver Center of Excellence at Fort Benning, Georgia, could be delayed because the installation is required to account for endangered species protection actions in its construction plans. While the Army initially expected to complete the relevant environmental impact statement by the end of fiscal year 2007, it has revised its expected completion date by about 3 months. Base officials said that this delay will not affect current construction schedules. However, if any further delays materialize, both needed construction and arrival of Armor School and Center personnel from Fort Knox could be delayed. Army officials also told us that other regulatory environmental requirements must be complied with, including certain studies, consultations, and permitting, before various construction projects can commence and any delays could undermine the synchronization schedule of construction and personnel movements that must be completed before the deadline.

Synchronization difficulties have already arisen in the Army's BRAC 2005 plans, and the Army consequently delayed scheduled personnel movements in at least the following three instances because facilities were not expected to be ready at the gaining bases when needed:

- Fort Benning, Georgia: Officials delayed the start-up of the Maneuver Center of Excellence by a year or more from their initial plans for it to begin operations in fiscal year 2009.
- Fort Bliss, Texas: The 1st Armored Division's planned move from Germany was moved from fiscal years 2008, 2009, and 2010 to fiscal years 2010 and

2011. Similarly, a 1st Armored Division brigade relocation has been rescheduled from fiscal year 2007 to fiscal year 2008.

• Fort Sill, Oklahoma: The Net Fires Center of Excellence is to begin operations in fiscal years 2009 instead of fiscal year 2008 as originally planned.

To the extent that delays occur as implementation proceeds, the Army faces an increased risk that it may not complete all closures and realignments by the statutory deadline.

The Army is now emphasizing the need to have adequate permanent facilities in place when personnel arrive because utilizing temporary facilities, often referred to as relocatables, adds to the facilities' cost in the long term as permanent facilities are to eventually replace the relocatables. Army officials have told us that because of congressional concerns regarding the possible use of temporary facilities to meet requirements for 2005 BRAC round and overseas rebasing actions, they do not plan to use relocatable facilities for these moves, even though they would serve as an interim measure for providing needed infrastructure.⁷ Nonetheless, in the recent past the Army has relied on temporary facilities to accommodate troops for operational reasons when no permanent facilities were available, as evidenced by the Army's modularity initiative and facilities construction in Iraq and Afghanistan. Army data indicate that more than 7 million square feet of relocatables have been used to accommodate modular force conversions at a cost of nearly \$1 billion since 2004 at domestic bases. Figures 2 and 3 show relocatables in place at Fort Bliss to accommodate the arrival of the 1st Cavalry Division in 2006.

⁷S. Rep. No. 110-77, at 585 (2007), and H.R. Rep. No. 109-89, at 443 (2005).



Figure 2: Panoramic View of Relocatable Buildings at Fort Bliss, Texas

Source: U. S. Army.

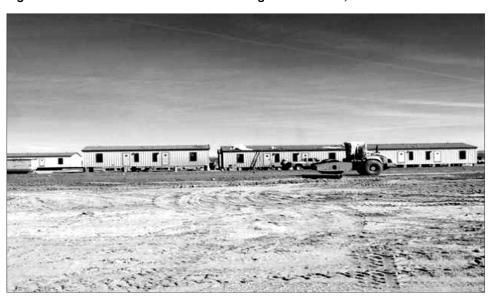


Figure 3: Closer View of Relocatable Buildings at Fort Bliss, Texas

Source: U.S. Army.

Competing Priorities Could Lead to Redirection of Funding from Infrastructure to Other Priorities

Competing priorities could lead to the redirection of funds planned for infrastructure construction or improvement to other priorities and consequently lead to delays in preparing facilities for newly arriving personnel at gaining bases. In September 2006, the Chief of Staff of the Army negotiated directly with the Office of Management and Budget for an increase in the Army's total fiscal year 2008 budget rather than the usual practice of providing its budget request to the Secretary of Defense. The Army Chief of Staff took this step because he perceived a shortfall of nearly \$25 billion in the Army's fiscal year 2008 budget. However, as a result of the negotiations, the Army received \$7 billion more than that originally supported by the Secretary of Defense, but still \$18 billion less than the amount the Chief of Staff believed was required to fund all priorities.

The Army projects the cost of BRAC implementation to be about \$17.6 billion of which military construction is projected to account for about \$13.1 billion.⁸ The Army plans to fund the \$17.6 billion from a variety of sources. First, to help finance portions of the Army's BRAC 2005 implementation costs, DOD will provide BRAC funding of almost \$7 billion. Second, DOD also will provide funding for overseas rebasing, which will supply the Army with about \$2.6 billion to fund these redeployment actions to the United States. Together, these amounts will provide the Army about \$9.5 billion. Thus, the Army will need about another \$8.1 billion to finance BRAC 2005 implementation of about \$17.6 billion. To address the shortfall, at the time of our review, the Army planned to rely heavily on funding programmed for certain projects outside the BRAC account—the Military Construction Army Account—through 2011 and to move these targeted projects further into the future.

While the Army has identified sources for the funds to implement BRAC 2005, competing priorities could prompt future redirection of funds away from BRAC or other construction. Operations in Iraq and Afghanistan; support for new weapons systems, including the Future Combat System; costs to implement modularity; plans to increase the Army's active force

⁸The initial estimate for the BRAC implementation costs increased by over 50 percent from \$11.6 billion to \$17.6 billion. Included in this figure is more than \$1 billion provided by the Army to the TRICARE Management Activity to construct a new hospital at Fort Belvoir, Virginia, and necessary infrastructure at the National Naval Medical Center, Maryland, to provide services formerly provided by the Walter Reed Army Medical Center, which is slated for closure.

structure by 65,000 personnel; and other initiatives all will compete for funds with BRAC 2005 and other infrastructure construction priorities. Moreover, cost growth in any of these priorities could increase the pressure to redirect funds. For example, in March 2007, we reported that the Army's projected cost for the Future Combat System had increased by almost 80 percent from \$91.4 billion to \$163.7 billion. We also reported that the Office of the Secretary of Defense's independent estimates of the acquisition cost of the system were higher and ranged from \$203 billion to \$234 billion.⁹

As we have previously reported, concerns have remained regarding the adequacy of funding allocated to maintain DOD infrastructure and support other installation operating needs. Furthermore, underfunding, including the deterioration of facilities and its negative effects on the quality of life for those living and working at affected installations and on their ability to accomplish their mission activities, further affects military operations.¹ This has been particularly prevalent in the Army and in 2004 was exacerbated because varying amounts were redirected from facilities accounts to help pay for the Global War on Terrorism. At the end of fiscal year 2004, Army installations received additional funds to help offset these shortfalls, but the timing made it difficult for the installations to execute these funds. Our visits to various gaining bases revealed that the adequacy of operations and maintenance funds to operate bases continues to be an issue. The Army has had to take steps in each of the last 3 years, affecting facilities accounts, to help fund the war. We are continuing to conduct work in this area and have recently initiated a review looking at the sustainment and operation of DOD facilities.

Because of expected budgetary pressures and competing priorities, and to limit short-term construction costs, the Army plans to delay construction of certain quality of life facilities at some gaining installations. Quality of life facilities include child development and youth centers, physical fitness centers, chapels, on-post shopping and convenience areas, and athletic fields. BRAC recommendations do not require specific construction projects, and thus the Army has chosen to defer some quality of life facilities beyond 2011. Specifically, at the nine Army growth installations

⁹GAO, Defense Acquisitions: Future Combat System Risks Underscore the Importance of Oversight, GAO-07-672T (Washington, D.C.: Mar. 27, 2007).

¹⁰GAO, Defense Infrastructure: Issues Need to Be Addressed in Managing and Funding Base Operations and Facilities Support, GAO-05-556 (Washington, D.C.: June 15, 2005).

	we visited, the BRAC requirement for quality of life facilities has an estimated value of about \$739 million. However, if only certain quality of life facilities are included, then the requirement drops to about \$472 million. ¹¹ Nonetheless, the Army planned to fund only about \$76 million using BRAC funds and about another \$122 million using military construction funds through 2011. As a consequence, for example, at Fort Carson, Colorado, officials requested that two child care centers be constructed before most incoming personnel arrived in 2009. However, the Army has budgeted funding for the two centers in 2011. Moreover, the Army has not budgeted for any quality of life projects at Forts Belvoir and Lee, Virginia, through 2011 despite installation requirements for these facilities.
	Installation officials we spoke with were confident that their bases could accommodate the new personnel even without all required quality of life facilities and believed that the surrounding communities would be able to accommodate some base personnel's child care and other quality of life needs. Meanwhile, military family advocates believe that not funding quality of life facilities could jeopardize military readiness by distracting deployed soldiers who may be concerned that their families are not being taken care of.
Army Corps of Engineers Is at Risk of Not Meeting Construction Costs and Timing Goals	To meet the expected large volume and costs of facilities construction associated with BRAC and the concurrent implementation of overseas rebasing and modularity, most of which must be completed by the end of fiscal year 2011, the Army Corps of Engineers has developed a strategy, known as military construction transformation, intended to reduce (1) construction costs by 15 percent and (2) construction time by 30 percent. Through its transformation strategy, the Corps intends to change how it executes construction projects by
	• standardizing facility designs and processes,
	• expanding the use of manufactured building solutions, ¹²

¹¹These quality of life facilities include only child and youth centers, physical fitness centers, religious facilities, and soldier and family support centers.

¹²This is another name for modular building methods where sections, or modules, of a building are constructed either on-site or off-site and then transported to the building site where the modules are assembled to construct a building.

- executing military construction as a continuous building program and not just a collection of individual projects, and
- emphasizing commercial rather than government building standards and base master planning.

The Army approved the strategy on February 1, 2006, and the established eight centers to simplify the contracting and construction processes for certain types of facilities as a step in its goal to reduce construction costs and time. By 2008, the Corps expects that each center will establish baseline requirements for common facilities to reduce construction costs and time frames on the theory that contractors can build to the same design faster and cheaper once they have experience with the design. The Fort Worth, Texas, district is to standardize enlisted barracks' construction; the Savannah, Georgia, district is to standardize brigade operations complexes; and the Louisville, Kentucky, district is to standardize operational readiness training complexes. A further costsaving element of the strategy is to reduce the cost of support facilities, such as utility connections, paved parking and walkways, storm drains, information technology connections, and antiterrorism and force protection measures. According to officials, these costs usually range from 25 to 30 percent of the construction cost when government construction standards are used.

In addition to common designs, the strategy encourages contractors to use manufactured buildings with flexibility to use any of five construction types rather than requiring only noncombustible, concrete and steel type I or II construction.¹³ Corps officials said that this approach provides not only greater flexibility in the design and construction of military projects but also flexibility to respond to fluctuating material prices. They also noted that using materials other than concrete and steel makes it easier to renovate, reuse, and reconfigure a facility when appropriate. These officials believe that the changes would not significantly reduce the useful life of facilities.

Recognizing that its construction strategy constitutes a critical operational change, the Army Corps of Engineers is testing its new approach on projects at five locations. A Corps official told us that 11 projects awarded

¹³The types of construction are based on fire combustibility ratings with type I being the least combustible.

at the pilot locations during fiscal year 2006 all were bid under the price set by the Corps thus achieving up to a 17 percent savings. Further, these projects were all awarded without scope reductions. Corps officials also told us that the contractors for these projects are expected to complete them in from 440 to 540 days as compared with the normal completion time of about 720 days. In addition, we were told that the Corps hopes to have completed the pilot testing and developed regional contracts for the standardized facility types so that they can be used in the fiscal year 2008 military construction program. According to Corps officials, these contracts will help streamline the construction process because a task order can be issued against an already existing contract when needed. Despite the early positive results, however, Corps officials acknowledge that their strategy has not been tested in high-demand conditions, such as those that will occur because of the much larger construction budgets and extensive construction plans during fiscal years 2008 through 2010.

With respect to implementing this transformational construction strategy, building materials cost and labor wage rates that exceed rates used in the construction budget process could lead to unexpectedly costly building projects. In recent years, the actual rate of construction inflation has exceeded the federal government's inflation rate, which the Corps is required to use in budgeting for its construction projects. While this variance, which was as high as 6.1 percentage points in fiscal year 2004, has diminished over time, the actual rate of construction inflation continues to exceed the Corps' budgeted rate. Because the Corps uses government inflation rates to develop its cost estimates and budget for construction in any given year, any variance in actual inflation from those rates has an impact on the cost of construction projects.¹⁴ Army Corps of Engineers officials told us that to the extent that the actual rate of inflation continues to exceed the budgeted rate as implementation proceeds and construction material costs are higher than anticipated, they would either have to redirect funding from other sources to provide for construction projects or resort to a reduction in the scope of some construction projects. We note, however, that this trend may not necessarily continue into the future, depending on the economics surrounding the construction industry.

¹⁴The House Committee on Armed Services has directed the Secretary of Defense to submit an analysis of these construction cost inflation differences by February 1, 2008. H.R. Rep. No. 110-146, at 520 (2007) (Conf. Rep.).

	Finally, the Corps is expected to manage an unprecedented volume of construction through 2011, with some regions expecting to far exceed their normal construction capacity. For example, the Fort Worth, Texas, district is to manage about \$2.5 billion in construction work at Fort Bliss. Corps officials said that this amount would place them at their maximum capacity of about \$400 million in construction work annually managed by that district, and they must also manage \$2 billion in construction in the San Antonio, Texas, area. Similarly, at Fort Benning, Georgia, the Corps' military construction budget will increase from about \$50 million per year to more than \$300 million annually over the next 3 years. These costs do not include the costs of the Corps' civil works program, which would include construction programs such as recovering from the impacts of Hurricane Katrina. Corps headquarters officials have said that they will bring in assistance from other Corps districts, hire outside help if specific districts are unable to meet the demand without such help, or both thus potentially adding additional cost to the projects.
Communities Have Efforts Under Way to Address Anticipated Army Growth, but Planning and Funding Challenges Remain	Communities surrounding growing Army installations have acted to address school, housing, transportation, and other infrastructure needs, but each community's actions are unique because demands vary by location. These communities are in the process of identifying and obtaining funding sources to finance these additional infrastructure requirements, and they have several ways to finance these needs, including seeking federal assistance. Nonetheless, given the evolving nature of the Army's growth projections, these communities have generally been hindered in their ability to identify all of the costs for implementing infrastructure expansion. DOD's OEA is assisting communities with their growth planning efforts, but OEA does not provide funding for facilities' construction projects.
Communities Have Generally Been Proactive in Planning and Implementing Actions for Growth	Communities we visited have been planning for a significant anticipated increase in DOD personnel and family members from BRAC, overseas rebasing, and modularity implementation. These communities' schools, housing, transportation, and other infrastructure needs depend on the number of new personnel to be assigned to their local bases. However, the Army's plans for relocating its personnel and families were evolving at the time of our review. Consequently, communities cannot fully determine their requirements because of changing Army plans, although some communities had begun planning anyway. Some went further and undertook new construction even before the Army had decided which bases would grow and by how much. For example, some communities in

the Forts Benning, Bliss, and Riley areas expanded medical facilities in anticipation of DOD and community growth unrelated to DOD. Similarly, through a pre-BRAC 2005 partnership between Fort Bliss and the City of El Paso, an inland desalination plant is under construction on the installation that is to be operated by the City of El Paso. Community officials also told us that they are increasing the capacity and accreditation of child care facilities to help accommodate relocating families' needs.

At the time of our review, base commanders' representatives and affected communities' officials at locations we visited were regularly collaborating to manage community growth. In addition to housing, schools, and transportation needs, community officials were planning new water and sewage systems projects to accommodate growth. For example, the community bordering Fort Sill has identified \$14.7 million in water and sewer projects and is seeking state and federal financial assistance to finance the projects. State-level or regional task forces have also been formed in some states to assist communities surrounding bases in managing the growth. Communities surrounding Army installations in Georgia, Texas, Kansas, Maryland, and Virginia have organized such task forces to help identify and address off-base infrastructure needs from a regional viewpoint. Members of these planning groups include elected or appointed representatives from the state, local, and county levels and representatives from local businesses, school districts, and the private sector.

Local officials in some of the communities we visited also said that the arrival of defense personnel and family members is expected to occur later than initially projected, thus giving them more time to plan for and complete new construction. At the same time, some communities' officials were concerned that Army plans could change and that their nearby bases might not grow as much as first thought, but they would not find out until after new construction had been started or completed.

Communities Have Developed Plans and Taken Other Actions to Improve Schools, Housing, and Transportation The communities we visited have been actively planning and have initiated a number of actions to accommodate the anticipated increased need for schools, housing, and transportation. Some communities have taken steps to address school needs by funding school construction requirements, while others are seeking federal assistance. To help accommodate increased housing demands, communities have constructed or developed plans for constructing additional housing units. Some communities already have transportation projects under way or planned, while other communities have identified needed projects but lack the funding to make these road expansions and are seeking state and federal assistance.

Community Plans and Actions for Accommodating Anticipated Increase in Student Enrollments	Some school systems in communities surrounding gaining Army installations plan to expand their facilities to accommodate the anticipated increase in school enrollments, although such planning is hampered by evolving Army base growth plans. While the Office of the Secretary of Defense estimates that Army actions will lead to the transfer of about 50,000 school children into school districts surrounding gaining installations, fluctuating Army numbers hamper communities' planning.
	For example, Fort Benning officials projected that student enrollment would increase by about 10,000 through fiscal year 2011 as compared to a November 2006 DOD report that estimates 600. A number of reasons accounted for the variances, including differences in the scope (e.g., defense personnel versus defense and nondefense personnel) of the projected arrivals and assumptions underlying the projections for family dependents related to those arriving personnel. At the time of our review, these disparities remained unresolved. There are a number of installations, in addition to Fort Benning, for which base projections differ from those generated by the Army. Forts Benning and Riley officials told us that they have been in direct contact with the units that will be moving to the bases and consequently believe that their own estimates more accurately reflect impending growth than those by Army headquarters. As a result, Forts Benning and Riley officials are relying on their own estimates and communicating them to local officials for use in their school construction planning.
	Financing school construction is a key challenge confronting officials in communities surrounding growth bases, and these officials have adopted a variety of strategies. For example, Forts Bliss and Riley area school systems have passed bonds to expand their schools' capacity. The community surrounding Fort Bliss approved bonds totaling over \$600 million for school construction intended to serve an increased student population of about 14,900. In addition, one community surrounding Fort Riley passed a \$33 million school bond to finance a new 1,100-student middle school, a new 400-student elementary school, and the expansion of existing elementary schools. Another school system near Fort Riley decided to keep a school open that was to close. In addition to bonds, some school systems are seeking federal assistance. For example, local officials in the community adjacent to Fort Benning estimate that they need about \$321 million to support incoming students and are seeking

federal assistance. Moreover, the school systems near Forts Benning, Bliss, Carson, Lee, Riley, and Sill have formed the Seven Rivers National Coalition and were subsequently joined by the school systems near the Aberdeen Proving Ground; Forts Bragg, Knox, Leonard Wood, and Meade; and the Redstone Arsenal. The coalition has petitioned for construction funding from DOD, the Department of Education, and Congress and believes that it needs about \$2 billion to support incoming students. However, DOD's position has been to provide planning assistance through OEA to communities affected in prior BRAC rounds but not construction financing. Similarly, the Department of Education indicated that no funding is available.

In addition to construction funds, school districts will also need additional operating funds to run the new schools. Congress provided \$7 million in fiscal year 2006 to help operate school systems affected by DOD transfers, and DOD distributed the money to 26 school systems in 14 states. School systems having a 20 percent enrollment of military or DOD civilian dependent children¹⁵ are eligible for this assistance if this population has increased or decreased by 5 percent, or by 250 students, and the increase or decrease is the result of DOD transfers. For fiscal year 2007, Congress provided \$8 million.

Community Plans and Actions for Accommodating Increased Housing Demands

To accommodate the anticipated demand for housing in communities surrounding gaining bases, residential developers and community planners are planning and constructing new housing. For example, officials from the communities surrounding Fort Riley, a multicounty area with fewer than 150,000 people, project that they will need from 8,000 to 9,000 additional housing units to accommodate the increase in personnel and family members relocating to the area. These off-base housing units are in addition to the 400 new on-base homes being added to the existing base inventory of 3,114. Developers in the communities surrounding Fort Riley had also already started construction or had construction plans for about 6,000 new units.

Also, the Department of Agriculture's housing loan program dedicated \$25 million in fiscal year 2006 for loan assistance to personnel relocating to the Fort Riley area. Under this program, approved lenders provide

¹⁵School districts with 20 percent enrollment of military or DOD civilian dependent children are eligible to receive DOD supplemental impact aid funding that has been provided since 1991. For fiscal years 2006 and 2007, Congress provided \$30 million for DOD supplemental impact aid.

qualifying low- and middle-income rural residents with home financing options, including no-down-payment loans to create homeownership opportunities. In December 2005, the department opened an office at Fort Riley to assist these potential homebuyers with off-post housing needs. The department also plans to establish a similar partnership at Fort Leavenworth, Kansas, and to provide similar assistance to potential homebuyers relocating there.

In contrast to the rural environment at Fort Riley, Fort Bliss is near El Paso, Texas, with a metropolitan population of about 750,000. El Paso community officials told us that they are not as concerned about housing because they believe that their market is large enough to absorb the influx of new personnel. At the same time, according to an Army official, a recently completed draft housing market analysis for Fort Bliss identified an additional on-base housing requirement of about 3,370 to be paid for using housing privatization funding if this requirement is approved and funding is provided.

Restationing of defense personnel at some gaining bases is likely to prompt new transportation infrastructure construction in communities surrounding the bases. Some state and local governments had already begun planning for or started construction projects at the time of our review. For instance, according to community officials, projects already started or planned to be started are expected to cost (1) \$60 million in the Fort Riley area, (2) \$45 million in the Fort Carson area, and (3) \$150 million in the Fort Bliss area. Also, Fort Sill community representatives said that they have identified road expansion projects totaling approximately \$25 million, and because of limited local funding, they are seeking state and federal financing assistance. At the same time, community officials at Forts Lee and Sam Houston told us that their respective state departments of transportation are examining plans for road expansion projects near these installations.

Transportation needs and funding will also be a concern in large metropolitan areas surrounding gaining installations because of both rapid growth being experienced apart from DOD-prompted growth and the influx of personnel onto gaining bases. For example, at Fort Belvoir, Virginia, personnel increases are expected to exceed 20,000 and this anticipated growth will further burden an already congested northern Virginia transportation system. A working group that includes representatives from the Army, the Virginia Department of Transportation, Fairfax County, and the Federal Highway Administration has been established to review the transportation impacts of the Fort Belvoir

Community Plans and Actions for Accommodating Increased Traffic and Insufficient Road Capacity

	realignment. A preliminary list of transportation projects around Fort Belvoir totaling about \$663 million has been identified as necessary to help accommodate the expected increase in traffic. Although representatives from the local, state, and federal governments recognize that transportation system improvements are needed, no funding sources or commitments had been identified at the time of our review for projects totaling approximately \$458 million of the total of \$663 million. To help facilitate some of these specific road construction projects surrounding Fort Belvoir, the John Warner National Defense Authorization Act for Fiscal Year 2007 included a provision allowing the Army to enter into a special agreement with the State of Virginia for certain land conveyance and road construction around Fort Belvoir. The Defense Access Road Program is a potential source for helping to pay for public highway improvements. ¹⁶ Recent developments could affect proposed transportation projects and the timing of the move to Fort Belvoir because, at the time of our review, the Army was making a decision whether to obtain land owned by the General Services Administration near rail and transit stations in the Springfield, Virginia, area where it would move approximately 9,000 personnel.
The Office of Economic Adjustment Is Assisting Communities	In prior BRAC rounds, OEA, part of the Office of the Deputy Under Secretary of Defense (Installations and Environment), has provided technical and financial planning assistance but not construction funds to communities through its grants. According to an OEA official, in the prior four BRAC rounds, OEA assisted over 100 communities. In our January 2005 report on the status of the prior BRAC rounds, we reported that OEA, the Department of Labor, the Economic Development Administration within the Department of Commerce, and the Federal Aviation Administration provided nearly \$2 billion in assistance through fiscal year 2004 to communities and individuals for base reuse planning, airport planning, job training, infrastructure improvements, and community economic development, and these agencies are slated to perform similar roles for the 2005 BRAC round. ¹⁷

¹⁶The Defense Access Road Program provides the legal means for DOD to pay for public highway improvements to mitigate an unusual impact of a defense activity, such as a significant increase in personnel at a military base. Military construction funds are specifically budgeted, authorized, and appropriated for these projects.

¹⁷GAO, Military Base Closures: Updated Status of Prior Base Realignments and Closures, GAO-05-138 (Washington, D.C.: Jan. 13, 2005).

DOD sponsored a BRAC conference in May 2006 attended by state, local, and federal agencies and BRAC-affected communities to discuss BRAC impacts, including growth. The conference provided an opportunity for communities to discuss issues with officials from OEA and other federal entities that are part of the President's Economic Adjustment Committee, which helps communities plan for and prepare for growth. In assisting communities with their growth plans, during fiscal year 2006, OEA awarded growth-related grants¹⁸ totaling approximately \$3.2 million to seven communities surrounding Army installations, and as of April 30, 2007, has awarded 11 fiscal year 2007 Army growth-related grants totaling approximately \$8.8 million to 10 communities surrounding Army installations and to the State of Kansas. Table 5 provides a listing of these OEA Army growth-related grants by fiscal year and amount.

Growth location	FY 2006 grant award	FY 2007 grant award (as of April 30, 2007)
Aberdeen Proving Ground, MD	\$287,438	\$1,414,650
Fort Belvoir, VA	0	1,542,568
Fort Benning, GA	486,542	0
Fort Bliss, TX	0	936,500
Fort Bragg, NC	0	1,049,387
Fort Carson, CO	517,830	0
Fort Drum, NY	737,579	0
Fort Knox, KY	0	565,867
Fort Lee, VA	289,379	13,950
Fort Meade, MD	0	1,447,630
Fort Riley, KS	763,700	36,000
Fort Sam Houston, TX	0	931,709
Fort Sill, OK	109,580	635,026
State of Kansas	0	180,054
Total	\$3,192,048	\$8,753,341

Table 5: OEA Army Growth-Related Grant Awards for Fiscal Years 2006 and 2007

Source: Office of Economic Adjustment, DOD.

We are continuing to examine the combined effect of BRAC, overseas rebasing, and Army modularity on communities surrounding military

¹⁸None of these grants help underwrite construction.

installations as a result of language in the House Committee on Appropriations report accompanying the Department of Defense Appropriations Act 2007. We expect to provide the results of that work in the spring of 2008.

Conclusions	Continuing Army operations in Iraq and Afghanistan and the war on terror and evolving BRAC 2005, overseas rebasing, and force modularity plans have resulted in fluctuating and uncertain personnel restationing plans. Knowing how many Army personnel and dependents will move to a given base and their arrival dates is fundamental to the base's and surrounding community's abilities to plan for and provide adequate on- and off-base schools, housing, transportation, and other infrastructure. However, as of March 2007, several of the Army's largest gaining bases and Army headquarters-level offices had yet to agree as to the number of arriving and departing personnel because officials were unaware of the specific causes of the variances in their estimates. For their part, communities surrounding gaining bases generally relied on their local base officials for personnel arrival and departure numbers, which in effect, can be translated into the communities' off-base infrastructure requirements. However, without knowing whether the local base or Army headquarters- level officials' plans have accurate information about growth plans, these communities are not well positioned to plan for and provide adequate schools, housing, transportation, and other infrastructure.
Recommendations for Executive Action	To better facilitate infrastructure planning, we recommend that the Secretary of Defense direct the Secretary of the Army to (1) determine why there are differences between headquarters and gaining bases with respect to the number of arriving and departing personnel and (2) ensure that Army headquarters and base officials are collaborating to agree on Army personnel movement plans so that base commanders and surrounding communities can effectively plan for expected growth. This collaboration to reach agreement should continue as expected personnel movement actions are revised over time.
Agency Comments and Our Evaluation	In commenting on a draft of this report, DOD partially concurred with both of our recommendations. With regard to the first recommendation, DOD concurred with our findings but said that the Army had determined the cause of differences between the headquarters and gaining bases' numbers of arriving and departing personnel. As a result, the Army said that in January 2007 it had taken corrective action by establishing the

Army Stationing Installation Plan (ASIP) as the single, unified source of installation planning population data to be used Army-wide. However, the information in our report was based on March 2007 ASIP data, which continued to show that all of the nine installations we visited were using different numbers than headquarters was using.

With regard to the second recommendation, DOD also concurred with our findings but said that the Army had already taken corrective action without the need of direction from the Secretary of Defense. The Army stated that in May 2007 it issued guidance that allowed installations to plan for anticipated unit moves that may not be reflected in the ASIP and to discuss these plans with local communities as long as they are appropriately qualified as predecisional and subject to change. Army officials also stated that in June 2007, they would ensure that installations forward all population issues, stationing issues, or both to Department of the Army headquarters for resolution. Following receipt of DOD's comments on our draft report in late August 2007, we contacted several of the bases we visited during our review and found that there were still some significant, long-standing problems with the variances in the data being used by the installations and headquarters. In some cases the magnitude of the differences has been reduced, but there are still several cases in which the differences exceed 1,000 personnel. For example, we were told that Fort Bliss still expects more than 1,000 military personnel than are currently projected by headquarters. To the Army's credit, most of the officials we spoke with at the installation level said the data were improving, with one location reporting that its data were very close to that of the headquarters. However, officials at six of the seven installations we contacted still said that they had serious concerns with the headquarters data.

Because disconnects still exist, we believe that our recommendations remain valid and that the Secretary of Defense should act upon both of our recommendations.

We are sending copies of this report to other interested congressional committees; the Secretaries of Defense and the Army; and the Director, Office of Management and Budget. We will also make copies available to others upon request. In addition, the report will be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staff have any questions concerning this report, please contact me at (202) 512-4523 or at leporeb@gao.gov. Contact points for our

Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.

Hun Copure

Brian J. Lepore, Director Defense Capabilities and Management

List of Congressional Addressees

The Honorable Carl Levin Chairman The Honorable John McCain Ranking Member Committee on Armed Services United States Senate

The Honorable Daniel K. Inouye Chairman The Honorable Ted Stevens Ranking Member Subcommittee on Defense Committee on Appropriations United States Senate

The Honorable Tim Johnson Chairman The Honorable Kay Bailey Hutchison Ranking Member Subcommittee on Military Construction, Veterans Affairs, and Related Agencies Committee on Appropriations United States Senate

The Honorable Ike Skelton Chairman The Honorable Duncan L. Hunter Ranking Member Committee on Armed Services House of Representatives

The Honorable John P. Murtha, Jr. Chairman The Honorable C. W. Bill Young Ranking Member Subcommittee on Defense Committee on Appropriations House of Representatives The Honorable Chet Edwards Chairman The Honorable Roger F. Wicker Ranking Member Subcommittee on Military Construction, Veterans Affairs, and Related Agencies Committee on Appropriations House of Representatives

The Honorable Tom Davis Ranking Member Committee on Oversight and Government Reform House of Representatives

Appendix I: Scope and Methodology

To determine the challenges and associated risks the Army faces in providing for timely infrastructure support at its major gaining bases because of the combined effects of implementing the 2005 round of base realignment and closures (BRAC), overseas rebasing, and Army force modularity actions, we analyzed infrastructure-related planning documentation and discussed planning and related funding efforts with officials from various Army headquarters-level offices, four regional Installation Management Command offices, and nine installations. We visited Fort Carson, Colorado; Fort Benning, Georgia; Fort Riley, Kansas; Fort Meade, Maryland; Fort Sill, Oklahoma; Fort Bliss and Fort Sam Houston, Texas; and Fort Belvoir and Fort Lee, Virginia, because preliminary data indicated large influxes of military and civilian personnel through fiscal year 2011 at these nine installations.

Because Army implementation plans were evolving as we conducted our work, we periodically updated the information we collected as the Army refined its plans. In examining the plans and identifying challenges that could place the Army at risk of not providing the necessary infrastructure to accommodate incoming personnel in a timely manner, we focused our efforts on key elements of the planning process, including planned personnel restationing actions and synchronization of multiple actions affecting particular installations, infrastructure requirements to include quality of life facilities, and military construction plans and expected costs. At the installation level, we collected and analyzed data on the estimated number of personnel arrivals and departures by fiscal year, along with installation-developed military construction requirements. We also analyzed installation-developed requirements for quality of life facilities at the nine Army growth bases we visited and compared these requirements to Army funding plans for fiscal years 2006 through 2011. We also met with Army Corps of Engineers' officials and discussed the challenges they face in providing an unprecedented volume of military construction across the country at gaining installations within allotted costs and time frames. Although we did not validate military construction requirements, the Army Audit Agency was validating the requirements at the time of our review for selected Army BRAC 2005 military construction projects. We also sought views from officials from the installations we visited as to the challenges they faced in planning for and funding their personnel growth requirements and their ability to fully fund continuing base operations and support and maintenance activities as the installations expand. At the Army headquarters level, we collected personnel restationing movement data and discussed overall infrastructure implementation plans for the expected growth installations. We further discussed the Army's efforts to

fully fund necessary infrastructure in the face of recognized overall funding challenges across the Army's programs.

To determine how communities surrounding the Army's gaining bases were planning for and funding the necessary infrastructure to support incoming personnel and their families, we contacted community leaders during our installation visits and discussed their relationships with installation officials and steps they were taking to address community infrastructure issues as a result of expected increased defense-driven personnel growth and non-Department of Defense (DOD) growth in their communities. While we focused most of our efforts on such areas as the availability of housing, schools, and transportation to accommodate the expected growth, we also learned of other areas of concern, including the adequacy of utilities. We collected and analyzed available relevant community planning documents relating to growth impacts and specific strategies and actions for addressing these impacts. Because the federal government has a role in providing financial, technical, and other assistance to communities affected by defense actions, we discussed with community officials to what extent they were seeking federal assistance in addressing growth issues. We further discussed community growth issues with officials from the Office of Economic Adjustment (OEA), an organization within DOD that provides technical assistance and financial assistance in the form of grants to eligible communities affected by defense actions. We also attended the May 2006 DOD-sponsored BRAC conference to learn about the ramifications of DOD growth on communities and the federal support and assistance available to these communities. We further collected and analyzed OEA grant data already provided to affected growth communities and discussed in general with OEA officials the activities of other federal agencies that are included in the President's Economic Adjustment Committee, a committee of 22 federal agencies that have varying roles in providing assistance to communities adversely affected by defense activities. We did not conduct work at those other federal agencies.

In addition to representatives of the nine domestic Army gaining installations we visited and nearby community leaders, we contacted the following organizations during our review:

- Office of the Secretary of Defense
 - Office of the Deputy Under Secretary of Defense (Installations and Environment), BRAC Office, Arlington, Virginia
 - Office of the Deputy Under Secretary of Defense for Military Community and Family Policy, Arlington, Virginia

• OEA, Arlington, Virginia

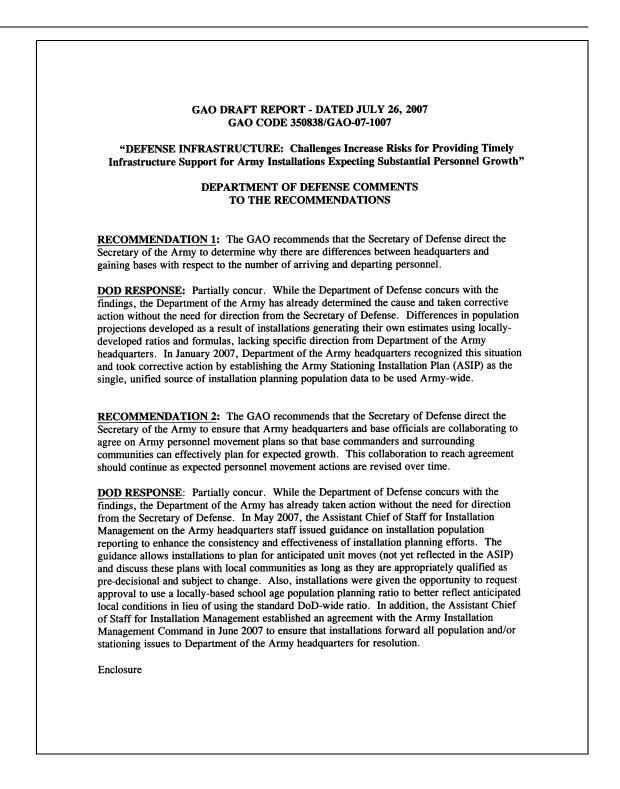
Army

- Assistant Chief of Staff for Installation Management, Arlington, Virginia
- Deputy Chief of Staff for Operations and Plans, Arlington, Virginia
- Installation Management Command Headquarters, Arlington, Virginia
- Installation Management Command, Northeast Region, Hampton, Virginia
- Installation Management Command, Northwest Region, Rock Island, Illinois
- Installation Management Command, Southeast Region, Atlanta, Georgia
- Installation Management Command, Southwest Region, San Antonio, Texas
- Army Corps of Engineers Headquarters, Washington, D.C.
- Training and Doctrine Command, Hampton, Virginia
- Military Surface Deployment and Distribution Command, Newport News, Virginia

Our analysis was complicated by the evolving nature of the Army's infrastructure implementation plans, which continued to change throughout our review. Business plans intended to direct the implementation of the BRAC recommendations affecting the gaining bases were in draft at the time of our review. Army officials said that the information they provided to us and that we present in our report represented their current plans at the time of our review and should be considered an approximation of their projected restationing and funding actions because these plans are subject to change. Consequently, civilian planning for providing infrastructure was subject to change based on changes in the Army's plans. Although we found some discrepancies in the Army's data, we concluded that, overall, they were sufficiently reliable for the purposes of this report. We conducted our review from March 2006 through July 2007 in accordance with generally accepted government auditing standards.

Appendix II: Comments from the Department of Defense

OFFICE OF THE UNDER SECRETARY OF DEFENSE 3000 DEFENSE PENTAGON WASHINGTON, DC 20301-3000 AUG 2 8 2007 TECHNOLOGY AND LOGISTICS Mr. Brian Lepore Director, Defense Capabilities and Management U.S. Government Accountability Office 441 G Street, N.W. Washington, DC 20548 Dear Mr. Lepore: This is the Department of Defense (DoD) response to the GAO draft report, GAO-07-1007, 'DEFENSE INFRASTRUCTURE: Challenges Increase Risks for Providing Timely Infrastructure Support for Army Installations Expecting Substantial Personnel Growth,' dated July 26, 2007 (GAO Code 350838). Specific comments are provided at the enclosure. Sincerely, Philip W. Grone Deputy Under Secretary of Defense (Installations and Environment) Enclosure: As stated



Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact	Brian J. Lepore, (202) 512-4523 or leporeb@gao.gov
Acknowledgments	In addition to the contact named above, Barry W. Holman, Director (retired); James R. Reifsnyder, Assistant Director; Nelsie S. Alcocer; Grace A. Coleman; Nancy T. Lively; Richard W. Meeks; David F. Nielson; and Roger L. Tomlinson made major contributions to this report.

Related GAO Products

Military Base Realignments and Closures: Plan Needed to Monitor Challenges for Completing More Than 100 Armed Forces Reserve Centers. GAO-07-1040. Washington, D.C.: September 13, 2007.

Military Base Realignments and Closures: Observations Related to the 2005 Round. GAO-07-1230R. Washington D.C.: September 06, 2007.

Military Base Closures: Projected Savings from Fleet Readiness Centers Likely Overstated and Actions Needed to Track Actual Savings and Overcome Certain Challenges. GAO-07-304. Washington, D.C.: June 29, 2007.

Military Base Closures: Management Strategy Needed to Mitigate Challenges and Improve Communication to Help Ensure Timely Implementation of Air National Guard Recommendations. GAO-07-641. Washington, D.C.: May 16, 2007.

Defense Acquisitions: Future Combat System Risks Underscore the Importance of Oversight. GAO-07-672T. Washington, D.C.: March 27, 2007.

Military Base Closures: Opportunities Exist to Improve Environmental Cleanup Cost Reporting and to Expedite Transfer of Unneeded Property. GAO-07-166. Washington, D.C.: January 30, 2007.

Defense Management: Comprehensive Strategy and Annual Reporting Are Needed to Measure Progress and Costs of DOD's Global Posture Restructuring. GAO-06-852. Washington, D.C.: September 13, 2006.

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Force Structure: Capabilities and Cost of Army Modular Force Remain Uncertain. GAO-06-548T. Washington, D.C.: April 4, 2006.

Force Structure: Actions Needed to Improve Estimates and Oversight of Costs for Transforming Army to a Modular Force. GAO-05-926. Washington, D.C.: September 29, 2005.

Military Bases: Analysis of DOD's 2005 Selection Process and Recommendations for Base Closures and Realignments. GAO-05-785. Washington, D.C.: July 1, 2005. Defense Infrastructure: Opportunities Exist to Improve Future Comprehensive Master Plans for Changing U.S. Defense Infrastructure Overseas. GAO-05-680R. Washington, D.C.: June 27, 2005.

Defense Infrastructure: Issues Need to Be Addressed in Managing and Funding Base Operations and Facilities Support. GAO-05-556. Washington, D.C.: June 15, 2005.

Military Base Closures: Updated Status of Prior Base Realignments and Closures. GAO-05-138. Washington, D.C.: January 13, 2005.

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