

High-Risk Series

February 1997

Defense Infrastructure





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Comptroller General of the United States

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The President of the Senate
The Speaker of the House of Representatives

In 1990, the General Accounting Office began a special effort to review and report on the federal program areas its work identified as high risk because of vulnerabilities to waste, fraud, abuse, and mismanagement. This effort, which was supported by the Senate Committee on Governmental Affairs and the House Committee on Government Reform and Oversight, brought a much-needed focus on problems that were costing the government billions of dollars.

In December 1992, GAO issued a series of reports on the fundamental causes of problems in high-risk areas, and in a second series in February 1995, it reported on the status of efforts to improve those areas. This, GAO's third series of reports, provides the current status of designated high-risk areas.

This report addresses one of the five newly designated high-risk areas—the difficult process of reducing the Department of Defense's (DOD) infrastructure. It focuses on the need for infrastructure reductions and obstacles that have hindered DOD's ability to achieve significant cost savings in this area. It describes DOD's future years funding plan for infrastructure and discusses areas in which we have identified opportunities for reductions. It also discusses the need for DOD to give greater structure

to its reduction efforts by developing a strategic plan and involving the Congress.

Copies of this report series are being sent to the President, the congressional leadership, all other Members of the Congress, the Director of the Office of Management and Budget, and the heads of major departments and agencies.

James F. Hinchman

Acting Comptroller General

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of the United States

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Despite the Department of Defense's (DOD) actions over the last 7 to 10 years to reduce operations and support costs, billions of dollars are wasted annually on inefficient and unneeded activities. DOD has in recent vears substantially downsized its force structure. However, it has not achieved commensurate reductions in operations and support costs. For fiscal year 1997, DOD estimates that about \$146 billion, or almost two thirds of its budget, will be for operations and support activities. These activities, which DOD generally refers to as its support infrastructure, include maintaining installation facilities, providing nonunit training to the force, providing health care to military personnel and their families, repairing equipment, and buying and managing spare part inventories.

The Problem

DOD is faced with transforming its Cold War operating and support structure in much the same way it has been working to transform its military force structure. Making this transition is a complex, difficult challenge that will affect hundreds of thousands of civilian and military personnel at activities in many states across the nation. If DOD does not address this challenge now, however, pressing needs will go unmet, while scarce

defense resources will be wasted or used inefficiently. For example:

- We previously identified 13 options for reducing DOD's infrastructure that could result in savings of \$11.8 billion.
- DOD's laboratory infrastructure is estimated to have an excess capacity of 35 percent.
- DOD's capacity for rotary-wing aircraft training is double what is needed by all of the military services.
- The cost to educate a physician in DOD's
 Uniform Services University of Health
 Sciences is more than twice as much as the
 cost of providing scholarships to students in
 civilian medical schools.
- DOD's efforts to shift workloads to the private sector without downsizing overall depot infrastructure will exacerbate existing excess capacity problems.
- DOD's overhead costs for transportation services are frequently two to three times the basic cost of transportation.
- Funds are being spent to operate and maintain aging and underutilized buildings, roads, and other infrastructure that will likely be declared excess by DOD in the near future.

Reducing the cost of excess infrastructure activities is critical to maintaining high levels

of military capabilities. Expenditures on wasteful or inefficient activities divert limited defense funds from pressing defense needs such as the modernization of weapon systems. DOD has identified net infrastructure savings as a funding source for modernization but has not, thus far, achieved anticipated savings. As a result, DOD has been unable to shift funds to modernization as planned.

The Causes

DOD officials have repeatedly recognized the importance of using resources for the highest priority operational and investment needs rather than maintaining unneeded property, facilities, and overhead. However, DOD has found that infrastructure reductions are a difficult and painful process because achieving significant cost savings requires up-front investments, the closure of installations, and the elimination of military and civilian jobs. Service parochialism, a cultural resistance to change, and congressional and public concern about the effects on local communities and economies as well as the impartiality of the decisions have historically hindered DOD's ability to close or realign bases. DOD has also recognized that opportunities to streamline and reengineer its business practices could

result in substantial savings, but it has made limited progress in accomplishing this.

By Dod's count, base realignment and closure (BRAC) rounds in 1988, 1991, and 1993 produced decisions to fully or partially close 70 major domestic bases and resulted in a 15-percent reduction in plant replacement value. Dod's goal during the 1995 BRAC round was to reduce the overall domestic base structure by a minimum of another 15 percent, for a total reduction of 30 percent in Dod-wide plant replacement value. Dod's 1995 closures and realignments will increase the total reduction to 21 percent, or 9 percent short of its goal.

DOD has programmed reductions in installation support funding due to base closures and realignments; however, as shown in table 1, overall infrastructure funding is projected to remain relatively constant through 2001.

Table 1: DOD's Projected Funding Through Fiscal Year 2001

Dollars in billions (constant 1997 dollars)
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Fiscal year	Total projected budget	Infra- structure part of budget	Percentage of budget that is infra- structure
1997	\$244	\$146	60
1998	243	142	58
1999	243	141	58
2000	244	140	57
2001	246	141	57

What Needs to Be Done

To its credit, DOD has programs to identify potential infrastructure reductions in many areas. However, breaking down cultural resistance to change, overcoming service parochialism, and setting forth a clear framework for a reduced defense infrastructure are key to avoiding waste and inefficiency. To do this, the Secretary of Defense and the service Secretaries need to give greater structure to their efforts by developing an overall strategic plan. The plan needs to establish time frames and identify organizations and personnel responsible for accomplishing fiscal and operational goals. This plan needs to be presented to the Congress in much the same way that DOD presented its plan for force structure reductions in the Base Force Plan and the Bottom-Up Review. This will provide

a basis for the Congress to oversee DOD's plan for infrastructure reductions and allow the affected parties to see what is going to happen and when. In developing the plan, the Department should consider using a variety of means to achieve reductions, including such things as consolidations, privatization, outsourcing, reengineering, and interservicing agreements. It should also consider the need and timing for future BRAC rounds, as suggested by the 1995 BRAC Commission and other groups. In the interim, we believe significant reductions can be made in a number of areas.

While we have not completed an in-depth analysis of all the categories of infrastructure, our work to date has identified numerous areas where infrastructure activities can be eliminated, streamlined, or reengineered to be made more efficient. For example, we previously identified 13 options that the Congressional Budget Office estimates could result in savings of about \$11.8 billion during fiscal years 1997-2001.

The following sections discuss key infrastructure categories in which we have identified opportunities for savings. DOD defined the categories and allocated infrastructure programs to those categories in its Future Years Defense Program. However, DOD could not allocate about 20 to 25 percent of its total infrastructure that is associated with the Defense Business Operations Fund. DOD officials believe the unallocated portion of the infrastructure is mostly for logistics purchases.

¹The 1997 Defense Authorization Act required DOD to conduct a comprehensive study of the Defense Business Operations Fund (DBOF) and to present an improvement plan to Congress for approval. Pending the results of this study, the Defense Comptroller, on December 11, 1996, dissolved DBOF and created four working capital funds: Army, Navy, Air Force, and Defense-wide. The four funds will continue to operate under the revolving fund concept—using the same policies, procedures, and systems as they did under DBOF—and charge customers the full costs of providing goods and services to them.

Acquisition Infrastructure

The acquisition infrastructure includes activities and personnel that support the research, production, and procurement of weapon systems and other critical defense items. During fiscal year 1997, acquisition infrastructure will account for about \$10.2 billion, or about 7 percent, of projected infrastructure expenditures.

In a 1993 roles and missions report, the Joint Chiefs of Staff stated that each service had approached training and tests and evaluation from its unique perspective and had developed its own infrastructures, leading to DOD-wide overlap and redundancy. In our analysis of this report, we noted problems in achieving consolidations in the training and evaluation areas and stated that DOD should consider consolidations in two areas—Air Force and Navy electronic warfare threat testing capabilities and high performance fixed-wing aircraft testing capabilities.

It is now 1997, BRAC 1995 is history, and despite efforts to focus on test and evaluation infrastructure during that process, no major consolidations or reductions in the test and evaluation infrastructure have occurred. Further, there is little to indicate that the services will voluntarily agree to consolidation across

service lines, where the greatest savings are apt to be achieved. In fact, there are indications that some of the services are trying to add to their testing capabilities to protect their infrastructure. For example, the Navy intends to construct a large anechoic chamber at Patuxent River, Maryland, and the Air Force plans to add to its anechoic capacity at Edwards Air Force Base, California, but the existing chamber at Edwards is underused.

Although studies of DOD's laboratories and centers have shown excess capacity, they have generally recommended management efficiencies rather than infrastructure reductions. Despite four BRAC rounds. reductions in laboratory infrastructure have not kept pace with reductions in funding, personnel, and force structure levels. According to DOD officials, after all current BRAC actions have been completed, DOD's laboratory infrastructure will still have an excess capacity of approximately 35 percent. DOD lost opportunities during the BRAC 1995 process to reduce laboratory infrastructure because it split the analysis of research and development laboratories and test and evaluation centers and because each service tried to protect its own facilities instead of adopting cross-service efficiencies.

Central Logistics

Central logistics includes maintenance activities, the management of materials, operation of supply systems, communications, and minor construction. Central logistics activities will consume at least \$13 billion, or about 9 percent, of projected fiscal year 1997 infrastructure expenditures.

Currently, DOD has 21 major depot maintenance facilities—2 of which are scheduled to close. Each of the service's depot maintenance systems have excess capacity. In fact, at the time of the 1995 BRAC process, the overall DOD depot system had 40 percent excess capacity. While each of the services had actions underway, those actions will neither reduce excess capacity nor achieve the expected cost savings.

The BRAC Commission's July 1995 report to the President noted that the decision to close two of the Air Force's five air logistics centers—at Sacramento, California and San Antonio, Texas—was difficult to make but necessary, given the Air Force's significant excess depot capacity and limited defense resources. The report concluded that these actions should save about \$151.3 million over the 6-year implementation period and \$3.5 billion over 20 years. When the

President forwarded the Commission's recommendations to the Congress, however, he stated that his intent was to privatize the work in place at these two locations. Further, he decided to delay the centers' closures until 2001.

Our analysis indicates that delaying the centers' closures until 2001 could increase net costs during the 6-year implementation period by hundreds of millions of dollars, primarily because it would limit the Air Force's ability to achieve recurring savings to offset expected closure costs. Privatizing defense depot activities in place could yield savings if other public and private activities were more fully utilizing their maintenance repair capacity. However, because both the public and private sectors have substantial excess capacity, privatizing the Sacramento and San Antonio workloads in place would result in missed opportunities to consolidate workloads at the remaining centers. Consolidating workloads would allow the Air Force to achieve annual savings of over \$200 million and reduce excess capacity from 45 percent to about 8 percent. If, on the other hand, the remaining centers do not receive the additional workload, they will continue to operate with significant excess

capacity, becoming more inefficient and expensive as their workloads dwindle.

Our analysis of the Army depot system showed that the Army is not effectively downsizing its remaining depot maintenance infrastructure to reduce costly excess capacity. Further, plans to privatize workloads in place at closing facilities rather than transfer the workloads to remaining underutilized Army facilities would increase excess capacity in Army depots from 42 percent to 46 percent and increase Army maintenance depot costs. Specifically, our work showed that

- transferring ground communications and electronic equipment from the Sacramento Air Logistics Center to the Tobyhanna Army Depot could reduce Tobyhanna's operating costs and result in annual savings of \$24 million, and
- consolidating the tactical missile workload at the Tobyhanna depot could significantly improve the utilization of the depot's capacity and decrease costs by as much as \$27 million annually.

The Navy is also attempting to privatize workloads in place rather than transfer them to other facilities where excess capacity

exists. During the 1995 BRAC process, one of DOD's recommendations was to close the depot at Louisville, Kentucky. The Commission, however, recommended that the Navy privatize the workload in place rather than transfer it to other Navy facilities. We determined that the Navy's plan for privatizing workloads in place would not reduce excess capacity in the remaining public depots and might prove more costly than transferring the workload. Moreover, the private sector would still have excess capacity, including facilities owned by the two defense contractors selected to operate and manage the privatized Louisville depot.

We have also identified long-standing problems and opportunities to reduce infrastructure costs in the key area of inventory management. While the Defense Logistics Agency has taken steps to reengineer its logistics practices and reduce consumable inventories, it could do more to achieve substantial savings. Given the approximately \$70 billion investment in defense secondary inventory items, we have prepared a separate high-risk report that focuses on the need for DOD to be more aggressive in changing its management culture and to take advantage of new

management practices so that inefficiencies can be eliminated.

Installation Support

Installation support includes personnel and activities that fund, equip, and maintain facilities from which defense forces operate. This support will consume about \$25 billion, or about 17 percent, of projected fiscal year 1997 infrastructure expenditures.

Despite the recognized potential to reduce base operating support costs through greater reliance on interservice-type arrangements, the services have not taken sufficient advantage of available opportunities. Differing service traditions and cultures and concern over losing direct control of support assets have often caused commanders to resist interservicing.

DOD has long been concerned about and has sought ways to reduce the cost of military base support. A downsized force and reduced defense budgets in recent years are causing the services to take renewed interest in trying to achieve greater economies, efficiencies, and cost savings in base operations. Their efforts include a more vigorous examination of the potential for greater interservice and intraservice

arrangements involving base support as well as partnership arrangements between military bases and local governments and communities. For example, service officials in Charleston, South Carolina, reported a 1-year cost avoidance of over \$1 million in travel and per diem costs through the shared use of video teleconferencing capabilities. Also, service officials in Colorado Springs, Colorado, reported that a consolidated regional natural gas contract resulted in cost savings of \$9.5 million over a 3-year period.

DOD believes that greater economies and savings could be achieved by further consolidation and elimination of duplicate support services where military bases are located close to one another or where similar functions are performed at multiple locations. For example, both Fort Lewis and McChord Air Force Base in Washington maintain separate airfield operations facilities. Fort Lewis personnel believe that both bases' airfield operations can be served by one facility. At Fort Bragg and Pope Air Force Base in North Carolina, both services are maintaining separate contract administration, supply and engineering, and other support services that may have the potential for consolidation.

The following list includes selected base support functions that could be consolidated for use by all the services:

- Airfield operations
- Biological assessments
- · Bulk fuel storage
- · Child care services
- Civilian personnel services
- Communication systems maintenance
- Contracting services
- · Facility maintenance
- Housing services
- · Legal assistance and claims
- Management and maintenance of family housing
- · Public works management
- · Roads and ground maintenance
- · Small arms maintenance
- Support services
- Tactical vehicle maintenance
- Training services
- · Vehicle transportation and maintenance

Central Training

The central training infrastructure includes basic training for new personnel, aviation and flight training, military academies, officer training corps, other college commissioning programs, and officer and enlisted training schools. During fiscal year

1997, central training will account for about \$19 billion, or about 13 percent, of projected infrastructure expenditures.

Since 1987, the BRAC Commission has recommended base closures and mission realignments that, when fully implemented, will reduce the number of locations where the services provide formal training for military personnel. Senior DOD officials recognize that even after completion of the 1995 BRAC round, excess training infrastructure will remain. In testimony before the BRAC Commission, the Chairman of the Joint Chiefs of Staff cited the need for future base closure authority because of opportunities for further cross-servicing, particularly in the area of joint-use bases and training facilities.

During our examination of the 1995 brac recommendations, we identified several Army training-related installations with relatively low military value that were not proposed for closure because of the up-front closure costs, despite projected long-term savings. The Navy's analysis indicated that its primary pilot and advanced helicopter training requirements were 19 to 42 percent below peak historic levels. However, the BRAC process did little to change this

situation because only one Navy air training facility was slated for realignment, and none was slated for closure. Further, as a result of the services' inability to consolidate rotary-wing training at one location, they were left with capacity for rotary-wing training that was more than twice the space needed.

Force Management

Force management provides funding, equipment, and personnel for the management and operation of all the major military command headquarters activities. During fiscal year 1997, force management will account for about \$13 billion, or about 9 percent, of projected infrastructure expenditures.

In the area of transportation, DOD customers frequently pay double or triple the cost of basic transportation. The Transportation Command retains an outdated and inefficient, modally oriented organizational structure with many collocated facilities. Each separate component command incurs operational and support costs. Customers receive bills from each component command for each mode of transportation, rather than a single intermodal bill from only one component. Separate billing systems are

inefficient, adding people and costs to the process. Wages and salaries alone for the commands in fiscal year 1994 were more than \$1 billion. Further, DOD's guidance for handling the cost of maintaining a mobilization capability does not clearly state that these costs are not to be passed on to transportation customers.

DOD may not achieve the goals of its reengineering efforts to improve the defense transportation system processes and reduce costs unless it concurrently looks at how the organization should be restructured. Waiting to address organizational issues until process improvements are made will likely impede achievement of the full benefits of DOD's reengineering efforts.

For temporary duty travel, DOD reported that it spent about \$3.5 billion in fiscal year 1993 and estimated that its processing costs were as much as 30 percent of the direct travel cost. This cost is well above the 10-percent average reported for private companies and the 6-percent rate that industry considers an efficient operation. Leading companies have been able to improve service and reduce processing costs dramatically by reengineering their travel management and

implementing best practices for keeping costs down.

Having recognized that its costs were too high, dod chartered a task force in July 1994 to reengineer travel management. The task force recommended that dod consider applying private industry best practices as part of its reengineering effort, and the Deputy Secretary of Defense concurred with the recommendation. While a transition team has been tasked with developing an implementation mechanism, sustained commitment and oversight by top management will be critical to ensure success.

Another area in which we have done many evaluations in the past and that is also being addressed in a separate high-risk report is defense financial management. Among other things, our work shows that DOD is planning to spend \$51 million in military construction funds on Defense Financial Accounting Service (DFAS) facilities that are not needed. Further, while DFAS is considering reengineering its financial management systems and processes to improve productivity, more aggressive reengineering commensurate with private sector companies could increase infrastructure

savings. Specifically, the number of employees for civilian payroll functions could be reduced by an additional 470 persons, operating costs could be reduced by \$16 million, and the number of operating locations needed for civilian pay functions could be further reduced.

Central Medical

The central medical infrastructure includes personnel and funding for medical care provided to military personnel, dependents, and retirees. Activities include medical training, management of the military health care system, and support of medical installations. During fiscal year 1997, medical infrastructure will account for about \$16 billion, or about 11 percent, of projected infrastructure expenditures.

Each of the three military departments operates its own health care system. To a large extent, these systems have many of the same administrative, management, and operational functions. Since 1949, over 22 studies have reviewed the feasibility of creating a health care entity within DOD to centralize management and administration of the three systems. Most of these studies encouraged some form of organizational consolidation. Consolidating the three

military medical systems into one centrally managed system could eliminate duplicate administrative, management, and operational functions. An estimate of savings cannot be developed until numerous variables, such as the extent of consolidation and the impact on command and support structures, are determined. The Army, Navy, and Air Force have resisted any efforts to consolidate health care operations, primarily on the grounds that each has unique medical activities and requirements.

Also, since 1972, DOD has obtained physicians from two source programs: the Health Professional Scholarship Program and the Uniformed Services University of Health Sciences. Under the former, DOD pays tuition, fees, and a monthly stipend for students enrolled in civilian medical schools. These students are obligated to serve a year of active duty for each year of benefits received. Under the latter, medical students are on active duty military service, receiving pay and benefits, while attending medical school; they incur a 10-year service obligation.

Given the changes in operational scenarios and DOD's approach for delivering peacetime health care, new assessments of needs for

physicians and the means to acquire and retain such physicians are needed. Our analysis shows that on a per-graduate basis, the Uniformed Services University is the most expensive source of military physicians. With DOD education and retention costs of about \$3.3 million, the cost of a University graduate is more than two times greater than the \$1.5 million cost for a regular scholarship program graduate. CBO estimates that if the Uniformed Services University of the Health Sciences were closed and a steady supply of physicians were maintained through other sources, DOD could realize savings of \$272 million during fiscal years 1997-2001.

What Needs to Be Done

DOD has programs to identify potential infrastructure reductions in many areas. However, breaking down cultural resistance to change, overcoming service parochialism, and setting forth a clear framework for a reduced defense infrastructure are key to avoiding waste and inefficiency. To do this, the Secretary of Defense and the service Secretaries need to give greater structure to their efforts by developing an overall strategic plan. The plan needs to establish time frames and identify organizations and personnel responsible for accomplishing fiscal and operational goals. This plan needs to be presented to the Congress in much the same way that DOD presented its plan for force structure reductions in the Base Force Plan and the Bottom-Up Review. This will provide a basis for Congress to oversee DOD's plan for infrastructure reductions and allow the affected parties to see what is going to happen and when. In developing the plan, the Department should consider using a variety of means to achieve reductions. including such things as consolidations, privatization, outsourcing, reengineering, and interservicing agreements. It should also consider the need and timing for future BRAC rounds, as suggested by the 1995 BRAC Commission and other groups.

Related GAO Products

Air Force Depot Maintenance:
Privatization-In-Place Plans Are Costly While
Excess Capacity Exists (GAO/NSIAD-97-13,
Dec. 31, 1996).

Army Depot Maintenance: Privatization Without Further Downsizing Increases Costly Excess Capacity (GAO/NSIAD-96-201, Sept. 18, 1996).

Navy Depot Maintenance: Cost and Savings Issues Related to Privatizing-in-Place at the Louisville, Kentucky, Depot (GAO/NSIAD-96-202, Sept. 18, 1996).

Defense Acquisition Infrastructure: Changes in RDT&E Laboratories and Centers (GAO/NSIAD-96-221BR, Sept. 13, 1996).

Defense Infrastructure: Costs Projected to Increase Between 1997 and 2001 (GAO/NSIAD-96-174, May 31, 1996).

Military Bases: Opportunities for Savings in Installation Support Costs Are Being Missed (GAO/NSIAD-96-108, Apr. 23, 1996).

Military Bases: Closure and Realignment Savings Are Significant, but Not Easily Quantified (GAO/NSIAD-96-67, Apr. 8, 1996).

Related GAO Products

Defense Infrastructure: Budget Estimates for 1996-2001 Offer Little Savings for Modernization (GAO/NSIAD-96-131, Apr. 4, 1996).

Defense Transportation: Streamlining of the U.S. Transportation Command Is Needed (GAO/NSIAD-96-60, Feb. 22, 1996).

Military Bases: Analysis of DOD's 1995 Process and Recommendations for Closure and Realignment (GAO/NSIAD-95-133, Apr. 14, 1995).

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