Secretary of Defense

James R. Schlesinger

ANNUAL DEFENSE DEPARTMENT REPORT

FY 1976 and FY 197T

REPORT OF SECRETARY OF DEFENSE

JAMES R. SCHLESINGER

TO THE CONGRESS

ON THE

FY 1976 AND TRANSITION BUDGETS, FY 1977 AUTHORIZATION REQUEST
AND FY 1976-1980 DEFENSE PROGRAMS

FEBRUARY 5, 1975

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I. INTRODUCTION

Mr. Chairman and Members of the Committee:

It is my privilege to present to you the Defense Program and Budget for FY 1976 and for the three months thereafter, ending September 30, 1976. In compliance with the 1974 Budget and Impoundment Control Act, I am providing you with the Department's request for legislative authorization through FY 1977. I am also submitting for the first time a five-year projection of future Defense budgets in total obligational authority.

The table below shows the Departmental requests for FY 1976 and the transition period.

TOTAL REQUESTS
(In Billions of Current Dollars)

	FY 1976	Transition Period
Total Obligational Authority	$104.7	$24.6
Outlays	92.8	25.4

The Department's requests and five-year projections will be discussed later in this Report. Before doing so, however, it is essential to discuss the basic defense choices that we as a nation face and the international context within which we must make them.

A. THE BASIC BUDGETARY CHOICES

In FY 1964, before the war in Vietnam had resulted in a major impact on the U.S. defense establishment, our military and civilian personnel totaled over 3.7 million people. For FY 1976, we plan fewer than 3.1 million people, even though the world has become only a slightly safer place in the ensuing twelve years. For the first time since 1939 (two years before Pearl Harbor), our active fleet will consist of fewer than 500 ships. Our ships, aircraft, and ground combat vehicles are aging. Perhaps most troublesome of all, the readiness of some forces has suffered as budgetary constraints have grown more severe. There is, in short, no way that we can maintain force structure, modernization and readiness on the basis of declining budgets. Yet, if the effects of inflation and real pay increases are removed, the last four years have witnessed nothing but declining budgets.

In such circumstances, the Congress and the country must face the main choices before us and the consequences that are likely to flow from their decisions.

One choice is to continue to review the Administration's budget and make cuts in such a way that the net reduction is no more than 5% of the total. Consciences are then salved and no great damage is done in any particular year. The difficulty is that if this approach is followed year after year -- as it has been in the recent past -- the real military power of the defense establishment must inevitably erode. And as troublesome as the fact of erosion is the fact that decisions fundamental to the security of the United States are made by default. Surely, if we want the shadow rather than the substance of first-class military power, we should make the decision explicitly rather than in a casual and impulsive fashion over a period of time.

A second choice is to recognize that there is a strong connection between the safety, interests, commitments, and foreign policy of the United States on the one hand, and the size, composition, and deployment of our defense establishment on the other hand. This choice implies that, if the proposed Defense budget is too high for the Congress and the country, it may well be that excessive demands are being made on defense. Thus, if the Defense Budget is to be reduced, it should be done in clear recognition that we will not be able to fulfill our responsibilities.

A third and more reasonable choice is to acknowledge that in a world where detente runs parallel with a number of dangers -- some evident, some hidden and uncertain -- in a world where the United States simply cannot escape great responsibilities, military power remains relevant. In these circumstances, a posture of deterrence will be seen as necessary to some measure of safety, collective security, and progress toward more enduring peace even though the price is high but quite tolerable. Such a choice implies acceptance not only of the Administration's budgetary request, but of the strategic concepts on which it is based.

B. THE INTERNATIONAL SITUATION AND THE DEFENSE ESTABLISHMENT

1. The Nature of the Challenge

Last year I quoted from Proverbs to the effect that "Where there is no vision, the people perish." The vision that I attempted to suggest then was one of peace among the great powers based on equality, civility, and prudence. This year, the principle of equality strongly supported by the Defense Department was established at Vladivostok. But equality must be more than a principle. We would do well to recall in that connection that "When a strong man armed keepeth his palace, his goods are in peace." Perhaps we are no longer of "that strength that in old days moved earth and heaven," but we must still be "strong in will -- to strive, to seek, to find, and not to yield."

To heed that advice, we must maintain military strength. But there remains the problem of defining our specific defense objectives and establishing efficient programs for their attainment. A French official once solved the problem very succinctly. He said that the Maginot Line began where it was required and ended where it was no longer needed. However, we can and should do better than that. As a British statesman once asked: "Does it mean that because Americans allegedly won't listen to sense, you intend to talk nonsense to them?" The answer is: No.

I am sensitive to the fact that national security is not a product that brings explicit and tangible benefits to us, although most of us are acutely aware when it is absent. As Sir John Slessor once noted: "It is customary in democratic countries to deplore expenditure on armament as conflicting with the requirements of the social services. There is a tendency to forget that the most important social service that a government can do for its people is to keep them alive and free."

It is also common to allege that the Defense Budget contains some inner momentum of its own, that it has a Parkinsonian tendency to expand independently of external threats (although the perceived growth is in current and highly inflated dollars). Few of us give ear to some of our most trenchant critics in Congress who acknowledge that the Department of Defense is the best managed in government.

Obviously, this Department can always improve the efficiency of its performance, but we will never reach zero defects. In any event, the United States can afford both increased social programs and an adequate posture of defense; the two objectives are not incompatible and we do not have to trade one for the other.

What is more, the defense of this nation and its interests is a matter of the utmost gravity; despite theories to the contrary, we have not arrived at this Budget (or its predecessors) as a result of some form of mindless bureaucratic bargaining. The issue before us, therefore, is not how to restrain these voracious bureaucrats. It is how much defense of what kind we need to be reasonably confident of securing this nation and its myriad interests.

We live in an interdependent world economy, and our foreign economic interests are substantial. U.S. assets abroad amount to more than $180 billion. Annually, we export more than $70 billion in goods and services, and our imports are of an equal or greater amount. The oil embargo of 1973 is only the most recent and pointed reminder that we have a keen and growing interest in distant lands -- their markets and their products.

Our foreign political interests are even more extensive. Within this century we have participated in two great wars to ensure that Europe did not fall under the domination of a single power. We have a similar interest in seeing that Japan remains independent and that the other nations of Asia are free to choose their own destinies. Our concern for the freedom of the Western Hemisphere from external domination now dates back more than 150 years. And, we have important economic and strategic interests in Latin America, including the Panama Canal. Even in a period of questioning and self-doubt, there remains a consensus within the country that we have vital interests in Western Europe, the Middle East, the Persian Gulf, and Asia. Contrary to occasional suggestions, surely the right cure for what may seem an excess of commitments is not the blind and hasty abandonment of all commitments. Our objective, as a great power, is to display a somewhat greater degree of steadfastness.

Despite detente and its opportunities, the need for steadfastness is no less great than it was a decade or more ago. Putting aside the shibboleths of the cold war era, it is nonetheless the case that the world remains a turbulent place. The military confrontation along the Sino-Soviet border continues. Both Washington and Moscow appear to agree that the situation in the Middle East is extremely volatile. Our allies in Europe and Asia find themselves in varying degrees of economic and political difficulty. From the Azores, through Europe and the Mediterranean, to Japan, common objectives and policies remain to be formulated. The conflict over Cyprus continues unresolved. In several countries with whom we have close associations, succession crises are in the offing. The international waters are troubled and the temptation to fish in them to the detriment of U.S. interests cannot be entirely absent.

The Soviet Union and the PRC have proved to be relatively prudent powers under their current leadership, although some of their client states appear to suffer from periodic excesses of revolutionary exuberance. Challenges may therefore arise even though the great powers do not wish to initiate them. Whatever the case -- and the future is clouded with uncertainty -- there is no doubt about the very large military capabilities at the disposal of the USSR. What is more, these capabilities continue to grow. In our prices, the Soviets now devote more resources than the United States in most of the significant categories of defense. In overall Research and Development, they outstrip us by 20%; in General Purpose Forces by 20%; in Procurement by 25%; and in Strategic Nuclear Offensive Forces by 60%.

What is more, we are now beginning to witness in the Soviet Union the largest initial deployment of improved strategic capabilities in the history of the nuclear competition. How far it will go we do not yet know, but there is no doubt that these new ICBMs -- with larger throw-weights, MIRVs, and improved accuracies -- combined with significant improvements in their sea-based missile force, will give the Soviets a much more powerful strategic offensive force, even within the constraints of Vladivostok.

At the same time, the Soviets have continued to strengthen their general purpose forces and provide large amounts of military assistance to other states. One of the more impressive feats performed by the Soviets during the past five years is to have built up their forces in the Far East to a strength of more than 40 divisions without any diminution of their capability west of the Urals. In fact, during the past year, there have been both qualitative and quantitative improvements in the forces oriented toward NATO, and the Center Region of the Alliance still faces a deployed force of about 58 Warsaw Pact divisions, with the possibility that at least 30 more could be added from the USSR alone within a relatively short period of time. The northern and southern flanks of NATO face smaller but nonetheless formidable forces as well.

While we have heard a great deal about U.S. forward based systems with nuclear capabilities, remarkably little has been made of the large number of non-central nuclear systems that the Soviets deploy, some of which -- under certain circumstances -- would be capable of hitting parts of the United States, most obviously Alaska. It is noteworthy, in this connection, that the President was unwilling to compensate the Soviets for our forward based systems in the negotiations at Vladivostok.

What we have to recognize, in sum, is that: first, the United States continues to have large and growing interests in an interdependent world even as it faces a number of problems at home; second, the areas of greatest interest to the United States are

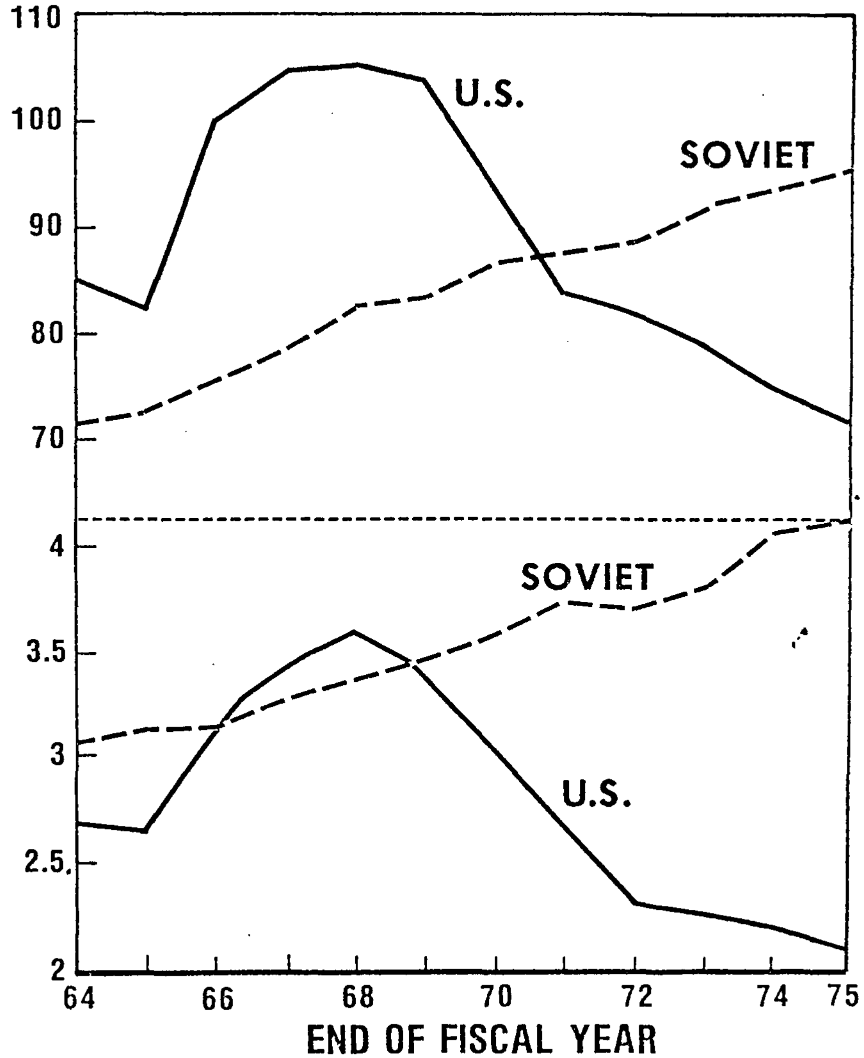
SOVIET — U.S. DEFENSE EXPENDITURES AND MILITARY MANPOWER

DEFENSE EXPENDITURES

(Billion 1973 Dollars, excludes military assistance and civil defense)

MILITARY MANPOWER*

(Millions)



* As a result of further data, a new analysis of the number of personnel assigned to the command and general support portions of the Soviet Armed Forces is underway. There are a number of individuals assigned to supply, research, and training elements for whom we have not yet accounted.

beset by a number of internal and external difficulties; third, despite detente, the sources of potential differences and conflict among the powers remain numerous; and fourth, large and diversified military capabilities remain in the hands of powers with whom our relationships have to some degree improved, but powers who have not traditionally wished us well or looked with cordiality upon our interests.

2. The U.S. Role

A major issue that we must face as a nation concerns the degree of initiative and leadership that the United States should provide in the face of these global complexities. As a result of events last year in the Middle East, no one can doubt that the world has become truly interdependent and that American citizens remain vitally concerned with its evolution. Clashes in various parts of the world have demonstrated the importance of U.S. diplomatic efforts both to foreign governments and to our own citizens. And we are all aware that we have become vulnerable to nuclear attack. It is also quite obvious that the United States will remain one of only two superpowers for many years to come. For that very reason, however passive and restricted our role in specific situations, we will loom as a major factor in the calculations of other nations, and many of them will seek to involve us in their affairs. Such was the case in the earlier part of this century; it is even more so now.

But none of these realities mean that we must take initiatives, try to shape the future to our ideals, work toward results favorable to our interests, or forestall unwanted challenges. In principle, at least, a relatively passive policy, a sense of limited liability, and a minimal military posture are alternatives that are open to us.

Some of our citizens might even find favor in such a role, provided that their own particular oxen were not gored in the process. An active foreign policy implies risks, but so does passivity. There is no risk-free policy. In the face of uncertainty and a not altogether friendly world, it is more prudent to shape the future by our own actions than to let others do it for us.

It is also worth recalling that a number of factors, in addition to our diplomatic relationships with the Soviet Union and the People's Republic of China,have changed during the last generation.

-- The United States, while remaining the great arsenal and reserve of democracy, has also joined its first line of defense; moreover, it is alone as the superpower of the non-communist world.

-- It is all well and good to add up the population and gross national product of the European Economic Community and pretend that it is a substitute for the United States; but it will be many years before the nine members of the Community can act with the unity, coherence, and efficiency that we command.

-- In the meantime, despite the promising dialogues begun with the USSR and the PRC, it would surely be unwise to forego the maintenance of a balance of power in critical areas of the world.

Perhaps all will go well without the maintenance of such balances and the deterrence of hostile acts that go with them. Perhaps we can now depend on the good will of others to preserve the independence and territorial integrity of our friends and the protection of our farflung interests. But we ought not to tempt fate in that particular fashion. That being the case, there is no alternative to a strong defense establishment for the United States as a basis for its continued leadership in the world.

Moreover, there is little reason why we should expect this requirement to change in the future. Despite our hopes for detente and an end to the cold war, we have been driven out of the Paradise of isolation and noninvolvement which characterized the America of the nineteenth and early twentieth centuries; and as Thomas Wolfe reminded us in another connection: We can't go home again. No longer can we expect other nations by themselves to man the front lines of freedom. No longer can we depend on the strength of our allies to buy us the time to expand our defense production base, to mobilize and deploy our forces, to learn the lessons of the conflict from the mistakes of others, and to turn the tide of war in our favor. The luxury of time -- and the old role that went with it -- are gone, perhaps forever.

In these circumstances, barring the millennium, ready military power will continue to be necessary; without it, anarchy will ensue. As President Ford has pointed out: "A strong defense is the surest way to peace. Strength makes detente attainable. Weakness invites war...." In a volatile world, a credible deterrent capability is essential to our well-being. The real issue thus is hardly one of need; it centers on the types and magnitudes of deterrent forces that we must have.

3. The Basis for Planning

A world in which so many conditions are changing simultaneously makes it difficult to state with precision what those types and magnitudes of forces should be. But as a very great power in the forefront of world politics, we cannot afford to play the accordion with our military posture any longer. As long as interests differ among the powers and competition continues (however muted), we must aim for an economical and stable defense posture that is suitable to the environment and that we can sustain over the long haul.

The movement toward detente with the USSR and the PRC may seem to suggest that such a posture can be very minimal indeed. Before we reach that conclusion, however, we would do well to remember that where the USSR is concerned, we can reasonably expect:

-- a relaxation but not an eradication of tensions with the United States;

-- a move away from the risk of direct military confrontation with the United States (as long as we maintain our military strength), but not at the sacrifice of any major interests as perceived by Moscow;

-- a continued pursuit of and even an increase in the ideological struggle;

-- the maintenance of a relatively closed society and a cloak of great secrecy around the decisions of her government;

-- a belief that the atmosphere of detente has arrived because, as the Soviet leadership might put it, the correlation of forces has begun to shift in their favor;

-- the continued allocation of major resources to a strong and growing military posture, and a singularly persistent effort to create a balance of military power more favorable to the USSR.

With the differences that exist between our own social system and that of the USSR, and with the differences in political and economic objectives, it would be surprising indeed if there were not an extended period of time between the first steps toward detente and the more deeply cooperative relationship to which we aspire. Meanwhile, we must anticipate that moments of cooperation and agreement will alternate with periods of dispute and competition. In such circumstances the risk of confrontation, crisis, and miscalculation will remain present -- as has been the case in the recent past. No one should be under any illusion about the extent, availability, and readiness of American military power should comparable cases arise in the future. A minimal military establishment will hardly meet the requirements.

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This concern should not be taken as opposition to a reduction in military arms and budgets. On the contrary, the Department of Defense has urged and still urges and encourages progress toward the equitable control and reduction of both strategic nuclear and general purpose forces. Arms control agreements such as the President has initiated at Vladivostok not only remove uncertainties from the process of military planning; they also offer hope of reducing the costs of the arms competition and removing some of the tensions and suspicions that invariably accompany accelerations in the competition. Precisely for these reasons, the Department of Defense supports the earliest possible effort on the part of the United States to lower the currently agreed ceilings on strategic delivery vehicles below 2,400.

Even as we support and actually desire arms reductions, we must be realistic in our expectations of how much can be accomplished in the near term. The actual removal of all nuclear forces from the arsenals of the world -- however desirable -- is not something that we can seriously anticipate, and the knowledge of nuclear fission and fusion is likely to be with us as long as the human race survives. This equally obvious but often-neglected prospect also holds true for the general purpose forces where, as yet, we have made little progress in the direction of arms control.

The main point, however, is that even if we continue to move forward on the arms control front, and even if successive constraints are imposed on the major military establishments, we will still have to engage in force planning within these constraints.

There are a number of principles that should guide our planning under these conditions.

First, our forces -- together with those of our allies -- must be a function, not of internal political disputes, but of our needs in light of the capabilities and programs of potential adversaries.

Second, we must avoid unilateral reductions in the baseline posture that we consider appropriate to our interests; in a period of transition and uncertainty, reductions should result from international agreement rather than from temporary budgetary exigencies or the impulse to set a good example for the other side.

Third, we should nonetheless continue to strive for the utmost efficiency in the use of our scarce defense dollars and, as long as our baseline force requirements are not fully met, continue to convert excess overhead and support into increased combat power.

Fourth, our planning should abide meticulously by the spirit as well as the letter of existing arms control agreements and guidelines; in fact, we should plan toward the Vladivostok goals and our desire for other equitable agreements.

To proceed otherwise -- and particularly to engage in unilateral force reductions -- will not foster further detente and arms control. Instead it will simply create the kind of weakness that invites miscalculations, probes, tests, and the risk of disaster. Despite frequent use of the term "arms race," the United States has not engaged in the life-or-death competition that occurred among the European powers in the 1930's; and our defense budget, both as a percent of GNP and in its decline (in constant dollars), is a clear reflection of that fact. Indeed, we have been engaged in the rather peculiar process of reducing our defense budget in real terms while the Soviets have been raising theirs.

That, unfortunately, is the problem confronting us. We may be facing a situation where the Middle East is the potential tinderbox that the Balkans actually were in 1914, and where our international economic problems bear some resemblance to the 1930s, when international financial institutions and economic structures deteriorated and the Western powers turned inward and became weaker. In such an era, civility is essential, but it should be armed civility joined with prudence. Thus, while we should take other capabilities into account, our planning objectives should be to:

-- assure that no potential adversary achieves unilateral advantage over the United States.

-- leave unchallenged the Soviet capability for deterrence provided that our interests are respected and the traditional norms of international behavior are accepted.

In the present era, with so many sources of possible conflict, these principles and objectives -- we believe -- constitute the only prudent bases for planning.

4. Toward Long-term Deterrence

In the period prior to World War II, we could think of deterrence as based essentially on one type of capability -- our non-nuclear forces. Even then we believed in a strong "forward defense" symbolized by a Navy second to none (and insisted on the principle of parity with Great Britain in the Washington Naval Treaty of 1922), a small regular army, and a mobilization base on which to build and equip major land and air forces. But because of distance, powerful friends in Europe, and the assumption that we would have the time to mobilize, we could afford a defense budget that constituted no more than 2% of the GNP.

Now, however, all that has changed. The role of the United States has grown dramatically since World War II. Perhaps even more important, the technology of warfare has undergone a dramatic transformation. After 30 years, we are still struggling to adapt our concepts of conflict and its deterrence to nuclear weapons that range in yield from the sub-kiloton to the multi-megaton; to delivery systems that can travel intercontinental distances in 30 minutes; and to improving accuracies that apply to short-range as well as long-range delivery systems and to high explosive as well as to nuclear warheads.

In the 1950's, some nations in the Western Alliance, including the United States, made the intriguing and convenient discovery that there was a phenomenon called deterrence, painless in that it would supposedly work without the unpleasant necessity of anyone being seriously prepared to fight. Even more miraculously, it turned out (or so it was alleged) that deterrence was low in cost -- in contrast to defense. This observation led to the advocacy by some of reduced defense capabilities. Churchill himself spoke of safety as "the sturdy child of terror, and survival the twin brother of annihilation." Even now, deterrence is distinguished from defense and described as "the means of inflicting unacceptable damage in case of aggression..."

At base, however, this is nothing but a dangerous illusion, and most serious students of the subject have recognized it as such as the nuclear predominance of the United States has disappeared. Deterrence is not a substitute for defense; defense capabilities, representing the potential for effective counteraction, are the essential condition of deterrence. This simple truth becomes especially evident in a crisis, when forces designed only for "deterrence" are increasingly found to be lacking in credibility both to opponents and to their potential users.

Deterrence, in other words, is not something free-floating that exists independently of a credible, implementable threat. It requires the most careful structuring of forces that is fully consistent with an agreed-upon strategic concept. By contrast with the 1950's, when the great nuclear superiority of the United States concealed any basic deficiencies in strategic analysis and force structure, it is now evident that deterrence does not simply derive from a pile of nuclear weapons -- a pile which one anticipates, at least, will frighten one's opponents as much as the people it is designed to protect.

In the 1950's, you may also recall, there was some misunderstanding of the need for balanced military forces as opposed to simple reliance on nuclear retaliation. The "Fifties", if nothing else, were a period during which many institutions became excessively intrigued with the novelty of nuclear explosives. There is some evidence that the academic community has not recovered from the novelty yet.

More recently, illusions somewhat similar to those of the "Fifties" regarding deterrence have emerged about detente. Only detente exercises an even more powerful magic since it is believed somehow to obviate the need for both deterrence and defense. But we should make no mistake about it: there is no conflict among detente, deterrence, and defense. They are inextricably bound up with one another in the maintenance of an equilibrium of power.

A relatively closed society like the Soviet Union has no difficulty in pursuing detente and simultaneously strengthening its defense efforts. Under such circumstances, this nation should be under no illusions about the need to maintain a military balance and all the capabilities that go with it. If indeed we are to maintain a military posture second to none, there is no substitute for the hard, costly, and unremitting effort required to keep up the nation's defense.

For more than a decade now, it has become generally accepted (regardless of administration or party) that credible deterrence must, among other factors, rest on a TRIAD of capabilities -- strategic nuclear, theater nuclear, and non-nuclear forces. Each component serves as a deterrent to its opposite number and, together, they interact to enhance deterrence over the spectrum of possible conflicts. If we do not have the full TRIAD, in other words, an opponent might be tempted to exploit the gaps in our deterrent.

The main components of our deterrent forces will be discussed in detail later on in this Report. Here, I simply want to review three key military balances: the strategic nuclear balance, the military balance in Central Europe, and the worldwide maritime balance. The importance of our strategic mobility forces should also be underlined.

5. The Worldwide Military Balance

These three main balances do not cover all of the elements that we must consider in assessing the worldwide military balance that is the objective of U.S. and allied military programs. Of increasing importance, for example, is the comparative U.S. and Soviet capability to project military power into potential crisis areas. Until recently this comparison did not concern us because Soviet capabilities to deploy and support military forces at some distances from its borders were negligible. The issue will be a matter of increasing interest to us in the years ahead as the strategic mobility of Soviet forces improves.

Another aspect of any comprehensive assessment of the worldwide balance is the contribution of U.S. overseas deployments outside of Europe, for example in Korea. These forces help maintain local balances and form U.S. strongpoints in the worldwide balance.

To assess all of these balances with confidence is difficult. U.S. and Soviet forces are different in many ways. Organizational, doctrinal, and weapon asymmetries have developed as a result of differences in historical experience, weapons design philosophy, relative resource scarcities, geography, and other factors. In the case of the three key balances that will be reviewed, there are larger and larger asymmetries as one passes from strategic nuclear forces, to the conventional forces in NATO (in which the Center Region receives so much attention), to the air and naval forces. Simple comparisons based on counting numbers of weapons and men, even if qualified by the differing technological quality of the weapons, tell only part of the story.

6. The Strategic Nuclear Balance

Credible strategic nuclear deterrence depends on the satisfaction of four major requirements. First, we must maintain an essential equivalence with the Soviet Union in the basic factors that determine force effectiveness. Because of uncertainty about the future and the shape that the strategic competition could take, we cannot allow major asymmetries to develop in throw-weight, accuracy, yield-to-weight ratios, reliability and other such factors that contribute to the effectiveness of strategic weapons and to the perceptions of the non-superpower nations. At the same time, our own forces should promote nuclear stability both by reducing incentives for a first use of nuclear weapons and by deterring and avoiding increased nuclear deployments by other powers.

The second requirement is for a highly survivable force that can be withheld at all times and targeted against the economic base of an opponent so as to deter coercive or desperation attacks on the economic and population targets of the United States and its allies.

The third requirement is for a force that, in response to Soviet actions, could implement a variety of limited preplanned options and react rapidly to retargeting orders so as to deter any range of further attacks that a potential enemy might contemplate. This force should have some ability to destroy hard targets, even though we would prefer to see both sides avoid major counterforce capabilities. We do not propose, however, to concede to the Soviets a unilateral advantage in this realm. Accordingly, our programs will depend on how far the Soviets go in developing a counterforce capability of their own. It should also have the accuracy to attack -- with low-yield weapons -- soft point targets without causing large-scale collateral damage. And it should be supported by a program of fallout shelters and population relocation to offer protection to our population primarily in the event that military targets become the object of attack.

The fourth requirement is for a range and magnitude of capabilities such that everyone -- friend, foe, and domestic audiences alike -- will perceive that we are the equal of our strongest competitors. We should not take the chance that in this most hazardous of areas, misperceptions could lead to miscalculation, confrontation, and crisis.

Our current and programmed capabilities continue to satisfy these four requirements of strategic balance and deterrence. The forces which fulfill these objectives are a triad of bombers, ICBMs and SLBMs. Each leg of the triad is not required to retain independently a capacity to inflict in a second strike unacceptable damage upon an attacker. Instead, the three legs of the triad are designed to be mutually supporting. Our sea-launched ballistic missile (SLBM) force provides us, for the foreseeable future, with a high-confidence capability to withhold weapons in reserve. However, some of the POLARIS submarines are nearing the end of their useful life, so we must now plan for their gradual replacement. In doing so, we should make certain that we are insured against major improvements in antisubmarine warfare (ASW) by improving the performance of both the successor submarines and the missiles that will replace the POLARIS A-3 and the POSEIDON C-3. The TRIDENT program provides that hedge and deserves continued support.

The ICBM force, the heart of which is the MINUTEMAN series, continues to give us the accuracy, flexibility, and control necessary to deal with and thereby deter a wide range of attacks on military targets. It provides the most reliable source of limited response options so essential to nuclear deterrence under conditions of nuclear parity. The combination of silo-upgrading and a new understanding of the problems the Soviets would face in mounting a preemptive counterforce strike -- the so-called "fratricide" effects -- holds the promise of extending the period in which we can feel confident of the survivability of our ICBM force. This assumes that the Soviets exercise restraint in their own developments and deployments.

The Soviets have already begun what will be a very substantial, indeed unprecedented, deployment of large new ICBMs in the first quarter of this year. However, if the principles and spirit of Vladivostok prevail, our response can be quite restrained. We should continue improvements in our command and control systems to enhance the flexibility and responsiveness of our strategic systems. For credibility in limited options, we should make modest improvements in the accuracy of the MINUTEMAN III by taking advantage of the capability inherent in its current guidance system. And we should increase the range of yields available for our nuclear warheads, in part to compensate for the uncertainties that always surround the accuracies of all-inertial guidance systems when used under real-world conditions.

The most tried and tested of our strategic retaliatory forces -- the heavy bombers -- continue to interact with our ICBMs to heighten the survivability of both. At the same time, they provide us with a hedge against failures in our other retaliatory capabilities and complicate the Soviet defense problem. For some years, we kept 50% of the force on a very high alert; subsequently we reduced it to 40%. Now, unless the Soviets prove remarkably aggressive in their offensive and defensive programs, we can reduce the alert rate still further -- to 30% -- and transfer some of the tanker force to the reserves.

The last B-52 was produced in 1962. It should be clear, therefore, that if the heavy bombers are to continue their contribution to deterrence, we must plan for their modernization and the replacement of at least some portion of the B-52 force. Accordingly, continued but measured development of the B-1 is essential as a basis for any future production decision. Such a decision does not need to be made for at least another year. A special contribution of the bomber is the massive complications it introduces into any attack plan directed at U.S. strategic forces. Survivable aircraft render unattainable any credible coordinated surprise strike against U.S.-based systems. In addition, bombers complicate Soviet force management decisions, resulting in substantial air defense expenditures. Air defense is the aspect of Soviet defense programming which this nation finds least disquieting.

Our modest but productive civil defense program also warrants continuation. I say this not because we plan to embark on any grandiose program of damage-limiting; the ABM treaty effectively precludes such an effort in any event. The value of the current program is that it contributes to deterrence in a crisis and offers the prospect of saving American lives in the event that limited and coercive nuclear attacks should actually occur.

Finally, because no significant long-range bomber threat to the United States now exists, and because -- with the ABM treaty -- we have recognized the difficulty of implementing a full-scale damage-limiting posture, we can rely on a reduced CONUS anti-bomber defense capability. At the same time, as a hedge, we can draw on our tactical theater-defense training forces for CONUS defense in an emergency since, for the most part, they are based in the United States rather than overseas.

There are several aspects of this overall strategic posture, and the programs that go with it, that deserve attention:

-- While it contains some counterforce capability, neither that capability nor the improvements we are proposing for it should raise the specter in the minds of the Soviets that their ICBM force is in jeopardy.

-- In addition, this improved hard-target-kill capability will not threaten the growing Soviet SLBM force.

-- It follows that we do not have and cannot acquire a disarming first-strike capability against the Soviet Union. In fact, it is our decided preference that neither side attempt to acquire such a capability.

To sum up the existing situation, we have a good second-strike deterrent, but so does the Soviet Union. Although the two forces differ in a number of important respects, no one doubts that they are in approximate balance. There are, in short, no immediate grounds for fears about bomber or missile gaps. To go further, however, we would welcome reductions in these forces provided that the Soviet Union were willing to reciprocate in an equitable fashion.

As we convert the principles and guidelines of Vladivostok into the specifics of a 10-year agreement, this basic situation should continue to prevail. However, there are two uncertainties against which we should continue to carry insurance. A major uncertainty is the manner in which the Soviets will attempt to exploit their throw-weight advantage. The throw-weight of the Soviet ICBMs will continue to exceed that of the U.S. MINUTEMAN force by a very substantial amount -- perhaps by as much as a factor of six (unless the United States also increases its ICBM throw-weight). This throw-weight, combined with several thousand high-yield MIRVs and rapidly improving accuracies, could come to jeopardize the survivability of our fixed, hardened ICBM force.

Such developments would not give the Soviet Union anything approximating a disarming first strike against the United States. One reason for this is that less than 25% of the U.S. strategic deterrent capability measured in terms of missile and bomber warheads resides in fixed ICBMs. But such a development could bring into question our ability to respond to attacks in a controlled, selective, and deliberate fashion. It could also give the Soviets a capability that we ourselves would lack, and it could bring into question the sense of equality that the principles of Vladivostok so explicitly endorse. Worst of all, it could arouse precisely the fears and suspicions that our arms control efforts are designed to dispel. Thus it is important that we continue to pursue programs that will permit us various options for responding to the growing Soviet counterforce threat against our fixed ICBMs.

You will recall in this connection that last year's program of strategic "initiatives" was justified on three major grounds. First, great uncertainty then existed as to the nature of any follow-on to the Interim Offensive Agreement of 1972 that we might be able to achieve. Second, essential equivalence was established as a fundamental criterion in the design of our strategic forces. Third, how far we went with these "initiatives" should depend on the evolution and pace of the Soviet strategic programs.

There now are fewer uncertainties about a successor to the Interim Offensive Agreement. But the other reasons for pursuing these "initiatives" remain strong, as I shall indicate later.

With a continuation of these "initiatives", and with the other programs outlined herein, I am confident that we can maintain a balance with the Soviet Union and assure a highly credible second-strike strategic deterrent within the framework of existing and future SALT agreements. Without these programs, however, I can give no such assurance.

7. The Balance of Power in Central Europe

Last year I pointed out that we plan our general purpose forces on the assumption that, in conjunction with our allies, we should be able to deal simultaneously with one major attack and one lesser contingency. The major contingencies that we consider for force planning purposes are attacks in Central Europe and Northeast Asia, although we do not ignore such areas as the Middle East. In addition, I believe that collective security and deterrence require us to maintain an initial defense capability primarily in our active forces, a long-war hedge in our reserves, and several strongpoints or deployments overseas from which our forces can move rapidly to deal with such threats to our interests as might arise. Central Europe is the most important of these deployments, in large part because of the powerful forces from the Soviet Union and its allies that lie in such close proximity to it.

Our association with NATO now dates back more than a quarter of a century and there is general agreement that we should continue it. Despite occasional differences among allies, most of us recognize that Western Europe, Canada, and the United States are inextricably linked by a number of political, economic, and cultural ties. Despite the failures of the 1920s and 1930s, we share a common interest in collective security and the deterrence of aggression. What tends to be at issue is not the importance and continuing desirability of the association, but the continued presence of a large U.S. military contingent in Europe combined with the capability to reinforce these ground and air forces substantially on very short notice.

In an age of essential nuclear parity, few of us would be happy with a concept for the defense of Western Europe that was heavily dependent on an early recourse to nuclear weapons. Most of us would agree, once having looked at the facts, that a non-nuclear defense of Western Europe is feasible. It also is desirable, from the standpoint of deterrence, that such a defense should be backed up and reinforced at all times by theater nuclear forces. The existence of deployed conventional and theater nuclear forces in sufficient strength reduces whatever temptation there may be for the Warsaw Pact to probe the cohesion and determination of the Alliance.

Nevertheless, while the reasons for it vary, some form of proposal to withdraw at least a portion of our forces from Western Europe has become an annual event. The arguments for withdrawal are now familiar. Our forces have been deployed in Europe for nearly a generation. Our Allies, in the aggregate, have become prosperous and are amply endowed with manpower.

In fact, while it is true that the deployment of U.S. forces to Europe has contributed to the U.S. balance-of-payments deficit in the past, the major cause of that deficit has been the difficulty with our commercial account. Nevertheless, we have encouraged the Allies to offset our military balance-of-payments in Europe and the Allies have responded favorably. The United States recently concluded one of several two-year bilateral offset agreements with the Federal Republic of Germany which -- when coupled with other Allied purchases of military-related equipment in the United States -- should be sufficient to offset total U.S. defense balance-of-payments expenditures in NATO Europe during FY 1974.

Now, in any event, our financial problem is of a different order. The balance-of-payments drain is from the West to OPEC. This drain is particularly acute in the case of Japan and Western Europe. In the current situation, we must be careful of the demands we place on our Allies, lest we be guilty of the "beggar thy neighbor" approach which President Ford has deplored.

It continues to be argued, nonetheless, that burdens can and should be more equitably shared among the Allies, despite current economic difficulties. Furthermore, the Soviet Union faces problems to the East that are alleged to divert her attention and, in any event, detente is here. Why then, has the time not come for a change?

To answer the question: this Administration is indeed prepared for change, but only if it takes place in the East as well as the West. Reductions are to be applauded, but they must be mutual and balanced force reductions.

Short of such reciprocity, however, there is a case for a strengthened military posture in NATO, even after 25 years, and the case for additional strength is very strong indeed. Despite significant reductions in overall U.S. force levels since 1969, despite detente, despite a major Soviet buildup on the Sino-Soviet frontier, we have to consider the following facts:

-- The Soviet Union alone still deploys 27 of its first-line divisions in East Germany, Poland, and Czechoslovakia. Another 4 Soviet divisions still stand guard in Hungary.

-- Other Warsaw Pact forces in the same area bring the total to more than 58 divisions, over 930,000 men, and about 2,900 tactical aircraft.

-- The ground forces have at their disposal more than 16,000 tanks and hold to a tactical doctrine of rapid armored thrusts that bears a strong family resemblance to what we used to call blitzkrieg.

As matters now stand, NATO has the capability and the resources to attain a more equal balance with the Pact even though it deploys a smaller number of divisions and has certain serious vulnerabilities that we are working to correct. Our U.S. Army, Europe (which we plan to strengthen by two brigades and other ground combat elements) and U.S. Air Forces in Europe (which we also plan to strengthen), all in compliance with the Nunn Amendment, represent a critical numerical and psychological factor in the current, somewhat precarious, equilibrium. If they were withdrawn or seriously reduced without reciprocity from the USSR, this capacity for a military balance would be badly upset. Furthermore, we would lose the foundation for rapid reinforcement from the United States to counterbalance any Soviet buildup that might occur, whether under relatively normal conditions or in a crisis. After thirty years, the peace of Europe would once again be at risk.

In other words, the choice here is the same as we face in so many other areas of foreign policy and national security. We can withdraw our forces and hope either that other countries will replace them, or that the Warsaw Pact will continue to exercise restraint. That is, we can depart from an area of great and enduring interest to us and let decisions about its fate be made by others. Or -- politically and militarily -- we can help to ensure the establishment of a balance of forces in Central Europe and nudge events in directions that are favorable to our interests.

Perhaps matters would proceed satisfactorily without our presence. Perhaps good will and mutual security would flourish precisely because of the departure of the only superpower in the West. Perhaps the bear would cherish the lambs in our absence. Perhaps..., but we should not count on it. As has been noted in the past, it is useless for the sheep to pass resolutions in favor of vegetarianism while the wolf remains of a different persuasion.

Accordingly, while there are costs and risks to being steadfast, we should not forget that there are advantages as well. The Congress has been in the forefront of those who have recognized and articulated these advantages for more than a generation. Now, as we gradually reap the rewards of standing fast, we should not think of retreat.

8. The Maritime Balance

As was emphasized in last year's Annual Report, it is essential that the United States, together with its allies, maintain naval forces that are widely regarded as at least equal in capability to the naval forces operated by the Soviet Union and its allies.

In assessing this balance, one should start by noting the substantial differences in geography, national policy, and alliance systems that dictate differing U.S. and Soviet naval missions and force structures. The United States and most of its principal allies depend fundamentally on use of the seas for their trade and commerce in peacetime and for their lines of communication in war. They also depend heavily on the strategic mobility provided by long-range airlift. The USSR and its allies currently do not. Because of this basic asymmetry, the primary conventional naval missions of the two superpowers and their respective allies differ in several respects:

- The United States and its allies emphasize sea control and the projection of power ashore through attack carriers and amphibious forces. The U.S. Air Force also contributes to the mining and sea surveillance and control missions.

- The Soviet Union, at least for now, stresses defense against U.S. power projection efforts and interdiction of U.S. and allied military and economic support shipping on the open oceans.

Both sides are interested in showing the flag in peacetime and in surging deployed naval forces in a crisis, as has happened on several occasions in the Mediterranean. In this connection, it is important to emphasize long-term flexibility in the employment of our major naval units. If commitments are too fixed, they will dictate the tempo of operations of the programmed forces and reduce flexibility.

Based on recent assessments of the maritime balance, six general conclusions are warranted.

First, confusion arises about the balance because of the asymmetry between the forces and their missions. Soviet naval forces emphasize an antiship capability. This capability is distributed among a large number of ships, most of which are small in comparison to our ocean-going units. U.S. forces, on the other hand, tend to concentrate striking power in a relatively small number of aircraft carriers. The carrier's escort ships emphasize defensive weaponry. In general, our units are larger, more sophisticated, and have a greater capacity for sustained action -- advantages which tend to offset their somewhat smaller numbers. In addition, what is often overlooked, our Allies add significantly to overall U.S. strength, particularly in a NATO war; Pact allies add very little to the strength of the Soviet fleet.

Second, once one removes the mission asymmetry and measures the balance, it becomes clear that the naval forces of the Soviet Union and its allies are not generally superior to those of the United States and its allies, and that this should be perceived by well informed observers. Nonetheless, U.S. naval power has suffered a serious decline and must be resuscitated.

Third, the Soviet Navy has developed a formidable force for the protection of Soviet and Pact territory from attacks by U.S. sea-based tactical air and amphibious forces. This force consists of surface ships, submarines, and long range aircraft. Many of these units are armed with cruise missiles, an innovation in naval warfare which greatly increases antiship striking power and partially substitutes for the Soviet lack of carrier-based tactical air.

Fourth, the Soviet Navy possesses strong capabilities for attacks on U.S. and allied shipping on the open oceans. Should they concentrate their long-range aviation and submarine forces exclusively on this mission, their interdiction potential would be substantial. In view of the heavy U.S. and allied dependence on use of the seas, particularly during any sustained conflict in Europe or Northeast Asia, and considering the capabilities of the Soviet Navy for antiship operations, it would be imprudent to assume that the Soviets would not allocate a significant part of their naval forces to an effort at interdicting our sea lanes.

Fifth, the United States and its maritime allies could suffer significant but not prohibitive shipping losses if the Soviets were to conduct a major antishipping campaign. In time, however, U.S. and allied sea control forces would exact heavy attrition on the enemy's long-range forces, and would regain firm control of the sea lanes in the Atlantic and Pacific. Although shipping losses might be heavy, the net effect on the U.S. and allied war effort would not be crippling.

Sixth, as far as peacetime naval presence is concerned, aggregate Soviet activity increased sharply in the late 1960s, but now appears to have stabilized somewhat below the overall U.S. level. The Soviets could increase their deployments by raising the operating tempo of their forces. During the Middle East war of 1973, in fact, they demonstrated a significant capability to surge and support naval forces to a greater extent than we had anticipated. However, U.S. forces tend to have a greater surge capability to most theaters of primary interest to the United States and its allies.

To preclude any misinterpretation of these conclusions, which I would characterize as cautiously optimistic, I should emphasize three basic qualifications.

First, the validity of the longer-range aspects of our assessment depends on the assumption that the Navy's current modernization will be completed essentially as planned. To the extent that this fundamental assumption proves false, the risk that our future Navy will be unable to carry out our strategy will grow beyond a prudent level.

Second, as is true of any analytical assessment of a complex problem, our work on the maritime balance reflects many uncertainties, particularly in its treatment of future Soviet policies. The naval programs discussed later in this Report are in some cases sized and structured to provide hedges against the more important uncertainties in our estimates.

Third, there could be plausible situations in which the enemy may have advantages of geography or selection of H-hour (or both) which would severely strain our naval capabilities or temporarily deny us the use of certain parts of the world's oceans.

Subject to these three basic qualifications, if our naval modernization programs are approved by the Congress, I am reasonably confident that the United States, together with its allies, will remain able to defend the essential sea lanes in the Atlantic and Pacific, project power ashore under a wide range of circumstances, continue a strong deployed naval presence, and maintain the necessary maritime balance with the Soviet Union and its clients.

C. TRENDS IN THE DEFENSE BUDGET

For FY 1976, the Department requests $104.7 billion in Total Obligational Authority (TOA). This compares with the $93.9 billion requested for FY 1975 (including the POL and Mideast amendments). Outlays are planned at $92.8 billion, compared with the Department's estimate of $86.8 billion for FY 1975 (again including the Mideast and POL). On this basis, TOA will increase by $10.8 billion and outlays by $6 billion. It should be noted, however, that the Congress allowed the Department only $89 billion in TOA for FY 1975, despite rampant inflation. Outlays for FY 1975 are now estimated at $84.8 billion.

Currently estimated outlays for FY 1976 will constitute 26.6% of the federal budget (compared with 27.1% for FY 1975), and will consume 5% of the capacity output of the Gross National Product (somewhat less than the 5.2% for FY 1975). It should be emphasized, however, that if the President were not to receive the authority to limit federal pay increases to 5% (which will save us $1.8 billion), and if the Department were not to acquire the receipts from the production of oil at Elk Hills (currently estimated at $400 million), defense outlays for FY 1976 would rise to $95 billion instead of $92.8 billion.

Of these planned outlays, $6.9 billion will go to military retired pay alone; and another $42.3 billion is required for compensation of civil service and active duty military personnel. This total of $49.2 billion represents 53% of our proposed outlays for FY 1976.

Although TOA for FY 1976 appears to increase by $15.7 billion, the bulk of the increase is intended to deal with the effects of past and current inflation. Although there is a real increase in TOA from the eroded FY 1975 base, there is an actual decrease from the amount projected last year in our rolling 5-year defense plan. In fact, as a result of underestimates of inflation during the past two years, the Department is not able to buy $10 billion in contracted goods and services authorized and approved by the Congress in FY 1975 and prior-year budgets.

Outlays show an increase of $8 billion over FY 1975. Of this total, $3 billion is for pay increases alone. In addition, purchase prices have risen sharply in recent months. Even if they level off in the near future, our purchasing power in FY 1976 (on a full-year basis) will be considerably less than in FY 1975. Depending upon the overall inflation rate, the real program value of Departmental outlays for FY 1976 will be about the same as for FY 1975. That is to say, we will be able to purchase about the same amounts of goods and services in FY 1976 that we did in FY 1975, despite the seemingly large increase in proposed outlays. By comparison, we compute that Soviet defense outlays, measured in dollars, will rise by as much as 3% in real terms.

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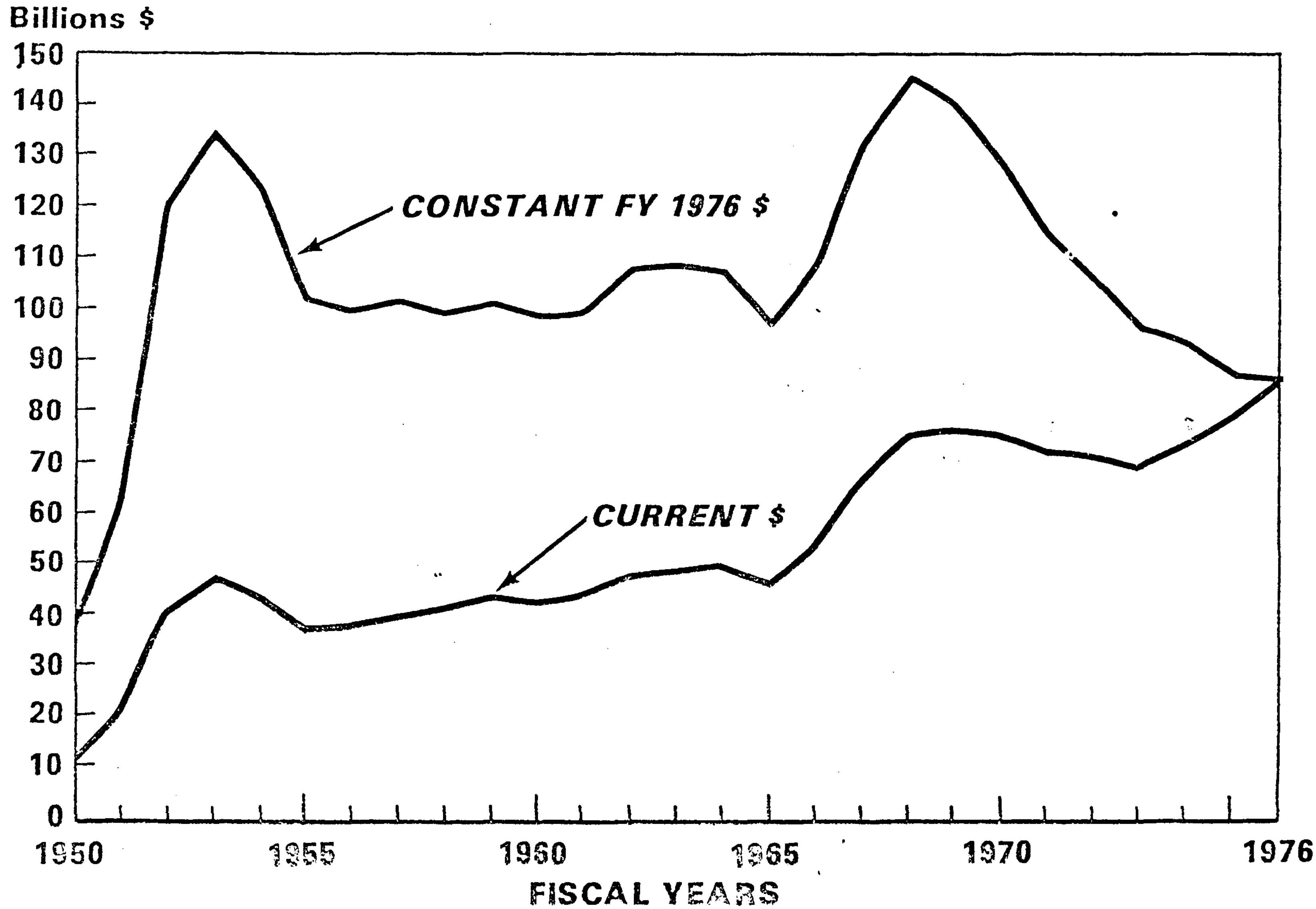
CURRENT AND REAL DEFENSE EXPENDITURES
(EXCLUDES MILITARY RETIRED PAY)



In order to keep our own outlays approximately level in real program value, and at the same time struggle to retain a force structure adequate to the fulfillment of U.S. responsibilities, the Department is taking further belt-tightening measures. Among the most severe are:

-- a reduction of 30,000 in military manpower;

-- a reduction of 9,000 in civil service personnel;

-- a rigid control over the consumption of petroleum.

The Department's five-year projection of future Defense budgets attempts to reverse this downward trend. The forecast shows current estimates of the minimum future financing needed to keep U.S. military forces of adequate size, readiness, and modernization. As shown in the top row of the table on page I-26, Department of Defense TOA will grow at a rate of about $2.8 billion a year in real terms from the proposed FY 1976 budget level of $104.7 billion.

An average of $300 million a year of this $2.8 billion annual increase will be needed to keep pace with projected increases in the population of men and women who will have retired after 20 or more years of service in the armed forces. Increases for development of petroleum reserves, less decreases for military assistance, net to a growth of $.1 billion a year. The remaining $2.4 billion annual increase will be required to provide real (non-inflationary) growth in funding for the modernization and readiness of U.S. forces. This $2.4 billion annual increase, which represents an annual real growth rate of about 2% in the Defense Budget, is needed to cover the additional costs associated with improving the technology of modern U.S. weapon and support systems made increasingly urgent by the continuing technological advances in the military forces of the Soviet Union.

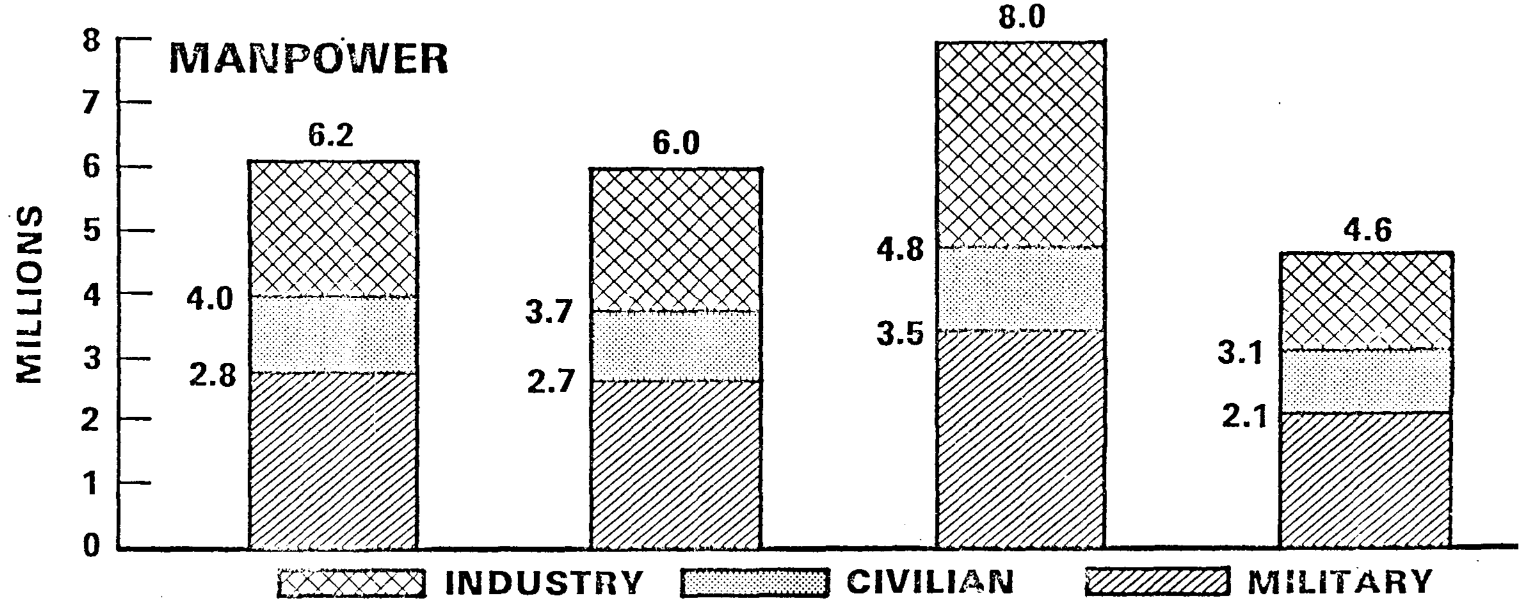
This five-year projection is based on the following general assumptions:

-- A world situation essentially unchanged from today, with the Soviet Union continuing the expansion of its present military establishment while remaining at odds with the People's Republic of China.

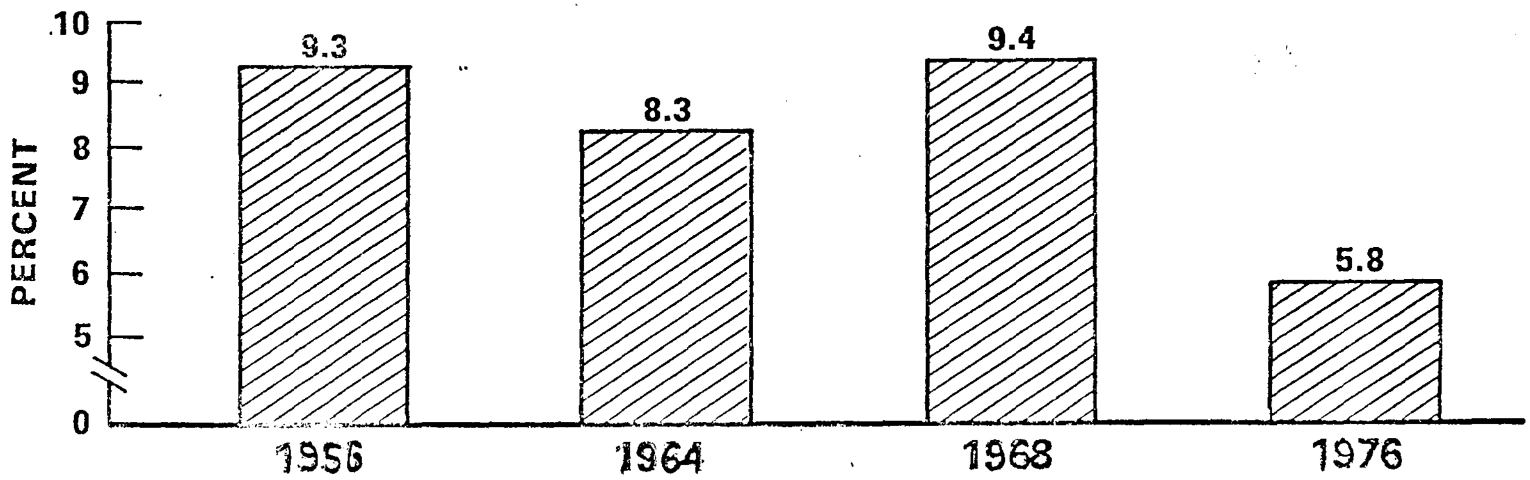
-- A continuing real growth of Soviet defense expenditures at a rate of 2-to-3% a year in dollar terms.

-- Continuation of the current Strategic Arms Limitation Agreements, including implementation of the Vladivostok understanding.

DEFENSE RESOURCES



DEFENSE SPENDING AS A PERCENT OF GNP



-- A relatively constant Defense active and reserve force, measured in military and civilian manpower, with continuing improvements in its combat power at the expense of reductions in headquarters and support personnel. This will result in some additional combat units, such as the planned increase to 16 Army divisions, and a growth in Air Force combat power, without increases in total Defense personnel. Further efficiencies will, of course, be sought in order to convert overhead into restored combat capability.

-- A continuation of the Navy program designed to reverse the recent trend of declining force levels while conforming generally to the requirements of Title VIII.

-- Continuation of the "high-low" force mix concept to avoid over-sophistication in all components of the force and to assure adequate numbers of systems.

-- Assurance of a dynamic RDT&E program, but one constrained in terms of total dollar resources.

-- Continuation of military assistance somewhat below the current level because of a projected decrease in aid to Southeast Asia.

Inflation has already reduced very severely the purchasing power of previous Defense budgets.1/ Current economic forecasts do not anticipate that future inflation will be as severe as it has been in the last 24 months. But there will still be inflation in the United States between FY 1977 and FY 1980. Consistent with current economic forecasts, the second row of figures in the table on page I-26 shows one series of fully inflated, "then-year" obligational authority estimates required to support our five-year projections.

The difference between the two projections is that the second projection includes all the estimated future inflationary price increases beyond those forecast in the Defense Budget for FY 1976. If future inflation is lower than the forecast upon which the projections in the second row are based, these "out-year" totals can be reduced. On the other hand, if inflation is higher than we have forecast, the Department will so advise the Congress and prepare new projections.

Two major points need emphasis here. The first is that projections of future Defense spending which include only the real growth are shown in deflated (constant) prices in the top line of the table. The second is that Defense outlays over this period will continue to decline as a percent of capacity GNP.

1/ For a more detailed discussion of inflation and "real program value," see Appendices A, B, and C.

		Fiscal Year (Total Obligational Authority in billions of dollars)			
Five-Year Projection	1976	1977	1978	1979	1980
In deflated prices	104.7	107	111	114	116
In "then-year" dollars	104.7	117	128	138	148

Before explaining the basis for these requests, it is worth summarizing several assumptions of a more general nature that have guided the Department in preparing this Report.

-- The United States is inescapably the leader of the non-communist world; there is no other country to fulfill our role if we abandon it.

-- Grave challenges face the industrialized nations of the West, and they are as much external as internal.

-- If we are to realize our dreams of domestic progress, we must first stay alive and free.

-- National defense (and the men and women who perform so well in its service) provide an indispensable public good that is the basic duty of this Republic to its citizens.

As you review this Budget and its intellectual foundations, I trust that you will continually ask whether there are any different basic assumptions on which we could or should base our posture of defense.

II. STRATEGIC FORCES

The strategic nuclear forces are the foundation of our military strength. Given our primary objective of deterring attack on ourselves and our allies, it is essential that we remain on equal footing with the Soviet Union in regard to these forces. The Vladivostok understanding not only clearly establishes the principle of equality by setting equal numerical ceilings on the strategic offensive forces of the United States and the Soviet Union, but also provides a point of departure from which we can work toward equitable reductions in the two forces. That is the direction in which we propose to go, once the Vladivostok understanding has been negotiated into treaty form.

Despite its importance, the Vladivostok understanding still does not relieve us of the burden of unilateral planning. Within the ceilings set by the agreement, we must continue to determine what specific objectives we want our strategic forces to serve and what constitutes the most efficient and effective mix of forces for those purposes.

A. THE BASIS FOR THE STRATEGIC NUCLEAR FORCES

It should be clear that deterrence must depend on a capability to respond effectively against the enemy, even after absorbing a first strike. A prospective opponent must, therefore, be aware of that capability, i.e., the ability of our forces to survive his attack and penetrate to their targets. Beyond that, he must be persuaded that in the face of a sufficient provocation, we will actually execute the retaliatory attacks. And we, in turn, must be fully prepared both physically and psychologically to launch those attacks; otherwise the effectiveness of the deterrent will be undermined.

While we tend to talk of deterrence as though it were in continuous operation, it is doubtful that the leaders of the great nuclear powers ask themselves on a daily basis whether they feel deterred. It is only in circumstances of confrontation and crisis that the credibility of the deterrent comes under test; at that point, what may have seemed like a plausible threat under normal conditions may appear grossly inadequate or inappropriate to the situation at hand. For better or for worse, the scientist in the lecture hall who announces that, in response to a Soviet attack on our nuclear forces, we should destroy a hundred Soviet cities and their populations, is unlikely to implement that threat should the situation arise. In addition, theorizing about these matters tends to be too abstract, and does not easily capture the agonizing nature and complex context of these fateful decisions, should they ever arise.

Since we have been fortunate enough never to have undergone such an experience in the thirty years of the nuclear age, the reaction of the policymaker in the face of such an attack cannot be foretold. But he and his advisers will have been exposed to a number of paper wars -- i.e., hypothetical cases in which deterrence has collapsed and our opponent has launched some kind of a nuclear attack. They will know from these exercises that in many circumstances the most suicidal course for the United States -- and hence the least credible course -- would be to strike the population in the opponent's cities. Thus, they quickly come to understand the desirability of being able to retaliate in other ways than by a massive attack against cities.

While the exercises may be hypothetical, the problem is not. The Soviet Union, for example, now deploys a strategic nuclear capability that goes far beyond anything required by the theories of minimum or finite deterrence. Her peripheral attack forces are such as to be able to take under attack every significant target in Western Europe. Her central strategic systems are sufficiently large in number so that she could strike at a substantial number of military targets in the United States, and elsewhere in the world, and still withhold a very large force whose future use we would have to consider in responding.

In addition, the People's Republic of China is slowly but steadily developing a strategic attack force of her own. And, as a result of the Indian nuclear detonation, we are once more aware that the danger of nuclear proliferation is still with us.

Another problem is the difficulty faced by our European and Asian allies. Most of them have no nuclear capabilities; those who do are dwarfed by the immensity of the Soviet strategic and peripheral nuclear attack forces. They still must look to the United States, as they have for thirty years, for some assurance that they cannot be blackmailed into submission by nuclear threats.

The problem is complicated still further by the range of nuclear contingencies that could arise. For planning purposes we have been conditioned to assume as the only contingency a massive surprise attack which comes, usually without motive or warning, as a bolt-out-of-the-blue. The case undoubtedly has its uses, but I would speculate that other contingencies are much more likely. The United States and the Soviet Union have exercised great care in the deployment and control of their nuclear weapons. Other nations may not do as well, and the concern with accidents and unauthorized acts may be with us again. Despite the increasingly stringent measures that we are taking, we cannot totally preclude the seizure or theft of a nuclear weapon and the need for countermeasures. In short, we face a wide range of possible actions involving nuclear weapons, and no single response is appropriate to them all.

There is also the ever present possibility that a conventional conflict might escalate into a tactical or even strategic use of nuclear weapons. Indeed, one of the minor ironies of recent polemics against current defense spending is that the polemicists manage to argue more or less simultaneously that:

-- the nuclear threshold must be kept high;

-- nuclear options will lower the nuclear threshold;

-- long-war conventional capabilities (for antisubmarine warfare, as one example) are unnecessary because conventional conflicts either will be short or will somehow turn nuclear.

I will not attempt to untangle the peculiar logic of this particular position. But it should be evident that the problems on our agenda, both today and in the future, make some of the earlier views of nuclear deterrence totally obsolete. Clearly, our requirements in this realm are for strategic forces capable of providing more than the simple response of a limited or wholesale destruction of cities.

This is not to say that a highly survivable force which can be withheld for substantial periods of time, if need be, and targeted against an enemy's major economic and political assets is irrelevant. Most of us can agree on the need for such a force to serve, at a minimum, as a deterrent to attacks on the cities of the United States and its allies. But to treat such a reserve force as an all-purpose deterrent, as a sovereign remedy for the problems we face, would be the height of folly. To threaten to blow up all of an opponent's cities, short of an attack on our cities, is hardly an acceptable strategy, and in most circumstances the credibility of the threat would be close to zero, especially against a nation which could retaliate against our cities in kind. Granting the need for such a withheld force in order to deter coercive attacks against our cities, we must surely go on to something else if our deterrent is to be credible over a wide range of contingencies.

Last year I pointed out that in addition to such a force, we needed a capability for more limited response options and for rapid retargeting so as to provide the President with the maximum feasible amount of flexibility in a nuclear emergency. In reviewing that requirement, it is worth emphasizing again that:

-- Neither the United States nor the Soviet Union is capable of a disarming first strike against the other; in fact neither side has a high confidence capability of destroying a large fraction of the other's fixed, hard ICBM silos.

-- Neither side, for the foreseeable future, is likely to acquire a disarming first strike capability against the other, even if the fixed, hard ICBM forces become more vulnerable in the 1980s.

-- Because of the Anti-Ballistic Missile Treaty, neither side can deploy a combination of counterforce and damage-limiting capabilities that will have any serious prospect of success; barring carelessness, each side should be able to count on large surviving forces that it can use or withhold for substantial periods of time.

In these circumstances, one may ask, has nuclear strategy not reached a dead-end? As far as the massive attacks that preoccupied us in the 1960s are concerned, that may well be the case. Unfortunately, however, there remain a number of more limited contingencies that could arise and that we should be prepared to deter. I have already mentioned the danger of accidents and unauthorized acts. Our allies have good grounds for asking how we would respond to threats against them from intermediate and variable range nuclear systems. And we cannot rule out the possibility that a desperate or reckless enemy might engage in a nuclear "shot-across-the-bow" by firing at one or more of our military installations.

There is, moreover, another contingency about which we must remain concerned. Since both we and the Soviet Union are investing so much of our capability for flexible and controlled responses in our ICBM forces, these forces could become tempting targets, assuming that one or both sides acquire much more substantial hard-target kill capabilities than they currently possess. If one side could remove the other's capability for flexible and controlled responses, he might find ways of exercising coercion and extracting concessions without triggering the final holocaust.

I mention these contingencies -- and no doubt there are others -- for several reasons. First, we have to assume that, despite the appearance of strategic nuclear stalemate, others continue to explore their strategic and tactical possibilities just as they do their technological opportunities. Second, while many of the contingencies may seem bizarre and of extraordinarily low probability, the consequences of their occurrence could prove catastrophic.

Accordingly, I believe that it is our duty to drive the probability of these contingencies even lower by developing and displaying the capability and the doctrine of flexible strategic response. No potential enemy should believe that we are so rigid, so lacking in capability, or so fearful of the consequences that we cannot respond appropriately (according to our best interests) to any nuclear provocation on his part.

The Command Data Buffer System will help ensure this flexibility by substantially improving our capacity for rapid retargeting of the Minuteman force. As national policy, we shall continue to acquire and be prepared to implement a number of more limited response options. No opponent should think that he could fire at some of our Minuteman or SAC bases without being subjected to, at the very least, a response in kind. No opponent should believe that he could attack other U.S. targets of military or economic value without finding similar or other appropriate targets in his own homeland under attack. No opponent should believe that he could blackmail our allies without risking his very capability for blackmail. Above all, no opponent should entertain the thought that we will permit him to remove our capability for flexible strategic response.

As I pointed out last year, the flexibility that we are developing does not require any major change in the strategic capability that we now deploy. Some modifications in command, control, and communications are necessary and are underway. I believe that our very modest civil defense program should continue; it makes clear to a prospective opponent contemplating a limited strike that, since we can protect our citizens against fallout, we have a credible choice between an all-out response and no response at all.

In addition, I believe that our response options would be enhanced by increased accuracy and a greater flexibility in the yields of the nuclear weapons available to us. In some circumstances, we might wish to retaliate against non-collocated, small soft targets, or facilities near large population centers; high accuracy and a low-yield, air-burst weapon would be the most appropriate combination for those targets. In other cases, we might wish to respond with attacks on a limited number of hard targets such as ICBMs, IRBMs, and MRBMs. The desired combination for these latter targets, especially as long as we have to depend on all-inertial guidance systems, is high accuracy and a higher-yield warhead than we now deploy.

Since any discussion of hard-target kill capability inevitably arouses controversy, I must stress that we are not now seeking to develop the capability to destroy the Soviet ICBM force. We have, as I pointed out last year, a limited hard-target kill capability in our missile forces at the present time, as do the Soviets. Our own capability against ICBMs is modest -- partly because our missiles lack the proper combination of warhead yield and accuracy, and partly because of the complications introduced by the phenomenon known as fratricide. I believe that we should improve our hard-target kill capability so as to have higher confidence of executing limited hard-target attacks. To destroy all of the very hard components of the Soviet ICBM force that are now being constructed or upgraded would require not only major qualitative improvements on our part, but also a large number of high-yield and very accurate reentry vehicles. I am not proposing any such deployment programs here.

A number of other and more general concerns about our response options have arisen during the last year, and I believe that they deserve serious consideration. Accordingly, I will try to address the most salient issues.

One of the most serious allegations is that, with limited response options, we are promoting warfighting rather than deterrence. But such a charge stems, in fact, from an erroneous conception of deterrence. This Administration is no less interested in deterrence than its critics; we recognize that the United States has more to lose from a nuclear war than any other country. But we also believe that our conceptions of deterrence must adapt to the large and growing capabilities of our rivals. Our objective remains deterrence, but modern deterrence across the spectrum of the nuclear threat. And that requires us to be prepared with credible responses to a variety of contingencies. Considering all the risks associated with the use of nuclear weapons, this kind of preparation does not in any way imply an effort to substitute limited nuclear response options for other instruments of military power. It is intended to make nuclear war of any kind less, not more, likely. I cannot help but add, in this connection, that nobody suggests that contingency plans, increased accuracy, or the avoidance of attacks on cities makes either non-nuclear or tactical nuclear war more probable. Why, then, should they make strategic nuclear war more probable?

A somewhat related charge is that, however good our intentions, limited response options will result in a lowering of the nuclear threshold. The fact is, as I pointed out last year, that we have had nuclear options for more than twenty years without their having notably affected the probability of nuclear war. Indeed, to believe that the development of contingency plans (which, after all, is what the search for options is all about) will increase the probability of nuclear use is to underestimate seriously the gravity of the decision to go to war, especially nuclear war. What is more, to the extent that concern about the nuclear threshold is more than hypothetical, the most effective way of keeping the threshold high is to increase the effectiveness and readiness of our non-nuclear forces. History, I believe, will show that on those rare occasions when the use of nuclear weapons was seriously considered in the past thirty years, it was because of the impression that adequate conventional forces were not available to achieve the desired objectives.

Another allegation (not quite compatible with the first two) is that limited response options are illusory because any nuclear exchange would rapidly escalate and that its results, even if the war were confined to military targets, would be indistinguishable from attacks on cities. The implication of this argument is that limited response options are worthless and harmful and that we should bow at least to the rhetoric and the force requirements of minimum deterrence.

Certainly it would be foolhardy to preclude the possibility that a nuclear conflict could escalate to cover a wide range of targets, which is one more reason why limited response options are unlikely to lower the nuclear threshold. But I doubt that any responsible policymaker would deliberately want to ensure escalation, and forego the chance for an early end to a conflict, by refusing to consider and plan for responses other than immediate, large-scale attacks on cities. Surely, even if there is only a small probability that limited response options would deter an attack or bring a nuclear war to a rapid conclusion, without large-scale damage to cities, it is a probability which, for the sake of our citizens, we should not foreclose.

Furthermore, all of the evidence available to us suggests that very limited and quickly terminated nuclear exchanges could result in fatalities and casualties much lower than from some of the traditional conflicts we have experienced. And even if a nuclear exchange were to expand to all strategic nuclear targets in the United States, we would probably suffer at least 100 million fewer fatalities than if our cities were attacked. Approximately similar results would hold true for the Soviet Union as well.

None of this is to argue that a strategy of limited response options is a panacea, or that it solves all the problems that we face in this realm, any more than previous strategies of deterrence have done. However, I believe that the Soviet leaders understand quite clearly why we have adopted this strategy in an era of approximate mutual deterrence, and I see no evidence that they regard as destabilizing these efforts to strengthen our own deterrent. Accordingly, I continue to consider the capability for limited response options as one of the essential requirements of deterrence under current conditions.

An equally essential requirement of deterrence is parity with the Soviet Union in strategic offensive forces, as perceived by friend and foe alike. Not only does Public Law 92-448 (the Jackson Amendment) require us to achieve equality with the USSR in central strategic systems but such equality is also important for symbolic purposes, in large part because the strategic offensive forces have come to be seen by many -- however, regrettably -- as important to the status and stature of a major power. Clearly the Soviet Union places a very high value on achieving parity, at the very least, with the United States.

What is perhaps even more important, the lack of equality can become a source of serious diplomatic and military miscalculation. Opponents may feel that they can exploit a favorable imbalance by means of political pressure, as Hitler did so skillfully in the 1930s, particularly with Neville Chamberlain at Berchtesgaden. Friends may believe that a willingness on our part to accept less than equality indicates a lack of resolve to uphold our end of the competition and a certain deficiency in staying power. Our own citizens may doubt our capacity to guard the nation's interests.

Fortunately, the question of perceptions may to a large extent have been resolved by the understanding at Vladivostok, which so firmly establishes the principle of equality between the United States and the Soviet Union in central strategic systems. Assuming that the Soviet leaders exhibit restraint in their application of the agreement's principles, we are prepared to exercise restraint as well. However, until we obtain solid evidence of Soviet restraint, we shall plan for deployment of approximately 2,400 strategic delivery vehicles and 1,320 MIRVed missiles. How we proceed on these accounts will depend essentially on the actions of the Soviet Union. They currently have the initiative, and it is up to them to decide how much additional effort the two sides should put into these programs. In making their decision, they should remember that the tortoise won because the hare did not try very hard very often. This hare may be different.

A further requirement of deterrence that I should stress again is what has been called essential equivalence. Let me elaborate on what I mean by that term. Despite the accomplishments of the Vladivostok understanding and the further agreements that might be reached in the future, we will continue to face many uncertainties about the long-term evolution of the strategic forces -- and about which technologies and which components of these forces will be considered most important. Under the circumstances, I believe that it would be a mistake to allow any major asymmetry to develop between the United States and the Soviet Union in the basic technological and other factors that shape force effectiveness.

We must continue to think flexibly about the strategic forces and their deterrent functions. We must be sure to keep pace with the Soviet Union in the design of new offensive and defensive systems, in such areas as accuracy and reliability, and, if necessary, in throw-weight and its management. We may need to maintain an offsetting advantage in some areas to compensate for Soviet advantages in others. For example, the United States should seek to stay ahead in accuracy to offset the large and apparently growing Soviet advantage in throw-weight. I should stress in this latter connection that the Soviet Union has made more rapid strides in accuracy than is generally appreciated and has shown an intense interest in various applications of terminal guidance.

Progress by both sides in this latter area of technology will take time. Meanwhile, we in the United States must accept the fact that while our test-range accuracies with all-inertial guidance systems have shown marked improvement over the years, there remain considerable uncertainties about the extent to which accuracies will degrade on operational trajectories, especially since the world is not a perfect sphere. The Soviets face comparable uncertainties, but can compensate to an important degree for degradations in accuracy by using the high yields that the large throw-weights of their missiles permit. We are in a less advantageous position in this regard because of the severe constraints on our own missile throw-weights. Accordingly, I believe that we should both increase the yield-to-weight ratio of our warheads and -- regardless of past preferences -- be prepared to expand the throw-weight of our missiles, however we may decide to base them in the future.

Despite these concerns for the future, we continue to deploy a highly effective second-strike strategic force. As matters now stand, we are able to fulfill the four requirements of deterrence that I have articulated in the first section of this Report. We currently possess:

-- A powerful and survivable force capable of being withheld for a substantial period of time;

-- A capability for limited response options, including some precision damage-avoidance and hard-target kill capability and a modest ability to provide our citizens with protection from radioactive fallout;

-- Perceived equality with the Soviet Union, even though our forces differ from hers in certain important respects;

-- Momentum in our program of strategic initiatives, to maintain essential long-term equivalence with the USSR and, to the extent necessary, with the PRC.

Since we do not seek a disarming first strike capability against the Soviet Union, there is no reason why she cannot have a capability comparable to ours, thus ensuring the mutual deterrence that is the foundation of equality, respect, and stability.

Despite these hopes and prospects, there remain two major problems on the horizon against which it is particularly important that we carry insurance. The first is that the new generation of Soviet ICBMs, if fully deployed, would carry a throw-weight exceeding that of the MINUTEMAN force by a factor of as much as five or six. The second problem is that this throw-weight, combined with several thousand high-yield MIRVs and accuracies that are well within the reach of the Soviets by the early 1980s, could come to jeopardize the survival of our fixed-based ICBM silos.

While such a development would not give the Soviet Union anything approximating a disarming first strike capability, it would:

-- bring into question our ability to deter limited and selective attacks;

-- give the Soviets a capability for damage and disruption that we ourselves would lack;

-- cause precisely the fears and suspicions that our arms control efforts have been and are designed to dispel.

Here, in fact, is a case where unilateral planning, as I indicated earlier, might have to support and supplement our arms control programs.

We cannot expect, in all candor, that arms control agreements -- any more than domestic laws -- will solve all problems or close all loopholes. Those who hold such high expectations are doomed to disappointment. Where the possibility of loopholes exists, we should not insist on perfection as the price of agreement. Rather we should attempt to close the loopholes, by further negotiation if possible, by unilateral action if necessary.

You will recall in this connection, when I submitted a program of strategic initiatives last year, that I did so on three grounds. First, great uncertainty then existed as to the nature of any successor to the Interim Offensive Agreement that we might achieve. Second, essential equivalence would constitute a fundamental criterion in the future design of our strategic offensive forces. And third, how far we would proceed within these initiatives should depend on the evolution and pace of the ongoing and maturing Soviet strategic programs.

As a result of the understanding at Vladivostok, there now are fewer uncertainties about the shape of a successor to the Interim Offensive Agreement. But the other reasons for continuing with our program of strategic initiatives remain strong.

Until the Soviets decide to make a more stable distribution of their strategic offensive resources, we must take account of the heavy emphasis that they are giving to their ICBM force. Accordingly, we should keep open the option to replace some or all of the force with a larger throw-weight, less vulnerable system. We should continue with our accuracy improvement programs, whether to acquire a more efficient hard-target kill capability or to improve our overall effectiveness against soft point targets. Pending ratification of a threshold nuclear test ban, we should also diversify our warhead prototypes -- particularly with the improvement of yield-to-weight ratios -- so that we can exercise options in the future on how we load our missiles and bombers. It does not follow, for example, that more MIRVs are always better or that we might not want single-warhead replacements for the current POSEIDON missile and its successors. Finally, I believe that we must continue to explore the potentiality of long-range cruise missiles, evaluate the costs and performance of smaller ballistic missile submarines, and assess the practicality of developing an aircraft that can convert from a transport to a tanker.

With these initiatives, and the other programs that I shall discuss in detail later in this section, I am confident that we can maintain a highly credible, modern, second-strike strategic deterrent within the framework of the Vladivostok understanding and any future SALT agreements. Without them, I can give no such assurance.

B. SIGNIFICANT DEVELOPMENTS IN FOREIGN STRATEGIC CAPABILITIES

The strategic forces of the Soviet Union constitute by far the major external strategic capability which the forces of the United States must be designed to counterbalance. The strategic forces of the People's Republic of China, while growing slowly in size, are still significant only in a regional context. Hence, the following discussion deals principally with the Soviet forces.

1. The Soviet Union

Last year I reported to the Congress that the Soviet Union was in the midst of an ICBM development program which was unprecedented in its breadth and depth. Four new ICBMs -- the "light" solid fuel SS-X-16, the "medium" liquid fuel SS-17, the "medium" liquid fuel SS-19 and the "heavy" liquid fuel SS-18 -- were being flight tested simultaneously. But of far greater importance with regard to the strategic balance, all four of those missiles employed a post boost vehicle (PBV), i.e., a bus type dispensing system, and all except the SS-X-16 were being flight tested with MIRVs. Now, a year later, I must report to the Congress that this most impressive development program is nearing completion and that we have evidence that all four of these new ICBMs have started, or soon will start, operational deployment. What remains to be ascertained at this time is simply the extent, composition and pace of that deployment.

Of the four new ICBMs being flight tested, the SS-19 is clearly the most successful. This new missile's throw-weight is about three to four times greater than the SS-11. In contrast to the SS-17 and the SS-18, the SS-19 has been flight tested solely with MIRVed payloads and probably will be deployed with six RVs.

CEPs are difficult to estimate with any degree of precision, especially when they are relatively small. We are convinced, nonetheless, that the SS-19 is clearly intended to achieve high accuracy; the Soviet designers have done everything right to attain that goal. The SS-19 missile itself probably has started deployment.

The SS-18, which is comparable in volume to the SS-9, is being flight tested in both a single RV and a MIRV mode. The single RV version has been designated the Mod 1, and the MIRVed version the Mod 2. The SS-18 Mod 1 has a computer aboard and is believed to be more accurate than the SS-9. With its large warhead yield, this missile would have a good hard target capability.

The SS-18 Mod 2 can carry as many as eight RVs or alternative MIRV payloads. Like the SS-19, it has several features which indicate that accuracy is a prime objective. We can assume that the accuracy

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of this system could also be improved in time by a series of refinements in the current guidance system.

Flight testing of the SS-18 Mod 1 is further advanced than that of the Mod 2. Consequently, we believe the Mod 1 is now operational, and will be followed later by the Mod 2.

The SS-18, like the SS-17, is designed to be cold-launched, i.e., the missile is boosted out of its silo by a gas generator before the main booster motors are ignited. The other two new ICBMs (the SS-X-16 and the SS-19) are hot-launched in the conventional manner, i.e., their main booster motors are ignited in the silos as in the case of the earlier Soviet ICBMs and all of the current U.S. ICBMs. The SS-18 will be deployed in the new type silos.

The SS-17 has certain features that are technologically more advanced than the SS-19, but high accuracy does not appear to be a prime objective at present. The SS-17 is not much larger in volume than the SS-11, but it carries four times the payload of the SS-11 Mod 1. We believe that the SS-17 will be deployed with four RVs. This missle would not have as good a hard target capability as the SS-19.

The SS-X-16 may be slightly smaller in volume than the SS-13, but it carries about twice the throw-weight over about the same range. Although equipped with a bus, the SS-X-16 has thus far been tested only with a single RV. However, we cannot preclude the possibility that the SS-X-16 will be deployed in a MIRV, as well as a single RV, mode.

A land-mobile version of the SS-X-16 may be under development. Although the Interim Agreement itself does not restrict the development of land-mobile systems by either side, the U.S. Government has unilaterally declared that it would consider the deployment of such missiles, during the period of the Interim Agreement, inconsistent with the objectives of the Agreement. Under a new SALT agreement, based on the Vladivostok summit meeting, any mobile ICBMs would counted against the aggregate limits. In any event, we believe the SS-X-16 would be deployed first in silos, and only thereafter in a land-mobile mode.

Speculation as to the rate of deployment of the new Soviet ICBMs and as to the buildup of its SLBM force are complicated by the provisions of the SALT I Interim Agreement which were to govern until mid-1977 and the ongoing negotiations to achieve a new agreement within the general outlines worked out at Vladivostok. The discussion here assumes that the provisions of the Interim Agreement will hold for the period up to mid-1977.

In order to allow for deployment of newer delivery systems, we assume that the Soviet Union will eventually phase out most, if not all 209 of the old SS-7s and SS-8s as long as the Interim Agreement remains in effect. The SS-7s and SS-8s will probably be phased out in favor of modern SLBMs in nuclear-powered submarines, which is permitted under the Agreement. Substitution of SLBMs for all of the 209 SS-7s and SS-8s would reduce the Soviet ICBM ceiling to about 1,400 launchers, excluding mobile ICBM launchers. If the new family of ICBMs is deployed along the lines we consider likely, these approximately 1,400 launchers could have a throw-weight of about 10,000,000 lbs.

This most impressive Soviet ICBM program, as I pointed out last year, appears to have three main objectives -- expanded target coverage (particularly countermilitary) with MIRVs, improved pre-launch survivability with the new hard silo designs, and the attainment of a significant hard target kill capability. The full deployment of the force I have just described would unquestionably permit the attainment of the first two objectives. The attainment of the last objective would depend upon the accuracy achievable with the SS-18 and the SS-19. We believe the CEPs of both of these missiles could be improved significantly. The sizeable force of SS-18 Mod 2s and SS-19s which is projected, given their estimated warhead yields, could then pose a threat to our ICBMs in their silos, which threat, though limited by our silo upgrade program, would become increasingly serious as Soviet CEPs were improved. That force, with a balanced deployment of SS-17s, SS-16s and SS-11 Mod 3s, could be operational by the early 1980s.

The Soviet SLBM program during the past year has also produced some interesting new developments. The new model of the D-class submarine, which I discussed last year, is now under construction. This new submarine is apparently a longer version of the original D-class which in turn is a longer version of the Y-class. The new D-class submarine will probably have more tubes than the original D-class; both are designed to carry the 4,200 nm SS-N-8 SLBM. The Y-class submarine has 16 smaller tubes for the SS-N-6.

Production of the Y-class submarine has apparently ended with completion of the 34th unit (last year we thought it would end with the 33rd unit). Eight of the 12-tube D-class submarines have been launched. The Soviet Union probably intends to exceed the Interim Agreement's "base line" ceiling of 740 SLBM launchers and move toward the maximum limit of 950 "modern" SLBM launchers and 62 "modern ballistic missile submarines".

When the SSBN with the 741st or larger number of launchers enters sea trials, the Soviet Union is required to begin dismantling an equal number of SS-7 or SS-8 launchers and/or SLBM launchers on older submarines and, under the Interim Agreement, to notify the U.S. of its actions. In any event, it seems clear that the Soviet Union intends to expand its SLBM force up to the limit set in the Interim Agreement. An agreement in accordance with the general terms discussed at Vladivostok would allow the Soviet Union to further expand its SLBM force with compensating reductions in ICBMs or bombers within the 2,400 limit. Many of the detailed scheduling and counting problems would not exist.

Last year I noted that the Soviet Union was flight testing a new version of the SS-N-6 with MRVs. It is now clear that there are actually two new versions of the SS-N-6 -- the Mod 2 with a single RV and the Mod 3 with MRVs -- both with a slightly greater range than the range of the Mod 1. Having mastered the MIRV technology in its ICBM program, there is no reason why the Soviet Union could not deploy MIRVs in its SLBMs as well. Should it do so, which it could under the terms of the Interim Agreement, the Soviet Union could exceed the United States in numbers of strategic missile RVs, as well as in total throw-weight, numbers of delivery vehicles, and megatonnage. The Vladivostok agreement is very important for the reason that it would not allow either the U.S. or Soviet Union to achieve superiority in all of these important measures of strategic offensive forces.

The Soviet strategic bomber program is progressing just about as anticipated last year. The BACKFIRE B bomber is clearly designed for air air-to-air refueling. It is now generally agreed that with this refueling capability, staging through arctic bases and flying a high altitude subsonic profile all the way, the BACKFIRE B could cover virtually all targets in the U.S. and return to the Soviet Union. On one-way missions, recovering in non-hostile territory in the Western Hemisphere, the BACKFIRE B, flying subsonically, could operate from its home bases without any tanker support. The extent to which BACKFIREs will be assigned missions against the continental United States, however, remains an open question. We must await evidence from basing, operational and training patterns, or tanker development before we can confidently judge whether the Soviets intend the BACKFIRE for intercontinental missions and, if so, to what extent.

We have yet to identify a new tanker for the BACKFIRE, however. The tankers now compatible with the BACKFIRE are converted BISON bombers, and while it is possible that all 85 BISONS still in the bomber force might eventually be converted to tankers, a new tanker may be developed to increase intercontinental bomber capabilities. The best prospect for this tanker role appears to be the IL-76 CANDID jet transport and, indeed, there is some evidence that a tanker version of that aircraft may be under development.

If a small force of BACKFIRE B bombers, plus an appropriate number of tankers, is eventually deployed, we do not believe that the U.S. air defense problem would be substantially altered. However, if a large force of BACKFIRE B bombers were to be deployed, then we would have to consider which increased CONUS bomber air defense programs we would wish to undertake.

The number of older bombers in Soviet Long Range Aviation, particularly the intermediate range BADGERS, continues to decline, albeit at a relatively slow rate. Inasmuch as the BACKFIRE B is expected to initially enter the force at a moderate rate and be assigned first to the peripheral mission, we can assume that the older intercontinental long range bombers, the BISON and BEAR, will be continued in the force for some time to come.

With regard to strategic defensive forces, there is still no evidence of any additions to the 64 ABM launchers now deployed around Moscow, even though the ABM Treaty (with the 1974 Protocol) permits the deployment of 100 ABM launchers in that national capital area. This failure to deploy the full number of ABM launchers permitted under the Treaty, however, does not mean that the Soviet Union has lost interest in ABM research and development. Quite the contrary, the Soviet Union is continuing to pursue a very active R&D program at its principal ABM test base. Research and development on improved ABM systems is permitted under the Treaty.

Modernization of Soviet air defenses is continuing along the lines I described last year. The number of active SA-2 sites is declining, but additional SA-3 low altitude and SA-5 high altitude SAMs are being deployed.

Similarly, new and more capable aircraft are entering the interceptor forces, but at a slower rate than the older aircraft are being phased out. A significant number of FLAGON E interceptors were added to the force last year. This aircraft has a moderately good intercept capability at low altitude and up to about 65,000 feet. The FOXBAT force continues to grow, but there is still no evidence that the Soviet Union has developed an advanced AWACS or a "look-down, shoot-down" system for its air defense interceptors. Should such systems be developed and deployed, we would have to counter them with new penetration devices and techniques such as the cruise missile, bomber defense missiles, and improved ECM. Without a "look-down, shoot-down" capability, the Soviet air defense interceptor aircraft are not likely to offer a serious obstacle to our bomber force, although the fact that improvements are being made requires continued efforts to maintain and improve our bomber forces.

2. The People's Republic of China

In contrast to the Soviet strategic forces program, the PRC strategic forces program in the last year or two appears to be losing some of its momentum, at least in part as a result of technical difficulties. A MRBM, which became operational in 1966, and an IRBM, which became operational in 1971, are progressing as expected. Their limited range ICBM, however, presents something of an enigma; its pace of development has been considerably slower than had been expected. While this missile could reach targets in European USSR, it cannot reach the United States, except for the western tip of Alaska. Hence, from our point of view it is also a regional missile.

The strategic missile program of most direct concern to the United States is the PRC full range ICBM. We believe that this ICBM is considerably larger in volume than either the Soviet SS-9 or the U.S. TITAN II and clearly could carry a multi-megaton warhead over a range of at least 7,000 nm, which, of course, would pose a direct threat to the United States. The PRC is expected to continue to develop this missile both as a satellite launcher and as an ICBM, with a number of these missiles possibly becoming ready for deployment in silos by mid-1980. We also believe that the PRC is determined to develop a submarine launched ballistic missile and a modern nuclear-powered ballistic missile submarine. The PRC would require a minimum of four years to achieve even a token operational SLBM capability.

Production of the BADGER medium-range bomber apparently ceased or was suspended in 1973, with a total of about 60 aircraft. Similarly, production of the BEAGLE light bomber (except for a small number to maintain inventory) apparently ended in mid-1973, after a total of some 400-450 had been produced.

The PRC strategic air defense program has also displayed a loss of momentum. Production of the PRC version of the MIG-21 ended about three years ago. We must conclude, therefore, that this program was a failure. Production of the PRC version of the MIG-19 clear-weather interceptor is continuing, and its continued production probably is intended to compensate for the failure of the MIG-21 program until a new interceptor is available for production. The new all-weather, long-range interceptor, which we thought last year might soon be placed in production, is apparently still in development. Production of the PRC's SA-1 surface-to-air missile (the PRC version of the Soviet SA-2) has also declined from earlier levels.

It is, of course, very risky to draw any firm conclusions from these trends. The apparent loss of momentum may simply reflect our past inflated expectations, or it may reflect a period of transition to a new, reoriented defense program, or quite possibly a major reassessment of national priorities in favor of economic development. In any event, it is clear that some important PRC programs have encountered technical difficulties, and that other programs have been deferred or curtailed far short of what we would consider to be a reasonably sized force.

C. U.S. STRATEGIC FORCES AND PROGRAMS

Pending the completion of negotiations on the final details of the Vladivostok agreement on the limitation of strategic offensive forces, we have continued to plan our forces within the general bounds of that agreement, as well as within the more specific limitations of the earlier agreements signed in Moscow in 1972 and 1974. We have assumed for purposes of intelligence estimating that the Soviet Union will also continue to plan its forces within the bounds of those agreements. A comparison of the projected U.S. and USSR strategic force levels through mid-1975 is shown on the following page.

1. Strategic Offensive Forces and Programs

I noted last year that well diversified strategic offensive forces are essential to our national security as a hedge against both foreseeable and unforeseeable risks and to enable us to make available to the President a reasonable range of strategic options. It is also worth noting that well planned force diversification greatly enhances deterrence because it severely complicates Soviet attack planning, thereby increasing the uncertainties and the risks confronting the initiator of an attack.

For example, the presence of both bombers and ICBMs in our forces virtually precludes the Soviet Union from destroying them both in a surprise attack. To pose a threat to our alert bombers the Soviet Union would have to station its ballistic missile submarines close to our shores. But that would place their submarines at risk to our antisubmarine warfare forces. Furthermore, to attack our alert bombers by surprise the Soviet Union would have to withhold the launch of its ICBMs until the SLBMs were launched. But this would mean that the first SLBM warheads would detonate over our bomber bases 15-20 minutes before the first ICBM warheads reached our MINUTEMAN silos. Whether our National Command Authorities would, under these circumstances, choose to launch some or all of our MINUTEMAN missiles before they were struck, no one, including the Soviet planners, can foretell in advance of the actual decision. Hence, that is a risk the Soviet decision makers would have to take in launching a nuclear attack against our land-based strategic forces.

Conversely, if the Soviet Union were to launch its ICBM forces first in order to achieve simultaneous arrival of the ICBMs and the SLBMs, our alert bombers would have ample time to clear their bases before the Soviet warheads arrived at their targets. Implicit in this statement, of course, is the assumption that our tactical warning systems can assuredly provide that time, and I will have more to say about this problem when I discuss the strategic defensive forces.

U.S. AND U.S.S.R. STRATEGIC FORCE LEVELS

	Mid-1974		Mid-1975	
	U.S.	U.S.S.R.	U.S.	U.S.S.R.
Offensive				
ICBM Launchers 1/	1,054	1,575	1,054	1,590
SLBM Launchers 2/	656	660	656	700
Intercontinental Bombers 3/	500	140	498	160
Force Loadings Weapons	7,650	2,500	8,500	2,800
Defensive				
Air Defense				
Surveillance Radars	67	4,000	67	4,000
Interceptors 4/	539	2,600	405	2,500
SAM Launchers	-	10,000	-	10,000
ABM Defense Launchers	-	64	-	64

1/ Excludes launchers at test sites.
2/ Excludes launchers on diesel-powered submarines.
3/ Excludes bombers configured as tankers and reconnaissance aircraft.
4/ These numbers represent Total Active Inventory (TAI)

Finally, making the reasonable assumption that some fraction of each element of our mix of strategic systems would survive a Soviet first strike regardless of how it was carried out, each element would enhance the potential of the other in a retaliatory blow, a potential that would have to give the Soviets pause in their calculations. Missiles, for example, could help clear the way for bomber penetration, and bombers, in turn, could help to fill the gap of those important targets missed by missiles.

It is this mutually supporting deterrent capability, in addition to the reasons I enumerated last year, that strongly commends to us the continued retention in our strategic offensive forces of both ICBMs and bombers as well as SLBMs. The cost of maintaining this diversified strategic capability is considerable. Consequently, we must emphasize the mutually supporting characteristics of the TRIAD, rather than just the independent capabilities of each of the components.

a. ICBMs

Given the continuing growth in Soviet strategic offensive capabilities, albeit within the bounds of the Vladivostok and earlier agreements, we believe that the U.S. must now move forward in an orderly and deliberate manner with the qualitative improvements initiated last year for the ICBM forces. This action is unavoidable if essential equivalence in strategic power between the U.S. and the USSR is to be preserved through the 1970s and beyond.

In the near term (through the early 1980s), the only way in which we can achieve a major improvement in our ICBM capabilities, particularly in expanding our options and keeping pace with growing Soviet hard-target kill capabilities, is through the modification of the MINUTEMAN III. For the long term (mid-1980s and beyond), we can provide an option to develop an entirely new ICBM, namely what has now been designated the MX.

The principal options to improve the MINUTEMAN III are the refinement of the existing guidance system and the new higher yield warhead, the MK 12A reentry vehicle. The terminally-guided maneuvering reentry vehicle, which I associated last year with the MINUTEMAN III, will continue to be developed as a potential payload for the MX or the TRIDENT II. The time required for the development of this technology will place this reentry vehicle in the time frame of the MX and TRIDENT II, rather than the MINUTEMAN III.

As I pointed out last year, this improved MINUTEMAN III system would be heavily dependent upon accuracy for its hard-target kill capability. Consequently, even a small degradation in accuracy could greatly reduce its effectiveness in that role. The MINUTEMAN III therefore, is not a system that we would pursue if we were interested in developing a disarming first-strike capability. Inasmuch as we are interested in the improved MINUTEMAN III for its deterrent value, that is, to deter the Soviet Union from launching a first strike against some or all of our ICBM silos, this uncertainty about its accuracy should not negate its usefulness for our purposes. This is so because the Soviet planners would also be faced with uncertainties about both the size of the surviving force and the particular targets that the MINUTEMAN III, with its improved accuracy and increased yield, would be programmed to attack.

Further improvements in our strategic missile capabilities must await the development of the MX and the TRIDENT II. How we proceed with the development of the MX and the TRIDENT II will depend upon future developments in the Soviet strategic missile forces. We should not deprive ourselves at this particular time of a reasonably wide range of ICBM and SLBM development options. Accordingly, we plan to pursue, at a pace closely linked to future developments in the Soviet strategic missile forces, the ICBM and SLBM force improvements initiated last year.

MINUTEMAN

First, we propose to continue the production of the MINUTEMAN III at the rate of five missiles per month -- the lowest feasible rate -- through the first ten months of the FY 1976 procurement period. The MINUTEMAN III is the only U.S. ICBM still in production; the USSR currently has at least three or four. It would be imprudent, in my judgment, to close down that production line before we have a more definitive assessment of how many of each type of the new MIRVed ICBMs the Soviet Union intends to deploy under the Vladivostok agreement.

The $270 million required to procure another 50 MINUTEMAN III missiles and initial spares is included in the figures shown on the MINUTEMAN line of the Acquisition Costs table beginning on the following page. These 50 missiles would fulfill our requirements for follow-on flight testing and also preserve the option to deploy more MINUTEMAN IIIs, if that should be deemed necessary.

Second, we propose to complete the engineering development of the new higher yield warhead for the MINUTEMAN III, the MK 12A RV. The AEC test program for this weapon has been accelerated so that it can be completed before the end of March, 1976, the proposed effective date of the Threshold Test Ban Treaty. The new arming and fusing mechanism and the reentry vehicle as a whole will be flight tested on MINUTEMAN III missiles already procured for the operational test program, as well as on the boosters to be procured specifically for the flight testing of the guidance refinements.

Acquisition Costs of Major Strategic Forces Modernization and Improvement Programs 1/

(Dollars in Millions)

Strategic Offense	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Continued Procurement of MINUTEMAN III Missiles, MINUTEMAN Silo Up-Grading and Other Related Programs	720	728	780	105	485
Advanced ICBM Technology, including MX	4	37	41	15	70
Development of Advanced Ballistic Reentry Systems and Technology (ABRES)	90	112	101	29	125
Conversion of SSBNs to POSEIDON Configuration, Continued Procurement of POSEIDON Missiles and Associated Effort	323	183	91	7	35
Development, Procurement and Military Construction--TRIDENT Submarines and Missiles (TRIDENT II not included in total)	1,433	2,030	2,142 (3)	622 (1)	3,438 (10)
SSBN Subsystem Technology	-	-	2	1	4
B-52D Modifications	38	95	43	-	-
B-52/HARPOON Modification	-	-	10	7	18
Continued Development of New Strategic Bomber, B-1	449	445	749	196	1,652
Acquisition of Short Range Attack Missile (SRAM)	133	2	3	2	35

Acquisition Costs of Major Strategic Forces Modernization

and Improvement Programs [1] (Cont'd)

(Dollars in Millions)

Strategic Offense (Cont'd)	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding[2]	FY 1977 Prop'd for Authorization
Initial Development of Advanced Tanker/Cargo Aircraft	-	2	5	1	50
Development of the Bomber Launched and Submarine Launched Version of the Strategic Cruise Missile	13	98	153	55	296
Strategic Defense					
Continued Development of the Over-the-Horizon (OTH) Back-Scatter Radar	3	10	8	6	14
Continued Development of Site Defense	110	115	140	38	160
Development of Ballistic Missile Defense Advanced Technology	62	92	105	30	111
Continued Improvements in the Defense Support Program	88	118	68	9	55
Development and Acquisition of the SLBM Phased Array Radar Warning System	-	38	50	2	17
Command and Control					
Development and Procurement of Advanced Airborne Command Post (AABNCP)	50	78	43	192	26

Acquisition Costs of Major Strategic Forces Modernization

and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Command and Control (Cont'd)					
Development and Procurement of AFSATCOM I and Development of AFSATCOM II	22	13	51	14	96
Development of SANGUINE ELF Communications System	12	8	18	4	24
Acquisition and Modification of the TACAMO Aircraft System	29	9	41	10	23
Civil Defense					
Continued Support of the Civil Defense Program	80	87	88	20	94

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.
2/ July 1 to September 30, 1976.

As I pointed out last year, the new warhead, plus the more advanced, (i.e., miniaturized) arming and fusing mechanism, can be retrofitted into the existing MINUTEMAN III MK 12 RV without any changes in its weight, balance, or other flight characteristics. Accordingly, flight testing of the MK 12A RV can be limited to check-out of the new arming and fusing components and verification that flight characteristics of the RV have not changed.

The MK 12A development contract has been placed and design work started. Flight testing is expected to be completed in the summer of 1977; hence, production could be started in FY 1977. A total of about $46 million has been included in the FY 1976 and Transition Budgets and another $31 million in authorization only is requested for FY 1977 to continue this development program. In addition, an authorization of $37 million in procurement funds is requested for FY 1977 to initiate production of the MK 12A RV.

The total development cost (DoD only) for the MK 12A is now estimated at about $107 million, compared with $125 million estimated last year. This reduction resulted from the elimination of the additional boosters which were to have been procured specifically for the MK 12A flight test program. No final decision has been made as to the number of MINUTEMAN III that ultimately will be equipped with the MK 12A RV. It is interesting to note, however, that the cost of producing sufficient MK 12A RVs for 550 MINUTEMAN III missiles is estimated at about $335 million. This does not include AEC costs for development and procurement of the MK 12A RVs.

Third, we propose to complete the development of the refinements in the existing MINUTEMAN guidance system and incorporate these refinements in all of the MINUTEMAN III missiles in FY 1978. Once the new guidance programs have been developed, incorporation of the refinements in the missiles simply involves the insertion of ground and flight software changes.

The total development cost of this program is now estimated at about $131 million, compared with the $100 million estimate presented here last year. The bulk of this cost, $108 million, is for the flight testing of the refined guidance system, including the cost of 10 boosters to be specially procured for this purpose. In order to maximize the return on these 10 boosters, some flight test missiles will carry two guidance systems. And, as noted earlier, these boosters will also be used to flight test the MK 12A RV.

The contracts for this project have been placed and the first flight test is expected to take place in the summer of 1976. Some $32 million was allocated to this program in FY 1975. Another $53 million is included in the FY 1976 and Transition Budgets, and the remaining $46 million is requested for authorization in FY 1977.

Fourth, we plan to continue work on the terminally-guided MaRV, but on a new, extended schedule, as indicated earlier. Since this is essentially a technology development project, it will be continued in the Advanced Ballistic Reentry Systems (ABRES) program which I will discuss later.

Fifth, we plan to complete the flight testing of two MINUTEMAN III missiles, each with several smaller RVs. This payload, if successfully demonstrated, would give us the option to expand the target coverage of the MINUTEMAN force without any increase in the number of missiles deployed. The additional capacity would be useful as a hedge against large losses in the MINUTEMAN force, as a means of increasing our coverage of relatively soft point targets of value that are not collocated with population, for suppression of expanded Soviet defenses and as a hedge against unexpected failures in the bomber or SLBM forces. Even if only 50 MINUTEMAN so equipped were to survive an enemy first strike, they could deploy a large number of RVs for attacks on such targets. The $18 million provided in FY 1974 and FY 1975 plus the $2 million requested in FY 1976 will be enough to complete this program. The first flight test is scheduled in May, and the second in August, 1975. No significant problems have been encountered in this project thus far, and the tests are expected to be completed successfully.

The amounts shown in the Acquisition Costs table for the MINUTEMAN program in FY 1976, the transition period, and in FY 1977, also include funds for the continuation of the Silo Upgrade effort and for the installation of the Command Data Buffer System. This system permits the MINUTEMAN III missiles to be retargeted remotely from the Launch Control Centers and reduces the time for retargeting a single missile from 16 to 24 hours to about 36 minutes.

All MINUTEMAN silos are included in the upgrading program, which is expected to be completed by the end of FY 1979. Only the MINUTEMAN III missiles, however, will be provided the Command Data Buffer System since their MIRVs can make the most effective use of the retargeting feature. Installation of the new system is being accomplished simultaneously with the upgrading of the silos. Deployment of the previously planned 550 MINUTEMAN III missiles will be completed on schedule by the end of FY 1975. But silo upgrading and installation of the Command Data Buffer System for the 550 MINUTEMAN IIIs will not be completed until sometime later.

<u>Advanced ICBM Technology and the MX</u>

Last year we requested $37 million to continue the development of new technology leading to the development of an entirely new ICBM. We did so in order to ensure the availability of a realistic option for the modernization of our ICBM forces in the 1980s and beyond. I noted at the time that this effort would be focused primarily on three problem areas -- the selection of the preferred basing mode, the unique guidance requirements for mobile missiles (both air-launched and ground-launched), and the technology required for more efficient rocket motors.

These three problem areas reflect our principal concerns with regard to the kind of an ICBM we ought to have available for deployment in the period beyond the early or mid-1980s. By that time, MINUTEMAN silos may become increasingly vulnerable to the Soviet ICBM forces; hence our interest in new basing modes. Air-mobile ICBMs, utilizing unaided, all inertial guidance, are inherently less accurate than fixed-based ICBMs, hence our interest in more capable guidance systems which would be needed to maintain the desired degree of accuracy.

Furthermore, the MINUTEMAN III, as compared with the new family of Soviet ICBMs, has a relatively small throw-weight. If the Soviet Union decides to replace all of its existing ICBMs with this new family of ICBMs, it could acquire an ICBM throw-weight advantage of 5 or 6 to 1 -- i.e., 10 to 12 million pounds for the Soviet Union versus 2 million pounds for the U.S.. Such a great disparity in throw-weight, in my judgment, would be very destabilizing. It would give the USSR a distinct advantage in one of the basic parameters that shape the future effectiveness of the strategic offensive forces. Hence our interest in new rocket motor technology, which would give us a greater amount of throw-weight per pound of propellant.

By far the most difficult problem which must be resolved in this new ICBM program is the selection of the basing mode. Fixed silos may become vulnerable to a Soviet counterforce attack, but they have some very important advantages, namely, accuracy, good two-way communications up and down the chain of command, general responsiveness to control by the National Command Authorities, and low operating costs. These are very important considerations in context with our efforts to expand our range of response options (i.e., increase our targeting flexibility), and we want to preserve them to the greatest extent feasible should we find it necessary to shift to a new basing mode in the future.

A large part of the Advanced ICBM Technology Program investigations concern alternate basing modes. We have a great deal of experience in the operation of fixed-based ICBM systems but virtually no operational experience with air- and land-mobile systems and thus the reason for their emphasis.

There are several types of air- and land-mobile options under consideration. One of the leading land-based candidates is the so-called shelter system. This system depends for its survivability on deception, that is, the missile mounted on a transporter-launcher would move from one relatively hard shelter to another within a complex. The attacker would have to target all of the shelters, since he would not know in which shelter the missile was deployed. Thus, the cost to us per emergency shelter and the cost to him per reliable RV needed to destroy that shelter would be the critical factors driving the cost-exchange ratio of the shelter system. While this system would retain the accuracy of a silo-based system, its costs and operating problems are immediately apparent.

The air-mobile system would be the most expensive to acquire and to operate. It would require the acquisition of a fleet of suitable aircraft which could be modified wide-bodied jets or new low cost aircraft. To ensure pre-launch survivability, aircraft with the missile aboard preferably would be kept on airborne alert, and this we know is a very expensive operation. Alternatively, the aircraft with the missile aboard could be kept on ground alert, but then it would have the same pre-launch vulnerabilities as the bomber/tanker force.

Finally, as previously mentioned, the air-mobile system with unaided navigation is inherently less accurate than any of the land systems since without navigation aids it is difficult to precisely determine aircraft velocity and heading. An in-flight position fixing system for the aircraft or a terminal homing system for the missile would help to alleviate this problem. We have the potential solution to the position fixing problem in a new high precision satellite navigation system now under development, called the NAVSTAR Global Positioning System. However, both NAVSTAR and the terminal homing system are still in early stages of development.

Given the many problems that still have to be resolved, we now propose advanced development of an ICBM that could be deployed interchangeably in the existing MINUTEMAN silos, in a land-based shelter or random deployment mode, or in an air-mobile mode. The new MX ICBM would have new, more efficient rocket motors and a new, more accurate guidance system. The MX could be designed to be cold-launched from a cannister in a silo or on a transporter-launcher. In the air-mobile system, the missile could be pulled out of the cannister by parachute and fired when vertical stability had been achieved.

The MX could be deployed in the existing MINUTEMAN silos, since that is the least expensive mode, until such time as the threat to those silos has been definitely ascertained. At that point, we could commence deployment of the missile in one of the mobile modes.

Meanwhile, we propose to continue advanced development of the key components of the mobile systems. A series of air drops

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has already been conducted from the C-5A, including three "Bathtub" drops (concrete slabs of increasing size and weight), three "mass simulation" drops (to investigate missile shape stability), one inert but instrumented MINUTEMAN I, one fueled but unfired MINUTEMAN I (the "dress rehearsal" test), and one "short burn" MINUTEMAN I (the final test of the series). These tests have proved the feasibility of air-dropping an ICBM, but many other problems remain to be solved before the technical feasibility of the air-mobile system as a whole can be demonstrated. The MINUTEMAN I, moreover, weighs about 75,000 pounds; the MX will weigh about 150,000 pounds.

Some work has also been done on the land-mobile systems. The problem here is not so much the technical feasibility of these systems as it is their operational feasibility. And the economic feasibility of all three mobile systems needs a great deal of additional study.

Accordingly, we are requesting for the Advanced ICBM technology program (i.e., MX and related projects) a total of $41 million in FY 1976, $15 million in the three month transition period, and $70 million for authorization only in FY 1977. Most of these funds would be devoted to guidance, control and propulsion. The cost to completion of the MX development is estimated at about $2.5 billion.

ABRES

Last year I noted that while the Advanced Ballistic Reentry Systems program (ABRES) is managed by the Air Force, the work being done also supports Navy and Army projects. Consequently, the Director of Defense Research and Engineering has been charged with the general direction of the program. He is responsible for defining the scope and priorities of the program and for providing the necessary guidance to the Air Force in order to ensure that the needs of the several Services are satisfied with a minimum amount of duplication.

The ABRES program has been the source of much of the advanced reentry technology incorporated in our strategic missile programs. Although the Soviet Union has made great advances in this area of technology in recent years, we still enjoy a distinct lead. But given the Soviet Union's great advantage in strategic missile throw-weight, we must ensure that we maintain our lead in this critical area of reentry technology.

We are requesting for this program about $101 million in FY 1976, $29 million in the three month transition period, and $125 million for authorization only in FY 1977. About one quarter of these funds will be devoted to the pre-prototype development of maneuvering reentry vehicles, including the terminally-guided

MaRV I discussed earlier. Also included in this program is work on a large advanced ballistic reentry vehicle; penetration aids; optical, radar and electronic countermeasure technology; and supporting technology such as nosetips, heatshields and arming and fusing components.

b. SLBMs

The portion of the SLBM force at sea is still the least vulnerable element of our strategic TRIAD; and as far as we can see ahead, it is likely to remain so. It behooves us, nonetheless, to take whatever measures may be necessary to ensure the continued survivability and operational effectiveness of that force.

The existing fleet of POLARIS/POSEIDON submarines eventually will have to be replaced, if for no other reason, because of aging. We believe that these submarines can be operated safely and effectively through their 20th year of service, and possibly longer. Since the last of the existing SSBNs went into service in 1967, we should plan on replacing the entire fleet by the late 1980s or the early 1990s.

In order to ensure the future survivability of the SLBM force, both a quieter submarine and a longer range missile are deemed necessary. The TRIDENT submarine is designed to meet the first requirement and the TRIDENT I missile the second, at least in the near term, i.e., through the early 1980s. A still longer range missile, the TRIDENT II, which would more fully utilize the volume of the TRIDENT submarine missile tubes, may be needed in the long term, i.e., beyond the mid-1980s. This longer range missile would permit us to increase our SLBM throw-weight.

Accordingly, we propose to complete the POSEIDON conversion program, continue the TRIDENT submarine construction program, complete the development and commence production of the TRIDENT I missile for the TRIDENT submarines, and pursue our studies of the TRIDENT II missile. Beyond these programs, we also propose to backfit the TRIDENT I missile into ten of our 31 POSEIDON SSBNs.

The last three of the 31 POSEIDON conversions and the last one of the four submarine tender conversions were funded in FY 1975, except for outfitting and post-delivery costs. Because of the impact of inflation, however, another $85 million will be required to complete the funding of the last three submarine conversions. We plan to finance $33 of that amount through reprogramming; the balance of $52 million is included in the FY 1976 Budget. The $98 million requested for POSEIDON in the FY 1976 and Transition Budgets will provide for completion of the POSEIDON conversions, outfitting and post-delivery costs, the support of POSEIDON missiles, and the POSEIDON Modification

Program. The total authorization requested in FY 1977 is $35 million which will provide for post-delivery costs, support of POSEIDON missiles, and the POSEIDON missile modification program.

Of the 31 POSEIDON conversions, 23 have been completed and 22 are currently deployed, and six are undergoing conversion. The 30th submarine will start conversion in April, 1975, and the last in FY 1976.

The POSEIDON Modification Program is an outgrowth of the deficiencies encountered in the POSEIDON Operational Test (OT) program in 1973. The corrections discussed here last year have been made. By December, 1974, 8 operational flight tests, with the fixes installed in whole or in part, were completed.

The latest series of POSEIDON operational tests supports the judgment that the deficiencies identified last year were minor in nature and could be successfully corrected. The tests will continue, using improved missiles selected at random from POSEIDON submarines returning from patrol, to determine the best estimate of true missile reliability possible.

As indicated last year, improved missiles will be installed in the 21st through the 31st converted submarines; the first 20 submarines, which had already been deployed when this problem arose, will be retrofitted with the improved missiles over a period of about 4 years. The entire modification program is expected to be completed by 1978.

TRIDENT (Excluding TRIDENT II Missile)

To ease the financial strain on the Defense Budget and to relax the pressure on the shipbuilder, we have again slowed the TRIDENT submarine construction schedule from a two-a-year to an alternating 1-2-1-2 a year rate. The lead submarine was funded in FY 1974 and two follow-on submarines in FY 1975. Accordingly, only one submarine is included in the FY 1976 Budget and two submarines are requested for authorization in FY 1977.

We are still planning for an FY 1979 IOC for the TRIDENT submarine and TRIDENT I missile. Also, we still plan to retrofit the TRIDENT I missile in ten of the POSEIDON submarines.

Of the $2,142 million requested in FY 1976, about $817 million is for RDT&E ($84 million for the submarine and $733 million for the missile), $1,130 million is for procurement ($290 million additional to cover the cost increase projected for the three ships funded in FY 1975 and prior years as a result of abnormal inflation, $560 million to complete the funding of the fourth ship, $43 million for advance procurement of long lead time components for the fifth, sixth, and seventh ships, and $237 million for TRIDENT I missile production start-up costs), and about $195 million is for military construction and construction planning (mostly for the TRIDENT support facility).

The $622 million in the Transition Budget would provide $184 million for RDT&E ($12 million for ships and $172 million for missiles), $437 million for procurement ($253 million for ship advanced procurement, $1 million for submarine outfitting, and $183 million for missile production start-up costs) and $1 million for military construction planning. The $3,438 million for the FY 1977 authorization request includes $547 million for RDT&E, $2,708 million for procurement ($1,221 million to complete funding the fifth and sixth ships, $166 million for advance procurement of long lead time components for the seventh through tenth ships, $6 million for submarine outfitting, and $1,315 million for 98 missiles) and $183 million for military construction and construction planning including $8 million for POSEIDON SSBN backfit.

In compliance with the requirement in the FY 1975 Military Construction Authorization Act that funds be authorized for community impact assistance in conjunction with TRIDENT-related community growth, we are including, in addition to the funds discussed above, $7 million in the FY 1976 Budget and $11 million in the FY 1977 authorization request for this purpose.

The TRIDENT system, it should be borne in mind, represents a great advance over the POLARIS/POSEIDON system. The submarine will have a submerged displacement of about 18,700 tons, compared with 8,250 tons for the POSEIDON submarine. It will carry 24 missiles, compared with 16 for the POLARIS/POSEIDON, and each TRIDENT missile tube will have a greater volume than that of the POLARIS/POSEIDON. Moreover, it will be considerably quieter than POLARIS/POSEIDON. It will also have a much more efficient command and control system, and a more capable sonar system.

The TRIDENT I missile will have a range of 4,000 nm, compared with the POSEIDON which has a range of about 2,500 nm. Moreover, the TRIDENT I at 4,000 nm is planned to be as accurate as the POSEIDON at 2,500 nm.

The TRIDENT program thus far is moving along close to its planned schedule. The lead ship contract was awarded in July 1974, and the contractor's physical plant rearrangements and the production of detailed design drawings are now well underway. Indeed, the formation of hull sections has already been started. The shipbuilder's labor force and facilities are being greatly expanded to accommodate the TRIDENT program on top of the already on-going shipbuilding programs, notably the 688 class SSNs. Development of new subsystems are receiving special attention. These are proceeding on schedule and special facilities have been established to provide the step-by-step testing of these subsystems.

The development contract for the TRIDENT I missile also has been awarded and the first flight test is expected in 1976. Four supplemental flight tests of the TRIDENT I MK 4 RV using ATLAS/MINUTEMAN boosters have already been successfully completed. Flight test on a TRIDENT I missile of the MK 500 MaRV Evader will be carried through advanced development only.

In view of our experience with the POSEIDON operational tests, we plan to conduct a larger proportion of such operational tests early in the TRIDENT program. For these tests to be valid, however, missiles which actually have been operationally deployed must be used. Thus the OT flight tests cannot be conducted prior to operational deployment. Assuming that the desired submarine delivery dates are met, we would have the first TRIDENT I missiles deployed by the end of FY 1979.

TRIDENT II Missile

To provide an option to deploy a higher throw-weight, more accurate SLBM in the late 1980s, if such a system should be needed at that time, we propose to continue our studies of the TRIDENT II. The new missile would be designed to utilize more fully the available volume of the TRIDENT submarine launch tubes.

We plan to proceed with the TRIDENT II effort at a very moderate pace. Only about $3 million is included in the FY 1976 Budget for this purpose, plus $1 million more in the Transition Budget. An authorization of about $10 million is requested for FY 1977.

SSBN Subsystem Technology

As indicated earlier, we must continue our search for technology that will provide less expensive alternatives for use in future SLBM systems. Accordingly, we have established a new program element, "SSBN Subsystem Technology", to focus attention on this essential effort. About $2 million is included in the FY 1976 Budget and $1 million in the Transition Budget for this purpose. In addition, we are requesting an authorization of about $4 million in FY 1977.

c. Bombers

As I indicated at the beginning of this discussion of strategic offensive forces and programs, we believe the retention of bombers in our forces for the foreseeable future is essential to a well balanced U.S. strategic posture. The current bomber force, particularly the B-52Gs and Hs, should be able to fulfill this need into the 1980s. But if we are to maintain an effective bomber force beyond that time, a new aircraft will have to be procured. While we can continue to modify and improve the B-52Gs and Hs for some time to come, and even equip them with stand-off cruise missiles, these aircraft may well become less effective during the next decade.

The principal potential threat to the pre-launch survivability of our current bomber force is the rapidly growing fleet of Soviet SSBNs which, if equipped with depressed trajectory missiles and operated close to our shores, could catch many of our alert B-52s before they could escape from the vicinity of their bases. While we still have no evidence of a Soviet depressed trajectory SLBM development program, such a system is clearly within their technical competence. We have already taken some steps to hedge against that potential threat, e.g., the satellite basing and the quick engine start modification programs. But beyond these measures we need a bomber which has both increased hardening to nuclear effects, and a significantly faster airfield escape time than the B-52.

With regard to penetration at very low altitude, the currently preferred U.S. mode, the principal potential threat to our current bomber force is the deployment of a Soviet AWACS/fighter air defense system with a good look-down, shoot-down capability. We have no evidence as yet that the Soviet Union has such a system under development but as we ourselves have already demonstrated, such a system is technologically feasible. Effective penetration at low altitude against an AWACS/fighter air defense system would require a faster bomber with a smaller radar cross section which is much more difficult to "see" against the ground clutter, and which is more difficult to intercept in a tail chase.

A B-52 force armed with Air Launched Cruise Missiles (ALCMs) could attack targets within the Soviet Union without the B-52 penetrating the air defenses. But a bomber force limited to stand-off operations would have far less capability and flexibility than a force which includes penetrating aircraft. A pure stand-off bomber force could not provide reconnaissance or attack targets of opportunity as could a penetrating bomber force.

For these reasons, a bomber force which includes penetrating aircraft is much to be preferred over a pure stand-off bomber force, providing that the cost of the former is reasonably commensurate with the benefits to be gained. The difference in costs, we feel, would be modest in comparison to the difference in gain. Accordingly, we believe the B-1 development and test program should be continued to provide us the option to modernize our bomber force with that aircraft in the 1980s.

A bomber force is not only expensive to acquire and keep modern, it is also expensive to operate. Accordingly, we have carefully reexamined our operational plans and procedures to determine where savings can be made with minimum additional risk. As a result of this reexamination, we are now making two major changes in the operation of the bomber force.

The first change involves a reduction in the proportion of the force to be maintained on day-to-day ground alert. When this pre-launch survival technique was first introduced in the late 1950s, the ground alert objective was 33% of the force, i.e., 33% of the UE aircraft. In the early 1960s, this objective was raised to 50%, but in more recent years it was reduced to 40%.

Inasmuch as we consider a Soviet surprise attack "out of the blue" to be quite unlikely under the current circumstances, we believe that a further modest reduction in the proportion of the force to be maintained on day-to-day ground alert would be acceptable. A nuclear attack on the United States, even one which is limited to our strategic offensive forces, would most likely be preceded by a series of crises, and certainly by a sharp deterioration in our relations with the Soviet Union. Under these circumstances, we would have the time to place virtually the entire force on ground alert.

Moreover, during the last few years we have greatly increased the number of strategic missile warheads on line; by June 1975 we will have more than 500 MINUTEMAN III missiles and more than 350 POSEIDON missiles deployed. With the large number of RVs these strategic missiles provide, we believe we can prudently take the additional risk entailed in the reduction of the bomber forces on day-to-day ground alert.

We calculate that a ratio of 1.29 crews per UE bomber and 1.27 per UE tanker would provide an adequate number of crews to generate the entire force in a relatively short time and maintain it on a fully generated ground alert for an extended period. This same number of crews would permit us to maintain about 30% of the bomber/tanker force on day-to-day ground alert, a reduction of about 10 percentage points.

The second major action involves the transfer of 128 UE KC-135 tankers from the active force to the Air Reserve Components. These 128 aircraft will be formed into 16 squadrons of eight UE aircraft per squadron. Each Reserve Component squadron will maintain at least one of its eight aircraft on day-to-day alert in support of active force alert bombers. Also, the Reserve Component units will be afforded the same number of flying hours per aircraft as the active forces. Since reservists can devote only part-time to their military activities, these Reserve Component squadrons will be provided with a higher crew ratio than the active forces -- 1.5 vs 1.27.

This transfer to the Reserve Components, and the phaseout of seven F-101 interceptor squadrons and nine KC-97 tanker squadrons for which we no longer have an urgent need, will result in overall cost savings while at the same time helping us to meet the Congressional mandate to maintain 91 flying units in the Air National Guard.

The reduction in the bomber crew ratio from 1.64 to 1.29 will permit us to reduce the number of bomber crews from 622 to 472. The reduction in the active force tanker crew ratio from 1.5 to 1.27, together with the transfer of KC-135s to the Reserve Components, will permit us to reduce the number of KC-135 crews in the active force from 925 to 585. The first four squadrons of KC-135s will be formed in Reserve Components in FY 1976 and the remaining 12 squadrons by FY 1979. These two actions, when fully implemented, will produce a savings of about $272 million per year in operating costs.

B-52D Modifications

Included in the FY 1976 Budget is about $43 million to complete the installation of structural modification on 80 B-52D aircraft to extend their safe service life into the 1980s. A total of 79 B-52Ds are being structure-tested prior to modification and retention. Including the cost of the test program, the total cost for the modification of 80 aircraft is now estimated at about $237 million. The program is expected to be completed by the fall of 1976.

B-52/HARPOON Modification

In keeping with our major effort to ensure a greater degree of mutual support among the Services, the Air Force will undertake prototype development of a B-52/HARPOON system, using two modified B-52 Ds. These HARPOON-equipped B-52s would supplement the Navy's capability to search out and destroy maritime targets. The project will require about $10 million in FY 1976, $7 million in the three month transition period, plus an authorization of $18 million in FY 1977. Most of these funds will be devoted to the development and flight testing of the two HARPOON-equipped B-52D aircraft, including engineering studies, prototype drawings, specifications, instrumentation and component testing. In addition, we are requesting an authorization of $41 million in FY 1977 to initiate procurement of 90 HARPOON missiles for use by B-52s.

B-1 Bomber

Given the need to strengthen and to modernize the bomber force sometime in the 1980s, I see no better alternative to the continued development of the B-1 bomber, notwithstanding its high unit cost. We have again examined the entire bomber modernization problem and the results of that study have been provided to the Congress. Of the six "equal cost" alternative forces examined against the estimated threat in the late 1980s, those including the B-1 appear to be the most cost-effective. Because of its greater speed and greater ability to withstand the effects of nuclear detonations, it will have a distinctly shorter airfield escape time than the B-52; and because of its smaller radar cross-section and its ability to fly at very low altitudes at high subsonic speed, it should have a much better capability to penetrate improved Soviet air defenses. Moreover, because of its wider range of air speed options and larger number of internal weapon spaces, the B-1 will provide considerably greater employment flexibility than the B-52, thereby enhancing our ability to execute a wide range of attack options in response to potential enemy actions. In short, the B-1 provides us with a weapon system which is least sensitive to potential increases in the threat.

Before we commit this aircraft to production, however, we want to be sure that it will be able to perform satisfactorily the mission for which it is designed, and that its cost will be commensurate with its expected capability. These assurances, with regard to both performance and cost, can be obtained only by extensive flight testing. Accordingly, we are allowing a period of about two years for flight testing before a production decision is scheduled to be made. By that time we should have a total of 250 flying hours on Air Vehicle (AV) No. 1, which began flight tests late last year, 30 hours on AV No. 2, and 85 hours on AV No. 3.

AV No. 1 will be used primarily to demonstrate the flight characteristics of the aircraft, including take-off and landing, low-level and high-level penetration, aerial refueling, and range/payload. AV No. 2 will be used initially to demonstrate structural integrity in static tests (i.e., proof loading), and then be assigned to the flight test program. AV No. 3 will be used primarily for flight testing the offensive avionics.

We have already informed the Congress that the crew escape module is being eliminated from the B-1 program. Instead, the aircraft will be equipped with ejection seats. The crew escape module has presented the most troublesome engineering problem in the entire program. The elimination of this feature will reduce the airframe weight by a few thousand pounds, but it will entail some additional risk to the flight crew. Considering the difficulties, delays and additional costs involved in trying to perfect this module, the Air Force has decided to take that added risk. It should be noted, however, that AVs 1, 2, and 3, which are already equipped with this crew escape module, will be flight tested as currently configured.

In order to place ourselves in a position to initiate production in late CY 1976, if such a decision is appropriate, certain actions must be taken beforehand. These actions include the commencement of construction of AV No. 4, the pre-production prototype, and the procurement of advanced materials for the six production aircraft tentatively planned for FY 1977. AV No. 4 would reflect all of the lessons learned from the fabrication and initial flight tests of the first three aircraft, as well as the elimination of the crew module. That vehicle would help us to maintain continuity between RDT&E and production should we decide to produce and deploy the aircraft.

The approximately $749 million requested for the B-1 in FY 1976 includes $672 million for RDT&E (of which about $70 million will continue the 4th aircraft) and $77 million for advanced materials. The comparable figures for the three month transition period are $165 million for RDT&E (including $22 million for the 4th aircraft) and $31 million for advanced materials. In addition, we are requesting an authorization of $1,652 million for FY 1977, including about $433 million for RDT&E and $1,219 million for the procurement of the first six production aircraft. While none of the FY 1977 procurement funds would need to be committed prior to the production decision, we would need some advance material funds in FY 1976 and the transition period if the results of the flight test program warrant a limited commitment of funds to facilitate the initiation of production in FY 1977. Without these funds, the cost of a production program would increase due to the necessity of reconstituting the work force and inflation.

SRAM

I noted last year that the acquisition of the SRAM would be essentially completed with FY 1974 funds. The amounts requested for SRAM in the FY 1976 and Transition Budgets, a total of about $5 million, is for the development of a new motor for that missile. The missile itself was designed for a ten year life, but the motor was designed for only a five year life. While it is still not clear how long these solid fuel motors will actually retain their effectiveness, the first SRAMs entered the force in FY 1972, and we should be prepared to begin the replacement of the existing motors by as early as FY 1977. However, the chemical process involved in the manufacture of the solid propellant is now unacceptable from a pollution control point of view; hence, the motor must be redesigned to accommodate a new propellant and liner, and then thoroughly tested.

Of the approximately $35 million requested for authorization in FY 1977, $15 million is included for completing development of the new motor and about $20 million for tooling and startup costs for production of missiles for the B-1. As in the case of the FY 1977 procurement funds for the B-1 aircraft, the use of these SRAM funds would be contingent on the decision to produce the B-1.

Advanced Tanker/Cargo Aircraft

We are continuing to study the requirement for additional refueling support of our strategic and general purpose forces. Alternative approaches which are being examined include commercial wide body candidates as well as modification of existing refueling aircraft. Preliminary study results indicate that additional tankers to support general purpose forces, including airlift aircraft, may be required. Accordingly, we are requesting $5 million in FY 1976 and $1 million in the transition period to initiate development if the final study results warrant such action. In addition, we are requesting an authorization of $50 million in FY 1977 to continue the proposed development.

Cruise Missiles

Last year the Congress was informed of the DoD's decision to proceed with a joint Air Force-Navy Cruise missile technology program. The Air Force was to concentrate on the development of a small turbofan engine suitable for both an air-launched and sea-launched cruise missile, and the Navy was to pursue the development of guidance technology which was also to be common to both missile systems. The Air Force was to commence engineering development of the Air Launched Cruise Missile (ALCM) in FY 1975, making maximum use of the previously terminated SCAD engineering program for air vehicle design and engine development, while the Navy was to continue with advanced development of a Sea Launched Cruise Missile (SLCM) in both a strategic and tactical variant.

The Congress expressed concern about these cruise missile programs, and we share that concern. As a result, we have completely reappraised the programs, examining in detail both the need and the technical considerations. The major conclusions which evolved from this reappraisal are as follows:

-- An ALCM would enhance the capability of the pure penetrating bomber in advanced threat environments; however, the extent of the need for ALCM depends on how the threat evolves.

-- A SLCM would provide a desirable augmentation of our strategic capabilities and a unique potential for unambiguous, controlled, single-weapon response from relatively invulnerable submarines as well as from other surface platforms.

-- Both ALCM and SLCM, because they are designed for use on existing carrier vehicles, would have a relatively low incremental cost, but they would impose on the Soviet Union large additional expenditures for air defenses to counter them.

-- A tactical cruise missile variant of the strategic version could provide the Navy with a highly effective over-the-horizon antiship capability.

-- There is a potential for improving management and the allocation of scarce RDT&E resources by restructuring the ALCM and SLCM programs.

-- Cruise missile technology, though well in hand, has not yet been integrated into a functional whole which could demonstrate proof of concept.

Of these conclusions, the last is the most crucial. While the separate pieces of technology required for the development of a cruise missile are well in hand, the problem of integrating them into a useful cost-effective system has not been solved. Consequently, it would be premature to consolidate the cruise missile efforts into a single, integrated engineering development program at this time. It is in the engineering development phase that expenditures begin to reach high levels. By keeping the two systems in the advanced development stage where expenditure levels are relatively low, we can afford to keep all viable options open.

Accordingly, we propose to keep the ALCM in advanced development until the cruise missile concept has been satisfactorily demonstrated. We also propose to continue the SLCM program in advanced development but on a revised schedule that would permit important milestones to be reached concurrently with ALCM. Both programs would be scheduled for first flight in early 1976 and for an engineering development decision (DSARC II) in early 1977. Both programs would continue to emphasize commonality of major components.

This proposed program would enable us to proceed toward our IOC with a more deliberate pace in the earlier years. We are requesting for the development of the ALCM $51 million in FY 1976, $13 million in the transition period, and an authorization of $104 million in FY 1977. For the SLCM development, the amounts are $102 million in FY 1976, $42 million in the transition period, and $192 million in FY 1977. SLCM funding is higher because of the Navy's competitive contractor approach and because both a strategic and a tactical variant of the missile are being developed.

2. Strategic Defensive Forces and Programs

The strategic defensive forces include the air defense and ballistic missile defense forces, the bomber and strategic missile surveillance and warning systems, and the space surveillance system. These components of the strategic defensive forces are not only interrelated with one another but also with the strategic offensive forces.

As I noted last year, without effective ABM defenses, air defenses are of limited value against potential aggressors armed primarily with strategic missiles. That is to say, if we cannot defend ourselves against strategic missiles, there is little to gain from trying to defend ourselves against strategic bombers. With reduced emphasis on active defenses, however, we become more dependent on warning for the survival and, hence, the deterrent effectiveness of our strategic offensive forces, particularly in the case of bombers, which are very vulnerable when on the ground. Consequently, as we proposed at that time, a basic readjustment in our air defense program and some major improvements in our tactical warning systems should be made.

a. Air Defense

With regard to air defense, the reasons that led us to propose a major realignment of our forces last year are even more compelling this year. The level of ABM deployment has been further limited by agreement between the U.S. and the USSR. Thus, the utility of air defense in a major attack on the United States is further restricted. More importantly, the high rate of inflation experienced during the past year has compelled us to excise from the Defense Program forces and activities that we no longer need or can no longer afford in relation to more urgent requirements.

Both of these developments reinforce the need to move forward promptly with the realignment of our air defense forces in support of their current primary mission, namely, to ensure the sovereignty of our air space in peacetime. This mission requires three related capabilities -- surveillance to detect and warn of intruders, forces to deter intrusion, and command and control to coordinate the two.

The major impact of this realignment is on the second of these capabilities, the interceptor and surface-to-air missile forces. Given the very tight constraints on the defense budget, I have no choice but to propose again the phaseout of the Air National Guard F-101 units which, in my judgment, are no longer worth their cost to operate and maintain. As noted earlier, the 91 flying units mandated by the Congress would be retained, if that mandate is continued, but the composition of the force would be changed. The seven F-101 units (including one Combat Crew Training Squadron) would be replaced by other types of aircraft, notably the KC-135.

Thus, by the end of FY 1977 the dedicated interceptor force would consist of F-106 squadrons in both the Active Force and in the ANG. These F-106 squadrons, operating at peacetime alert rates, could support various alert locations around the periphery of the 48 contiguous states. Additional alert locations, mostly in the South, could be provided by CONUS-based general purpose forces to enhance coverage along that periphery. These additional sites would be located on Air Force tactical bases and manned by F-4s (two aircraft each) drawn from the Air Force tactical units on the bases. The tactical aircraft, while on air defense alert, would operate under the control of the North American Air Defense Command, and the necessary communication links would be provided for that purpose. General support of the detachments would continue to be provided by the parent organizations.

We believe this application of the principle of mutual support and force interdependence is completely feasible and, indeed, desirable. The F-4 is currently our primary theater air defense aircraft and its tactical air-to-air capabilities have been well demonstrated not only in Vietnam but also in the Middle East. Moreover, service with our dedicated air defense forces in peacetime would provide very useful training for the F-4 crews involved. The main disadvantage is that a major war abroad, particularly in Europe, would require a prompt decision on the allocation of the available air defense resources between our needs at home and our needs abroad. But, this is the kind of military risk we must be prepared to take in a Defense Budget as tightly constrained as that proposed for FY 1976.

Although the air defense forces are being sized to perform their primary mission -- surveillance and control of U.S. air space in peacetime -- a force adequate for that mission would have an inherent capability in times of crisis to inflict attrition on penetrating bombers or reconnaissance aircraft, thus precluding them from having a "free ride" over the United States. In a crisis we would expect at least some strategic warning, which would give us time to increase the readiness of our air defense forces and augment them with appropriate general purpose forces. The Joint Chiefs of Staff and the Services have prepared detailed plans for this contingency.

Portions of the strategic air defense force could also perform air defense missions on a worldwide basis should contingencies requiring air defense arise. It should be noted in this connection that many of the AWACS aircraft, which we now propose to acquire for the tactical air mission, normally would be stationed in the U.S. Hence, AWACS would be available to train with the Continental Air Defense forces in peacetime and to take over the mobile command and control function in wartime. The older EC-121 airborne radars will be phased out by end FY 1977 as previously planned, consistent with the planned introduction of AWACS.

Last year we had planned to phase out in FY 1975 all of the remaining Continental Air Defense NIKE-HERCULES (both active and reserve) and their Fire Coordination Centers. Pressure on both personnel and funds, however, caused the Army to phase out these units in FY 1974.

We also planned last year to phase out over a period of years all of the existing CONUS Air Force regional command and control centers -- the Regional Control, BUIC Control and Manual Control

Centers -- and replace them with 13 USAF/FAA Joint Control Centers (JCCs). I noted at the time that a new command and control plan tailored specifically to the revised air defense structure and missions was under development by the Air Force, and that the JCC plan could change.

This plan has now been completed. The principal change concerns the joint use of the 13 FAA Control Centers. Further study has convinced us that the command and control of the interceptor forces from 13 separate JCCs would be inefficient in peacetime and unworkable under actual combat conditions. Accordingly, we now propose to establish four Region Operations Control Centers (ROCCs), one in each of the four regions into which the forty-eight contiguous states would be divided. Each ROCC would be able to handle the input from as many as 15 surveillance radars and would be able to control all of the interceptors stationed in its region. All four ROCCs, of course, would be tied into the North American Air Defense Command (NORAD).

Under the new plan, 43 military/FAA joint-use surveillance radars will be required. However, five military radars would have to be retained to cover areas in which FAA has no requirement for radar coverage.

The total investment cost of this new command and control system is estimated at about $95 million, of which $80 million would be for procurement (including installation and check-out) and $15 million for military construction. As shown in Table 2 of the Appendix, the first two ROCCs would become operational in FY 1977 and the last two in FY 1978. The realignment of the surveillance radars would be completed in FY 1978, and all of the existing CONUS Regional, BUIC, and Manual Control Centers would be phased out by end FY 1979.

I noted last year that the Air Force was investigating the feasibility of modernizing the Alaskan air defense system. In view of the new ROCC program proposed for CONUS, the Air Force has developed a plan to establish such a control center in Alaska. This ROCC, which would also be tied in to NORAD, would replace the existing Regional Control Center and Manual Control Centers in Alaska by end FY 1979.

Inasmuch as Canada is a partner in NORAD, discussions have been held with the Canadian authorities concerning realignment of the North American Air Defense system. These authorities have indicated that the proposed changes in the NORAD structure, particularly the establishment of two regions in Canada, will meet their national air space surveillance and control requirements.

In addition to the DEW Line radars in northern Canada, there are a number of surveillance radars in southern Canada which are part of the NORAD system. Moreover, Canada operates several squadrons of CF-101s to ensure the sovereignty of its own air space as well as to contribute to the defense of the North American continent.

Along with the CONUS air defense forces, we will also continue to maintain one active Air Force air defense squadron (F-4s) and three active Army NIKE-HERCULES batteries in Alaska, and one ANG air defense squadron (F-102s converting to F-4s in FY 1976) in Hawaii. We will also continue in-place the active Army general purpose forces NIKE-HERCULES and HAWK batteries now operational in Florida. We will continue, of course, to have options to improve our F-106s, deploy a follow-on interceptor (e.g., F-15, ACF or F-14), or to deploy a new SAM system (e.g., SAM-D) for CONUS air defense, since these programs are being pursued in any event for the general purpose forces.

CONUS OTH-B Radar

As I indicated earlier, with the sharp reduction in active defenses which has taken place in recent years, tactical warning assumes even greater importance than in the past. Consequently, I believe that we should continue our efforts to develop the CONUS Over-The-Horizon Backscatter (OTH-B) radar. This radar promises to extend our surveillance and early warning capability against bombers (or any other aircraft) to more than 1,000 nautical miles from our coasts, at both high and low altitudes. The detection range of our current surveillance radars out over the oceans is about 200-250 nm at high altitude and about 30-50 nm at low altitude.

Although the technology required for this radar has been under development for more than a decade, some technological risks still remain to be resolved. Therefore, we propose to pursue this program in two steps -- first, the development of a limited coverage prototype radar; and second, if the first step is successful, the deployment of a full two-site coverage system. The prototype radar would be used to validate system concepts, develop operational procedures for wide area surveillance, and establish performance and cost parameters prior to the commitment of funds for operational sites. It would be designed initially to cover a reduced azimuth, but would be designed to be expansible to full coverage if the decision is made to deploy the system.

The currently planned program involves two OTH-B radars -- one near Cutler, Maine (the prototype) looking northeast, and one in Washington or Oregon looking northwest. With regard to the northern approach, we now plan to retain the 31 DEW Line radars until such time as we can perfect an OTH radar, or some other system, which can operate successfully in the presence of the intense electrical disturbances which characterize the northern auroral zone. The need for a south-looking radar will be considered later.

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About $10 million has already been appropriated for this prototype program, and another $14 million is requested for FY 1976 and the transition period. In addition, an authorization of about $14 million is requested for FY 1977.

b. Ballistic Missile Defense (BMD)

The R&D portion of our ballistic missile defense (BMD) effort is comprised of a restructured Site Defense program and an Advanced Technology program. The third element of our BMD program, SAFEGUARD, will successfully complete its R&D phase on schedule and begin its operational phase early this year. We have significantly reduced and streamlined our BMD management structure concurrent with the reduction in overall BMD funding as the SAFEGUARD system approaches completion. All elements of our BMD program are now controlled in the Army by a single program manager.

I believe we must continue a BMD effort of significant breadth and depth to ensure that we can keep pace with the continuing Soviet BMD efforts and improvements that I discussed earlier. Our continued effort is essential not only as a hedge against a sudden abrogation of the ABM Treaty, but also because our demonstrable competence in this field will continue to motivate the Soviet Union to negotiate additional limits on strategic arms. In addition, R&D in this strategic area assists in the design and evaluation of our strategic offensive systems by providing data on their ability to penetrate missile defenses. It also assists our intelligence agencies in the assessment of Soviet BMD capabilities by providing a core of expertise in this complex technology.

Our overall BMD program provides operational experience with a deployed system, SAFEGUARD, the advancement of system technology in the Site Defense program and research on the more futuristic technologies and concepts in the Advanced Technology program.

SAFEGUARD

Last year I informed the Congress that we planned to bring the SAFEGUARD site near Grand Forks, N. D. up to full operational capability. I also noted at the time that the Army was working out the details for a SAFEGUARD operating plan.

The operating plan for FY 1976 has now been completed. The Equipment Readiness Date of 1 October 1974 for the Grand Forks site, which was set in April, 1970, was met on schedule. The Missile Site Radar (MSR) and the Perimeter Acquisition Radar (PAR) are operational and the missiles are undergoing installation.

No additional R&D funds will be required for the SAFEGUARD program after FY 1975. R&D flight tests were completed in August 1974 and no further upgrading of the system is planned. Production verification flight tests will be completed in April 1975. The cost of the Army's Meck Island R&D installation at the Kwajalein Missile Test Range will be reduced by closing down and storing the interceptor launch facilities in the spring of 1975 and the MSR at the end of that year. Until that time the MSR will support (and be funded by) the Ballistic Missile Defense Advanced Technology Programs as the SAFEGUARD activity is phased out. The $2 million in acquisition costs shown for SAFEGUARD in FY 1976 is for replenishment of spare parts.

Site Defense

In conformance with the desire of the Congress, the Site Defense program, which had been directed toward the demonstration of a prototype ABM system specifically designed for the defense of MINUTEMAN, now has been reoriented to a systems and component technology and validation effort. This system-oriented technology effort is important because the integration of complex components such as phased-array radars and large digital computers into a smoothly working system is still the most demanding challenge in missile defense. The new program will be pursued in two phases -- (1) a validation phase to prove that our solutions to technical problems associated with the Site Defense concept of terminal defense are adequate, and (2) a second phase which will incorporate advances in technology into the Site Defense design and thereby keep the system concept abreast of newly emerging offensive and defensive capabilities.

The first phase will seek to validate the technical solutions to five key problem areas -- bulk filtering of tank fragment radar returns, discrimination of warheads in the midst of clutter, effective operation in a nuclear environment, prompt activation of the system from a peacetime dormant posture, and software required to permit real time engagement. Since these technical areas involve the radar, data processor and the software, the new effort will be concentrated on those three components of the system. The missile portion of the program -- i.e., the development of the SPRINT II -- will be de-emphasized; no flight tests will be conducted. We will, however, pursue improvements in interceptor performance by incorporating recent advances in the state-of-the-art into the improved interceptor design.

To test and verify our solutions to the key technical problem areas, it is critical that we conduct a limited number of field tests at the Kwajalein Missile Test Range. The new Site Defense Radar is scheduled to be installed at Kwajalein by the summer of 1976.

The total cost of the validation phase of the reoriented Site Defense program (including the $115 million appropriated for FY 1975 but excluding the $275 million appropriated for FY 1974 and prior years) is now estimated to be less than $600 million. The second phase will be a continuing introduction of advanced technology to better solve systems problems. It will enter the program gradually, beginning in FY 1976. We are requesting for this combined effort $140 million in FY 1976 and $38 million in the transition period, plus an authorization of $160 million in FY 1977.

BMD Advanced Technology

In the strategic world of the future we cannot continue our leadership or even remain competitive without a sound understanding of the new emerging technologies. The BMD Advanced Technology Program keeps us abreast of new defensive techniques and radically new concepts, and thereby reduces the likelihood that we would be caught technically unaware of BMD advances by the USSR. To achieve this, the program maintains an aggressive search for new ideas, and conducts additional research to prove the feasibility of the most promising ideas. BMD Advanced Technology concentrates on five major areas of technology -- discrimination, data processing, optics, radar, and interceptors.

The ability of an ABM system to discriminate between RVs and other objects such as decoys and tank fragments is absolutely essential to its effectiveness against a sophisticated opponent. Although a great deal of progress has already been made in this area, much more data on the radar and optical signatures of tank fragments and other non-RV objects is needed for more efficient designs to improve performance and reduce the cost of future systems.

Data processing software is generally the largest single cost item in the development of an ABM system and requires the longest lead time to develop. Consequently, more efficient methods for designing, planning and managing the development of this critical component will be pursued in this program. Moreover, improvements in data processing hardware also appear feasible, and these are being developed.

Optics technology appears to hold great promise for overcoming some of the shortcomings in radar sensors. Much remains to be learned, however, about target signatures and the application of optical sensors in a typical target environment.

Current ABM radars are very expensive to acquire. New approaches to antenna design, such as the dome shaped antenna, show promise of large reductions in construction costs. Similarly, solid state power amplifiers, if they can be economically produced, would improve radar performances and permit further economy in radar design and operation.

Improvements in interceptors beyond the SPRINT class of vehicles will require faster burning propellants, harder missile structures, electronic components which can stand the shock of high acceleration, and new guidance and flight control techniques. The development of a much faster burning propellant which can be produced economically in large quantities is currently being emphasized.

These five areas of technology, in our judgment, are the most critical at this stage of our knowledge and experience. A reasonable degree of success in these areas should enable us to maintain our lead in ABM technology, provided that the current pace of the Soviet R&D effort in this field is not accelerated. To continue this important basic technology program at a relatively constant level of effort, we are requesting $105 million in FY 1976 and $30 million in the transition period, plus an authorization of $111 million for FY 1977.

Ballistic Missile Attack Warning Systems

Because of the importance of high confidence warning to our overall strategy, we have adopted the policy of ensuring coverage of all relevant strategic missile launch areas by at least two different types of sensors (sensing different phenomenology). Such an approach minimizes false alarms and potential natural interference, and insures critical areas are always covered.

With regard to ICBMs, first warning of a Soviet (or PRC) launch would be provided by the Satellite Early Warning System satellite maintained on station over the Eastern Hemisphere. Previously, this warning would have been verified first by the forward scatter Over-The-Horizon (OTH) radar system and then by the Ballistic Missile Early Warning System (BMEWS). But, as I pointed out last year, the forward scatter OTH System is very sensitive to atmospheric disturbances and hence considerably less reliable than the satellite and BMEWS systems. We, therefore, had planned to phase out this system with its four transmitters and five receivers, in FY 1976. At the urging of the House Appropriations Committee, however, the system is being phased out in FY 1975 to achieve an additional year of savings in operating costs. We are quite confident that the remaining two systems, together with available intelligence sources, will continue to provide highly credible warning of ICBM attack.

Our surveillance and early warning capability against SLBM attack, however, leaves much to be desired. First warning of SLBM launches against the United States is provided by the early warning satellites maintained on station over the Western Hemisphere. Complementary warning coverage is provided by the 474N SLBM Detection and Warning System consisting of seven FSS-7 radars -- three on the East Coast, three on the West Coast, and one on the Gulf Coast. However, as I explained to the Congress last year, the FSS-7 radars have low reliability and can be bypassed by the Soviet SS-N-8 and SS-N-6 Mod 2 SLBMs.

Moreover, there are occasional gaps in our satellite coverage caused by natural phenomena, i.e., solar reflections.

Accordingly, we had proposed last year to replace those seven "dish" radars with two new SLBM phased array early warning radars -- one on the East Coast and one on the West Coast. These much more reliable and capable radars, together with the Western Hemisphere satellites, would provide highly credible warning of a Soviet SLBM launch against the United States. The new SLBM radars would not only corroborate the warning received from the satellites, but would also fill in any gaps that may occur in satellite coverage as a result of solar reflections.

Now, at the urging of the House Appropriations Committee, we propose to make three further changes in the plan presented last year in order to effect some reduction in operating cost in this area. First, the standby radar at Moorestown, New Jersey was phased-out in December, 1974, instead of maintaining it until the East Coast SLBM phased array radar is available.

Second, we will phase out the FSS-7 site at Laredo, Texas later this year when the modification of the Space Track radar at Eglin AFB, which will give it an SLBM warning capability, is completed.

Third, in line with an understanding with the House Appropriations Committee, we plan to close down the BMEWS radar at Clear, Alaska when the ability of COBRA DANE and the new West Coast SLBM phased array radar to take over Clear's warning functions has been determined.

The first SLBM phased array radar would replace the three East Coast FSS-7 dish radars. The second phased array radar would replace the three West Coast FSS-7 dish radars. The acquisition cost of the two SLBM phased array radars still is estimated at approximately $118 million.

We are requesting about $50 million in FY 1976 and $2 million in the transition period, plus an authorization of about $17 million in FY 1977, for the acquisition of the second of the two SLBM phased array radars. For the acquisition of the satellite system and its ground segments, we are requesting about $68 million in FY 1976 and $9 million in the transition period, plus an authorization of about $55 million in FY 1977. The FY 1976 amount includes funds for the procurement of ground elements which are intended as a backup for the existing ground stations to enhance survivability through redundancy of this satellite warning system.

3. Strategic Command and Control

The system devised for the command and control of the strategic forces, both in peace and in war, is part of a larger system designed for the control of all of our forces worldwide. This more comprehensive system of command, control and communications is discussed later in this Report. This section deals specifically with the new elements of the system that would be of particular importance to the command and control of the strategic forces during and after a nuclear attack on the United States. These include the Advanced Airborne Command Post (AABNCP) aircraft, the Air Force Satellite Communications System (AFSATCOM), and the SANGUINE extremely low frequency (ELF) radio system.

AABNCP (E-4)

The heart of our national level command and control system is the National Military Command System through which the National Command Authorities (NCA) issue their orders to subordinate commands and receive information in return. The command facilities of this system include the National Miltiary Command Center (NMCC) at the Pentagon; the underground Alternate National Military Command Center (ANMCC); and the National Emergency Airborne Command Post (NEACP) primarily based at Andrews AFB, Maryland.

Normally, national level command and control is carried out in the NMCC. As the threat increases, however, control can be transferred to the ANMCC or to the NEACP. This system of command centers maintains connectivity to the ICBMs, the manned bombers, and to the sea-based strategic missile forces by means of a deliberately redundant system of communications.

High confidence in the continuity of command and control throughout the spectrum of conflict is an absolute necessity if the NCA are to maintain control of the forces during a conflict. If this confidence is to be ensured, a major improvement in the most survivable command post, the Airborne Command Post (ABNCP) must be achieved. Thus, we have undertaken the development of the Advanced Airborne Command Post (AABNCP) aircraft, the E-4, because of limitations in capacity, endurance, and survivability of the current ABNCP, the EC-135.

The survivability of the E-4 will be substantially increased over the current EC-135 airborne command posts by virtue of two factors. First, it will have a satellite communications capability and, therefore, it will not be geographically constrained by line-of-sight communications to ground stations as in the case of the EC-135. Second, its protection against electromagnetic pulse (EMP) effects are expected to be much greater than the EC-135.

The E-4 design allows sufficient room for the NCA and their close advisors. It should be stressed, however, that the validity of the airborne command post concept does not depend on the presence of the NCA on board the aircraft as long as communications can be maintained with them or their authorized successors.

As indicated last year, the AABNCP program is divided into "blocks". The current Block I program is further divided into three phases, A, B, and C. Phase IA, the equipping of the first three aircraft with C^3 packages from three existing EC-135s to provide an interim NEACP, is nearly complete. The first aircraft was operational in December, 1974, and the final operational capability with three aircraft is expected in the near future.

Phase IB provides for the acquisition of a test bed aircraft, development of an advanced C^3 package consisting of new and more powerful communications equipment, including terminals for interface with the AFSATCOM satellite system and the Defense Satellite Communication System (DSCS), and procurement of three additional operational E-4s, complete with the new C^3 package. The more powerful communications equipment will be resistant to degradations caused by a nuclear environment and jamming. The new C^3 package will include an automated message switching capability, a computer terminal for interfacing with the ground command and control computer system, and consoles to display data to the battle staff.

Phase IC involves the retrofit of the first three E-4 aircraft with the new C^3 package.

Future Blocks will continue the definition and development of the airborne computer system and studies of additional improvements. For example, one of the important objectives of Block II is expected to be a substantial increase in the capability of the E-4 to support flexible nuclear response.

In FY 1974 Congressional guidance stated that the procurement of the last three aircraft and the six production C^3 packages should be deferred until completion of threat level EMP testing. This deferral would not only delay the program but would also increase the cost by an estimated $35 million, since the Air Force would not be able to take advantage of the option in the existing Boeing contract for the procurement of the last three E-4s. That option expires in July, 1976. In our judgment, deferral of procurement of the last three E-4s is unnecessary. The aircraft itself is a low risk item and it already has been subjected to a lower level EMP test. Moreover, a great deal of attention has been given to EMP protection in the design of the system.

The $43 million requested for FY 1976 would provide $36 million to continue development of the Block IB C^3 and $7 million for the Block II program. The $192 million in the Transition Budget would provide $173 million for the procurement of the last three aircraft (including their C^3 packages), $11 million for initial spares, and

$8 million for RDT&E ($2 million for the Block IB C^3 package and $6 million for Block II). The $26 million requested for authorization in FY 1977 includes $4 million for Block IB C^3 package development, $12 million for Block II, and $10 million to initiate construction of hanger facilities for the E-4 at Offutt Air Force Base, Nebraska.

The total cost of the Block I program is now estimated at about $560 million, provided that we are permitted to procure the last three aircraft in July, 1976. Otherwise, the total cost would be about $593 million.

AFSATCOM/SURVSATCOM

The AFSATCOM system consists of a combination of special communications transponders and channels carried on board "host" satellites placed in orbit for other missions (e.g., Navy FLTSATCOM satellites) plus numerous ground and air terminals. This deliberately redundant satellite system will not only provide greater assurance that essential NCA instructions reach our forces, it will also enable the forces to report back the data needed by the NCA to maintain sure control and to execute a variety of nuclear options.

Service test models of the various terminals have been acquired and are now in test and evaluation. The production of terminals is scheduled to begin in late 1975. Host satellite launches are also scheduled to begin in 1975.

AFSATCOM II is now in program definition. The principal objective of AFSATCOM II is to achieve a major upgrade in ECCM capability over AFSATCOM I, and to enhance further the physical survivability of the space segment. AFSATCOM II consists of the AFSATCOM I earth terminal segment, modified to give it a much higher antijamming capability, and a new space segment (SURVSAT I) to be installed in upgraded host, or possibly dedicated, satellites. The LES 8 and 9 experimental satellites, which are scheduled to be launched in late 1975, will demonstrate new technology for improvements in the physical and ECCM survivability of satellites. The results of these experiments are expected to influence significantly the definition and design of the SURVSAT I system.

The $51 million requested for FY 1976 would provide for AFSATCOM I development and initial procurement. The $14 million requested in the Transition Budget also supports AFSATCOM I procurement and integration development. The $96 million requested for authorization in FY 1977 would provide $42 million for AFSATCOM I and $44 million for AFSATCOM II development and support.

SANGUINE

As noted last year, the SLBM force, when at sea, is the element of our strategic offensive forces least vulnerable to sudden nuclear attack. The prospect of maintaining effective command and control of that force in a nuclear war environment, however, is the least satisfactory, because the communication links from the NCA to the individual ballistic missile submarines are less survivable than the submarines themselves. This shortcoming is a matter of deep concern with regard to our ability to deter aggression, to maintain stability in a nuclear crisis, and to deter escalation of a strategic nuclear war, especially before cities are struck. Therefore, we must make every effort to ensure reliable and survivable communications with the SLBM force under all foreseeable circumstances, without increasing the vulnerability of our SSBNs to Soviet ASW forces.

The SANGUINE system holds the best promise of providing a survivable communications link with our ballistic missile submarines, and possibly with our other strategic forces. In addition, the SANGUINE signals would decrease susceptibility of our communications to atmospheric disturbances and enemy jamming, and improve the survivability of our submarines by permitting them greater operational flexibility in depth and speed.

Our funding requests -- $18 million in FY 1976, $4 million in the transition period, and the $24 million requested for authorization in FY 1977 -- would permit the continued development of the SANGUINE system. Design validation activities are being conducted at existing facilities. Propagation validation experiments will be conducted to provide measured propagation data using operational submarines for data collection. Environmental compatibility activity will be continued to study the biological and ecological effects of extremely low frequency radio waves.

Although accomplishment of the FY 1976 program is not dependent on any particular site, it is recognized that site selection is of critical interest to the Congress and the public. Over the past several months the Navy has investigated a number of sites in the United States that may be suitable for construction of the SANGUINE transmitter complex. The Deputy Secretary of Defense will lead an in-depth review of the entire SANGUINE program in February, including the results of the site investigation. We will then select a site which will best accommodate the overall objectives of the program. The Congress will be advised of the site selection well before full-scale development is scheduled to start. The Navy will also work with the federal, state and local government agencies in the area of the site to ensure their understanding of the system.

The need for a more survivable communications link to our ballistic missile submarines is clear, and the technical feasibility of the SANGUINE system has been reasonably well demonstrated during the years of work at the Wisconsin test site. Moreover, notwithstanding some fears to the contrary, the SANGUINE system would pose no known environmental, ecological, or biological dangers to the area in which it is installed. I, therefore, strongly urge the Congress to support this program.

TACAMO

At the present time, our primary communications to our Fleet Ballistic Missile Submarines are by means of several fixed, low and very low frequency radio stations located in various parts of the world. The TACAMO airborne radio relay system, which consists of EC-130 aircraft, is the more survivable emergency back-up to those fixed stations. The Navy now has a total of 11 of these aircraft; however, we believe this number should be increased to 14.

Two additional aircraft have been funded but not yet delivered, and we now propose to buy one more in FY 1976. The $41 million requested for FY 1976 would permit the procurement of the additional aircraft, the continuation of the ongoing major modification program to improve TACAMO operational capabilities, and some minor development work. The $10 million requested for the transition period and an authorization of $23 million in FY 1977 will continue the improvement programs.

4. Civil Defense

Our Civil Defense Program is, and has always been, an essential element of our overall strategic deterrence posture. Hence, one would expect that the recent shift in emphasis towards a more flexible strategic response policy, which I discussed earlier in this section of the Defense Report, would be reflected in our Civil Defense Program. That is indeed the case. We are seeking to reflect in our civil defense planning the wider range of response options that we are now introducing into our military planning.

The Soviet Union for many years has given a great deal of attention to civil defense, including not only the construction of shelters and the training of civilians but also the preparation of plans for evacuation of the bulk of the population from its major cities in the event of a crisis. Thus, the Soviet leaders have the option to evacuate the cities or to shelter the population in place, depending upon their assessment of the situation at the time.

We believe that the United States should have a similar option for two reasons: (1) to be able to respond in kind if the Soviet Union attempts to intimidate us in a time of crisis by evacuating the population from its cities; and (2) to reduce fatalities if an attack on our cities appears imminent.

Similarly, this nation should have the option in the event of an intense crisis to evacuate the civilian population from high risk areas near such military installations as SAC bases, ICBM fields, SLBM support facilities, etc., to less hazardous areas while protecting the rest of the population against fallout. As noted last year, a Soviet counterforce attack which deliberately avoids our cities would still produce a large amount of nuclear fallout which could drift over areas that are downwind from strategic military installations. This civil defense option would complement the military response options that we are now introducing into our planning to strengthen deterrence against a Soviet counter-force attack.

Accordingly, we propose to continue our efforts, within the limits of the resources available, to improve our ability to protect the population in place against fallout and to develop in an orderly way two major options for the relocation of the population in a crisis. The first option, which would be designed against the threat of a Soviet counterforce attack, would involve the relocation of the population from high risk areas near key military installations and the protection of the rest of the population against fallout. This option could reduce nationwide fatalities due to fallout from a limited Soviet counterforce attack to relatively low levels -- well under one million -- provided that the people in the communities that would be most exposed to fallout from such an attack make effective use of the shelters available.

The second option, which would be designed against an all-out Soviet nuclear attack, would involve the evacuation of the population from cities, as well as from areas near key military installations. Repeated studies have shown that the evacuation of the bulk of the population from our major metropolitan areas could save some 70 million lives in an all-out Soviet attack on the United States, over and above those saved by in-place protection options.

Pilot-project work undertaken in areas near some of our important military installations during fiscal years 1974-75, has established the feasibility of developing plans to allocate risk area populations to surrounding host areas, including the development of standby public information (for publication during a crisis) on "where to go and what to do" should relocation be implemented. Public officials at state and local levels in the pilot areas accepted the need for this type of contingency planning but pointed out that federally-supported planning assistance would be needed.

Other studies indicate that it would be feasible to relocate population from cities over a period of several days, and to provide for their reception and care in host counties for a period of up to two weeks. Specially-tailored solutions, however, would have to be developed for the most densely-urbanized parts of the U.S., such as the Northeast. It would also be feasible to redirect the distribution of food and other essentials to support evacuees in host areas, provided adequate state-level planning is done with industries concerned. Pilot-project experience with a "host area survey" indicates that local plans in host areas can provide for protecting evacuees from fallout radiation by use of best available existing protection, plus crisis action to improve fallout protection in existing buildings and to construct expedient shelters.

In fiscal year 1976, we propose to move that work forward by training a group of planners, hired under contracts with the states, to work with additional states and cities in developing allocations of risk area population to host areas, and in the preparation of standby instructions for the public. Concurrently, we will continue our research and development efforts, with emphasis on development of special solutions for densely urbanized areas such as the Northeast. We will also conduct host area surveys in counties near selected high risk areas and the "all-effects" shelter survey in selected areas. The latter identifies the best protection available from fallout in existing structures in all areas of the U.S.. In high risk areas, it also identifies best available protection from the direct effects of nuclear weapons. Should the bulk of the population be relocated from the high risk areas, the direct effects protection facilities would be used by "key operating personnel", i.e., persons who would commute into cities from nearby host areas to keep the most essential industries and services in operation during the relocation period.

Developing flexible-response capabilities for use in case of a severe crisis or nuclear attack requires that local jurisdictions throughout the United States be able to conduct emergency operations to support and assist their citizens. This in turn generates, as a highly desirable bonus, improved readiness to conduct coordinated local operations in peacetime emergencies or disasters. Such peacetime capabilities are accordingly a secondary, but important, objective of the Civil Defense Program.

The Department of Defense (through the Defense Civil Preparedness Agency) provides to state and local governments shelter surveys which identify inherent protection against fallout and other weapons effects in existing structures. It provides radiological detection instruments and training on their use under attack conditions and in peacetime emergencies involving radiological hazards, as well as periodic maintenance and calibration for the instruments. It provides the National Warning System, through which attack warning can be disseminated in less than two minutes, from the primary National Warning Center at Cheyenne Mountain to over 1,200 warning points throughout the United States (this system is also used to disseminate severe-weather warnings, based on inputs from the National Weather Service).

In addition, the Civil Defense Program provides matching funds to assist state and local governments to weld the elements of emergency readiness into an all-hazard civil preparedness capability to conduct lifesaving operations during peacetime emergencies or in the event of war. These funds support the construction of Emergency Operating Centers, the procurement of warning sirens, communications equipment and other hardware, and the basic management structure -- the Civil Defense Directors and their staffs.

To fulfill these civil defense responsibilities of the Defense Department and to make a modest start on the relocation planning effort, we are requesting a total of $88 million in the FY 1976 Budget and $20 million in the Transition Budget. The $88 million requested for FY 1976 would provide $8 million for the shelter program, $43 million for financial assistance to state and local governments, and $37 million for other programs such as attack warning, emergency operations, research and development and program management. The $20 million requested for the transition period would provide $2 million for shelters, $11 million for financial assistance, and $7 million for the other programs.

III. GENERAL PURPOSE FORCES

A. THE NEED FOR GENERAL PURPOSE FORCES

The strategic nuclear forces are only the first part of the U.S. defense TRIAD. As President Ford has pointed out, they require no more than about 20% of the total budget, even when a number of indirect costs are allocated to them. The general purpose forces, consisting of our theater nuclear and non-nuclear capabilities (which, for all practical purposes, include our mobility forces and support to other nations), are by far the most expensive part of our defense establishment. For FY 1976, the National Guard and Reserve forces alone will cost the Federal Government $5.6 billion in total obligational authority.

Even during a generation of great U.S. strategic nuclear superiority, the theater nuclear and non-nuclear forces had important roles to play. Now, in the era of Vladivostok and strategic equivalence, their importance has increased still more. It is essential, therefore, that the basis for these two parts of the defense TRIAD be discussed in some detail.

1. The Basis for the Theater Nuclear Forces

I hardly need remind the Congress that it was the American scientific community which in its wisdom led the effort to develop and deploy our theater nuclear forces. But however much the original initiative lay with us, the Soviet Union has shown the liveliest possible interest in the concept of theater nuclear warfare. As a consequence, it is now the Soviets who set the pace here, as they do in so many other respects.

Soviet peripheral attack and theater nuclear forces are numerous, diversified, and of high quality. Their MRBM and IRBM capabilities represent a powerful potential threat to our allies in Europe and Asia as well as to U.S. forces stationed in these theaters. In addition, Soviet sea-launched cruise missiles (SLCMs) -- while primarily seen as antiship weapons -- could be used for strategic missions, including attacks on European and Asian targets as well as on U.S. coastal cities and installations. Other long-range forces include a major portion of the Soviet medium bombers which, while assigned to the Long-Range Aviation (LRA) of the USSR, and having a marginal intercontinental attack capability, are oriented primarily toward targets in Europe and Asia.

Shorter-range Soviet capabilities include nuclear-capable tactical aircraft and a series of mobile surface-to-surface missiles, many of which have an off-road capability. These forces can be rapidly deployed from one front or theater to another and, as we know, can be transferred to other countries as well. Pact commanders appear to plan on the rapid application of firepower, with priority given to NATO nuclear delivery units. Pact armored forces are postured to exploit these attacks by rapidly seizing territory in the West.

This is not a situation that we can ignore or wish away, particularly where our NATO Allies are concerned. Accordingly, we continue to deploy our own theater nuclear forces in both Europe and Asia. In the case of Europe, we have three basic reasons for our deployments. First, the maintenance of theater nuclear capabilities in NATO is essential to deterrence as long as the Warsaw Pact deploys theater nuclear forces of its own. They help to deter the use of nuclear weapons by the Pact and, along with our strategic nuclear and conventional forces, provide a general deterrent across the entire spectrum of possible aggression. Second, should deterrence fail, our theater nuclear capabilities provide a source of limited and controlled options other than the early use of U.S. and allied strategic forces. Third, in keeping with NATO's flexible response strategy, we do not rule out the use of nuclear weapons by the United States and its allies if that should prove necessary to contain and repel a major conventional attack by the Warsaw Pact.

While the NATO Alliance has made progress in developing an armory of nuclear weapons for tactical purposes, much work on this leg of the NATO TRIAD remains to be done. This includes -- as stipulated by Public Law 93-365 (the Nunn Amendment) -- striving further to reduce the vulnerability of the tactical systems already deployed, improving our doctrines for the tactical use of nuclear weapons, and improving our ability to minimize collateral damage and escalation if the Alliance decides to resort to the use of nuclear weapons. As we continue to come to grips with these problems NATO should also consider whether, in the future, there are serious possibilities of replacing the existing stockpiles with nuclear weapons and delivery systems more appropriate to the European environment.

It would be premature at this time to summarize ongoing work to grapple with these problems within the Alliance or to provide a specific report along the lines required by Public Law 93-365. Nonetheless, we can already see in outline five major conditions that our theater nuclear forces must meet if their effectiveness as a deterrent is to be materially increased.

First, we must reduce their vulnerability to sabotage, seizure, and conventional assault. Measures are already underway to ensure this condition in cooperation with our allies.

Second, the vulnerability of these forces to surprise nuclear attack should be reduced, and the more exposed dual-capable systems should have the capability to disperse quickly so as to match a surprise dispersal by the Warsaw Pact. And even after dispersal, all forces should remain under central command and control, which may imply the organization of new units with more specialized nuclear missions. The introduction of the LANCE missile with its improved munitions should also increase the survivability, controllability, and effectiveness of the force.

Third, we need to improve our centralized command and control and campaign assessment capabilities to the point where reliable and comprehensive information about both non-nuclear and nuclear attacks, and the status of defending forces, can be more rapidly and reliably communicated to those political leaders who hold the responsibility for nuclear decisions and the release of nuclear weapons.

Fourth, target acquisition systems that can survive at least the first phase of any nuclear use still remain essential if we are to be able to implement a range of selective and controlled options, and at the same time limit the collateral damage from their implementation.

Fifth, we should continue to develop selective, carefully controlled options that will permit us: (a) to enhance our ability to deal with major penetrations of an allied sector and achieve a quick, decisive reversal of the tactical situation; and (b) to engage, if necessary, in a highly discriminating interdiction campaign against enemy lines of communication. Both basic options are designed so as to minimize the incentives for the enemy to reply at all or to respond with uncontrolled attacks. As I indicated earlier, changes in the size and composition of our deployed nuclear stockpiles and systems will improve our ability to accomplish these ends.

It should be evident that these are demanding conditions, and that they will be difficult to satisfy. For that reason, and for many others as well, we cannot regard our theater nuclear forces as a substitute for powerful conventional capabilities. They have a unique role to play in the spectrum of deterrence, and we should continue to maintain and improve them. But we cannot lean on them as a crutch in place of a strong non-nuclear leg to the deterrent TRIAD.

2. The Basis for the Non-nuclear Forces

Last year, this Report emphasized the importance of modernizing our concepts about nuclear deterrence. This year, it is equally essential to think in fresh terms about the role of our non-nuclear forces. The deterrence of non-nuclear war is probably the most challenging and complex problem that faces the defense planner. In

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part this is simply because credible conventional deterrence across a broad range of contingencies is difficult to achieve with high confidence in a turbulent world. But in addition, the challenge is so great because of the magnitude of the non-nuclear capabilities fielded by potential rivals in the international arena.

a. Opposing Capabilities

The most imposing of these capabilities is at the command of the USSR. We currently estimate Soviet ground forces at about 1.7 million men (paramilitary organizations aside) marshalled into 166 divisions of varying sizes and degrees of readiness. These forces could deploy over 40,000 tanks and would have the support of more than 7,000 tactical aircraft (excluding the medium bombers of Long-Range Aviation and Naval Aviation). Soviet naval forces consist of about 220 major surface combatants (including one new aircraft carrier already launched and two helicopter ASW carriers) and approximately 265 general purpose submarines (of which about 80 are nuclear). These naval forces are distributed among four separate fleets.

The Soviets maintain 31 divisions in Eastern Europe, along with about 1,500 tactical aircraft. Of this imposing total, 27 divisions and 1,200 tactical aircraft are deployed against the sensitive Center Region of NATO. The total Warsaw Pact capability in East Germany, Poland, and Czechosolvakia consists of 58 divisions, about 16,000 tanks, and nearly 2,900 tactical aircraft. A powerful assault force, nearly half of it Soviet in origin, stands poised near the heart of Western Europe.

The USSR also maintains a force of more than 40 divisions and 900 tactical aircraft deployed in Soviet Asia. This force probably exceeds what is required to defend against a Chinese attack. Therefore, some of this capability, along with the Pacific Fleet of the USSR, could be used against U.S. forces or allies if the need should arise. The Soviets, in short, have the forces to wage a two-front war -- in Europe against NATO, and in Asia against either the People's Republic of China or the United States and its allies.

The Chinese, with an Army of around 3.5 million men and 210 divisions, deploy more than 90 of their divisions in regions opposite these Soviet forces.

b. Non-nuclear Deterrence

It is the continued view of the United States and its allies that all parties would gain from a mutual and balanced reduction of forces, particularly in Central Europe. But as is the case with SALT and the strategic nuclear forces, even if we were to achieve reductions and a state of parity in conventional capabilities, we would still face the problem of how unilaterally to plan our forces and assure a condition of deterrence. Here as elsewhere, detente and arms control do not absolve us from dealing with force-planning issues in a systematic way. To proceed otherwise -- and especially to cut away more or less casually at our general purpose forces -- would be not merely to sink us to the status of a second-rate power, as it were, by default; it would be to undermine deterrence and collective security, and bring the fundamental interests of the United States (and perhaps its survival as well) into the gravest possible danger.

Unfortunately, the legend still lingers, especially in Europe, that because potential opponents have such imposing non-nuclear capabilities, the conventional deterrence of major conflict is infeasible, and that we present our budgets for these very costly forces based on the product of some inner bureaucratic interest and momentum. But while both aspects of the legend are false, it is certainly the case that the requirements of non-nuclear deterrence are, if anything, even more complex and stringent than they are for strategic nuclear deterrence. Perhaps that is why they attract so little outside analysis.

Nonetheless, there are a number of reasons why an understanding of non-nuclear deterrence and its requirements is crucially important. After thirty years of the nuclear era, most nations have developed a deep and understandable reluctance to resort to the use of nuclear weapons. By contrast, the inhibitions against the use of traditional force are not nearly so great. However unpredictable the course and outcome of conventional conflicts, we probably understand them better than the risks and consequences of a nuclear campaign. If military force finally seems in order, familiar force is what is most likely to be used.

Once the decision to commit conventional force is made, surprise, shock, speed, and the rapid acquisition of territory tend to be even more seductive to the non-nuclear attacker than to the operational planner of a nuclear assault. In fact, in the nuclear era, there may be a special premium on surprise and rapid advance; they permit the achievement of valuable objectives before the agonizing nuclear decision can be made.

The ability to resist and repulse such conventional attacks (and we have seen many of them during the last 35 years) calls for a much more diversified inventory of capabilities than we currently understand to be the case with respect to the strategic retaliatory forces.

One such capability, however distasteful, is that of toxic chemicals. The Soviet Union has the world's largest capability to conduct chemical warfare, both offensively and defensively. You will note, by contrast, that our own modest budget for chemical munitions stresses protection against and deterrence of chemical warfare.

Finally, it must be repeatedly stressed that the deterrence of nuclear war depends not only on the adequacy of our strategic and tactical nuclear capabilities. It also rests heavily in the first instance on our ability to deter the outbreak of conventional conflict among the great powers. All of us recognize the theoretical utility of large-scale bolt-out-of-the blue surprise nuclear attack scenarios for force planning purposes. Nonetheless, most of us would agree that the more likely first use of nuclear weapons would arise out of a setback at the conventional level of conflict. To keep the nuclear threshold high, we must therefore maintain strong conventional forces and work unceasingly to deter the outbreak of any major conflict.

c. The Strategic Concept

This would be a tall order even if our policymakers were operating in a more traditional world of conventional military force only, and multiple centers of great power. Now, however, we must deal with three different tiers of force and only two real superpowers. Even so, we must still try to find our way to safety in an environment that is governed more by traditional considerations than by the simple equations of nuclear attack and retaliation -- especially when the answer to these equations is usually stalemate.

Despite the relative good fortune and self-sufficiency of the United States, we still must care about such matters as access to the Persian Gulf, passage through the Straits of Malacca, and other important waterways. Despite our strategic and theater nuclear capabilities, non-nuclear forces remain the prime coin of the military realm. Hence, deterrence depends very basically on these forces, on allies, and on our ability to hold certain strategic areas. Shifts in the balance of economic power still matter; certain areas of the world continue to affect our well-being and, ultimately, our integrity and independence. Despite all the nuclear calculations and theology, we cannot forget geopolitics as the world becomes truly interdependent. Unless we are prepared to join in defending portions of the world lying outside North America, we shall soon find ourselves with nothing else but North America to defend.

Granted the importance of these considerations, the United States should not attempt to solve all the world's problems -- not that it has ever tried. We could not hope to create and sustain the military establishment necessary to stand guard throughout this turbulent world, nor could we command the resources to defend on all fronts simultaneously. In any event, our allies have an equal interest in collective security and international stability; they should bear a fair share of the burden of keeping the peace and deterring major conflict.

But even with allies, there is a need for us to decide what, at a minimum, we should be prepared to defend and how we should design and deploy our forces for that purpose. In short, we require a strategic concept and the capabilities to go with it. If we should have learned one lesson from the 1930's, it is that collective security is a hollow term if there is no conception of where and how to apply it, and if there are no forces of any consequence to back it up.

The utility of the strategic concept for collective security (or deterrence as we now seem to call it) is fourfold:

- -- By defining certain primary contingencies (such as an attack on Western Europe) as of critical concern to the United States, it narrows down the force planning problem to manageable proportions even though it does not preclude the development of a wide range of contingency plans.
- -- It sets a specific force requirement for the defense establishment to satisfy; in the process, it precludes fortification of the moon.
- -- It establishes priorities by defining the primary missions of the Armed Forces and the individual Services.
- -- But it does not preclude the use of the forces thus generated for other purposes as directed by the President and approved by the Congress. In fact, even as we design and implement the concept, we must recognize the need for enough flexibility to deal with other than the standard planning contingencies.

The strategic concept itself cannot, of course, tell us what are the main contingencies on which we should focus, but certain considerations help to make the choices fairly evident. It is noteworthy, for example, that Soviet ground forces are divided almost evenly east and west of the Urals. Although they are deployed in such a way that they could operate in a number of different directions, two points about them are reasonably evident: despite the increasing mobility of their forces, the Soviets would have grave difficulty in opening up a series of offensives more or less simultaneously; and their main concerns (whether offensive or defensive) are obviously in Central Europe and Northeast Asia.

What this suggests for the United States in general is that we should not plan forces, even with allies, to attempt to deal simultaneously with a large number of contingencies. Instead, we should continue to maintain a small number of strongpoints in areas of the most critical interest to us, acquire the bases necessary to support these points, and develop forces flexible enough to reinforce our forward positions and to deal with unforeseen contingencies.

Western Europe is the most obvious place for a strongpoint and a conspicuous display of collective security. Not only do we have long historical, cultural, and economic ties with the nations of Europe, we would not want to see them united and dominated by an alien power. Yet, as has been the case for many years, a very large force of Warsaw Pact divisions and aircraft continues to stand on the borders of our European allies.

That force alone is sufficient reason for the collective defense established by NATO, to which the U.S. Army and United States Air Forces, Europe, and the Sixth Fleet make such signal contributions. Surely it is far better that we should establish a forward defense in this sensitive area and deter hostile action there rather than risk the failure of deterrence because of insufficient force and then undergo the agonizing and costly effort to recover lost and devastated territory.

In addition, power in the Center has beneficial effects on the flanks of NATO. As long as the Pact countries know that the forces in the Center are strong and mobile, they will exercise greater caution on the more vulnerable northern and southern flanks. Indeed, they should recognize that NATO, while a defensive alliance dedicated to collective security, does not completely foreswear offensive action in one theater should there be aggression in another.

Whether there should be a comparable presence in the Western Pacific is a more complex issue. While we continue to maintain tactical air forces in Thailand, their strength is on the decline. The military situation in South Vietnam remains a cause for grave concern, but there is little outside threat to the Philippines and Taiwan at the present time, which leaves open the question of the role that Northeast Asia should play in our force planning.

Because it is an area where the interests of the United States, the Soviet Union, the People's Republic of China, and Japan converge, Northeast Asia will continue to be an area of concern from the standpoint of collective security. The importance of Japan, and the special nature of our mutual defense relationship, make it important to maintain forces sufficient to give visible evidence of the seriousness of our commitment to the stability of the region and to provide a credible ability to respond quickly and effectively to unforeseen events.

I believe that there are a number of reasons for using a major contingency in Asia as a basis for testing the adequacy of our conventional force planning:

-- U.S. interests in the area remain strong, and we continue to have mutual security treaties with Japan, Taiwan, and the Republic of Korea.

-- We cannot preclude political changes that would make the direct threat to the Republic of Korea much more serious than we now consider it to be.

-- We continue to be concerned about developments in Southeast Asia, and we are closely allied with Australia and New Zealand.

-- The Korean peninsula is relatively easy to defend at a minimum cost in U.S. deployments and reinforcements.

-- U.S. ground, naval, and tactical air power can project power over a wide area from strongpoints in Okinawa and the Philippines.

-- Generally speaking, quite apart from any specific contingency, U.S. military power still has a stabilizing role to play in the Pacific area.

It should be clear that our interest in the Caribbean and the Panama Canal continues undiminished, and the Middle East must remain a matter of military as well as economic and diplomatic concern. It would also be unwise from a strategic standpoint to ignore the proximity of Alaska, our fiftieth state, to the mainland of Asia. All in all, then, there appears to be a limited number of key areas where we would want to deploy forces and a relatively small number of contingencies for which we should size our forces.

In designing our conventional military establishment, we could, of course, ignore the geography and the possible contingencies and devise some other approach to force planning. I await with interest suggestions on that score. Alternatively, we could decide to program forces sufficient, in conjunction with our allies, to:

-- deal simultaneously with a major contingency in Europe, a major contingency in Asia, and one or more lesser contingencies elsewhere;

-- deal simultaneously with one major contingency (wherever it might occur) and one minor contingency, with the capability to "swing" with some speed from one major theater to the other.

The first concept governed conventional force planning in the 1960's, at least in principle. The second concept was adopted in 1970 and has been in effect since then. With the end of our involvement in Vietnam, the emphasis of our planning has shifted toward Europe; however, we still retain a presence in South Korea with backup forces primarily in Okinawa. Most of our forces already are or soon will be oriented toward a war in Europe, but we maintain some less heavily armored and mechanized units for a lesser contingency and as the basis for a rapid swing toward Asia, or some other theater.

The success of this concept as the basis for defending our interests obviously depends to a large extent on the assumption that the USSR and the PRC would not strike more or less simultaneously in Europe and Asia, whether separately or in renewed cooperation. Since the United States obviously cannot carry the burden of implementing the concept alone, its success also depends on continued cooperation from our allies in Europe and Asia. Most important of all, the concept as a basis for planning will continue to have validity only as long as there is agreement within the United States itself that these minimum strongpoints and the military balances that we attempt to maintain in their immediate areas remain in the best interests of collective security, deterrence, and peace.

It seems reasonable to believe that the commitment to Europe continues to command widespread U.S. support, even though we continue to have periodic disagreements with our NATO Allies over budgets, forces, and base utilization under certain conditions. The Allies have cooperated in our efforts to comply with the Jackson-Nunn Amendment without the withdrawal of any U.S. forces from Europe. Now, given the serious impact of oil prices on the European economies, balance-of-payments issues no longer should be allowed to exacerbate relationships within the Alliance. Instead, we must focus on the more basic strategic questions that the Nunn Amendment has raised. Here, again, the Allies are assisting in the various reviews and assessments required by the amendment, particularly with respect to the need for standardization and further improvements in combat-to-support ratios in both ground and air forces.

It is also worth noting that most of our European Allies are attempting to maintain and increase their real defense expenditures despite the heavy inflationary and balance-of-payments pressures from which they are suffering. Moreover, they recognize increasingly, despite the magnitude of Warsaw Pact capabilities, that their non-nuclear efforts are worthwhile. As a consequence, the chances are improving that NATO will develop a solid defensive posture in Central Europe. In the circumstances, quite apart from the MBFR negotiations, this would be the wrong time and place to reduce the U.S. defense contribution. On the contrary, as will be explained later, the combat power of that contribution should be increased.

Our position in Northeast Asia may not command as much attention as our deployment in Europe, but the security of Japan and the peace of Northeast Asia are critical to international stability. We should also keep in mind the fact that President Ford has recently reaffirmed our commitment to the Republic of Korea and to the continued maintenance of U.S. forces there. Our critics should realize that if we withdrew these forces, we might reduce the risk of involvement in some unwanted conflict, but at the price of losing leverage in the area. There is no risk-proof policy.

There is another problem as well. Our intelligence does not pretend to understand the convolutions of Kim Il Sung's mind, but there is no evidence for believing that he is friendly to the Republic of Korea or to the United States. A withdrawal of our forces might tempt him into adventures even more imprudent than those in which he indulges as of now. Our presence, however modest, operates as a restraint on North Korean adventurism. It also means that other powers in the area must think twice before instigating major trouble on the Korean peninsula or redeploying forces to theaters where they might prove more threatening to us.

For all these reasons, there are solid grounds for believing that the basic strategic concept is sound. As was stressed last year, the concept enables us to put bounds on our force requirements and plan prudently to deal with the contingencies that would have the most adverse effect on U.S. interests. It also helps to underline those strategic areas where it makes the greatest sense to concentrate our strength. But the concept does not oblige us to think about these areas and contingencies to the exclusion of all others or to tie the forces generated for the strategic concept to these theaters. While Europe and Asia remain important for force-planning purposes, it is essential to maintain powerful reserves centrally located in the Continental United States, along with increased strategic mobility. Our defense establishment, as an instrument of deterrence, must be able to respond rapidly and effectively to any emergency as directed by the President and approved by the Congress.

The strategic concept helps to establish the framework within which more detailed planning of the conventional forces can go forward. But it leaves a number of issues unresolved. One of the most important is the length of the war that we should be prepared to fight with our non-nuclear capabilities. Views range from the position that we should have only enough conventional capability to meet the initial enemy assault, to the argument that we should have the capability to fight indefinitely on a non-nuclear basis.

The view of this Department is that, within the framework of the strategic concept, we have two fundamental needs: the capacity for a successful strong initial forward defense based primarily on our active forces; and a long-war hedge that depends primarily on our guard and reserve forces and our production base. As has been stressed on a number of occasions, our first concern must be to dissuade a potential enemy from believing that, by means of a short, intense, fast-moving assault, he can either destroy our deployed defenses or gain a favorable territorial position from which to negotiate advantageous peace terms. Failure to deal with this contingency makes long-war preparations hopeless and pointless.

However, once we have ensured our capability for a stout initial defense, we must hedge against the possibility that a conventional conflict could continue well beyond this first, intensive stage. Such an approach has met, and continues to meet, with something less than universal understanding. Some students of strategy argue that we should pour all our resources (including most support forces) into making certain that we can last as long as our opponent in the first phase of the conflict. Others assert that, given the high probability that a war among the great powers would rapidly escalate to nuclear exchange, any commitment of resources to an extended non-nuclear campaign would be wasted.

Despite these arguments, it is worth remembering that previous calculations about the duration of a war and the nature of high policy decisions have usually been in error. According to most of the conventional wisdom available at the time, World War I should have ended after about six weeks; yet it went on for four more years. Britain supposedly should have come to terms with Germany after the fall of France in 1940; certainly Hitler thought she should. To her credit, she did not.

As for an early use of nuclear weapons, that too is uncertain. Here as elsewhere, our responsibility is to present choices for the highest policymaker, not to trap him into decision by default. That is to say, depending on costs, we should have the option to continue a non-nuclear campaign for an indefinite period of time. To prepare otherwise could indeed lower the nuclear threshold. Alternatively, it might leave a vulnerability in our deterrent posture that a determined and well-supplied opponent might seek to exploit. How much we should invest in our long-war hedge is an issue that deserves the most serious consideration. That we should hedge to some degree against a long conventional war hardly seems to be a matter for dispute.

As was noted previously, the main test of our deterrent -- whether nuclear or conventional -- is the credibility and effectiveness of our military response in the event that deterrence should fail. If our forces, and those of our allies, can give a satisfactory account of themselves in combat, it seems reasonable to assume that an opponent would be loath to challenge them. It should be clear, moreover, that deterrence is not an either/or proposition. Instead, we have to gauge our requirements in terms of probabilities and confidence-levels when we make choices about the size and composition of our forces.

On this score, we ought to be no less prudent in the design of our non-nuclear forces than we are in the determination of our nuclear capabilities. Surely, if we wish to preserve our essential interests and maintain the nuclear threshold at a high level, we should keep sufficient active and ready conventional forces, along with selected, high-priority reserves, to have a high probability of repelling an initial attack in such crucial theaters as Central Europe and Northeast Asia. It is worth adding, in this context, that while history provides many inspiring examples of units that have repulsed attackers ten or more times their size, no one would argue that (on the average) those are acceptable odds or that a deterrent based upon such a large asymmetry of forces would inspire high confidence.

There is always room for debate about the precise force structure needed to exercise deterrence over a wide range of possible contingencies, especially when the structure is intended to complement those of allies. But there should be no real disagreement about the main requirements of a non-nuclear deterrent under modern conditions. Each of these main requirements will be discussed briefly before our specific programs for the general purpose forces are described.

d. The Ground Forces

Despite the advances of modern technology, no one doubts the need for ground forces in most conventional conflicts. There is no other full countermeasure to enemy ground forces. They are the key element in holding territory against attack, and (of course) they can also seize enemy territory or threaten to do so. Because of this versatility, they provide the most effective leverage that we have available in bringing an enemy to terms. For all these reasons, the ground forces are an indispensable ingredient of any non-nuclear deterrent.

In 1964 we set our Army strength at 16 1/3 active and 8 reserve divisions. In the aftermath of Vietnam, the change in strategic concept, budgetary pressures, and the concerns about the feasibility of the all-volunteer force, we reduced the Army objective to 13 active and 8 reserve divisions. (The Marines, as you know, maintain 3 active divisions and air wings by law.) Now we believe that we should return to the 16 active and 8 reserve division objective provided that the Army is able to improve its "teeth-to-tail" ratio and find more combat spaces within its existing manpower total.

Some observers have asked why, if 13 active divisions was a good enough number several years ago, we now need to revise the number upward. Others have suggested that, if there are support spaces to be saved, we should return the money to the Treasury rather than provide the Army with this allegedly perverse and unnecessary incentive to become more efficient. But these criticisms miss the point that we had already gone too far in reducing our active-duty ground forces.

When the previous administration changed the strategic concept and set an objective of 13 active Army divisions, it did so on the assumption that our high-priority National Guard and Reserve divisions would achieve sufficiently high standards of combat readiness so that we could deploy them almost as rapidly as our active Army divisions. We have now concluded, however, that such heavy reliance on the Guard and Reserve divisions for initial defense missions would be imprudent. It is worth remembering, in this connection, that it took a minimum of eleven months to ready these divisions for combat in World War II and Korea.

Our plans for initial defense should depend primarily on the active forces for two main reasons. First, we might have very few days or weeks in which to ready and deploy forces before the outbreak of fighting. Second, as matters now stand, we must depend primarily on active-duty ground force units to meet such demanding schedules.

This is not to say that Guard and Reserve units would not have important roles to play in conventional conflicts of the future. Mobilization and deployment schedules might prove less demanding than I have indicated, in which case we might be willing to call up the main reserve units. In addition, they can continue to serve as the long-war hedge described earlier.

In other words, if we are to act responsibly toward the National Guard and Reserve, we should stop pretending that we can use all of them as full substitutes for active-duty ground forces. Obviously they can be useful in special circumstances such as the callup during the Berlin crisis of 1961. Eventually they did play an important role in World War II and Korea, and they might have done so in Vietnam had there been the political will to call them to active duty. But in circumstances where there are only short periods of warning and the most decisive battles of the war occur during the first days and weeks of conflict, then the active-duty ground forces must bear the brunt of the initial defense. Nonetheless, we will still rely on two brigades and a number of separate maneuver battalions from our Reserve Components to round-out the 16 division active Army force that we are planning.

There still remains the question of why we need 16 rather than 13 active-duty Army divisions. Part of the answer obviously lies in a greater substitution of active-duty components for reserve units in our initial defense force. But of even greater importance is our belief that in the aftermath of Vietnam and the changeover to the all-volunteer force, we basically went too far in reducing our active-duty ground forces.

For most contingencies, the ground force requirement depends on several factors. The first is the ratio of force to space. Whether we are talking about Central Europe or Korea, if a front is to be held along its length with a reasonable degree of confidence, there must be a minimum density of manpower along that front, with no significant gaps between units. Second, there should be a reserve -- both locally and at higher levels, that can be allocated to halt penetrations or develop counterattacks. Third, certain ratios -- whether we are talking about manpower, manpower in maneuver battalions, firepower scores, or weapons effects indicators -- should not be allowed to favor an attacker by too great a margin. For example, if an attacker could achieve a favorable overall ratio of perhaps 1.5:1 in several of these respects, he could embark on such large local concentrations that the defender would find it difficult to prevent one or more breakthroughs.

With these factors in mind, and a detailed knowledge of the capabilities of both allies and potential enemies, it becomes possible to calculate the needed input of ground forces by the United States to provide an adequate initial defense in any given theater, and the deterrence that goes with it.

Our current strategic concept, the maintenance of two major strongpoints in conjunction with our allies, and the need to provide a highly combat-ready force for initial defense pretty well dictate our ground force requirement. To satisfy this minimum initial defense requirement (the United States ultimately deployed 90 large divisions in World War II), not only would we want 16 active-duty Army divisions; we would also have to depend heavily on the three active-duty Marine divisions to help fill the need.

Within a total active Army strength of 785,000 men and women, we obviously cannot expect to acquire the full 16 division force or anything like it as part of the standing Army. Even if we are able to bring our overhead for training support and command down to 25 percent of the total, that will still leave us with fewer than 590,000 people for the ground forces. At this level, we must continue to draw on the reserve for selected combat units as well as for critical supporting elements of the division slices.

Given all these circumstances, I believe that the Congress not only should endorse the goal of 16 active-duty Army divisions, but should also join in:

-- continuing to offer the Army the incentive to convert spaces from support to combat by allowing them to retain the benefits of real efficiencies in the form of increased combat power;

-- maintaining active-duty Army strength at the minimum level of 785,000 despite the high cost of manpower and the understandable temptation to reduce military personnel as an allegedly quick way to save money;

-- considering whether, in fact, we should not increase active Army manpower so as to reduce still further our dependence on the Guard and Reserve for our initial defense forces.

If the Congress will provide this kind of support, the Department is confident that General Weyand -- following the example so powerfully set by General Abrams -- will ensure the evolution of a lean and capable Army of which we can all be proud. We are also confident that our overall non-nuclear deterrent -- and thus all deterrence -- will be substantially strengthened.

e. The Tactical Air Forces

The need for tactical air forces is well accepted, but the precise role of these forces in non-nuclear deterrence is not always understood. We have, of course, had spectacular demonstrations of the effectiveness of tactical airpower: during World War II in the Normandy campaign, and during the 1967 six-day war in the Middle East. But our tactical air forces have also come under some criticism on grounds of both performance and cost. It is not uncommon to hear the argument that tactical aircraft have very low probabilities of kill against important targets and that they are much less cost-effective than artillery.

These criticisms miss several important points about the attractiveness of tactical airpower to the United States. Tactical air forces are complementary to, rather than competitive with, ground forces. They cannot prevent an enemy from infiltrating on the ground, but because of their range and speed, they have the ability to concentrate very rapidly and to attack important targets outside the range and surveillance of our ground forces. And with the advent of precision guided munitions (PGMs) the cost of destroying relevant targets is in the process of going down. In any event, measuring the effectiveness of tactical airpower by its ability to kill specific arrays of targets overlooks the "virtual attrition" that it imposes on an enemy by forcing him into air defenses, dispersal, night movement, and the general "heads down" mentality that goes with the presence or threat of enemy airpower in the vicinity.

We also have to face the stark fact that because of rising manpower costs and the difficulty of going beyond quite minimal levels of active ground forces, tactical airpower quickly becomes a potentially efficient way of acquiring additional firepower without relying on manpower-intensive means. In many instances, to the extent that allied and other friendly nations are able to provide adequate ground forces, the most effective way for the United States to assist them is by the timely provision of tactical air support. Several wings of modern attack aircraft can deliver as much high explosive tonnage in one day as an entire division, and they can do so at about a seventh of the manpower cost. What is more, fewer of those men are at risk.

Despite these advantages, there is no doubt about the heavy dollar cost of tactical airpower. Air Force tactical airpower alone runs to about $12 billion a year. If we add to it the cost of Marine Corps wings and carrier-based tactical air, the total comes to around $24 billion a year -- much more than we pay for our strategic nuclear forces. Accordingly, we should be as precise as we can in determining the size and composition of these forces. Since the carrier-based airpower performs multiple land and unique sea-based missions, I shall discuss them later in connection with our naval forces. Here the focus will be on our land-based tactical air forces.

There are two issues to resolve: the nature of the overall requirement, and the mix of aircraft within the required total.

One factor in determining the overall number is the size of the total tactical air force of the other superpower and our ability to match it. The difficulty with this approach is threefold. First, the Soviet tactical air force is somewhat different from our own in function and capability. Second, we should credit ourselves and the Soviets with the tactical air forces of our respective allies in the theater when arriving at any such balance. Third, we should allow for the fact that the United States tends to substitute tactical air forces for ground forces more heavily than does the USSR. Nonetheless, as a matter of prudence, NATO as a whole should not allow the tactical air forces of the Warsaw Pact to achieve any substantial numerical superiority. At present, depending on how certain Soviet interceptor aircraft are counted, approximate parity exists between the two sides. On the most pessimistic assumptions, the Pact might enjoy a 50 percent superiority in total aircraft, but NATO would hold a substantial qualitative advantage.

A second factor to consider is the capability to counter the ground threat that our tactical air forces will assist in stopping. The size of that threat has increased in quantity and quality, especially in terms of armor, requiring an increasing ground attack role for tactical air forces. Warsaw Pact armor is expected to be used in massive, concentrated thrusts against the NATO line early in any European conflict, presenting a demand for flexible, numerically sufficient tactical air forces.

A third factor in sizing our land-based tactical air is to relate it to the number of divisions that we field. For example, the Marine Corps is organized as a combined air/ground force built around division and wing teams. These teams are particularly suited for offensive employment. Marine tactical air forces are sized to provide a full spectrum of air support, especially because of the immediate need for responsive firepower in the amphibious assault phase.

Because of the central control exercised over its forces, the Air Force believes that it can perform its diverse missions in a somewhat different way. Its operational planning tends to be based in part on its ability, if necessary, to provide a certain number of fighter-attack sorties per division per day rather than integrating their wings into a combined air/ground force. The number of Army divisions to be supported, as we have seen, will grow over the next few years.

The second and third factors translate to providing a required daily level of ordnance on the Forward Edge of the Battle Area (FEBA), a level that should increase with the increase in threat and in the number of units supported. The achievement of an optimum level is realized by varying the proportion of TACAIR sorties allocated to anti-armor attacks, close air support, defense suppression, air superiority, etc., depending on how the enemy attack develops.

Also adding to the quantitative requirement in a NATO conflict is the possibility that we may become engaged in a conflict elsewhere first, attriting the force remaining for NATO. There are yet additional demands on our tactical air forces that do not impinge on force size, such as sea surveillance and augmentation of CONUS air defense forces.

At present, we have the equivalent of about 22 active Air Force fighter-attack wings. Although it would be preferable to have a more systematic way of computing tactical air wings, the factors outlined here are based on experience which for the most part, has proved satisfactory.

The three main missions performed by the tactical air forces have been air superiority, interdiction, and close air support. Historically, the Air Force has put the main weight of its effort into the first two missions and has given less attention to the function of close air support. This, in turn, has led the Army to push the development and deployment of attack helicopters.

As the cost of procuring and operating tactical aircraft has risen, the Air Force has tended to select multipurpose aircraft optimized more toward pursuing the air superiority battle and the interdiction campaign than toward close air support and shallow interdiction. The result has been the long-range, heavy fighters of recent vintage. Now, however, several conditions dictate, not a reversal of this trend, but a shift in emphasis.

As we have seen from the last war in the Middle East, sheltered aircraft are extremely difficult to destroy. And where concentrated air defenses are present, they can exact a heavy toll of attacking aircraft. There is also the problem in Eastern Europe that the network of railroads and roads is sufficiently dense so that a deep interdiction campaign, even with Precision Guided Munitions (PGMs), would take considerable time to work its impact on the fighting front, and probably could not prevent a considerable leakage of tonnage to the forward edge of the battle (FEBA). In a war of surprise and rapid movement, these effects might well occur too late to break the momentum of an enemy assault.

This is not to say that we should abandon the air superiority or deep interdiction missions. Nor is there a case for jettisoning the heavy, long-range fighter exemplified by the F-14 and F-15. As PGMs become more versatile, and as countermeasures to modern air defenses continue to improve, these two missions may again prove sufficiently worthwhile on a large scale to warrant a substantially increased investment. For the foreseeable future, however, our policy, within the force objective, should be to procure and maintain a sufficient number of sophisticated deep penetrators to preserve the threat of a long-range air superiority/interdiction campaign and thereby, at a minimum, force potential enemies to spread their defenses.

Following that policy will obviously facilitate the task of shallow interdiction and close air support, where we should increase our investment. That in turn will require more emphasis on the air combat fighter for air defense and local air superiority in the

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vicinity of the FEBA, and on the A-10 for shallow interdiction and close air support. Movement in these directions should also help to satisfy the Army. And it should bring our tactical airpower more effectively to bear during the early phases of a conflict when the main effort, particularly in Europe, must go to halting fast, armor-heavy assaults on the ground.

It is a pleasure to report, in this connection, that under the imaginative leadership of General David Jones (Chief of Staff, USAF) and General John Vogt (Commander-in-Chief, USAFE) we are now taking meaningful strides toward the prompt battlefield application of tactical airpower in the Center Region of NATO. The 4th and 2nd Allied Tactical Air Forces (ATAFs) are being brought into much closer coordination. General Vogt is establishing a centralized headquarters for the two ATAFs so that the flexibility and economy of force inherent in our tactical airpower can be effectively exploited. And due consideration is being given to the most effective use of our air assets during the initial phases of a campaign. It would not be surprising if note of these developments were being taken at the Soviet military headquarters in Potsdam, and that the credibility of the NATO deterrent has risen substantially as a consequence.

f. The Naval Forces

In the discussion of our strategic concept, mention was made that for force planning purposes we focus on possible conflicts in Europe and Northeast Asia. It hardly needs to be added that we must also be concerned with getting to and from those two great theaters, and other areas of the globe as well. The seas have been and remain -- despite the continuing revolution in air transportation -- the great highway upon which, in peace and war, vast quantities of goods must travel.

As a traditional maritime nation, the United States has lived by and fought for the freedom of these seas. A major component of deterrence, therefore, must be our demonstrated ability to support our ground and tactical air forces overseas, and to supplement their capabilities to the extent that it is necessary to do so.

Since World War II, the U.S. Navy has performed four missions as its contribution to collective security and deterrence. First, it has sought sufficient command of the seas to ensure our sea lines of communication (SLOC). Second, it has provided a special means of projecting power ashore through its attack carriers and amphibious forces. Third, with its various ships, it has provided a presence -- a visible reminder of U.S. interest and power in distant seas. Fourth, and most recently, it has contributed very substantially to nuclear deterrence through its sea-launched ballistic missile submarines (SSBNs).

This last mission has already been discussed elsewhere. Here, it should only be added that the SSBNs should continue to be regarded as the Navy's main contribution to nuclear deterrence. While other naval vessels may be able to carry nuclear weapons (and do), their main missions and their main justification should be non-nuclear. Aside from the SSBNs, there is no current basis for building new ships on the premise that their primary mission would be to add to nuclear deterrence. Again excluding the SSBNs, we must justify naval forces on the basis of their contribution to non-nuclear deterrence.

To determine the nature and size of that contribution, we must look first and foremost to the Soviet navy. It is a force, to borrow from Churchill, that is to some degree a riddle wrapped in a mystery inside an enigma. It is divided into four separate fleets, three of which have relevance to our Atlantic and Mediterranean interests, the fourth of which bears on our concerns in the Pacific and the Indian Ocean area. In peacetime there is, of course, the possibility of interchange among these fleets, and it will presumably increase to some degree with the reopening of the Suez Canal.

We have no doubt about the anti-shipping and anti-carrier missions of these fleets. It also seems reasonably clear that the Soviets value their Navy's role in providing an overseas presence. As is well known, they frequent the Norwegian Sea, various parts of the Atlantic, the Mediterranean, the Indian Ocean, the Pacific, and even the Caribbean. However, it is not at all clear that they plan to increase their deployments above the levels of the past few years.

Whether the Soviets have still more ambitious objectives for their naval forces is not at all clear. They continue their flirtation with the Cuban facility at Cienfuegos, but at the same time they are concentrating on longer-range missiles for their ballistic missile submarines. They have launched one Essex-sized carrier and are constructing a second, presumably to supplement the reach of their land-based naval airpower. They have built-up a substantial fleet of ocean-going major surface combatants (about 220 in all) with a heavy concentration of first-strike firepower, but without much sustained combat capability or support from underway replenishment groups. Perhaps as a partial substitute for this shortcoming, they have sought base rights of various kinds in the Mediterranean, along the Horn of Africa, and in the vicinity of the Persian Gulf.

Whatever lies behind all of this activity -- and the trends that it portends -- the Soviets now possess or are acquiring the capability to:

-- challenge our attack carrier task forces in such areas as the Norwegian Sea, the Mediterranean, and the Sea of Japan;

-- undertake a major assault on U.S. and allied sea lines of communication and the surface combatants protecting them;

-- provide a limited degree of long-range protection for their merchant shipping in contrast to the situation that prevailed during the Cuban missile crisis (when they were not in a good position to challenge the U.S. quarantine);

-- maintain at least a modest presence in such distant waters as the Caribbean and the Indian Ocean.

The United States, as a traditional maritime power, naturally favors freedom of the seas not only for itself but for all other nations as well. At the same time, because of our extended interests overseas, we intend to maintain the capabilities essential for the protection of these interests. U.S. naval forces, especially in light of the Soviet developments I have just outlined, remain a vital component of those capabilities. Without them, the rest of the deterrent will not work and collective security will return to the realm of farce.

Our carrier task forces have three main functions to perform in strengthening the deterrent. First, they provide us with mobile platforms under our own sovereignty that permit us to project tactical airpower ashore where land bases are not available to us or where the number of land bases is insufficient for our purposes. Second, they provide support for amphibious operations. Third, they continue to be the dominant ship in any contest among surface combatants. No foreign power can assume that the denial of land bases will nullify our tactical airpower. No belligerent can ignore the prospect of flanking operations from amphibious forces protected by carrier-based air. No hostile surface fleet can expect to operate unchallenged by the long reach and the firepower of the attack carriers.

From all of this, it should be clear that the issue surrounding this force for a decade or more has never seriously been whether or not we should have carrier task forces. The argument has centered, instead, on the number of carriers that we should maintain and on the rate at which we should modernize the force. It is the first part of the issue that must be of the greatest concern from the standpoint of force planning. What we decide on that score will largely govern what we do in the future about modernization.

It would be misleading to pretend that there is any generally acceptable formula for determining our inventory of attack carriers. However, quite apart from the need for peacetime deployments (which I shall discuss later), we have had two historical instances where, despite the availability of land bases, we found it desirable to place at least five carriers on line in combat for the projection of tactical airpower ashore. In the case of Korea, when the enemy had driven us back to the Pusan perimeter, the carriers proved of particular value. In Vietnam they helped to split the air defenses and control our losses.

If we are to preserve positions of strength and contribute to collective security in Europe, the Middle East, and Asia, and keep a basic power equilibrium in those three great theaters, I see no choice but to maintain roughly 13 carrier task forces over the current planning period. Such a capability should enable us to:

-- provide adequate coverage against marauding surface combatants in the Atlantic and Pacific and other waters;

-- place a substantial number of carriers on line in both the European and Western Pacific theaters during an emergency (even though they might have to operate in high-threat environments);

-- keep a number of carriers on station in the Mediterranean and Western Pacific, should we continue to desire to do so;

-- dispatch a carrier task force into other seas and oceans from time to time as diplomatic interests dictate. A periodic presence in the Indian Ocean and occasional visits to the Persian Gulf may be a case in point.

This last policy, and the expansion of our facilities on the island of Diego Garcia, have become a source of some misunderstanding. There are, however, two arguments for the policy that deserve consideration. Not only the United States, but Western Europe and Japan as well, have a rather considerable interest in the area of the Persian Gulf and access to it. Not the least of our interest is that the area be kept out of unfriendly hands. While the problem is not yet of alarming proportions, a Soviet force is in fact in the Indian Ocean and has been there since 1968. With the reopening of the Suez Canal, maintenance of a larger Soviet force will become feasible. Under the circumstances, it seems only prudent to observe the situation in the Indian Ocean and to demonstrate from time to time that the United States can make its presence felt there should our interests, and those of our allies, be jeopardized. Diego Garcia will allow us to support such operations efficiently without additional mobile logistics capability.

In sum, 13 carrier task forces (with 12 active air wings) should give us the dual capability of maintaining strong off-shore tactical air forces and countering any surface challenge to our sea lines of communication. The fact that the Soviets are building aircraft carriers of their own can be taken as testimony that the carrier, despite frequent announcements of its imminent demise, remains the capital ship of the modern navy.

Despite the gradual growth of the Soviet surface fleets, the greatest potential danger to our sea lines of communication arises from the large Soviet attack submarine force. The principal threats come from the forces in Murmansk and Vladivostok. Depending on the circumstances, one of these forces could support the other; the Soviets could also draw on their Baltic and Black Sea fleets for reinforcements. But however they might choose to allocate and deploy these forces, the possibility of interfering with our sea lines of communication (SLOC) would be substantial.

One issue that arises in this context is whether, considering the emphasis currently being given to short conventional wars, it makes sense to continue a major investment in anti-submarine warfare (ASW) forces, even though the magnitude of the threat from the attack and cruise-missile submarines continues to be great. What is certainly the case is that in times of rapid mobilization, deployment, and attack by an enemy, the first phase of an assault might already have occurred before our protected sealift could begin to deliver equipment and supplies to the front. There remain a number or reasons, however, why we should continue to strengthen our ASW forces and programs:

-- The fast mobilization and deployment scenarios are not the only cases that we should consider. Slower buildups are equally plausible; where they occur, protected sealift continues to make sense.

-- If we and our allies do what is necessary to ensure our initial defenses, protected sealift can make a significant contribution to the early stages of our resistance; it will also add significantly to our long-war hedge.

-- In any event, we should not put all our mobility eggs into the basket of airlift, which has vulnerabilities of its own.

-- It would be unthinkable, finally, to allow any competitor in the international arena to believe that we could not protect our shipping, whatever the circumstances; to leave our SLOC unprotected would create a vulnerability that would obviously degrade our deterrent. Our deployed forces should not be left dangling from the slender thread of our airlift and its capability for long-range resupply.

While the continued need for ASW forces seems evident, there is continuing debate about the preferred size and composition of these forces. The Congress has complicated the debate by its passage of Title VIII of the Department of Defense Appropriation Authorization Act, 1975 which requires that we now procure only nuclear-powered ships for our major naval strike forces.

As was indicated last year, our preferred ASW strategy is to establish a series of barriers (speaking somewhat figuratively) which enemy submarines must penetrate in order to attack our merchant shipping and main fleet units. The first of these barriers, because of geography, can be most effectively created by a combination of passive defenses, attack submarines, and patrol aircraft. The second barrier depends primarily on long-range patrol aircraft and attack submarines assisted by surveillance systems, but carrier-based aircraft can also help to strengthen it. The third, close-in barrier -- whether supporting merchant shipping or the main units of the surface fleet -- involves principally our escort forces and the helicopters that accompany them.

With our current and programmed force of attack submarines, ASW aircraft, and surface combatants, I believe that, in conjunction with our allies, we would have the platforms necessary both to man the barriers I have described and to provide protection for any major shipping convoys that we may desire to form. Our problem, in other words, is not the number of platforms that we have in the fleet and on order. Rather, it is the modernization of these platforms and their sensors and weapon systems, together with essential surveillance systems, that we need. Simply adding to the total number of platforms beyond the required number, or making them all nuclear-powered, will not significantly increase the effectiveness of the barriers; increasing the kill probability of each available platform will obviously do so.

Our shipbuilding program has already suffered severely from the impact of inflation. As a consequence, our plan for modernizing the fleet is badly behind schedule, and we will require substantial increases in budget authority if we are to complete the program already authorized by the Congress. If, in addition, there is to be more nuclear propulsion than had previously been programmed still more budget authority will be required for our shipbuilding program.

If nuclear power is to become the main source of propulsion for the Navy in the future, we must also consider the versatility of nuclear attack submarines both on the ASW mission and against enemy surface ships. Indeed, despite their high cost, we may well want to regard them as competitive with surface escorts and combatants of other types. Visibility and presence remain of capital importance in the design of a navy. But, the SSBNs aside, non-nuclear threats and our combat effectiveness against them must remain the first priority of the U.S. Navy.

In addition to our carriers and ASW forces, we maintain the amphibious capability for the assault portions of slightly over one Marine division-wing team, and are continuing to build toward a 1 1/3 division lift objective. This capability, in turn, will make demands on our escort forces and underway replenishment groups as well as on our carriers.

The amphibious forces are not cheap. Moreover, we are modernizing them not only so as to replace vessels of World War II vintage, but also so that all ships will have a 20-knot capability. These programs, their costs, and the delays that have attended their completion have raised questions about the need for an amphibious assault force which has not seen anything more demanding than essentially unopposed landings for over 20 years, and which would have grave difficulty in accomplishing its mission of over-the-beach and flanking operations in a high-threat environment.

Despite these doubts, I believe that the modernized amphibious forces will be well worth their cost. The entire globe is not defended by sophisticated surface-to-air missiles and high-performance fighters. Nor is it the case that the United States has lost all interest in beachheads and flanking operations. Moreover, there is certain salutary value in having reinforced Marine battalions aboard their assault ships in various sensitive parts of the world. But to maintain such forces on-station in the Mediterranean, the Atlantic, and the Western Pacific effectively requires that we have two equivalent forces in reserve for each one on station. Our amphibious lift objective is only just sufficient for these deployments. We would be ill-advised to reduce it.

g. Forward Deployments

It is generally accepted that forces in forward visible deployments make an important contribution to non-nuclear deterrence. One has only to recall our withdrawals from South Korea in 1949 -- and the events that followed -- to recognize the inhibiting value of a military presence. But there continue to be issues about the necessary location and size of these deployments for purposes of deterrence. Since they are important issues, and central to the future role of the United States in the world, it is worth addressing them separately from the questions of strategy and basic force structure.

If we are to take our strategic concept seriously (not only for force planning purposes, but also for the realistic implementation of collective security and deterrence), we should maintain military deployments in Europe and Asia. To ensure these deployments, we should be in a position to control the approaches to the Atlantic and the Western Pacific. In addition, for quite obvious reasons, we should be able to make our presence felt in the Mediterranean and the Indian Ocean.

This does not mean, in our naval deployments, that we must keep certain fixed levels of force permanently on station in these strategic areas. Rather, we should give consideration both to altering the mix of our on-station forces from time to time, and to reducing fixed on-station commitments. A more impressive policy than one of fixed forces would be to surge large numbers of U.S.-based naval capabilities into wider areas for relatively brief intervals on an unscheduled basis.

With deployments of this general character, we are in a position to:

-- contribute immediately to collective security and the deterrence of attack in critical strategic areas;

-- lay the groundwork for reinforcements and provide a strong initial defense in the event of an attack;

-- prevent major losses of territory and the terrible human and material costs of taking the counteroffensive;

-- keep the nuclear threshold high;

-- project power into other areas so as to deter or respond to unforeseen contingencies;

-- stabilize relationships in these areas because of our presence as one of only two superpowers, and because of the great potential that lies in back of our presence.

All of these functions are important in a world of competition and conflict. But political justifications for military deployments, however relevant, rarely provide the basis for specific numbers and types of forces in a theater. A corporal's guard may be as effective as a division if our main purpose is merely to demonstrate a U.S. interest and presence in the area. In order to justify the current deployments, we can and should provide the military and deterrent basis for their presence.

It is generally accepted that we should maintain strong naval forces in the Atlantic, Western Pacific, and Mediterranean, even though we may wish to vary their strength along the lines I have indicated.

They act as deterrents to Soviet surface and submarine forces and they are in a position to provide early protection to our sea lines of communication. They also give us some capability for early power projection in key areas with our attack carrier and amphibious forces.

Much more at issue is our base in Diego Garcia and the periodic sailing of U.S. naval forces into the Indian Ocean. The view that we should guard against overextending ourselves and assuming new and potentially dangerous commitments is understandable. But the strength of the opposition to such a modest base and such a modest presence is puzzling. Surely no one needs reminding that the area of the Persian Gulf, with its large oil reserves, has become a matter of the keenest possible interest to a number of powers, including the USSR. Surely we have not yet forgotten that in December, 1940, during one of those several tete-a-tetes between Nazi Germany and the Soviet Union, M. Molotov claimed for his country the area of the Persian Gulf as one of the spoils of World War II. And surely, we should not simply ignore the Soviet presence in the Indian Ocean and Soviet efforts to obtain base rights of various kinds both in the Gulf itself and along the Horn of Africa. Considering the stakes that are involved -- not only for the United States itself, but also for its partners -- it makes elemental sense to have some capability to operate our forces efficiently in the area. The modest base at Diego Garcia and the occasional detachment of task forces from the 7th Fleet hardly seem out of proportion to the situation and our interests there.

Our forward deployments in Europe and Korea are determined by such tested planning considerations as the ratio of men to space, the ratio of our own forces to opposing forces, and the ratio of allied to opposing firepower. Although we would expect, at least initially, to be on the defensive in both these theaters (should deterrence fail), we do not believe that any of the basic planning factors should be allowed to favor opposing forces excessively. It is particularly important that, whatever the overall manpower and firepower ratios, allied forward defenses be manned in sufficient strength and depth so that an opponent would not be tempted into exploiting gaps in our lines in order to obtain a quick and cheap territorial advantage.

There has been concern for some time that our forward defenses in Central Europe were not being held in sufficient strength. Despite the efforts on the part of our allies there to sustain their strength and despite the major contributions made by 7th Army and USAFE, which are the political and military backbone of NATO, the balance of military power in the Center Region still tilts toward the Warsaw Pact. In fact, any U.S. withdrawals would shift the ratio in favor of the Pact to an unacceptably dangerous degree, quite apart from their psychological impact and their implications for MBFR.

Public Law 93-365 (the Nunn Amendment) now offers us the opportunity and incentive to strengthen U.S. combat forces in the Center Region provided that we keep our total force levels constant and trade in support spaces for additional combat power. With the cooperation of the Army and the Air Force, we are making distinct progress precisely in that direction. Accordingly, we should be able, in calendar year 1975, to add two combat brigades, and other ground combat elements, and to strengthen U.S. Air Forces in the Center Region. These additions not only should improve our combat manpower and firepower ratios relative to the Pact; they should also give us better division frontages and increase our confidence in being able to withstand an initial assault from deployed Pact forces.

Greater strength in these respects also increases our chances of bringing in reinforcements -- both ground and air -- at a rate that will permit us to repulse the much larger Pact assaults that were discussed with you last year. Of the utmost importance in this regard is that we continue four major programs with our allies: continued sheltering of our tactical aircraft; standardization of weapons; reception facilities for the large reinforcements that we are determined to provide in the event of a crisis; and provision of a central reserve for SACEUR.

At the same time that we move to strengthen the U.S. contribution to NATO, in an effort to counterbalance Soviet increases and fortify deterrence, we continue to hope for progress in the negotiations toward Mutual and Balanced Force Reductions in Central Europe in the interest of detente. These are compatible and complementary goals, and the Department of Defense will work toward both. The agreement in principle at Vladivostok, setting a common ceiling on the central strategic systems of the United States and the Soviet Union, could well serve as a precedent for our deliberations in Vienna. And, just as we believe it would serve the interests of both sides to lower the agreed ceilings on the central strategic systems, so we are convinced that both NATO and the Warsaw Pact would benefit from having a common ceiling at reduced levels on their conventional forces in Central Europe.

U.S. deployments in Thailand do not fall into the same category as those in Europe and Northeast Asia. The forces there, while substantially reduced from their peak levels, remain as a hedge against an overt North Vietnamese attack on South Vietnam of the character that we witnessed in the spring of 1972. Whether such a flagrant attack is likely to occur again in the near future remains a matter of some uncertainty. However, the North Vietnamese have certainly deployed the manpower and the means to launch one.

Accordingly, while we can reduce our deployments in Thailand still further, it seems prudent to continue our presence there as a deterrent to reckless action by Hanoi and as a contribution to a more stable and lasting settlement in Southeast Asia.

Our main strongpoint in Northeast Asia remains in South Korea, with backup forces in nearby Okinawa. The 2nd Division in South Korea, along with the ROK forces on line, assures a solid front and a sufficiently favorable ratio of manpower and firepower to provide reasonable assurance that we could repulse any sudden attack from North Korea alone. Our deployments also provide the necessary foundation on which to build a much larger force in an emergency.

Perhaps of even greater importance, should a crisis erupt in Europe, we would have several major objectives in Asia: first, to deter adventures by other Asian nations; second, to prevent forces currently deployed in Asia from being transferred west of the Urals; and third, to discourage the opening of another front in Northeast Asia, whether on land or at sea. Our deployments in Korea and Okinawa, together with the "swing" forces in Hawaii, California, and Washington, provide us with the basic means to achieve these objectives. Indeed, these deployments are an outstanding example of the classical military principle of economy of force. We would be making a mistake to disrupt it.

Nonetheless, our overseas deployments have become an annual source of controversy in connection with the defense budget, and there are recurring pressures for withdrawals on grounds that we are overcommitted, are discouraging our allies from carrying their fair share of the collective burden, are incurring excessive balance-of-payments deficits, are risking becoming involved in unwanted wars, and in any event have been playing the leadership role too long. In addition, of course, troops cut from overseas deployments or overseas bases that are closed create few political problems at home.

These are understandable and popular arguments, but they miss the point of what we are trying to do. We are attempting to create a genuine system of collective security, balance, and deterrence -- not the hollow shell of such a system. As this Report emphasizes, we have explicit strategic reasons for our deployments: they accord with our interests and commitments, and they complement the forces of our Allies. Moreover, our overseas deployments are now 100,000 fewer than they were in 1964. Not only have we managed to make cuts (however painfully) without any loss of combat power or strategic position; we have also done our utmost to comply with the Jackson-Nunn Amendment. Our military balance of payments costs are being largely offset by our Allies, and we would save little in real costs by returning deployed forces to the CONUS, unless we then demobilized them. To do so would be a serious strategic error.

As matters now stand, our baseline overseas posture is at the minimum that our commitments, our strategy, and our position as one of the two superpowers requires. To reduce it to any measureable degree in the absence of agreed reciprocal action by the other side either calls for greater faith in the goodwill of other nations than we have experienced in the past, or requires a much more restrictive definition of the U.S. role in the world than the one to which we now adhere.

We are now entering the thirtieth year of relative peace among the great powers, and the record, however modest, owes much to the generosity and steadfastness of the United States. The course has been long and the role burdensome, but the prize has been great. I doubt that we should want to surrender it now out of fatigue, pique, or a mistaken sense of priorities.

If our relations with former adversaries continue to improve, perhaps we can begin to plan our forces and their deployments on some basis other than opposing capabilities. But that time has not yet arrived. Our posture, in prudence, should continue to be based on the objective realities of what competitive postures contain. If and when those realities change, our posture should change as well. Meanwhile, we should entertain a certain skepticism toward those in whom persuasion and belief have ripened into faith, and faith has become a passionate intuition. As a statesman of some repute is alleged to have said: "It's a good thing to make mistakes so long as you're found out quickly." Our passion may have become focused on troop withdrawals; the mistake of it might not become apparent for several years to come.

h. Strategic Mobility

At the present time, our operational strategic mobility forces consist of our heavy airlift (70 C-5 and 234 C-141 aircraft) and a controlled sealift force of only 34 ships (troop ships, cargo ships, and tankers). Their essential contribution to collective security and deterrence hardly needs elaboration.

These forces not only symbolize our ability to move forces and supplies rapidly over great distances, they are essential to the flexibility of response that should characterize modern non-nuclear strategy. If we are to minimize our deployments in strategic areas, maintain a powerful central reserve in the CONUS that can "swing" in a number of different directions, and persuade potential competitors that we can put our ground and tactical air forces "on line" at rates that match their own mobilization and deployment, both the deterrent itself and its credibility will have been strengthened.

The alternatives to strategic mobility (if we are to achieve the same objective of initial forward defense) are either to lock large forces into particular theaters -- with all the costs, rigidities, and frictions they cause -- or to engage in very large-scale pre-positioning of equipment and supplies in those theaters. This latter course is also costly (because units in the CONUS must have another set of equipment to train with), lacking in flexibility, and risky in that it creates high-value targets and requires protection.

Accordingly, as I indicated last year, while it makes sense to deploy some forces forward and pre-position a limited amount of materiel and supplies in critical theaters, we can best meet our planning objectives by maintaining a substantial strategic lift which has the space and structural strength to move even the heaviest and most bulky equipment. This means primary dependence on large, wide-bodied jets which are able to receive, carry, and unload large and heavy materiel.

Unless we are willing to make the necessary investment in strategic lift, we run the risk of several unpalatable consequences. Either we will have to deploy more forces forward, with resulting decreases in strategic flexibility and increases in both budgetary and balance-of-payments costs, or we will have to accept the risk that an opponent, by a rapid buildup, would overwhelm U.S. and allied deployed forces before our reinforcement could arrive. At the same time, we will have to acknowledge that some of our more distant and informal but nonetheless likely obligations will become increasingly difficult to fulfill. In these circumstances, it would make more sense to reduce our commitments and strategies that depend on a rapid response -- whether of forces or of materiel -- and cut back on our central reserve in the CONUS, with non-trivial budgetary savings, than to maintain the facade of non-nuclear deterrence and keep in our inventories both forces and materiel that we are incapable of delivering anywhere in meaningful amounts.

There remains a temptation to restrict or abandon our strategic mobility forces on the premise that, by so doing, we will be kept from meddling and becoming involved in distant places of little or no concern to the United States. As Neville Chamberlain said in 1938: "How horrible, fantastic, incredible it is that we should be digging trenches and trying on gas-masks here [in England] because of a quarrel in a far-away country between people of whom we know nothing!" That is one possibility.

There are, however, several difficulties with that premise. The Congress, by various acts, has asserted itself to the point where meddling (if that is the right word for it) is presumably less likely than in the past. The premise assumes, moreover, that decisions of war or peace are made on the basis of force availability rather than on the interests of this Republic. There is no evidence to support that case.

We should also keep in mind that tides of opinion change in the United States, and that whereas some of us may have deplored U.S. actions of a decade ago in one distant place, the very same groups may now deplore with equal vehemence our inability to act with power and speed in some other distant place. Faced with these uncertainties, it would be a mistake to deprive ourselves capriciously of adequate strategic mobility.

We should be as precise as possible, however, about how much strategic mobility we need. This is not an easy task considering the varied demands that are made on our mobility forces, particularly our airlift. Not only has it been called upon for the movement of troops and their equipment, as in the case of our REFORGER exercises to Germany when we test our capability to reinforce the U.S. Army, Europe; it has also met the test of a 22,000-ton lift of equipment and supplies to Israel, the movement of UN forces to Cyprus, and the delivery of food and medicine to Bangladesh.

Despite all the uncertainties, if we have the capability to move (on the average) about 10,000 tons a day in wide-bodied aircraft over a distance of about 4,000 nautical miles (without any dependence on intermediate bases), we should be able to meet most of the demands on our strategic airlift. In other words, if we are able to lift a division with all its equipment each week from the CONUS to bases in Europe, we should have in hand the capability to deal with most of the other contingencies that could arise.

This was the objective set last year when I proposed increasing crews and spare parts for the C-5 and C-141 fleet, stretching the C-141s, and modifying 110 wide-bodied jets in the Civil Reserve Air Fleet (CRAF). While the program we are proposing this year is somewhat different, the basic approach and philosophy remain the same.

More lift would clearly give us greater confidence in our ability to match a rapid mobilization and deployment by the Warsaw Pact. Less would put our defensive posture in Europe at greater risk. The objective being proposed here is the minimum commensurate with a sober view of Pact capabilities and reasonable expectations about what our allies can contribute to collective security and deterrence in Central Europe.

We have no present plan to expand our sealift capability. Our sealift forces are not expected to add much to our initial defense in Europe unless both sides mobilize more slowly than we have assumed for planning purposes. If our planning assumptions are wrong, there is more than enough sealift capacity in merchant fleets controlled by the U.S. and our allies to meet war needs. We are less certain about the adequacy of our sealift for contingencies other than major war in Europe. Our experience in resupplying Israel during the October War, for example, indicates that airlift is indispensable for the rapid transport of a limited tonnage of critical items, but sealift must be used to haul the bulk of large, heavy equipment. Availability of shipping for contingencies less than general war is uncertain. Mobilization for general war implies the authority to direct the activities of merchant shipping; lesser contingencies, and, indeed, a period of indecision leading up to general mobilization, would be characterized by lack of such authority. The Navy has under continuing review the question of how much sealift capacity we may need to command for various contingencies.

i. Readiness

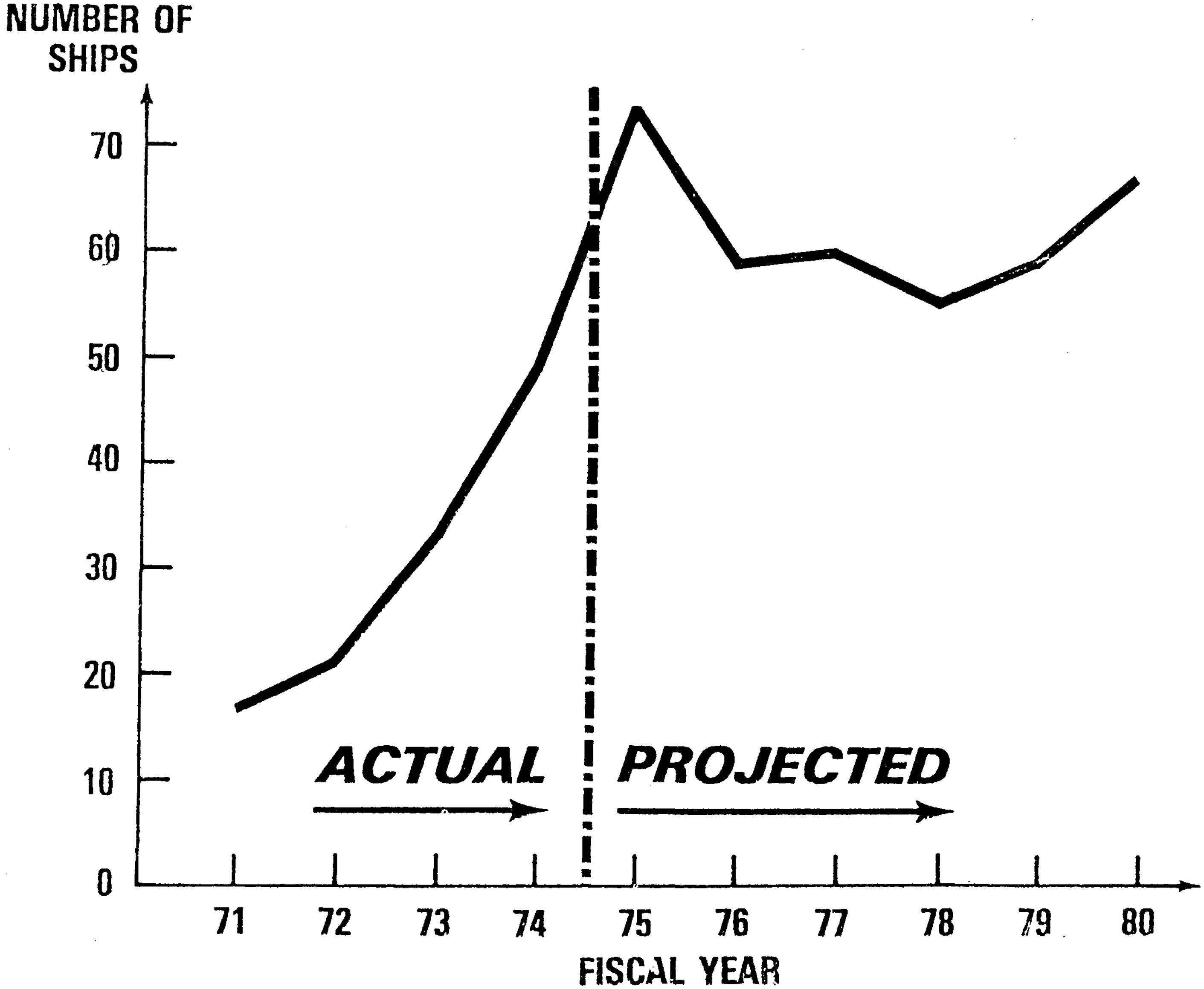
The main requirements to implement our strategic concept for collective security and non-nuclear deterrence should now be clear. However, it should be stressed that it is not sufficient simply to have our initial defense forces and long-war hedges in being. We must also maintain a high level of readiness in our active forces. Otherwise we will have the facade, rather than the reality, of deterrence.

By readiness, I mean forces that are well trained, have modern unit equipment in good operating order, and hold war reserve stocks on which they can draw for the early stages of any conflict. For example, in order to attain this goal, the Air Force portion of the FY 1976 budget request includes the largest funding of aircraft spare parts in recent years. This increased request is to permit the procurement of War Reserve Materiel to enhance the surge and sustaining capabilities of our strategic airlift and our tactical fighters.

Unfortunately, however, it is not possible to state with confidence that we have a high degree of readiness in our non-nuclear forces today.

There are several reasons for this state of affairs. First, the Arab-Israeli war of 1973 not only demonstrated that stocks of equipment and supplies can be consumed at very high rates (much higher than anticipated), it also resulted in a major drawdown of U.S. war reserve stocks as we replaced Israeli losses and helped to rebuild her inventories. Second, our efforts to conserve fuel have meant reductions in Army training exercises, Navy steaming hours, and flying hours for both the Navy and the Air Force. Third, inflation and increased pay, combined with the continuing need to modernize our forces, have resulted in fewer funds for operations and maintenance than is prudent.

BACKLOG OF NAVY SHIPS OVERDUE FOR OVERHAUL



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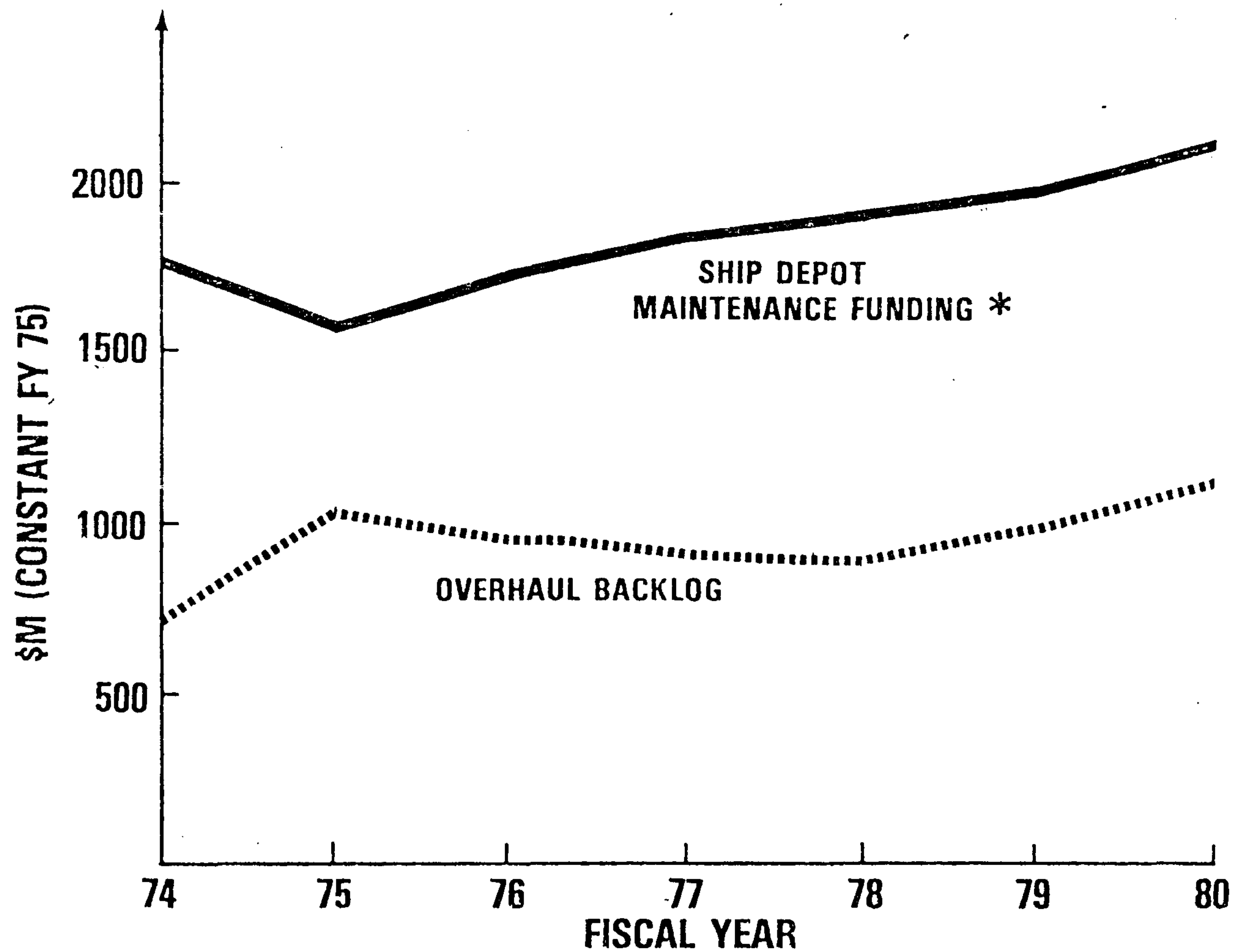
SHIP DEPOT MAINTENANCE PROGRAM
(INCLUDING MODERNIZATION)



Projections (as of 15 Jan 75) subject to change during continuing development of FY 77 and outyear budgets.

* Includes, in FY74 and FY 75, repair and modernazition in conjunction with SCN funded conversions.

There is a tendency, understandably, to hold down on O&M funding when budgets are tight. The conventional wisdom is that, in an emergency, these funds can be quickly acquired and the necessary state of readiness rapidly achieved. Meanwhile, scarce resources should be concentrated on the long lead time items, which means funding R&D and modernization at the expense of readiness.

This philosophy may have had merit in those bygone days when the United States did not have such large responsibilities for collective security and had time to mobilize. Now, as events have recently demonstrated, it is an anachronism. We must keep up our training not only because our forces may be sent into action with very little warning, but also because we rely increasingly on the sophistication of our equipment to compensate for superiority in enemy numbers. It is essential to keep our war reserves high, not only for our own needs, but also for the resupply of our friends. We must keep our equipment overhauled and combat-ready because, owing to unit costs, we have less of it to bring to bear in an emergency. In short, unless we are prepared to fund these components of readiness, collective security and deterrence will be seriously undermined.

j. The Production Base

The Arab-Israeli war was so short, and consumption rates of equipment and supplies so high, that for all practical purposes it was fought out of inventories. But, as we have subsequently discovered with some pain, inventories must be replenished from a production base. And that base should have the skills, diversity, and responsiveness to supply these needs in a timely fashion; otherwise, the readiness that we require simply cannot be adequately maintained.

It is not clear, however, that these attributes characterize our production base at the present time. It is worth recalling, in this connection, what the U.S. arsenal of democracy proved capable of doing in World War II. On the average, we managed an annual production of more than 50,000 aircraft, 20,000 tanks, 500,000 trucks, 1.5 million rifles, and 80,000 artillery pieces. As late as 1963, we could still launch 13 Polaris and 4 attack submarines in one year. Now, while the Soviets produce 2,000 tanks a year, we are struggling to build to an annual rate of some 800. New military aircraft are coming off the lines at a rate of about 600 a year, and helicopter production over the last decade has fallen by a factor of ten.

One cause of this rather modest recent performance is the dramatic decline in real defense procurement dollars. What looks like a great deal of money for the purchase of military goods and services has been badly eroded by inflation. For example, jet fuel that used to cost 11 cents a gallon is now over 35 cents a gallon. Map paper that was \$24 a ream only a year ago, is now up to \$52 a ream. Manila rope, at \$28 a coil last year, now is \$40 a coil. Further examples are shown on the following chart. And in many areas lead times on deliveries have more than doubled.

But other factors have also had an adverse impact on our ability to acquire needed goods and services. Our new maritime subsidy programs have caused a crowding of our shipyard capacity, driven up prices, and lessened the attractiveness of naval contracts to shipyards. Environmental programs and higher standards of health for industrial workers (which I support) have eliminated reserve capacity, increased prices, and slowed reaction times in the production of such diverse products as forgings, castings, and propellants. In some instances, because current defense demands are low (and we do not have the resources to maintain standby capacity), we find ourselves reduced to a single supplier of vital military goods -- with considerable uncertainty as to whether we can generate enough orders to keep that one line in production.

None of us should begrudge the very real increases in pay that have gone to our military personnel as well as our civil servants. But we should recognize that we have provided these increases largely at the expense of other outlays. One result has been that our production base for the general purpose forces has now shrunk to an alarming degree. It may well prove less than adequate to our needs, especially if it is again put under the kind of pressure that resulted from the drawdown of stocks in the Arab-Israeli war. Remedial action clearly is in order.

k. Support To Other Nations

Effective collective security and non-nuclear deterrence must obviously depend to a crucial degree on the contribution of our allies. In some cases, especially where guerrilla and subversive threats arise, we expect them to solve these problems without the involvement of U.S. forces. However, where our interests are involved, we may be willing to provide military and economic assistance.

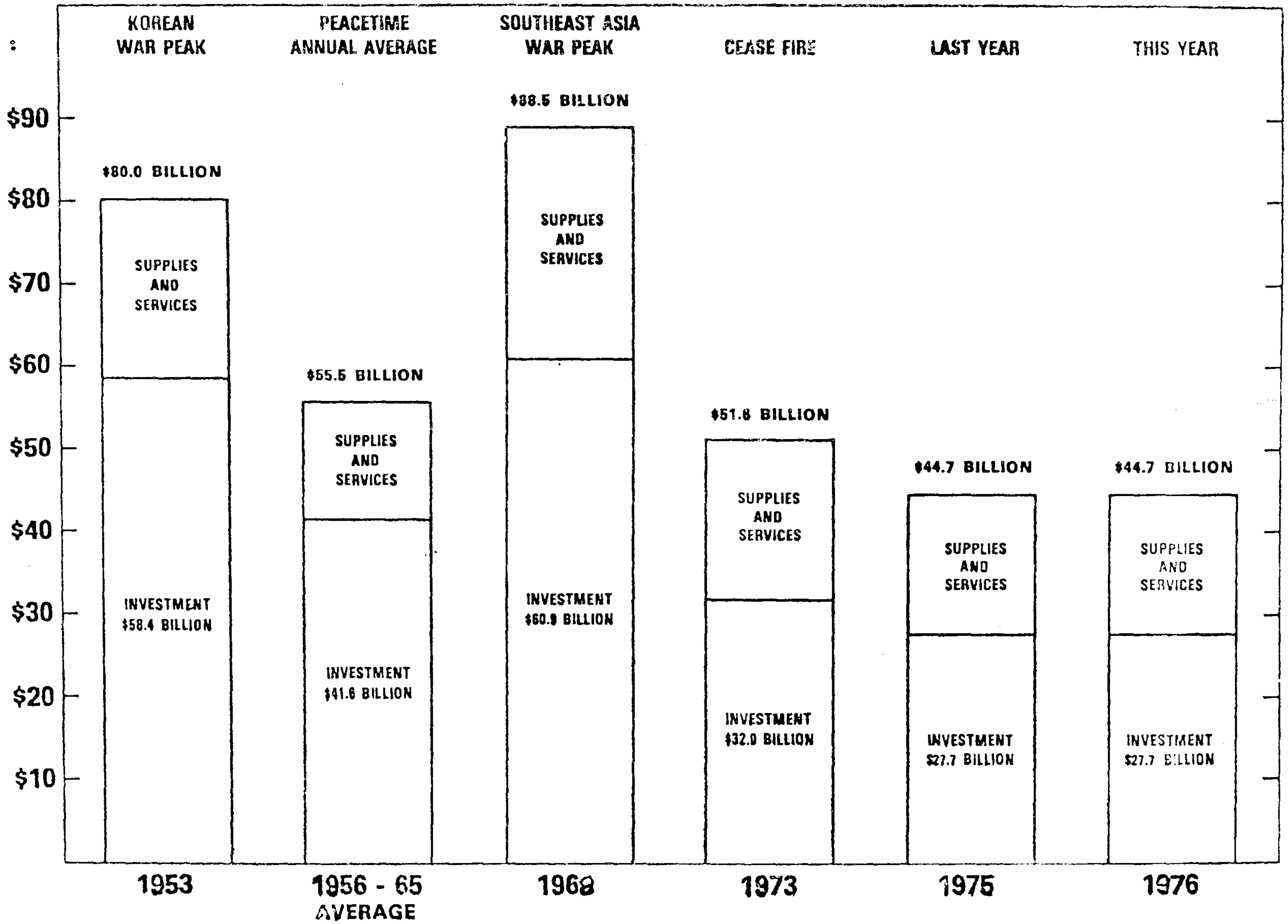
There are other cases where friends and allies are in strategic positions and eager to participate in collective security efforts, but lack the economic base and the resources to provide adequate forces for their role. In these circumstances, it is preferable to provide support for the necessary forces through security assistance rather than to incur the even heavier burden of adding forces of our own.

Our assistance may take the form of grants or foreign military sales. We prefer to provide it solely in order to help defeat externally inspired subversion and maintain the kind of military balance

EXAMPLES OF UNIT COST INCREASES FOR FY 1975 PROGRAM

ITEM	UNIT COST IN FY 1975 BUDGET	CURRENT UNIT COST	% INCREASE
M60 MACHINE GUN	$ 833	$ 1,000	20.0
LASER RANGE FINDER FOR M551	40,124	45,110	12.4
ROCKET, 66MM, HEAT	49	68	38.8
CARTRIDGE, 105MM, SMOKE, WP, F/HOW	37	54	45.9
CARTRIDGE, 105MM, HEP-T, W/FUZE, F/TANK	73	109	49.3
PROJECTILE, 155MM HE	38	45	18.4
TRUCK, STAKE	6,995	7,774	11.1
TRUCK, UTILITY	3,688	4,560	23.6
TRUCK, PICKUP	2,743	3,167	15.1
SHELTER, EXPANDABLE	37,000	43,746	18.2
TRACTOR, CRAWLER	71,800	120,000	67.1

DEFENSE PURCHASES FROM INDUSTRY IN CONSTANT (FY 1976) PRICES



that will deter external attacks. In supplying our assistance, we seek to ensure that regional stability is maintained. We have no interest in fueling local arms races.

But we must also recognize the fact that today, as never before, foreign countries have alternatives to the acquisition of defense equipment from the United States -- particularly if some form of purchase is involved. Nonetheless, we shall continue to review most carefully potential sales of military equipment, even to close allies, and to refuse them where regional security or other U.S. interests would be adversely affected.

Despite the issue that arose over military assistance to Turkey -- a nation of considerable strategic importance to us -- it is generally appreciated that security assistance, properly managed, strengthens collective security and reduces the military burden on the United States. There is, however, a marked exception to this general appreciation, and it applies to the Republic of Vietnam. There, in Churchill's words, we seem to be decided only to be undecided, resolved to be irresolute, adamant for drift, solid for fluidity, and all powerful for impotence. Our forces are now out of that tortured country, and the cost to the United States of the continuing conflict is currently about 3% of what it was at the peak of the war. The South Vietnamese did not say to us: "Give us the tools and we will do the job." Instead, we simply informed them that we would provide them with the tools -- and the munitions -- and would expect them to do the job as best they could.

Since that time, three things have happened: The South Vietnamese have pretty well held their own despite our departure; our assistance to Saigon has declined; and outside aid to Hanoi has increased. A small state, beholden to us, still struggles to maintain its independence, but we have neither the temerity to sever its lifeline nor the resolution to pay the relatively small but necessary price to assure its continued existence. We have chosen, instead, to put an ally -- facing an increasingly intensive attack -- on the military equivalent of starvation rations.

This is not an edifying spectacle. As a contrast, consider what occurred when conflict resumed in the Middle East in October, 1973. Members of Congress -- not all of whom sympathized with the equipment and munitions requirements of the South Vietnamese -- persistently urged the Department of Defense to do whatever was necessary to ensure the survival of Israel. A supplemental request of $2.2 billion for military assistance to Israel was sent to the Hill, and the Congress quickly approved it.

It is worth noting that the hostilities in the Middle East lasted for three weeks. In a sense, the bill to the United States for the war worked out to $700 million a week. Yet we now begrudge the South Vietnamese $700 million a year for munitions and refuse to appropriate the resources necessary for the replacement of their losses in equipment. Some may say that the decision does not relate very strongly to collective security and deterrence as such, but I cannot say that it enhances our credibility or demonstrates our resolve. Yet credibility and resolve, along with ready military power, are precisely what we must demonstrate if we are to have collective security, deterrence, and a meaningful peace.

B. LAND FORCES

The most significant change in the land forces program from that originally planned in the FY 1975 Budget is the increase in the number of active Army divisions from 13 1/3 to 16, with only a slight increase in the current number of active duty personnel of 785,000. This new 16 division plan was developed on the initiative of the late Army Chief of Staff, General Creighton W. Abrams, in response to my request that the Army find a way to obtain more combat capability from the manpower resources made available to it. Land forces, by their nature, are manpower intensive, and manpower is a very expensive resource. Hence, an increase in active Army combat forces, which for the reasons I discussed earlier is needed urgently, should be achieved within the existing budgetary constraints only through the more efficient use of available military manpower resources.

The ambitious nature of General Abrams' plan may be better appreciated when one recalls that prior to our involvement in the Vietnam conflict the Army had more than 970,000 active duty personnel for 16 divisions. Indeed, in the last year of the Eisenhower Administration the Army had more than 870,000 men for 14 divisions, even though three of those divisions were used for training. And in 1950, before we entered the Korean war, the Army had 10 divisions and about 600,000 men.

The composition of the Army force structure has undergone some significant changes over the years. For example, the Army's role in continental air defense, which was very substantial in 1960, is now quite minor. Hence, fewer people are needed for that strategic defensive mission and more are available for the division forces. Nevertheless, most of the increase in the number of Army divisions under the new plan is being achieved by the reduction in military manpower devoted to headquarters and support, and by the more extensive use of Reserve Component units to affiliate (roundout and augment) with the active divisions. The reduction in division forces support would mean greater reliance on the U.S. and allied civilian sector for such services as construction, transportation and communications, at least during the initial stages of a conventional war in Europe.

Our plan to affiliate Reserve Component units is an expansion of a concept which has been in use for some time. One Reserve Component brigade (two maneuver Bns) plus four separate Reserve Component maneuver battalions were earmarked to roundout two of the 13 active divisions in the Army force structure at end FY 1974. By end FY 1976, the 16 active divisions will be organized, and by FY 1978 there would be two Reserve Component brigades (six maneuver Bns), plus nine separate Reserve Component maneuver battalions earmarked for the roundout of the 16 active divisions, i.e., to bring them up to their "standard" configuration. In addition, six Reserve Component brigades plus three separate battalions (total of 22 maneuver Bns) would be affiliated with active divisions, compared with five brigades (15 maneuver Bns) affiliated at end FY 1974. These augmentation affiliation units would be operationally attached to divisions at least during the initial combat period. None of these Reserve Component affiliation units, roundout or augmentation, would come from the eight National Guard divisions (82 maneuver Bns) or eight of the separate brigades; these divisions and brigades would remain intact. Thus, we would have 24 divisions and 14 separate brigades at end FY 1976, compared with 21 divisions and 16 separate brigades at end FY 1974, in the division forces (excluding maneuver units in special mission and general support forces).

The active divisions in peacetime would provide assistance to their affiliated Reserve Component units (both roundout and augmentation) in training, maintenance and other areas, and where feasible the Reserve Component units would serve their two weeks active duty for training with their designated active Army divisions. Upon mobilization, command of the affiliated Reserve Component units would be transferred to the commanders of their designated active Army divisions. No Reserve Component units are affiliated with the five divisions deployed wholly abroad -- i.e., the one division in South Korea and the four full divisions in western Europe -- because it would not be practical for those deployed divisions to maintain this kind of close relationship with the reserve units.

In addition to the four full divisions deployed in Europe, there is one brigade of another division, the 1st Infantry Division (Mech.). The remaining two brigades of this division are stationed in the U.S.. We now propose to deploy one brigade each from the 4th Infantry (Mech.) and the 2nd Armored Divisions to Europe, increasing the force there to four complete divisions plus one brigade from each of three additional divisions. The elements of the brigades from the 4th Infantry (Mech.) and the 2nd Armored divisions deployed to Europe would be re-constituted in CONUS. These two brigades would be deployed TDY to Europe without dependents and with only austere support (except for command and certain support elements). Units from the U.S.-based brigades of these two divisions would rotate through the forward deployed brigades. The CONUS-based elements of all three dual-based divisions, including their affiliated Reserve Component units, would be maintained in a high state of readiness.

Our new programs -- the three new divisions, the affiliation program, the forward deployment to Europe of two more active brigades, and the improving capabilities of the Guard and Reserve units -- provide the capability for a more rapid but sustained introduction of combat forces into a theater of conflict.

The increase in Army combat strength in Europe will be accomplished within the currently authorized Army troop level of about 198,000. The additional combat spaces for the two brigades would be provided by the reduction of support in consonance with the Nunn Amendment, which requires a reduction in support forces strength in Europe (predominately Army and Air Force) of 6,000 military personnel in FY 1975 and an additional 12,000 by end FY 1976.

To accomplish this plan, however, the Army will need much greater personnel stability than it has experienced during the last decade. The sharp increase in Army active duty personnel during the Vietnam buildup and the even sharper decrease in personnel since 1968, together with the shift to an all volunteer force, produced such great personnel turbulence that good manpower utilization was virtually unattainable. Consequently, I promised General Abrams that if the Army would undertake a determined effort to achieve a major increase in combat power within the then authorized active duty personnel strength (i.e., 785,000), I would do everything I could to maintain that strength at least for the next few years. As explained in the first part of this section on general purpose forces, I believe that we have cut our land forces too thin in relation to the tasks they must be prepared to perform. In my judgment, one of the most significant investments we can make in our national security is to continue to support the Army's current active duty strength of 785,000 so as to enable it to continue to shift a larger proportion of its manpower to the combat forces. However, in order to continue to support the same size structure in the Army in the transition period and in FY 1977, we must ask for a small accounting adjustment in end fiscal year strength, from 785,000 to 793,000. The seasonal nature of our recruiting program, combined with the change in fiscal years, habitually causes the number of students and trainees to rise, in the fall. This will result in a 30 September 1975 projected strength of 793,000. The upward variance should be smoothed out in later years as our accession and loss pattern changes.

This new approach to the Army general purpose forces, it should be acknowledged, does involve some sacrifice in our ability to sustain a conventional war in Europe. As indicated earlier, however, the Warsaw Pact forces appear to be geared for an intense, short war. Hence, the first few weeks of a war in Europe could be the most critical. If the NATO forces cannot survive that initial period, our ability to sustain a conventional war in Europe would have little value. Therefore, first priority must be given to combat and combat support forces which could be placed on the line in Europe in the early weeks or months of a war. The support forces could be augmented later, as required. Some extra sets of long lead time equipment for selected unmanned support units for this eventuality would be retained or procured. With more careful management of our Reserve Component manpower pool, we believe that these unmanned support units could be organized, trained and deployed in time to meet the need. In any event, NATO's mobilization capabilities for a major conventional war are at least as good as those of the Warsaw Pact, and our industrial base is larger and more efficient.

The Marine Corps, in contrast to the Army, is designed primarily for amphibious operations and short periods of intense combat and relies for long-term sustaining support on the Army and the Navy. Consequently, the Marine Corps has a smaller proportion of its troop strength in the support units. Nevertheless, the Marine Corps is making a determined effort to increase the proportion of its troop strength in the combat forces; the Mission Forces/Support Forces ratio is expected to improve from 60/40 in FY 1974 to 63/37 in FY 1976. Manpower savings from reductions in headquarters and other areas will be used to man six more rifle companies (leaving 12 still unmanned) and to organize a separate TOW company for each of its four divisions (three active and one reserve).

1. Force Structure Changes

The increase in the number of active divisions with only a slight increase in the number of active duty personnel, and the shift of manpower spaces from support to combat units, have caused us to reassess our concept of a Division Force Equivalent (DFE) which we have used as the planning factor for land forces. These developments have also necessitated a reassessment of the current Army reserve component structure and troop lists, reassessments which are still in progress.

The total number of Army divisions increases from 21 at end FY 1974 to 24 at end FY 1976 when the Army's 16 active division force is expected to be in place. The Marine Corps will continue to maintain its four divisions (three active and one reserve).

The Army's TRICAP division is being reorganized. The division base and the two brigades will be joined in FY 1975 with another brigade and organized as an armored division; the TRICAP division's Air Cavalry Combat Brigade (ACCB) is being reclassified as a new type of cavalry unit.

As pointed out earlier, combat elements of a fourth brigade are being added to the 2nd Armored Division. Thus, by the end of the current fiscal year there would be four armored divisions with a total of 13 brigades in the active Army. Also in this year, a fourth infantry division (with a division base and one brigade) will have been added to the active force, raising the total number of divisions to 14. In FY 1976, two more divisions will be added, one infantry and one mechanized, raising the total to 16 active Army divisions. Combat elements of a brigade will be added to the 4th Infantry Division (Mech) in FY 1976, giving that division 12 maneuver battalions rather than the normal ten. No changes are contemplated in the eight Reserve Component divisions.

Two of the five active separate brigades will be absorbed by the new divisions to be activated in FY 1976. The remaining three active separate infantry brigades are all deployed for special missions -- Panama, Alaska and Berlin. Of the 21 Reserve Component separate brigades, four have special missions and one is a school troops training brigade. Of the remaining 16 brigades, eight are programmed for affiliation with active divisions, and eight are maintained as separate brigades.

No change is planned in the number of active and reserve Armored Cavalry Regiments. The decrease of one active Special Forces Group in FY 1975 reflects the pressing need for manpower economy.

The surface-to-surface missile battalion program for the active forces is the same as was proposed last year -- four PERSHING and eight LANCE battalions. LANCE is presently deployed with six battalions in Europe and one in CONUS (training base). An eighth battalion previously scheduled for movement overseas will be retained in the U.S. in a combat deployable status for the present time. The six HONEST JOHN battalions programmed for the Reserve Components last year are being retained in the force.

Air defense of our ground forces in the field continues to be a priority concern. Because of the creation of new divisions and because of the need for a greater density of air defense, we are increasing the number of active CHAPARRAL and VULCAN batteries in the FY 1975-80 period. This program will provide each of our 16 active Army divisions with a low altitude air defense (C/V) battalion (two CHAPARRAL and two VULCAN batteries) by FY 1978, plus units for air defense in Corps rear areas.

The HAWK batteries are being converted to the Improved HAWK and the number of tactically deployed batteries will be increased. The NIKE-HERCULES batteries in our forces will be reduced in FY 1976 and in FY 1977. Given the urgent need for manpower in our combat division forces, it very well may be that we can no longer afford to retain these units in our forces. For the high altitude air defense of our bases abroad, I believe we will have to rely primarily on the Improved HAWK and our fighter aircraft, pending a final decision on SAM-D. The remaining U.S. batteries will be retained in southern Florida, and Alaska and two, which serve as a training base for U.S. and Allied troops, will be retained at Ft. Bliss, Texas.

The Marine Corps forces are essentially the same as those presented last year. On the plus side, as noted earlier, is the reduction in the number of unmanned infantry companies from the 18 planned last year to 12 planned now, and the addition of one TOW antitank missile company to each of the four tank battalions (three active and one reserve). As was noted last year, the Marine Corps in an emergency could quickly fill the 12 remaining unmanned companies by drawing on trained personnel in other less essential assignments.

2. Land Forces Modernization and Materiel Readiness

I noted last year that in addition to continued equipment modernization we now need to improve substantially the materiel readiness of our land forces, including the replacement of assets provided to other nations. Further study of our inventory objectives in the light of the recent Middle East War has convinced us that in many cases we have been underestimating wartime attrition and consumption rates. Moreover, the unanticipated needs of our friends and allies abroad have resulted in a serious drawdown of stocks of many key items of land forces equipment and consumables and, to make matters worse, we have permitted our industrial base to deteriorate to the point where we are now experiencing great difficulty in expanding production of some major items of equipment to meet these increased requirements.

Clearly, this problem of equipment modernization and materiel readiness must now be approached on a more rational and comprehensive basis. We should plan over the next few years to fill as quickly as feasible the inventory requirements for our own forces, including war reserves. To avoid the abrupt drawdown of our own inventories to meet the unanticipated emergency needs of our friends and allies abroad, appropriate buffer stocks of key items of equipment and war consumables should be acquired. Wherever economically feasible, a warm production base should be maintained for all major items of equipment and consumables; and where such a course is not feasible, higher stock levels and appropriate industrial mobilization planning measures should be undertaken. I will have more to say about our industrial mobilization planning program later in this Report.

These policy goals are reflected in our FY 1976 and Transition Budget requests and in the amounts requested for authorization in FY 1977. The major equipment acquisition programs that we are proposing for these years, together with the amounts provided for these programs in FY 1974 and now planned for FY 1975, are shown on the table beginning on the following page.

a. Close Combat (Tank/Antitank) Program

Our continuing analysis of the recent Middle East war has convinced us that the tank is still the single most important land forces weapon system wherever armored forces can be utilized effectively. This is true even in the European context, where NATO's overall strategy is primarily defensive and the Warsaw Pact strategy is primarily offensive. While we believe that modern antitank weapons fired from the air as well as the ground can provide an effective counter to the modern tank, it should be recognized that these weapons are useful primarily in a defensive role. The ground-based versions do not have the protection, mobility and versatility of the tank, particularly when used in the local counter-offensive role; the air-launched versions, although highly mobile, are still weather-limited.

Acquisition Costs of Major Land Forces Modernization

and Improvement Programs 1/

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Close Combat (Tank/ Antitank)					
Continued Modification and Procurement of M60 Series Tanks (Including USMC) and Major Modification of M48 Tanks and Development of a new Thermal Night Sight	224	318	686	223	685
Procurement of Armored Vehicle Launch Bridge M60 Chassis (AVLB M60)	-	-	-	-	30
Development of New Main Battle Tank (XM-1)	54	65	52	40	160
Modification and Procurement of M88 Recovery Vehicle (including USMC)	3	58	101	9	116
Procurement of Armored Personnel Carrier (M113A1)	-	8	104	28	73
Development of Mechanized Infantry Combat Vehicle (MICV)	21	15	32	8	37
Continued Procurement of Tow and DRAGON Antitank Missiles (including Marine Corps), and Development of a Thermal Night Sight for TOW	191	241	312	60	278

Acquisition Costs of Major Land Forces Modernization

and Improvement Programs [1] (Cont'd)

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding [2]	FY 1977 Prop'd for Authorization
Attack Helicopters					
Procurement of TOW Modification for COBRA Attack Helicopter (AH-1Q)	73	80	17	1	3
Procurement of Improved COBRA-TOW Attack Helicopter (AH-1S)	9	21	52	30	105
Procurement of SEA COBRA Attack Helicopter (USMC)	30	-	42	13	58
Development of Advanced Attack Helicopter	49	61	65	18	100
Acquisition of HELLFIRE Helicopter Launched Antitank Missile	6	8	5	4	27
Development of Aerial Scout Helicopter (ASH)	-	1	11	9	46
Air Defense					
Procurement and Modification of CHAPARRAL/VULCAN Air Defense System	4	14	74	7	167
Acquisition of the STINGER Missile System (Including USMC)	25	32	21	2	95
Acquisition of the Short Range Air Defense Missile System	2	18	65	13	102

Acquisition Costs of Major Land Forces Modernization and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

Air Defense (Cont'd)	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Development of Advanced Forward Area Air Defense Systems	9	10	17	2	15
Acquisition of Improved HAWK Surface-to-Air Missile Systems (Including USMC)	138	112	110	3	93
Continued Development of SAM-D Surface-to-Air Missile System	194	105	130	40	157
AN/TSQ-73 Air Defense Command and Control System	16	7	7	1	25
Fire Support					
Acquisition and Modification of the PERSHING IA Missile and Development of PERSHING II	67	20	37	7	39
Acquisition and Modification of LANCE Missile System	81	66	4	1	2
Modification of 8" SP Howitzer and 175mm SP Guns (Including USMC)	7	11	19	9	12
Acquisition of 155mm Howitzer and 105mm Howitzer	11	15	19	0	21
Acquisition of Cannon-Launched Guided Projectile (CLGP)	7	6	18	7	32

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Acquisition Costs of Major Land Forces Modernization

and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Combat Support (Air Mobility Helicopters)					
Acquisition of Utility Tactical Transport Aircraft System (UTTAS)	103	53	92	19	211

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ July 1 to September 30, 1976.

Ground-based antitank weapons, however, are considerably less expensive than tanks; hence they can be deployed in much larger numbers. Given our defensive strategy in Europe, therefore, we believe that modern antitank weapons deployed in sufficient numbers can help to offset the Warsaw Pact's quantitative superiority in tanks. Accordingly, we do not believe it is necessary to match the Soviet Union in numbers of tanks, but we do believe most strongly that our tanks, by and large, should be at least the equal in firepower, armor and mobility to the best the Soviet Union has fielded.

M60 Series Tank

Last year we requested funds to increase the production of M60 series tanks from 43 per month to about 55 per month so that we could replace in our inventory those tanks furnished to Israel and modernize our own tank fleet more rapidly. The year before, for the first time since FY 1965, the M60 production rate had been increased from 30 per month (the lowest sustaining rate) to 43 per month to permit the Marine Corps to replace its M48 tanks over a period of about 4 years. Now, we are proposing a further increase in tank production to about 103 a month.

There are a number of very pressing reasons why we deem it necessary to increase the tank production rate once again. First, a detailed review of the tank wartime attrition rate estimates has convinced us, partly as a result of the Middle East war experience, that additional war reserves are needed. Second, additional tanks are required for the three new divisions being added to the active Army forces. Third, we have provided to other nations since October 1973 a total of 853 medium tanks, of which 569 were M60 series; moreover, we have accepted commitments to provide an additional 795 tanks to other nations, 411 of which are M60s (111 from inventory and 300 from new production). Fourth, we now believe it is essential to establish a special contingency stock of about 500 tanks to meet unanticipated emergency requirements of friends and allies abroad.

The recalculation of wartime attrition rates, the three new divisions, and the additions to stocks for friends and allies have served to increase the Army tank inventory objective from about 10,000 to 13,500 (including about 3,150 for War Reserve Stocks for Allies (WRSA), and 500 for the Special Contingency Reserve). Against this requirement, the Army had at the end of 1974 a total of about 8,000 usable and repairable tanks, of which some 5,000 were M60 series. The Marine Corps, which at the end of FY 1974 had 431 M48A3s and 58 M103s in its inventory, now has an inventory objective of 408 M60A1s.

We would prefer, of course, to fill all of our tank requirements with the M60 or better tank, but as a minimum we believe that all U.S. tanks should have at least a 105 mm gun and a diesel engine.

The M60 meets these minimum requirements but the M48 does not. The M48A3 has a diesel engine but mounts a 90 mm gun; the earlier M48s have gasoline engines as well as the 90 mm gun.

To fill the Army and Marine Corps active and reserve inventory objectives (about 10,300 tanks) and the Special Contingency Reserve (500 tanks) with M60 series tanks within the next five years, while at the same time satisfying foreign requirements, we would have to increase the M60 production rate to almost 150 tanks a month. Unfortunately, we have permitted our tank production capacity to deteriorate to such a point that we are now having difficulty in increasing the M60 production rate to 64 tanks per month. The principal bottleneck is in the production of hull and turret castings; there is only one foundry that can produce castings of this size and that foundry can turn out no more than 65-72 sets per month. We have decided, therefore, on a two-fold approach: (1) to increase M60 production to about 103 tanks per month by opening a second source for hull and turret castings and expanding the related production facilities; (2) to satisfy the remaining U.S. forces and special contingency stock requirements by converting 1,209 M48s, (849 A1s/A2Cs and 360 A3s) to a new M48A5 configuration with a diesel engine and a 105 mm gun. As the XM-1 enters the forces, the older M48A1/A2C tanks in the inventory will be replaced by about 1989 with the M48A3/A5 and the early model M60.

The cost of converting the M48A3s and the M48A1s/A2Cs to the M48A5 configuration in FY 1975 (including the cost of installation and overhead as well as the parts kits) is about $110,000 and $236,000 per tank, respectively. The cost of a new M60A1 in the FY 1976 Budget is about $494,000, excluding funding for component capacity expansion.

The $686 million requested for FY 1976 includes:

(1) $484 million for the procurement of 816 M60 series tanks (562 M60A1s and 100 M60A3s, for the Army, and the last 154 M60A1s for the Marine Corps).

(2) $88 million to upgrade existing M60A1s to the improved M60A3 configuration by installing such new features as the laser range finder and solid state computer.

(3) $6 million for the expansion of casting and related production facilities to provide a total capacity for 103 tanks per month. (A request for the reprogramming of $32 million in FY 1975 funds to start this facility expansion has been submitted separately to the interested Congressional Committees.)

(4) $100 million for the conversion of 504 M48A1/A2Cs to the M48A5 configuration. (A request for the reprogramming of $52

million in FY 1975 funds to procure kits for the conversion of the first 213 M48A1 and the 360 M48A3s to the M48A5 configuration has also been submitted separately to the Committees.)

(5) $8 million for the continued development of the new thermal night sight.

The almost $223 million requested in the Transition Budget includes $167 million for another 248 M60 series tanks for the Army, plus additional funds to upgrade additional M60A1s, convert the last 132 M48A1/A2Cs to the M48A5 configuration, and provide for RDT&E.

The $685 million requested for authorization in FY 1977 provides $572 million for the procurement of 886 M60 series tanks (200 A1s and 686 A3s) for the Army, $104 million to upgrade additional M60A1s, and $9 million for the thermal night sight development.

The last 638 Army M60 series tanks -- all M60A3s -- would be procured in FY 1978. In FY 1979, the first new main battle tanks (XM-1) would be procured.

Armored Vehicle Launch Bridge, M60 Chassis (AVLB M60)

The AVLB is an M60A2 tank, less the turret, which is designed to carry and emplace a scissor-type bridge. This vehicle thus provides a bridging system that is just as mobile and armor-protected as the M60 tank itself. Over the years the Army has acquired a total of 342 of these M60-type AVLBs. We now propose to replace with the M60 chassis AVLB all of the remaining M48A1/A2C chassis AVLBs in both the active and reserve forces. These older AVLBs, like the M48A1/A2C tanks, are powered by gasoline engines. Since we plan to convert to an all-diesel powered tank force, it would be desirable from a logistics, as well as a modernization, standpoint to eliminate these gasoline engine vehicles from the inventory.

We calculate that another 211 AVLB M60s would be required to replace the remaining AVLB M48s and provide for the support of the tank units in the three new divisions. The $30 million requested for authorization in FY 1977 is for the procurement of 105 AVLB M60s. The remaining 106 vehicles are programmed for procurement in FY 1978.

New Main Battle Tank (XM-1)

Development of the XM-1 new main battle tank is now well started. The principal advance in this system, as compared with the M60, is the use of a new type armor which promises a major increase in survivability against modern antitank weapons. In addition, the XM-1 will have a somewhat lower silhouette, a more powerful engine, a new transmission, and better compartmentation of ammunition and fuel to reduce vulnerability to antitank weapons. The XM-1 prototype will mount the current 105mm gun, but the main gun for the production model will be determined after the shoot-off evaluation of other U.S., UK and German gun and ammunition systems.

Development of the XM-1 is proceeding on schedule. The two development prototype contractors are continuing both their design work and the test and evaluation of armor configurations, compartmentation techniques, mine protection, etc.. Fabrication and assembly of prototype chassis and ballistic hulls and turrets is scheduled to start in the current fiscal year. The development prototypes from each of the two contractors are scheduled to be delivered in February, 1976, and test and evaluation to be completed by May, 1976. A single full-scale development contractor would then be selected. Engineering development and the fabrication and testing of the development vehicles is expected to be completed in FY 1979, at which time a decision on initial limited procurement would be made.

The Federal Republic of Germany is modifying one of the developmental prototype Leopard II tanks in an effort to meet the goals established for the U.S. XM-1 tanks in armor protection, system performance, reliability, maintainability, and production costs. We plan to evaluate this prototype as a competitor to the winner of the XM-1 prototype competition. It may be possible to arrive at a design which could meet the needs of the U.S., the FRG, and other allied countries, thus making possible a joint production program.

The $92 million requested in the FY 1976 and Transition Budgets would provide for the continuation of the competitive development effort and the testing of the development prototypes and initiation of engineering development. The $160 million requested for authorization in FY 1977 includes $106 million for the continuation of engineering development and the fabrication and testing of the eleven development vehicles, and $54 million for the procurement of long lead time tooling in preparation for the start of limited production. The actual use of these procurement funds would, of course, depend upon our assessment of the cost and performance of the XM-1.

As I noted last year, it is reasonable to assume that the Soviet Union is working on a more advanced modern tank than the M1970 which is just now entering large scale production. Consequently, we believe it would be wise to continue the development of the XM-1 to provide both an option for the production of a new, more survivable main battle tank for the 1980's, as well as a hedge against a Soviet breakthrough in tank technology.

The M88 Recovery Vehicle

Last year we began a program to buy a diesel engine version of the M88 recovery vehicle and to convert all the existing gasoline engine M88s to diesel power. This vehicle is designed to retrieve, under combat conditions, disabled tanks up to the size of the M60 and

XM-1 from the battlefield. It is armored and full-tracked, and has a .50 caliber machine gun which provides a limited self-defense capability. The intrinsic value of this vehicle was dramatically demonstrated in the Middle East war where the Israelis utilized it to recover many slightly damaged tanks which were then quickly repaired and returned to combat.

The $110 million requested for this program in FY 1976 and the transition period includes $82 million for the procurement of another 159 diesel-powered M88Als (144 for the Army and the last 15 for the Marine Corps), and $28 million for the conversion of an additional 189 gasoline engine M88s to the diesel version. The $116 million requested for authorization in FY 1977 includes $89 million for the procurement of the last 168 M88Als for the Army and $27 million for the conversion of another 240 gasoline engine M88s to diesel power. Conversion of the final increment of M88s to the diesel version is planned for FY 1978.

Armored Personnel Carrier (M113Al)

Last year we had proposed, pending the availability of the Armored Reconnaissance Scout Vehicle (ARSV), to replace with the M113Al the M114 three-man command and reconnaissance vehicles used by our armored cavalry units in Europe. Subsequently, the Army informed the Congress that procurement of the ARSV would be delayed until the suitability of that vehicle had been completely reviewed in light of the Middle East war experience; the advisability of introducing another special purpose vehicle, especially in view of the small ARSV crew size, was questioned.

Pending a final decision on ARSV, we have replaced the M114s in our European based cavalry units with M551 Sheridan light tanks on a three for five basis. We further propose to replace all of the other M114s in our inventory with the M113Als. As was pointed out last year, the M114 has proven to be very difficult and costly to maintain and we believe it should be replaced as soon as possible.

This requirement, plus the three new divisions and the recalculation of wartime attrition rates, has increased the Army's M113Al inventory objective from about 11,750 to over 16,000. Against that requirement the Army has on hand and funded through FY 1975 a total of about 11,500 M113Als. The FY 1976 and Transition Budgets include $132 million for 1,650 more vehicles (1,320 in FY 1976 and 330 in the transition period). The $73 million requested for authorization in FY 1977 would provide another increment of 868 vehicles. The balance of the inventory objective, less that portion which would be filled by the MICV, will be funded in the FY 1978-80 period.

Mechanized Infantry Combat Vehicle (MICV)

The $40 million requested for the MICV in FY 1976 and the transition period includes $20 million for the continued development of the vehicle itself and $20 million for the development of the armament. The funds requested for the vehicle will provide for completion of seven engineering development prototypes, testing of the prototypes, and initiation of advanced production engineering and planning in preparation for limited production. The funds requested for armament include $5 million for product improvement of the current M139 20mm gun and ammunition for interim use as the main armament on the MICV, $15 million for development of a new main armament system (BUSHMASTER or an alternative) and $.4 million to complete the development of the supplemental weapon system, i.e., the dismountable automatic weapon for use in the firing ports of the MICV.

The $37 million requested for authorization in FY 1977 includes $30 million for the vehicle and turret trainers, ($5 million for continued development and $23 million for the procurement of the first limited production increment of 43 MICVs and $2 million for MICV turret trainers), $2 million for product improvement of the M139 gun, $4 million for the development of the main armament, and $.7 million to initiate procurement of the supplemental armament. Production of the vehicle would be continued on a limited basis in FY 1978, pending troop testing and a final decision on full-scale production.

The MICV, in our judgment, represents a major advance in mechanized infantry vehicles. It will be the first U.S. "infantry fighting vehicle", i.e., a heavily armored personnel carrier in which a full infantry squad can conduct combat operations without dismounting. The MICV will have six one-man firing stations in addition to the main gun and the secondary 7.62mm machine gun mounted in the turret. In addition, the squad will be equipped with the standard complement of infantry weapons, which will now include one DRAGON firing unit, i.e., a tracker plus missiles (we are also considering the possibility of mounting a TOW launcher on some of the MICVs). Finally, the MICV will incorporate an improved night sight, a better swim capability, better armor protection, and will be air transportable.

In short, the MICV is the U.S. counterpart to the Soviet BMP armored infantry combat vehicle which has been in production since 1967. We hope that some of our NATO Allies will buy it for their forces (the FRG already has an armored infantry combat vehicle in its forces). Other, non-NATO countries, have already indicated an interest in the MICV.

TOW and DRAGON

Last year we proposed, and the Congress approved, a major increase in the production of antitank missiles; TOW missile production was increased from about 12,000 to more than 30,000 per year and DRAGON missile production, which was in an early stage, was increased to about 8,800 per year. We now propose to hold TOW production at the 30,000 per year level until U.S. force requirements are substantially completed with the FY 1977 buy and foreign requirements are met. DRAGON missile production for our own forces will continue to increase to about 42,000 per year in the FY 1977 procurement period, and then taper off to a level sufficient to meet foreign demand as the U.S. requirements are completed with the FY 1978 buy. I should caution, however, that the impact of the three new divisions and the recomputation of wartime consumption rates on the inventory objectives of these weapons has not yet been fully assessed.

In the Army the TOW will be widely deployed on helicopters, jeeps, and M113A1 armored personnel carriers. On the ground, TOW will be deployed down to the company level. The man-portable DRAGON in the Army will be deployed down to the squad level. The allocation of these antitank weapons down to the company and squad levels will greatly strengthen those elements of our infantry forces which would be the first to bear the brunt of an enemy armored attack. In the Marine Corps the TOW will be deployed, as noted earlier, in separate companies organic to the tank battalions; the DRAGON will be assigned to the infantry battalions.

The $372 million requested in the FY 1976 and Transition Budgets includes $182 million for TOW (about 29,800 missiles and 2,809 launchers for the Army, and about 1,200 missiles and 51 launchers for the Marine Corps), $180 million for DRAGON (about 25,240 missiles and 2,154 trackers for the Army, and about 9,200 missiles and 332 trackers for the Marine Corps), plus $10 million for the continued development of a night sight and electronic countermeasure hardening for TOW.

The $278 million requested for authorization in FY 1977 would provide $94 million for TOW (about 16,700 missiles and 75 initial production night sights for the Army and about 2,500 missiles for the Marine Corps), $183 million for DRAGON (about 27,000 missiles, 3,900 trackers, and 190 initial production night sights for the Army, and 228 trackers and 6,564 missiles for the Marine Corps), and about $1 million for the continued development of the night sight and electronic countermeasure hardening for TOW.

b. Attack Helicopters

As noted last year, we believe that the TOW-armed attack helicopter would be very useful in the antiarmor role, particularly with respect to Europe where the Warsaw Pact enjoys a substantial superiority over NATO in numbers of tanks. Accordingly, we intend to press forward with the TOW-armed helicopter programs presented to the Congress last year.

COBRA-TOW Modification

The $18 million included in the FY 1976 and Transition Budgets, plus the $3 million requested for authorization in FY 1977, will complete the funding of the COBRA-TOW modification program. The first phase of this program, which has already been fully funded, involves the installation of the TOW missile system on 290 COBRA attack helicopters (AH-1G), thus converting them to the COBRA-TOW (AH-1Q). The second phase of this program, for which we are now requesting funds, involves the installation of an upgraded engine, gearbox and transmission to permit the AH-1Q to carry a full load of fuel, TOW missiles and other standard ordnance. This upgraded AH-1Q is designated the AH-1S.

Approximately half of the 290 AH-1Gs will have already been converted to the AH-1Q configuration by the end of the transition period. These aircraft will be further modified to the AH-1S configuration in the field, beginning in FY 1976. The remaining AH-1Gs will be converted directly to the AH-1S configuration, i.e., they will receive both sets of improvements on the modification line, beginning in FY 1976. Testing of the improved components is now underway and a final decision on installation is expected to be made in June, 1975.

COBRA-TOW Procurement

For reasons which were explained last year, in addition to the modification of 290 AH-1Gs to the AH-1S configuration, we are now embarked on a program to buy a total of 305 new production AH-1S COBRA-TOW helicopters. With three new divisions and a more realistic assessment of war reserve requirements, the Army will need about 1,426 attack helicopters, compared with the former inventory objective of 1,335. Against this requirement, the Army had on hand at the end of FY 1974 a total of about 1,100 attack helicopters of which about 350 were UH-1 utility helicopters used as substitute attack helicopters.

While the new Advanced Attack Helicopter (AAH) now under development promises to be a distinctly more capable aircraft than the AH-1S, it is expected to cost about twice as much per unit. Accordingly, we plan to buy only enough AAHs to meet the most demanding requirements. The balance of the inventory objective would be filled with the AH-1Ss and the remaining AH-1Gs, and to the extent required, with the UH-1 substitute attack helicopter. This approach to the quantitative aspect of the attack helicopter problem is still another example of our effort to apply the high-low mix principle wherever it is appropriate.

Last year the Congress provided $21 million for the procurement of the first six new production AH-1Ss and for advance procurement against the FY 1976 buy. Our new budget request includes $52 million in FY 1976 for 38 AH-1Ss and $30 million in the transition period for another 22. An authorization of $105 million is requested for FY 1977 to procure 82 more.

Sea Cobra Attack Helicopter

Last year we had planned to buy a total of 124 AH-1J attack helicopters for the Marine Corps (enough to equip three active squadrons and two training elements), the last 57 of which were to be the "improved" version. This Improved AH-1J was to have an uprated engine and transmission and was to be configured to carry TOW as well as certain newly developed protective devices (e.g., infrared suppressors, detectors, jammers and decoys) in addition to the current payload. The increased weight of new equipment, however, tends to make the Improved AH-1J somewhat tail-heavy and we now plan to lengthen the forward section of the fuselage by 12 inches to solve that problem.

In view of this structural change, we believe it would be prudent to postpone procurement of the Improved AH-1J until the modified version of the aircraft has been satisfactorily tested. Accordingly, we plan to modify the last two of the 20 AH-1Js procured in FY 1973 to the Improved AH-1J configuration, including the uprated engine and transmission and the 12-inch fuselage extension. One of these two test aircraft would be equipped to fire TOW (i.e., TOW configured), the other would be designed so that a TOW kit could be easily installed at depot level (i.e., TOW convertible).

The uprated engine and the uprated transmission needed for the Improved AH-1J are currently being developed and tested on the Iranian Improved AH-1J and Iranian Improved UH-1 (HUEY), respectively. The other modifications are expected to be completed by early 1976, and we would then flight test the two Improved AH-1Js, to include the test firing of TOW missiles from the TOW-configured version.

The $30 million provided by the Congress for the AH-1J program in FY 1974 will be used to modify and test the two flight test aircraft and to procure ten Improved (TOW convertible) AH-1Js. Another 16 Improved (TOW convertible) AH-1Js would be provided with the $42 million requested for FY 1976, and six more with the $13 million requested for the transition period. The $58 million requested for authorization in FY 1977 would provide for the procurement of 23 Improved (TOW configured) AH-1Js. This program would provide the Marine Corps with 67 AH-1Js, 33 Improved (TOW convertible) AH-1Js and 24 Improved (TOW configured) AH-1Js.

The flyaway unit cost of the Improved (TOW configured) AH-1J is estimated at $2.3 million and the Improved (TOW convertible) AH-1J at about $1.7 million, compared with about $1.2-1.3 million (in comparable dollars) for the AH-1J. Nevertheless, since the Marine Corps has a limited number of attack helicopters, we believe the costs of these Improved AH-1Js are justifiable in view of their ability to carry the TOW system (8 TOW missiles), as well as increased ordnance for the Sea Cobra's other standard armament (20mm nose mounted turret gun and 2.75-inch air-to-ground rockets) along with the newly developed air defense suppression devices.

The Government of Iran is funding the non-recurring RDT&E costs of the uprated engine and transmission for the improved version of the AH-1J it intends to acquire.

Advanced Attack Helicopter (AAH)

Development of the AAH is proceeding and no major technical problems have been encountered. The funds provided in FY 1975 and prior years will complete the development and fabrication of two flyable prototypes and a ground test vehicle by each of two contractors. The funds requested in the FY 1976 and Transition Budgets ($65 million and $18 million, respectively) would support the continuation of contractor prototype testing and an Army conducted "fly-off" between the two sets of prototypes. The FY 1977 authorization request of $100 million would permit the awarding of a contract to the winning contractor for subsystems development and the initiation of fabrication of three additional flyable prototypes with integrated full mission equipment. During FY 1975, cost growth occurred primarily because of inflation. The result has been a six month extension in the development schedule. Barring any major problems, procurement is scheduled to begin in FY 1979.

The approved AAH program provides for the procurement of 472 helicopters at a unit flyaway cost of $1.7 million in FY 1972 dollars, a per unit cost considerably less than that of the Cheyenne program which was terminated in 1972. The AAH will be slower and less sophisticated than the Cheyenne, but it will have more agility with performance maximized for hover and slow speed. Since the AAHs would be employed in conjunction with ground forces along the forward edge of the battle area, their agility would make them even less vulnerable to ground fire than the Cheyenne. Furthermore, the AAH with its night and adverse weather capability and high point-firepower should be especially valuable in Europe where the design of the Warsaw Pact forces reflects a high speed day and night armored offensive strategy.

HELLFIRE Helicopter-Launched Antitank Missile

The helicopter-launched TOW missile, like all TOW missiles, is wire-guided; consequently, the launching helicopter must remain in the line-of-sight of the target until the missile strikes home, thus lengthening its exposure to return ground fire. It would be highly desirable, therefore, to equip the attack helicopters with an antitank missile which would permit them to "fire and leave". The Air Force's laser-guided MAVERICK antitank missile will have this feature but it is too heavy for an attack helicopter. The Army, therefore, has initiated the development of a smaller, shorter range laser-guided missile, the HELLFIRE. The laser designator would be mounted either in the attack helicopter itself, in a scout helicopter or in a ground vehicle. When the laser designator is in some other aircraft or ground vehicle, the attack helicopter could launch the missile toward the designated target and leave, while the laser operator guides the missile to its target with a laser beam.

The $9 million requested in the FY 1976 and Transition Budgets would allow the HELLFIRE program to continue in advanced development. We still have a number of key problems that need to be satisfactorily resolved -- remote designation capability, engagement range, degradation resulting from environment and countermeasures, total system reliability and the practicality of multiple launches per exposure. Twenty-seven million dollars is requested for authorization in FY 1977 to maintain the option to enter full-scale development if the results of further field tests warrant. Initial deployment of the HELLFIRE is tentatively planned for the early 1980s.

Aerial Scout Helicopter (ASH)

As the Congress is aware, the Army needs, as a complement to the increased capabilities of the Advanced Attack Helicopter (AAH) and Utility Tactical Transport Aircraft System (UTTAS) helicopter, a modern Aerial Scout Helicopter (ASH) which can acquire and transfer targets and defend itself in a high-threat environment. To fulfill this requirement, the Army is evaluating three alternatives: modification of an existing U.S. Army helicopter, an adaptation to military specifications of a commercial (domestic or foreign) helicopter, and the development of a new helicopter. This evaluation is expected to be completed in February, 1975, at which time we will make a decision on the approach we propose to pursue in developing the ASH. Our program proposal will be presented to the Congress as soon thereafter as possible. Pending the submission of that program, we have included for development of the ASH $20 million in the FY 1976 and Transition Budgets, and $46 million in the authorization request for FY 1977.

c. Air Defense

As noted last year, it is generally agreed in the Defense Department that major improvements in our theater Army air defense capabilities are urgently needed to counter the increasing capabilities of Soviet tactical airpower. The Soviet Union, with its SA-4, SA-6, SA-8, and SA-9 SAMs, and the 57mm and ZSU-23-4 radar-guided guns, has a distinct advantage in this area, and it is clear that the improvements are technically feasible.

Our most immediate need for air defense of the Army in the field is an effective all-weather, highly mobile, low altitude system. Our VULCAN gun and CHAPARRAL short-range missile are mounted on tracked vehicles and are highly mobile, but they are not radar-directed and therefore lack an all-weather capability. Our HAWK missile is radar-directed and has an all-weather capability, but it moves in several wheeled vehicles and requires too much time to set up and fire.

We also need an improved follow-on to the REDEYE man-portable SAM, which like the Soviet SA-7, has a tail-chase-only engagement capability. For the longer term modernization of ground forces air defense, we are continuing the development of the SAM-D as a potential replacement in the 1980s for the NIKE HERCULES as well as for the Improved HAWK.

CHAPARRAL/VULCAN

Pending the availability of a new, low altitude, mobile, all-weather air defense system for the Army in the field, we propose to buy additional CHAPARRAL fire units to equip the three new active divisions and, as previously planned, five of the eight reserve divisions. No additional VULCAN guns are planned for procurement. The three new divisions will be equipped with on-hand VULCAN assets. A CHAPARRAL fire unit consists of a fully-tracked, modified M548 cargo carrier and mounted launching station with four missiles mounted and a number stored on board. A VULCAN fire unit is a 20mm Gatling machine gun mounted on either an armored personnel carrier or a towed vehicle. The CHAPARRAL/VULCAN units are deployed together with a Forward Area Alerting Radar (FAAR) but this radar, as its name implies, is an alerting (it provides target range and azimuth), and not a tracking and guiding radar.

Inasmuch as the CHAPARRAL/VULCAN systems are likely to remain in our force for many years to come, we plan in FY 1976 and beyond to continue our efforts to upgrade these systems. VULCAN will be modified to improve its reliability, availability and maintainability. With regard to CHAPARRAL, we have recently completed development of a new fuze, a new blast fragmentation warhead and a new all-aspect guidance package. To further enhance the performance of CHAPARRAL, we now propose to undertake the development of an anti-glint canopy for the fire unit and a new set of improved components for the missile -- an IRCM (Infrared Countermeasures) immune seeker, a smokeless missile motor, and an electronic IFF.

The $81 million requested for this program in the FY 1976 and Transition Budgets ($74 million and $7 million, respectively) would provide $39 million for the procurement of another 52 CHAPARRAL fire units to complete the equipping of the 16 active divisions, $21 million for VULCAN modifications and $21 million for the development of the new modifications for the CHAPARRAL system. The $167 million requested for authorization in FY 1977 would provide for the procurement of 86 CHAPARRAL fire units and 2,500 missiles, the completion of the development of the new modifications for CHAPARRAL, and the modification of VULCAN.

STINGER

The STINGER man-portable air defense missile system is now well along in development. Some difficulties, however, have been encountered with the guidance system in the first phase of the guided vehicle test firings. In this missile, the seeker senses the exhaust plume of the target aircraft and the guidance system makes the necessary course adjustments for the missile to hit the aircraft itself. It is this feature, together with a more powerful motor, which enables STINGER to engage targets from any aspect, in contrast to REDEYE which can engage targets only in a tail chase. Hence, the proper performance of the guidance system is critical to the effectiveness of the STINGER missile.

Assuming the guidance problem is satisfactorily resolved within the next few months, the first production quantity of STINGER for the Army would be procured in FY 1977 instead of FY 1976 as previously planned. The $23 million requested in the FY 1976 and Transition Budgets ($21 million and $2 million, respectively) is for the continued development of STINGER. The $95 million requested for authorization in FY 1977 would provide $9 million for continued development and about $86 million to initiate production of the STINGER missile system, including ground support equipment and 645 missiles for the Army, and ground support equipment only for the Marine Corps. As the new STINGER missiles enter the active forces, the remaining serviceable REDEYE missiles will be transferred to the Reserve Components.

Short Range Air Defense (SHORAD) Missile System

Last year we had proposed to evaluate the results of U.S. conducted preliminary firing tests of three foreign short range air defense missile systems -- the French CROTALE, the German ROLAND II, and the UK RAPIER -- with the view of selecting one of them for production under license in the United States. We proposed this approach because a major improvement in our low altitude, all-weather, mobile SAM capability for our forces and bases is urgently needed and the development of these foreign systems had already been completed.

The reaction of the Congress to this proposal ranged from very favorable to very unfavorable. The Conference Report of the House and Senate Armed Services Committees states explicitly that "it is [not] necessary to procure a foreign developed SHORAD system... [simply] because of the earlier availability of test firing data." The Senate Appropriations Committee, however, stated that "it will not tolerate a drawn out SHORADS research and development program" and directed that "the most economical and most easily deployed system under consideration" be selected. To complicate the problem further, the Congress in the Department of Defense Appropriation Authorization Act of 1975 (PL 93-365) directed, "The Secretary of Defense shall undertake a specific assessment of the costs and possible loss of nonnuclear combat effectiveness of the military forces of the North Atlantic Treaty Organization countries caused by the failure of the North Atlantic Treaty Organization members, including the United States, to standardize weapons systems...".

Let me say at the outset that I fully agree with the intent of the provision incorporated in PL 93-365. Given the ever rising costs of defense, we and our NATO Allies simply can no longer afford any unnecessary duplication of effort. While I certainly agree that key weapon systems used by our forces should be produced in the United States as a matter of prudence, I can think of no logical reason why we cannot produce in this country suitable weapon systems developed by our Allies. Indeed, this is the one area where the greatest degree of mutual exchange and cooperative effort should take place. We have no monopoly on good ideas or inventiveness. Some of our Allies, and it should be acknowledged, even some of our adversaries, are ahead of us in certain fields of military technology. It is in our interest, as well as in the interest of our NATO Allies and the Alliance as a whole, to make maximum use of each other's inventiveness. And where feasible, weapon systems should be selected and standardized for use NATO-wide. Suitable arrangements can be made for joint production in the United States as well as in Europe. We have had such joint programs in the past, and there is no reason why we cannot have even more of them in the future.

The United States is preeminent in certain fields such as aircraft, but our Allies have developed some outstanding guns, surface-to-air missiles and armored vehicles. Where these systems meet our needs it is sheer waste to duplicate the development effort in the United States, just as it is sheer waste for our Allies to duplicate our development efforts.

The Short Range Air Defense missile system is a case in point. Each of the three foreign systems we have tested has performed as specified. Since there is a U.S. licensee for each of these systems, production in the U.S. offers no particular problem. Nevertheless, to satisfy the desire of the Armed Services Committees, we opened the competition for SHORAD to U.S. designers. A final selection of the ROLAND II has been made recently. Total RDT&E cost is estimated to total $226 million.

The $78 million requested for the ROLAND II program in the FY 1976 and Transition Budgets ($65 million and $13 million, respectively) would provide for the fabrication of hardware for development and cooperative (FRG, France and the U.S.) tests of ROLAND II, in addition to the conduct of some limited U.S. contractor tests. The $102 million requested for authorization in FY 1977 would provide for the continuation of development and completion of U.S. prototype qualification testing and for initial production.

Advanced Forward Area Air Defense Systems (AFAADS)

Grouped under this heading are three related air defense efforts -- the Man-portable Air Defense System (MANPADS), the Low Altitude Forward Area Air Defense System (LOFAADS) Gun, and the Evaluation of Foreign Weapon Systems (EFWS). The MANPADS effort is concerned principally with the development of improvements for the STINGER system, particularly new seekers and guidance systems. The LOFAADS Gun project is oriented toward the development of a radar-directed gun system to replace the VULCAN. Foreign, as well as U.S., designs will be considered in this project, but whatever design is selected, the system will be produced in the United States. The Evaluation of Foreign Weapons Systems (EFWS) project, for which we are requesting only about $100,000 a year, will focus attention on the search for innovations in air defense technology abroad.

The funds requested for AFAADS in FY 1976, the transition period and FY 1977 would provide for the continuation of these three efforts. The increase in FY 1976 as compared with prior years is for the LOFAADS Gun project which will enter a competitive feasibility demonstration phase in that year. Fabrication and testing of prototype systems will continue into FY 1977.

Improved HAWK

For the Improved HAWK program we are requesting a total of $110 million in FY 1976, $3 million in the transition period, and an authorization of $93 million in FY 1977. The FY 1976 and Transition Budgets include funds for the Army for RDT&E, procurement of missiles, modifications for existing Improved HAWK missiles, and for Marine Corps procurement of 140 missiles. The FY 1977 authorization would provide for RDT&E, the procurement of missiles, and for

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modification of Army Improved HAWK missiles and ground support equipment. The RDT&E funds would be devoted to improvements in mobility, optics, ECCM, and command and control.

The Army's inventory objective is now 95 battery sets of equipment. The Marine Corps' inventory objective is 14 battery sets of equipment. The Marine Corps' objective will be completed with FY 1977 funding. The Army's inventory objective will be completed with FY 1978 funding. It should be noted, however, that the Army's missile inventory objective is still under review and there is a good possibility that it will be raised next year.

Compared to the Basic HAWK, the Improved HAWK is significantly superior in target acquisition and has a far greater capability to "kill" high speed, maneuvering targets employing electronic countermeasures. For these reasons, it is the primary low-to-medium altitude air defense system for both the Army and the Marine Corps.

SAM-D

As indicated last year, initiation of full-scale engineering development of the SAM-D has been delayed pending a more thorough demonstration of the technical feasibility of its Track-via-Missile (TVM) guidance system.

Ten Controlled Test Vehicle (CTV) missile firings have been conducted through the end of 1974. In these tests the TVM guidance system is not in operation, and the missile has an on-board program which guides the missile over a preselected course. Eight of these test firings to test the missile itself were completely successful and two were partially successful. CTV #1 was inadvertently destroyed due to range instrumentation error, and CTV #10 experienced a momentary loss in power during the initial turn but performed properly during the remainder of its trajectory.

In order to test the feasibility of the TVM guidance concept, we propose to proceed with the scheduled sixteen guided test vehicle (GTV) tests at a very deliberate pace in order to provide the time required to analyze the data collected from each test, make corrections and reformulate the objectives of the succeeding tests. The planned completion date (January, 1976) of this test program has slipped six months from that reported a year ago due to procurement delays and technical difficulties. The balance of the SAM-D program will be continued at a pace commensurate with this TVM test program in order to preserve, at the lowest feasible cost, the option to deploy the system.

As noted last year, the SAM-D, which is intended as a replacement for the NIKE HERCULES and Improved HAWK, is a very complex surface-to-air guided missile system. The performance specifications call for a high single shot kill probability in a sophisticated electronic countermeasure environment, and an ability to conduct multiple simultaneous engagements against the type of high performance targets that potentially could be employed against U.S. forces in the field in the 1980s and beyond.

The funds requested for the SAM-D program -- $130 million for FY 1976, $40 million for the transition period, and an authorization of $157 million for FY 1977 -- will allow us to complete the proof of principle testing of the TVM guidance portion of the flight test program in early FY 1976 and, if successful, permit the initiation of full-scale engineering development.

AN/TSQ-73 Air Defense Command and Control System

Last year I noted that procurement of additional units of the AN/TSQ-73 Air Defense Command and Control system had been deferred pending the satisfactory completion of tests and the successful accomplishment of the necessary engineering changes. These actions are still underway and we will not proceed with the procurement of the system until FY 1977 in order to provide time to complete final operational testing prior to a production decision. The $8 million requested in the FY 1976 and Transition Budgets ($7 million and $1 million, respectively) will support this testing and includes funds to incorporate engineering changes resulting from the tests in the three prototype and five low-rate initial production models. Of the $25 million requested for authorization in FY 1977, $.3 million is for RDT&E and slightly less than $25 million is for the acquisition of the first 12 of 25 full production systems.

The AN/TSQ-73 will be configured inside a single metal shelter mounted in the back of a standard 5-ton truck. The 3-man crew will use the highly automated equipment to coordinate the firing of HAWK and other SAMs, as well as to integrate SAMs and air defense artillery with joint air defense command control centers. The AN/TSQ-73 is a significant improvement over the AN/MSG-4 system which has been in use since 1958. The latter system is extremely costly to operate and maintain, it does not integrate easily into other Services' C^2 systems, and it can be easily jammed.

d. Fire Support

Grouped under this heading are two surface-to-surface missile systems (PERSHING and LANCE) and four artillery systems (the 8" self-propelled howitzer, the new towed, extended range 155mm and 105mm howitzers, and the cannon-launched guided projectile). The missile programs were discussed here last year; the artillery programs were not.

As other Defense witnesses have pointed out in previous years, Soviet artillery generally out-ranges ours. Moreover, our longest range artillery piece, the self-propelled 175mm gun, lacks accuracy as it approaches maximum range. Consequently, we propose to make some major improvements during the next few years in both the range and the accuracy of our artillery weapons.

PERSHING

The $44 million included for PERSHING in the FY 1976 and Transition Budgets would provide $17 million for the currently deployed PERSHING IA system and $27 million for the advanced development of the PERSHING II follow-on system. The $39 million requested for authorization in FY 1977 would provide $3 million for PERSHING IA and $36 million for PERSHING II.

The $17 million requested for PERSHING IA in FY 1976 and the transition period is for the procurement of the last 72 automatic Azimuth Reference Systems (ARS) and 25 telemetry sets. The ARS will enhance the survivability of PERSHING by enabling the fire units to use unsurveyed launch sites. The telemetry sets are required for the PERSHING missiles used for training. The $3 million included for PERSHING IA in the FY 1977 authorization request would provide for the procurement of a new safety and arming device, and for a modification to the radio system to eliminate its unique signature.

Last year we requested about $11 million to continue feasibility testing of a new radar area correlation guidance system (the development of which was separately funded) and to initiate the design of a new terminally-guided RV for PERSHING II. The Congress appropriated the $12 million requested for the development of the guidance system but reduced the $11 million requested for the new RV to $2 million because of its concerns about the need for the PERSHING II in Europe, its cost-effectiveness, and the sharing of its development cost with our NATO Allies.

While it is true that we are reexamining our tactical nuclear weapon deployments in Europe, we have no plans to eliminate either the PERSHING or the LANCE missile systems. The Warsaw Pact forces have a wide variety of Soviet nuclear capable missile systems for use against targets in Western Europe, including not only MRBMs and IRBMs but also ICBMs with minimum trajectories of about 500 nm.

A PERSHING missile employing the new terminally-guided RV and the new radar area correlation guidance system (the development of which is nearing completion) would greatly increase the accuracy of

PERSHING, thus permitting the use of small yield warheads and, hence, reducing unintended collateral damage. The only alternative to the 400 nm range PERSHING in the European theater is the Quick Reaction Alert (QRA) aircraft, i.e., tactical aircraft loaded with nuclear weapons and held on ground alert. The cost of operating and maintaining one F-4 on QRA is about equal to the cost of operating and maintaining one PERSHING launcher, but the aircraft on the ground is more vulnerable to surprise nuclear attack than PERSHING, which can move about from one launch site to another. The QRA aircraft, of course, have their own advantages of range and mobility.

With regard to cost-sharing, the Federal Republic of Germany will be thoroughly briefed on the PERSHING II project and we believe that it will participate with us in the development and deployment of the system. That Government, it should be noted, has bought every PERSHING improvement offered.

The funds requested in the FY 1976 and Transition Budgets for PERSHING II would permit design and development work on ground test hardware, and the new RV (funding of the new guidance system was essentially completed in FY 1975), and fabrication and testing of one engineering model RV. The authorization requested for FY 1977 would provide for procurement of the prototype hardware for six advanced development flight tests of the PERSHING II missile scheduled for FY 1978.

LANCE

The $5 million requested for LANCE in the FY 1976 and Transition Budgets would provide for the procurement of 63 practice warheads, and the first increment of a four year modification program. The $2 million requested for authorization in FY 1977 would provide for the second year increment of the LANCE modification program. This modification program would equip all LANCE missiles with a new safety and arming device and a protective cover for the warhead section.

The Army's LANCE program provides for one training battalion in CONUS and seven battalions to be deployed overseas. Of the six battalions to be deployed in Europe, all have received their equipment and five are now operational. The need for the seventh operational battalion to be deployed overseas is still under review.

8" Self-Propelled Howitzer

Beginning in FY 1976, we propose to replace with a new, improved tube all of the existing tubes on our self-propelled 8" howitzers and 175mm guns, both of which are mounted on the same chassis. The current 8" howitzer tube has a maximum range of about 17 km; the 175mm gun has a maximum range of 32 km but it is somewhat inaccurate at that range. The new 8" tube, when firing the new rocket-assisted projectile now completing development, would have the same accuracy as the current 8" howitzer tube does at 17 km but with considerably increased range. Moreover, the new tube will have a longer life, and also will be able to fire the current 8" conventional round as well as the 8" nuclear round.

With these improvements, U.S. heavy artillery would be a better match for current Soviet heavy artillery; particularly in counter-battery operations. Furthermore, the replacement of the 175mm gun tubes with the new 8" howitzer tubes will greatly simplify the ammunition logistics problem.

The $28 million requested for this program in the FY 1976 and Transition Budgets included $26 million for the Army and $2 million for the Marine Corps. The Army amount includes $.2 million to complete RDT&E, and $26 million to begin the modification of existing self-propelled 8" howitzers and 175mm guns. The $2 million for the Marine Corps will complete the modification program for that Service. The $12 million requested for authorization in FY 1977 would complete the Army's modification program.

105mm and 155mm Towed Howitzers

As an integral part of the program to improve the effectiveness of our artillery, we also propose to replace all of the existing towed 105mm and 155mm howitzers in the Army (both active and reserve) with the new, towed, extended range 105mm (XM204) and 155mm (XM198) howitzers that are just completing development. The new 105mm howitzer firing the current round will have a greater range compared with 11 km for the existing 105mm howitzer. The new 155mm howitzer firing the new 155mm rocket-assisted projectile will have a much greater range compared with 15 km for the existing towed 155mm howitzer firing the current round. Moreover, the new 155mm howitzer also will be able to fire the current 155mm conventional round as well as the 155mm nuclear round.

The $19 million requested in the FY 1976 Budget would permit the Army to complete development of the new howitzers and procure the first 19 105mm and the first 19 155mm howitzers for final operational test and evaluation. The $21 million requested for authorization in FY 1977 would permit the Army to procure an additional 42 105mm howitzers and, providing that a decision on full-scale production is made in FY 1976, 44 more 155mm howitzers. The Army's inventory objective is scheduled to be completed with the FY 1983 buy. Marine Corps procurement of the XM198 and XM204 is programmed for FY 1978-80.

Cannon-Launched Guided Projectile (CLGP)

Field artillery has been designed primarily for area fire, but as the trend toward armored warfare continues the need for hard point target (i.e. antiarmor) weapons increases. This need is now being met primarily by the antitank weapons programs, but obviously it would be extremely helpful if our extensive field artillery forces could also be used against hard point targets. But to do so, a dramatic increase in the accuracy of artillery must be achieved, and that is the objective of the Cannon-Launched Guided Projectile (CLGP) program.

The CLGP is a projectile equipped with a semi-active laser guidance system. It is fired from an artillery tube, using conventional fire direction techniques. As the projectile arrives over the target area, either a ground or an air observer equipped with a laser designator illuminates the target with a thin laser beam. The CLGP, with its semi-active laser guidance system, homes in on the laser energy reflected from the target, thus giving it a very high kill capability even against moving hard targets such as armored vehicles.

Three such projectiles are now under development -- a 155mm round for the 155mm howitzer, by the Army; a 5" round for the 5" naval gun, by the Navy; and an 8" round for both the new lightweight 8" naval gun and the 8" howitzer, jointly by the Army and the Navy. Consistent with the House and Senate Armed Services Committees' Conference Report on the FY 1975 Authorization Bill an extensive program of tests and evaluation of the saboted Navy 5" round fired from a 155mm howitzer has been planned. Due to difficulties encountered by the Navy, this program has not been completed, but the DSARC will review the available results early in 1975 as planned and the results of this review will be communicated to the Congress.

Meanwhile, we have included $25 million in the FY 1976 and Transition Budgets to continue the Army's successful development efforts. The $32 million requested for authorization in FY 1977 would provide for about 85% of the development cost of the round that is selected to enter full-scale engineering development.

e. Combat Support (Air Mobility Helicopters)

The U.S. still leads the rest of the world in the use of helicopters to enhance the mobility of the land forces. Our large inventory of tactical transport helicopters, however, was acquired during the Vietnam war buildup, and these aircraft are now aging.

Utility Tactical Transport Aircraft System (UTTAS)

The UTTAS program is progressing satisfactorily and on schedule. However, higher costs than expected have been encountered due to inflation. Nonetheless, the total is within the original UTTAS RDT&E funding profile. The two airframe contractors have begun engineering flight testing, which will continue through January 1976. The $111 million requested for this program in the FY 1976 and Transition Budgets ($92 million and $19 million, respectively) would support continued contractor air-worthiness qualification testing, Army testing of the two competing aircraft, and the initiation of source selection. The $211 million requested for authorization in FY 1977 ($75 million for RDT&E and $136 million for procurement) would provide for the completion of development testing (including a competitive flyoff in November 1976) and the procurement of the first 15 UTTAS at low initial production rates. Full-scale production is not scheduled to begin until FY 1979, thus providing ample time for thorough troop testing of the production model of the UTTAS before a major procurement commitment is made.

The UTTAS is designed to replace the UH-1 (HUEY) in assault helicopter, air cavalry and aeromedical evacuation units. With a crew of three, it can airlift a complete, fully-equipped Army infantry squad of 11 troops into combat, resupply these troops while in combat, perform associated aeromedical evacuation, reposition reserves and perform other combat support missions. Because of its increased payload, reduced specific fuel consumption, decreased maintenance requirements, improved reliability and enhanced survivability, the UTTAS promises to be a very cost-effective replacement for the UH-1.

We believe the UTTAS would also be highly effective in fulfilling other helicopter requirements. Accordingly, we are considering this aircraft as a replacement for the Marine Corps CH-46 troop lift helicopter and as a candidate for the Navy's requirement for a LAMPS MK III ASW helicopter, although certain doctrinal and design considerations must be resolved before UTTAS can become fully effective for other than Army requirements.

C. NAVAL FORCES

Last year I pointed out that because of the prevailing fiscal constraints and the block aging of many World War II-constructed ships, the Department of Defense, in planning the modernization of our naval forces, has had to adopt two fundamentally harsh policies. The first was the sharp reduction of force levels over the near term to help provide the funds needed for modernization over the long term. The second was the vigorous application of the so-called "high-low mix" approach to the acquisition of new ships and other Navy weapon systems. The implementation of these policies has been complicated by three additional factors -- the unprecedented inflation in shipbuilding costs, the apparent reluctance of some U.S. shipbuilders to accept Navy work, and the Congressional mandate on nuclear-powered surface ships.

As noted earlier, the impact of inflation on the Navy shipbuilding program has been exceedingly severe; shipbuilding costs in recent months have been rising at a rate of more than 20% per year and we expect an increase of about 11.5% for FY 1975. Since major ships typically require four to five years to construct, the shipbuilder, even in a relatively stable economic environment, is particularly vulnerable to cost increases. Consequently, all major "fixed price" type shipbuilding contracts normally contain a labor and material escalation clause under which the Government is obligated to reimburse the contractor for increases in those costs during the life of the contract. In addition, some shipbuilding contracts contain clauses which provide for the resetting of target prices on the basis of actual cost experience, but normally not to exceed the ceiling price.

Because the Defense Department must budget for the cost of a new ship at least four or five years before its completion, the budget estimate must include some provision for the escalation of labor and material costs during that period. Last year, for example, we included in our budget request for new ship construction a factor of about 4 1/4% per year for such cost escalation; the estimates for earlier shipbuilding programs were even lower. Inasmuch as labor and material costs actually have been rising at a far more rapid rate, it is not surprising that the Navy shipbuilding program is now in a severe deficit position. Complicating the problem further, but to a lesser extent, are the changes that had to be made in some of these programs. We now estimate that somewhat more than $2 billion of new funds will be required to cover the aggregate costs of completing the ships authorized by the Congress in FY 1975 and prior year programs. The additional funds are included in our FY 1976 Budget request.

The same cost increases and the estimates of further increases expected over the next few years, have been reflected in our budget request for the FY 1976 shipbuilding program and in our authorization request for the FY 1977 shipbuilding program. We have included in these estimates the following allowances for aggregated labor and material cost escalation — 11.5% in FY 1976, 11% in FY 1977, and 7.5% in FY 1978 and thereafter. Navy witnesses will be prepared to discuss these estimates in greater detail, but it should be recognized that these projections are intrinsically uncertain and that further adjustments may be required in future years.

Simultaneously with the growth of the inflation problem, the U.S. shipbuilding industry has been showing diminishing interest in building Navy ships. In the 1950s and '60s, when commercial demand for new ships was much smaller, shipbuilders generally were eager to bid on Navy contracts. Now, with both Maritime Administration-supported and other private demands for shipbuilding capacity on the rise, the competitive picture is much less favorable from the Defense Department point of view. Although major Navy contractors should be able to meet most of the Navy's needs, many shipyards already are having difficulty recruiting and maintaining a work force adequate for near-term work. Consequently, the problem of capacity cannot be solved merely by the expansion of facilities. Finally, as a number of industry witnesses informed the Congress last year, the contract administration requirements of the Defense Department are significantly more burdensome than those of private customers, or even the Maritime Administration (MARAD). The net result of these factors is a distinct reluctance on the part of U.S. shipbuilders to seek Navy work.

There are at least two steps which the Executive Branch can take unilaterally to alleviate these problems. One, which we are now working on, is to achieve a better integration of MARAD and DOD ship acquisition programs under the aegis of the Office of Management and Budget. Another is to carefully examine our contracting methods and monitoring procedures to see if we can reduce those administrative requirements which impose additional costs and management burdens on the shipbuilding industry but provide little or no real benefit to the Government. With regard to the latter, the interested Congressional committees can help by supporting our efforts to ease those burdens.

Another step, which requires Congressional action, is to provide a stronger measure of assurance to shipbuilders that the Navy's long-term procurement programs will be carried forward to completion in an orderly way. This would involve some form of multi-year authorization for selected Navy ship acquisition programs. These longer-term commitments would encourage shipbuilders to set aside capacity for Navy programs with some assurance that such capacity would be gainfully employed for a definite number of years. Clearly, such an authorization should be enacted only after the Congress has had a full opportunity to examine the requirements, hardware configuration, cost goals, and production plans. The Defense Department, on its part, would do everything in its power to provide that information in a timely and useful manner.

Last year the Congress reaffirmed its interest in nuclear propulsion by enacting Title VIII of the Department of Defense Appropriation Authorization Act, 1975. This new Title requires the Navy to procure only nuclear-powered ships for its strike forces (defined as submarines, carriers, and the surface combatants which accompany carriers) unless the President advises the Congress that construction of nuclear-powered ships for that purpose is not in the national interest.

Before I describe our efforts to comply with the provisions of Title VIII, I would like to make two general points with regard to nuclear propulsion for major combatants. First, there is no doubt that a nuclear-powered ship is superior to a conventional-powered ship with equivalent sensors and weapons. No one has ever seriously contended otherwise; the issue that has been raised is whether the added military benefits are worth the extra cost involved.

Second, our most recent analysis of the relevant data has convincingly demonstrated that nuclear-powered ships are more expensive -- both to acquire and to operate over their service lives -- than their conventional counterparts, even at current and expected fuel oil prices. Thus, the notion that higher nuclear ship acquisition costs can be eventually amortized by lower operational costs is simply not borne out by the facts. In the case of submarines, nuclear propulsion is clearly worth the extra cost; it gives us a capability which cannot be duplicated by a conventional-powered submarine, regardless of its cost. In the case of surface ships, however, the cost-benefit relationship is by no means as clear.

To provide a basis for evaluating our surface warship program in light of Title VIII, the Defense Department is examining a wide range of cost and capability trade-offs. The fundamental objective of this effort is to compare an all-nuclear major warship acquisition program with our previously planned mixed-propulsion program. We adopted this approach because the total military capability provided by the mixed-propulsion force was considered minimally adequate to carry out our strategy and preserve the maritime balance.

With respect to surface combatants which operate with carriers, our trade-off analyses indicate that an all-nuclear program of approximately equal aggregate capability and cost of the previously planned mixed-propulsion force would result in a small force level decrease. However, in view of the major reduction in surface combatants already made, we are still not sure that we can afford to trade-off additional numbers for further increases in the capabilities of individual ships. Our evaluations in this area are continuing, and we will inform the Congress of the resulting changes in our shipbuilding program when the review is completed.

In accordance with Section 803 of Title VIII, the current DoD five-year plan for construction of nuclear-powered vessels, including strategic submarines, is shown in the table below. Because surface combatant construction programs beyond FY 1976 are still uncertain, no such ships are shown on the table.

FYDP Nuclear-Powered Ship
Construction Program

	FY 76	FY 77	FY 78	FY 79	FY 80
Carriers	-	-	1	-	1
SSBNs	1	2	1	2	1
SSNs	2	3	2	3	2
Surface Combatants	1	-	-	-	-

Title VIII also requires that contract placement dates for nuclear warships be identified. Months in which contracts have been, or are expected to be, signed for FY 1974 and FY 1975 nuclear ships are shown in the table below. For the FY 1976-80 period, we plan to contract for nuclear ship construction during the fiscal year in which construction funds are budgeted.

FY 1974 PROGRAM

CVN-70	March 1974
TRIDENT I	July 1974
SSN-706	January 1974
SSN-707	January 1974
SSN-709	January 1974
SSN-708	October 1973
SSN-710	October 1973

FY 1975 PROGRAM

DLGN-41	January 1975
TRIDENT II	February 1975
TRIDENT III	February 1975
SSN-711	April-June 1975
SSN-712	April-June 1975
SSN-713	April-June 1975

For carriers, an equal-capability trade at the expense of force levels is not considered acceptable. We regard a force of 12 fully-equipped active carriers as the minimum needed to support our strategy and peacetime commitments. Indeed, we now propose to retain in the force a 13th carrier without a dedicated air wing to provide greater flexibility for contingency deployments. Moreover, we believe it would be unwise to slow the pace of carrier procurement, because it would exacerbate the block obsolescence problem that will confront us when the FORRESTAL-class carriers begin to reach retirement age in the mid-1980s. Consequently, in the case of the carrier, the increased costs resulting from compliance with Title VIII will have to be added to the Navy shipbuilding program.

To improve further the utilization of available resources, we are increasing our emphasis on the use of Naval Reservists in important, combat-oriented missions. To this end, we plan additional reserve manning of selected surface ships and the expansion and accelerated modernization of the reserve air ASW forces.

I would now like to turn to the specific naval forces programs we are proposing for funding in FY 1976 and the transition period and for authorization in FY 1977. These are shown in the table beginning on the next page.

1. Aircraft Carriers

Last year, pending the completion of homeporting arrangements for a carrier in the Mediterranean, we had planned to hold the carrier force at 15 through FY 1975, reducing to 13 in FY 1976 and to 12 in FY 1977. Although the prospects for homeporting a carrier in the Mediterranean are now quite unpromising, some reduction in the size of the carrier force is unavoidable largely due to the intense fiscal and manpower pressures on the Defense program. Moreover, the two HANCOCK-class carriers still in the force are more than 30 years old and should be retired in FY 1976 as planned. In view of the current uncertainties in the world situation, however, we believe it would be desirable to retain a 13th carrier to enhance our flexibility.

We had planned last year to retire the ROOSEVELT in FY 1976, when the second of the three nuclear-powered NIMITZ-class carriers (the EISENHOWER) joined the fleet, and retire the CORAL SEA in FY 1977. Delivery of the EISENHOWER, however, will be delayed until FY 1977. Consequently, to provide a force of 13 carriers through FY 1976, the retirement of the ROOSEVELT has been deferred until at least FY 1977.

To provide a 13th carrier at least through FY 1980, we intend to review the material condition and operating costs of the MIDWAY-class carriers, CORAL SEA and ROOSEVELT, prior to deciding which ship to keep in service. This 13th carrier would be maintained in a special category -- it would not be equipped to handle our more sophisticated aircraft, it would not have a dedicated air wing or support ships, and it would not be deployed overseas on a routine basis. Instead, the ship would be available to improve the readiness of our reserve aircraft squadrons and to deploy in an emergency with either USMC or reserve squadrons embarked.

Acquisition Costs of Major Naval Forces Modernization and Improvement Programs 1/

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Aircraft Carriers					
Procurement of NIMITZ-Class Aircraft Carriers	705	24	268	1	10
Acquisition of the CVNX Aircraft Carriers	-	-	-	-	350
Design and Development of the Light V/STOL Support Ship	29	-	-	-	60
ASW Aircraft					
Development and Procurement of S-3A Carrier-Based ASW Aircraft	545	560	516	-	-
Modification of SH-3 Helicopter	17	21	54	10	58
Development of the HSX	-	2	1	-	21
Continued Procurement of the P-3C Land-Based ASW Aircraft	152	151	177	62	183
Surface Combatants and Weapons					
Procurement of CGN (formerly DLGN) Nuclear-Powered Ships	82	255	397	1	18
Continued Development of AEGIS Ship Air Defense System (to include Combat Systems Engineering Development Site)	39	63	111	16	95

Acquisition Costs of Major Naval Forces Modernization

and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

Surface Combatants and Weapons (Cont'd)	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Procurement of DD-963 Destroyers	612	465	781	-	17
Acquisition of Guided Missile Frigate, FFG-7 (formerly Patrol Frigate)	6	186	1,095	-	1,239
Development of Advanced Naval Vehicles (formerly Surface Effect Ship-SES) Technology and Alternatives	61	46	38	17	70
Modification and Acquisition of the Light Airborne Multi-Purpose System (LAMPS)	23	18	35	4	107
Acquisition of Active STANDARD Antiship Missile	7	8	1	-	1
Acquisition of the HARPOON Antiship Missile	92	151	162	45	183
Acquisition of Patrol Hydrofoil Missile Ship	25	108	220	25	394
Attack Submarines					
Procurement of SSN-688 Class Nuclear Attack Submarines	916	545	819	192	815
Acquisition of the MK-48 Torpedo	180	151	125	7	109
Acquisition of the AN/BQQ-5 Sonar System	61	73	89	43	2.

Acquisition Costs of Major Naval Forces Modernization and Improvement Programs [1] (Cont'd)

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding [2]	FY 1977 Prop'd for Authorization
Undersea Surveillance Systems					
Development and Deployment of SOSUS and Improved SOSUS and Development of SURTASS	119	127	126	24	55
Amphibious Lift					
Acquisition of Amphibious Assault Ships (LHA)	174	8	115	-	11
Mines and Mine Countermeasures Forces					
Acquisition of the CAPTOR ASW Mine	22	21	33	10	65
Modification of RH-53D Mine Countermeasure Helicopters	-	-	9	-	-
Mobile Logistic Support Force Ships					
Procurement of Underway Replenishment and Support Ships	4	218	735	1	491

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.
2/ July 1 to September 30, 1976.

We still expect the first of the NIMITZ-class carriers (i.e., the NIMITZ) to be delivered to the fleet in FY 1975, and the last of the three (the VINSON) in FY 1981, at which point the CORAL SEA or ROOSEVELT and MIDWAY probably could be retired. We would then have a 12-ship carrier force composed entirely of large post-World War II carriers, including four which are nuclear-powered.

I noted last year that while no further changes in the estimated costs of the three NIMITZ-class carriers had been reported to my office, delays in the delivery of the NIMITZ and the EISENHOWER could increase their costs. Now, as in all ship programs, we have the additional problem of financing the extraordinarily rapid increase in labor and material costs on all three NIMITZ-class carriers. To cover both categories of cost increases and minor support costs, we are requesting an additional $268 million in the FY 1976 Budget for these three ships.

The program to convert attack aircraft carriers (CVA) to the multi-purpose, or CV, configuration is being continued. The CV operates fighter, attack and ASW aircraft and combines the role of the CVA and the ASW carrier (CVS). Four FORRESTAL-class carriers are now being operated as CVs, and two more will be converted to that configuration in FY 1975. The NIMITZ will be converted to the CVN configuration in FY 1977, and EISENHOWER will be delivered as a CVN. The last of the FORRESTAL-class ships will be converted in FY 1977. After that we expect to operate 11 CV/CVNs and two MIDWAY-class CVAs until the VINSON is delivered and the two MIDWAY-class carriers are retired.

The reduction in the carrier force level, coupled with the uncertain prospects for homeporting a carrier in the Mediterranean, will require some changes in our forward deployment plans. The United States, since the Korean War, has kept five or more carriers continuously deployed in forward areas -- two in the Mediterranean, and at least three in the Western Pacific. Normally, with all carriers homeported in the U.S., a total of 15 ships would be required to support five deployed forward in peacetime. With a total of only 12 routinely deployable carriers, including one homeported overseas in Japan, only four can be continuously deployed forward on a normal peacetime basis. Accordingly, we plan to reduce our routine carrier deployment in the Western Pacific from three to two in FY 1976, and to continue for the present the deployment of two carriers in the Mediterranean.

We are examining the feasibility of reducing the routine operating tempo of the remaining carriers. This could ease personnel hardships, improve material readiness and, most important, improve the "surge" capability for crisis response. We are also planning to deploy occasionally one of our new general purpose helicopter

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assault ships (LHAs) to forward areas in lieu of a carrier. These ships are equivalent in size to the old World War II ESSEX-class carriers and, with their V/STOL aircraft, helicopters, and Marine Corps troops aboard, they could perform a wide range of crisis response functions.

In order to maintain the carrier force level beyond the mid-1980s, we will have to begin the replacement of the FORRESTAL-class carriers, the first of which were delivered to the fleet in 1955. Accordingly, we plan to start the first of these replacement carriers in FY 1978 and then procure additional carriers at the rate of one every two years. Even at this rate, the FORRESTAL carriers will each complete more than 30 years of service as they are replaced by new carriers.

These new carriers, in conformance with Title VIII, would be nuclear-powered. We estimate that they will cost much more per ship than the new class of conventional-powered carriers we had in mind last year. Notwithstanding their somewhat greater capabilities, we would still need to replace the FORRESTAL-class carriers on a one-for-one basis. A total of $350 million is included in the FY 1977 authorization request for the procurement of long lead time items for the carrier to be started in FY 1978. Assuming a six-year construction time, this carrier would be delivered in FY 1985, four years after the VINSON.

Multi-purpose carriers are required for the employment of high performance fighter and attack aircraft in areas where the enemy air threat is expected to be very strong. In other areas, notably in the major sea lanes, a smaller, less expensive ship employing a small complement of V/STOL fighter/attack aircraft and ASW helicopters could perform the sea control functions. This was the purpose the proposed 14,000 ton Sea Control Ship was intended to serve. Inasmuch as the Congress rejected that proposal in favor of a larger, more capable ship, we are now considering a new, small aircraft support ship with a better offensive, as well as defensive, potential. Such a ship would provide greater flexibility for employment in a wider range of situations. Offensive options being examined include the operation of V/STOL strike aircraft and assault helicopters for an embarked Marine Corps unit. Our plans in this area are not firm, however.

2. ASW Aircraft

The Navy's ASW aircraft force includes fixed- and rotary-wing aircraft which operate from carriers and long-range maritime patrol aircraft which operate from land bases. Our most modern patrol aircraft (DIFAR-equipped P-3s) have repeatedly demonstrated that they are one of our most effective ASW systems. Their range would allow them to cover most ocean areas of interest in a global conflict with the USSR.

In consonance with the CV/CVN concept, the Navy plans to operate its multi-purpose carriers with a mix of ASW and tactical aircraft. This aircraft mix can be varied within limits, depending upon the specific mission of the carrier, i.e., primarily force projection or primarily sea lane defense. In peacetime, a multi-purpose carrier would normally operate with a "balanced" load of aircraft, including one squadron each of fixed- and rotary-wing ASW aircraft.

S-3A

As indicated last year, we plan to buy one squadron (10 aircraft) of the new S-3A for each of 12 multi-purpose carriers expected to be in the fleet in the early 1980s. During the early stages of a major conflict, the carriers directly engaged in the protection of the sea lanes could be provided with two squadrons of S-3s (20 aircraft) each by drawing down the S-3 complements of other carriers -- e.g., those undergoing overhaul, those which are least likely to encounter large submarine threats, and those for which ASW protection could be provided through other means.

Procurement of 138 production aircraft has already been funded. A total of $516 million is included in the FY 1976 Budget to buy the last 41 of these aircraft.

The weapons systems portion of the Board of Inspection Survey (BIS) trials, in which the S-3 avionics were tested and evaluated, was successfully completed in March, 1974. The Navy expects to have its second fleet squadron changed over to the S-3 in the near future, and the first carrier deployment with S-3s is scheduled for July, 1975. Six S-3 squadrons are expected to be operational in FY 1976, and the full 12 squadrons in FY 1978. Since the aircraft carriers converted to the CV configuration will not be equipped to operate the S-2s, the six reserve S-2 squadrons will be phased out in FY 1976.

SH-3

The active fleet ASW helicopter force currently consists of ten squadrons (8 UE aircraft per squadron) of SH-3s which are allocated for CV use. In addition, there are four squadrons of SH-3s (8 UE aircraft per squadron) in the Naval Reserve. A program is underway to modernize the active force SH-3 A/D/G helicopters to the new SH-3H configuration, and we now propose to include the Naval Reserve SH-3s in that program, starting in FY 1977. This would provide us with a total of 12 squadrons of SH-3Hs, enough to meet the needs of the carrier force and other helicopter-capable ships in a major conflict. Consequently, we no longer plan to resume production of the SH-3H.

The modernization program includes sensor improvements in the radar, MAD, ESM, and sonobuoy systems which will provide an increased ASW and surveillance capability. Modification of four active SH-3 A/D/G squadrons to the H model has already been funded. Another $64 million is included in the FY 1976 and Transition Budgets for the modification of an additional 32 SH-3s. Included in the FY 1977 authorization request is $58 million for the modification of 22 more SH-3s, including the first 12 reserve force helicopters.

HXM

Further study of an eventual replacement for the SH-3H has convinced us that this requirement might be incorporated in the development of LAMPS MK III, since the range/payload characteristics of the LAMPS MK III air frame candidates are compatible with the mission intended for the HXM. The funds provided for the HSX in FY 1975 are being applied to study efforts related to LAMPS MK III, the HXM (Marine Corps replacement of the CH-46) and the testing of the "Arapaho" concept involving positioning ASW helicopters on non-combat ships, as directed by the Congress.

P-3

The Navy currently has 36 squadrons of land-based, long-range ASW aircraft -- 24 active and 12 reserve. Since large-scale ASW operations would be required only in a conflict that directly involved Soviet forces, it is an appropriate mission to assign in part to the Naval Reserve forces. These Reserve forces undoubtedly would be fully mobilized in such a conflict and, if properly equipped and trained, they could perform the wartime ASW mission nearly as well as active forces -- and at a somewhat lower peacetime operating cost.

The active P-3 force is now composed of A, B and C models, but the older P-3As are being replaced, at about one squadron per year, by the new P-3Cs. All the P-3B aircraft and most of the P-3A aircraft have been retrofitted with the new DIFAR directional sonobuoy system, but the P-3C has a more capable, computer-integrated avionics and acoustic processing system which provides a significant increase in overall ASW effectiveness.

The $239 million included in the FY 1976 and Transition Budgets would provide for the procurement of another 15 P-3Cs. The $183 million included in the FY 1977 authorization would provide for 12 more P-3Cs.

The P-3A and B aircraft released from the active forces would be used to modernize the reserve forces, and by the end of FY 1980, all of the old P-2 ASW aircraft would be replaced with P-3s.

3. Major Surface Combatants

In addition to aircraft carriers, the Navy's surface warship force includes cruisers, destroyers, frigates, and patrol combatants. Beginning in FY 1976, the designations of these ships will undergo a major change to bring them more in line with the designations used in other navies. Under the new system, most of our frigates will be redesignated as cruisers; a few smaller frigates will become guided missile destroyers (joining the DDG classes); non-missile destroyers will become "gun" destroyers; and all ocean escorts and the new PFs will become either guided missile frigates or simply frigates, depending on their armament. Patrol vessels will be known as patrol combatants.

Heretofore, we have considered major surface combatants, other than aircraft carriers, as primarily defensive, i.e., forces required for the protection of other maritime forces. Actually, all of these ships have some offensive capabilities against other ships and land targets. But now that most of these ships are scheduled to be equipped with the HARPOON antiship missile, their offensive capabilities against other ships will be far more pronounced. Hence, it will be no longer appropriate to think of these ships as primarily defensive.

Nevertheless, the defensive requirements still govern in large part the overall size and basic configuration of our ocean-going surface combatant force. Fundamental to our sea control strategy is the concept of defense in depth. Consistent with this concept, aircraft and submarines in time of war would establish barriers around enemy bases and exact open-ocean attrition on deployed enemy units, while surface combatant screens would provide the primary ASW point defenses in the vicinity of high-value units. Our analyses show that surface combatants are very effective in the point defense role, particularly in defending against aircraft and missiles, and in countering torpedo attacks by those Soviet submarines, which survive the ASW barriers and open-ocean sweep operations.

Our quantitative requirements for surface combatants in defensive screens are determined by four factors: (1) the number of high-value units which need to be protected; (2) the amounts of defense needed by each protected force in basic planning scenarios; (3) expected contributions from allies; and (4) provision of an allowance to cover non-availability of ships in overhaul/repair status.

The high-value forces for which we program protection in the outyears include 12 carriers, 10 underway replenishment groups, lift shipping for 1 1/3 Marine division/wing teams, and five military resupply ship convoys. As I indicated last year, we expect our allies to allocate surface combatants to help defend the convoys, but these allied ships cannot be counted upon to arrive very early in a conflict. Consequently, we plan to use U.S. ships to protect the convoys sailing early in a war. We, therefore, would have some ships on hand to replace surface combatant losses elsewhere, which could be quite high, as allied ships arrive to take over convoy duties.

To protect programmed high-value units in an all-out war with the Warsaw Pact, Navy estimates indicate that a large number of surface combatants would be needed for the numerically more demanding ASW mission. (The open-ocean Soviet naval threat, it should be noted, consists largely of cruise missile- and torpedo-firing submarines.)

In the 1960s, the policy was to provide an AAW capability on about a third of the active ocean-going surface combatants. In view of the great increase in the aircraft and antiship missile threat in recent years, however, it is now considered prudent to include at least an austere AAW capability on all our new open-ocean combatants. Our proposed modernization programs reflect this policy.

At the end of the current fiscal year, we will have a total of only 211 surface combatants (164 active, one in conversion, 34 reserve, plus 12 Coast Guard cutters which are configured for ASW and would come under Navy control in wartime). Thus, we are considerably short of our overall force level objective, but it should be recognized that this deficit results from a conscious decision to accept higher near-term risks in order to speed needed modernization in this segment of the naval force structure.

In addition, as I noted earlier, we propose to improve the offensive power of the surface combatant force. These improvement programs do not alter the numbers of ships required; instead they change, at relatively modest cost, the configuration of ships we would procure in any event for defensive missions. The principal improvement is in the area of antiship missiles. Almost all existing and programmed surface combatants will receive the new HARPOON missile, which will provide a greatly improved capability over the current improvised antiship missile -- the STANDARD AAW missile employed in the surface-to-surface mode.

Before I discuss our proposed ship and weapon system acquisition programs, there is one other general matter which warrants some comment. As in the case of the other forces, we are intensifying our efforts to make better use of Navy Reserve personnel in our surface combatant force. One such action is the transfer of eight patrol combatants to the Naval Reserve in FY 1976, leaving only seven in the active force.

Another, more important, initiative is our plan to man some of our active surface combatants at 80% of active manning, relying on Selected Reserve personnel to fill the remaining billets upon mobilization. These 80/20 ships, in terms of combat readiness, would fall somewhere between the fully manned active ships and the Naval Reserve ships which typically are manned at 60% active and 40% reserve. Hence, the 80/20 ships would be expected to be available somewhat earlier than the Naval Reserve ships in a major contingency involving mobilization. Moreover, by filling in the remaining billets with active shore establishment personnel designated in advance, they could be used to augment fully manned active ships during a prolonged contingency for which reserves are not called up.

Admittedly, there are some potential problems involved in the 80/20 concept, most of which center around the interrelated factors of maintenance and operational tempo. The concept is predicated on the assumption that the understrength active crew, augmented by reserves during drill periods, would be able to maintain their ship in adequate material condition and conduct required training for basic combat missions. Thus, the 80/20 ships could not be considered "deployable" to meet peacetime commitments.

We plan to test the 80/20 concept on five destroyers in FY 1976 and FY 1977. If the concept proves successful we are prepared to expand the program in subsequent years. We must, however, retain a sufficient number of fully manned active ships to handle non-mobilization contingencies, to meet early combat requirements in a major war, and to support our peacetime forward deployments.

As indicated earlier, we have adopted a new set of designations for our major surface combatants. These new designations, with the old designations in parentheses, are used in the following discussion of our proposed surface ships and weapons acquisition programs.

CGN-38 (DLGN-38)

We now have in the fleet or under construction a total of eight nuclear-powered surface combatant ships -- CGNs 9, 25, and 35 through 40. Funds for CGN-41 are provided in the FY 1975 Budget, and we awarded the contract for that ship last month. The $397 million requested in the FY 1976 Budget includes $140 million in additional funds for CGNs 38-41 to cover unanticipated cost growth/escalation and routine minor support costs, and $257 million to complete the funding of CGN-42 for which $111 million was provided in prior years. When CGNs 41 and 42 are delivered in 1979-80, there will be a sufficient number of nuclear-powered surface combatants to provide an austere level of ASW and AAW protection for two of the four nuclear-powered carriers which will then be in the fleet. Thus, we will have two rapid-reaction, all-nuclear-powered carrier task groups.

AEGIS

The AEGIS system is being developed to provide an improved area air defense capability to counter the aircraft and antiship missile threat of the 1980s and 1990s. Current systems, including their projected improvements, are inherently limited in defending against high intensity, coordinated attacks. AEGIS would provide significant enhancement in defensive capabilities on present and future ships primarily through reduced reaction time, increased firepower and jamming resistance. AEGIS (single quadrant) is now installed in the USS NORTON SOUND and tests have met or exceeded expectations, including successful intercepts using the SM-1 missile.

This year we are modifying the AEGIS development program to incorporate some lessons learned, to improve program efficiency, and to aim for early introduction in the fleet. The $127 million requested in the FY 1976 and Transition Budgets includes $76 million to continue development leading to the next at sea test phase of AEGIS with the SM-2 missile, and $51 million to build a Combat System Engineering Development Site (CSEDS). The primary functions of the CSEDS will be to integrate and test the total AEGIS weapon system prior to the delivery of the lead AEGIS system, to serve as a training facility for precommissioning crews of AEGIS follow-on ships, and to proof future AEGIS system cost/weight improvements. The $95 requested for authorization in FY 1977 would provide $26 million for development and $69 million for CSEDS. To support early fleet introduction, we are well along in our planning to install the AEGIS system on existing and new construction ships.

DD-963

The last seven units of the 30-ship DD-963 program were funded in FY 1975. This program, like most of the other shipbuilding programs, has encountered severe inflation problems as well as construction delays. The $781 million in the FY 1976 Budget includes $772 million to cover unanticipated inflation and cost growth in the DD-963 program. Our current best estimate is that the final ships in this program will be about one year late in delivery. The Navy is doing its best to ensure the earliest possible delivery of ships completed to contract specifications. Any reductions in program quantity would require payment of cancellation charges and have an adverse impact on our capability to provide adequate ASW protection for our carrier forces in the early 1980s, when the last of our World War II destroyers will have changed over to the Naval Reserve.

FFG-7 Guided Missile Frigate (Patrol Frigate)

The CGN and DD-963 classes are designed primarily to defend our carriers, which could be called upon to operate in areas of severe enemy air threat, and to conduct sustained independent operations. These missions require large, sophisticated and, hence, relatively expensive, ships. There are other missions which require greater numbers of somewhat slower, more austere AAW ships -- for example, to protect high-value units which proceed at relatively slow speed and are generally expected to operate in areas of less technologically advanced and intense air threats. The FFG-7 Guided Missile Frigate (formerly the Patrol Frigate) is designed to meet this less demanding requirement in keeping with the concept of a high/low mix.

FFG-7 frigates will have sensors and weapons which are fully adequate for their projected AAW and ASW point defense missions. Moreover, the lower cost of this ship will permit us to acquire it in sufficient numbers to build our surface combatant force up to the required level of about 240 ships. Without the FFG-7 program, we would have less than 200 surface combatants by the end of FY 1983, rather than the presently programmed 237.

Our current estimates indicate that the FFG-7 will have a total program unit cost of about $122 million per ship in a large-quantity buy. A unit cost of $70 million was presented last year for the PF. The increase over last year primarily reflects the much higher allowance for labor and material cost escalation, the addition of a fourth generator, and the addition of the PHALANX close in weapons systems (CIWS). The basic FFG configuration has not changed, since it was always planned to add CIWS once an appropriate one was developed.

Last year the Congress cut the PF buy for FY 1975 from 7 to 3 ships, primarily because of its concern that insufficient time was allowed in the construction schedule for testing. In response to this Congressional action, we have stretched the FFG-7 schedule to accommodate additional testing. We now are requesting $1095 million in the FY 1976 Budget. This will fund ten FFG-7s and cost growth, escalation for prior year programs. We also are requesting an FY 1977 authorization of $1,239 million for 11 more. We plan to continue this program at approximately the same level through FY 1980. For this essential program to proceed in an orderly manner at the least cost to the government, it is very important that the Congress approve the funds we are now requesting. Under current market conditions, shipbuilder interest and strong competition for this program can be assured only if it is clear that the program has the full support of the Congress.

Advanced Naval Vehicles (formerly SES)

We have been planning a 2,000 ton, 80 knot ocean-going Surface Effect Ship (SES) prototype, with a larger and more capable operational ship as the ultimate goal. The testing of two 100 ton prototype craft was completed in 1972. A year ago it was expected that the high technical risks of this program would have been resolved to the point where we could proceed with the building of a 2,000 ton prototype in FY 1976. The program has been progressing well, but there remain some problem areas to be resolved. Therefore, for this reason and due to the budgetary constraints on R&D funds, an additional year of testing of the two 100 ton crafts is the prudent course to follow to reduce the risk in this important new program before requesting funds for a 2,000 ton prototype. Concurrently, a reevaluation will be undertaken to consider other technology alternatives to achieve a high speed ocean going vehicle. For this reason, we have redesignated this program, Advanced Naval Vehicles. The amounts requested -- $38 million in FY 1976, $17 million in the transition period and an authorization of $70 million for FY 1977 -- would permit us to carry forward the SES technology and design effort at a prudent pace in parallel with the reevaluation.

LAMPS

The Light Airborne Multi-Purpose System (LAMPS) program provides for the acquisition of helicopter aircraft to be operated from about half of the surface combatant force planned for the early 1980s. Employment of LAMPS helicopters permits a significant extension of the parent ship's sensor and weapon coverage, particularly in ASW and antiship operations. The first phase of this effort, which consists of modifying 105 SH-2 aircraft to LAMPS MK I configuration (SH-2F), will be completed with FY 1975 funds. MK-I aircraft are now operational in the fleet and reports indicate that they are proving very useful for a wide range of missions.

Current Navy planning is directed toward development of a single helicopter to perform both surface combatant (LAMPS MK III) and carrier-based helicopter missions. Further commonality and commensurate reduction in unit costs are expected from combining acquisition of these Navy helicopters with the Army's UTTAS, since basic UTTAS airframe characteristics are compatible with both projected naval missions. The $39 million requested for FY 1976 and the transition period ($35 million and $4 million, respectively) and $107 million requested for authorization in FY 1977 would permit continuation of the LAMPS MK III development effort.

Antiship Missiles

Our current antiship missile capability consists of the semi-active STANDARD missile used in the surface-to-surface mode and

STANDARD ARM (anti-radiation missile). The semi-active STANDARD missile is installed in all of our major missile ships and the STANDARD ARM in two patrol gunboats (PGs). The semi-active STANDARD provides an austere antiship capability limited in range to the radar horizon. The STANDARD ARM provides an over-the-horizon capability against radar-emitting targets. The STANDARD ARM system is additionally being installed on six DDGs and six DEGs. We also had under development as a backup for HARPOON a third system, the Active STANDARD antiship missile. This development was terminated by Congressional direction.

The HARPOON development program has met or exceeded our expectations with regard to performance, but it, too, has encountered rising costs. Production of 150 pilot line missiles, 58 for operational test and 92 for deployment, was funded in FY 1975. The 92 deployment missiles will be in some of our patrol aircraft and non-missile frigates.

We intend to review the final test and evaluation results later this year. If progress warrants, we will then initiate full-scale production. Accordingly, we have included in the FY 1976 Budget $150 million for production of 270 missiles and $12 million to complete development of this missile. The Transition Budget includes $45 million for 95 missiles. The $183 million requested for authorization in FY 1977 would provide for the procurement of 420 missiles. As noted earlier, the HARPOON will also be carried by Air Force B-52s.

4. Patrol Combatants (Patrol Vessels)

PHM

The Patrol Hydrofoil Missile (PHM) program is structured to provide a small, fast surface combatant to help counter the Soviet surface naval threat. The program has been a cooperative NATO development effort with the United States and West Germany (FRG) having immediate plans to procure PHMs.

The PHM will operate against surface combatant ships and craft in the conduct of surveillance, screening, and special operations in coastal and island areas, and inland or narrow seas. The FRG is currently interested in purchasing the PHMs, since these ships with their high speed, good sea-keeping, and potent firepower would constitute a useful force for NATO Baltic and North Sea operations.

Two prototype PHMs were funded in prior years and four production PHMs were funded in FY 1975. Inasmuch as some problems of cost growth and schedule slippage were encountered in the fabrication of PHM-1 which was launched last November, only one prototype ship is funded to completion. We are requesting only two more PHMs in FY 1976. This action is intended to keep our options open and at the same time sustain FRG interest by demonstrating a U.S. commitment to purchase at least seven of these PHMs. The almost $220 million requested for FY 1976 would provide $11 million to complete test and evaluation on PHM-1, another $85 million for the four ships funded in FY 1975, $40 million for tooling costs to support a production program of 12 ships per year, and $83 million for the construction of two more PHMs. The $25 million requested in the Transition Budget is for long lead time funding of the nine PHMs planned for FY 1977. Assuming that the current difficulties will be resolved in the next year, we are requesting an authorization in FY 1977 of $394 million for these 9 PHMs.

5. Attack Submarines

Nuclear attack submarines are a highly effective component of our ASW forces. Because they are uniquely able to operate covertly, they can establish ASW barriers and conduct other missions in waters that are otherwise under the control of enemy surface and air forces, and in which it would be untenable for other types of U.S. ASW forces to operate.

Most modern Soviet submarines are stationed in the Murmansk area; the remaining modern units are stationed in the Vladivostok and Petropavlovsk areas with the Pacific Fleet. We believe that, in the event of war, we should have sufficient "first-line" SSNs to establish ASW barrier lines across the Soviet submarine routes from those areas into the Atlantic and Pacific Oceans.

In addition, SSNs would be needed in the Mediterranean, and for open ocean search of those areas in which there is a high probability of hostile submarine concentration and where other ASW forces would be less effective. The Navy is also evaluating its doctrine regarding the use of SSNs for the protection of high-value surface ships in open ocean areas. There are, however, several tactical employment problems that must be resolved before submarines can be effectively employed in such missions; for example, there are difficulties involved in coordinating a "friendly" submarine with other types of ASW forces in wartime.

Given other priorities, we believe that a force of about 90 nuclear attack submarines, together with other ASW forces, should be sufficient to support these essential requirements. At the end of FY 1975 we will have 64 SSNs in the fleet, plus 27 funded but not yet delivered.

SSN-688

Of the 26 688-class nuclear-powered SSNs funded through 1975, none as yet have been delivered to the fleet. The 688-class lead ship, LOS ANGELES, was originally scheduled for commissioning in

August of 1974. This ship, however, has been delayed 15 months primarily due to late delivery of contractor-furnished equipment and a slower-than-planned buildup of the work force at Newport News, which is also building a variety of surface ships. Thus, the first 688-class SSN is expected to be delivered in FY 1976, and the other 25 by the end of FY 1981.

Our current plan is to procure two 688-class SSNs in FY 1976 and five every two years thereafter for the remainder of the five-year planning period. The FY 1976 and Transition Budgets include $1,011 million for the SSN-688 program -- $272 million for escalation, outfitting, and post-delivery costs on prior-year ships; $439 million to complete the funding of the two SSNs in the FY 1976 program ($52 million for long lead time funding of these ships was provided in the FY 1974 budget)$291 million for long lead time funding of the five SSNs planned for FY 1977 and FY 1978, and $9 million for directly related military construction projects. The $815 million requested for authorization in FY 1977 would provide $27 million for outfitting and post-delivery costs on prior-year ships, $598 million for three more SSNs, $68 million for long lead time funding of the two SSNs planned for FY 1978 and $122 million for long lead time funding of three in FY 1979.

Looking to the longer term, we are examining the feasibility and desirability of building a new class of SSNs. We are particularly interested in a less costly SSN; the cost of a 688-class SSN in FY 1976 is approximately $225 million.

MK-48 Torpedo

The MK-48 wire-guided, acoustic homing torpedo was designed primarily for use against submarines, but it also has an excellent capability against surface ships. Operational evaluation of the MK-48 was completed in 1972, and the system was fully approved for fleet use in October of that year. By the end of FY 1975, a significant number of the SSNs will be carrying, and certified to fire, MK-48 torpedoes.

Procurement of the MK-48 torpedo in quantity began in 1972, and some 500 torpedoes were funded both in FY 1973 and in FY 1974. We had planned to buy 450 more in FY 1975 and complete procurement in FY 1976-77. Since there is now only one active submarine torpedo manufacturer left in the United States, namely, the current MK-48 contractor, we want to keep the current production line going as long as feasible. To do so, we now propose to buy 425 MK-48s in FY 1975, 175 in FY 1976 and 150 in FY 1977. The $132 million included in the FY 1976 and Transition Budgets and the $109 million included in the FY 1977 authorization would support that program. For the longer run, however, we will have to deal with the basic problem of ensuring some minimum level of torpedo manufacturing capability in the United States.

AN/BQQ-5 Sonar

While the MK-48 torpedo is the primary weapon of the attack submarine force, the new digital, multi-beamed sonar system, with both hull-mounted and towed acoustic arrays, is the principal sensor. This system, designated the AN/BQQ-5, underwent extensive developmental testing and was approved for production in 1973. It is being installed in all of the new 688-class SSNs, and it will be backfitted into all PERMIT- and STURGEON-class SSNs during regular overhauls commencing in FY 1976. The $132 million requested in the FY 1976 and Transition Budgets for this program would provide $5 million for development and $127 million for the procurement of 14 systems for the backfit program.

6. Undersea Surveillance Systems

There are currently two key U.S. Undersea Surveillance Systems under development, the fixed Sound Surveillance System (SOSUS) and the Surveillance Towed Array Sensor System (SURTASS).

It was decided in 1972 to undertake a SOSUS improvement program. This improvement program has been structured in three phases to limit development risks. Phase 0, which involves relatively low cost improvements in existing processing capabilities at the individual Naval Facilities (NAVFACs) as well as the Evaluation Centers, is nearly completed. Phase 1 is currently in the engineering development stage and includes fabrication of a System Validation Model (SVM) which would upgrade current systems by the addition of more capable, generally "off-the-shelf" processing equipment and software. The resulting system will be thoroughly tested and evaluated prior to any further significant backfit installation. If Phase 1 results warrant, a Phase 2 program leading to further system integration would be undertaken.

While this improvement program should increase SOSUS effectiveness, it is clear that the mobile systems now in development, such as the Surveillance Towed Array Sensor (SURTASS) system, will also be needed to supplement SOSUS. The tactical towed array ships would have a processing capability on board to evaluate contacts. LAMPS or other ASW aircraft could be used as tactical follow-up forces. Analyses and at-sea tests have shown that towed arrays should make a significant contribution to the ASW effectiveness of surface combatants.

A recent review of the progress on the Surveillance Towed Array Sensor System (SURTASS) indicated that it was ready for full-scale engineering development. The Navy has started design and fabrication of an engineering development model and will subject this model to at-sea tests and evaluation.

The $150 million included in the FY 1976 and Transition Budget requests would provide $126 million for SOSUS improvements and $24 million for the development and testing of the surveillance towed array sensors. The $55 million requested for authorization in FY 1977 would provide $40 million for SOSUS and $15 million for the SURTASS program.

7. Amphibious Lift

The present amphibious force of 65 ships has sufficient capacity (if all ships are available) to transport simultaneously the assault elements of slightly more than one Marine Amphibious Force (MAF), i.e., one Marine division/wing team and supporting elements. Our amphibious shipping, however, is about equally divided between the Atlantic and Pacific Oceans. Thus, to conduct a single MAF-size lift and subsequent assault, it would be necessary to shift half of our amphibious shipping from one ocean to the other. Moreover, about 15% of the Navy's ships are in overhaul status at any given time and thus are not immediately available.

We are now able to maintain two Marine Amphibious Units (MAUs), each corresponding to about 1/9 of a MAF division/wing team deployed afloat continuously in forward areas with one in the Mediterranean and the other in the Pacific. Because of the shortage of helicopter decks, two additional Battalion Landing Teams (BLT) are usually deployed without helicopters. One is deployed in the Western Pacific and the other is deployed intermittently in the Caribbean. The utility of these forces was recently demonstrated when a MAU in the Mediterranean was instrumental in evacuating American citizens from Cyprus.

Our programmed objective for amphibious lift is to provide the lift capability to transport the assault elements of 1 1/3 Marine Amphibious Forces. This capability would enable us to conduct (after shifting ships from one ocean to the other) a MAF-sized amphibious operation in a major combat theater (for example, on the northern or southern flanks of NATO) and a limited assault elsewhere.

When the five large general purpose Amphibious Assault Ships (LHAs) now under construction are delivered to the fleet, our amphibious force objective will be essentially achieved. The overall lift capacity will be increased to about 1 1/3 MAFs (excluding provision for ships in overhaul), and the helicopter platform shortage will be eliminated. When the last LHA is delivered, the amphibious lift will consist of 66 active ships and 3 Naval Reserve Force (NRF) ships, all with speeds of about 20 knots. With this force, we will be able to maintain four MAUs (battalion-size amphibious forces), all with major helicopter ships, continuously forward deployed. As noted earlier, the substantial capability of the LHAs may also permit us to use these ships for occasional forward deployment in place of an aircraft carrier.

The LHA program, as reported to the Congress in previous years, has experienced numerous delays and contractual disputes. The first LHA was finally launched in December, 1973 and is expected to be delivered to the fleet in September, 1975, a delay of about two years from the original contract delivery date. LHA #2 is also expected to be delivered in FY 1976, LHA #3 and #4 in the transition period and FY 1977, and LHA #5 in FY 1978, about 44 months beyond the original delivery date. All of these ships have been funded in prior years, except for outfitting, post-delivery and claims reservations.

Current operational doctrine for a MAF-sized amphibious operation assumes that two carrier air wings (CVWs), or their equivalent, will be available for direct support, and that surface combatants accompanying these forces would provide gunfire support as necessary. The last active Navy major-caliber-gun (8" or larger) warship, the heavy cruiser NEWPORT NEWS, has been retired. Future gunfire support would be essentially limited to the 5" guns carried by many remaining surface combatants. A new Major Caliber Lightweight Gun (MCLWG) development program has been underway for some time as a potential replacement for the large-caliber gunfire support previously provided by the cruisers and battleships. The relatively small bulk of this weapon would permit its installation in a variety of surface combatants. The MCLWG will complete development in FY 1976, but we have not yet established which ship classes might carry this weapon.

8. Mines and Mine Countermeasure Forces

Mines can be used for port closure, to form barriers against surface ships or submarines, and to impede amphibious landings. The mining of the principal ports and harbors of North Vietnam in May, 1972 demonstrated the military, psychological and political effectiveness of this form of naval warfare.

One of the most recent and effective products of the mine development program is the CAPTOR ASW mine. CAPTOR consists of an MK 46 antisubmarine torpedo housed in a capsule. Because of the mobility of the torpedo, CAPTOR has a damage radius several orders of magnitude greater than any conventional mine. Production tooling for this weapon was started with FY 1975 funds. The $43 million included for this program in the FY 1976 and Transition Budgets would provide for the procurement of a substantial number of mines. The $65 million requested for authorization in FY 1977 would allow procurement of additional mines.

The active and reserve mine countermeasure forces have undergone substantial reductions in recent years. Currently, the surface force consists of 3 active and 22 NRF ocean minesweepers. In part, this reduction has been offset by the greater use of mine countermeasures helicopters (specially equipped RH-53Ds), of which there are now 21 in the force. However, these helicopters do not have a good airborne mine-hunting capability. Furthermore, our ability to clear mines is not good. To correct this deficiency and provide an improved mine-clearing capability, we are requesting $9 million in FY 1976.

9. Mobile Logistic Support Force (MLSF)

The Navy operates a total of 129 MLSF ships, all of which are in the active force. These include 51 underway replenishment (UNREP) ships, 20 major fleet support ships (tenders and repair ships) and 58 minor fleet support ships (primarily salvage ships, tugs, and submarine rescue vessels). These ships provide both wartime and peacetime underway logistics support and mobile, forward area maintenance and repair facilities for deployed naval forces. In peacetime, MLSF ships routinely deploy to the Mediterranean and the western Pacific to support the Sixth and Seventh Fleets. Additional MLSF ships can be deployed if required to sustain increased combatant ship activity in these or other areas.

The wartime requirements for UNREP ships are derived from assumptions concerning the number of naval forces to be supported simultaneously, their expected distance from logistic bases, estimated consumption rates for ordnance, fuel, stores, and repair parts, and the projected duration of the conflict. Peacetime demand for UNREP ships is determined by requirements to support a smaller number of deployed ships compared to wartime deployments; however, the requirement for UNREP ships is not reduced proportionately because this smaller number of vessels operates in more widely dispersed areas than would probably be the case in wartime. Forward peacetime deployments of UNREP ships generally total roughly 16 to 18 ships, several of which are homeported overseas.

Planned UNREP ship forces will provide a wartime capability to support deployed carrier and amphibious task groups in up to five locations simultaneously, using ten underway replenishment groups. Denial of foreign logistic bases, however, would reduce the number of simultaneous fleet operating areas which could be supported with our currently programmed UNREP forces. The increase in UNREP ship cycling distances caused by loss of foreign bases could force a significant drawdown in combatant ship capability and/or deployments elsewhere.

Beginning in FY 1972, the Navy initiated a program to have a small number of UNREP ships operated by the Military Sealift Command (MSC). Five Fleet Oilers and one Stores ship are being operated by MSC in FY 1975, and three more oilers are programmed to be transferred to MSC operation in FY 1976, for a total of nine UNREP ships under MSC control. MSC-operated ships are manned by U.S. civil service crews, at a reduced manning level compared to military manning, and by a military communications detachment. As a consequence of the smaller civilian crew, MSC-operated ships have a reduced military capability, a risk that has been accepted. These ships also have all their defensive armament removed during peacetime.

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The UNREP ships currently operated by MSC have remained forward deployed, accomplishing necessary maintenance locally within the theater, and the crews have been rotated annually by air. Consequently, MSC-operated ships can be programmed and funded to achieve greater time on-station and higher utilization rates in peacetime than active Navy-operated ships. In light of the cost and manpower savings associated with MSC-operated UNREP ships, efforts are continuing to identify UNREP missions which MSC-operated vessels and possibly commercial ships can carry out.

The transfer of a Stores ship to MSC during FY 1975 is the first MSC operation of an UNREP ship dedicated to the transfer of solid stores. Existing MSC UNREP ships all are oilers which carry very limited or no solid stores cargo. The extent to which UNREP ships can be transferred to MSC operation is limited, however, by the current operational practices involved in storage, transfer, and protection of munitions. Moreover, the Navy tentatively plans to provide greatly improved self defense for major Navy UNREP ships, including the installation of the PHALANX Close In Weapons System for antiship missile defense on large multi-purpose ships (AOEs and AORs) and the new large KILAUEA (AE-26) class ammunition ships (AE). Such armament improvements probably would not be possible for ships operated by the MSC.

Tender force level goals are derived from planned wartime roles based on estimates of the number and location of ships to be deployed, the estimated volume of repair work needed, and the availability of overseas bases. Current Destroyer Tender (AD) forces can provide sustained maintenance and a limited battle damage repair capability for most deployed surface ships forces in wartime, assuming concurrent availability of U.S.-operated ship repair facilities in either Japan or the Philippines. The programmed force of six modern Submarine Tenders (AS) is adequate to support maintenance of planned submarine operations in wartime, assuming that a few forward area anchorages are available for basing. Peacetime forward deployment of tenders is generally limited to two ships in both the Atlantic and Pacific Oceans (in addition to tenders supporting ballistic missile submarines); this posture can easily be maintained within planned force levels.

Force levels for minor fleet support ships are derived from estimates of the likelihood of major damage to combatants requiring salvage, repairs, or towing in a forward area; routine towing and other tug duties; and other service support requirements. Planned forces can support early deployment of several tug-type vessels for salvage support in a contingency. In peacetime, forward deployments are limited largely to a few submarine rescue vessels, ocean tugs and salvage ships, all of which can be accommodated within the planned force. As in the case of the UNREP force, the Navy plans to have the MSC operate more minor fleet support ships.

A total of 9 such minor fleet support ships (including 4 ships from the MLSF) will be MSC-operated by the end of FY 1976.

Because of their lower priority and severe fiscal constraints, modernization of the MLSF ships has been repeatedly deferred and now lags far behind modernization of the combatant ship forces. There will still be more than 50 World War II-constructed support ships in the active fleet at the end of FY 1977, the year in which the last of the MLSF ships now under construction or funded will be delivered. At that time, the average age of MLSF ships will be about 24 years. As noted last year, a major effort to modernize the MLSF can no longer be deferred. Our plans to add a wide variety of new combatant ships, designed to be manned with reduced crews and therefore requiring increased intermediate-level maintenance support, must be paralleled by the provision of adequate support forces.

Accordingly, we propose to fund in the FY 1976-1980 period a substantial shipbuilding program in this area. A total of 31 ships would be built, at a currently estimated cost of about $4 billion. The program includes nine Fleet Oilers (AO), six Destroyer Tenders (AD), two Submarine Tenders (AS), two Ammunition Ships (AE), three Combat Stores Ships (AFS), and nine Fleet Ocean Tugs (ATF). These ships would be delivered to the fleet between FY 1979 and FY 1983, leaving about 25 World War II-constructed ships still in the active fleet at the end of FY 1983.

A total of $735 million is included in the FY 1976 and Transition Budgets to procure two ADs, two AOs, and three T-ATFs. The $491 million requested for authorization in FY 1977 would provide for the construction of one AS, two AOs, and one ATF. Previous difficulties in contracting for the construction of MLSF ships have been largely overcome. In November, 1974, the contract for construction of the FY 1972 and FY 1973 Submarine Tenders (ASs) was awarded to Lockheed Shipbuilding in Seattle.

D. TACTICAL AIR FORCES

Last year I pointed out that our tactical air forces -- the Navy carrier air wings, the Marine Corps aircraft wings, and the tactical air units of the Air Force -- are the most expensive components of the general purpose forces in terms of investment costs and that the cost per unit, even after adjusting for inflation, is steadily rising. Consequently, if we and our NATO Allies are to maintain the numbers of tactical aircraft required to cope with the growing capabilities of the Warsaw Pact tactical air forces, we must introduce lower cost aircraft into the forces and exploit to the maximum extent feasible the mutually supporting capabilities of those forces.

I also noted that our experience in Vietnam and the Israeli experience in the recent Middle East conflict impressed upon us the urgent need to improve substantially the defense suppression capabilities of our tactical air forces. In both those conflicts it was convincingly demonstrated that tactical air forces equipped with appropriate defense suppression weapons and electronic countermeasures devices can successfully accomplish their mission even in the face of heavy, sophisticated ground air defenses. Given the high cost per unit of tactical aircraft, we must be prepared to make the additional investment required to minimize losses from those air defenses.

These basic principles, together with the need for continued modernization in general, have guided the formulation of the tactical air programs proposed in the FY 1976 and Transition Budgets and requested for authorization in FY 1977.

1. Force Structure

The composition of the Navy air wings is tailored specifically to the composition of the aircraft carrier force. As noted in the preceding section, the number of carriers will decline to 13 in FY 1976 as the last two HANCOCK-class carriers are phased out of the active fleet. Hence, all of the remaining Navy A-4 and F-8 squadrons, which were retained solely for use on the HANCOCK-class carriers, will also be phased out of the active force in FY 1976.

Last year's plan called for a reduction to 12 carriers in FY 1977. After reconsideration we have now decided to retain one of the MIDWAY-class carriers formerly scheduled for deactivation. This thirteenth carrier would not have an active air wing assigned, but would instead provide us with a deck to be utilized by our Naval Reserve tactical air units during mobilization. During peacetime it will be used by our training squadrons and fleet squadrons whose parent carrier is in overhaul. This will enable us to increase our operational readiness and also provide a significant surge capability in times of crisis.

The phaseout of one of the three MIDWAY-class carriers and the delivery of the second NIMITZ-class carrier to the fleet in FY 1977 (thereby retaining the number of carriers at 13) will result in a further change in the composition of the carrier air wings. The NIMITZ-class carrier, in contrast to the FORRESTAL and MIDWAY-class carriers, is large enough to accommodate three (instead of two) light attack squadrons in addition to one medium attack squadron and two fighter squadrons. Thus, the 12 air wings programmed through end FY 1980 for the 13-carrier force will require 12 medium attack squadrons (A-6), 26 light attack squadrons (A-7), and 24 fighter squadrons (F-14 and F-4).

Initially, F-14s will be deployed in pairs on F-14 configured carriers, but as noted last year, we plan to eventually deploy as part of each carrier air wing at least one squadron of F-14s as well as one squadron of F-4s or NACFs (Navy Air Combat Fighters). However, in order to accommodate the sale of 80 F-14s to Iran without severely peaking the production rate we propose to stretch out somewhat the delivery of F-14s to our own forces, and thus maintain a warm production line for a longer period. In the case of the Navy carrier air wings, the eleventh and twelfth squadrons would be delivered to the fleet in FY 1979 instead of FY 1978 and two F-4 squadrons will be retained in the active force one year longer. We have also decided to buy two more squadrons of F-14s to give the Navy some flexibility in tailoring the aircraft complement more closely to the particular mission of a given carrier, e.g., embarking two F-14 (instead of one F-14 and one F-4) squadrons on a carrier scheduled to be deployed to a high threat area. These last two squadrons would be delivered in FY 1981.

We also had planned last year to deliver the first two squadrons of VFXs (now designated NACF-Navy Air Combat Fighter) to the active fleet in FY 1979. As the result of Congressional action on the FY 1975 Budget, this program is being reoriented and two more F-4 squadrons will have to be retained in the active force for at least two years longer than previously planned.

In addition to the fighter and attack squadrons, each carrier is provided with a complement of electronic countermeasures, airborne early warning, tanker, and reconnaissance aircraft, as well as ASW aircraft for particular missions. The Navy is still in the process of acquiring sufficient EA-6B electronic countermeasures aircraft to equip the 12-wing force. The specialized reconnaissance aircraft (RF-8, RA-5), however, will be phased out over the next few years and replaced with reconnaissance pods which would be carried by dedicated A-7s in the attack inventory, or other carrier aircraft. This is an example of the mutual support concept noted earlier.

The Marine Corps active tactical air force structure proposed for the FY 1976-80 period is the same as that presented here last year except for one change. That change reflects the decision to stretch out the delivery of F-14s to our own forces. In the case of the Marine Corps, delivery of the third and fourth F-14 squadrons will be slipped by one year, i.e., from FY 1977-78 to FY 1978-79.

Because of the stretch-out in F-14 deliveries and the change in the VFX program, there will be a lag in the transfer of F-4s from the active to the reserve units of the Navy. Consequently, two squadrons of F-8s, which we had previously planned to phase out in FY 1978, will be retained in the reserve forces.

The active Air Force at the end of the current fiscal year will have a total of about 2,280 fighter and attack aircraft organized in 69 squadrons. At the end of FY 1980, the active Air Force is programmed to have considerably increased this force. The Air Force is achieving this increase together with an increase in tactical fighter crew ratios from 1.1 to 1.25 (and maintenance personnel) while undergoing a reduction in end-strength because of successful efforts to reduce resources devoted to overhead and support. This will provide for both greater combat power and staging power. The ten squadrons of A-7s now in the force are programmed to be replaced by A-10s. The 45 squadrons of F-4s would be reduced, and F-15s would be added. The F-111 force would be continued throughout the programmed period. This is essentially the same force structure presented last year, but projected forward one more year.

The Air Force's dedicated defense suppression force now consists of two F-105G squadrons and two F-4C squadrons. As noted last year, we now plan to modernize and expand this force substantially over the next few years. The two F-105G and two F-4C squadrons are scheduled to be replaced with four squadrons (116 a/c) of F-4Es. In addition we are considering the buildup of two squadrons (42 a/c) of EF-111s equipped with high-powered jammers. These new units would greatly increase our defense suppression capabilities.

The first two squadrons of E-3As (AWACS), with a total of seven aircraft, are scheduled to become operational in FY 1977. The planned force of three squadrons with a total of 34 aircraft is scheduled to be in place by the end of 1981. The basis for this force requirement is discussed later in this section in connection with the E-3A acquisition program. The active reconnaissance force of 13 RF-4 squadrons plus one special squadron will be reduced.

The A-7s, F-4s, and RF-4s released from the active Air Force are programmed to be transferred to the Reserve Components. In addition, we plan to procure some A-10s specifically for these Reserve Components. In the Air National Guard, all of the remaining A-37s, F-100s, F-105s, and RF-101s are scheduled to be phased out. The ANG tactical air force structure at that time would consist of A-7, A-10, F-4 and RF-4 squadrons. As noted earlier in connection with the strategic forces program, the ANG KC-97 tankers would be replaced with KC-135s from the active forces. In the Air Force Reserve, A-37 squadrons would be replaced by A-10s, and F-4s would replace the F-105s.

2. Acquisition Programs

Shown on the table beginning on the following page are the major tactical air forces modernization and improvement programs. The two largest programs, in terms of acquisition costs, are the F-14 for the Navy and Marine Corps and the F-15 for the Air Force. Both of these programs continue to dominate the funding requests for tactical air procurement in the FY 1976 and Transition Budgets, and in the FY 1977 authorization.

F-14

Last year we had planned to produce the F-14 at a rate of six per month -- four for the U.S. Navy and Marine Corps and two for the Government of Iran to fill its order for 30 aircraft. Subsequently, the Government of Iran placed an order for another 50 F-14s, making a total of 80 aircraft. To accommodate the Iranian purchase of 80 aircraft without peaking the production rate, we have decided to hold procurement for our own forces to three per month, leaving the remaining output of three per month for the Government of Iran. As noted earlier, this arrangement will delay somewhat the deliveries of F-14s to the U.S. Navy and Marine Corps. But, in view of the economic and foreign policy benefits to be gained by accommodating the Iranians, this delay is considered acceptable.

After the Iranian orders have been filled, the F-14 production rate is scheduled to decline to three per month, and then gradually to two per month. The decision to buy another two squadrons of F-14s for the Navy, which was mentioned earlier, would increase the total number of F-14s to be procured from the 334 planned last year to 390. With this additional U.S. procurement and a gradual reduction in the production rate once the Iranian order is completed, we hope to keep the production line open through at least the FY 1980 procurement period, i.e., calendar year 1981 deliveries. By keeping the line open, we retain the options to procure more F-14s to meet the attrition requirements of our own forces and to sell more F-14s abroad if new orders are received. We believe these advantages more than compensate for the increased unit costs which would result from the lower production rates.

Acquisition Costs of Major Tactical Air Forces Modernization

and Improvement Programs 1/

(Dollars in Millions)

Navy and Marine Corps Systems	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Procurement of F-14 Multi-Mission Fighter Aircraft	733	733	620	138	616
Procurement of PHOENIX Missiles	98	98	101	27	85
Development of the Navy Air Combat Fighter (NACF)	-	20	110	23	131
Procurement and Modification of A-6 Attack Aircraft	204	212	300	55	180
Acquisition of CONDOR missiles	33	6	92	11	54
Procurement and Modification of A-7E Attack Aircraft	157	145	187	41	192
Procurement and Modification of A-4M Aircraft	136	15	75	-	11
Development of the Navy V/STOL Fighter/Attack Aircraft	25	14	22	6	40
Procurement of EA-6B Electronic Countermeasures Aircraft	120	129	120	14	107
Procurement of E-2C Fleet Early-Warning Aircraft	160	125	161	23	132
Procurement of KC-130 Tankers (Marine Corps)	27	44	-	41	-

Acquisition Costs of Major Tactical Air Forces Modernization

and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

Air Force Systems	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Continued Development/ Procurement of F-15 Air Superiority Fighter	1,129	1,096	1,683	356	1,436
Development of the AF Air Combat Fighter (including Lightweight Fighter prototypes and engine)	48	57	273	83	317
Development and Procurement of A-10 Close Air Support Aircraft	107	261	460	107	849
Development and Procurement of MAVERICK	68	91	171	39	218
Development and Procurement of F-4E Wild Weasel Modifications	29	28	92	4	81
Development and Procurement of EF-111A Modifications	15	37	5	5	37
Development and Acquisition of E-3A AWACS 3/	163	617	690	85	504
Navy/Air Force Air-to-Air Missiles					
Acquisition of SIDEWINDER Missiles	34	33	113	1	69

Acquisition Costs of Major Tactical Air Forces Modernization

and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Navy/Air Force Air-to-Air Missiles (Cont'd)					
Acquisition of SPARROW Missiles	55	104	151	5	173

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.
2/ July 1 to September 30, 1976
3/ Does not include costs of directly related military equipment.

Research and development and the procurement of the first 234 production aircraft have already been funded through FY 1975, including \$70 million for advanced procurement. The \$620 million requested for FY 1976 would provide for the procurement of 36 more aircraft, including \$89 million for advanced procurement. The \$138 requested for the transition period would provide for the procurement of nine more aircraft, including \$59 million for advanced procurement. The \$616 million requested for authorization in FY 1977 would provide for the procurement of 36 more aircraft, including \$102 million for advanced procurement.

More than 100 F-14s have already been delivered to the Navy and two squadrons are deployed aboard the ENTERPRISE. The first Marine Corps squadron is expected to become operational by the end of 1975. The F-14 is performing extremely well, and we are fully confident that this aircraft, armed with the PHOENIX missile, can successfully accomplish its primary mission of fleet air defense. Armed with the SPARROW and SIDEWINDER air-to-air missiles and the M-61 Gatling gun, we are confident the F-14 can also accomplish a wide variety of other tactical air missions.

The major contractual and financial problems which have plagued the F-14 program have now been satisfactorily resolved. With the receipt of the follow-on order for 50 more F-14s from the Government of Iran, Grumman was able to reopen commercial lines of credit with a bank consortium. This return to commercial financing has eliminated the need for advanced payments that existed last year. We do not foresee any further major contractual difficulties in the F-14 procurement program.

PHOENIX

For the PHOENIX program we are requesting \$101 million in FY 1976 to buy 340 additional missiles and \$27 million in the transition period for advanced procurement, plus an authorization of \$85 million in FY 1977 to procure another 340 missiles. The final procurement of PHOENIX for our own forces is now scheduled for FY 1979, based on our restructured F-14 program.

The PHOENIX is a long-range, supersonic missile that was specifically designed for the F-14 in its fleet air defense role. The F-14 can carry six of these 985 pound missiles and, with the AN/AWG-9 fire control system, can launch and simultaneously guide all six against six different targets. The PHOENIX has been integrated on all Navy F-14s, and to date has demonstrated successful guidance and fusing during test and evaluation and training firings.

Navy Air Combat Fighter (NACF)

Last year I pointed out to the Committees that while a minimum number of F-14s is clearly essential for fleet air defense, we cannot afford, nor do we need, an all F-14 carrier or Marine Corps fighter force. Consequently, the Navy was requested to formulate the characteristics of a new, austere, low-cost fighter (then designated the VFX) to serve as the eventual replacement for the remaining F-4s in both the Navy carrier and the Marine Corps air wings. The Navy subsequently proposed a fighter/attack aircraft (then designated the VFAX) to serve as the eventual replacement for the A-7 as well as the F-4.

The House and Senate Appropriation Committees fully supported the concept of a high/low mix but directed that in developing the new, low-cost fighter/attack aircraft the Navy should make full use of the Air Force Air Combat Fighter technology and hardware. We heartily support the Committees' objective, but we should not overlook the fact that aircraft designed to operate from carriers have certain unique structural requirements which are not essential in aircraft designed to be operated solely from land bases. With this problem in mind, we have provided the Navy's Air Combat Fighter specifications to the two Air Force Air Combat Fighter contractors, General Dynamics and Northrop, and requested them to submit proposals for full-scale development of a Navy derivative of their Air Force designs. To assist them in this effort, the two Air Force contractors have joined forces with two Navy contractors -- General Dynamics with LTV and Northrop with McDonnell Douglas. We hope to complete our evaluation of these contractor proposals in March and submit a report of our findings to the interested Congressional Committees shortly thereafter.

Pending the outcome of that evaluation, we are requesting $110 million in FY 1976 and $23 million in the transition period, plus an authorization of $131 million in FY 1977, to enable us to move forward promptly with the full-scale development of the Navy Air Combat Fighter should the results warrant such action. The availability of these funds would depend, of course, on Congressional action. But we agree with the Appropriations Committees that no time should be lost in moving forward with this project if it should prove to be feasible. The F-4s and A-7s in the active forces should be replaced with more modern aircraft in the 1980s, and we cannot afford to replace them solely with F-14s and F-15s.

A-6E

Last year we had planned to buy sufficient A-6Es to equip 12 Navy and five Marine Corps squadrons with 12 aircraft each and convert all the older A-6s to the A-6E configuration. However, we presently plan on terminating A-6E procurement after FY 1976 and the rate of conversions of older A-6s to A-6Es in FY 1976 will be somewhat slower than planned last year -- 36 instead of 48 a year.

We also propose to complete the development of the A-6E TRAM (Target Recognition and Attack Multisensor), install the system in all production aircraft beginning in FY 1976, and retrofit it in all of the other A-6Es. TRAM includes a passive imaging infrared sensor for target classification and identification, a laser target designator boresighted with the infrared sensor for delivery of laser-guided weapons, and a laser search mechanism to locate targets illuminated by external laser designators. It will provide the A-6E crew with a greatly improved nighttime operating capability.

The $300 million requested for FY 1976 would provide $156 million for the procurement of another 12 A-6Es, $140 million for modifications including the modification of 36 older A-6s to A-6Es, and $4 million for the development of the A-6E TRAM. The $55 million requested for the transition period would provide for the conversion of nine A-6Es. The $180 million requested for authorization in FY 1977 would provide for another 27 A-6E conversions and other A-6 modifications.

CONDOR

The CONDOR air-to-surface missile has an excellent capability for precision strikes against selected land targets. Navy A-6 aircraft will be modified to carry the CONDOR missile and avionics pod. The $103 million included in the FY 1976 and Transition Budgets for CONDOR would provide $1 million to continue development, and $102 million for the procurement of 243 missiles. The $54 million requested for authorization in FY 1977 provides $52 million for the procurement of another 162 missiles, and $2 million for additional development.

A-7E

As noted last year, we plan during the next few years to replace all of the Navy A-7As and Bs with the new A-7E. The older A-7s would be transferred to the Naval Reserve where they would in turn replace the early model A-4s. In addition, we plan to install in all of the A-7Es the new A-7E TRAM system which is now completing development. This system is similar to the TRAM system being developed for the A-6E, but is specifically designed for use in the A-7E with its more limited avionics.

The A-7E acquisition plan calls for the procurement of 666 aircraft, of which 506 have been funded with FY 1975 and prior year appropriations. The $187 million requested for the A-7E program in FY 1976 would provide for the procurement of another 30 aircraft, the continuation of TRAM development, and the installation of TRAM and other modifications in A-7E aircraft. The $41 million requested for the transition period would provide for the procurement of six more A-7Es, for TRAM development, and modification of A-7Es. The $192 million requested for authorization in FY 1977 would provide for the procurement of 30 A-7Es, installation of TRAM and other modifications, and completion of TRAM development.

A-4M

The $75 million included in the FY 1976 Budget for the A-4M program would provide $70 million for the procurement of the last 24 aircraft, $1 million for the last increment of a modification to install improved electronic warfare equipment, and $4 million to continue development of the Angle Rate Bombing System (ARBS). The $11 million requested for authorization in FY 1977 would provide the first increment of modification funds to install the system in the A-4M.

The delivery of these 24 A-4Ms would permit the Marine Corps to complete the modernization of its five light attack aircraft squadrons. All of the remaining A-4Es and A-4Fs would then be transferred to the Marine Corps Reserve where, in turn, they would replace some of the even older A-4s.

V/STOL Tactical Aircraft

In response to Congressional concern with some aspects of our current V/STOL development effort, we have now reoriented that program to concentrate the effort on the proven technology required to give us the option to initiate a full-scale V/STOL fighter/attack aircraft engineering development program in FY 1979. The three current projects -- the XFV-12A prototype with the thrust-augmented wing (TAW), the lift-plus-lift cruise engine, and the AV-16 with the Pegasus engine -- will all be brought to completion in FY 1976 and the transition period. A new project, a lift-fan technology demonstration effort, would be initiated in FY 1976, and in the transition period the best available technology would be selected for possible advanced development of a new V/STOL prototype aircraft. We plan to continue advanced development efforts through FY 1978 to provide options for full-scale engineering development by FY 1979.

Our funding requests -- $22 million in FY 1976, $6 million in the transition period, and $40 million in the FY 1977 authorization -- would provide for the completion of the current efforts and the initiation of the new efforts.

The United States has worked for many years on the development of a useful V/STOL aircraft. The U.S. Marine Corps is now operating three squadrons of the UK-developed AV-8 HARRIER in order to evaluate the use of this type of aircraft in the close air support of ground forces. However, a more capable V/STOL aircraft than the current HARRIER is needed both for the Marine Corps and the Navy. While development is proceeding on the approach for a completely new V/STOL, the Navy is examining the evolutionary growth potential which can be derived from the operational AV-8 HARRIER. The options for a second generation AVX range from aerodynamic refinement of the AV-8 design with the presently installed PEGASUS 11 engine to a redesigned aircraft incorporating the PEGASUS 15 engine. The product of such an effort would be a V/STOL candidate to replace A-4 and AV-8 in the U.S. Marine Corps inventory as those aircraft reach the end of service life.

EA-6B

The funds requested for the EA-6B program -- $120 million in FY 1976, $14 million in the transition period and $107 million in FY 1977 authorization -- would permit the continued procurement of this aircraft at the rate of six per year to complete the equipping of the 12-wing force. The Navy needs a total of 77 of these aircraft to provide a complement of four aircraft per carrier. The last five aircraft required to fill this inventory objective are scheduled for procurement in FY 1978.

E-2C

Last year, we had planned to buy 36 E-2C fleet surveillance and early warning aircraft to equip six of the 12 carrier air wings and to modify and improve 36 existing E-2A/Bs to equip the remaining six wings. The Congress, however, disallowed the funds requested for the modification program on the grounds that the expenditure to modify E-2A/Bs would be a questionable investment in view of the age and high maintenance cost of these aircraft.

In light of that Congressional action, we now propose to procure six additional E-2Cs in FY 1976 and about $161 million is included in the FY 1976 Budget for this purpose. In addition, we are requesting $23 million for one aircraft in the transition period and an authorization of $132 million for six aircraft in FY 1977, pending an overall review next year of a program combining E-2C, E-2B, and other options.

KC-130 Tanker

The $41 million included in the Transition Budget for the KC-130 would permit the Marine Corps to procure the last four aircraft needed to support its authorized inventory of aircraft through the mid-1980s. The primary mission of this tanker force is to provide aerial refueling for the deployment of Marine Corps attack and fighter aircraft.

F-15

The Air Force F-15 Air Superiority Fighter Program is proceeding as planned; the major milestones are being achieved on schedule, and demonstrated performance confirms the F-15 will fulfill its intended role. The flight test program has been very successful thus far and the engine, which was still the cause of some concern last year, has performed satisfactorily in more than 3,000 hours of flight. The first production aircraft were delivered to the Tactical Air Command in November, 1974, and follow-on testing and evaluation, and initial pilot training have been started. The final development milestone, initial operational capability (IOC) of the first training squadron, is still expected to be achieved on schedule in July, 1975.

The armament and the Tactical Electronic Warfare Suite (TEWS) of the F-15 have had some development problems, which are presently being resolved. The F-15 was designed to carry a variety of armament -- the GAU-7A 25mm caseless ammunition Gatling gun; the AIM-7F SPARROW medium-range, semi-active air-to-air missile; and the AIM-9L SIDEWINDER short-range, infrared homing air-to-air missile. All three of these programs have encountered varying degrees of developmental delays and difficulties. The problems involved in the development of the AIM-7F have now been resolved and the missile has been released for full production. The AIM-9L is now undergoing an operational test and evaluation to verify the fixes devised to solve the problems encountered in its development. We believe the results of this test will be satisfactory, but if not, the AIM-9E, which has been flight certified on the F-15, will be available to serve as an effective substitute.

The GAU-7A development, which had encountered great development difficulties in cost, weight, accuracy, and ammunition performance, has been cancelled. As an alternative, we plan to install initially the proven M-61 20mm Gatling gun, and to replace that system later with the improved M-61 Gatling gun and ammunition system which is now in development. An F-15 equipped with the M-61 gun has already been flight tested.

With regard to the Tactical Electronic Warfare System (TEWS), we believe that the technical problems encountered in its development have now been solved. The warning sensors have satisfactorily achieved their development milestones and have been ordered into production. The development of the jammers, which was initially delayed by technical problems, has now reached the flight test stage, but we must still reduce the costs of the jammer somewhat. The complete TEWS system has undergone an Air Force preliminary flight evaluation and with successful cost reduction efforts should be available for installation in the aircraft by the end of the next fiscal year.

As noted last year, we intend to procure a total of 729 F-15s (excluding the 20 RDT&E aircraft) to equip the planned squadrons. A total of 164 production aircraft has been funded through FY 1975. The $1,683 million requested for FY 1976 includes $40 million to complete development and $1,643 million to procure 108 aircraft. The $356 million requested for the transition period would procure 27 more aircraft and the $1,436 million requested for authorization in FY 1977 would procure an additional 108. The remaining 322 aircraft are programmed to be procured in the FY 1978-80 period. The first F-15 squadron is scheduled to become operational in FY 1976, and by the end of FY 1980 we expect to have most of the remaining planned squadrons operational.

Air Force Air Combat Fighter (AFACF)

As in the case of the Navy and Marine Corps, we cannot afford, nor do we need, a completely high-capability fighter force in the Air Force. We have, therefore, pressed forward with the development of two prototype "lightweight" fighters and with the new, high thrust-to-weight engine. Both prototype designs have met their flight test objectives, namely, to demonstrate the technical feasibility and combat value of a low-cost, high performance, visual combat fighter aircraft incorporating the newest and most advanced aerodynamic and propulsion technologies and design concepts. Hence, we are now ready to proceed with full-scale engineering development of the Air Force Air Combat Fighter, utilizing the funds appropriated by the Congress for this purpose last year.

On January 13, 1975, we announced that the General Dynamics' YF-16 was selected for full-scale engineering development as the Air Combat Fighter. This decision was based on cost and technical engineering proposals submitted by the two companies and results of the prototype flight test evaluations conducted at the Air Force Flight Test Center, Edwards AFB, California. In selecting this aircraft for Air Force requirements, we also considered not only the U.S. Navy's need for an air combat fighter, but also the needs of several of our NATO Allies. As Deputy Secretary of Defense Clements noted in his letters of September 10, 1974, to the Chairmen of the Armed Services and Appropriations Committees, the Netherlands, Belgium, Denmark and Norway have formed a consortium for the purpose of selecting a new aircraft to replace their F-104s. The members of

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the consortium informed us that they had narrowed the field to four candidates -- the Swedish JA-37 Viggen, the French F-1/M53, the U.S. YF-16, and the U.S. YF-17. We agreed with them that their requirements for a new air combat fighter, while more sophisticated, were similar to our own, and that it would be mutually beneficial to develop and produce an aircraft that could satisfy their requirements as well as our own.

We also agreed that if a U.S. ACF is selected by the NATO consortium, we would accept a production-sharing arrangement. Under this arrangement consortium firms would produce 10% of the procurement value of the 650 USAF ACFs, 40% of the procurement value of the 350 consortium aircraft, and 15% of the procurement value of third country sales. The U.S. Government agreed that the value of the offset for this program shall be limited to no more than the total value of the European participating governments' initial investment in this program (which includes dollar value of 350 aircraft, spares, AGE, etc.). Offset agreements for production beyond this number would require further negotiation. The U.S. would manage the program, and a full production capability would be located in the U.S. to retain the ability to produce the entire aircraft.

I believe we can all agree that such an arrangement would offer many benefits. It would reduce the cost per unit to the U.S. as well as to the members of the consortium, it would have a favorable effect on our balance of payments, it would improve NATO equipment standardization, and it would significantly enhance a key NATO strength -- tactical airpower. With a unit flyaway cost of $4.6 million (in FY 1975 dollars) and austere support and training requirements, the F-16 ACF should be an attractive aircraft for many other of our friends and allies.

Our current plan calls for the production of a minimum of 650 ACFs for the USAF. We are informed that the members of the consortium have a collective initial requirement for about 350 aircraft, making a total of about 1,000. When the potential of this aircraft is discovered by other nations a much larger production run can be anticipated.

The need for this aircraft is urgent both for us and the members of the consortium. We must replace most of the F-4s in the active Air Force in the mid-1980s, and we cannot afford to replace them solely with F-15s. The members of the consortium are equally pressed to replace their even older F-104s. Hence, we propose to move forward with production at the earliest feasible time. This would result in some degree of concurrency, but on the basis of the extensive flight testing already accomplished with the two experimental versions of the lightweight fighter, I believe the risks involved are quite modest. In view of the Congressional concern regarding this matter of concurrency, we plan to consult with the interested Committees at each step of the way to production. No commitment to production will be made until it has been specifically approved by the Congress.

The $273 million requested for this program in FY 1976 would permit us to move into full-scale engineering development on an accelerated basis. The $83 million requested for the transition period is for RDT&E. The $317 million requested for authorization in FY 1977 would provide $245 million to continue the development effort, including the development of a new lightweight, low-cost pulse doppler radar and the fabrication of 15 development, test and evaluation aircraft, and $72 million for advance procurement.

A-10

The A-10 close air support aircraft program has progressed to the point where we can start limited production. The fly-off with the A-7, using one of the two A-10 prototype aircraft, has been conducted as directed by the Congress, and the results, to include my certification that the YA-10 was the winner, have been reported to the interested Committees. The two back-to-back 150-hour engine qualification tests have been successfully completed, and the technical problems encountered in the development of the GAU-8 gun and ammunition have been resolved. The gun/aircraft compatibility tests will be conducted with the second of the six full-scale development models of the A-10, the first of which is now scheduled for delivery in February of this year.

A contract was awarded in December, 1974, for the first 22 production aircraft (funded in FY 1975), with an option for 30 more. No decision on full-scale production will be made until the six full-scale development aircraft have been thoroughly flight tested, which we expect will be accomplished by the end of this year. The $460 million requested for FY 1976 would provide $52 million to continue development, $351 million for 61 aircraft and $57 million for advance procurement. The $107 million requested for the transition period would provide $1 million to continue development, and $91 million for 33 aircraft and $15 million for advance procurement. On the assumption that a decision on full-scale production can be made by the end of this year, we are requesting an authorization of $849 million for FY 1977 -- $2 million to complete development, $806 million for 221 aircraft and $41 million for advance procurement.

It is generally agreed within the Defense Department that the A-10, as compared with the A-7, is the superior aircraft for the close air support role particularly in a European environment. It will have the maneuverability, responsiveness, lethality, survivability, long loiter time and simplicity that are essential in an aircraft specifically designed to perform that mission. Armed with the high velocity 30mm GAU-8 gun, the MAVERICK air-to-surface missile and other ordnance, the A-10 promises to be a very effective weapon system against all close air support targets, particularly tanks and other armored vehicles. We currently plan to buy a total of 733 production aircraft (i.e., excluding the two prototype and six full-scale development aircraft).

MAVERICK

Our extensive testing of the MAVERICK air-to-surface missile and its successful use in the recent Middle East war have convincingly demonstrated the value of this missile in the antitank role. The current version of the MAVERICK, however, is equipped with an electro-optical (T.V.) sensor and, hence, it is essentially a clear weather, daytime weapon system. While such a weapon is completely satisfactory for use in such areas as the Middle East, its effectiveness in Europe would be more limited because of the less favorable weather conditions. Consequently, we have undertaken the development of two new versions of the MAVERICK missile -- one with a laser seeker which would give it both a night and day capability in clear weather, and one with an imaging infrared (IIR) seeker, which would provide for a launch and leave capability and a better adverse weather capability in both day and night.

The $171 million included in the FY 1976 Budget for MAVERICK would provide $139 million for the procurement of 6,000 MAVERICK missiles, and $32 million for the development of the laser- and IIR-guided MAVERICK missiles. The $39 million requested in the Transition Budget would provide $25 million for the procurement of 1,200 T.V. MAVERICK missiles and $14 million for the development of the laser and IIR MAVERICK missiles. The $218 million requested for authorization in FY 1977 would provide $103 million for the procurement of 4,650 T.V. MAVERICK missiles, $52 million for the continued development of the laser and IIR MAVERICK missiles, $26 million for the procurement of the first 350 laser MAVERICK missiles and $37 million for the procurement of the first 250 IIR MAVERICK missiles.

F-4E (Wild Weasel)

As noted last year, the Air Force is particularly deficient in tactical aircraft configured primarily for defense suppression. The F-105G and F-4C Wild Weasel (WW) systems now in the force were developed during the Vietnam conflict and do not have the capability required to cope with the very intense air defense environment we would expect to encounter in a war in Europe. We propose, therefore, to replace the two squadrons of F-105G (WW) and two squadrons of F-4C (WW) aircraft with four squadrons of F-4E (WW) aircraft equipped with the latest defense suppression systems. In addition to the standard F-4E electronic countermeasures equipment (warning sensors, jamming pods, and chaff dispensers), the F-4E Wild Weasel aircraft will be equipped with the capability to detect, identify and locate threat systems. Like the F-105G and F-4C Wild Weasel aircraft, they would also be equipped to launch anti-radiation missiles, i.e., STANDARD ARM, SHRIKE and HARM. Thus equipped, they would accompany our fighter and attack aircraft, and when a ground based radar-directed air defense threat is encountered, they would detect, locate, and attack the radars with their anti-radiation missiles.

The $92 million requested for this program in FY 1976 would provide for the final development phase of the new avionics package and modification of F-4E aircraft. The $4 million requested in the transition period is primarily for support equipment development. The $81 million requested for authorization in FY 1977 would provide for demodification of test bed aircraft and aircraft modifications. A total of 116 F-4Es would be modified to the Wild Weasel configuration.

EF-111A

Our fighter/attack aircraft, including the Wild Weasel-configured aircraft, have room for only a small electronic countermeasures capability -- enough to cope with the few air defense weapons-tracking radars that pose the most immediate danger. To operate effectively in a very intense air defense environment, our tactical aircraft need a jammer with a much greater capability to provide jamming coverage over a wide area. The EF-111A is intended to fulfill that area jamming requirement. The EF-111A would be an Air Force F-111A equipped with ALQ-99 jammers of the type used in the Navy EA-6B. It would also be able to locate the emitting radars, but it would not carry weapons since it would operate normally in conjunction with our F-4 (Wild Weasel) and fighter/attack aircraft.

The EF-111A development program was started in FY 1973 and is expected to be completed by the late 1970s. Two competing contractors undertook systems design analyses of a prototype EF-111A, and one of them has been awarded a contract for full-scale engineering development. The work will involve the determination of the final design and modification of one or both of the government-furnished aircraft, integration of sub-systems, and testing of a full-scale development EF-111A. If the development phase is successful, forty additional aircraft could then be modified (plus the second prototype if it is not modified in the RDT&E program) to provide an inventory of 42 aircraft for two EF-111A squadrons.

The $10 million requested in the FY 1976 and Transition Budgets for the EF-111A would permit the continuation of the development effort. The $37 million requested for authorization in FY 1977 would provide for completion of nearly all RDT&E. If the EF-111A demonstrates greater military worth than other defense suppression systems, the modification of the first increment of EF-111A aircraft would then be funded.

AWACS (E-3A)

Last year we requested funds for the procurement of 12 AWACS aircraft, looking toward the acquisition of a total of 34 operational AWACS aircraft, including the retrofitting of three RDT&E aircraft already on hand. The Congress reduced the FY 1975 buy to six aircraft, principally because of its concern about the vulnerability of AWACS to Warsaw Pact employment of electronic countermeasures (ECM) in a major conventional war in Europe. In addition, the Senate Armed Services Committee recommended "that the Secretary of Defense appoint a group of disinterested radar and ECM technical experts...to examine this issue and to report to him on the potential vulnerability of the system to jamming, with an assessment of the GAO and Air Force claims on the subject." Finally, the Department of Defense Appropriation Authorization Act, 1975, requires the Secretary of Defense to determine, and certify to the Congress, that AWACS "is cost effective and meets the mission needs and requirements of the Department of Defense."

In response to these concerns of the Congress, I appointed a panel of disinterested experts, under the chairmanship of Dr. H. P. Smith, Jr.. The panel examined the three major roles envisioned for AWACS in a NATO-Warsaw Pact conflict:

(1) to provide the NATO command with timely information of significant aircraft or ECM deployments prior to hostilities, i.e., early warning;

(2) to provide surveillance information required for effective direction of the air battle over NATO-held territory, i.e., the defensive mission; and

(3) to provide the information required for effective direction of strikes into enemy-held territory, i.e., the offensive mission.

As a result of this examination, the panel found AWACS "to be an impressive technical accomplishment that has met its design goals and in so doing is less susceptible to ECM than ground surveillance radars now employed in Europe." More specifically, the panel concluded that:

"(1) attempts to jam AWACS prior to initiation of hostilities constitutes, in itself, warning; (2) AWACS (Block I) will be substantially less vulnerable to ECM than the present air surveillance network; (3) the present ECM equipment of the Warsaw Pact forces should not seriously degrade AWACS performance in support of defensive operations; (4) such equipment could degrade AWACS performance in support of offensive operations; and (5) early implementation of the Panel's ECCM recommendations will insure that future Warsaw Pact ECM deployments will have no greater effect than the present situation. The recommended programs are in addition to the Block III enhancements proposed by the Air Force and are estimated (in a very cursory manner) to cost tens of millions of dollars, an investment comparable to threat ECM equipment proposed by the Panel. In summary, if the offensive mission is secondary to the defensive mission, and if our recommended programs are implemented in the near future, the Panel concludes that the vulnerability of AWACS to ECM is a secondary consideration with regard to acquisition and deployment of this system in Europe."

With regard to offensive operations, it should be noted that the report states that AWACS surveillance could be degraded but not denied and current systems have virtually no capability to control forces in hostile territory. For these reasons and since NATO's strategy is primarily defensive, I have determined that AWACS "is cost effective and meets the mission needs and requirements of the Department of Defense," and I am certifying this to Congress. Accordingly, we now propose to move ahead with the initial production of operational AWACS aircraft.

These AWACS would be operated as a pool from which aircraft could be drawn and used as needed on a worldwide basis. For example, aircraft could be deployed to Europe in the event of a NATO-Warsaw Pact conflict; or deployed to defend vital air and sea LOCs; or be used to support a minor contingency operation; or be retained in CONUS in times of crisis.

AWACS force levels depend not only on our requirements but also on whether our NATO Allies procure AWACS. We are now working closely with our NATO Allies in defining a NATO AWACS program in which most of the costs would be borne by nations other than the United States. A NATO decision on the eventual procurement of AWACS could be made as early as November, 1975.

In the absence of such a NATO decision our ultimate AWACS force level is uncertain. We believe it prudent to stretch procurement both to reduce somewhat the yearly procurement expenditures and to allow time for NATO nations to reach a decision. For this reason we have adopted the six-a-year production rate established by Congress for the FY 1975 buy. Considering the varied requirements for AWACS the 34 aircraft proposed program appears prudent until a clearer indication of NATO's desires are received.

Three RDT&E AWACS aircraft, and the System Integration Demonstration (SID) aircraft, were funded in prior years; the first six production aircraft were funded in FY 1975. The $690 million included in the FY 1976 Budget for this program would provide $476 million for the procurement of six more AWACS, $15 million for advance procurement and $199 million to continue development of the system, including the Time Division Multiple Access (TDMA) digital data link and a minor modification to the mission system to provide an improved maritime surface surveillance capability. These first 12 production aircraft (six in FY 1975 and six in FY 1976) would be very useful even without the later "enhancements", but they (and the three RDT&E aircraft) will be retrofitted with them eventually.

The $85 million requested in the Transition Budget includes $55 million for continued development and $30 million for advance procurement. The $504 million requested for authorization in FY 1977 would provide $358 million for procurement of six more aircraft (all with the "enhancements"), $22 million for advance procurement, and $124 million for continued development. The additional U.S. and any NATO AWACS (with "enhancements") would be procured in FY 1978 and FY 1979, and the first 12 production aircraft, as well as the three RDT&E aircraft, could be modified to the final "enhanced" configuration at that time. Thereafter, further improvements would be incorporated as they are developed. This aircraft is expected to remain in the force for 20-30 years and during that time it will undoubtedly undergo essential configuration changes as the threat and operational requirements dictate.

SIDEWINDER AND SPARROW

In FY 1975-76 we will begin the procurement of new versions of both the SIDEWINDER and SPARROW air-to-air missiles. The SIDEWINDER is a short-range, infrared homing missile; the SPARROW is a medium-range, radar-guided missile which is also used as a ship-to-air missile for fleet air defense. The SIDEWINDER and SPARROW are the standard air-to-air missiles used by the tactical air forces of the Air Force, Navy, and Marine Corps.

The last procurement of the SIDEWINDER AIM-9H for the Navy was funded in FY 1975; the Air Force will procure AIM-9Hs in FY 1976 as a one time procurement. Initial operational test and evaluation of the new SIDEWINDER AIM-9L is scheduled to be completed this summer, and we plan to begin procurement of this new missile in FY 1976. The $114 million requested for this system in the FY 1976 and Transition Budgets would provide for completion of development of the AIM-9L, initiation of a product improvement development program, procurement of 1,510 AIM-9Ls (800 for the Navy and Marine Corps and 710 for the Air Force) and procurement of 800 AIM-9Hs for the Air Force. The $69 million requested for authorization in FY 1977 would provide for continuation of the product improvement development program and the procurement of 1,750 AIM-9Ls -- 750 for the Navy and Marine Corps and 1,000 for the Air Force.

We are also requesting $6 million for the Navy and $4 million for the Air Force to continue the effort to determine the efficacy of developing a follow-on short-range air-to-air missile (SRAAM) that will fulfill the future requirements of both the Navy and Air Force, and to define the configuration of that missile. We are aware that missiles of this type will be needed in large quantities and that the unit cost must be kept down to a level consonant with buying them in large numbers.

The problems encountered in the development of the new SPARROW AIM-7F have now been resolved, and the first production quantity of this missile has been procured with FY 1975 funds. The operational test firings conducted last year indicate that the AIM-7F has a significantly better performance and reliability than the earlier models of the SPARROW missile.

The $156 million requested in the FY 1976 and Transition Budgets would provide $13 million for the development of a new type of seeker for the AIM-7F and $143 million for the procurement of 980 missiles -- 360 for the Navy and Marine Corps and 620 for the Air Force. The $173 million requested for authorization in FY 1977 would provide $15 million to continue the development of the new seeker and $158 million for the procurement of 1,580 missiles -- 700 for the Navy and Marine Corps and 880 for the Air Force. The new seeker would be less costly than the current seeker and have a better discriminating capability against ground clutter as well as better ECM resistance. If successfully developed, it would be incorporated into the AIM-7F missiles on the production line.

Defense Suppression Weapons and Equipment

In addition to the specialized electronic countermeasures and defense suppression aircraft discussed above, we intend to pursue the wide variety of defense suppression weapons and equipment that were described to the Committee last year. Funds are included in the FY 1976 and Transition Budgets, and in the FY 1977 authorization request, to finance these efforts.

Virtually all of the air-to-surface weapons carried by our tactical aircraft can be used to attack ground air defenses. Some of these weapons, for example the MAVERICK and WALLEYE, have a stand-off capability, i.e., the attack aircraft can fire these missiles while remaining outside the range of the more limited ground air defense systems. Other weapons, such as the modular glide bombs, can be launched at the target from outside the range of SAMs.

Three tactical air weapons, STANDARD ARM, SHRIKE and HARM, are specifically designed for defense suppression. These anti-radiation missiles home on the emitting radar signals. In addition to procuring more of the current SHRIKE missiles, the Air Force is now completing the development and testing of an improved version of SHRIKE.

One of the important new developments in the defense suppression area, as well as for tactical air strikes against fixed targets generally, is the Precision Emitter Location Strike System (PELSS). This system, if successfully developed, would give us the long sought capability to locate precisely enemy defense radars and quickly direct strikes against them.

Passive Airbase Defense

The provision of hardened shelters for all NATO fighter, attack and reconnaissance aircraft in Europe has been a major objective of U.S. defense policy for more than a decade. The need for such shelters was dramatically demonstrated in the 1967 Middle East war where the Israelis, in a few hours, annihilated the unprotected Arab air forces and achieved absolute air superiority in the combat zones for the duration of the Six Day War. Subsequently, the Arabs built shelters for most of their aircraft. The Arab experience in the 1967 war was not lost on the Warsaw Pact nations. Since that time, the Warsaw Pact has built a large number of aircraft shelters. The NATO nations, including the United States, have moved more slowly, and we still have a long way to go to provide shelters for all of the fighter, attack and reconnaissance aircraft planned for deployment to Europe in the first few weeks of a mobilization.

Accordingly, we now propose to accelerate our program to provide the shelters needed for the USAF fighter, attack and reconnaissance aircraft we would deploy to Europe during that period.

As noted last year, at the urging of the U.S., the NATO Ministers approved in December 1973 the expansion of SACEUR's protection program to include a high percentage of U.S. rapid reaction aircraft scheduled for deployment to Europe. Some 615 shelters were funded by the U.S. and NATO in FY 1975 and prior years. Of the remaining shelters, some are currently eligible for funding through the NATO Infrastructure account. An extension of NATO eligibility for SACEUR Strategic Reserve aircraft is hoped for soon, and would provide more shelters through direct NATO funding. We are now negotiating with our NATO partners to expand the Infrastructure funding criteria to include shelters for the remaining USAF fighter, attack and reconnaissance aircraft earmarked for deployment to Europe in the first few weeks of a mobilization. Pending the completion of these negotiations, we plan to finance the shelters over a three year period, FY 1976-78.

Some $175 million is included in the FY 1976 Budget for 253 aircraft shelters, and $200 million is requested for authorization in FY 1977 for another increment of shelters. The remaining shelters would be funded in FY 1978. As I mentioned, we hope to recoup a large part of these outlays from the NATO Infrastructure account. These recoupments are reported to the Congress as they are received and are taken as credits against our future construction requirements.

Included in this program are other passive defense measures such as dispersal and camouflaging and the protection of POL storage areas, ammunition dumps, maintenance shops and similar facilities essential to the operation of our air forces in Europe. As a necessary complement to our program, we are continuing our efforts to encourage our NATO Allies to fund adequate shelters for all of their fighter, attack and reconnaissance aircraft planned for use in Europe.

E. MOBILITY FORCES

Mobility forces play a key role in our general purpose force structure. They provide the capability to resupply allies in a timely manner, to deploy forces quickly when and where needed, and to employ them flexibly once they reach their area of operations. These capabilities assist us in meeting our commitments and maintaining our national security with fewer forces deployed abroad. Our mobility forces include the strategic airlift forces of the Military Airlift Command (MAC) and of the Civil Reserve Air Fleet (CRAF), the sealift forces of the Military Sealift Command (MSC) and the U.S. Flag Merchant Fleet, the tactical airlift forces which have been recently transferred from the Tactical Air Command to MAC, and helicopter air logistics forces used for tactical logistics movements within a theater of operations. There are also some tactical airlift aircraft in the Navy and Marine Corps.

As noted earlier, the principal focus of our general purpose force planning is on the achievement of a stable conventional force balance in Europe. In our judgment, the in-place forces of NATO and the Warsaw Pact do not now give either side a clear margin of superiority. Should the Warsaw Pact choose to mobilize and reinforce their forces in central Europe, however, they would have two distinct advantages. First, we assume that they would move first, gaining time before we and our allies would clearly perceive the threat and react. Second, they would have a shorter and possibly more secure distance over which to move their reinforcements. These would consist primarily of Soviet divisions from the western military districts of the USSR. The principal source of NATO's reinforcements is U.S. forces based in the United States which must be deployed in some cases almost 5,000 miles across the Atlantic. Should the Warsaw Pact mobilize quickly and effectively, they could have a significant advantage in terms of forces available during the first few weeks of a confrontation.

The capability of our mobility forces to rapidly reinforce is a key factor in the capability of NATO to conduct a successful conventional defense. Moreover, a clearly perceived capability on our part to deploy forces rapidly greatly strengthens the deterrent to aggression against ourselves and our allies in Europe and elsewhere.

1. Strategic Airlift

Our military strategic airlift forces consist of four active squadrons of C-5As (70 UE aircraft) and 13 active squadrons of C-141s (234 UE aircraft). In addition to these active units, there are an equal number of C-5A and C-141 Reserve Associate Units (i.e., personnel without aircraft) collocated with the active units. When activated, these reserve units make possible a rapid increase in the rate of utilization of the active force aircraft. In peacetime, the reserve units contribute on a part-time basis to the operation and maintenance of the active force aircraft as part of their normal training.

In addition to these military assets, U.S. commercial airlines have committed 246 long-range aircraft to the Civil Reserve Air Fleet (CRAF). Of these, 156 are cargo or passenger/cargo convertible aircraft and 90 are passenger only aircraft. These aircraft would be available to assist in military airlift operations under conditions of mobilization or in a contingency serious enough to activate CRAF.

Strategic airlift plays a particularly important role in our commitment to the conventional defense of Europe. Our ability to deploy forces rapidly could do much to offset the Soviet Union's geographic advantage, particularly in the early weeks of a confrontation in Europe. Sealift also plays a crucial role and, over the long term, would account for the bulk of materiel movements. However, only airlift insures the delivery of combat forces in the opening weeks of a deployment. In addition airlift has the advantage of providing a visible, growing buildup starting with the first few days. Our capability to deploy forces in the first few weeks by air may well be crucial to the success of a NATO defense and indeed, it may deter an attack in the first place.

In order to improve our ability to rapidly reinforce NATO, we proposed last year a number of programs which would provide a major increase in the capability of our strategic airlift forces. We continue to believe that these programs are essential and we are proposing them again this year, with some changes based on our further study of the problem and the concerns expressed by the Congress last year. The proposed programs include an increase in the wartime utilization rates of the MAC force of C-5s and C-141s, modification of the C-141 force, and Government financing of modifications to civilian wide-bodied passenger aircraft. These programs in combination with other operational changes we have made or plan to make -- such as in-flight refueling of C-5s (we currently have over 77 air refueling qualified aircrews) and the limited employment of C-130s in a strategic airlift role during the early weeks of a major deployment -- would make possible a doubling of our wartime airlift capability.

Our current strategic airlift force, based on a detailed analysis, has the capability to move substantial quantities of equipment to Europe during the first 30 days following mobilization. In addition, the existing airlift and sealift forces could deliver the needed Army support equipment for units already in Europe and the equipment and support units for additional fighter/attack squadrons.

The added airlift capability resulting from all the proposed improvement programs would greatly increase the total tonnage we could deliver by air during the first 30 days. The added airlift capability would enable us to deliver additional DEs with their equipment and combat-essential support units. If we chose to use the additional airlift capability primarily for division equipment, relying on our sealift capability to deliver the support equipment, we could move even more DEs to Europe by M+30. We estimate that by M+40, sealift could have delivered large quantities of support equipment, ensuring adequate support for the combat forces. Sealift can move massive tonnages, but does not commence deliveries until after about two to three weeks following initial mobilization.

The total investment cost of the proposed airlift improvement programs would be about $1.5 billion and the additional annual operating cost, about $81 million. These amounts compare with an investment cost of about a half a billion dollars for an additional armored division and an annual operating cost of about $200 million for that division. Viewed in this light, the proposed airlift improvements, giving us the capability to employ more divisions by M+30, represent a highly economical means of improving our capability to mount a stalwart conventional defense in Europe.

C-5 and C-141 Wartime Utilization Rates

First, we plan to increase the overall (active and reserve) crew ratios for the military airlift force of C-5s and C-141s from 3.25 crews per aircraft to 4.0 crews per aircraft. These changes would permit us to increase the sustained wartime utilization rate of these aircraft from eight hours per day to ten hours per day and the initial 45 day surge utilization rate from ten hours per day to 12.5 hours per day. Associated with these crew ratio increases are increases in manning for maintenance personnel initially from existing behind-the-line resources and increases in war reserve spare parts stock levels needed to support the higher utilization rates.

In response to the concerns expressed by the Congress, we now plan to achieve these higher crew ratios primarily by expanding the Reserve Associate Units to the maximum extent possible. We believe that by 1978 we can recruit and train adequate reserve personnel to achieve a 2.0 reserve crew ratio for the C-141 force and a 1.75 reserve crew ratio for the C-5 force. Accordingly, we plan to maintain the current 2.0 active crew ratio for the C-141 force and to increase the active crew ratio for the C-5 force from 2.0 to 2.25. The reserve crew ratio increases will be phased through FY 1978, and in the interim, to provide the required capability, we plan to make up crew shortfalls through an auxiliary aircrew concept which utilizes active duty personnel who have been formerly qualified C-5/C-141 aircrew members. These crew members, along with supporting maintenance personnel, are presently serving in positions considered less critical during national emergencies and can be diverted to provide the additional resources. Also, as we gain experience with the auxiliary aircrew concept, and have the opportunity to observe its feasibility and cost effectiveness, we would then have the option of evaluating the extension of the concept.

This program would substantially increase our airlift capability during the first 30 days of a mobilization. The additional operating cost would be about $81 million per year for crews and maintenance manning when the program is fully implemented in FY 1978. As shown on the table beginning on the next page, a total of about $36 million is included in the FY 1976 Budget for the acquisition of the additional war reserve spare parts needed to support the higher wartime aircraft utilization rates. The additional operating costs would be $41 million in FY 1976, $12 million in the transition period and $63 million in FY 1977.

C-141 Modification

Last year the Congress approved prototype modification of the "stretched" version of the C-141. For most missions involved in the deployment of Army units, the C-141 is space, rather than weight, limited. Hence, by lengthening the fuselage we can increase the normal payload of this aircraft without significantly affecting its performance or operating cost. The difficulties encountered during the 1973 Middle East war convinced us that an in-flight refueling capability should also be added to enhance the flexibility and potential usefulness of these aircraft.

Accordingly, we propose to lengthen the fuselage by 280 inches, modify the wing fairings to improve aerodynamics, and install in-flight refueling equipment. These changes would increase the usable payload of the C-141s by about 30 percent, which is equivalent to adding approximately 80 C-141s to the force. This action would significantly increase our airlift capability during the first 30 days following mobilization.

The cost to modify the entire force of 275 C-141s is now estimated at about $660 million. The increase from last year's estimate is due to the stretching out of the program and to inflation. The Congress appropriated $25 million in FY 1975 to begin the prototype modification. Another $16.5 million is included in the FY 1976 Budget to complete the modification and testing. The $74 million requested for authorization in FY 1977 would permit the procurement of kits to start modification of the force.

Acquisition Costs of Major Mobility Forces Modernization and Improvement Programs 1/

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Strategic Airlift					
Procurement of Additional Replenishment Spares for C-5 and C-141 Aircraft	-	-	36	-	-
"Stretch" Modification to C-141 Aircraft to Increase Capacity	-	25	17	-	74
Modification of Civilian Wide-Bodied Passenger Aircraft to a Convertible (Cargo-Passenger) Configuration	-	-	22	24	124
Planning and Initial Engineering of C-5 Wing Modification	8 3/	3	22	10	38
Tactical/Logistical Helicopter Airlift					
Prototype Development of Advanced Medium STOL Transport (AMST)	25	56	85	11	45
Navy Carrier-Onboard Delivery (COD) Development/Procurement	1	1	4	-	151
Initial Engineering and Test of Army CH-47 Helicopter Modernization Program	-	3	10	3	10
Development/Procurement of Navy/Marine Corps CH-53E Helicopter	29	47	30	2	124

Acquisition Costs of Major Mobility Forces Modernization

and Improvement Programs 1/ (Cont'd)

(Dollars in Millions)

	FY 1974 Actual Funding	FY 1975 Planned Funding	FY 1976 Prop'd Funding	Trans. Period Prop'd Funding 2/	FY 1977 Prop'd for Authorization
Tactical/Logistical Helicopter Airlift (Cont'd)					
Advance Technology Component (ATC/Prototype) Development of the Army Heavy Lift Helicopter (HLH)	60	33	20	3	17

1/ Includes costs of RDT&E, procurement of the system and initial spares, and directly related military construction.

2/ July 1 to September 30, 1976.

3/ Funds originally provided for 3rd Fatigue Article, now reprogrammed to development of wing modification.

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Wide-Bodied Passenger Aircraft Modifications

As requested by the Congress, we have conducted a detailed review of our airlift needs and again we find that the modification of existing wide-bodied civilian passenger aircraft, giving them a convertible passenger-cargo configuration, would be one of the most cost-effective ways to acquire the additional increment of wartime airlift capability needed to support our NATO strategy. Therefore, we are again proposing to modify, at Government expense, existing commercial wide-bodied passenger aircraft, and to include them in the CRAF program.

The modification of the Boeing 747 passenger aircraft to a cargo-convertible configuration would involve installation of a nose visor door and either strengthening of the upper cargo floor or installation of a cargo floor weight distribution system for use with the current passenger floor. With the strengthened upper cargo floor these aircraft would be capable of carrying nearly all cargos which can be carried by the C-141 and would have a payload of about 75 tons. With the weight distribution system for the passenger floor they could carry more than 50% of the equipment items which can be carried by the C-141 and would have a payload of about 55 tons. The latter modification would cost less and would impose a lesser weight penalty on the aircraft in normal passenger operations. We anticipate that some airlines would prefer one version while others would prefer the other version. The cost of the modifications would be between $3 million and $7 million per aircraft, depending on which version of the modification was selected. These costs include compensation over the life of the aircraft (estimated at 10 years after modification) which we would have to pay to the airlines for revenue lost during conversion and for increased operating costs and revenue lost due to the added aircraft weight.

The long-range DC-10s could be modified with a side-loading cargo door and a strengthened upper cargo deck for about $4 million per aircraft. These DC-10s can carry a payload of about 50 tons. However, they are height limited and therefore can carry only about 70% of the equipment items which can be carried by the C-141; their range is also shorter than that of the 747.

There are now about 111 U.S.-carrier operated passenger 747s in service. Another 71 passenger and cargo 747s are operated by the airlines of our NATO Allies. In addition, U.S. airlines also operate about 77 DC-10s, but only about 24 are the long-range version. (The wide-bodied Lockheed 1011 is too short-range to be considered in this context.)

We are currently negotiating tentative agreements with the U.S. airlines to make their 747s and DC-10s available for modification and then to operate them as part of the Civil Reserve Air Fleet. In addition to the modification of the aircraft, we must also develop and procure the new Material Handling Equipment (MHE) needed to load and unload military equipment expeditiously. In contrast to the C-5 and C-141, whose main cargo decks are at about truck-bed height, the main cargo decks of the 747 and DC-10 are about 16 feet above ground level. The cost of acquiring the new MHE, however, would be relatively small in relation to the cost of modifying the aircraft.

A program to modify over 100 of these aircraft would significantly increase our capability in the first 30 days of mobilization. The cost to the Government for this program is estimated at about $6800 million. The first increment of $22 million is included in the FY 1976 Budget, another $24 million is included in the Transition Budget, and $124 million is requested for authorization in FY 1977.

The Defense Department has relied for some time on the U.S. maritime industry to provide the bulk of our sealift forces in a time of national emergency. The Congress, in recognition of this fact, has authorized subsidies for the shipping industry to ensure the availability of these assets in emergencies. We believe that similar reliance can be placed on the civil sector for airlift support in emergencies, now that large numbers of wide-bodied, long-range aircraft suitable for use in military unit deployments are available. Reliance on the civil sector for our emergency lift needs permits us to achieve savings in procurement and, even more significant over the long term, savings in operating and maintenance costs.

C-5A Wing Modification

As discussed in last year's Report, we have known for some time that the service life of the C-5A would fall significantly short of the design goal of 30,000 hours. Last year we estimated the C-5 wings would have a service life of 17,000 to 20,000 hours. Events since then have convinced us that their service life will be closer to 9,500 to 13,000 hours and that the required wing modification must be more extensive than originally estimated. More important, at the rate the C-5 aircraft are accruing fatigue damage, the force will begin to reach a damage accumulation point in 1979, at which time some of the aircraft would have to be grounded. Thus, action must be taken now to develop and test the necessary wing modifications.

With the concurrence of the Congress, we plan to redirect the efforts on the third C-5A fatigue test article to have it built in the modified configuration and reprogram $3 million to initiate design engineering and testing of the wing modification. The remaining $8 million required to finance the program through FY 1975 would be made available from previously approved test article funds. We estimate that the cost of modifying all of the C-5As will amount to about $900 million. We have included $22 million in FY 1976, and $10 million in the transition period and $38 million in the FY 1977 authorization request for this program. The C-5A plays such a key role in our airlift capability that we have no alternative but to take the necessary steps to ensure, once and for all, the long-term availability and reliability of these critical aircraft.

2. Sealift

Nine charter tankers for the Military Sealift Command are being acquired through a build-and-charter arrangement and do not involve any capital investment by the Defense Department. These tankers are relatively small shallow draft ships used primarily to transport POL into smaller, less developed ports. All nine are scheduled to be available to the MSC-controlled fleet by the end of this fiscal year.

Last year it was planned to acquire two multi-mission ships, also through a build-and-charter arrangement. However, a lack of response from the shipbuilding industry, because of the limited number of ships contemplated, has caused this program to be deferred until a new approach can be devised.

Notwithstanding our current emphasis on strategic airlift, we will still need a substantial sealift capability to assist in the movement of unit equipment and to sustain and augment the forces initially deployed by airlift. Even in a NATO-Warsaw Pact conflict, some of the deploying forces would have to move by sea, as would the bulk of the resupply for all of the U.S. forces already deployed.

Since the capability of the DoD-controlled sealift is probably insufficient to support even a minor contingency in a timely fashion, heavy reliance will have to be placed on the U.S. Merchant Marine and in the case of a NATO conflict, on the commercial fleets of our NATO Allies as well.

The sealift problem is not so much a matter of total capacity as it is of early availability of suitable ships. Given sufficient time to assemble the ships, the U.S. Merchant Marine, augmented by a significant number of NATO flag ships, could provide more than enough sealift to meet even the most demanding NATO contingency.

Consequently, the principal emphasis in this area has been placed on early availability, not only in a mobilization declared by the President, but also for lesser contingencies not involving mobilization.

With regard to the mobilization contingency, our NATO Allies have committed NATO flag ships to assist in U.S. deployments if needed. These are Allied ships which frequent U.S. east and gulf coast ports, and which are "earmarked" in peacetime to facilitate their early availability upon the declaration of NATO mobilization and the activation of the NATO Defense Shipping Executive Board which would control the NATO shipping pool during wartime.

With regard to minor contingencies not involving the declaration of a mobilization by the President or the Congress, the MSC under the Sealift Readiness Program has obtained commitments from the commercial shipping lines to make ships available in such a contingency, with at least half to be available in the first 30 days. One of the key difficulties inherent in this program is the risk that operators would lose some portion of their business on the regular trade routes to other U.S., as well as foreign, lines if they took their ships off those routes for any substantial period of time. During the Vietnam conflict, we were still able to draw on the Victory ships in the National Defense Reserve Fleet (NDRF), and there was still a large number of World War II-built ships in the Tramp fleet. Now, however, the Tramp fleet is just about gone, and the 130 ships presently in the NDRF are well past 30 years old.

It is apparent to us that we need a capability of the sort now represented by the NDRF. A revitalized NDRF would fit in well with the Sealift Readiness Program. We would have to rely on the berth line industry only during the initial stages of a non-mobilization contingency, until the NDRF ships could be broken out of the reserve and placed back in service. This arrangement would limit the deleterious effect on the competitive position of the berth line operators. The Defense Department, together with the Maritime Administration, is working on a program to revitalize the NDRF. In addition, we are studying potential improvements in the Sealift Readiness Program, the NDRF and the MSC to provide greater assurance that we have the capacity to meet our sealift requirements in a timely manner in situations short of mobilization. One of these potential improvements could be the provision of a small group of relatively modern ships in a ready reserve status under MSC to enhance our quick reaction surge capability.

3. Tactical Airlift

Overall, our Air Force tactical airlift force will remain relatively constant, but we plan to increase reliance on the Reserve Forces. The active force will be reduced by two squadrons in FY 1976, from 17 (325 aircraft) to 15 (283 aircraft). The aircraft from these two squadrons will be used to modernize the Air Reserve Forces.

Also to cut overhead, we now propose to eliminate the small tactical airlift forces currently operated by the Navy and Marine Corps and reorganize the large airlift forces assigned to the Air Force to meet the needs of the Navy and Marine Corps. The general airlift portion (C-130, CT-39, C-9 and C-118) of the Navy fleet tactical support squadrons, both active and reserve, and the Marine tactical support airlift aircraft (C-117, C-8, CT-39 and C-9) would be phased out in FY 1977. The Carrier Onboard Delivery (COD) aircraft and the Marine KC-130 aerial tankers will be retained. Aircraft now assigned to the Navy and Marine Corps tactical airlift mission will be allocated to unique Navy and Marine Corps support missions or retired.

To increase the ability of the Air Force to respond to the added requirements, we have transferred the C-130 tactical airlift forces of the Tactical Air Command and the Unified Commands to the Military Airlift Command (MAC). MAC will also be the gaining command, upon mobilization, for the Air National Guard and Air Force Reserve airlift forces.

This reorganization will place all DoD strategic and tactical airlift assets under a single manager for airlift, thereby increasing our ability to exploit fully the inherent flexibility of airlift. The Navy and Marine Corps have provided estimates of their airlift requirements to the Air Force which is developing a plan to meet their needs. The plan will be reviewed by the Services and Joint Chiefs of Staff prior to its implementation in FY 1977, to ensure that adequate, responsive airlift is provided to all the Services and theater commanders.

It should be emphasized that it is not our intention to reduce the airlift support provided to the Navy and Marine Corps nor to eliminate their organic support aircraft. On the contrary, the airlift service provided to them should be equal or better. The objective of the reorganization is to utilize the Air Force airlift assets more effectively for the benefit of all of the Services, while at the same time realizing some economies through the elimination of redundant support forces. We anticipate a saving of more than $600 million in new aircraft procurement and operating costs over the next five years as a result of this consolidation.

<u>AMST</u>

While the C-130 has been an effective aircraft, it has limitations in meeting the current and future tactical airlift requirements. Thus, we believe that tactical airlift modernization will be needed, sometime in the early 1980s. The objective of the Advanced Medium STOL Transport (AMST) prototype program is to demonstrate new STOL technology and operational utility and provide an option to replace not only the C-130, but also the current STOL aircraft, the C-7 and C-123.

The two contractors involved in the AMST program, Boeing and McDonnell Douglas, are each building two prototypes and are using different powered lift concepts for achieving improved STOL performance. Because of their different technical approaches to powered lift, the fabrication and testing schedules of the two contractors differ. Testing of the McDonnell Douglas prototype will be completed in November, 1976, and the Boeing prototype in August, 1977.

Two of the principal objectives of the prototype program are to obtain data on costs and operational factors associated with short field performance, and to define engine and airframe characteristics which would substantially reduce maintenance support requirements. As a practical matter, until the flight test phase of the prototype program is completed, cost-effectiveness analyses must be based on engineering data. For an engineering development/production decision, we think it would be prudent to withhold the decision until the results of the flight tests become available.

About $96 million has been included in the FY 1976 and Transition Budgets for the AMST program. The bulk of these funds would be devoted to final assembly and testing of the prototypes. For FY 1977, we are requesting an authorization of $22 million to complete the prototype phase. The total cost of the four prototypes is now estimated at $230 million.

Carrier Onboard Delivery (COD)

As mentioned earlier, the Military Airlift Command will provide tactical airlift support between land bases for all Services. The Navy, however, will continue to operate the Carrier Onboard Delivery (COD) aircraft for the rapid delivery of high priority personnel, cargo and mail to the carriers at sea. Currently, the COD force consists of 12 C-2s and about 30 aging C-1s. By 1980 the C-1s will be 24 years old and will have to be retired, leaving only the 12 C-2s. That force would be too small to support the carrier forces during contingencies or mobilization operations. Therefore, replacement aircraft will be required.

We have been evaluating several alternatives for the COD mission for some time. As yet no firm decision has been made but none of the alternatives appears to provide an acceptable balance between budgetary restraints and operational requirements. Accordingly, we have included $4 million in the FY 1976 Budget for the Navy to examine other alternatives for the COD mission. The $160 million requested for authorization in FY 1977 is based on the assumption that a decision to procure a COD replacement will be made later this year.

4. Helicopter Air Logistic Forces

In addition to strategic and tactical airlift forces, the DoD maintains medium and heavy lift helicopter forces for air movement of troops, equipment and supplies within a theater of combat operations. This force includes the Army's CH-47 and CH-54 and the Marine Corps CH-53A/D helicopters.

CH-47 Modernization

In FY 1976 the Army will have 434 medium lift CH-47 helicopters of which 51% will be A and B models. In the early 1980s the CH-47 A/Bs will be about 15 years old and without some modernization will be reaching the end of their expected service life. Therefore, to maintain the needed vertical lift capability through the 1980s, the CH-47 A/Bs should be either replaced by a new helicopter or modernized. After examining the medium lift capability needed and cost involved, we chose the latter approach. The modernization program we plan to pursue will not only extend the service life of the CH-47 A/Bs, but will also provide needed improvements in payload, maintainability, safety and reliability. In order to continue this modernization program, which we started in FY 1975 for $3 million, we have included $13 million in the FY 1976 and Transition Budgets and $10 million in the FY 1977 authorization for engineering development and testing of the desired modifications to the CH-47 A/B.

CH-53E

To provide the Marine Corps and Navy with a shipboard compatible heavy lift helicopter, we plan to continue the development of the CH-53E. Phase I (advance development) is nearly complete and we expect to initiate Phase II (engineering development) in March. Phase II, which is scheduled for completion in November, 1976, will include development and testing of two production prototype aircraft. Some $30 million is included in the FY 1976 Budget to complete Phase II and to procure long lead time items for the first production aircraft. The $124 million requested for authorization in FY 1977 would provide for the procurement of the first 17 CH-53Es in addition to some long lead time procurement.

Heavy Lift Helicopter (HLH)

The current Army helicopter used for heavy lift is the CH-54, which has a lift capacity of about 10 tons. The Army has been developing advance technology for a new helicopter, the HLH, which can lift about 22.5 tons. We had envisioned that this helicopter would be used by all the Services to satisfy heavy vertical lift requirements which cannot be satisfied by the current helicopter forces. After a detailed review of the HLH program, however, we have decided that its cost in relation to other higher priority needs would be too high. Accordingly, we propose to complete the advanced technology phase, including the flight test of all components on one prototype, to assess the applicability of HLH components to other helicopter programs (e.g., UTTAS and CH-47 modernization), provide the Government with improved technology at the lowest cost, and advance industry expertise in heavy lift helicopter components. Upon completion of that phase, the HLH program would be terminated. The $23 million included in the FY 1976 and Transition Budgets and the $17 million requested for authorization in FY 1977 would complete this program.

IV. OTHER MAJOR PROGRAMS

In addition to the force-related programs discussed above, there are a number of other major programs which account for a large part of the Defense Budget. They include Intelligence; Command, Control and Communications; Research and Development; Central Supply and Maintenance; Training, Medical and Other General Personnel Activities; Administration and Associated Activities; and Support of Other Nations. Inasmuch as many of the more important R&D projects have already been discussed in connection with the force-related programs, and many others will be covered by the Director of Defense Research and Engineering in his appearance before the Committees, there is no need to deal with the R&D program here.

A. INTELLIGENCE

The Defense Department intelligence and security programs consist of cryptologic and general intelligence activities. Because of the sensitivity of specific intelligence activities, however, only a general discussion can be provided here.

During the past five years, Defense intelligence manpower has been reduced substantially and further reductions are programmed over the next several years. These manpower reductions have been achieved for the most part by consolidating certain intelligence activities worldwide, modernizing operations to a maximum degree consistent with advances in research and development, and streamlining headquarters and staff support. As an example, we have introduced computer-assisted collection and processing devices and other automated data handling systems which are designed to relieve manpower-intensive efforts. To ensure continued mission effectiveness, manpower reductions will be accomplished by holding mission reductions to the minimum possible to lessen the operational impact on the intelligence consumer. Automated systems are being introduced in a time-phased manner during the manpower drawdown process.

We need to provide more timely intelligence support to our theater commanders, and the fulfillment of this need has become one of our primary goals. We have invested resources in centralized intelligence facilities and activities in recent years and we must ensure that the time-sensitive intelligence and warning information produced from these systems is made available promptly to the theater commanders. This intelligence information will enhance the commander's capability to make time-critical decisions during combat or periods of increased tension. Funds are included in the FY 1976 Budget to provide increased support in this area.

Another major problem which should be resolved without further delay is the consolidation of major Defense Intelligence Agency analytical facilities which are currently dispersed in the Washington area. DIA is responsible for providing timely and accurate intelligence information to the Secretary of Defense and the Joint Chiefs of Staff, but has been conducting important analytical responsibilities under extremely poor working conditions and unsatisfactory communications linkages. Accordingly, we are requesting military construction funds in the FY 1976 Budget for a new building to bring together the analytical workforce, improve overall production management, and reduce the number of personnel required. Consolidation will enhance DIA's capability to provide sound and timely estimates, particularly during rapidly developing crisis situations.

Finally, analyst professionalism has become of critical importance for the success of the intelligence production effort. These circumstances require that we upgrade the quality of professional defense intelligence analysts and actions toward this end are underway. We have initiated a vigorous career development program to attract and retain professional military and civilian analysts. This will be a continuing program and one that is important to our future success.

B. COMMAND, CONTROL AND COMMUNICATIONS (C^3)

An adequate and secure system of communications is not only essential for the administration of the Defense establishment in peacetime, it is also vital to the command and control of our forces in wartime. Hence, this section deals primarily with the C^3 portions of the overall telecommunications program.

The United States Department of Defense must have a "central nerve system" to command and control its military forces wherever they may be deployed around the world. This system must be sufficiently flexible to adapt quickly to changes in national policy objectives, strategies, force deployments, technology, and threats. This process must encompass the key elements of the system, including procedures for the command and control of our forces, as well as the necessary supporting computer and communications systems.

C^3 must be integral to our force structure, must adapt to changing circumstances, and when stressed or under attack must degrade in a manner which ensures the survival of the most vital functions. The C^3 system must continuously convey information on the nature and scope of the threat, and the status and availability of U.S. and Allied forces, to command authorities in a form that facilitates their decision-making; pass action directives to those forces; and provide the National Command Authorities (NCA) information on the results of the directed actions.

The provision of information to the NCA is of particular importance to maintain control over any possible escalation of a conflict, a basic tenet of our nuclear policy. The national decision makers need timely, accurate feedback information on the battle situation, such as the effect of attacks and force status of both sides. Thus, emphasis is required on reliable links from the forces as well as to the forces for the transmission of command messages.

Force reductions as a result of SALT agreements and budget reductions dictate more efficient utilization of the remaining forces. Because efficient force utilization often is limited by existing C^3 capabilities, increased emphasis on improved C^3 is essential to maintain overall force effectiveness.

Our present C^3 resources have not been systematically designed to accommodate today's complex C^3 requirements. In general, they were introduced in response to specific changes in the threat or to take advantage of a particular technology. As a result the overall C^3 system is not as thoroughly integrated as it should be. Although there will always be a need for specialized sub-systems to serve certain unique functions, such as the command and control of our strategic forces in a nuclear war, our basic C^3 system should be planned within an overall system framework to serve all of the needs of the Defense establishment, ranging from a response to a crisis situation to all-out nuclear war.

In moving toward a more systematic approach to our C^3 needs, a number of corrective actions have been taken. Two important organizational actions taken were the establishment of the Worldwide Military Command and Control System (WWMCCS) Council and the creation within OSD of the Office of Director, Telecommunications and Command and Control Systems (DTACCS). In February, 1974, a decision was made to develop a master plan, an "architecture", for a system based on the identification and satisfaction of our most urgent C^3 needs, to the extent technology and the reasonable application of Defense resources would permit. The efforts to identify these C^3 requirements and to develop the architectural options to satisfy them are now underway. In order to implement the option selected by the WWMCCS Council, we will designate an organization within DoD to engineer and manage the achievement of the C^3 system capabilities, and to do whatever additional architectural work which may be required.

The primary objective in designing our telecommunications system is to provide the capability for secure command and control of our forces in crisis situations and war contingencies. It must be borne in mind, however, that there will always be a requirement for day-to-day operational, logistic and administrative communications. The systems provided to satisfy these requirements are multi-user, general purpose systems for voice, written message and data traffic and they form the backbone grid of our communications network. To minimize the need for costly, duplicative systems for purely command and control purposes, these general purpose systems have been provided a capability to recognize messages of varying priority so that in times of crisis important command and control messages can be accorded precedence over more routine traffic.

A certain minimum telecommunications capability, however, must be able to survive a full-scale nuclear surprise attack. It would be too expensive to provide all of our general purpose systems with that degree of survivability. Therefore, the provision of some special purpose C^3 systems, such as those discussed in connection with the strategic forces, cannot be avoided. The collection of most survivable systems providing capability to transmit command information to our nuclear forces is known as the Minimum Essential Emergency Communications Network (MEECN). Wherever feasible, however, the special purpose systems are designed to use appropriate segments of general purpose systems. Thus, the special purpose C^3 systems are essentially sub-sets of, or adjuncts to, the general purpose C^3 system. Inasmuch as the special purpose systems have already been discussed in the Strategic Forces section, the following discussion will deal primarily with the general purpose systems.

1. General Purpose Systems

The general purpose C^3 systems perform telecommunication and teleprocessing functions in both peacetime and wartime, and provide the backbone grid for the interconnection of fixed bases, aircraft in flight, and mobile tactical forces on land and sea. Although not hardened, they enjoy some degree of survivability because of the many alternate routes available between fixed facilities and mobile/transportable equipments. Some of the more significant general purpose systems and their critical requirements for improvement are discussed below.

Defense Communication System (DCS)

The DCS is a single worldwide complex comprised of communications facilities, personnel, and materiel within the Department of Defense down to but not including: (1) mobile and transportable facilities and tactical networks organic to field armies, fleets, air forces, and fleet marine forces; (2) post, camp, base, and station terminal facilities; and (3) those on-site communications facilities associated with, or integral to, weapon systems, e.g., MINUTEMAN, POLARIS, SAFEGUARD. It includes the assets of the Defense Satellite Communications System (DSCS) except portions that are specifically designated as primarily tactical in nature. Also included are communications which interconnect the primary and alternate fixed or mobile command posts of the President, the Secretary of Defense, the Joint Chiefs of Staff, and the unified and specified commanders.

DCS transmission sub-systems include a variety of facilities and equipments which provide communication links via high frequency radio, microwave radio, tropospheric scatter, leased and Government-owned submarine cable, and satellites. DCS transmission facilities are located on five continents and provide millions of miles of communications. Only a few of these circuits, however, are capable of carrying high quality secure speech, and major sub-system upgrading is planned for both military and commercial equipments in order to expand that capability.

The DCS switching sub-system consists of the Automatic Voice Network (AUTOVON), the Automatic Secure Voice Network (AUTOSEVOCOM), and the Automatic Digital Network (AUTODIN). The AUTOVON is a worldwide direct-dialing non-secure telephone service provided by 69 automatic switches in the U.S. and Canada and 17 switches overseas. Three U.S. switches and one Canadian switch are to be eliminated by June 30, 1975.

Seventeen thousand subscribers are served by these switches, which are interconnected by nearly eight thousand circuits. Secure voice service, although limited in both capacity and quality, is provided to selected users via the AUTOSEVOCOM worldwide secure voice network. Approximately 1,600 subscribers are currently served by the 126 Government-owned switches, most of which are the small, manual type. The Phase II Secure Voice Program will expand secure voice service and provide direct dialing to replace the present cumbersome manual switching.

Written message communication is provided by AUTODIN, a world-wide high-speed computer-controlled general purpose communication system. The system serves about 1,500 subscribers through 19 switches (9 leased in the U.S. and 10 Government-owned overseas) interconnected by 49 trunks. In contrast to the AUTOVON voice switching network, the AUTODIN message system is and has been 100% secure from its beginning.

Significant personnel and operating cost savings were achieved in 1972-73 by the integration of the Defense Special Security Communication System (DSSCS), which served the intelligence community, into AUTODIN. The DSSCS was a manual system and lacked the speed of service of the computerized AUTODIN system; moreover, it required duplicate circuits generally paralleling the AUTODIN trunks. The two networks were integrated, with better speed of service to DSSCS users and with no adverse impact on AUTODIN service.

While the current AUTODIN system has provided significant improvements in both speed and efficiency of service, the continued growth of AUTODIN traffic and the requirement for interactive query and response between remote subscriber terminals and computer data banks make it essential to expand the capability of this type of service. Plans are being prepared to address this need.

Planned reductions in the AUTOVON, AUTODIN switched networks will provide more efficient networks at reduced costs, assisting the financing of other DCS operating network improvements.

Satellite Communications

Communication satellites offer unique capabilities for military command and control. Unlike fixed facilities, which require much time and effort to install, satellite systems permit the quick establishment of communications, using terminals that can be recovered and redeployed as conditions change. Small shipboard and airborne satellite terminals are now being developed and when produced will bring the advantages of reliable communication over long distances to mobile weapon platforms.

The flexibility with which satellites can solve complex military operations problems has been demonstrated by the initial operational Defense Communication Satellite System and the experimental Tactical Satellite Communication System (TACSATCOM). This experience has enabled us to identify a number of satellite requirements, including global command and control, transmissions of intelligence data, communications with nuclear forces, fleet communications, and communications for mobile ground forces. We plan to satisfy these requirements, to the extent feasible, with multi-user general purpose systems employing primarily two kinds of operational satellite systems.

The first of these systems, the Defense Satellite Communication System (DSCS) Phase II, will serve primarily fixed terminals requiring many circuits. The two Phase II satellites launched in 1973 are now being used operationally by 54 U.S. terminals deployed around the globe, and by the United Kingdom and other NATO Allies on a shared basis. Two more Phase II satellites will be launched during the current fiscal year and funds for the procurement of the first of the system's replenishment satellites are included in the FY 1976 Budget.

The second system, which is being developed under the Navy Fleet Satellite Communication System (FLTSATCOM) program, is intended to serve primarily the mobile terminals on ships and in ground units, that is, to provide interconnection between fleet units and between ground forces. This system is an operational follow-on to the TACSATCOM experiment. Some of the transportable terminals will be available in early 1975, but due to delays in the spacecraft development, initial satellite launches probably will not occur until early 1977. To fill this gap, the Navy has arranged for lease of a securable limited satellite relay capability from the COMSAT Corporation to serve the growing terminal requirements until the FLTSATCOM spacecraft are launched.

Tactical Communications

The present tactical communication equipments of the Services are becoming increasingly inadequate to meet the more demanding command and control requirements. To deal with this problem on a joint basis, the Joint Tactical Communications Office (TRI-TAC) was established. Reporting directly to the Secretary of Defense, this organization has the responsibility for joint service tactical system architecture and for supervising the development of equipments to satisfy future requirements. The tactical communications system is to be specifically engineered for joint use in order to economically and effectively solve multi-service problems and prevent a proliferation of independent Service systems.

One of the principal new tactical equipments is the AN/TTC-39, a transportable modular switch that will interconnect various types of current and planned multi-media, multi-Service communications systems. The automatic switching of secure telephone calls and written message traffic will permit significant reductions in the number of telephone operators and message center personnel and provide end-to-end security for subscribers using the associated communication security equipment. It is our goal to design this secure switch to satisfy not only the tactical forces' needs but also the secure voice requirements of the overseas Defense Communication System.

Secure Voice

A new generation of Communication Security (COMSEC) equipments has been made possible by recent advances in solid-state micro-circuit technology. These new equipments are miniaturized, reliable, easy to maintain, and offer some revolutionary security and operational capabilities, but they will require considerable investment. Consequently, we have programmed equipment acquisition over a period of years.

Comparable integral COMSEC equipment is being developed to operate in conjunction with the AN/TTC-39 TRI-TAC automatic switch to secure the telephone circuits used by tactical forces in the field. Like the radio COMSEC equipments, the secure telephone equipments will provide good quality voice reproduction.

New generation equipments will be required to implement service via the Phase II Secure Voice Network. A Narrow-Band Secure Voice Consortium of Government and industry experts in speech compression technology has been formed to work on this problem. Candidate equipments which have demonstrated the capability to provide good quality speech over present circuits are currently undergoing competitive testing to select an equipment for production and deployment.

2. Theater Command, Control and Communications

Command and control of our forces in Europe pose certain unique problems in that they must operate as part of an alliance force. While a certain minimum unilateral U.S. C^3 capability for such purposes as the control of forces not committed to NATO in wartime and the control of nuclear weapons in both peacetime and wartime is essential, we want to utilize, to the maximum extent feasible, the existing and planned NATO C^3 capabilities in Europe. It is essential, however, that this minimum unilateral C^3 system be in place, efficient, and exercised regularly in order to guarantee the successful introduction of forces earmarked for Europe but based elsewhere in time of crisis, as well as provide for the command and control of forces already there.

We are undertaking several initiatives in Europe to integrate further NATO's C^3 capabilities and to minimize duplicative national systems. The partial interconnection of NATO and U.S. general purpose systems, U.S. participation in a communications improvement program in the Central European Region, and the possible use of U.S. general purpose C^3 systems by NATO are some examples of these initiatives. Given the nature of multi-national negotiations and industrial competition existing within the NATO community, these programs cannot be accomplished as expeditiously as unilateral programs, but they will be pursued vigorously.

The Army is now leading a joint effort to examine the overall C^3 posture in Europe and to recommend options for C^3 improvement, particularly for command and control of theater nuclear forces. The final report, which is due in April, 1975, will specifically identify the funding requirements for these improvements. In order to provide greater visibility for these funds, a new program element, "RDT&E and procurement resources designed for improvement of nuclear-related command, control and communications in Europe", was established last year.

Army initiatives already underway to improve the C^3 of theater nuclear forces involve the development and fielding of several ultra-high-frequency single channel satellite ground terminals. Initially employing the Gap Filler UHF space segment, and ultimately the AFSATCOM

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space segment, these terminals are planned to provide a satellite communications capability to assist in the improvement of this C^3 problem in Europe.

In the Pacific, where limited forces must be applied with maximum effectiveness in the vast expanses of the Pacific and Indian Oceans, an efficient C^3 system is extremely important. Joint action is now in progress within CINCPAC, similar in nature to that underway for Europe, to identify specific requirements. Inasmuch as the geographic character of the Pacific command is vastly different from that of Europe, certain unique requirements may be identified, but they, as well as European requirements, will be considered within the overall C^3 framework and will be molded into an integrated system.

C. CENTRAL SUPPLY AND MAINTENANCE

Approximately 30% of the total Defense resources are devoted to logistics functions of one sort or another -- repair of weapon systems, equipments and their components; warehousing and distribution; equipment modification, etc. These activities are conducted at virtually all levels of the Defense establishment, from the operating units up through the central depots and shipyards, and to some extent including private industry. Of the total resources consumed by this great aggregate of logistics activities, about 40% are included in this major program, i.e., the resources for depot maintenance (other than maintenance of ships) and the operation of the central supply, procurement, warehousing, and distribution systems. Ship repair and overhaul, and all maintenance and supply activities performed by units organic to the operating forces, or by units directly supporting the operating forces, are not included in this 40% but are accounted for in the force-related major programs.

Our supply and distribution operations consume a relatively small proportion of our logistics funds, compared with the really critical maintenance and modifications area. This discussion, therefore, is focused on the maintenance area, including ship overhaul and repair which for programming purposes is considered a part of the Navy General Purpose Forces Program.

Nearly 12% of the Defense budget is spent directly or indirectly on the maintenance of equipment. Another 5% is devoted to modernizing and otherwise upgrading the capability, maintainability and reliability of equipment. The combat capability of the weapon systems employed by our forces, expecially those which are technologically complex, is directly dependent upon the quality of their maintenance. Moreover, for an aircraft to be capable of performing its combat mission, all of its sub-systems (e.g., radars, fire control computers, communications, electronic countermeasures systems) must work reliably. Most routine maintenance of these sub-systems is done by replacing "piece parts" or exchangeable components. Hence, component repair is an essential part of the total maintenance effort. Indeed, repair of exchangeable components costs between one-fourth and one-sixth as much as purchasing new components. While depot maintenance is fundamental to the structural integrity and long-term reliability of primary equipments, an adequate stock of operational spare components is essential to organizational and intermediate level maintenance, the levels responsible for the operational availability and full-systems capability of weapons and equipment on a day-to-day basis.

By and large, the materiel readiness of our forces is not satisfactory, notwithstanding the valiant efforts of the military services. Inflation, shortages of skilled labor, aging major items of equipment, higher priorities, all have taken their toll. So, once again, we must make a concerted effort:

-- To improve the often unsatisfactory mission-ready and full-systems capability rates which we are now experiencing;

-- To ensure that the Defense Department spends no more than is necessary to provide the materiel maintenance and operational activity levels required to ensure acceptable combat readiness.

More specifically, the Services have been directed to reexamine their equipment maintenance policies and bring them into conformance with the reliability-centered maintenance concepts first developed and employed in the space program and by the commercial airlines for their wide-bodied jet transports. These concepts involve the monitoring of equipment failure patterns and the elimination of all maintenance actions which do not improve or restore the reliability of the equipment. Through the application of such methods, commercial airline maintenance costs per flight hour have declined by as much as 30% while flight safety has improved. Although the need to be prepared for wartime operations may not always permit the armed services to achieve such large savings, significant benefits have already been realized in selected submarine and aircraft maintenance programs where these concepts have been applied.

Further, the Services have been directed to review once again their central logistic support structures to be sure that they are scaled appropriately to the changes which have taken place in the size and composition of our combat forces. This is a problem which requires a continuing effort. We cannot afford to maintain facilities that have become excess to our needs due to changes in our forces.

Finally, additional funds have been included in our budget requests to reduce the unfunded repair backlog of reparable components which fail and have to be replaced in day-to-day operations. The current value of unserviceable but reparable spare components required for approved force acquisition objectives now exceeds $2 billion. These items, plus the majority of those which will fail during the current and budget years should be repaired by the end of FY 1976. The lack of serviceable components has significantly reduced mission readiness and full-systems capability. It is not unusual to find aircraft maintenance personnel in some operational units devoting as much as 20-25% of their time cannibalizing parts from one aircraft to use on another. Both the Air Force and the Navy have taken steps to improve the management of operational spare components in an effort to reduce such cannibalization. Any permanent improvement in this area, however, will require a major reduction in the existing backlogs of failed components awaiting repair.

Inasmuch as aircraft and ships account for the greatest part of DoD's total maintenance workload and costs, they warrant a more detailed discussion.

1. Aircraft Maintenance

The Defense Department, as recent GAO reports on readiness have made clear, has not been able to support at satisfactory levels the full-systems readiness of its aircraft and, hence, their readiness for combat. We believe that the systematic application of reliability-centered maintenance concepts will help greatly to solve this problem, with no degradation in safety, and no increase in cost.

The Air Force has applied some of these concepts to depot maintenance through its Maintenance Requirements Review Board, and as a result has increased the average interval between airframe overhauls by nearly 50% while also reducing the scope of work by about one-third. Similarly, the Army has been able to reduce UH-1 airframe depot maintenance requirements by about 25% during FY 1975. The Navy applied these principles on an experimental basis to the organizational maintenance of a P-3 ASW squadron; based on a six month evaluation, the scheduled maintenance man-hours were reduced by 40% and the scheduled maintenance down time by 70%, while full-systems capability increased markedly. The experiment was so successful that the program has now been extended to all P-3 aircraft.

It should be emphasized, however, that such basic changes in maintenance policy and planning cannot be accomplished quickly; they must be based on time-consuming reliability engineering analyses. All three Military Departments have projects underway to extend further the application of reliability-centered maintenance concepts on all levels. Our goal is to apply these concepts universally throughout the Defense Department by the end of FY 1978.

As they are extended, funds should be freed for reducing the backlog of aircraft depot maintenance and accomplishing needed equipment modernization.

2. Ship Maintenance

Surface ships are already in such generally poor materiel condition and have operated under such tight financial and manpower constraints for so many years, that even with the increased funding which we are programming, the backlog of badly needed maintenance will remain well above desirable levels through FY 1980. This problem has been aggravated by the abnormal rate of inflation and as a result, this backlog of deferred maintenance has been increasing each year from 17 ships in FY 1971 to 74 ships in FY 1975, even with a sharply reduced number of ships in the force. This situation is depicted in the following table:

	FY 74	FY 75	FY 76	FY 7T	FY 77 a/
Number of Ships Overdue for Overhaul at End-Fiscal Year	49	74	59	59	60
Number of Ships Entering Overhaul in Fiscal Year	105 b/	105 b/	107	26	97
Value of Workload in Backlog of Ships Overdue for Overhaul at End-Fiscal Year (Constant FY 75 $M)	724	1,037	954	966	905
Value of Workload on Ships Entering Overhaul During Fiscal Year (Constant FY 75 $M)	1,763 b/	1,593 b/	1,740	555	1,852

a/ FY 1977 is a projection as of 15 January 1975, which is subject to change during continuing development of FY 1977 budget.

b/ Includes repair and modernization in conjunction with SCN-funded conversions.

But even these figures do not portray the full extent of the ship maintenance backlog. A majority of recent overhauls have had to forego for lack of resources substantial shipyard repair work which sound engineering judgment indicated needed to be done. In some cases, because of resource limitations depot repairs during overhaul have been limited solely to the work needed to permit the ship to return to sea. In other cases, ship alterations have been limited to those necessary to meet such new legal requirements as pollution abatement, plus a minimum of capability improvements.

Because of the unique safety standards required in nuclear-powered ships and in submarine operations, as well as the high priority given to the SSBNs, the submarine force, with 20% of the ships, has received approximately 50% of the ship repair budget. Submarines also have had far better engineered and integrated maintenance planning than other ships. As a result of this more nearly adequate level of resources being applied to our submarines, they are generally in good condition. We must now focus on increasing the resources and management talent applied to surface ship maintenance toward the levels now provided the submarine fleet.

The Navy has been working for two and a half years to develop and test a reliability-centered maintenance plan for the 31 POSEIDON submarines which are expected to remain in the fleet for a decade or more. Although certain critical assumptions have yet to be fully tested, this plan is now being implemented. It is expected to extend the overhaul cycle to at least nine years, compared with five years at the present time. Similarly, the overhaul cycle for the more recent classes of attack submarines is being extended to seven years.

In spite of these improvements, an average of two submarines will be operating under significant restrictions during the next two years because of deferred shipyard entry. And, notwithstanding the dramatic increase in reactor core life, many of our nuclear attack submarines will have to continue to operate under various forms of "slow orders" in non-tactical situations to conserve the core until they can be brought into a shipyard for refueling.

In recognition of these severe problems, we are requesting for ship depot maintenance the maximum amount that we believe can be wisely spent for that purpose during FY 1976 and the transition period. The amounts requested would have been even greater if not for the labor supply constraints which limit the Navy's ability to place ship overhaul and modernization work, as noted earlier in connection with the Navy shipbuilding program. The commercial shipyards, especially those large and sophisticated enough to be able to work on Navy ships, have about all the business they can handle with their current work forces. They have been unable to hire enough skilled employees to accept all of the Government and commercial contracts now being offered to them. The naval shipyards also have been unable to hire the numbers of skilled workers (especially welders and pipefitters) they need. Thus, naval shipyards can expand only as fast as they can hire and train the requisite skilled labor. We, therefore, propose to increase naval shipyard employment by about 4,000 men per year during the next two years. This deliberate and practical rate of expansion would permit us to correct many of our current ship maintenance problems and to develop the capacity needed to accomplish the large number of nuclear refuelings expected in the early 1980s.

D. TRAINING, MEDICAL AND OTHER GENERAL PERSONNEL ACTIVITIES

Included in this major program are the Defense Department's centrally managed military personnel activities which, collectively, account for about $21 billion of the budget authorization requested for FY 1976. The distribution of these funds by activity is shown in the table below:

	FY 74	FY 75	FY 76	Trans.
Training	6.2	6.5	6.5	1.6
Medical Programs	2.5	2.7	3.1	.7
Recruiting & Examining	.4	.4	.5	.1
Defense Family Housing	1.1	1.2	1.3	.3
Individuals & Permanent Change of Station (PCS) Moves	2.5	2.6	2.7	.7
Other Personnel Support Programs	.4	.4	.4	.4
Retired Pay	5.1	6.1	6.9	1.8
Total	18.2	19.9	21.4	5.3
Total, less Retired Pay	13.1	13.8	14.5	3.5

1. Retired Pay

Retired pay for military personnel is an anomaly in the Defense Budget. It represents payments for past services and does not contribute to our current or future defense posture. For this reason, we prefer to exclude retired pay from other Defense costs, although it should be acknowledged that the liability accrued each year for military retired pay is a legitimate charge against current Defense expenditures. On an accrual basis, the military retired pay liability would amount to $4 billion in FY 1976.

2. Training

The Department of Defense, unlike the civilian sector, cannot hire skilled military personnel such as tank turret mechanics, fighter pilots or battalion commanders from the civilian labor pool. Consequently, personnel to fill most military positions must be brought into the Service at the lowest enlisted and officer grade levels; many are subsequently trained and upgraded to higher skill levels during the course of their careers in the Service. In this sense, Defense is essentially a closed personnel system with few lateral entries at the higher skill or training levels. It is not surprising, therefore, that the training of military personnel is a multi-billion dollar activity in the Defense establishment.

a. Enlisted Recruit Training

Over the past decade, we have had to replace, on the average, about 25% of our projected annual strength because of losses to civilian life. This figure was higher in the buildup years of Vietnam and lower in periods of strength decline. Over the next few years, we anticipate a replacement rate of about 20%, a rate that compares most favorably with turnover experienced in industry -- about one-third lower, in fact -- as pointed out in last year's Military Manpower Requirements Report.

The production of basic soldiers, sailors, airmen, and marines -- skills which are unique to the military professions -- requires a massive training establishment to equip each new entrant with the skills he will need upon initial assignment to a unit. This training introduces the recruit to life in a military organization and includes physical training, non-specialized military skills, basic combat techniques, social conduct, and discipline.

All new entrants (accessions) undergo a period of recruit training lasting from 6 to 13 weeks. Thus, number of entrants, not the size of the force structure by itself, determines the size of the recruit training load.

b. Officer Acquisition

Officer acquisition training has no counterpart in the enlisted ranks in that it is generally pre-commissioning training geared to provide the officer personnel required to perform future Service missions. The determination of the officer requirement is computed on the basis of projected future needs versus projected inventory levels. Total enrollment must also consider the requirement for officer staffing of the reserve components. In FY 1976, some 24,000 officers will enter active duty -- about 2,700 from the Service academies, 7,900 from ROTC and the balance from other sources such as OCS, Enlisted Commissioning Programs, etc.

c. Skill Training

Both officers and enlisted personnel require skill training both when they first enter the Service (at the completion of recruit training for enlisted and after officer acquisition training for officers) and later on during their careers.

Enlisted Initial Skill Training

Upon completion of recruit training, most military personnel are afforded job-peculiar training relating to their first assignment. In FY 1975, for example, less than 5% of the personnel completing recruit training went directly to a unit; the other 95% went on to Advanced Training Centers or one of the technical service schools. This follow-on training varies from about 5 weeks to almost a year in length, depending on the complexity of the subject. It should be noted in this connection that the law requires each recruit to receive at least 16 weeks of training before deployment in a foreign country. In general, the average recruit spends about five months of his initial tour in achieving his initial skill and travelling to his first assignment.

To improve the quality of training, the Army, the largest trainer of new personnel, is undertaking a new training concept called One Station Training. This is a system of initial entry training management for enlisted personnel which minimizes the turbulence during training of the new enlistee and economizes on the structure of the training base. These goals are achieved by conducting all stages of initial entry training for most enlistees at a single installation and by presenting most courses of instruction at only one installation. The program envisions designation of an individual's initial entry training program immediately upon his enlistment at the Armed Forces Entrance and Examining Station and will result in a predetermined flow for the individual through training, usually at a single installation, to his first unit. One Station Training supports the professional home concept for each career field, so that most career soldiers will attend professional development courses at the same post, and often in the same training facility where they received their initial entry training. The professional home concept offers training in a totally integrated atmosphere which includes initial entry, skill progression training, professional development courses and combat and training development activities at what shall become known as the professional home of a specific branch.

Many foreign countries do not provide a large, centralized training establishment as we do. Their units are not so fully ready as we require ours to be; their divisions are largely filled with teachers and learners. From time to time, we have considered giving the operating forces a larger share of the training burden. It is not at all clear, however, that they can absorb this additional burden without a deleterious effect on their combat readiness.

Enlisted Advanced Skill Training

As the basic soldier progresses in grade and experience and requires a higher degree of specialization in a technical or functional sub-category, he will again return to skill training at a more advanced level. Unlike the open system of private industry which attempts to hire for vacancies at each progressive level, the Services project skill needs and provide appropriate advanced training in anticipation of the loss. This provides continuity and enhances the readiness of our deployed force.

Officer Initial Skill Training

Upon entry to active duty most new officers undergo initial skill training designed to provide a transition from the general military subjects received prior to commissioning to subjects related to their specific skill group. For example, field artillery officers of the Army will be schooled in the detailed functions of firing battery operations at Fort Sill, Oklahoma, prior to their initial unit assignment. Marine lieutenants will receive schooling which will enable them to function knowledgeably as a platoon leader or junior staff officer in the Corps.

Officer Advanced Skill Training

Officers with several years of practical experience also need additional training to assume more advanced responsibilities in their fields. For example, the Army conducts 16 branch-oriented career courses of about 7 months duration which are designed to prepare the student for command at the battery, company, and troop level; or staff duties at the brigade or division level.

d. Professional Development

Our highest quality enlisted personnel who progress through junior leadership positions and demonstrate qualities as potential non-commissioned officers are sent to local non-commissioned officer (NCO) academies prior to promotion and assignment to positions of greater responsibility. Formal school systems for the strengthening and improvement of these leaders exist in most of the Services, culminating in the Sergeant Major's Academy in the Army, and the senior and staff NCO academies of the Air Force and Marine Corps. These schools represent the highest category of enlisted professional development training.

The educational systems employed by the Services to prepare the officer corps for future staff, command, management and executive needs have frequently been cited by government commissions and private researchers as well-conceived models of what such programs should be. These programs include progressive training in Service schools, selective attendance at staff and senior service colleges, temperate use of post-graduate education at civilian universities, Service-run graduate schools and modest exchange programs with industry, other federal agencies, and allied nations. Beginning in FY 1976, we plan to reduce the fully-funded officer graduate education program to align it with the reducing officer strength. More specifically, we plan to reduce fully-funded graduate education loads in FY 1976 by 28% from FY 1973 levels.

e. Undergraduate Flight Training

Undergraduate flight training is the most expensive form of training, per student graduated, that is offered by the military services, but compared with the cost of aircraft, it is a relatively modest investment. Nevertheless, because of its high cost, flight training requirements are kept under constant scrutiny. We want to be sure that no more aviators are trained than are absolutely necessary to man our forces and support our national security objectives. In computing these training requirements we take into account all relevant factors including aircraft inventories, projected aviator assets, aircraft manning policies, and projected losses to the trained inventory. Undergraduate flight training outputs are displayed in the following table:

(In Thousands)

	FY 64	FY 68	FY 74	FY 75	FY 76
Aviators/Pilots	4.6	11.1	4.4	4.1	3.8
Navigators/Flight Officers	1.0	1.4	1.9	1.9	1.5

3. Medical Programs

There are three fundamental reasons for Defense medical programs: (1) to provide a nucleus around which to build our wartime medical force; (2) to maintain a healthy peacetime active military force; (3) to offer a fringe benefit, consistent with modern American employment practices, through delivery of health care to dependents and retirees. To these ends the DoD now spends almost $3.6 billion a year and operates 204 hospitals worldwide, and nearly 400 dispensaries and field medical units. The following table describes the major categories within which these costs fall:

(TOA in $ Millions)

	FY 74	FY 75	FY 76	Trans.
Hospitals and Medical Centers	2.00	2.18	2.55	.54
Operations	(1.84)	(1.96)	(2.07)	(.52)
Investments	(.16)	(.22)	(.48)	(.02)
CHAMPUS	.48	.49	.54	.13
TOTAL	2.48	2.67	3.09	.67

Of the 9.5 million people eligible for medical care in military facilities, only 2.1 million are active duty military personnel. The rest are dependents of active duty personnel, retirees and dependents of retirees and survivors of deceased military personnel.

The Department of Defense is required to provide care in military facilities only to active duty personnel. Dependents, retirees and others are treated on a space available basis. Their treatment represents a fringe benefit analogous to the health care provided civilian employees through private health plans such as Blue Cross. These beneficiaries represent 78% of the total population, but accounted for only 58% of the 909 thousand hospital admissions and 54% of the 50 million outpatient visits last year. The remainder of dependent and retiree care was provided through the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), a program under which dependents and retirees may be treated by civilian providers who bill DoD for a portion of the care. Because of a reduction in the number of military health care professionals on active duty, there has been an increase in the use of CHAMPUS; this, along with a rising unit cost of treatment and a dramatic escalation in the size of the retiree population, has helped cause the total CHAMPUS cost to increase sharply from $339 million in FY 1971 to $460 million in FY 1974. There is no reason to believe these costs will level out in the next few years, but we are making every effort to keep them in line. To this end, we have consolidated the control and accounting of CHAMPUS at the DoD level.

It is important to understand that CHAMPUS costs are a tradeoff for reduced funding of military medical facilities. We are obligated by law to treat dependents and retirees either in military facilities or to pay for a large share of their care through CHAMPUS. If care is shifted from one source to the other, program costs for in-house care might change more or less than CHAMPUS costs. We are now taking a hard look at this tradeoff to determine the most efficient mix. We are also examining and testing other new initiatives such as contracting with Health Maintenance Organizations to provide medical care for military personnel at certain installations.

In the meantime, we are examining the possibilities of basing the size of military in-house medical operations and facilities primarily on the medical needs of our active duty forces, including the nucleus required for wartime contingency missions rather than on active duty personnel plus dependents and retirees, except in remote locations or where it can be shown that dependents and retirees can be treated less expensively in-house. At the same time we are continuing to modernize existing hospitals. Many of our present facilities are old, inefficient, and unattractive. Not only do they require higher physician staffing levels than modern hospitals, they also fail to offer physicians and other health professionals the modern, well-equipped physical plant needed to attract and retain them in sufficient numbers to achieve our threefold medical mission.

4. Recruiting and Advertising

Recruiting and advertising expenditures have increased greatly since the end of conscription, supporting a 75% increase in recruiting personnel and the extensive use of paid advertising to attract the required quality and quantity of military accessions.

(TOA in $ Millions)

	FY 68	FY 70	FY 74	FY 75	FY 76	FY 7T
Recruiting and Advertising Costs	120	139	410	441	463	115

After major increases through FY 1973, these costs have now stabilized at approximately $500 million. In the next few years, we will begin to reap the benefits of the longer enlistment tours and, therefore, reduce accession requirements obtainable with volunteer accessions. Consequently, we do not envision further increases in recruiting and advertising budgets. At the same time, it should be recognized that the number of accessions is not the sole determinant of recruiting budgets. As accession requirements decline, other factors will contribute to increased pressure on recruiting budgets, including salary increases and inflation, as well as efforts to obtain accessions of high quality and representing a cross-section of the American population.

5. Family Housing

The Defense Family Housing program in FY 1976 will require approximately $1.3 billion. About $.26 billion will go for construction, $.95 billion for operation and maintenance, and the balance for debt payment. Most of the O&M and debt payment costs have been recovered by the Government from the quarters allowance forfeited by occupants of Defense housing, but because of rapidly increasing operating costs (e.g., fuel) the net cost to the Government in the future is likely to be greater than in the past. The trend in housing costs in recent years is shown below.

(TOA in $ Billions)

	FY 74	FY 75	FY 76	Trans.
Construction	.39	.31	.26	-
O&M	.68	.79	.95	.27
Debt Payment	.06	.06	.05	.01
Homeowner's Assistance	.01	.02	.01	-
Total	1.14	1.18	1.27	.28

About one-third of DoD's 1.1 million married military personnel live in 380,000 family housing units while the remaining two-thirds live in the civilian community. Of the total housing inventory, about 70% is in the CONUS, 10% is in Alaska, Hawaii and possessions, and 20% is in foreign countries. Of CONUS housing, about 60% is located within 30 miles of cities of at least 250,000 population. We now have decided to reduce the level of family housing construction in the United States, particularly near these urban areas, and to devote more resources to improving our existing housing. Our 1976 new construction program would provide about 3,500 units compared to the more than 10,000 units requested in each of the three previous years.

While military families forfeit only their quarters allowance when they occupy public quarters, families living in the civilian community frequently spend considerably more than their quarters allowances for shelter. Because of these inequities, the upcoming Quadrennial Review of Military Compensation will examine the compensation and subsidy aspects of family housing. Suggestions by the House Appropriations Committee to thoroughly review a variable station allowance within CONUS will receive our careful attention.

6. Individuals and Permanent Change of Station (PCS) Moves

Permanent Change of Station (PCS) moves, and the pay and allowances associated with transient military manpower, are the unavoidable result of a "closed" military manpower system, i.e., one where trained labor cannot be hired from local markets or overseas deployments. DoD efforts to reduce the number of PCS moves through better personnel planning and management are partially offset in FY 1976 by force structure and stationing changes resulting from PL 93-365, which requires the conversion of 18,000 military "non-combat" jobs in Europe to "combat" jobs by the end of FY 1976, and by the increase in the number of active Army divisions. Furthermore, the effect of inflation has totally overshadowed any potential savings from reduced move requirements. Thus, notwithstanding a 10% reduction in PCS moves as compared with FY 1974, the total cost of PCS moves in FY 1976 is expected to increase about $369 million, as shown in the table below.

(TOA in $ Millions)

	FY 74	FY 75	FY 76	Trans.
Transients	1,086	1,059	973	237
PCS Moves	1,279	1,448	1,648	477
Patients & Prisoners	107	97	84	21
Total	2,472	2,604	2,705	735

a. Losses and Loss Replacement

About 605,000 active duty military personnel are projected to retire, not reenlist, request release from military service, or be dropped from personnel rolls for other reasons during FY 1976. Most of these people are entitled to return to their hometowns with their families and belongings at Government expense. Excluding the projected decrease of about 30,000 in total military manpower planned for FY 1976, these personnel must be replaced in order to sustain unit manning. The process of numerically replacing losses requires DoD to recruit civilians, move them to centralized training sites to acquire a skill, and then move them to a unit where these skills are utilized.

b. Overseas Deployments

During FY 1976, about 540,000 military personnel will be forward deployed (i.e., assigned ashore or on ships homeported overseas) outside of CONUS. These people are assigned for periods of from one to three years, depending on the desirability of the location. Accounting for about one-third of the moves, they are the most costly in terms of PCS costs and transient requirements. This is the result of the move distances involved, and the tendency to take the maximum leave allowed enroute.

c. Skill Imbalances/Career Progression

As noted earlier, about 605,000 persons will leave active duty during FY 1976. This will create a chain reaction of job vacancies which cannot be completely satisfied by the preceding move categories. Similarly, the conversion of Fort Ord, California, for example, from a training center to a troop post will require the reassignment of personnel. Furthermore, job opportunities for promotions do not always exist at one's current station. In a "closed" manpower system all of these situations result in some movement of personnel. These moves will account for about 14% of the total in FY 1976.

7. Other Personnel Support Programs

The largest program in this category is the Overseas Dependents Education Program, about $215 million in FY 1976. The overall size of this program is driven by the number of military personnel assigned overseas in areas where dependent travel is authorized. This program was brought under OSD management in fiscal year 1975 to enhance the overall quality of education provided and to effect operational efficiencies.

Other programs included in this category are disciplinary barracks, correctional training facilities, returned deserter processing activities, centrally funded welfare and morale activities, Junior ROTC, and the Armed Forces Information Program.

E. ADMINISTRATION AND ASSOCIATED ACTIVITIES

There are certain administrative and related elements in the DoD budget which cannot be allocated logically to any specific major program, such as Strategic or General Purpose Forces. These elements are, for the most part, support oriented and not readily identifiable with any particular mission. For convenience, therefore, they have been grouped in this "catch-all" program. Included here are a number of activities that deserve some special mention -- Departmental Headquarters, Naval Petroleum Reserves, Claims and Contingencies.

1. OSD, JCS and Departmental Headquarters

Departmental Headquarters, by definition, include the Offices of the Army, Navy, and Air Force Secretaries; the Army Chief of Staff; the Army General and Special Staffs; Chief of Naval Operations; Navy Judge Advocate General; Department of the Navy Staff Offices; and USAF and Marine Corps Headquarters. These headquarters, together with the OSD and the

JCS organizations, had a total of 16,919 personnel (9,266 civilian and 7,653 military) assigned to them at the end of FY 1974. In consonance with our effort to cut support personnel, we plan to reduce that number to 15,786 (8,639 civilian and 7,147 military) by end FY 1976.

2. Naval Petroleum Reserves

The Navy for many years has been responsible for the care and maintenance of the Naval Petroleum Reserves. Prior to the 1973 oil crisis, the cost of this activity amounted to approximately $5 million per year. In November, 1973, the Armed Services Investigating Subcommittee of the House Armed Services Committee recommended that "immediate action should be taken...to bring NPRs #1 and #4 to a suitable condition of readiness so that they can be held in a standby condition capable of meeting our national defense requirements in times of national emergency." In FY 1974, therefore, the Congress decided to move forward with the development of these Reserves and appropriated $59 million for that purpose.

There are a total of four Naval Petroleum Reserves, two in California (Elk Hills and Buena Vista), one in Wyoming (Teapot Dome) and one in Alaska (North Slope). Of the four, only Buena Vista (NPR #2) is currently in production at nearly full capacity in order to avoid loss of Government oil through drainage. Six commercial oil companies now hold 17 leases accounting for about 60% of the total acreage in this Reserve, and produce about 5,800 barrels of oil per day. In FY 1975, $20,000 was appropriated to the Navy for the administration of these leases, and the same amount is requested for FY 1976.

No commercial production is currently allowed from the other three Reserves, NPRs #1, #3 and #4. NPR #1, at Elk Hills, has a proven reserve of more than one billion barrels of oil, of which about 3,400 barrels per day is produced solely for maintenance and to offset adjacent commercial production and thus prevent drainage losses. Currently, the Elk Hills Reserve is approximately 50% developed, with over 1,000 wells already completed and ready for production. The total cost of this program, which includes the drilling of approximately 900 additional wells, is estimated at $447 million. When completely developed, Elk Hills may be able to produce 400,000 barrels of oil per day. We are requesting $64.3 million in FY 1976 for development and continued exploration of the Elk Hills Reserve.

NPR #3, at Teapot Dome, is the smallest of the four Reserves; it has a proven reserve of 43 million barrels. Only 410 barrels per day are being produced, again, solely for offset to prevent drainage and for test and maintenance. To complete exploration of NPR #3, we are requesting $700,000 for FY 1976. Full development to maximum capacity of 12,000 barrels per day will require about $70 million.

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By far the largest and potentially most valuable of the Reserves is NPR #4, on the North Slope of Alaska. While its proven reserves are as yet unimpressive, NPR #4 is estimated to contain up to 33 billion barrels of oil. Because this location is largely unexplored and undeveloped, realization of the Reserve's full potential will require many years of work and a very large investment. Should large reserves be discovered, development costs will include the construction of a pipeline to, and an ocean terminal on, the southern coast of Alaska, as well as the drilling of wells. If the anticipated reserves are found, production from NPR #4 could reach 1 million barrels of oil per day in the early 1980s and perhaps 3 million per day by 1985. To proceed with the exploration of NPR #4, we are requesting $44 million for FY 1976. The total funding being requested for exploration, development and administration of all four Naval Petroleum Reserves is $119 million for FY 1976.

In furtherance of the President's program to increase the domestic supply of petroleum and to reduce the nation's vulnerability to interruption of foreign sources, legislation has been proposed which would authorize production from the Naval Petroleum Reserves. It would also authorize the establishment of a National Strategic Petroleum Reserve of up to 1.3 billion barrels of both unrefined and refined petroleum products to be stored at such locations as would provide for rapid deliverability to meet emergency, civil and military needs. Of the 1.3 billion barrels, 300 million barrels would be reserved for military requirements. This Strategic Reserve would be available for allocation in a future emergency if the President found that the existing supply was inadequate to meet national security needs.

3. Defense Contingencies

There are two contingency accounts included under this funding, Defense Contingencies and funds in Military Construction, Defense Agencies, to fund the military construction contingency authority. These accounts provide funds for programs of an urgent and frequently confidential nature which are deemed vital to the national security of the United States. Due to their spontaneous nature, budgeting and funding through "normal", i.e., regular appropriation/authorization channels, is virtually impossible. These accounts meet the Department's occasional need for flexibility and responsiveness. I would like to emphasize, however, that the use of these funds can be authorized only by the Secretary of Defense or the Deputy Secretary of Defense; expenditures are carefully controlled and each request receives our closest scrutiny. If at any time funds for a particular project can be obtained from other sources, every effort is made to do so and the use of contingency funds is not authorized.

With regard to the Defense Contingency account, upon determination that a particular project cannot be deferred for regular programming and receipt of the written approval of a specific contingency project, the necessary funds are obligated for use. Each project is allocated a ceiling which cannot be exceeded for that project; in the event that a portion of the funds for Defense Contingencies remain unobligated beyond the fiscal year in which the funds were appropriated, the unobligated balance is returned to the U.S. Treasury. A complete accounting for the use of these funds is provided to the interested Congressional Committees each year. Moreover, this fund is now subject to audit the same as any other Defense Appropriation.

Throughout most of the 1960s, between $10 and $15 million a year was appropriated for this account. In the past five fiscal years, however, only $5 million per year has been appropriated for this program. For FY 1976, we are again requesting $5 million, and $1.25 million is requested for the transition period.

The military construction contingency authority provides for the use of funds for unprogrammed and unanticipated military construction essential to the national security, the implementation of which could not be delayed without a detrimental effect on the best interests of the United States. Immediately after approval is given for any emergency military construction project, the Chairmen of the House and Senate Committees on Armed Services and Appropriations are notified and fully apprised of the project details.

This military construction authority was largely used during the peak of hostilities in South Vietnam and the level of fund obligations has since decreased somewhat. The FY 1975 program is $30 million, including $5.3 million carried over from prior years. We are requesting a program of $30 million for FY 1976, including $10 million carried over from prior years, and an authorization of $30 million for FY 1977.

4. Claims

The Claims appropriation provides for the payment of all noncontractual claims against the Department of Defense, including the Military Departments. There are four basic categories of these claims, each with a specific allocation of funds from the total Claims appropriation -- personnel claims, tort claims, admiralty claims and other miscellaneous claims.

The personnel claims category is the largest of the four and accounts for about two-thirds of all claims settled under this appropriation. These include claims by both military and civilian personnel for recovery of private property lost or damaged by the

Department of Defense; compensation for physical injury or loss of life due to action at the fault of the U.S. Government; repayment of funds erroneously collected from military or civilian personnel; and payments of claims arising from the correction of military or naval records.

Tort claims accounted for most of the remaining funds in this appropriation. Payments in this category include (1) cases arising under the Federal Tort Claims Act, (2) foreign claims, (3) claims due to non-combat activities, (4) compromise settlements by the Judge Advocate General and (5) tort claims against the Services outside the scope of employment.

The third and fourth categories, admiralty and other miscellaneous claims, account for only about 1% of the total claims. Admiralty claims arise from marine accidents and incidents involving U.S. military vessels or property; other miscellaneous claims provide for the settlement of claims for embezzlement, theft, or negligence on the part of Department of Defense personnel.

We are requesting a total of $71.6 million for Claims in FY 1976 and $15.5 million in the transition period.

F. SUPPORT TO OTHER NATIONS

Grouped under this heading are several distinct activities associated with our support to other nations -- the Security Assistance Program, (including both grant military assistance (MAP) and foreign military sales (FMS)), the Defense Assistance to Vietnam (DAV), Military Assistance Advisory Groups (MAAGs), NATO Infrastructure, and International Military Headquarters.

War Reserve Stocks for Allies (WRSA), formerly in this major program, has been shifted to a more appropriate program -- General Purpose Forces. None of this materiel, and I want to emphasize this point, may be transferred to any country without an authorization and appropriation by the Congress. The purpose of the program was to ensure that U.S. war reserve stocks would be sufficient to support the forces of certain of our allies should they become involved in combat. We cannot afford, nor is it necessary, to provide each of these allies with individual war reserve stocks.

Because of the keen Congressional interest in all foreign aid programs and the recent sharp increase in foreign military sales, I believe it would be useful to discuss the objectives and contents of this program in some detail. The common denominator of these six activities is the fundamental objective of strengthening the shared security interests of our friends and allies. We decided more than a quarter of a century ago to seek our security in concert with other nations because we believed that we would be stronger together than we would be alone. Also, our security assistance programs help foster favorable attitudes toward the U.S. and its policies. Moreover, the interdependence between ourselves and our allies involves not only defense but also economic interests. We depend on the rest of the world for many raw materials and for markets for our exports to pay for those materials, and this dependence is steadily increasing. Thus, we have an ever growing stake in a stable world order, and the costs of our collective defense efforts should be weighed against the contributions they make to the attainment of that stability.

We would prefer, of course, that all of our friends and allies provide for their own defense needs; unfortunately, very few of them are able to do so. Hence, the practical problem that confronts us is how best to provide the support that is needed. Some of our friends and allies have the financial but not the industrial capability to provide for their own defense. To these nations, we sell military materiel on a cash sales basis. But even here, each proposed sale is carefully reviewed in terms of its potential contribution to our domestic, foreign policy and mutual security interests.

Other nations have the economic capacity to purchase the military materiel they need, but lack the cash reserves. To those nations, we sell military materiel on a credit basis, and we apply the same criteria to these sales as we do to the cash sales.

Some of our friends and allies lack even the economic capacity to purchase the military items they legitimately need. For these countries, we provide defense articles and services on a grant aid basis.

Our aim for the long term is not to continue providing this grant assistance indefinitely; rather, it is to shift these MAP recipients from dependency to self-sufficiency as soon as possible. Accordingly, every effort is made to reduce the country-by-country levels of grant aid, consistent with the recipient's ability to make effective use of foreign military sales credits. Ideally, our assistance will enable these countries eventually to pay cash for their defense materiel.

In all cases, development of the individual country programs is predicated upon the understanding that the recipient countries will devote a fair share of their own resources to their defense. Progress toward this end is also progress toward reducing both the degree of U.S. involvement overseas and the likelihood of direct U.S. participation in local conflicts.

The success already achieved in this area is not always recognized. In the last decade, 17 countries have made the transition from MAP to FMS (except for very modest amounts for training only). Included in this group are Greece, Brazil, Argentina, Pakistan, Peru, Taiwan and Spain. Other countries, such as Turkey and Korea, are making substantial progress in that direction.

1. Military Assistance Program (MAP)

The $820 million requested for MAP materiel and training in FY 1976 (excluding the $250 million required for the liquidation of contract authority authorized in FY 1974 for Cambodia), plus the $122 million in the transition period would provide aid to some 46 countries, but 27 of these countries would receive training only. Of the remaining 19 countries, just 7 -- Turkey, Cambodia, Indonesia, Korea, Laos, Thailand and the Philippines -- would account for a large percentage of the MAP funds requested in the FY 1976 and Transition Budgets. The justifications for these programs will be presented separately to the interested Congressional Committees.

2. Defense Assistance to Vietnam (DAV)

The Military Assistance Program for South Vietnam, while technically a grant aid program, is currently funded in a separate account, Defense Assistance to Vietnam (DAV), in the regular Defense Department military functions budget. This arrangement will be continued through FY 1976, at which time it will be funded under the MAP. We are requesting for Vietnam $1,293 million in FY 1976, $355 million in the transition period and an authorization of $1,000 million in FY 1977. As in the case of MAP, the justification for these amounts will be presented separately.

3. Foreign Military Sales (FMS)

For foreign military sales credit, we are requesting budget authority of $560 million in FY 1976, $30 million in the transition period, plus an authorization of $604 million in FY 1977. The FY 1976 amount ($508.7 in direct financing and $51.3 million obligated for guaranties) would support a total credit program of $1,021.5 million for 30 countries. The transition amount ($27.2 million in direct financing and $2.8 million obligated for guaranties) would support a $55.5 million credit program to three countries. Again, the details of this program will be presented separately.

In addition to these credit transactions, we expect to sell for cash in FY 1976 under the provisions of the Foreign Military Sales Act (FMSA), several billion dollars of military equipment and supplies, i.e., goods and services purchased through the U.S. Department of Defense.

Prior to FY 1972, cash sales averaged about $1 billion per year. In FY 1972, the volume rose to $2.7 billion, mostly as a result of an increase in sales to Germany and Saudi Arabia. In FY 1973, the volume rose to $3.6 billion, of which $2.1 billion was to Iran. In FY 1974, cash sales reached $6.6 billion, of which $3.8 billion was to Iran and $600 million was to Saudi Arabia.

Admittedly, this increase in cash sales is rather startling. It should be borne in mind, however, that we are dealing with sovereign nations whose perceptions of their defense needs may not coincide with our own. They have the choice of buying from the United States, from certain other Western countries, or from communist countries. For many reasons, we would prefer that they purchase their military materiel from us, provided that the sale is consistent with our foreign policy objectives. Indeed, before we make a commitment to a foreign country, which must be consistent with foreign aid legislation, the President must make a determination that such a country is eligible to purchase U.S. military items, and the country must agree: (1) not to transfer that equipment to a third country without prior U.S. Government consent, (2) to use the equipment only for the purposes furnished, and (3) to maintain security of the materiel. Further, no decision to sell military materiel is made before careful consideration is given to the requirements of our own forces, the military needs of the recipient country, and the anticipated contribution to peace and stability such a sale would make.

The Department of Defense is proposing this year the establishment of an Inventory Replenishment Fund for foreign military sales. This fund, in the amount of $300,000,000, would enable the Department of Defense to procure certain critical items of equipment in anticipation of foreign military sales of such equipment from existing inventory. This would enable us to meet the demands of foreign military customers on an expedited basis without adverse impact on our own forces.

Where credit is involved, the law requires that we charge interest normally at a rate which is the cost of money to the United States Government. Circumstances may require an exception to this policy and occasionally a lower interest rate is permitted. Section 23, FMSA, stipulates, however, that repayment to the U.S. Government be completed within a period not to exceed ten years after delivery; this provision is not subject to Presidential waiver. It is worth noting that of a total of over $16 billion in FMS credit since FY 1950, all but $4.9 million has been repaid on schedule. In general, delinquent payments result from misunderstandings regarding the terms of sale or content of the billing rather than any intention of the purchasing country to default.

The final sales category is Department of Defense guaranties of commercial credit. In this instance the purchasing country obtains not only the military equipment but also credit directly from commercial sources; the U.S. Government, through the Department of Defense, guarantees repayment of the loan.

Section 24 of the FMSA also permits the President to guarantee loans to any country eligible for FMS, provided that 10% of the principal amount of the loan is set aside as a reserve using funds authorized and appropriated for this purpose under the FMSA. Fees of one-fourth of 1 percent are charged for such guaranties. As in the case of Foreign Military Sales Credit, our record of guaranties is excellent; no country has ever defaulted on commercial credit obligations which were covered by a guaranty.

4. MAAGs

Our Military Assistance Advisory Groups (MAAGs) have contributed significantly to the attainment of U.S. security assistance objectives. They not only enhance the value of U.S. equipment but also promote standardization of equipment, doctrine, and training. The value of the MAAGs also extends into the enhancement of personal U.S. officer and host officer relationships which extends U.S. influence and encourages military cooperation. While MAAG personnel can be considered in the support category, their advisory work with our allies makes a direct contribution to host military combat readiness and thus reduces the likelihood of U.S. military involvement.

MAAGs have historically been funded partially from the military function accounts and partially from MAP and will continue to be so funded until June 30, 1976. But apart from the dollar costs, the military personnel assigned to MAAGs add to the number in the support personnel category. As part of our effort to improve the combat/support ratio, we are making a concerted effort to reduce the number of military personnel assigned to MAAGs, as well as personnel in general.

In FY 1968, the MAAG authorized strength level was 4,477 (including 3,172 U.S. military personnel); as of June 30, 1974, that number had dropped to 2,304 U.S. spaces (including 2,077 U.S. military personnel). Our goal is to reduce that number by about 400.

Because of the rapid expansion of foreign military sales in the past few years, principally to Iran, Technical Assistance Field Teams (TAFTS), were created to provide the necessary technical training in the use of U.S. equipment. While the U.S. Government is fully reimbursed by the purchasing country for the costs of TAFTs, nonetheless these personnel must be included under the manpower ceilings. There are now about 729 U.S. military personnel programmed for these Teams (663 in Iran and 66 in Saudi Arabia) and the demand is increasing. Accordingly, we are urging the Governments of Iran and Saudi Arabia to hire U.S. civilian technicians to the greatest extent possible.

5. NATO Infrastructure

Since 1951, the NATO Infrastructure program has provided the basis for equitable distribution of a large percentage of the military construction costs associated with NATO. This distribution is achieved through a cost-sharing formula, with each member nation contributing its agreed share of the cost of a joint NATO construction program.

Since the inception of this program, the US share of the NATO Infrastructure has been reduced from 43.72% to an effective share of about 20% in the latest Slice Group. Recent annual Infrastructure programs have provided, on the average, over $5 worth of facilities for U.S. forces for every $3 of U.S. contributions to single and joint user projects. We have every reason to expect this favorable ratio to continue.

For the new (Slices XXVI-XXX) five-year (1975-79) Infrastructure program, our Allies have agreed to include under the normal Infrastructure program a special category of projects in support of U.S. forces, which would otherwise be funded from appropriated U.S. funds. This special project category, totaling $90 million over a five-year period, will provide military facilities which (a) have a clearly identifiable NATO interest, and (b) are of special interest to the U.S.

Any assessment of the dollar cost to the United States of contributing to the Infrastructure program must not only consider the direct benefit derived from the percentage of U.S. national user projects but also the indirect benefits gained through U.S. industry participation in the Infrastructure projects. We have made substantial progress in maximizing this indirect benefit. During negotiations on the NATO Integrated Communications System (NICS) project, for example, accord was reached among the NATO members to implement a production-sharing agreement which would guarantee that a minimum of 38% of the project production would go to U.S. contractors with the possibility of another 20% of the project being let to U.S. contractors.

Overall, the NATO Infrastructure program has been a distinct success. It has provided us and our NATO Allies with a network of modern airfields, vital air defense warning installations, an efficient system of POL distribution and storage, and the common communications facilities which are fundamental to the operation of the NATO command structure. The cost to the U.S. is $80 million in FY 1976. Another $20 million is included in the Transition Budget, and $90 million is requested for authorization in FY 1977.

6. International Military Headquarters (IMH)

The United States, in concert with its allies, contributes to the cost of maintaining certain international military headquarters. These contributions are funded in the O&M accounts in the Defense Budget. In FY 1975 the U.S. contribution amounted to $105 million; for FY 1976 we are requesting $111 million and for the transition period, $28 million.

The U.S. contribution to international military headquarters not only involves dollars, it also involves manpower. In FY 1974 there were about 5,733 U.S. personnel assigned to these headquarters, including 5,413 military. In consonance with our efforts to cut support personnel, we are reducing that number to 5,495 (including 5,331 military) by end FY 1976.

V. MANPOWER

The Department of Defense recognizes that its human resources -- military and civilian, active and reserve -- are both its most precious and its most costly asset. Making effective use of these resources, while simultaneously doing the very best that we can for our people and assuring that we adequately man our planned forces on an all-volunteer basis, represent significant challenges to which we are giving priority attention.

The first of these challenges has been assuring that we meet our force requirements with volunteers. The Department has now completed its second year of operation without the draft. The last of the draftees left the Services in November, 1974, and we now have a true all-volunteer force. While it is still too early to make a final judgment, we are reasonably confident that we can maintain our planned peacetime force levels on an all-volunteer basis. Recruiting has been successful to date, and the quality of the volunteers has remained high.

We are not complacent, however. The task of recruiting one young man out of every three who are qualified and available for military service still represents a formidable challenge, one which will require our sustained best efforts. And the success of the all-volunteer force over the long term will depend largely upon the full support of the Congress and the American people.

A second challenge is improving the use we make of our human resources so as to achieve a greater defense capability with existing manpower. Beginning in FY 1974, the Department undertook a series of reviews designed to uncover ways to increase military readiness and reduce costs through overhead and support reductions; through greater reliance on the Reserve forces; through better focused, more flexible use of compensation; and through improved manpower and personnel management. The initiatives which resulted from these reviews have already improved markedly the readiness of our Army divisions, have released resources to improve Air Force tactical airpower and strategic airlift capability, and have served to streamline our forces in major ways. Here again, our achievements represent the beginning of a process of improvement. We have more to do.

Finally, we are doing our best to improve living conditions for our Service personnel. Our efforts are framed by the realization that budget trimming and program streamlining often are perceived by our people as a reduction in benefits or support. Therefore, it is our intention to place even greater emphasis on the personal approach to manpower management.

The programs we have instituted to meet our manpower challenges are described in detail below. While it is our desire to take the initiative in improving the Defense establishment, we will continue to seek the support and counsel of the Congress as we proceed.

A. DEFENSE MANPOWER REQUIREMENTS

Manpower requirements result essentially from the force levels described earlier in this Report; the force levels themselves are derived from our national security objectives. This process, as well as our detailed manpower requirements, is discussed in my annual Defense Manpower Requirements Report to the Congress. Summarized on Table 3 in the Appendix are the military (active and reserve) and civilian direct-hire end strengths proposed for end FY 1976, the transition period, and FY 1977.

As shown in the following chart, U.S. military active duty strength is now at the lowest level since before the Korean war.

ACTIVE DUTY MILITARY PERSONNEL
(End of Fiscal Years in Thousands)

Fiscal Year	Total DoD	Army	Navy	Marine Corps	Air Force
1950 (pre-Korea)	1,460	593	382	74	411
1952 (peak Korea)	3,636	1,596	824	232	983
1964 (pre-Vietnam)	2,685	972	667	190	856
1968 (peak Vietnam)	3,548	1,570	765	307	905
1973 (actual)	2,252	801	564	196	691
1976 (plan)	2,100	785	529	196	590

Note: Totals may not add due to rounding.

The reduction from 3,547,000 at end FY 1968 to 2,100,000 at end FY 1976 reflects the disengagement of U.S. forces from the Vietnam war and other strategic and general purpose force reductions as well as our intensive efforts to improve the utilization of our active duty military and civilian personnel.

B. MANPOWER UTILIZATION

The economic conditions in our country, the tight constraints on the Defense Budget, and the related reduction in the size of our forces has caused us to scrutinize with particular care the way in which we are using our manpower resources. Beginning in FY 1974, the Department undertook a series of reviews designed to uncover ways to increase military readiness and reduce costs through better management. The following is a listing of some of the more significant initiatives which have resulted to date and some which we propose for the future. Still others are under study.

1. Headquarters Review

In October, 1973, as one step in our efforts to improve efficiency in the Department of Defense, I initiated a comprehensive review of all DoD headquarters including the worldwide military command structure. The objectives of this review were to improve the effectiveness of headquarters, to reduce their number, size, layering and duplication and to convert the resulting fiscal and manpower savings into combat forces. Using the results of this study, we established a goal to reduce headquarters manpower by 14,400 by the end of FY 1975 based on the FY 1974 column of the President's FY 1974 Budget. Subsequently, enough progress was made to enable us to revise that goal upward. The following table shows the revised goals for FY 1975 and FY 1976.

	Cumulative Reductions (Military and Civilian)	
	End FY 75	End FY 76
Joint Activities and Commands	1,400	1,400
Defense Agencies	5,200	6,800
Military Departments	14,200	14,800
Totals	20,800	23,000

2. Conversion of Support Positions to Combat

Headquarters and support reductions will make more resources available to combat forces. For example, such reductions will enable us to field sixteen active Army divisions, three more than at end FY 1973, with no increase in Army manpower. Similarly, during FY 1974, the Air Force used headquarters space savings to retain three C-130 squadrons in the active forces. As new weapon systems are introduced, it will be able to add another three tactical fighter wings without an increase in Air Force personnel. The proposed elimination of two major air commands, two numbered air forces, together with extensive support reduction initiatives in other areas, will free over 30,000 Air Force personnel for use in increasing combat effectiveness. In Europe, we will convert 18,000 support troops to combat missions by end FY 1976 in accordance with PL 93-365 (the Nunn Amendment), thus strengthening our conventional force posture in NATO. Pacific headquarters eliminations will provide approximately 2,000 spaces for conversion to combat strength.

The 216 DoD base closure or realignment actions initiated since my Report last year will eventually result in the elimination, or transfer to other activities, of more than 37,000 positions at the affected sites. As a part of this series of actions, the Air Force will eliminate 400 administrative and support aircraft, and will centralize responsibility for all but a few of the remaining support aircraft under the Military Airlift Command. In addition, the Air Force is consolidating its strategic and tactical airlift assets under the Military Airlift Command. All of these actions liberate resources for further strengthening of our combat forces.

3. Greater Reliance on Guard and Reserve

We are relying more on our Reserve and National Guard forces to get more combat strength for the Defense dollar. The Reserve Components now account for nearly 30% of our forces and 50% of the trained manpower available for national security emergencies. Specific examples by Service include:

a. Army. Guard and Reserve forces now constitute about 50% of Army combat forces, and closer integration of active and reserve forces is underway. Present planning calls for the Guard to provide a brigade for each of three active divisions as the Army builds toward sixteen active divisions. These brigades will train regularly with the active divisions and become an organic part of them upon mobilization. There are five other brigades and 13 separate battalions currently linked to active Army divisions. Altogether, these roundout units will represent 25% of the combat power of the non-deployed active divisions.

b. Navy. The Navy has reorganized its Reserve force, emphasizing hardware-oriented units. Carrier air wings are being tailored to the multi-purpose carrier program to improve training and mobilization. Initiatives are underway to expand Reserve missions, to decrease the average age of Reserve ships, to increase materiel readiness, and in general link the Navy Reserve directly to combat missions which are consistent with our national security strategy. In the process of making these changes, we have been able to reduce Navy Reserve paid drill strength to 92,000 personnel, thus freeing funds for more productive purposes.

c. Air Force. This year 56% of Air Force tactical airlift aircraft are assigned to the Guard and Reserve; by FY 1976 about 40% of our tactical reconnaissance force will be assigned to the Guard. We are also transferring 128 KC-135 jet tanker aircraft from the active Air Force to the Guard and Reserve over the next four years, thus placing the Guard and Reserve squarely in the strategic offensive mission for the first time. The Air Force has also adopted a program under which a reserve associate squadron is collocated with each of the seventeen strategic airlift squadrons. Personnel in these squadrons fly and maintain the same aircraft used by the active squadrons and, when mobilized, provide for significantly increased aircraft use and airlift capability.

d. Marine Corps. The Reserve division, wing, and supporting elements are structured so as to be an effective complement to active Marine forces. As such, these Reserve forces are included as an integral part of all contingency planning and can provide additional capabilities required by the strategy but not programmed in the active forces.

4. Total Force Study

The OSD Total Force Study is just being concluded. This study of the Guard and Reserve considers the availability, force mix, limitations and potential of the Reserve Components. The broad goals of the study group were to identify functions and missions which could be shifted from active to reserve forces; reserve functions that could be converted to more useful functions; and places where modifications to the reserves are warranted to improve readiness and capability upon mobilization. Alternative force levels, active/reserve force mixes, and a host of subsidiary recommendations of the study group are now being analyzed. Economies in operations and increased effectiveness and efficiency are anticipated as study group recommendations are incorporated in the Five Year Defense Program.

During the Appropriations Committee hearings for FY 1975, a decision was made to suspend all overseas training travel for Guard and Reserve personnel pending a review of the matter.

As a part of our Total Force policy, we have, during the past few years, been taking measures to improve the mobilization readiness of our Guard and Reserve units. This has entailed their participation in JCS-directed exercises, actual training in areas of scheduled deployment, and specialized environmental training in established active force training centers.

With the reduction in the number of active support force personnel in Europe, more dependence will be placed on Reserve components to provide direct combat arms and maintenance support in the event of a contingency. The termination of Reserve Component overseas training would reduce the overall effectiveness of these units in future operations, both in Europe and the Pacific. This training is, in fact, strongly supported by senior Army commanders in both Europe and the Pacific.

It is highly recommended that judicious movement of Guard and Reserve personnel be permitted between the 48 contiguous states, Puerto Rico, Alaska, Hawaii, the Virgin Islands, Guam and the Canal Zone. Participation in joint exercises and environmental training at specific deployment locations should also be authorized.

We have proposed legislation to authorize the President to call up 50,000 members of the Selected Reserve for not more than 90 days under conditions short of a national emergency. This authority would lend important credibility to the Total Force concept.

5. Reduction in U.S. Military Strength Overseas

At end FY 1968, U.S. military strength ashore and afloat deployed outside the U.S. and its territories and possessions was 1,200,000. By end FY 1973 this had been reduced to 542,000, largely as a result of our reductions in Southeast Asia. By end FY 1975, deployed strength will be 490,000, a reduction of 52,000 (10%) from FY 1973. Further cuts are scheduled during FY 1976.

6. Reduced Military Personnel Turnover

The successful transition to the peacetime volunteer force has effected a reduction in personnel turnover and has resulted in several added benefits: training costs of $370 million will be avoided in FY 1976; billet assignments will have greater continuity, thus enhancing force readiness; individual personnel will have a greater depth of experience and training because they will remain in the force longer. For example, in the Army's combat arms, the average length of the initial term of service has increased 41% since FY 1971, adding nearly a full year to the time on the job after initial training. The Army will constrain two-year enlistments for new recruits to 10% in FY 1976, 5% in FY 1977 and zero in FY 1978 and thereafter, thus reducing recruiting requirements beginning in FY 1978. The training personnel spaces saved will be used to help man the three new divisions being created by the Army.

7. Civilian Personnel

We are simultaneously eliminating civilian positions wherever possible and converting military positions to civilian jobs when feasible. Total direct hire strength was 998,000 at end FY 1973, and is tentatively planned to be about 985,000 at end FY 1976, a net reduction of 13,000. However, the FY 1976 total includes 39,000 civilian jobs resulting from the civilianization of 48,000 military positions. Without this civilianization program, civilian personnel strength would decrease by 52,000 (5%) over the three-year period.

We are placing particular emphasis on our comprehensive program for stability of civilian employment, which is designed both to ease the adverse impact on individual employees of civilian reductions and other work force fluctuations and to reduce the turbulence normally associated with reductions in force. This program has provided placement opportunities for about 80% of the employees who register for placement assistance, and was extended to overseas areas in January, 1975. We are also taking a number of measures designed to improve the management of non-appropriated fund activities, improve labor-management relations, and reform federal wage setting practices.

8. Officer Programs

Officer Strength. During the three-year period FY 1974-76 we expect active duty military strength to drop about 7%. We are reducing officer strength by an even greater proportion to shrink overhead and improve the enlisted-to-officer ratio:

	End FY 73	End FY 76	Percentage Change
Officer Strength (000)	321	282	-12%
Ratio: Enlisted-to-Officer	6	6.5	+ 8%

Senior Officer Grade Structure. We are also emphasizing reductions in our senior officer grade structure:

	End FY 73	End FY 76	Percentage Reduction
Generals/Admirals	1,291	1,185	8%
Colonels/Navy Captains	16,200	14,900	8%
LtCols/Commanders	36,500	32,800	10%

Officer Education. We are working to improve officer education programs, particularly those in the scientific and technical fields, with an eye toward providing shorter programs for greater numbers of officers. The increasingly expensive nature of fully-funded programs makes it more imperative than ever that they be managed carefully to ensure maximum effectiveness. A high-level committee, chaired by the Deputy Secretary of Defense, is reviewing the cost and utility of these programs, including the Service academies, graduate education at Service and civilian schools, and the War Colleges. The committee expects to publish its report by the end of this fiscal year, although some initial decisions should be reached in the spring. In the meantime, costs are being reduced wherever possible. For example, we are reducing the number of officers receiving fully-funded graduate education from an actual 4,582 in FY 1973, to a projected 3,279 in FY 1976, for a total reduction of 28%.

C. THE ALL-VOLUNTEER FORCE

1. Active Forces

The armed forces succeeded in 1974 in achieving their active duty strength goals. At the end of the calendar year, DoD military strength was 99% of the planned total. The Army's success in recruiting and retaining personnel permitted the release of the remaining inductees in November, 1974, about six weeks earlier than their scheduled release.

Military Strengths
(In Thousands)

	June 30, 1974 (Actual)	December 31, 1974 (Actual)	June 30, 1975 (FY 1976 Budget)
Army	783	772	785
Navy	546	549	536
Marine Corps	189	192	196
Air Force	644	625	612
DoD	2,161	2,138	2,129

The December, 1974, end-strength position, viewed in conjunction with current recruiting and retention trends, provides a reasonable expectation that we will meet our overall strength requirements in FY 1975. With the stabilization of Service manning requirements, the currently available recruiting and retention incentives should permit the Services to reduce but not eliminate existing shortages in certain hard-to-fill skill areas during FY 1975..

a. Enlisted Accessions and Reenlistments

Fiscal Year 1975 is an especially demanding year for achieving new volunteers because we must not only overcome normal attrition but also replace the shorter-term draftees and draft-motivated enlistees who complete their terms of service. A total of 461,000 accessions are required in FY 1975. As we look ahead, however, we anticipate a smaller requirement for new accessions in future years. This will not make our recruiting task appreciably easier; we still must recruit one qualified Service-age male out of every three available. Despite the magnitude of this challenge, we expect to meet it. Concern over the projected decline in the male population expected in the mid-1980s as a result of the decline in birthrates during the past several years led to a study of the needs for and availability of volunteers for the Services for the next 10-15 years. Basic findings indicated that the all-volunteer force can be maintained throughout the period. The ratio of enlisted accessions to the 18 year old male population throughout the 1976-1990 time frame exceeds the FY 1975 proportion in only three years, 1986-1988, and in these three years the difference is negligible.

Recruiting during calendar year 1974 was excellent, as shown in the following table.

SERVICE RECRUITING RESULTS FOR CALENDAR YEAR 1974
(000's)

	Army	Navy	Marine Corps	Air Force	DoD	(Prior Service)
Recruiting Objective	217.5	109.6	66	75.6	468.7	(29.9)
Actual Accessions (NPS & PS)	218.9	113.8	56.9	76.2	465.7	(33.9)
Percent Achieved	100.6	103.8	86.2	100.7	99.4	(113.4)

Reenlistment results were also encouraging. Each of the four military services increased their first-term reenlistments in FY 1974, and while there were some skills in which the number of new entries into the career force was not sufficient, currently available incentive programs and increased retention from the true volunteer first-term force are expected to alleviate this situation.

The reenlistment bonus is proving to be a major incentive for reenlistments in critical skills, although shortages still exist. The Armed Forces Enlisted Personnel Bonus Revision Act, which allows the flexible, selective payment of a reenlistment bonus, is demonstrating its value. If we can continue to improve our retention of already trained people we will have a more effective and less costly force, and this is precisely the purpose of the Selective Reenlistment Bonus.

b. Quality Standards

The quality of the volunteer force has remained high. Whether measured by mental ability or high school graduation status, the quality of the force is higher than for the nation at large.

Congressional concern about possible lowering of quality standards led in 1973 to the establishment of a ceiling on the proportion of low mental ability entrants and non-high school graduates the Services would be allowed to recruit. As a result of the difficulties encountered by the Marine Corps in recruiting sufficient high school graduates, the Congressional limitation was amended to provide that the ceiling on non-high school graduates could be breached if the supply of graduates were not sufficient to meet strength requirements. Although the limitation applied to FY 1974 only, none of the Services, except the Marine Corps, has found it necessary to breach the ceiling and the Corps is within one percentage point of the previous Congressional limitation. Of the FY 1974 accessions, those with high school diplomas or the equivalent accounted for 66% of the new accessions. The proportion of high school graduates in the active force (officer and enlisted combined) remains high -- about 85%.

The Services have found that a high school diploma is a valid indication of potential motivation and disciplined performance. This is evidenced by a Basic Military Training attrition rate that is twice as high for non-high school graduates as for high school graduates. Therefore, the Services prefer to enlist high school graduates whenever possible. Still, four out of five non-graduates prove to be effective service members and we continue to recruit them.

Similarly, with regard to mental ability, less than 10% of the enlisted accessions in the first half of FY 1975 were Mental Category IV (below average) personnel. This percentage was lower than that of both FY 1964, the last pre-Vietnam year, and FY 1974. All the Services are within the previous Congressional limitation relating to mental ability.

c. Geographic Distribution of Enlistees

Geographically, the number of new accessions from each state for FY 1974 tended to be proportional to the youth population in that state. Regionally, there was a slightly greater representation from the South and the West than from the North and, more particularly, the Northeast. The 57 largest metropolitan areas provided a slightly lower share of new enlistees than their proportion of the population -- 46% versus 50%.

d. Racial Climate and Equal Opportunity

The all-volunteer force has proved increasingly attractive to minority groups. Blacks, as the largest minority in our population and in the armed services, accounted for 14% of the total enlisted force at end 1973. At the end of 1974, their proportion of the total strength stood at 16%. Among the individual Services, Black participation in the enlisted ranks varies widely from a low of 9% in the Navy, to 22% in the Army. The unemployment rate for minorities throughout the economy continues to measure twice that of the labor pool as a whole. It is, therefore, not surprising to find among minorities a proportionately greater interest in having the armed services as an employer.

This greater interest and need of minorities calls for a careful appraisal of the current racial climate and the implementation of positive action to insure that the national policy, attitudes and actions of the military leadership, and the perceptions of both minority and majority Service members contribute to that sense of unified purpose and combat readiness essential to the maintenance of national security.

Minority officer participation remains a challenge to the officer procurement programs of the Services. In particular, Black officer participation as a proportion of total active duty officer strength at the end of FY 1974 was 2.8%. For the Services, this participation varied from a low of 1.3% in the Navy to a high of 4.5% in the Army. While the proportion of Black officers is low in comparison with the general population and the enlisted force, it is very close to the proportion of Blacks in similar civilian positions. The competition for capable Blacks at the management and officer level has become very great as the country as a whole has emphasized equal opportunity.

The overall racial climate in the Services is more stable now than it has been in recent years. Racial incidents appear to be on a steadily declining trend. Operational and training missions continue without disruption. At the same time, commanders generally hold the view that the racial climate is "under control", not that total harmony has been achieved.

The Department of Defense, as the nation's largest employer of minorities and as an organization totally dedicated to achieving the objectives of our Human Goals Program, must lead the way in the coming year in attaining full participation by all eligible citizens.

e. Women in the Services

Women are playing increasingly important roles in the all-volunteer force. With the exception of certain combat or combat-related skills, all career areas are now open to women. After a flurry of news items on the first women pilots, military police, parachute riggers, and so forth, the once-novel concept of women as fully participating members of the armed services is becoming increasingly commonplace.

In terms of the total strength of the armed forces, the percentage of women has risen from 1.6% in FY 1971 to 3.5% in FY 1974, with a projected strength of 4.6% by the end of FY 1975. We project the overall numerical strength of women to increase from 74,715 at the end of FY 1974 to 97,000 in FY 1975, to 109,200 at the end of FY 1976.

f. Drug and Alcohol Abuse Control

The problem of drug abuse in the armed forces no longer approaches the crisis level evidenced by the high incidence rate recorded in 1971 and early 1972. Military treatment and rehabilitation of drug abusers continue to be based on a highly disciplined, well organized program. This program uses a humane approach, with treatment aimed at tailoring the rehabilitation program to the individual drug abuser. Service programs continue to emphasize rehabilitation efforts at local installations with the Navy and Air Force also using centralized treatment facilities for more seriously involved drug abusers.

Based on a decision of the Court of Military Appeals in the case of the United States v. Ruiz, the DoD Urinalysis Test Program for Drug Abuse was suspended on 18 July 1974. After consideration of the legal, manpower and health implications of the Court decision, the Urinalysis Test Program was reinstituted on 7 January 1975 within the constraints of the Ruiz decision which prohibits an other than honorable discharge if the discharge is based on evidence obtained through involuntary urinalysis.

Continuing past policy, the Services refer to the Veterans Administration those personnel who need additional treatment at the time of their separation from the Service as well as those who need long-term treatment for their drug abuse problems.

During the past year, the alcohol problem in the Department of Defense has been brought into sharper focus. We have made significant progress in developing a more positive attitude toward identification and treatment of the alcohol abuser, renewing our emphasis on the DoD Drug and Alcohol Abuse Education program. As the disease concept of alcoholism is replacing the punitive concept, increasing numbers of persons are volunteering for, or are being referred to, the program, an indication that the program is gaining credibility. The treatment and rehabilitation program assures sufficient care for everyone who is in need of help. Both inpatient and outpatient care are available.

2. Reserve Forces

Selected Reserve strength as of October 31, 1974, was 905,359. Additionally, there were 13,257 unpaid non-prior-service enlistees awaiting training. The aggregate figure of 918,616 compares to a figure of 916,693 as of December 31, 1973.

Average Strengths
(In Thousands)

	October 31, 1974			FY 1976 President's Budget
	Plan 1/	Actual 2/	Percent	
ARNG	400	400	100	400
USAR	225	234	104	212
USNR	112	111	99	92
USMCR	37	33	89	32
ANG	95	95	100	95
USAFR	51	46	90	53
DoD	920	919	100	885

1/ FY 1975 Appropriation Average
2/ Includes 13,257 NPS enlistees awaiting training

a. Enlisted Accessions and Reenlistments

The recruiting successes experienced in FY 1974 continued into FY 1975, with total accessions for the first quarter FY 1975 being 120% of the program, mainly due to the continuing large number of prior-service individuals joining the Selected Reserve. Although non-prior-service enlistments have shown an upward trend, they still fall short of programmed acquisitions.

SELECTED RESERVE RECRUITING RESULTS FOR FIRST QUARTER FY 75

	ARNG	USAR	USNR	USMCR	ANG	USAFR	TOTAL DoD
Non-prior service							
Program	8,085	4,800	841	670	1,560	989	16,945
Actual	5,738	3,467	841	1,730	722	378	12,876
Net over/short	-2,347	-1,333	0	+1,060	- 838	- 611	- 4,069
Prior service							
Program	13,250	9,700	5,665	1,479	1,930	1,752	33,776
Actual	13,009	9,283	6,687	1,297	2,610	5,087	37,973
Net over/short	- 241	- 417	+1,022	- 182	+ 680	+3,335	+4,197
Total accessions							
Program	21,335	14,500	6,506	2,149	3,490	2,741	50,721
Actual	18,747	12,750	7,528	3,027	3,332	5,465	50,849
Net over/short	-2,588	-1,750	+1,022	+ 878	+ 158	+2,724	+ 444

Improved reenlistment rates have also contributed greatly to maintenance of Selected Reserve strength. Efforts to improve reenlistment rates for first-term eligibles were especially productive in FY 1974 and the momentum has been maintained. Increased emphasis on retention of present unit personnel is emphasized as a means of reducing training costs and increasing readiness levels. First-term reenlistees are defined as those who reenlist on or before the expiration of their six-year military service obligation. Career enlistees are defined as those who reenlist or extend after completion of their six-year military service obligation.

REENLISTMENT RATES FOR THE SELECTED RESERVE

	FY 72	FY 73	FY 74
First Term	12%	16%	23%
Career	83%	75%	81%

Effective Reserve Component recruiting organizations have been built since the end of the draft. Innovative programs and hard work have enabled most of the Reserve Components to maintain required strength levels. Nevertheless, there is a difficult task ahead. There are approximately 444,730 individuals whose enlistments in the Selected Reserve expire during FY 1975 and FY 1976 -- over 211,000 in the Army National Guard alone. Many of these individuals will be reenlisting. Of the 444,730, approximately 165,000 are career personnel and our retention rate of these individuals is about 80%.

In addition, we can reasonably expect to retain about 20% of the 279,730 first-term enlistees. Recruiting replacements for the large number of individuals who choose not to reenlist in the Selected Reserve, however, represents a formidable task and recruiting will necessarily remain one of the most important missions of the Reserve Components. New incentives may be required to assure enlistments in sufficient quantity and quality.

b. Quality Standards

The overall quality of Reserve Component enlisted personnel remains high -- education and mental levels exceed that of the active force -- but the recent trend toward enlistment of persons in lower mental categories and with lesser educational attainment is a matter of concern and is being closely monitored. Recruiting is being monitored by mental category and by educational attainment through the Reserve Components Common Personnel Data System. As anticipated, the end of the draft has resulted in fewer numbers of persons in Mental Categories I and II seeking to join the Reserve Components. A similar decline in enlistment of college graduates and persons with some college background is also evident. Viewed in absolute numbers, since FY 1970 there has been a significant fall-off in Mental Categories I, II and III enlistments and a slight increase in Category IV enlistments. Further, over 50% of the enlistees lacked a high school education, although it should be understood that many of these non-high school graduates are expected to complete high school, since enlistment in the Guard or Reserve does not necessarily terminate their civilian education. Indeed, intensified recruiting of students within six months of graduation from high school contributes to the increase in the number of non-high school graduates enlisting in the Reserve Components.

c. Female and Black Accessions

Recruiting of women and minority groups has received special emphasis and these efforts have been particularly successful. Further gains in female and minority group participation are predicted as equal opportunity programs continue to be stressed. Opportunities for women have been greatly expanded by permitting enlistment for service in numerous fields previously closed to females. The goal in minority group recruiting is to achieve participation in each unit that reflects the character of the population in the recruiting area of the unit.

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FEMALE AND BLACK NON-PRIOR-SERVICE ACCESSIONS IN THE SELECTED RESERVE

	FY 71	FY 72	FY 73	FY 74
Female Accessions	356	481	1,352	5,479
(Percent of Total Non-prior-Service Gains)	(.4%)	(.6%)	(2.6%)	(11.8%)
Black Accessions	1,798	4,042	7,847	11,905
(Percent of Total Non-prior-Service Gains)	(1.8%)	(4.8%)	(14.9%)	(25.6%)

In terms of DoD Selected Reserve totals, women have increased from .4% participation, as of 30 June 1971, to 1.4%, as of 30 June 1974. Total Black participation increased from 1.7% to 5.6% during the same time frame.

D. PERSONNEL POLICIES

The Department of Defense is undertaking a number of initiatives to improve its personnel management.

1. Officer Personnel Management

After several years of study, the Department of Defense has proposed comprehensive legislation which would modernize the rules governing the management of the officer corps of the active military services. A companion proposal is being prepared for the reserve forces.

The current Officer Personnel Act governing the appointment, promotion, separation, and retirement of commissioned officers was enacted in 1947. It does not provide consistent career opportunities among the Services and contains many inequities and unwarranted differences in the treatment of personnel.

The proposed law would provide promotion systems which are uniform among the Services, new flexibility for selective retention and grade structure control not available today, and would eliminate unwarranted differences in treatment. It would overhaul or eliminate 328 sections of the existing law, and codify the remaining provisions into a cohesive and far more effective personnel management system. The companion bill for reserve officers would make their career patterns similar to that of regular officers by revising laws pertaining to appointment, promotion, separation, and retirement; and it would provide greater selectivity in retention. The active and reserve proposals together would enhance the integration of active and reserve forces in time of mobilization.

2. Enlisted Programs

We are developing better, less costly alternatives for meeting enlisted personnel requirements. Historically, enlisted programs have been short-range in nature, responding for the most part to annual mission changes and budget constraints. This has often proved costly in the long run, both economically and in terms of personnel dissatisfaction and reduced retention. We are now developing five-year enlisted personnel plans for each Service, scheduled for completion during 1975. The proportion of the enlisted force serving in the top six enlisted grades is planned to be reduced from 64.7% authorized at end FY 1973 to 61.4% in the outyears, a reduction of 5%.

3. Military Compensation

a. Quadrennial Review

The Department of Defense embarked upon its Quadrennial Review of Military Compensation in January, 1975. The last review, conducted in 1971, analyzed selected areas of the compensation program and led to a number of initiatives directed toward achievement of a volunteer force. It has been nearly eight years, however, since a comprehensive review of military compensation was conducted by the DoD, during which time significant changes have taken place in the pay structure. Therefore, in the forthcoming review we will undertake a detailed analysis of all forms of direct and indirect military compensation. This analysis will examine the adequacy and interrelationships of the several aspects of direct and indirect military compensation. This major study will be conducted by the Office of the Secretary of Defense with full participation by the military departments. We will draw on all knowledgeable sources, both internal and external, for information, suggestions, and guidance.

b. Retirement Modernization

Culminating several years of study, the DoD has proposed comprehensive legislation to modernize the retirement program for active duty personnel. In the past decade, the cost of military retirement has increased 400%. This increase has been driven by cost-of-living adjustments designed to protect the purchasing power of the military retiree; by the dramatically increasing number of retirees on the rolls; and by the substantial increases in active duty pay, from which retirement pay is derived.

There are several defects in the current retirement concept which need to be corrected:

-- It fails to recognize the significant increase in military income during the active duty period brought about by the new policy of pay comparability.

-- It fails to vest retirement benefits before twenty years of service. A member who serves for less than twenty years is not entitled to retired pay.

-- The retirement annuity is based on the pay received on the actual date of retirement. Thus individuals who can select their retirement date can significantly increase their retired pay by waiting for a pay raise or longevity increase. A basic inequity associated with this approach is that individuals who are not able to select their retirement dates (e.g., mandatory or disability retirees) do not have the same sort of option.

-- Annuities available to members with over twenty-five years of service are not competitive.

The DoD proposal would correct these defects and ultimately decrease the cost of the military retirement program. Save-pay features would protect the rights of those already on active duty. Even with the adjustments being proposed, the revised program would still be one of the most generous programs in general use.

In keeping with the total force policy, DoD has also proposed legislation that would modernize the reserve retirement system. Elements of the reserve retirement proposal that guardsmen and reservists should find particularly attractive are: (1) an option to receive actuarially reduced retired pay as early as age 50 and (2) survivor benefits payable to dependents of a reservist who dies before age 60 and who is otherwise qualified for retirement.

c. Special Pay Programs

The DoD has a wide variety of special pay programs originally designed to attract and retain capable personnel, and to provide incentives for channeling qualified persons into the more arduous occupations. These programs are expensive and many are outdated, inefficient, and misdirected. We have made administrative changes where we had the authority to do so, and proposed new legislation where necessary. The major results are as follows:

Enlistment Bonus. The expanded enlistment bonus, enacted by the Congress (PL 93-277), was implemented on June 1, 1974. Under the previous law, the enlistment bonus was restricted to individuals enlisting only in specified combat jobs in the Army and Marine Corps, and required only a three-year enlistment. The new law allows the bonus to be used by all Services for any critical skill suffering from inadequate accessions and requires a minimum four-year enlistment. This additional year of service will reduce replacement training costs, thereby offsetting a portion of the cost of the bonus, and will improve readiness through reduced turnover. The planned level of FY 1976 expenditures of $75 million for the bonus should provide an annual training cost offset in the outyears of approximmately $32 million.

Selective Reenlistment Bonus. As mentioned previously, the Congress has also authorized an improved Reenlistment Bonus program. The old law allowed two bonuses: a regular Reenlistment Bonus and a Variable Reenlistment Bonus. The Regular Reenlistment Bonus had to be paid to all reenlistees, without regard to the need for their specialty. As a result, about 25% of these payments were made in skill areas where sufficient retention could be achieved without a bonus. And while the Variable Reenlistment Bonus was paid only in shortage skills, it could be paid for the first reenlistment only. It thus failed to help us at the second reenlistment point. The Selective Reenlistment Bonus replaces both of the old bonuses and provides the flexibility to offer a substantial retention incentive at any problem reenlistment point within a member's first ten years of service. The amount paid depends on the severity of the retention problem in a particular skill and the amount of additional obligated service to which the member agrees. Members who reenlist in skills where no significant shortages exist receive no bonus. Thus, the new law is not only more effective but it results in substantial outyear savings as the Regular Reenlistment Bonus is phased out:

Cost Implications of the
New Selective Reenlistment Bonus
($ Millions)

	FY 76	FY 77	FY 78	FY 79	Total FY 76-79
Budgetary Changes	+2.1	-6.8	-13.2	-77.4	-95.3

Medical Bonus. In an attempt to increase the recruitment and retention of medical officers in an all-volunteer environment, DoD requested and Congress approved a program of variable incentive pay for medical officers. Under this program, obligated officers are paid bonuses of $9,000 per year and non-obligated officers are paid from $11,000 to $13,500, depending on the length of their contract and number of years of service. In FY 1976, 4,660 officers

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are under contract at a cost of approximately $55 million. We believe that the medical bonus program, combined with other initiatives in the health area, such as the Health Professions Scholarship Program, will be of substantial assistance in alleviating the shortage of medical officers on active duty.

Proficiency Pay. Early in FY 1975, Superior Performance Pay was terminated, and a decision was reached to reduce Shortage Specialty Pay by 75%. These decisions were designed to deemphasize proficiency pay in favor of the more effective Selective Reenlistment Bonus. As a result, a savings of $78.3 million will accrue in FY 1976.

Flight Pay. The Congress enacted a modified version of the DoD-sponsored Flight Pay bill, which became the Aviation Career Incentive Act of 1974 (PL 93-294), effective June, 1974. This Act, which is far more effective than the previous law, concentrates the greatest incentives in the retention-critical, flight-intensive years of an aviator's career and prohibits flight pay for commissioned officers after the 25th year of service. In addition, the Act provides for systematic performance standards which replace the much criticized "excusal" policy of the past. When transition to the new program is completed, a reduction of the flight pay budget will occur:

Cost Implications of the New Flight Pay Program
($ Millions)

	FY 1976	FY 1977	FY 1978	Total FY 76-78
Budgetary Changes	+11	-6.3	-10.8	-6.1

d. Military Pay Adjustment System

The method of allocating military pay raises among the elements of Regular Military Compensation was modified this past September by PL 93-419. The new law, sponsored by DoD, retains the matching increase principle, relating military pay increases to those of federal civilian employees. However, instead of placing the entire raise into basic pay, it applies the percentage increase equally to basic pay, basic allowance for quarters, and basic allowance for subsistence, thus bringing the allowances more in line with the expenses they are designed to defray. It also eliminates annual adjustments to enlisted subsistence allowance rates which in the past took place outside of the framework of the matching increase process. The estimated cost savings are as follows:*

Cost Savings of the New Method of Allocating Military Pay Increases Among the Various Elements of Military Compensation
($ Millions)

FY 1976	FY 1977	FY 1978	FY 1979	Total FY 1976-79
-366	-609	-882	-1,187	-3,044

* Assumes a 5% pay increase in FY 1976 and 5.5% thereafter.

4. Military Leave Policy

A comprehensive military leave policy was established in June, 1974. It is designed to maximize use of leave, minimize loss of leave, and reduce lump-sum terminal leave payments for unused accrued leave. Full implementation of this policy could generate annual savings on the order of $60 million by the end of FY 1976. The DoD is also developing a legislative proposal to limit repetitive terminal leave payments to enlisted personnel so as to make them approximately equivalent to the entitlements of the officer corps.

5. Presidential Clemency Program

From the point of view of the Department of Defense, the President's program for the return of Vietnam era draft evaders and military deserters has proceeded in an encouraging manner. To date, the military services have processed over 3,300 of 13,000 eligible absentees. These individuals can now go about reentering the mainstream of American society without fear of prosecution or punishment for their absence. The Department of Defense has made every effort to implement the President's program in keeping with the spirit of reconciliation, justice, and mercy in which it was conceived.

VI. ORGANIZATION AND MANAGEMENT

Our organization and management efforts during the past year have been concentrated in five major areas:

-- Reduction in the number and size of management headquarters, including improvements in the Unified Command Plan.

-- Achievement of efficiencies and economies in the support structure.

-- Improvements in the management of the weapon systems acquisition process.

-- Better utilization and conservation of energy resources.

-- Planning for the industrial mobilization base.

In addition, we are continuing to expand the Defense Department's participation in the Government-wide Management by Objectives program. The Department's program now includes some 60 different actions grouped under eight broad departmental objectives. Judging from the experience gained during FY 1974, Management by Objectives is most effective when used as a supplement to the Planning, Programming and Budgeting System (PPBS) within the Department. The strength of the program lies in its ability to focus quickly top management attention on a select list of key objectives, and in the communication of these objectives to working levels of management.

A. CHANGES IN THE UNIFIED COMMAND PLAN

In conjunction with our efforts to achieve significant headquarters efficiencies through reductions in personnel, or the consolidation or elimination of specific headquarters, which were discussed in some detail in the preceding section of this Report, the Department of Defense is also giving serious consideration to a major reorganization of the unified and specified combatant commands. While no final decision as to its implementation has yet been reached, this Unified Command Plan would improve management and command effectiveness through clarification of lines of authority and contribute to the creation of a peacetime posture which is compatible with the requirements for rapid transition from peace to war or other contingencies.

B. ACHIEVEMENT OF EFFICIENCIES AND ECONOMIES IN THE SUPPORT STRUCTURE

In addition to all of the specific actions discussed earlier, we are undertaking a number of other Defense Department-wide actions to increase the efficiency of the support structure.

1. Base Realignments

The major purposes of the DoD base realignment program are to decrease costs and to maintain a proper balance between military requirements and facilities available to support those requirements. In last year's Defense Report I indicated that the base realignment program would be conducted in two phases. The first phase consisted of a reduction or realignment of bases both here and abroad as the result of internal military department management improvements. The planning for this phase is essentially completed; 216 DoD base closure or realignment actions, which will eventually produce savings of about $548 million per year, have been announced.

The second phase of the base realignment program is inherently more difficult to accomplish; it involves a concerted effort to maximize the cross, or joint, Service utilization of bases and facilities, i.e., the sharing of certain logistics facilities that lend themselves to common usage. Four task groups, working under the direction of the Deputy Secretary of Defense, have been established to determine the most efficient base and support structure for strategic and tactical aircraft, troop and pilot training, depot level maintenance, and inventory control points. We hope that this second, albeit more difficult, phase will result in further savings, but it would be premature to make such a judgment at this time.

In addition to the studies being conducted under the second phase of the base realignment program, we are continuing our evaluation of real property facility requirements in order to ensure the most efficient use of our diminishing resources and to permit the strengthening of our combat forces. Special attention is being given to reducing overhead and support activities and eliminating headquarters activities which perform duplicate functions.

2. Standardization of Management Systems

As stated last year, a task force under the direction of the Assistant Secretary of Defense (Comptroller) has been established to standardize defense management systems where such standardization would reduce costs, without sacrifice of essential support to management. Forty candidates for standardization have been identified for immediate action, and an additional 40 for later action. Cost savings or cost avoidances resulting from the standardization projects are difficult to forecast, but the potential for savings through the more effective use of personnel with hard-to-find talents and the simplification of audit and management review is considerable.

3. Reduction of Reports, Forms and Directives

Another Management by Objectives action in support of our general objective to achieve economies within the Department is the effort to reduce drastically the number of reports, forms and directives. The continuous growth of data, information and reporting requirements has resulted not only in an increasingly burdensome requirement on DoD components, but also on our contractors. Our goal is to reduce the number of reports required by an average of 12%. Progress, thus far, has been excellent; 390 reports have been reduced or eliminated, at an estimated savings of $27 million.

4. Productivity Program

As part of the Management by Objectives program, the Department is placing increased emphasis on the productivity of its civilian and military workforce. Responsibility for this effort has been consolidated under the Assistant Secretary of Defense for Installations and Logistics. The Department plans to measure labor productivity in all major support functions such as medical, procurement, transportation, supply, maintenance, training, accounting and finance, printing and base services. We plan to have 50% of the civilian workforce under labor productivity measurement by the end of FY 1975.

Actions are being taken to enhance productivity through improved methods, techniques and procedures; more effective planning and control of workloads and resources; and by capital investments in fast payback opportunities as discussed in last year's Report. We are attempting to eliminate constraints on funding limitations and financing restrictions to provide greater opportunities for fast-payback projects. Actions have been initiated to allow industrially-funded activities to procure productivity enhancing investment-type items (currently limited to $1,000 per project) regardless of cost, when the cost of acquisition can be recovered in two years or less. Our goal is to increase labor productivity in the measured areas by 1.7% in FY 1975.

C. MANAGEMENT OF THE WEAPON SYSTEM ACQUISITION PROCESS

Management of the weapon system acquisition process requires a fine balance between freedom for the program managers and the Services to manage their programs and the need for review and assessment by OSD. This balance among the three levels of management is continually under review within the Department.

1. Defense Systems Acquisition Review Council (DSARC)

The DSARC, composed of the senior planning and acquisition managers in the Office of the Secretary of Defense, is the principal advisory group to the Secretary and Deputy Secretary of Defense. Each major weapon system receives detailed scrutiny by the DSARC at a minimum of three major decision points during the acquisition process: (1) prior to entering into Advanced Development, (2) prior to entering into Full-Scale Engineering Development, and (3) prior to proceeding with Production and Deployment. Although the issues addressed at DSARC reviews are determined by the extent to which the planned effort is completed, each milestone review addresses:

- The military need for the system in view of current and potential military threats.

- Possible alternatives to program continuation.

- The validity of the results of testing and the acceptability of the planned testing program.

- The extent of planned technical and economic competition.

- Schedule, performance, and cost thresholds.

- The overall readiness of the system to proceed into the next program phase.

A key element of each DSARC review is the OSD Cost Analysis Improvement Group (CAIG) assessment of the program manager and Service cost estimates. The CAIG provides an independent check on the reasonableness of cost estimates and the criteria used in their development. The CAIG has made significant progress toward its primary goal of improving DoD cost estimating and analysis: cost estimates are no longer simple advocacy expressions; and vigorous reviews of costs are now carried out both within each Service and within OSD. This review process results in any conflicting views of both acquisition and operating cost being made visible at highest policy levels prior to program acquisition decisions.

2. Service Reviews

While the reviews conducted by the DSARC are comprehensive, they constitute only a small fraction of the management effort supporting a major acquisition. The Services have individually adopted review practices which parallel those of the DSARC and are at least as extensive in their coverage. These reviews bring together high level program management personnel, functional specialists, and top civilian and military planning and acquisition managers for intra-Service discussion and resolution of issues surrounding each major acquisition. At the procuring command level, quarterly reviews of individual program performance address detailed technical and contractual agenda. Program cost estimates receive special management attention.

Each Service has created a special cost analysis staff which is organizationally independent from program management activities and which is responsible for providing an independent assessment of the reasonability of existing cost estimates. The results of these independent cost analyses are a major subject of discussion at each organizational level prior to the major milestone reviews. Special Service reviews are also held on reliability, maintainability and contract specifications.

3. Program Manager

The program manager remains the most important element in the entire weapons acquisition process. In recognition of his importance, we have taken a number of steps to assure the existence of a cadre of these high quality personnel. To this end, we have established a policy of decentralizing acquisition management to the maximum extent possible, placing increased emphasis on specialized high quality training, and providing attractive promotion and career incentives.

4. Efficiencies and Economies in Weapon System Acquisition

Planning horizons for weapon system acquisitions have been extended from five years to fifteen years. This allows us to better forecast performance, production schedule and cost factors and the relationship between them. Cost is now equal in priority to performance and schedule. All major weapon systems are assigned unit production cost targets before the decision is made to go to full-scale development, unless the weapon system is specifically exempted by the Secretary of Defense. We are preparing mission area summaries to facilitate selection of the most cost effective technology solution to threats in mission areas. As an example, aircraft and missiles compete with tanks in the area of tank defense.

Our efforts to improve the visibility of support costs have been concentrated toward support costs of aircraft systems. Our principal near term goal is to establish common costing terminology and data collection methodology which will allow us to obtain better estimates for life cycle costs of future systems.

Several initiatives are now underway in reliability and maintainability, key drivers of support costs. We are initiating a system whereby contractors assume additional responsibility for the field reliability of their equipment by their providing a warranty for that equipment. Reliability and maintainability minimum thresholds are specified in the Development Concept Papers; progress in these two areas is being given greater emphasis by DoD Test and Evaluation personnel in their assessments for DSARC.

The long lead time required for systems development makes it difficult to assess the impact of these and other actions toward reducing costs. However, recent analysis of Selected Acquisition Reports indicates that we have decreased the rate of growth in the costs of our new weapons system as measured in dollars of constant purchasing power.

5. Management Information Systems

Knowledge of the technical, schedule, and cost aspects of major acquisitions by managers in DoD is essential in order to conceive and implement realistic and balanced overall plans. We recognize the requirement for better evaluation of the costs and status of weapons acquisitions and are making every effort to report to the Congress and the public more extensive and accurate financial information. In this regard there are three developments of interest. First, we have improved the quality of weapons cost data by ensuring the high quality of basic cost data produced by contractors involved in defense production and by standardizing the information collected. Second, we are developing more effective estimating methods for full-life cycle costs of major weapon systems. Third, we have initiated a more detailed breakdown of the cost information provided to the Congress in the Selected Acquisition Reports.

Extensive efforts during the past year were made by the Services to validate the quality of contractor management systems through application of Cost/Schedule Control Systems Criteria (C/SCSC). To date, over 80 contractors involved in major acquisition programs have received validation. Complementing this effort is the implementation of Contractor Cost Data Reporting (CCDR) including a special overhead monitoring program for selected large procurements. CCDR is a critical part of our efforts to improve the quality of both initial cost estimates and of the estimated costs to completion of ongoing programs. CCDR is essential for accumulating actual defense contractor direct and indirect costs, and using these actual costs for projecting estimates to complete our current programs and projecting the costs on new programs.

Important revisions in both the format and coverage of the quarterly Selected Acquisition Reports have been made after extensive negotiation with Congressional and GAO users of this information.

Though our efforts have not resulted in unanimous agreement on the quality of the final product, we have established a better mechanism for explaining the impact of inflation on program costs. We are, on a continuing basis, examining SAR user suggestions for improvements to the system.

6. Commission on Government Procurement Recommendations

The Department of Defense is actively participating, through membership in an interagency advisory group established by the Office of Management and Budget, in the development of Executive Branch positions on the 149 recommendations of the Commission on Government Procurement. We support fully the work of this group and have provided experienced personnel to the many individual task groups created to develop proposed position papers and implementation plans on each of the Commission's recommendations.

As of 6 December 1974, the status of the 149 recommendations was as follows:

Accepted - Implementation Completed	20
Accepted - Implementation Pending	33
Rejected	7
Referred to OMB with Recommended Positions	31
Deferred to the OFPP	6
In Process by GSA Staff	23
Official Agency/Private Sector Views Pending	19
Interagency Task Group Reports Pending	10
TOTAL	149

As individual recommendations are accepted by the Executive Branch and implementation documents are promulgated by OMB or GSA, we immediately initiate implementation actions within the Department of Defense. This is done on a priority basis and usually consists of revisions to the Armed Services Procurement Regulations or the issuance of written directives.

Benefits are already being realized from some of the implemented recommendations. For example, one such recommendation called for an increase in the definition of a small purchase from a maximum of $2,500 to a maximum of $10,000. Immediately upon enactment of the necessary legislation (Public Law 93-356), we issued implementing instructions to the various military purchasing activities. The use of the simplified small purchase procedures up to $10,000 will result in a considerable saving in manpower and operating costs.

One of the most important areas of the Commission's report deals with the acquisition of major systems. There are twelve recommendations in this area dealing with such subjects as needs and goals for new acquisition programs, exploring alternate systems, maintaining competition, limiting premature system commitments, withholding production approval until reconfirmation of the need and successful testing, and delegating decision authority to the operating agency components except for key milestone decisions to be made by the agency head. We support all of the recommendations with minor modifications and we are now working with other interested agencies on the development of an Executive Branch position on them. These recommendations generally reflect existing Department of Defense policies and procedures; thus we do not foresee any significant difficulties in implementing them within the Department of Defense.

D. ENERGY MANAGEMENT AND CONSERVATION

During fiscal year 1974, military petroleum consumption averaged about 571,000 barrels per day, the lowest level since fiscal year 1955. This rate of consumption represented 3.4% of the U.S. total, down from 4.3% in the previous year. While FY 1974 fuel consumption was constrained to an unprecedented degree by the Middle East embargo and other factors, we plan to hold FY 1975-76 consumption to about that level -- because of price and budgetary constraints.

As stated in last year's Defense Report, a Defense Energy Task Group (DETG) was established in September, 1973, to conduct a comprehensive study of DoD energy-related problems and to recommend measures for strengthening management of DoD energy resources. A plan has now been developed which will allow us to maintain momentum in moving toward greater efficiency in the management and consumption of energy in future years. This plan, Management of Defense Energy Resources - Phase II, dated 22 July 1974, includes recommendations for conservation through motivation, investment in energy saving projects which can be amortized in a relatively short period of time, and additional R&D for the more efficient utilization of energy.

The Defense Energy Information System (DEIS-1), which provides worldwide energy information on a near real time basis for all aspects of petroleum energy used by DoD, has now been expanded. DEIS-II now provides information on other forms of energy used in support of installations. This system, which has the flexibility to support ever changing needs of DoD managers, permits easy and quick access to up-to-date reliable data on inventories of the various petroleum products in stock, weekly and monthly consumption, as well as actual receipts from DoD and contract sources. The DEIS systems also include information on distribution (e.g., petroleum products in transit).

DoD does not intend to undertake R&D projects in areas where civilian agencies or industry have the lead and required expertise, but it will encourage such work as a potential beneficiary. A good example is our experimentation with the liquified coal product developed by the Department of Interior. Similarly, DoD is prepared to provide family housing units as test platforms for solar heating and cooling demonstration projects. Defense R&D programs will be concentrated in those areas promising the most direct payoff in improved specific fuel consumption, such as in aircraft and ship operations; and in developing conservation techniques for use in Defense installations.

We are requesting $131.2 million in FY 1976 and an authorization of $213.9 million in FY 1977 for energy conservation investment projects. These military construction funds would initiate viable energy savings programs in most of our military bases in CONUS and, through reduced operating costs, would be amortized in one to five years. In addition we are including an additional $11.4 million in the regular FY 1976 military construction program for alteration of two major central heating plants to give them a capability to use either oil or coal. Funds were previously authorized and appropriated for a single fuel capability. Alteration of these plants will assist in meeting the President's self-sufficiency goal.

E. PLANNING FOR THE INDUSTRIAL MOBILIZATION BASE

A viable industrial base is a major element of our national strength and deterrent posture, and maintaining the capacity of that industrial base to respond to potential wartime demands continues to be a major consideration in our defense planning. In some specific areas, however, we have experienced a gradual erosion of the defense industrial base. Material scarcities, increases in production lead times, and the cost burden to comply with safety, health and environmental protection requirements are symptoms of this erosion. In addition, private industry is less willing to accept the complexities of doing business with the Defense Department as the proportion of defense spending in the economy decreases.

The Assistant Secretary of Defense (Installations and Logistics) has been directed to take a new look at our planning for industrial preparedness. We are seeking to implement further incentives to encourage industry to cooperate with the Industrial Preparedness program under a peacetime environment, as well as under the declaration of a national emergency.

1. Materials Scarcity and Production Lead Times

The general scarcity of a wide spectrum of materials, particularly in the past year, has seriously affected our procurement of weapons systems and logistics support. For example, the shortage and high cost of petroleum resulted in shortages of industrial chemicals such as ethylene oxide, toluene and benzene. The lack of these fuel stocks, in turn, caused cutbacks in production of synthetic fibers and textiles and severely restricted the production of plastics such as neoprene and polyvinyl chloride. Moreover, virtually all metals were in short supply, causing a significant escalation of production lead times and other production shortages. As a result, the list of supplies identified as long lead time procurement items has grown rapidly and now includes: forgings, extrusions, electronic subsystems, aircraft wheels and brakes, and many other commodities.

2. Impact from Application of Environmental and Safety Regulations

Because of recently imposed environmental and health protection requirements, it has been necessary to shut down certain facilities, some of which are essential to DoD's operational needs. Other facilities are in danger of being closed because compliance with the more stringent environmental protection requirements is often not feasible in view of the age and condition of the facilities and the prohibitive cost of rehabilitation.

For example, the production of a liquid missile fuel known as Unsymmetrical Dimethyl Hydrazine (UDMH) has come to a halt except for a limited production capability at a recently-established facility at Indian Head Naval Ordnance Station in Maryland. Newly applied standards require a total redesign of the production process and the Government, as the sole customer, will have to pay the bill. In the past, this fuel cost the Government 45¢ per pound; estimates of the next buy of UDMH range between $5 and $7.50 per pound.

Within the last three years, approximately 1,000 foundries have closed, and another 350 are expected to close in the near future when existing variances expire. While the overall output of this industry has increased in recent years, it still falls short of demands, and the lead time for large steel castings, for example, has more than doubled in the last two years, from 20 to 52 weeks. Consequently, as noted in the discussion of the M60 tank program, the Defense Department has had to finance an expansion of casting facilities for that program.

The forging industry, similarly, is faced with severe restrictions on noise pollution from their impact forging equipment. Some of the standards that have been proposed, if fully implemented, would cause closure of major segments of this industry. Lead times for forgings have also more than doubled in the last two years, from 20 to 46 weeks.

3. Corrective Actions

As long as this country and the world continues to experience critical shortages in various basic metals and raw commodities, instability within industry will continue. The Department of Defense, for its part, is doing everything possible to reduce requirements; forego nonessentials; adjust contract delivery schedules to more manageable terms; and employ new procurement practices to reflect the current situation.

Action must also be taken to ease the impact of inflation on some suppliers, particularly small businesses. Production contracts written with options to place follow-on orders at a fixed price sometimes have a damaging effect on the contractor because he has no control over the cost of materials. Accordingly, we have adopted the practice of writing shorter term contracts, and expanding the use of price escalation clauses.

The DoD also is aggressively applying remedies provided under the Defense Materials System (Defense Production Act) to resolve production bottlenecks. This involves identification of specific material shortage areas, reallocating a specific plant's production and rescheduling its delivery commitments, and providing special priorities assistance. In the latter regard, the number of assistance requests processed by DoD to the Department of Commerce on behalf of industry has tripled in the past year. Additionally, increased use of government furnished materials and the use of materials available from the national stockpile have been stressed whenever possible.

4. Industrial Preparedness Program

The general policy of the DoD is to rely primarily on private industry for goods and services needed by the Defense establishment. The capacity and capability of private industry to respond to military requirements in a national emergency dictates the amount of public funds which must be expended to procure and maintain government industrial plants, equipment and war reserve materiel to make up the deficiencies. For example, the DoD maintains about $17.9 billion in industrial plants and production equipment to provide the mobilization production capacity that private industry neither has nor is willing to provide with its own capital. This government segment of the industrial base consists of 149 plants and repair facilities (excluding R&D laboratories) of which 85 are contractor-operated and 64 Government-operated. It also includes about: (1) 96,000 items of active industrial plant equipment (IPE) currently in the hands of contractors; (2) 37,000 items of IPE currently idle but being held in the form of plant equipment packages for use by specifically planned producers in event of an emergency; (3) 24,000 items of IPE being held in a general reserve for redistribution as required in support of current or future programs; (4) 8,500 items of IPE which are currently on loan to non-profit vocational training schools and educational institutions.

Over the past several years, we have made a concentrated effort to bring our industrial preparedness planning into consistency with the realities of today's world and the types of potential wartime contingencies that are plausible enough to justify such planning. Industrial preparedness planning and investment in a modernized, responsive production base cannot contribute to support of our forces in the first few months of a conflict. Therefore, this facet of Defense planning focuses on critical potential contingencies that, if they occur at all, would probably be protracted.

Virtually all of this planning and production base investment concentrates on production capacity for critical combat consumables (such as munitions, spare parts, medical supplies) and combat equipment and vehicles of complexity and unit cost up to that of items such as tanks. We do not invest any significant funds in production facilities for ships and aircraft for the sole purpose of providing a wartime production base. This is because our studies have shown that a great deal of money must be spent in peacetime to provide even small improvements in production acceleration well over a year after the start of a conflict. For this reason, the economics of peacetime procurement dominate our peacetime decisions on investments in ship and aircraft production facilities.

Other measures being taken to overcome weaknesses in the industrial mobilization base include: (1) the use of negotiation authority under the Armed Services Procurement Regulations where necessary to keep facilities available for industrial mobilization; (2) modernization of plants and equipment where required to reduce maintenance costs and increase productivity and/or safety; (3) economic analyses to determine the most cost-effective mix of production base capability and war reserve stocks; and (4) incentives to industry to encourage continued participation in the maintenance of a viable industrial base.

5. Munitions Production

Since we are largely dependent on in-house facilities for munitions production, we have had to undertake a major program to upgrade these facilities. For example, we are nearing completion of the installation of a continuous nitration process at our TNT plants to replace the batch process that dates back to World War I. This continuous process is far more cost-effective. Automation of the loading and packaging of munitions is another facet of the modernization program. The ability of these automated facilities to expand production quickly reduces the amount of munitions that must be stored pending the availability of new production. The munition production modernization program is scheduled over several years and will cost, when completed, in excess of $6 billion.

6. Manufacturing Technology

Another action that we have taken to assist in the maintenance of a viable production base in this country is the DoD Manufacturing Technology Program. This program is designed to develop improved manufacturing techniques and to provide for timely, reliable and economical production of Defense materiel. The program is production-oriented and is designed to smooth the transition of R&D advances into economical production.

Although the primary objective of the DoD Manufacturing Technology Program is to resolve defense production problems, the results of the DoD projects are shared with industry. These actions have significantly contributed to the modernization of the domestic production base and have assisted in the national drive to increase U.S. productivity.

In cooperation with industry we are exploring various approaches to promote greater use of computers and computer technology in the manufacturing process. We believe that computer-aided manufacturing offers many highly significant opportunities for cost reductions in systems acquisition and we plan to pursue these opportunities aggressively within the limitations of funding availability.

APPENDIX A

DEFENSE BUDGET TRENDS

In appraising the FY 1976 Defense Budget, it is essential to take into account the effects of inflation from FY 1975 to FY 1976, and -- even more important -- to consider the impact of unforeseen inflation and other developments over the past year which have seriously eroded our FY 1975 base. Table 1 provides a framework for these comparisons. This table shows total and baseline TOA in current and constant prices for the years FY 1973-76. The FY 1975 Budget included a forecast for FY 1976. Last year's Defense Report included a breakout of baseline and other elements of the budget. To provide a meaningful comparison, we have expressed all these figures in constant FY 1976 prices as well as in current prices.

In current prices, TOA for the FY 1973-75 period is below the levels of a year ago. The $.3 billion drop for FY 1973 reflects cutbacks in programs for that year, either by direct congressional action or with congressional approval. The $2.1 billion falloff for FY 1974 reflects, largely, congressional cutbacks in the FY 1974 readiness supplemental requests. The FY 1975 estimate of $89 billion includes all supplementals now pending. Even on that basis, our estimates are $3.6 billion below those of a year ago. Our current estimate for FY 1976 is $6.7 billion higher than last year's forecast.

The trend in constant prices, shown in the lower portion of the table, is radically different. Last year, we projected an essentially level total program from FY 1973 to FY 1976, in terms of real buying power. And, as last year's Defense Report showed, we had projected an increase of about 1 1/2% per year in buying power for the baseline force. As table 1 shows, we have not realized these expectations. Our baseline buying power has sagged badly, in part owing to congressional cutbacks but much more so owing to unforeseen inflation. Our FY 1975 baseline program -- $87.9 billion, in FY 1976 prices -- is $10.2 billion below the level we had projected a year ago. There is, indeed, a real baseline increase of $4.5 billion from that depressed level to our FY 1976 request. But even with that increase, our FY 1976 baseline program is $6.8 billion lower than our projections of a year ago. With that FY 1976 program -- lower, by some 7%, than our projections of last year -- we shall have to meet our current military needs and fill, as well as we can, the gaps in our readiness which appeared as a result of the shortfalls in FY 1974 and FY 1975.

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TABLE I

DEFENSE BUDGET COMPARISONS
(TOA Billions of Dollars)

	Fiscal Years			
	1973	1974	1975	1976
Current prices				
Total, February 1974 (FY 1975 Budget)	80.5	87.1	92.6	98.0
Total, February 1975 (FY 1976 Budget)	80.2	85.0	89.0	104.7
Baseline, February 1974	69.8	77.0	83.4	88.5
Baseline, February 1975	69.6	75.9	81.0	92.4
Constant (FY 1976 prices)				
Total, February 1974	109.7	109.3	108.8	109.3
Total, February 1975	109.4	104.4	96.5	104.7
Baseline, February 1974	94.4	96.5	98.1	99.2
Baseline, February 1975	94.1	92.6	87.9	92.4

APPENDIX B

INFLATIONARY IMPACT AND REAL PROGRAM CHANGES

Unforeseen Inflation

After an extended period of double-digit inflation, it is difficult to recreate the economic climate and expectations of the fall of 1973, when our FY 1975 Budget estimates and original FY 1976 forecasts were prepared. That was, in economic terms, a very long time ago. It is necessary to refer back to that period, however, because a large part of our FY 1975 Budget was presented in prices calculated as of the fall of 1973. Even in those areas where we are permitted under budgetary guidelines to anticipate inflation, we made our own projections in terms of the economic expectations operative in the fall of 1973. The consensus of the economic forecasters, at that time, was that inflation would be in the range of 4% to 5% per year.

Table 1 shows the results. It depicts the inflation rates we have experienced from FY 1973 to FY 1975, and our current expectation from FY 1975 to FY 1976, and compounds these to a 3-year total. This is compared to our 3-year expectation of a year ago. In the payroll area, the increases are very close to what we had expected a year ago. As to purchases from industry, however, inflation has been more than double what we expected -- 55.5% versus 22.5% in terms of outlay impact, and 50.1% versus 22.9% for TOA. Overall, considering pay and purchases together, we had forecast inflation of some 23% from FY 1973 to FY 1976, and are now facing 37%. The Table also shows that our inflation rates are well in line with general economic measures.

This unforeseen inflation is the primary reason that our FY 1975 buying power has been so weakened. It is also the reason that our current FY 1976 program -- in spite of a sharp increase in dollar levels -- is far below the real-term levels we had projected a year ago.

Baseline and Other Program Trends

In last year's Defense Report, we presented data on total and baseline force trends in current and constant prices. For this purpose, we set aside the military assistance program (primarily to exclude the effects of the large FY 1974 item for Israel), Southeast Asia costs, and military retired pay. Table 2 shows the same data for this budget, with one further necessary adjustment -- the prior-year shipbuilding item. The FY 1976 request includes $2,269 million to cover unforeseen inflation affecting prior-year shipbuilding programs. This amount does not provide any additional ships for FY 1976, but is necessary to cover the costs of ships already approved for FY 1975 and prior years. A comparability adjustment is necessary, as shown in the table.

TABLE 1

ANNUAL INFLATION RATES

	CONSUMER PRICE INDEX	WHOLESALE PRICE INDEX*	GNP DEFLATOR	INFLATION ON DEFENSE BUDGET OUTLAYS	INFLATION ON DEFENSE BUDGET TOA
FY 1973 TO FY 1974	9.0%	16.1%	8.1%	9.4%	11.0%
FY 1974 TO FY 1975	11.9%	18.3%	11.3%	14.4%	13.3%
FY 1975 TO FY 1976	9.5%	4.7%	9.0%	9.9%	8.4%
COMPOUND TOTAL, FY 1973-76	33.5%	43.8%	31.2%	37.7%	36.3%
DEFENSE FORECAST, FEBRUARY 1974				23.0%	23.3%

*Based on unofficial forecast after January 1975

TABLE 2

TOTAL AND BASELINE PROGRAM TRENDS

($ MILLIONS, CONSTANT FY 1976 PRICES)

TOA	FY 1973	FY 1974	FY 1975	FY 1976	CHANGE, FY 1975-1976
Total Obligational Authority	$109,377	$104,410	$96,468	$104,684	$+8,216
Prior-Year Shipbuilding Programs[a/]	+91	+634	+909	-2,269	
Comparable TOA	109,468	105,044	97,377	102,415	+5,038
Non-Baseline Items:					
Military Retired Pay	5,787	6,174	6,573	6,936	
Military Assistance:					
Southeast Asia Costs	–	–	1,166	1,293	
Other MAP	1,614	4,482	1,449	1,408	
Mil. Functions Southeast Asia Costs	7,938	1,772	306	124	
Production Support, Fgn. Mil. Sales	–	–	–	300	
Total, Non-Baseline Items	15,339	12,428	9,494	10,061	+ 567
Baseline TOA, Constant Prices	94,130	92,617	87,883	92,354	+4,471

[a/] $635 million applies to FY 1972 and prior programs

Last year we projected a sharp drop in real terms for nonbaseline items from FY 1973 to the following years. This drop has in fact occurred, as the table shows.

We had projected an increase in real TOA for the baseline force, however. In terms of constant FY 1976 prices, that program would have risen from $94.4 billion in FY 1973 to $99.2 billion in FY 1976. Instead, as the table shows, a very sharp drop materialized from FY 1973 to FY 1975. In terms of real buying power, our FY 1975 program is $10.2 billion below the levels projected last year. The baseline program rises $4.5 billion from FY 1975 to FY 1976. Even with that increase, our FY 1976 program is $6.8 billion below the levels planned a year ago.

Table 3 covers the same material in terms of current prices -- that is, without adjustment for inflation.

TABLE 3

TOTAL AND BASELINE PROGRAM TRENDS
(Millions of Dollars, Current Prices)

TOA	FY 1973	FY 1974	FY 1975	FY 1976
Total Obligational Authority	$80,225	$84,992	$88,993	$104,684
Prior-Year Shipbuilding Programs	+91	+635	+909	-2,269
Comparable TOA	80,316	85,627	89,902	102,415
Non-Baseline Items:				
Military Retired Pay	4,392	5,137	6,276	6,936
Military Assistance				
Southeast Asia Costs	-	-	1,000	1,293
Other MAP	1,129	3,314	1,331	1,408
Military Functions Southeast Asia Costs	5,171	1,290	281	124
Production Support, Fgn. Mil. Sales	-	-	-	300
Total, Non-Baseline Items	10,692	9,741	8,888	10,061
Baseline TOA, Current Prices	69,624	75,886	81,014	92,354
February 1974 Projection	69,769	77,047	83,373	88,542

APPENDIX C

BUDGETARY TREATMENT OF INFLATION IN FY 1975 AND PRIOR YEARS

The extraordinary inflation of the past year has had a severe impact on DoD's procurement of Congressionally approved weapon systems. The inflation rates in the most basic materials used by defense industries have been rising at unanticipated and virtually unprecedented rates. This inflation is unavoidable, for the figures shown below are the wholesale price increases for these materials throughout the economy. Fortunately, the cost of labor has not been rising exceptionally fast, as shown below.

Material and Labor
Price Increases
(Most Recent 12 Months Available)

Steel	41%
Aluminum	43%
Copper Wire	33%
Aircraft Industry Labor Earnings	5%
Shipbuilding Labor Earnings	6%

However, DoD does not purchase directly either the material or the labor shown above, so the goods actually bought reflect a combination of these input cost increases. One measure which does reflect the impact of this cost inflation on the output of heavy industries, such as defense industries, is the wholesale price index for producer finished goods. As seen in the table below, the inflation rate resulting from these material and labor cost increases has quadrupled in the past year.

Price Increases
Producer Finished Goods
(% Change)

1973-1974	23%
1972-1973	5%
1971-1972	3%

Price increases of this order of magnitude have driven procurement costs for the FY 1975 and prior year programs significantly above their original estimates. This proposed budget therefore includes the higher price levels in costing the proposed defense program.

The combination of underestimates of inflation and budgetary procedures has led to serious underfunding of DoD programs approved by the Congress in FY 1975 and prior years. For example, in the case of those major weapon systems which had a provision for price escalation in the FY 1975 Budget, those estimates were consistent with the then-current economic projections. As we are all aware, those projections grossly underestimated inflation, and thus DoD funding did not fully cover the Congressionally approved program. For other accounts, primarily operation and maintenance and minor procurement, budgetary procedures required that we estimate the budget using the prices in effect 9 to 21 months prior to spending in the budget year. When inflation is two to three percent, this situation can be accommodated by minor adjustments. However, with the rampant inflation of the past two years, these budgetary rules have led to serious underestimates of the cost of operating our forces at approved levels.

These underestimates of the impact of inflation have resulted in underfunding of about $7 billion for defense spending in FY 1975. In addition, money appropriated in FY 1975 and prior years for spending in FY 1976 and beyond is short of the inflation-swelled cost which must be met. The prior year shortfalls have caused cuts in operations and readiness, deferrals of needed maintenance, lengthened lead times, and reduced procurements. These problems have been described in greater detail in previous sections of this Report. The FY 1976 Budget request by no means seeks to recover this entire prior year underfunding. However, we have an obligation to seek adequate funds to meet the full costs of the programs proposed in this budget.

Real Program Value

In an earlier section, we provided one broad breakdown of the Defense Budget in terms of baseline and other forces -- a breakdown used in last year's Defense Report. Another measure that is highly significant is real program value, or RPV.

RPV is a measure used by the Department of Defense to identify the segment of DoD budgets that contributes directly to U.S. and Allied peacetime military capability. RPV represents the 90% of the current Defense Budget that maintains and modernizes the forces which comprise the military posture of the U.S.. It is not a direct measure of military security because that depends not only on U.S. forces but also the threats they face. It is also not a measure of military strength at a given point in time because that varies as a function of the specific allocation of RPV resources between investment in future capability and present force operating levels. Specifically, RPV includes the pay of U.S. active and reserve military personnel, pay of DoD civilians, purchases of equipment and services, military construction, research and development, and some share of support to other nations.

The remaining 10% of the current Defense Budget (in constant FY 1975 prices) consists of programs that have international or social objectives other than maintaining or modernizing U.S. and Allied peacetime military capability. The largest single item excluded from RPV is the DoD pension payments to retired military personnel. These payments are included in DoD's budget even though payments are for past services and are unrelated to the size or composition of current U.S. forces (U.S. government payments to retired DoD civilians are not included in DoD's budget). DoD pension payments to retired military are now above $6 billion a year (in FY 1975 prices) and will grow to about $8 billion (in FY 1975 prices) by 1980. In addition to the pension payments, the DoD provides medical care to retired military and their dependents. This program, also excluded from RPV, has grown from less than $100 million in the early 1960s to about $1 billion a year. These retired medical costs include a share of the cost of U.S. military medical facilities which are used by military retirees and an estimate of direct payments through the Civilian Health and Medical Program for the Uniformed Services to retirees.

RPV, as defined within the Defense Budget, provides a reasonably realistic measure of U.S. defense resources devoted to current and future U.S. military capability. There are, however, three exceptions.

First, the DoD has been required to institutionalize some costs that were not previously part of the DoD Budget. Two examples are postal charges and rent of General Services Administration-managed buildings that DoD uses. While these costs are properly a cost of Defense, their addition to the DoD Budget distorts comparisons of past RPV with current RPV. Such additions give the incorrect impression of more real resources -- men, equipment, and other assets -- for defense when in fact they merely represent a change in the manner in which the federal budget accounts for certain cost items.

Second, the DoD has been required to add to the costs of defense by initiating and paying for programs that comply with non-defense related legislation. Examples are the implementation of environmental laws and the Occupational Safety and Health Act. In the past, damage to the environment and injuries to workers in defense industries, which these laws attempt to prevent, were social costs of maintaining a defense establishment. As a result of a public policy decision, in the future these costs will be paid for out of the Defense Budget. Although DoD supports these laws, no additional defense capability is gained by spending money on these programs.

Finally, defense budgets have been increased to accommodate programs that are partially defense oriented but in the main are of general national interest. Examples are the projected development of the U.S. Naval Petroleum Reserve and the DoD's share of the space shuttle programs. While it is almost impossible to determine what portion of these joint products is properly allocated to defense, it is important in making historical RPV comparisons to note that some share of these resources is making a zero contribution to military capability.

Projected costs of the programs described above are included in the table below. The RPV figure does not include significant amounts of these items prior to 1970 and, therefore, comparison of trends after 1970 must take into account the fact that these additional "RPV" dollars buy <u>no</u> real increase in military capability.

<u>GROWTH IN DOD RPV FROM PUBLIC POLICY DECISIONS</u>

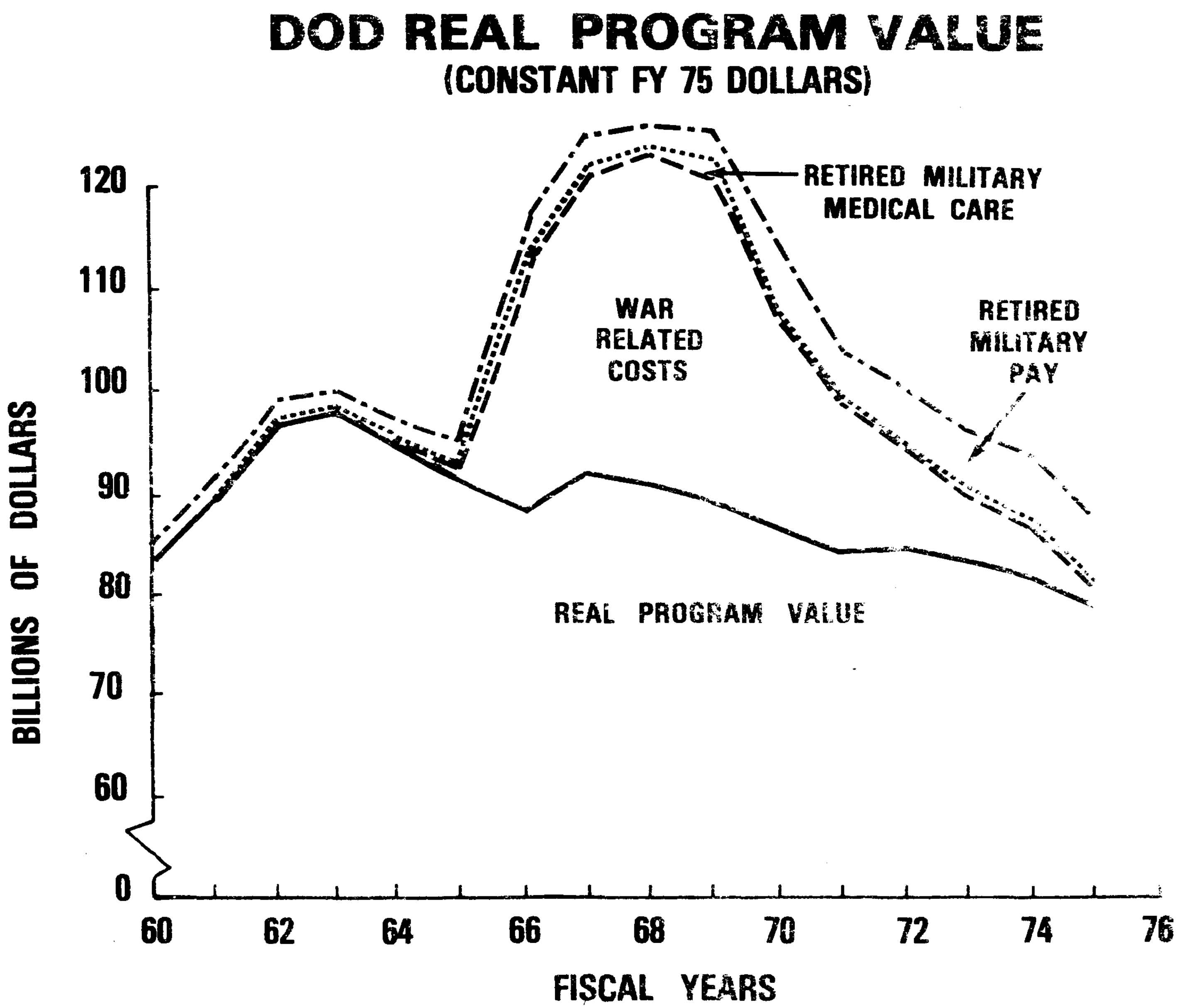
	Amount in DoD Budget (In Millions of Dollars)	
	Actual FY 1970	Projected FY 1980
Petroleum Reserves	*	$1,800
Environmental Programs	-	260
"TITLE VIII" Nuclear Navy	-	200
"Rent" on GSA Buildings	-	150
Postage Charges on DoD Franked Mail	-	130
All-Volunteer Force "Non-Pay" Items	-	80
Occupational Safety & Health Act	-	40
		$2,660

* Less than $10 million

Consistent with defining RPV as those DoD resources devoted directly to maintaining our military posture, military aid to our Allies who are at peace is included in RPV. These resources may contribute as much, and in some cases more, to deterring the threat as an equal investment in U.S. forces. However, foreign aid funds in the DoD Budget for Allies who are at war are excluded. In FY 1975, RPV excluded $700 million for South Vietnam and $200 million for Cambodia mainly for ammunition and materiel being consumed in combat. Since these expenditures do not contribute to the steady-state military capability of the U.S. and our Allies, they are excluded from RPV.

RPV, in FY 1975 dollars, has been gradually declining from a pre-Vietnam war level of $95 billion to about $82 billion in FY 1974. It fell below $80 billion in FY 1975 as a result of roughly $5 billion in Congressional reductions to the President's FY 1975 Budget submission. The trends are shown in Chart I. The chart also shows how the retired military pay and medical care components have been growing, as discussed previously.

Chart I


DOD REAL PROGRAM VALUE
(CONSTANT FY 75 DOLLARS)
RETIRED MILITARY MEDICAL CARE
WAR RELATED COSTS
RETIRED MILITARY PAY
REAL PROGRAM VALUE
BILLIONS OF DOLLARS
120
110
100
90
80
70
60
0
60
62
64
66
68
70
72
74
76
FISCAL YEARS

APPENDIX D

TABLE 1
Department of Defense
FINANCIAL SUMMARY
(In Millions of Dollars)

	FY 1964	FY 1968	FY 1974	FY 1975	FY 1976	FY 197T
Summary by Budget Title						
Military Personnel	12,983	19,939	24,104	24,975*	25,913	6,731
Retired Pay	1,211	2,093	5,137	6,276	6,936	1,870
Operation and Maintenance	11,693	20,908	23,862	26,259*	29,846	7,861
Procurement	15,036	22,550	17,467	17,356	24,720	4,578
Research, Development, Test, & Evaluation	7,053	7,264	8,195	8,616	10,294	2,704
Special Foreign Currency Program	-	-	3	3	3	-
Military Construction	977	1,555	1,695	1,914	2,901	76
Family Housing & Homeowners Asst. Prog.	602	614	1,136	1,176	1,282	290
Civil Defense	111	86	80	87	88	20
Military Assistance Program	989	588	3,314	2,331	2,701	513
Total - Direct Program (TOA)	50,655	75,597	84,992	88,993	104,684	24,642
Summary by Program						
Strategic Forces	8,505	7,236	6,835	7,394	7,721	2,100
General Purpose Forces	16,406	30,375	27,535	28,207	35,851	7,251
Intelligence and Communications	4,378	5,551	5,891	6,375	7,272	1,692
Airlift and Sealift	1,044	1,756	778	921	1,597	348
Guard and Reserve Forces	1,768	2,196	4,308	4,853	5,579	1,517
Research and Development	4,813	4,277	6,850	7,674	9,365	2,457
Central Supply and Maintenance	4,639	8,422	8,537	8,985	9,896	2,642
Training, Medical, Other Gen. Pers. Activ.	6,959	12,183	18,203	19,919	21,717	5,445
Administration and Assoc. Activities	1,077	1,237	1,772	2,095	2,426	616
Support of Other Nations	1,066	2,364	4,283	2,570	3,261	574
Total - Direct Program (TOA)	50,655	75,597	84,992	88,993	104,684	24,642
Summary by Component						
Department of the Army	12,275	24,972	21,584	21,663	25,098	6,328
Department of the Navy	14,458	20,765	26,860	28,136	34,093	7,590
Department of the Air Force	19,958	24,917	24,682	26,201	30,593	7,167
Defense Agencies/OSD/JCS	1,007	1,519	2,134	3,061	3,513	848
Defense-wide	1,857	2,750	6,339	7,513	8,598	2,177
Civil Defense (DCPA)	111	86	80	87	88	20
Military Assistance Program	989	588	3,314	2,331	2,701	513
Total - Direct Program (TOA)	50,655	75,597	84,992	88,993	104,684	24,642
Financing Adjustments	14	1,143	3,906	1,765	-	-
Budget Authority (NOA)	50,669	76,740	88,898	90,758	106,340	24,859
Outlays	50,786	78,027	78,445	84,800	92,800	25,400

Note: In the FY 1976 and FY 197T columns, amounts for military and civilian pay increases, military retired pay reform and other proposed legislation are distributed.
* Reflects proposed legislation.
Details may not add to totals due to rounding.

TABLE 2

SUMMARY OF SELECTED ACTIVE MILITARY FORCES

	Actual June 30, 1964	Actual June 30, 1968	Actual June 30, 1974	Estimated June 30, 1975	June 30, 1976
<u>Strategic Forces</u>:					
Intercontinental Ballistic Missiles:					
MINUTEMAN	600	1,000	1,000	1,000	1,000
TITAN II	108	54	54	54	54
POLARIS-POSEIDON Missiles	336	656	656	656	656
Strategic Bomber Squadrons	78	40	28	27	26
Manned Fighter Interceptor Squadrons	40	26	7	6	6
<u>General Purpose Forces</u>:					
Land Forces:					
Army Divisions	16	19	13	14	16
Marine Corps Divisions	3	4	3	3	3
Tactical Air Forces:					
Air Force Fighter/Attack Sqdrns	85	103	75	69	68
Navy Attack Fighter/Attack Sqdrns	85	80	70	70	65
Marine Corps Fighter/Attack Sqdrns	28	27	26	25	25
Naval Forces:					
Attack & ASW Carriers	24	23	14	15	13
Nuclear Attack Submarines	19	33	61	64	68
Other Warships	368	387	187	189	185
Amphibious Assault Ships	133	157	65	64	63
<u>Airlift and Sealift Forces</u>:					
Strategic Airlift Squadrons:					
C-5A	0	0	4	4	4
C-141	0	14	13	13	13
Troopships, Cargo Ships, and Tankers	101	130	37	40	43

TABLE 3

Active Duty Military Personnel, Reserve Component Military Personnel, and Civilian Personnel Strength
(end of fiscal years in thousands)

	1964	1968	1974	1975	1976	30 Sep 1976	1977
Active Duty Military							
Army	972	1,570	783	785	785	793	793
Navy	667	765	546	536	529	536	546
Marine Corps	190	307	189	196	196	196	198
Air Force	856	905	644	612	590	590	590
Total	2,685	3,547	2,161	2,129	2,100	2,115	2,127
Reserve Components (in paid status)							
Army National Guard	382	389	403	400	400	400	400
Army Reserve	346	312	235	212	212	212	212
Naval Reserve	132	131	115	113	92	92	92
Marine Corps Reserve	48	48	31	32	33	33	36
Air National Guard	73	75	94	96	95	95	94
Air Force Reserve	67	46	46	52	53	54	55
Total	1,048	1,001	925	905	885	886	890
Direct-Hire Civilian							
Army 1/	360	462	342	337	334	338	337
Navy	332	419	324	318	322	323	328
Air Force 1/	305	331	274	266	256	258	256
Defense Agencies	38	75	75	74	73	73	73
Total 1/	1,035	1,287	1,014	994	985	991	994

1/ These totals include Army and Air National Guard Technicians, who were converted from State to Federal employees in FY 1969. The FY 1964 and 1968 totals have been adjusted to include approximately 38,000 and 39,000 technicians respectively.

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