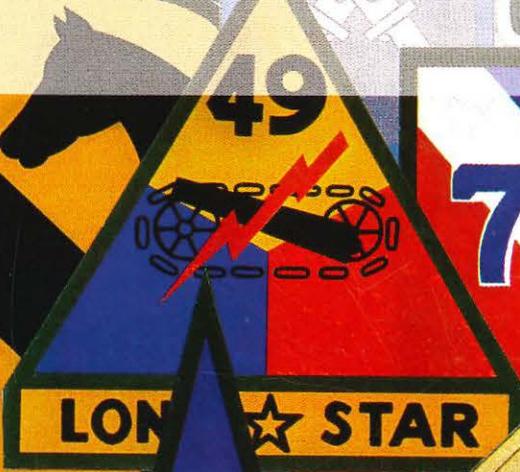


PROFILE OF THE ARMY

A REFERENCE HANDBOOK

OLD IRONSIDES



LONG STAR



MOUNTAIN



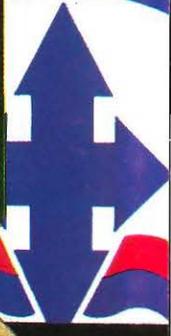
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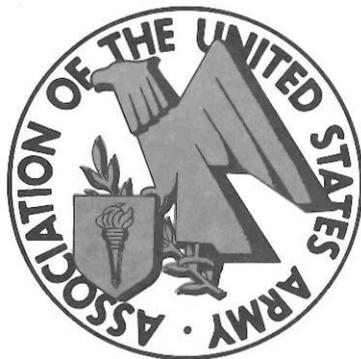


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Association of the United States Army



Profile of the Army

A Reference Handbook

February 1997

Institute of Land Warfare



**Compiled by the Staff of
The AUSA Institute of Land Warfare**

February 1997

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PROFILE OF THE ARMY

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FOREWORD

Profile of the Army is published by the Association of the United States Army's Institute of Land Warfare to provide basic information about the United States Army. It contains general information on the Army's organization, functions, weapon systems, missions and budget.

To show how the Army fits into the National Security structure of the United States, the *Profile* also discusses the organization of the Department of Defense, the Joint Chiefs of Staff, and the National Command Structure.

The appendices include descriptions of Army rank and branch insignia, staff and organization, a list of Army installations in each state, demographic information about the Army, and descriptions of selected Army weapon systems.

The United States Army faces many challenges and demands in the post-Cold War world. It must continue to maintain a forward presence in areas of critical importance to the United States, provide forces for peacekeeping and humanitarian operations, provide a credible deterrent force to our potential enemies and, if deterrence fails, fight and win.

The Institute of Land Warfare welcomes your comments and suggestions concerning *Profile of the Army*.

A handwritten signature in black ink, appearing to read "J. N. Merritt". The signature is stylized with a long horizontal line extending to the right.

JACK N. MERRITT
General, USA Retired
President

SECTION I INTRODUCTION

THE ARMY AND THE CONSTITUTION

The Constitution of the United States designates specific responsibilities to the President and Congress concerning the armed forces.

Article I, Section 8

“The Congress shall have the power to . . . provide for the common defense; to declare war . . . to raise and support armies . . . to make rules for the government and regulation of the land and naval forces.”

Article II, Section 2

“The President shall be the Commander-in-chief of the Army and Navy of the United States; and of the militia of the several states, when called into the actual service of the United States.”

THE UNITED STATES ARMY

The Army has served the nation for 222 years. The Army is the oldest of the armed forces and is, in fact, older than the United States. On June 14, 1775, the Second Continental Congress authorized the enlistment of ten companies of riflemen in Maryland, Pennsylvania and Virginia. The Continental Congress also set pay scales and adopted articles of war to govern the new Continental Army. On June 15, George Washington was appointed commander in chief. General Washington formally took command of the Continental Army on July 3, 1775, when he joined the forces at Long Island, New York.

Since those early beginnings, the Army has often been called upon to protect the nation's interests — in the War of 1812 . . . the Mexican War . . . the Civil War . . . the Indian Wars . . . the Spanish-American War . . . the Mexican Punitive Expedition . . . World War I . . . World War II . . . the Korean War . . . the Vietnam War . . . Grenada . . . Panama . . . the Gulf War . . . Somalia . . . Haiti . . . and most recently as part of the NATO operation in Bosnia.

Since the end of World War II, the Army has been a forward-deployed force, focused primarily on the defense of Western Europe. However, America's Army of the future is a force-projection Army, capable of rapidly deploying a variety of forces to all corners of the globe. It is a total Army, consisting of Army National Guard, Army Reserve and regular forces, as well as civilian employees.

Victory in the Cold War was achieved because for 45 years many thousands of American soldiers, sailors, airmen and marines stood shoulder-to-shoulder with their compatriots from other free-world armed forces on the ramparts of freedom. More than three million U.S. soldiers have served in Europe since the end of World War II, visible symbols of the American people's determination to defend freedom. These four decades of vigilance led to the fall of the Berlin Wall, the collapse of the Warsaw Pact, and victory in the Cold War.

America's Army of the 1990s and into the 21st century will be significantly different from the Cold War Army. It will be a smaller, contingency-oriented, power-projection Army. It must be organized, trained and equipped to provide forces for employment by joint commanders in support of our national objectives and interests.

Combat operations will almost always be joint operations with the other services and may be part of multinational operations. The Army may also be called upon to operate in either combat or noncombat operations under the auspices of the United Nations.

The fundamental mission of the Army remains the same: to deter war and, failing that, to fight and win wars quickly and with minimum casualties.

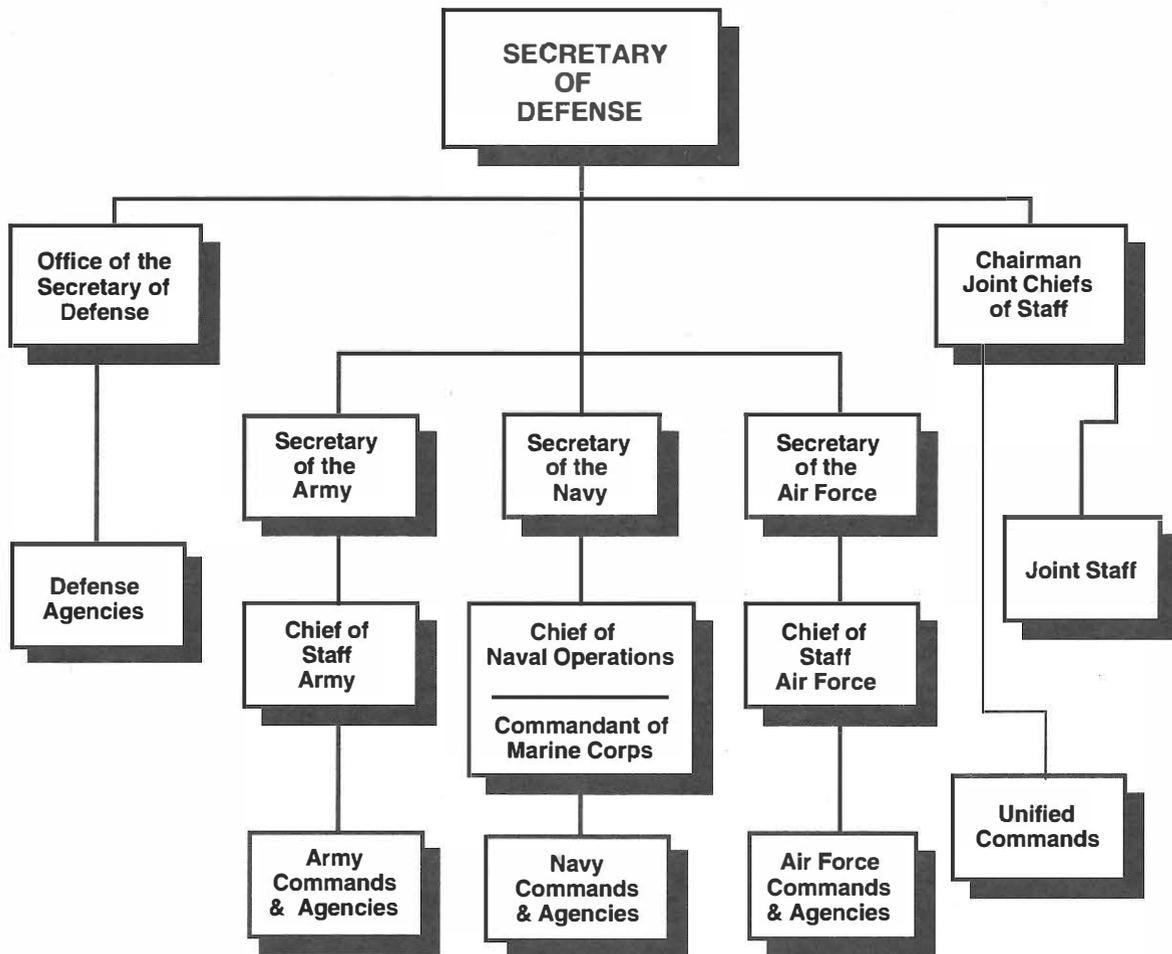
SECTION II

NATIONAL SECURITY STRUCTURE

THE DEPARTMENT OF DEFENSE

The Department of Defense was established as an executive department of the United States by the National Security Act of 1947 (50 U.S.C.401).

The major elements within the Department of Defense are: the Office of the Secretary of Defense, the Joint Chiefs of Staff, the three military departments, the unified combatant commands and such other agencies as the Secretary establishes to meet specific requirements.

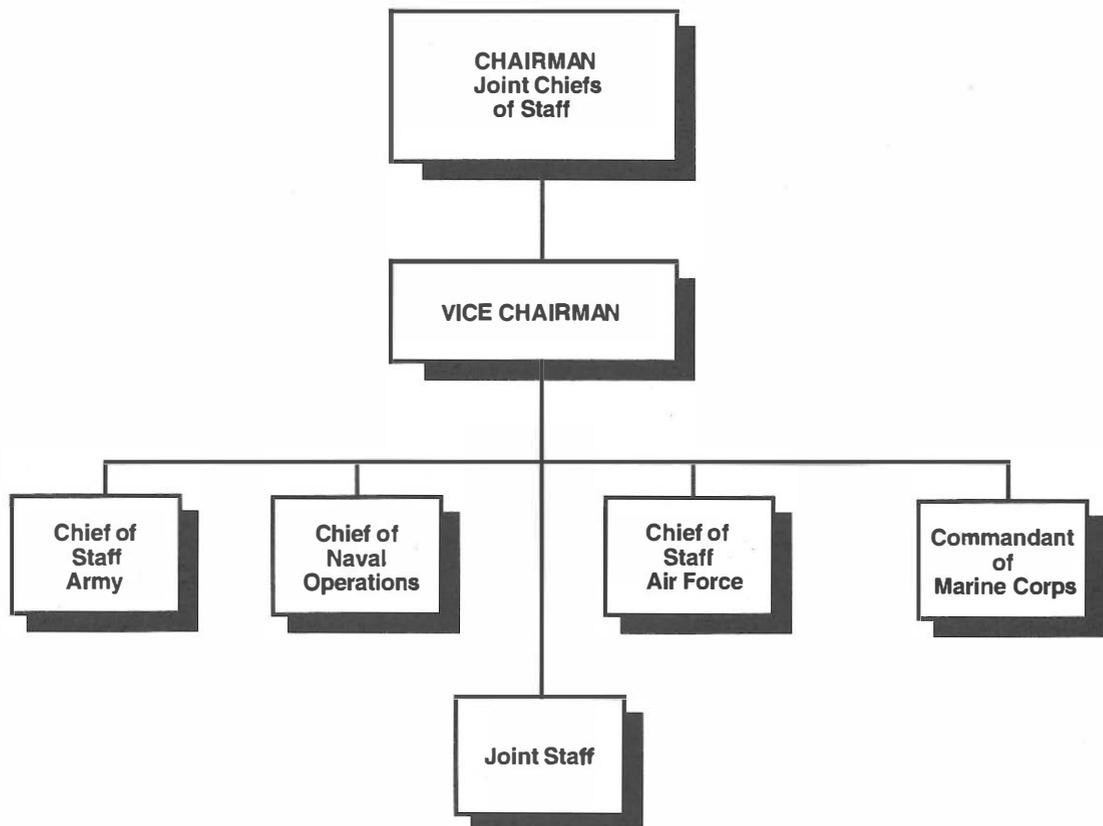


THE SECRETARY OF DEFENSE

“The Secretary of Defense is the principal assistant to the President in all matters relating to the Department of Defense, and, subject to the direction of the President and the provisions of the statute . . . has direction, authority, and control over the Department of Defense.” (Section 113, Title 10 U.S.C.)

THE JOINT CHIEFS OF STAFF

The Joint Chiefs of Staff (JCS) consist of the Chairman (who outranks all other officers of the armed forces while holding office); the Vice Chairman; the Chief of Staff of the Army; the Chief of Naval Operations; the Chief of Staff of the Air Force; and the Commandant of the Marine Corps. The Chairman is appointed by the President, with the advice and consent of the Senate, for a term of two years. He may be reappointed for two additional terms. By law, the Chairman of the Joint Chiefs of Staff is the principal military advisor to the President, the National Security Council, and the Secretary of Defense. The Vice Chairman is appointed under the same conditions as the Chairman. He acts for the Chairman in his absence. The Chairman and Vice Chairman may not be members of the same service.



The Chairman of the Joint Chiefs of Staff, subject to the authority and direction of the President and the Secretary of Defense, is assigned (among others) the functions of:

- ▶ providing for strategic direction of the armed forces and preparing strategic plans;
- ▶ performing net assessments of the capabilities of the armed forces;
- ▶ advising on priorities of requirements, program recommendations and budget proposals;
- ▶ developing doctrine for joint employment and formulating policies for coordinating military education and training;
- ▶ advising and assisting the President and the Secretary of Defense on the establishment of combatant commands.

UNIFIED COMBATANT COMMANDS

The armed forces of the United States are organized for the performance of military missions into combat commands made up of forces from the various military departments under the operational command of unified commanders in chief.

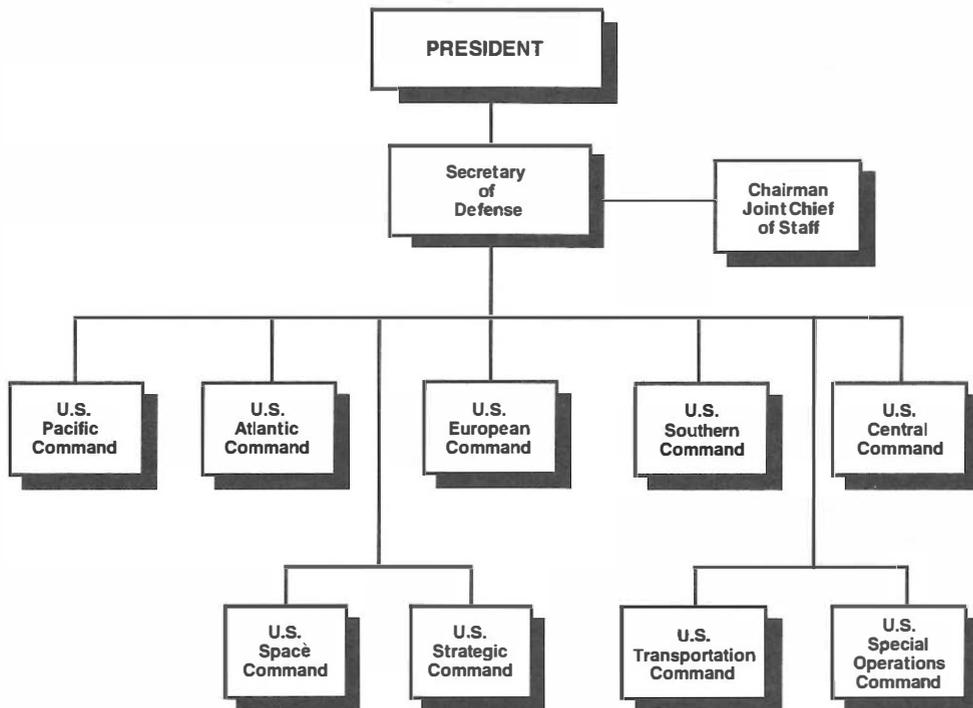
A unified combatant command is a command assigned a broad and continuing mission under a single commander and normally composed of significant components of two or more services. Unified commanders have full operational control of all forces assigned.

Unified commands provide for the integrated effectiveness of U.S. military forces in combat operations and for the projection of U.S. military power in support of U.S. national policies. They are established by the President through the Secretary of Defense with the advice and assistance of the Chairman, Joint Chiefs of Staff.

The Unified Command Plan assigns missions, responsibilities and force structure to unified commanders and also delineates geographic areas of responsibility. In 1996, geographical boundaries between Pacific Command and Central Command were changed to assign responsibility for the Arabian Sea and part of the Indian Ocean to Central Command. Southern Command acquired from Atlantic Command responsibility for the waters off the coast of Central and South America. By June 1997, Atlantic Command will have transferred to Southern Command responsibility for the Caribbean Sea and the Gulf of Mexico.

NATIONAL COMMAND STRUCTURE

The commanders of unified commands are responsible to the President and the Secretary of Defense. Hence, the chain of command runs from the President to the Secretary of Defense to these commanders. The Chairman, Joint Chiefs of Staff may issue orders to these commanders by authority and direction of the Secretary of Defense.



The role of the Chairman of the Joint Chiefs of Staff in the chain of command from the National Command Authorities to the commanders of the combatant commands involves the following:

- communications between the National Command Authorities and the combatant commanders. With this communications responsibility come the myriad duties associated with assisting the President and Secretary of Defense in the direction and control of the combatant commanders: strategic direction, strategic planning, contingency planning and preparedness;
- oversight of the activities of combatant commands in matters dealing with the statutory responsibility of the Secretary of Defense. This includes recommending changes in assignment of functions, roles and missions to achieve maximum effectiveness of the armed forces;
- serving as the spokesman for the combatant commanders, to include providing summaries and analyses of military requirements, programs and budgets.

THE MILITARY DEPARTMENTS

The military departments (Army, Navy and Air Force) were retained by law after the establishment of the Department of Defense. Each military department operates under its civilian Secretary who, in turn, is responsible to the Secretary of Defense.

Once the force structures of the various unified commands have been determined, each military department is responsible for furnishing its allotted portion, and remains responsible for the administration and logistics of these forces. The responsibility for support of forces assigned to combatant commands is vested in one or more of the military departments, as directed by the Secretary of Defense.

FUNCTIONS OF THE MILITARY DEPARTMENTS

The major functions of the military departments, under their respective Secretaries, are to:

- ▶ prepare forces and establish reserves of manpower, equipment and supplies for the effective prosecution of war and military operations short of war, and plan for the expansion of peacetime components to meet the needs of war;
- ▶ maintain in readiness mobile reserve forces, properly organized, trained and equipped for employment in emergency;
- ▶ recruit, organize, train and equip interoperable forces for assignment to unified combatant commands;
- ▶ prepare and submit budgets for their respective departments;
- ▶ develop, garrison, supply, equip and maintain bases and other installations, furnishing administrative and logistic support for all forces and bases; and
- ▶ assist one another in the accomplishment of their respective functions.

SECTION III

THE DEPARTMENT OF THE ARMY



PURPOSE AND COMPOSITION OF THE ARMY

“It is the intent of Congress to provide an Army that is capable, in conjunction with the other armed forces, of

- preserving the peace and security, and providing for the defense of the United States, the Territories, Commonwealths, and possessions, and any areas occupied by the United States;
- supporting the national policies;
- implementing the national objectives; and
- overcoming any nations responsible for aggressive acts that imperil the peace and security of the United States.

“In general, the Army, within the Department of the Army, includes land combat and service forces and such aviation and water transport as may be organic therein. It shall be organized, trained and equipped primarily for prompt and sustained combat incident to operations on land. It is responsible for the preparation of land forces necessary for the effective prosecution of war, except as otherwise assigned and, in accordance with integrated mobilization plans, for the expansion of the peacetime components of the Army to meet the needs of war.

“The Army consists of

- the Regular Army, the Army National Guard of the United States, the Army National Guard, while in the service of the United States, and the Army Reserve; and
- all persons appointed or enlisted in, or conscripted into, the Army without component.” (Section 3062, Title 10 U.S.C.)

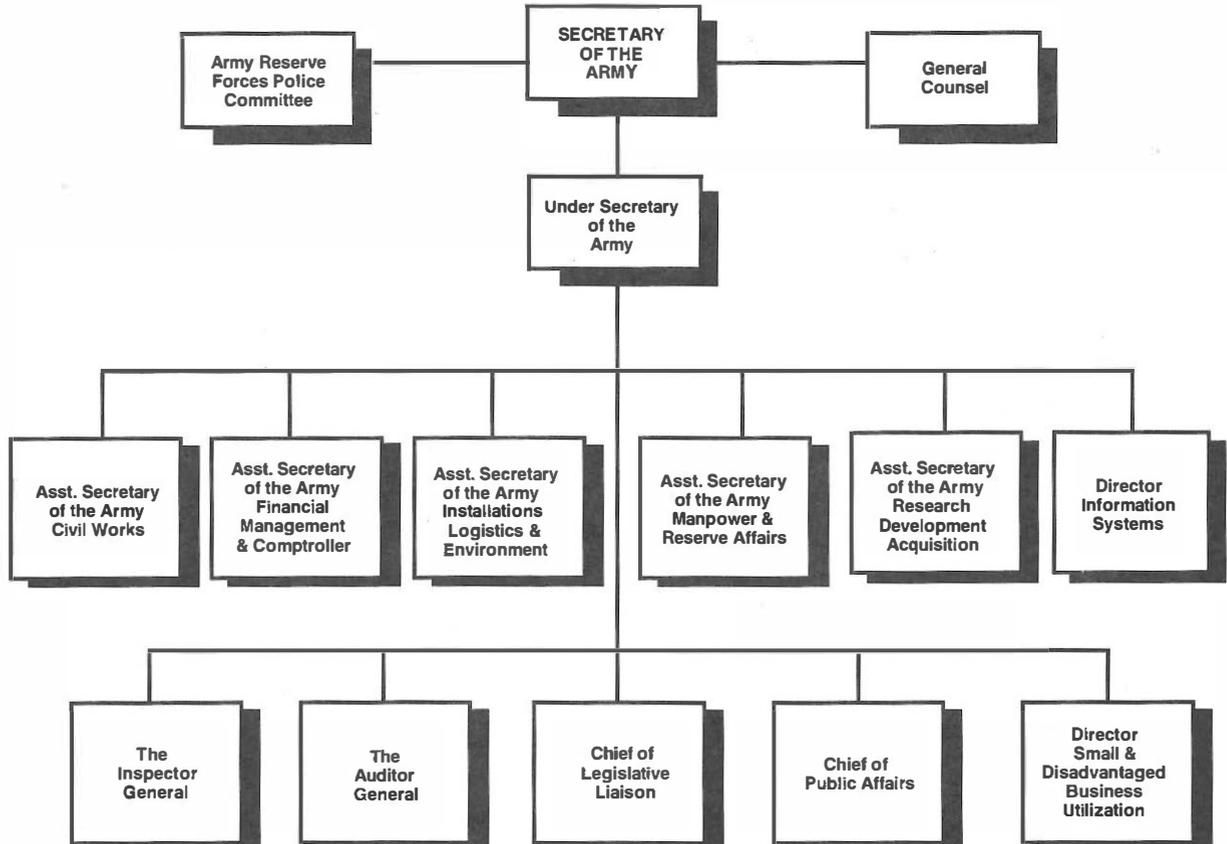
THE SECRETARY OF THE ARMY

“The Department of the Army is separately organized under the Secretary of the Army. It operates under the authority, direction, and control of the Secretary of Defense. The Secretary of the Army is the head of the Department of the Army.” (Sections 3011 and 3013, Title 10 U.S.C.)

The Secretary of the Army is responsible for and has the necessary authority to conduct all affairs of the Department of the Army, including recruiting, organizing, supplying, equipping, training and mobilizing.

THE ARMY SECRETARIAT

Certain functions are assigned exclusively to the Office of the Secretary of the Army, which has “sole responsibility within the Office of the Secretary and the Army Staff.” The Army Secretariat is organized to carry out these functions and is structured as follows:

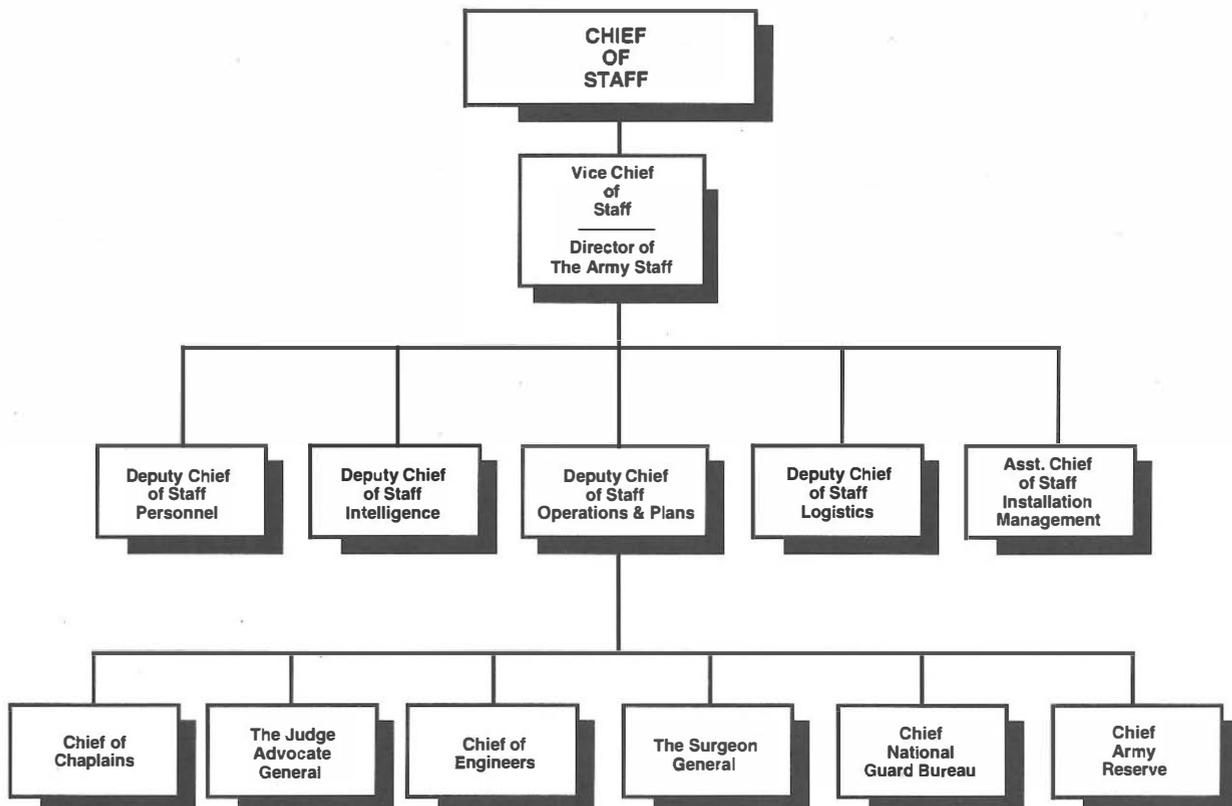


THE ARMY STAFF

The Army Staff is headed by the Chief of Staff of the Army, who is appointed by the President for a period of four years. In time of war or other national emergency, he may be reappointed for an additional four years. Subject to the authority, direction, and control of the Secretary of the Army, the Chief of Staff shall:

- transmit and provide advice on the plans and recommendations of the Army Staff to the Secretary;
- act as the agent of the Secretary in the execution of approved plans and recommendations;
- exercise supervision over members and organizations of the Army as directed by the Secretary; and
- perform the duties prescribed as a member of the Joint Chiefs of Staff.

The Army staff is organized as follows:



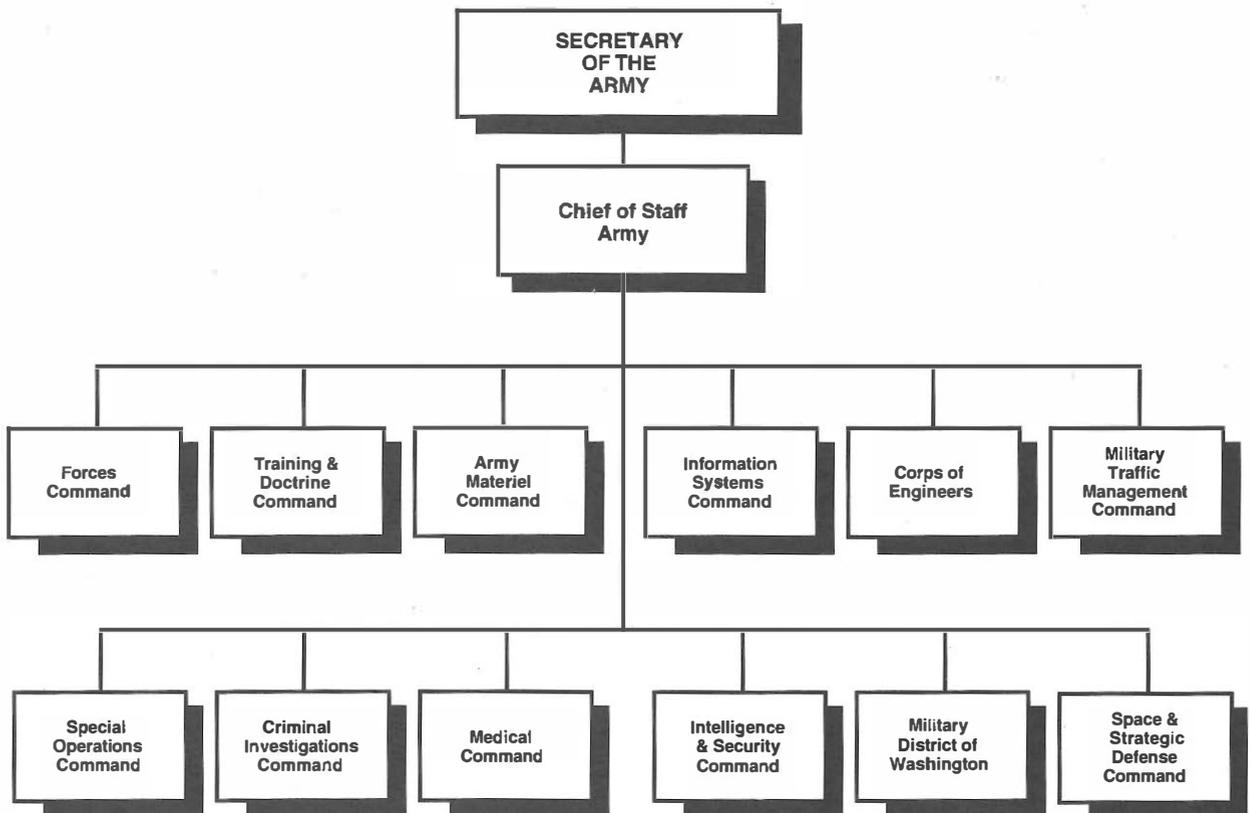
ARMY ORGANIZATION

The Army is generally organized into combat, combat support and combat service support units. The combat organization of the Army includes corps headquarters, divisions, separate brigades/regiments, artillery, air defense and aviation brigades, and special forces groups. A variety of units provide logistical, engineer, chemical, civil affairs, intelligence, communications, medical, transportation, supply, maintenance and other types of support essential to the conduct of combat operations.

In addition to combat, support and service units, there is a supporting structure that performs a wide range of Army activities. This supporting structure, manned by both military and civilian personnel, provides the following functional services for the Army:

- ▶ command and control;
- ▶ training and military education;
- ▶ medical, transportation, supply and maintenance;
- ▶ recruiting;
- ▶ research and development; and
- ▶ engineering and base support.

MAJOR ARMY COMMANDS IN THE UNITED STATES



MAJOR ARMY COMMANDS OVERSEAS

Army overseas commands consist primarily of major forces assigned as the ground force components of United States unified commands. As such, the Army components are under the operational control of the commanders in chief of the unified commands, who in turn report to the Secretary of Defense.

The four major Army overseas commands and the unified commands to which they are assigned are:

United States Army, Europe — U.S. European Command

United States Army, Pacific — U.S. Pacific Command

Eighth United States Army — U.S. Forces Korea*

United States Army, South — U.S. Southern Command

**subordinate unified command of U.S. Pacific Command*

Additionally, Army personnel are presently serving in other overseas locations: United Nations Command, NATO commands, Security Assistance organizations, defense attache offices, and various other offices stemming from treaties and executive agreements with individual nations.

THE ARMY

The Army is an integrated, cohesive organization of the active component (Regular Army), reserve components (Army National Guard and Army Reserve) and civilian employees of the Army.

- ▶ The Regular Army provides the forces to support forward presence and provides initial forces for rapid deployments worldwide.
- ▶ The Army National Guard and Army Reserve provide trained units and individuals for active duty in time of war or other emergency and provide reinforcements for contingency operations.

A significant part of the Army's support structure resides in the reserve components. In fact, the Army Reserve provides most of the critical combat service support units for the Army's contingency force package. This increased reliance on the Army National Guard and Army Reserve for early-deploying combat and support forces means that a presidential decision to federalize selected Army National Guard units and call Army Reserve units to active duty must be made early in the crisis development stage.

The activation of Army National Guard and Army Reserve units during the Gulf War is an excellent example of the importance of the reserve components to the Total Army.

Approximately 650 Army Reserve and 400 Army National Guard units and elements were activated for Operations Desert Shield and Desert Storm. Army Reservists and Army National Guardsmen have taken part in operations in Haiti and Somalia, and units have been deployed to Germany and Bosnia to support NATO operations in Bosnia. During 1995, a composite battalion made up of Army National Guardsmen and Army Reservists was deployed to the Sinai as part of the Multinational Observer Force. More than 24,000 Army National Guardsmen and 17,000 Army Reservists participated in training missions outside the United States during the past year.

Active Army Divisions

1st Infantry Division (Mechanized) - headquarters and two brigades in Germany, one brigade at Fort Riley, KS.

1st Armored Division - headquarters and two brigades in Germany, one brigade at Fort Riley, KS.

1st Cavalry Division - headquarters and three brigades at Fort Hood, TX.

2d Infantry Division - headquarters and two brigades in Korea, one brigade at Fort Lewis, WA.

3d Infantry Division (Mechanized) - headquarters and two brigades at Fort Stewart, GA, one brigade at Fort Benning, GA.

4th Infantry Division (Mechanized) - headquarters and two brigades at Fort Hood, TX, one brigade at Fort Carson, CO.

10th Mountain Division (Light Infantry) - headquarters and two brigades at Fort Drum, NY and the 1st Brigade, 6th Infantry Division (Light) at Fort Richardson, AK.

25th Infantry Division (Light) - headquarters and two brigades at Schofield Barracks, HI, one brigade at Fort Lewis, WA.

82d Airborne Division - headquarters and three brigades at Fort Bragg, NC.

101st Airborne Division (Air Assault) - headquarters and three brigades at Fort Campbell, KY.

THE TACTICAL ORGANIZATION OF THE ARMY

The Army today consists of four corps and 18 divisions. In the active Army there are ten divisions: two forward-deployed in Europe, one in Korea, one in Hawaii, and six in the continental United States (CONUS). The remaining eight are Army National Guard divisions.

The division is the Army's largest tactical organization that trains and fights as a combined arms team. It is a self-sustaining force capable of independent operations. The division is composed of varying numbers and types of combat, combat support and combat service support units. The mix and types of combat units determine whether a division is armored, mechanized, infantry, light infantry, airborne or air assault.

ARMY COMBAT CORPS & DIVISIONS

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I CORPS



1st INFANTRY DIV



1st ARMORED DIV



V CORPS



2nd INFANTRY DIV



40th INFANTRY DIV*



25th INFANTRY DIV



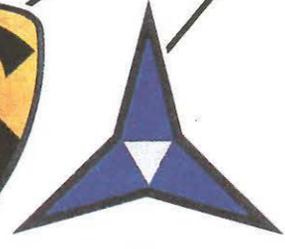
35th INFANTRY DIV*



4th INFANTRY DIV



1st CAVALRY DIV



III CORPS



49th ARMORED DIV*



34th INFANTRY DIV*



101st AIRBORNE DIV



38th INFANTRY DIV*



3rd INFANTRY DIV



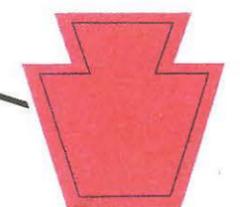
XVIII AIRBORNE CORPS



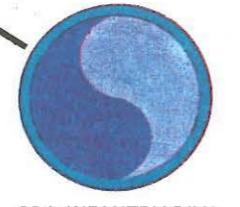
10th MOUNTAIN DIV



42nd INFANTRY DIV*



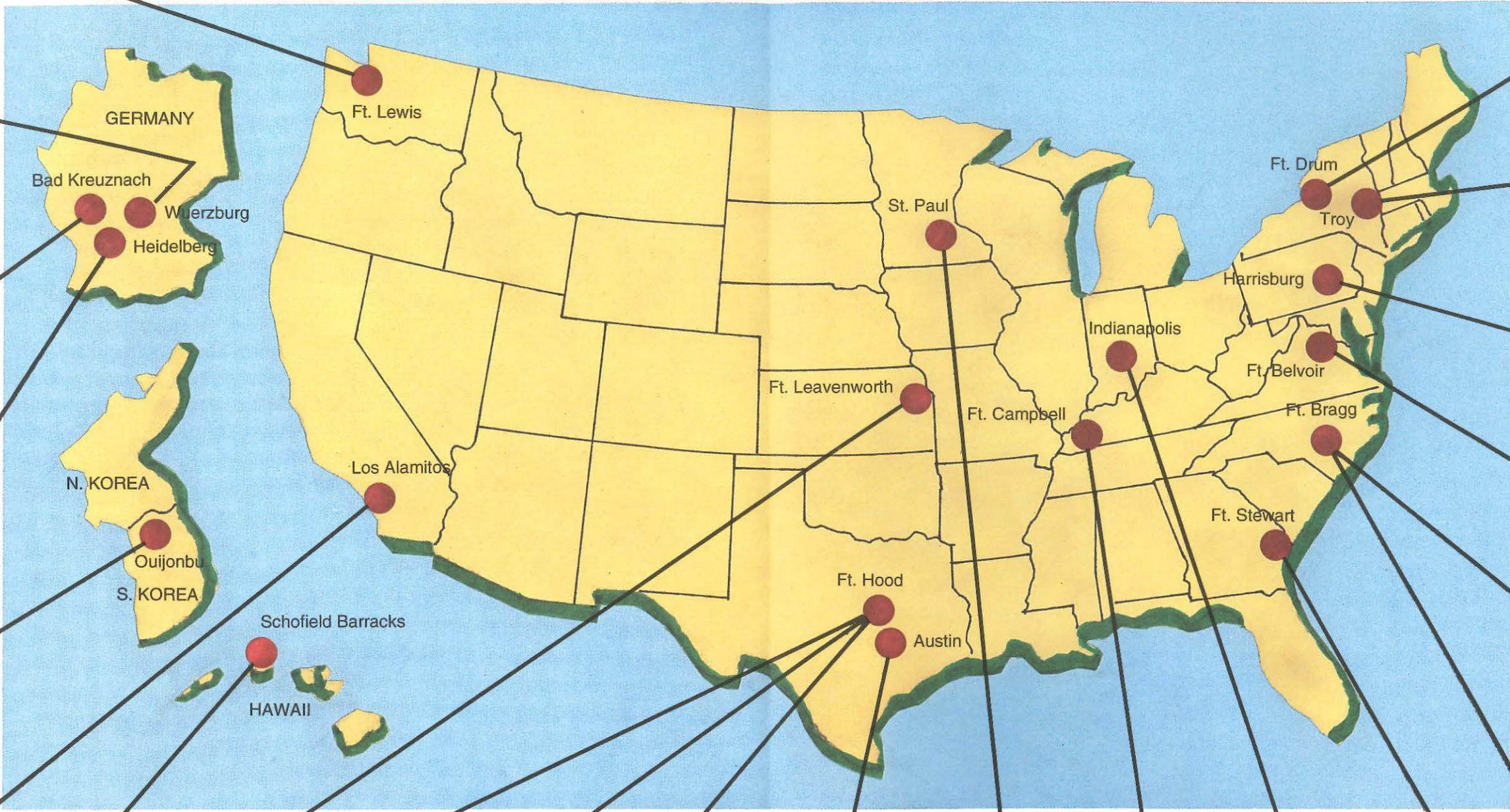
28th INFANTRY DIV*



29th INFANTRY DIV*



82nd AIRBORNE DIV



Note: Locations are HQ locations.

THE RESERVE COMPONENTS

The reserve components (RC) include the Army National Guard and the Army Reserve. There are three reserve categories — the Ready Reserve, the Standby Reserve and the Retired Reserve.

- ▶ The Ready Reserve is comprised of the members of Army National Guard and Army Reserve units, Individual Mobilization Augmentees, Active Guard/Reservists, Individual Ready Reservists, and members of the Inactive Army National Guard. The total strength of the Ready Reserve at the end of FY 1996 was approximately 974,000 personnel.
- ▶ The Standby Reserve consists of individuals who have completed their active duty and reserve training requirements, or who are unable to maintain membership in units.
- ▶ The Retired Reserve is composed of individuals who have completed 20 years of qualifying service for retirement.

Members of Army National Guard and Army Reserve units are required to participate in 48 drills and two weeks of active duty training annually. Individual Mobilization Augmentees are assigned to wartime positions in units or headquarters. They perform two weeks of active duty training each year. The Individual Ready Reserve is made up of officers and enlisted soldiers with prior military service, who are completing their eight-year military service obligation, or who are not assigned to units. The majority of these personnel have no annual training requirement.

The Army National Guard



The Army National Guard traces its lineage to the militias that fought in the French and Indian Wars in the 1700s. Unlike any of the other reserve components, the Army National Guard has a dual state and federal mission. When not on active duty, Army National Guard units are under the command of their respective state governors.

The National Guard Bureau is both a staff and operating agency in the Department of Defense and is headed by the Chief, National Guard Bureau, who is appointed by the President for a four-year term. The Bureau serves as the link between the Departments of the Army and Air Force and the individual states. The Director of the Army National Guard is responsible for administering the resources for equipping and training Army National Guard units to perform in their federal role.

The Army National Guard provides combat and combat support unit reinforcements, as well as some combat service support, for the active Army. By the end of FY 1999, 80 percent of the Army's field artillery support will be provided by the Army National Guard. A program to provide a 90-day combat reinforcement capability has been initiated for selected Army National Guard brigades. The 15 reinforcing or "enhanced readiness" brigades will receive additional training support and priority in modernization equipment to enable them to reinforce deployed combat forces within 90 days.



ARMY NATIONAL GUARD ENHANCED BRIGADES



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81st INFANTRY BRIGADE



41st INFANTRY BRIGADE



116th CAVALRY BRIGADE



29th INFANTRY BRIGADE



45th INFANTRY BRIGADE



39th INFANTRY BRIGADE



256th INFANTRY BRIGADE



155th ARMORED BRIGADE



76th INFANTRY BRIGADE



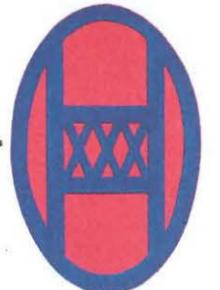
278th ARMORED CAVALRY REGIMENT



53rd INFANTRY BRIGADE



27th INFANTRY BRIGADE



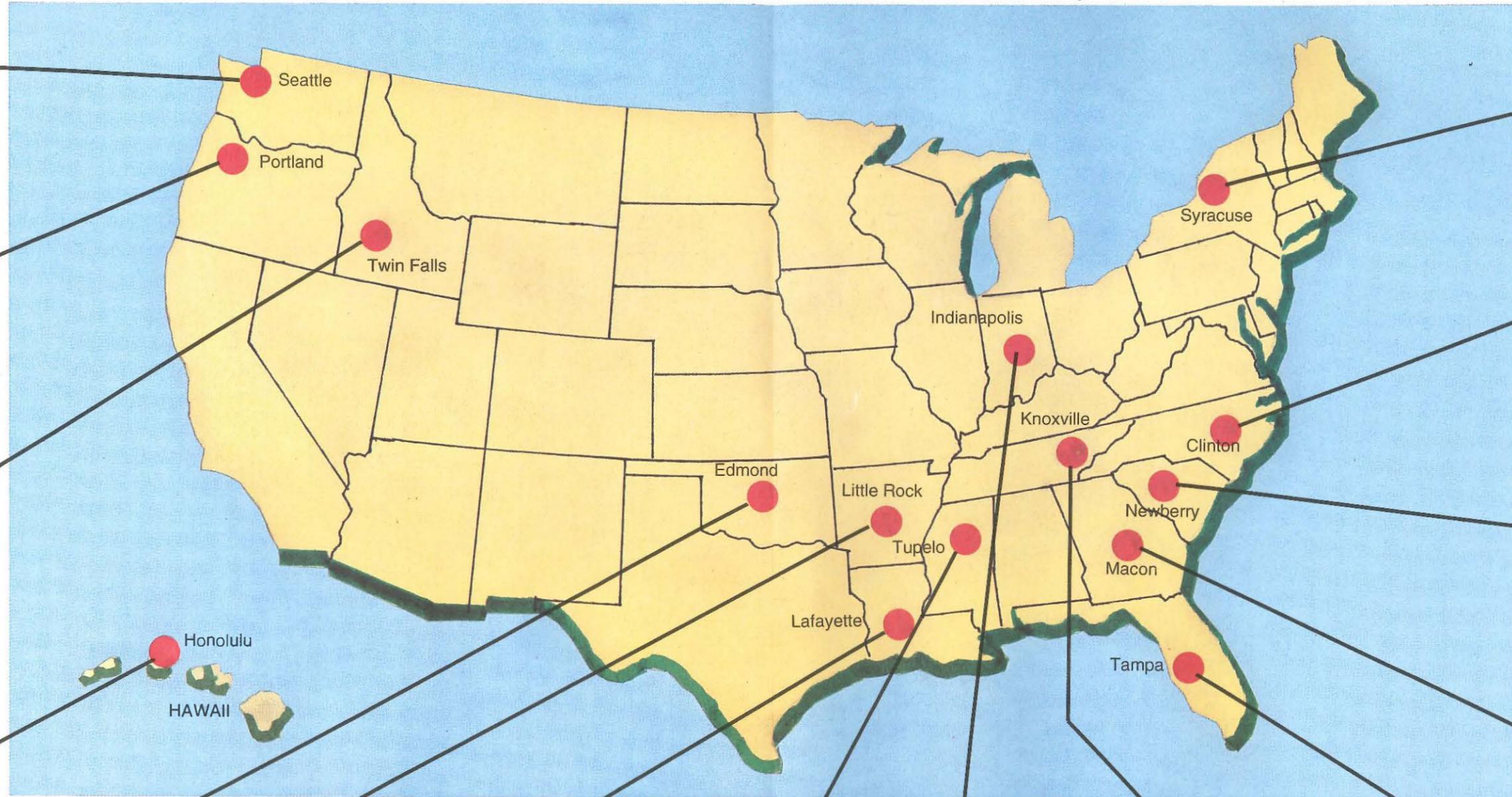
30th INFANTRY BRIGADE



218th INFANTRY BRIGADE



48th INFANTRY BRIGADE





70TH REGIONAL SUPPORT CMD.



ARMY RESERVE REGIONAL SUPPORT COMMANDS and DIVISIONS



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98th DIVISION*



104th DIVISION*



94TH REGIONAL SUPPORT CMD.



88th REGIONAL SUPPORT CMD.



77TH REGIONAL SUPPORT CMD.



91st DIVISION**



78th DIVISION**



96TH REGIONAL SUPPORT CMD.



99TH REGIONAL SUPPORT CMD.



63RD REGIONAL SUPPORT CMD.



89TH REGIONAL SUPPORT CMD.



95th DIVISION*



85th DIVISION**



90TH REGIONAL SUPPORT CMD.



75th DIVISION**



84th DIVISION*



81ST REGIONAL SUPPORT CMD.



87th DIVISION**



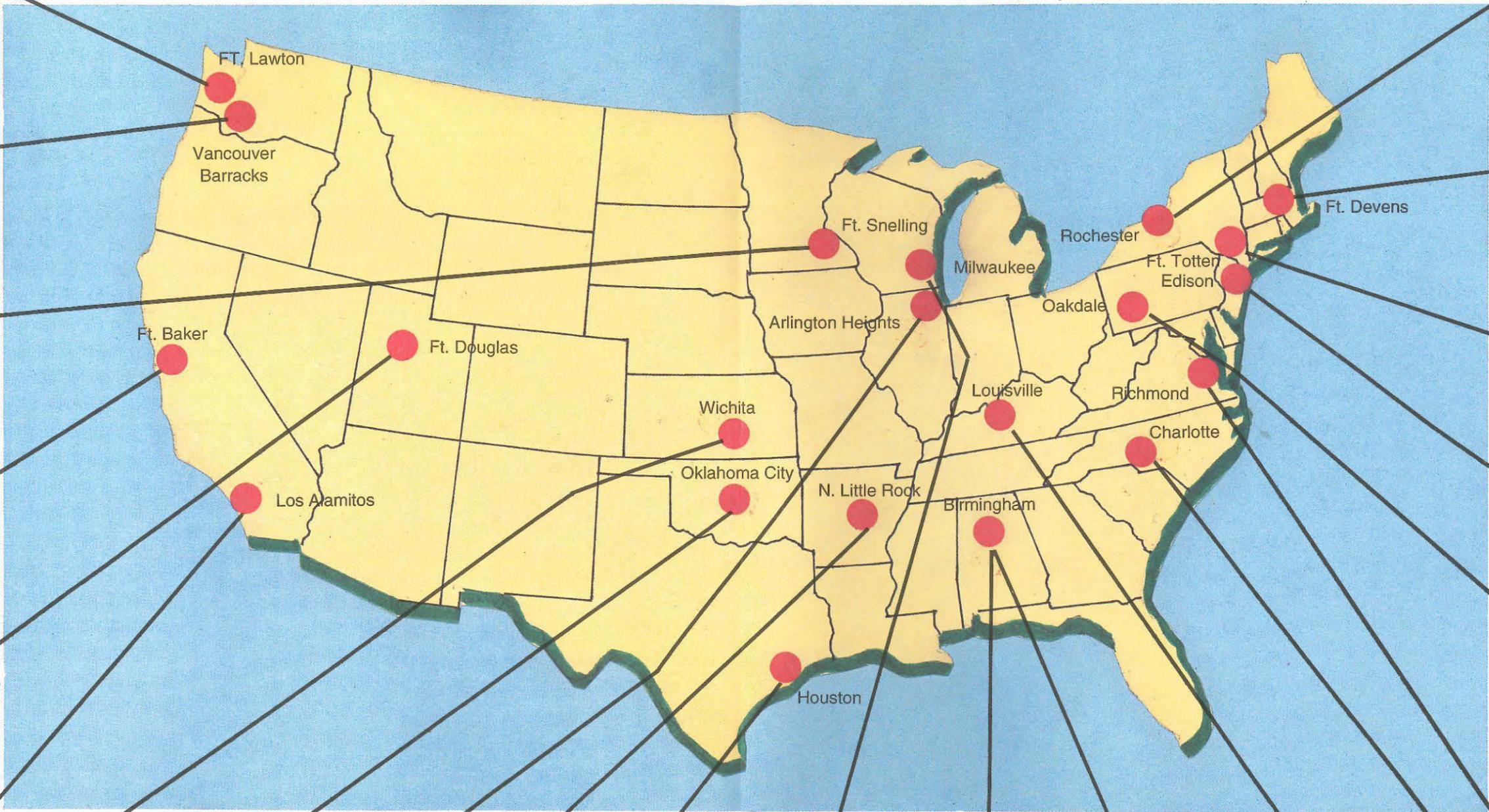
100th DIVISION*



108th DIVISION*



80th DIVISION*



The Army Reserve



The Army Reserve was first formed in 1908. After World War I, the National Defense Act of 1920 established the Organized Reserve Corps, which included both units and individuals. Many of the divisions activated during World War II belonged to the Organized Reserve Corps. During the Korean War, more than half of the reservists recalled to active duty were members of the Army Reserve.

The Chief of the Army Reserve is an advisor to the Army Chief of Staff and also the commander of the Army Reserve Command, which commands, controls and supports all Army Reserve units in the United States except psychological operations, civil affairs and special operations units.

The Army Reserve has completed a reorganization of its command and control structure to improve training and mobilization readiness. The regional Army Reserve Commands were replaced by Regional Support Commands, and Army Reserve institutional training and exercise divisions have been realigned to support U.S. Army Training and Doctrine Command's Total Army School System. The Army Reserve provides the bulk of combat service support units, as well as some combat support, for the Total Army.

SPECIAL OPERATIONS FORCES

U.S. Army special operations forces (SOF) are an integral part of the Army's wide range of capabilities. They provide versatile military capabilities that are not only essential in the unconventional or terrorist arenas, but are also effective in performing special missions across a wide range of situations.

Special operations functions include:

- ▶ unconventional warfare;
- ▶ foreign internal defense;
- ▶ direct action;
- ▶ special reconnaissance;
- ▶ counterterrorism;
- ▶ psychological operations;
- ▶ civil affairs.

U.S. Army Special Operations Command is located at Fort Bragg, NC. It is under the control of the commander in chief (CINC) of the U.S. Special Operations Command, a unified command with headquarters at MacDill Air Force Base, FL.

The Army Special Operations Command consists of both active and reserve component forces. The major force elements are:

- ▶ 75th Ranger Regiment;
- ▶ 160th Special Operations Aviation Regiment;
- ▶ seven special forces groups, two of which are in the Army National Guard;
- ▶ Civil Affairs and Psychological Operations Command.

Budgeting and funding for special operations forces is unique in that operating funds are not contained in the Army budget. Funds are provided through the Department of Defense and the commander in chief of U.S. Special Operations Command under a separate major force program and are, therefore, independent of service cuts. Other requirements, including base operations, are still covered in the Army budget.

SECTION IV

ARMY MISSIONS AND FUNCTIONS

MISSIONS

The Army has three major missions to perform:

- ▶ Deterrence (and capability to fight and win if deterrence fails)
- ▶ Power Projection
- ▶ Operations Other Than War

In order to accomplish these missions, the Army must have the forces to maintain a forward presence in critical areas and to provide rapid response or reinforcement when necessary. The Army must be prepared to fight and win if deterrence fails and have the capability to rapidly expand the force in times of national emergency.

MAJOR FUNCTIONS

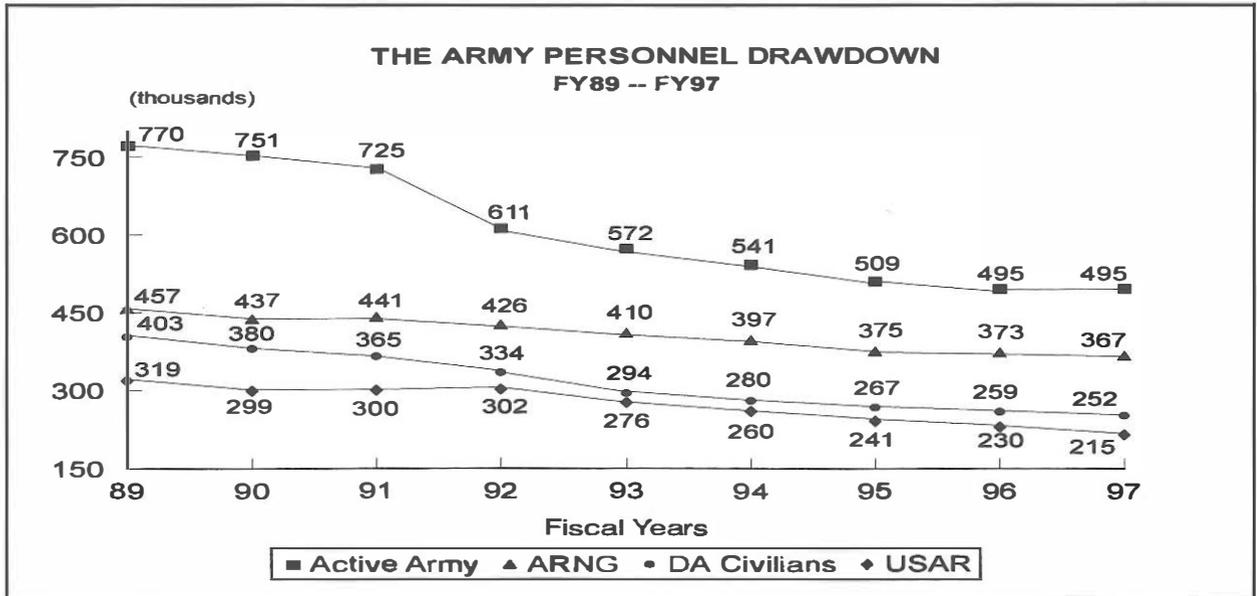
The Army provides land forces necessary for the effective and sustained prosecution of war and operations other than war.

Some of the major functions of the Army are to:

- ▶ organize, train and equip forces for the conduct of prompt and sustained combat operations on land, to defeat enemy land forces and to seize, occupy, and defend land areas;
- ▶ provide forces for appropriate air and missile defense and space operations;
- ▶ develop airborne doctrine, procedures and equipment that are common to the Army and Marine Corps;
- ▶ provide Army forces for joint amphibious, airborne and space operations;
- ▶ provide forces for special operations; and
- ▶ provide forces for humanitarian assistance and disaster relief at home and abroad.

PERSONNEL

Since 1989, the Army has reduced its active forces by 275,000; reduced the Army National Guard by 84,000; reduced the Army Reserve by 89,000; and reduced the civilian workforce by 135,000. The chart below shows the extent of Army personnel cutbacks in all components since 1989.



The Army must continue to recruit quality soldiers to maintain a well-trained and ready force. Quality personnel are essential to the high-technology skills needed by modern forces, and they are the nucleus for selecting and developing future Army leaders.

The goals that have been set for recruiting quality enlisted personnel require that no less than 95 percent of new soldiers must be high school graduates. Currently, the Army is meeting or exceeding this goal; however, achieving this in the future may be more difficult.

A key factor in maintaining a high-quality force is the development of qualified and motivated young officers. The Army primarily acquires officers from three sources—the United States Military Academy (USMA), the Reserve Officers Training Corps (ROTC) and Officer Candidate School (OCS). The major source of officers is the senior ROTC program, which is operated by U.S. Army ROTC Cadet Command with programs at 316 colleges and universities in the United States. In 1996, approximately 2,800 ROTC graduates, 1,000 USMA graduates and 200 OCS graduates received commissions in the active Army. An additional 1,100 ROTC graduates were commissioned and assigned to the Army National Guard and Army Reserve.

Equally important are the development and retention of high-quality noncommissioned officers (NCOs). In addition to operational experiences, NCOs are developed through a disciplined NCO Education System which teaches leadership and technical skills appropriate for each NCO level.

TRAINING

A quality force requires quality training at every level. U.S. Army Training and Doctrine Command (TRADOC) is responsible for the operation of the extensive Army school system that provides military specialty training and professional military education.

Reserve component (Army Reserve and Army National Guard) schools make up a major part of the system. They provide training for Reservists and Guardsmen who cannot attend active Army schools. The RC also provides designated special courses and training for all Army personnel. In addition, the Army National Guard conducts its own Officer Candidate School and other skill training courses.

The Army is in the process of establishing a Total Army School System (TASS) with integrated Army, Army Reserve and Army National Guard schools. This should be implemented by calendar year 1998.

Generally, Army training can be categorized as follows:

► **Institutional Training**

- Initial Entry Training (Basic Combat for all soldiers, followed by Advanced Individual Training in a unit or at an Army branch school);
- Noncommissioned Officer Education System (NCOES), which includes the Primary Leadership Development Course, the Basic Course, the Advanced NCO Course and the Sergeants Major Academy;
- Officer Training consisting of the Basic and Advanced Courses at an Army branch school, followed by mid-level schooling at the Command and General Staff College or the Armed Forces Staff College; and senior-level schooling at the Army War College or National Defense University.

► **Unit Tactical Training**

Unit tactical training is designed to prepare units for a variety of operational missions. Although most of this training is conducted at home installations, the Army operates combat training centers that provide realistic training in a combat-like environment. The three combat training centers—the National Training Center at Fort Irwin, CA; the Joint Readiness Training Center at Fort Polk, LA; and the Combat Maneuver Training Center at Hohenfels, Germany—offer the opportunity to apply unit mission skills against a well-trained opposing force.

MODERNIZATION

Modernization connotes future changes and improvements in force capabilities, to include doctrine, structure and tools of the trade, i.e., weapons and equipment – all focused on providing superiority over a real or assumed threat. This is driven by the melding of several important factors – primarily the threat, the state of technology, doctrine, and the intellectual concept of how best to exploit future capabilities.

The Army's long-term modernization requirements are being developed and defined for the 21st century through a process of exercises and experiments known as Force XXI. It will capitalize on using information-age technology and will be facilitated by the use of battle laboratories and warfighting experiments to test, evaluate and synchronize for future combat. Digitization and horizontal integration of all systems are key goals and are part of overall Force XXI development plans.

The current Army modernization program seeks first to improve or upgrade existing systems, when cost effective, and then focus on new procurement needed to replace technologically obsolete assets. The overall approach is summarized as follows:

- selective improvement/upgrade;
- maximum horizontal technology integration;
- investment in programs that reduce operation and support costs; and
- when necessary, development and procurement of new systems.

The objective is to obtain and keep technological superiority.

Recapitalization of weapons and equipment is a big challenge for the Army because of major budget reductions since the end of the Cold War. The Army's procurement budgets declined almost 60 percent in real terms between FY 1988 and FY 1996 (from \$18.7 billion in FY 1988 to \$7.7 billion in FY 1996 in FY 1997 dollars). As a result, more than 60 major Army modernization projects previously programmed were either cancelled or stretched out. This is a major area of concern for the Army if it is to maintain a clear technological superiority into the next century.

DEPLOYMENT AND SUSTAINMENT

For the Army to fulfill its role in support of national security strategy, it must be able to move forces to where they are needed, when they are needed, and it must have the means to sustain and support those forces for as long as they are deployed. The key factors in deploying and sustaining Army ground forces are:

- ▶ a ready, well-trained force;
- ▶ available reserve component forces and a capable civilian workforce;
- ▶ sufficient airlift and sealift;
- ▶ war reserve stocks;
- ▶ prepositioned materiel afloat; and
- ▶ an adequate industrial base.

The Army must have adequate airlift and sealift to provide the strategic mobility it needs to meet force projection requirements. The Army's goal is to be able to put the lead brigade of a contingency force on the ground in an operational area in four days; a division in 12 days; two armored or mechanized divisions in 30 days; and a five-division corps within 75 days.

LOGISTICS

Logistics encompasses the materiel and services needed to sustain the conduct of military operations. Materiel includes organizational items (i.e., unit equipment, ammunition, spare parts, fuel and lubricants) and individual items, such as food, water, clothing and personal equipment. Services include maintenance and repair of equipment, transportation of people and supplies, medical treatment and evacuation, construction, and provision of individual services such as mail delivery and sanitation facilities.

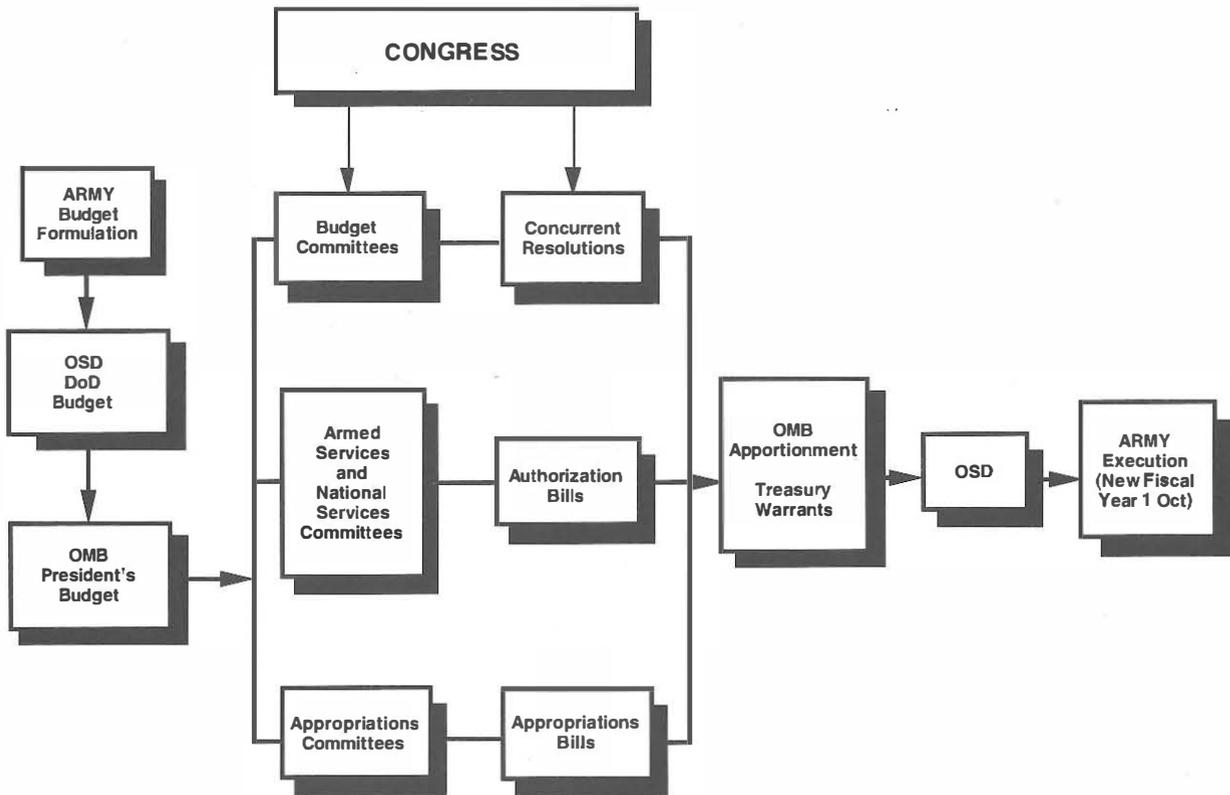
The Army Materiel Command (AMC) is responsible for the operation of the logistical structure that supports the operational forces of the Army. The structure consists of arsenals, laboratories, supply and maintenance depots, and ammunition plants that:

- ▶ provide supply, maintenance, transportation and services during peacetime operations and expanded support during emergencies or wartime; and
- ▶ support continued research and development to modernize the Army and to develop and acquire the weapons and equipment necessary to maintain operational capability.

SECTION V THE ARMY BUDGET

THE BUDGET PROCESS

The size of the Army, what the Army does and what the Army buys depends on authorization and funding which comes from Congress. A schematic of the Executive and congressional budget process is shown below:



ARMY BUDGET TRENDS

Army Budget Trends FY 1989 to FY 1997
(\$ billions – Total Obligational Authority)

	FY89	FY90	FY91*	FY92	FY93	FY94	FY95	FY96	FY97 **
Constant FY97 \$	97.9	95.9	107.3	84.8	73.3	67.8	67.1	64.6	60.1
Current or then year dollars	78.6	79.1	92.5	74.7	66.7	62.1	64.0	63.1	60.1 **

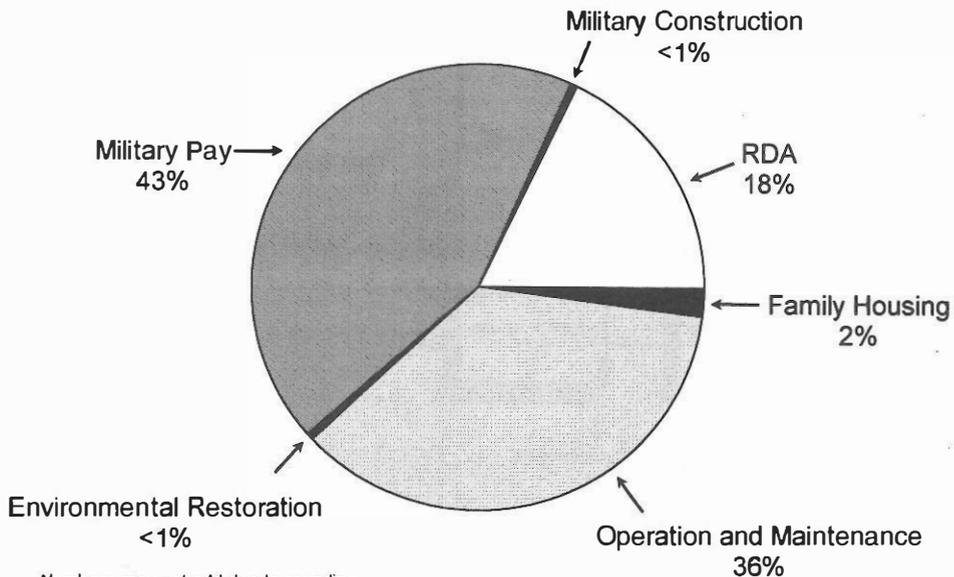
* Operation Desert Storm

** This reflects the President's Budget as initially submitted. The FY 1997 Appropriation Bills provided the Army \$2.5 billion more than requested in the President's Budget, but at press time had not yet been fully released for Army use. Some of this is expected to be applied by reprogramming action to cover contingency costs in Bosnia.

Budget as a whole was down 39 percent in real (inflation-adjusted) funding since FY 1989 or since the end of the Cold War.

Over the same period, Army strength was reduced by 36 percent for active military, 25 percent for reserve component personnel and 38 percent for civilian employees. Additional reductions to reach objective levels are still in process over the next few years.

**Army Funding Profile (by functional areas)
in FY 1997 President's Budget**



SECTION VI

THE ARMY IN TRANSITION

A NEW SECURITY ENVIRONMENT

The world security environment has changed significantly with the:

- ▶ breakup of the Warsaw Pact;
- ▶ dissolution of the Soviet Union;
- ▶ rise in historic ethnic disagreements;
- ▶ emergence of new economic powers;
- ▶ major force reductions and new orientations in NATO;
- ▶ U.S. fiscal constraints/defense budget reductions; and
- ▶ availability of advanced military technology to many Third World countries.

Our current National Military Strategy was developed to deal with the security requirements of the post-Cold War world. The strategy includes the following objectives for the armed forces:

- ▶ deter the use of nuclear and other weapons of mass destruction;
- ▶ deter and defeat major aggression in regions important to the United States;
- ▶ be capable of fighting and winning two major regional conflicts nearly simultaneously;
- ▶ prepare forces to participate in multilateral peace enforcement and unilateral intervention operations.

An inherent part of the strategy is the military success criterion, which requires U.S. forces to apply decisive force to win swiftly with minimum casualties.

ARMY STRATEGIC ROLES

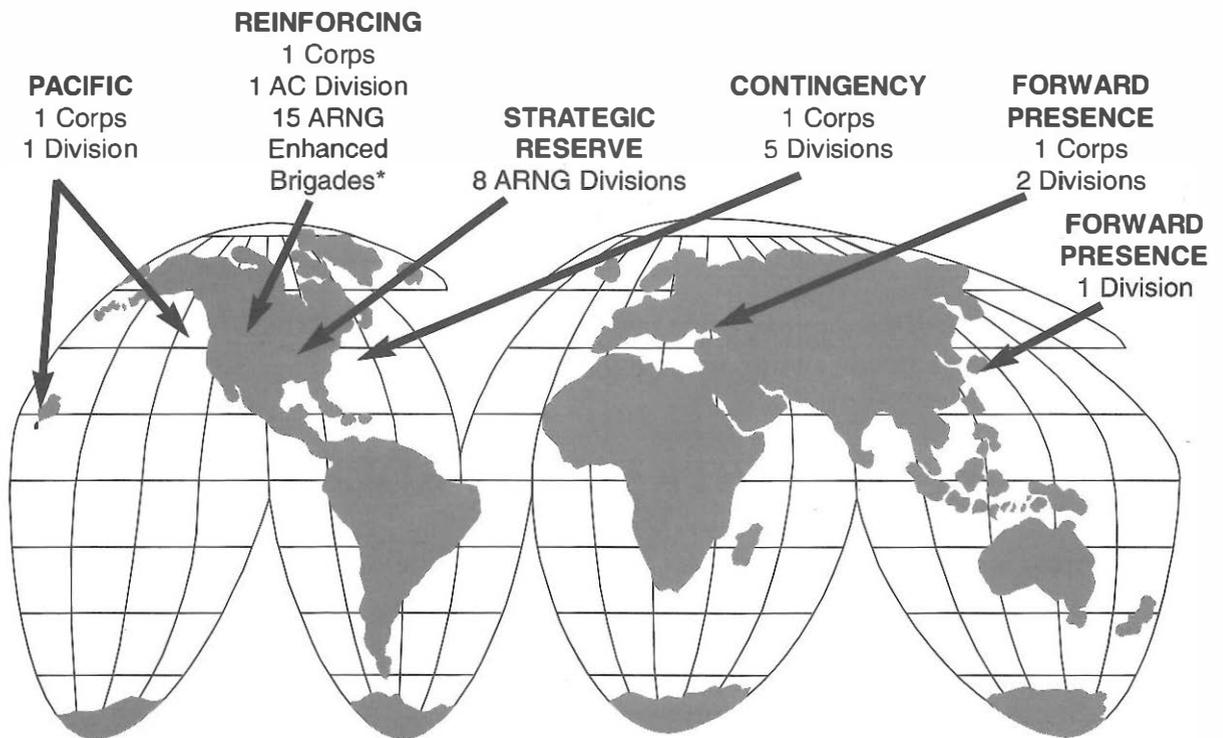
The Army is a full-spectrum force; its roles are to provide:

- ▶ a rapidly deployable force capable of deterring aggression and fighting worldwide;
- ▶ combat-ready ground forces for crisis response, sustained land combat and other immediate requirements;
- ▶ forward presence forces strategically positioned to support friendly nations through peacekeeping, security assistance and army-to-army initiatives;
- ▶ active and reserve component forces capable of rapid expansion to meet a myriad of contingencies;
- ▶ forces for disaster relief and emergency assistance and to aid in interdiction of illicit drug traffic.

THE CHANGING ARMY

The Army has undergone some of its most dramatic changes in more than a half-century. The Army's focus has changed from fighting a major European war to ensuring the capability to protect vital U.S. national interests in worldwide contingencies. It has changed from a forward-stationed Army to a power-projection Army, and it is a much smaller Army. In fact, it is the smallest force since just prior to World War II. Since 1989, the Army has reduced its active forces by 275,000; reduced the Army National Guard by 84,000; reduced the Army Reserve by 89,000; reduced the civilian workforce by 135,000; cut active force structure by eight divisions and Army National Guard force structure by two divisions; and reduced the size of the force in Europe to approximately 65,000 soldiers.

18-Division Stationing by the End of FY96



END OF FY96: 4 CORPS - 18 DIVISIONS

*Brigades in transition to enhanced status

Source: Dept. of the Army

Reduction of Combat Forces in Europe



1989

2 Corps
4 Divisions
2 Armored Cavalry Regiments
147 Combat Battalions

1996

1 Corps
2 Divisions
37 Combat Battalions

BASE REALIGNMENTS AND CLOSURES

The Defense Base Closure and Realignment Commission (BRAC) was first established in 1988 as an independent commission to review the recommendations of the Secretary of Defense for the closure or realignment of military installations in the United States. There were four separate commissions — 1988, 1991, 1993 and 1995. The final approved recommendations included closing 112 and realigning 78 Army installations in CONUS. In addition, the Army will close 662 overseas bases. As of the end of FY 1996, base closures were 97 percent complete in Europe and 86 percent complete in Korea.

FY 1997 marks the cross-over year when the savings from base closures and realignments should exceed the costs required to close bases.

Even with BRAC 95, however, there remains more infrastructure overall than is justified by total force structure. Effort will be needed in the future to look for additional consolidations, but will require new authorization by Congress. A new BRAC is probably several years away.

FORCE XXI: THE ARMY OF THE FUTURE

Though much smaller than the Army of the 1980s, the Army of the 1990s and the 21st century will capitalize on the potential of technology to improve its capabilities in critical areas such as information management, weapon lethality, battlefield mobility and protection of the individual soldier. The Army is in the process of upgrading intelligence, maneuver, fire support, sustainment, and command and control capabilities with advanced technologies which will enable Army forces to observe, decide and act faster and more precisely than ever before. Force XXI integrates emerging technologies, new doctrine, force organization and quality soldiers to produce a versatile Army capable of dominating future battlefields.

In operations other than war, the versatility of the Army makes it uniquely qualified to support national and international interests. The Army can move quickly and with substantial capabilities to directly assist local, state and national authorities in the event of civil disturbances and national disasters by providing medical support and feeding facilities, assisting local governments in cleanup and repairs, and providing security.

The Army will continue to support America's friends and allies with security and humanitarian assistance and to protect American citizens and interests through forward presence and crisis response.

The Army of the future will continue to provide the United States with the finest land force in the world, capable of winning on the battlefield, and with the versatility to apply its organizational skills and operational capabilities in support of a wide range of operations. The Army must remain a trained and ready force, capable of decisive victory.

**THE FUNDAMENTAL PURPOSE OF THE ARMY –
TO FIGHT AND WIN THE NATION'S WARS –
REMAINS THE SAME.**

SECTION VII

APPENDICES

- Appendix A:** Officer & Enlisted Rank Insignia
- Appendix B:** Branches of the Army
- Appendix C:** Army Staff Positions
- Appendix D:** Army Combat Organization
- Appendix E:** U.S. Army Installations
by Congressional District
- Appendix F:** Army Demographics (FY 1996)
- Appendix G:** Selected Army Weapon Systems

APPENDIX A

OFFICER & ENLISTED RANK INSIGNIA
ARMY INSIGNIA OF RANK/PAY GRADE

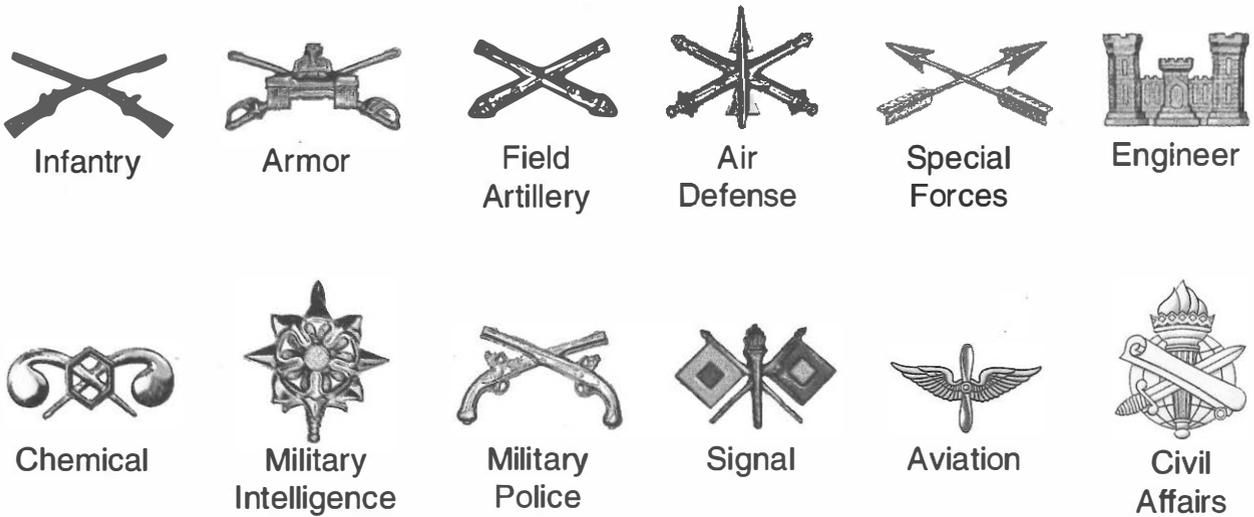
Officer		Enlisted	
	GENERAL OF THE ARMY		SERGEANT MAJOR OF THE ARMY E-9
	GENERAL O-10		COMMAND SERGEANT MAJOR E-9
	LIEUTENANT GENERAL O-9		SERGEANT MAJOR E-9
	MAJOR GENERAL O-8		FIRST SERGEANT E-8
	BRIGADIER GENERAL O-7		MASTER SERGEANT E-8
	COLONEL O-6		SERGEANT FIRST CLASS E-7
	LIEUTENANT COLONEL O-5		STAFF SERGEANT E-6
	MAJOR O-4		SERGEANT E-5
	CAPTAIN O-3		CORPORAL E-4
	FIRST LIEUTENANT O-2		SPECIALIST E-4
	SECOND LIEUTENANT O-1		PRIVATE FIRST CLASS E-3
			PRIVATE E-2
			PRIVATE E-1
Warrant Officers			
	CHIEF WARRANT OFFICER W-5		CHIEF WARRANT OFFICER W-4
	CHIEF WARRANT OFFICER W-3		CHIEF WARRANT OFFICER W-2
			WARRANT OFFICER W-1

APPENDIX B BRANCHES OF THE ARMY

All the soldiers in the Army are assigned to — and trained or schooled in — one of the branches of the Army according to the functions they would perform in combat or in support of the combat units. The branches of the Army are grouped as to whether their primary mission is to engage in combat, to directly support the combat elements, or to provide combat service support or administration to the Army as a whole.

Shown here are the distinctive insignia of the various branches of the Army.

Combat and Combat Support



Combat Service Support



APPENDIX C

ARMY STAFF POSITIONS

Division-level*

- G-1 – Personnel
- G-2 – Intelligence
- G-3 – Operations
- G-4 – Supply
- G-5 – Civil Affairs
- G-6 – Communications

Battalion/Brigade-level

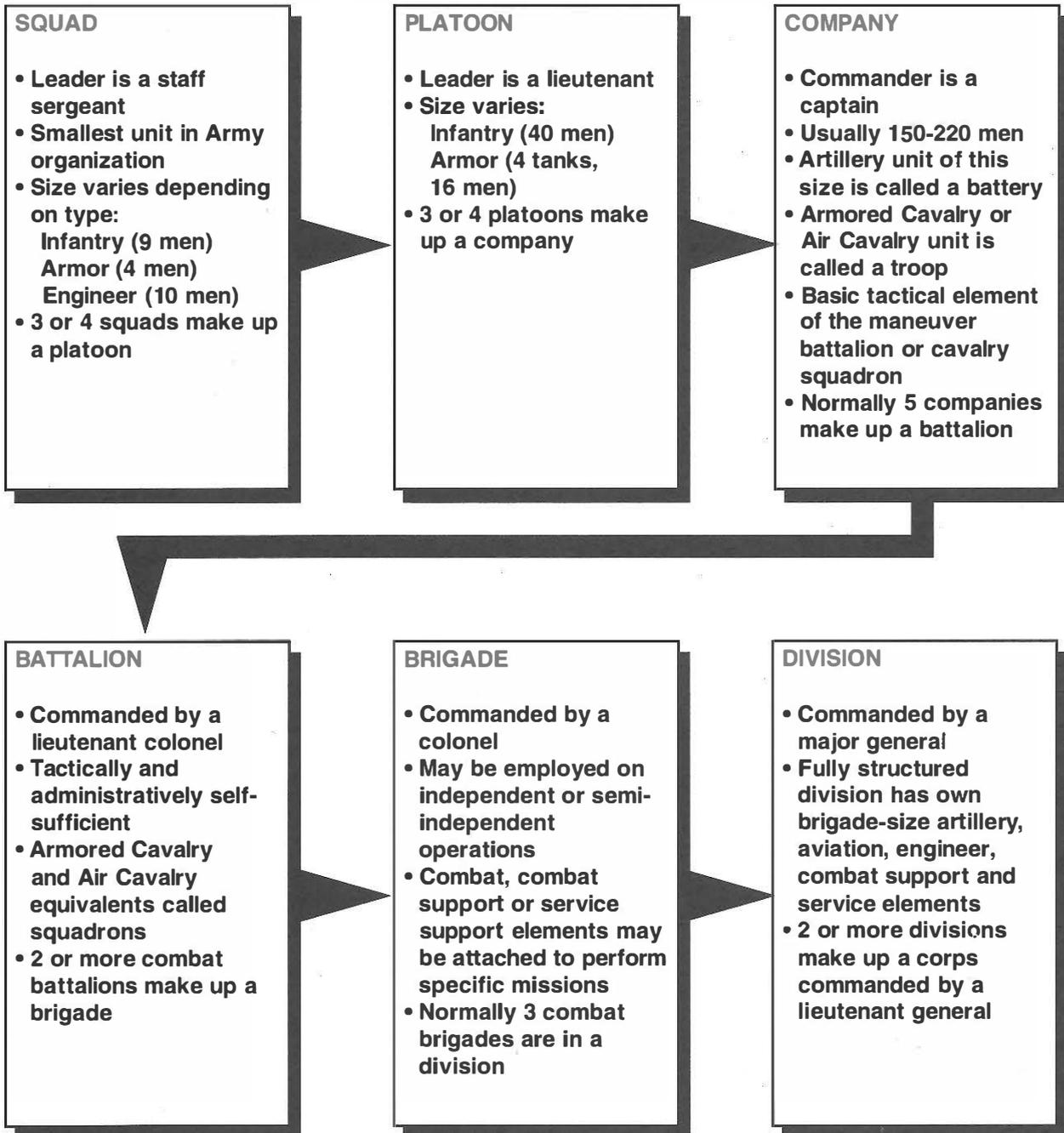
- S-1 – Personnel
- S-2 – Intelligence
- S-3 – Operations
- S-4 – Logistics
- S-5 – Civil Affairs
- S-6 – Communications

* In a joint environment (involving more than one service, e.g., a unified command), these positions are designated J-1 through J-6.

APPENDIX D

ARMY COMBAT ORGANIZATION

Army organizations are inherently built around people and the tasks they must perform. Major combat organizations are composed of smaller groups of forces as shown here.



APPENDIX E

**U.S. ARMY INSTALLATIONS
BY CONGRESSIONAL DISTRICT****ALABAMA**

Redstone Arsenal, Huntsville (5)
Fort Rucker, Ozark (2)
Fort Benning GA, Phenix City (3)

ALASKA

Fort Greely, Delta Junction (AL)
Fort Richardson, Anchorage (AL)
Fort Wainwright, Fairbanks (AL)

ARIZONA

Fort Huachuca, Sierra Vista (5)
Yuma Proving Ground, Yuma (2)

CALIFORNIA

Fort Hunter Liggett, Monterey (17)
Fort Irwin, San Bernadino (40)
Presidio, Monterey (17)
Sierra Army Depot, Herlong (2)

COLORADO

Fort Carson, Colorado Springs (5)

GEORGIA

Fort Benning, Columbus (2)
and Phenix City AL (3)
Fort Gillem, Atlanta (3)
Fort Gordon, Augusta (10) (11)
Hunter Army Airfield, Savannah (1)
Fort McPherson, Atlanta (5)
Fort Stewart, Hinesville (1)

HAWAII

Schofield Barracks, Honolulu (2)
Fort Shafter, Honolulu (1)
Tripler Army Hospital, Honolulu (1)

KANSAS

Fort Leavenworth, Leavenworth (2)
Fort Riley, Junction City (2)

KENTUCKY

Fort Campbell, Hopkinsville (1)
and Clarksville TN (7) (9)
Fort Knox, Louisville (2)

LOUISIANA

Fort Polk, Leesville (7)

MARYLAND

Aberdeen Proving Ground, Aberdeen (2)
Fort Detrick, Frederick (6)
Edgewood Arsenal, Aberdeen (2)
Fort George G. Meade, Laurel (5)

MISSOURI

Fort Leonard Wood, Rolla (4)

NEW JERSEY

Fort Dix, Wrightstown (3)
Fort Monmouth, Redbank (12)
Picatinny Arsenal (11)

NEW MEXICO

White Sands Missile Range, Las Cruces (2)

NEW YORK

Fort Drum, Watertown (24)
Fort Hamilton, Brooklyn (9)
U.S. Military Academy, West Point (19)

NORTH CAROLINA

Fort Bragg, Fayetteville (8)

OKLAHOMA

Fort Sill, Lawton (4)

PENNSYLVANIA

Carlisle Barracks, Carlisle (19)
New Cumberland Army Depot, Harrisburg (19)

SOUTH CAROLINA

Fort Jackson, Columbia (2)

TENNESSEE

Fort Campbell KY, Clarksville (7) (9)

TEXAS

Fort Bliss, El Paso (16)
Fort Hood, Killeen (11)
Fort Sam Houston, San Antonio (20)

VIRGINIA

Fort A.P. Hill, Bowling Green (1)
Fort Belvoir, Fairfax County (8)
Fort Eustis, Newport News (3)
Fort Lee, Petersburg (4)
Fort Monroe, Hampton (1)
Pentagon, Arlington (8)
Fort Myer, Arlington (8)
Fort Story, Virginia Beach (2)

WASHINGTON

Fort Lewis, Tacoma (9) (6)

DISTRICT OF COLUMBIA

Fort Lesley J. McNair, Washington DC (AL)
Walter Reed Army Medical Center, Washington DC (AL)

NOTE: Number in parentheses indicates congressional district(s) where installation is located and (AL) indicates At Large congressional district. Installations scheduled for closure by BRAC are not included.

APPENDIX F

**ARMY DEMOGRAPHICS
(FY 1996)**

ACTIVE ARMY

Officers - 80,628
Enlisted Soldiers - 406,502
USMA Cadets - 3,908

Women make up approximately 13.5 percent of active Army strength.

ARMY NATIONAL GUARD

Officers - 41,834
Enlisted - 328,142

ARMY RESERVE (Ready Reserve)

Officers - 105,761
Enlisted - 438,679

WHERE SOLDIERS ARE STATIONED

CONUS and U.S. Territories - 393,536
Europe - 64,853
East Asia & Pacific - 29,409
Africa, Near East & Southwest Asia - 3,363
Sub-Saharan Africa - 52
Central & South America - 8,388

ARMY FAMILIES

Percentage of officers who are married - 78%
Percentage of enlisted who are married - 63%

ARMY RETIREES - 629,000

APPENDIX G

SELECTED ARMY WEAPON SYSTEMS

M2/M3 SERIES BRADLEY FIGHTING VEHICLE SYSTEM (FVS). The M2 allows for mounted combat and means for infantry to protect tanks and consolidate gains in the offensive. Designed for a nine-man infantry squad, it includes a two-man turret for the commander and gunner. Armament includes the 25mm "chain gun," a 7.62mm coaxial machine gun, and a TOW antitank missile launcher housed in an armored rectangular box. Fire control includes an integrated day/night sight with a thermal-imaging infrared device. Top road speed is 38 mph; cruising range is 260 miles. The M2A1 incorporates the more lethal TOW 2. The M2A2 adds spall suppression liners, enhanced applique armor and provisions for armor tile. The M3 series armored cavalry scout version accommodates the five-man cavalry squad.



M113 SERIES ARMORED PERSONNEL CARRIER. The first M113 was powered by a 175-horsepower gasoline engine. The M113A1, with a 212-horsepower six-cylinder diesel engine, has a loaded weight, with a two-man crew and an 11-man infantry squad, of 12.3 tons; maximum road speed is 40 mph and cruising range is 300 miles. Armament includes a .50-caliber machine gun. Other variants of the M113 are the M106A2 carrier for the 4.2-inch and 120mm mortar; M125A2 carrier for the 81 mm mortar; M577A2 command post vehicle; M741 chassis for the M163 Vulcan air defense gun; M730 for the Chapparral air defense missile system; and M901 improved TOW vehicle (pictured). The M113A2 has a turbocharged engine rated at 275 horsepower. The M113A3 version has incorporated interior spall suppression liners, armored external fuel tanks, upgraded engine and transmission, and mounting points for bolt-on armor.

M1 SERIES ABRAMS MAIN BATTLE TANK. The Abrams tank is the Army's primary ground combat weapon for closing with and destroying enemy forces. Its special armor, compartmentalization of fuel and ammunition stowage, automatic fire detection and suppression system, and mobility provide the crew with the greatest possible levels of protection. The M1 tank is armed with a 105mm main gun. The M1A1 tank added a 120mm smoothbore cannon and an NBC microclimatic cooling system to the already proven combination of thermal sight, laser rangefinder and full stabilization. The M1A1 weighs 68.7 tons (combat loaded), is powered by a 1500-horsepower turbine engine, and has a top speed of 41 mph, a cruising range of 275 miles and a crew of four. Other armament includes one .50-caliber machine gun and two 7.62mm machine guns. The Army is upgrading approximately 1,000 M1 tanks to the M1A2 version.



TOW MISSILE SYSTEM. The TOW (Tube-Launched, Optically Tracked, Wire-Guided) antitank missile system is mounted on the Bradley FVS, the Improved TOW Vehicle, the High Mobility Multipurpose Wheeled Vehicle (HMMWV) and the AH-1S Cobra helicopter. When the system is fired, a sensor in the launcher tracks a beacon in the tail of the missile; the gunner keeps the crosshairs on the target and a computer in the launcher sends corrections to the missile via two extremely thin wires that deploy in flight. The ground launcher version weighs 240 lbs; the missile weighs 50 lbs; its range is 3,750 meters. There is a three-man crew. There have been two variations of the TOW subsystem and five variations of the missile; the latest missile is TOW 2B.

M198 SERIES 155MM TOWED HOWITZER. The M198 provides significant improvements in lethality, range, reliability, availability, emplacement and movement. The cannon will fire a 96-lb rocket-assisted projectile to a range of 30 kilometers. The maximum rate of fire is four rounds per minute, and two rounds per minute sustained. The accuracy of the M198 is enhanced by its highly stable firing platform. Less than five minutes are needed to set up the howitzer for firing or to displace. The M198 weighs 15,750 lbs, but is still light enough to be lifted by the CH-47 medium helicopter. It can also be towed cross-country by a five-ton truck.



M109 SERIES 155MM SELF-PROPELLED HOWITZER. The M109 was designed to provide a medium-weight carriage with adequate mobility to support armor and mechanized infantry units. The M109 is an aluminum-armored, self-propelled, air-transportable field artillery weapon system. Most fielded Army howitzers are M109A2 or M109A3. Maximum range is 18,000 meters and 24,000 meters for rocket-assisted projectiles; weight is 56,000 lbs. Secondary armament includes a .50-caliber machine gun. The crew consists of six personnel. Cruising range of the vehicle is 220 miles. A program to improve the M109 has resulted in the M109A4 (NBC protection), M109A5 (armament improvements) and M109A6 Paladin, which is capable of semi-autonomous operation. The Paladin has a wide range of improvements; range has increased to 24,000 meters and 30,000 meters for the rocket-assisted projectile.

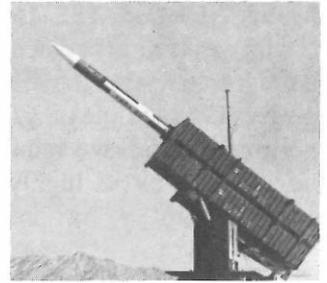
M119 SERIES 105MM TOWED HOWITZER. The M119, originally developed by the United Kingdom, is a lightweight towed 105mm artillery system. It is intended for use in direct support field artillery battalions in the light infantry, airborne and air assault divisions. It weighs 4,000 lbs and is transportable by the UH-60 series helicopter. Its prime mover is the HMMWV. Using standard ammunition, the M119's range is 14,300 meters; rocket-assisted projectiles (RAP) and improved conventional ammunition now in development are expected to increase the range to 19,500 meters and improve lethality. The M119A1, with U.S. fire control, replaces the M102 howitzer (maximum range 11,500 meters; 15,000 meters with RAP) which in turn replaces the M101A1 (maximum range 11,270 meters; 14,500 meters with RAP).



MULTIPLE LAUNCH ROCKET SYSTEM (MLRS). MLRS is a free-flight artillery rocket system that consists of a 12-round launcher capable of firing rockets one at a time or in rapid ripples to ranges of 32 kilometers for the basic rocket and 45 kilometers for the extended-range rocket available in 1998. The primary missions of MLRS are counterfire and suppression of enemy air defenses. It supplements cannon artillery fire by delivering large volumes of firepower in a short time against critical, time-sensitive targets.

MLRS employs shoot-and-scoot tactics to limit vulnerability to counterbattery fire. In addition to the dual-purpose conventional submunition, the system can deliver scatterable mine warheads, each of which dispenses 28 antitank mines. The MLRS launcher has been updated to employ the Army Tactical Missile System (ATACMS) against tactical surface-to-surface missile sites and other priority targets at ranges well beyond the capability of existing cannons and rockets.

PATRIOT. The Patriot missile system provides high- and medium-altitude defense against aircraft and tactical ballistic missiles. The system's fast reaction capability, high firepower and ability to operate in a severe electronic countermeasure environment are features not previously available in air defense systems. The combat element of the system is the fire unit, which consists of a radar set, an engagement control station, a power plant, an antenna mast group and eight remotely located launchers. The system is highly automated, combining high-speed digital processing with various software routines to effectively control the battlespace. The single radar, using phased array technology, provides for all tactical functions of airspace surveillance, target detection and tracking and support of missile guidance. The only manned element of the fire unit during air battle, the engagement control station provides the human interface for control of automated operations. Each launcher contains four ready-to-fire missiles, sealed in canisters which serve a dual purpose as shipping containers and launch tubes. Fifty targets can be tracked simultaneously with a maximum range of 37 nautical miles. U.S. missile production deliveries include PAC-2 missiles which provide defense against the tactical ballistic missile threat. The PAC-3 missile will add the capability to counter cruise missiles and aircraft.



STINGER MANPORTABLE ANTI-AIRCRAFT MISSILE. The shoulder-fired Stinger provides effective short-range air defense capabilities for ground personnel against low-level fixed-wing aircraft and helicopters. The 35-lb supersonic fire-and-forget Stinger, which has replaced the Redeye, features quick-reaction acquisition and tracking and the ability to engage aircraft approaching from any direction, including head-on. Three variants – Basic Stinger, Stinger-POST (passive optical seeker technique) and Stinger-RMP (reprogrammable microprocessor) – are in the Army inventory. The Basic Stinger is an infrared (IR) system. The Stinger-POST employs a dual-detector (IR and ultraviolet). The Stinger-RMP improves microprocessor power and is highly resistant to countermeasures. New software reprogrammability allows upgrades without costly retrofit. Stinger-RMP is being upgraded to Stinger Block 1 to increase accuracy and overall effectiveness.

AVENGER SURFACE-TO-AIR MISSILE/GUN SYSTEM. The Avenger is a light-weight, highly mobile/transportable surface-to-air missile/gun system mounted on a High Mobility Multipurpose Wheeled Vehicle (HMMWV). The armament consists of eight ready Stinger missiles and a .50 caliber machine gun. It is operated by a two-man crew and has a day/night/clear or adverse weather capability. Avenger provides a forward area air defense capability in the division tactical area.



M9 ARMORED COMBAT EARTHMOVER (ACE). The M9 ACE is a highly mobile (tracked), amphibious armored earthmoving vehicle that can move, survive and work with the flow of battle, responding immediately to the need for elimination of enemy obstacles, creation of obstacles to enemy maneuver, preparation of fighting positions for the fighting forces, expedient antitank ditching, and maintenance of roads and supply routes. The M9 ACE weighs 18 tons empty and 26 tons loaded, with a road speed of 30 mph. It is transportable by C-130 and larger aircraft. Vehicle armor protects the crew from small arms, artillery fragmentation, and NBC threats.

UH-1 SERIES IROQUOIS UTILITY HELICOPTER. The UH-1 is a low-silhouette, single-rotor helicopter powered by a single gas turbine engine. Missions include transportation of personnel, equipment and supplies; command and control; and medical evacuation. There have been several UH-1 models produced, the latest being the UH-1H and UH-1V. The UH-1V is a medical evacuation helicopter. Nicknamed the "Huey," the UH-1 has a crew of three – two pilots and a crew chief – and can transport a 3,000-lb payload (including up to eight combat troops) or a 4,000-lb sling load under standard day conditions. Maximum speed is 124 knots; endurance is 2.5 hours; and maximum gross weight is 9,500 lbs.



UH-60 SERIES BLACK HAWK TRANSPORT HELICOPTER. The UH-60 Black Hawk is a twin-engine helicopter that is used in the performance of the air assault, air cavalry, aeromedical evacuation, and command and control missions. It is capable of carrying a crew of three and a combat-equipped 11-man infantry squad (or 14 with alternate seating). The Black Hawk can also transport a 105mm howitzer with its crew and ammunition. The Black Hawk is replacing the UH-1H Iroquois in air assault, air cavalry, aeromedical evacuation and special forces units. The UH-60L has improved durability and a new primary engine. Normal mission endurance is 2.1 hours. Under hot day conditions, the Black Hawk can lift its crew of three and 11 combat-equipped troops with a rate of climb of 785 feet per minute, a cruising speed of 150 knots, and a range of 306 nautical miles.

AH-64 SERIES APACHE ATTACK HELICOPTER. The AH-64A is an advanced attack helicopter able to locate, engage and destroy enemy armor forces and a variety of other targets during day, night and bad weather. The Apache is operated by a crew of two. Maximum level flight speed is 158 knots, and the ceiling is 20,000 feet. Mission endurance is 2.5 hours carrying eight Hellfire antitank missiles, 38 2.75-inch rockets and 1,200 rounds of 30mm cannon ammunition at a speed of 146 knots. The crew station is protected by armor plating and a blast fragment shield. The Apache Longbow will improve the AH-64A by providing fire-and-forget capability and improved target acquisition in adverse weather conditions.



AH-1 SERIES COBRA ATTACK HELICOPTER. The primary missions of the AH-1S Cobra are antiarmor, armed escort and reconnaissance. It can carry a mix of the following weapons: eight TOW missiles, 750 rounds for the 20mm cannon, and 76 2.75-inch rockets. Maximum sea-level speed is 171 knots. Normal cruise speed is 123 knots, maximum endurance is 2.6 hours and rate of climb is 1,580 feet per minute. A major improvement is the Cobra "C-NITE" that gives the helicopter a night tank-killing capability. This enables the AH-1S to fire TOW missiles at night and under bad weather

conditions in a limited electro-optical countermeasures environment.

CH-47 SERIES CHINOOK MEDIUM LIFT TRANSPORT HELICOPTER. The CH-47D is a medium lift transport helicopter used primarily to transport personnel, weapons, ammunition, equipment and other cargo in general support of combat units. It has a payload of 24,000 lbs. The Chinook has a maximum level flight speed of 158 knots, single-engine service ceiling of 13,100 feet, the ability to hover out-of-ground-effect up to 17,250 feet, and maximum rate of climb of 3,450 feet per minute. The Army continues to modernize the CH-47C model to the "D" configuration for one-to-one replacement in the field.



OH-58D KIOWA WARRIOR. OH-58D is the Army's first true scout helicopter. It provides a day/night/bad-weather capability in high temperature/high altitude conditions. The aircraft system incorporates a new drive train consisting of a four-bladed rotor, 650 HP engine, compatible transmission and tail rotor systems. The OH-58D has a mast-mounted sight that houses day and night target acquisition sensors and a laser rangefinder/ designator; it is located above the rotor to maximize aircraft survivability. A highly accurate navigation system permits precise target location which can be passed to other aircraft or artillery elements via the airborne target handover system. The laser designator enables the OH-58D to provide designation for laser-guided weapons to include Hellfire and other laser-guided precision munitions. The OH-58D can be equipped with Air-to-Air Stinger (ATAS) missiles. The OH-58D has a maximum speed of 118 knots with a crew of two.

