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# MILITARY CONSTRUCTION APPROPRIATIONS FOR 1971

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## HEARINGS

BEFORE A

### SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-FIRST CONGRESS

SECOND SESSION

SUBCOMMITTEE ON MILITARY CONSTRUCTION APPROPRIATIONS

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Department of the Army

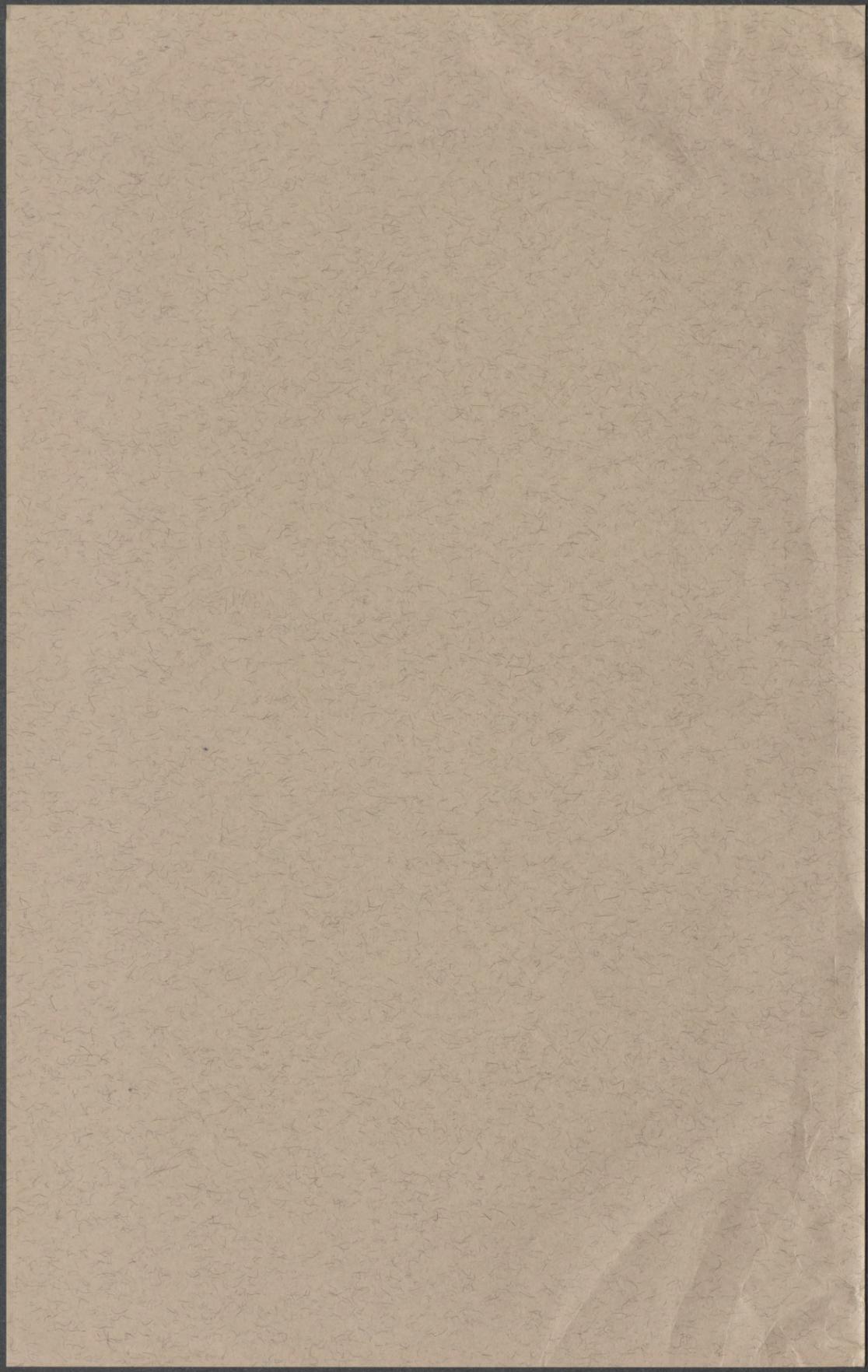
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# MILITARY CONSTRUCTION APPROPRIATIONS FOR 1971

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## HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES NINETY-FIRST CONGRESS SECOND SESSION

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### Department of the Army

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WASHINGTON : 1970

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# MILITARY CONSTRUCTION APPROPRIATIONS FOR FISCAL YEAR 1971

TUESDAY, MARCH 3, 1970.

## DEPARTMENT OF THE ARMY

### WITNESSES

DR. J. RONALD FOX, ASSISTANT SECRETARY OF THE ARMY  
(INSTALLATIONS AND LOGISTICS)  
MAJ. GEN. J. C. DALRYMPLE, DIRECTOR OF INSTALLATIONS, OFFICE,  
DEPUTY CHIEF OF STAFF FOR LOGISTICS  
W. R. SHULER, OFFICE, ASSISTANT SECRETARY OF THE ARMY  
(INSTALLATIONS AND LOGISTICS)  
LT. COL. H. L. BLANK, CONSTRUCTION DIVISION, OFFICE, DEPUTY  
CHIEF OF STAFF FOR LOGISTICS  
A. M. CARTON, CHIEF, PROGRAM DEVELOPMENT AND BUDGET  
BRANCH, CONSTRUCTION DIVISION, OFFICE, DEPUTY CHIEF OF  
STAFF FOR LOGISTICS  
LT. COL. R. H. BOEHNKE, OFFICE, DEPUTY CHIEF OF STAFF FOR  
LOGISTICS  
MAJ. J. B. LINCOLN, OFFICE, ASSISTANT VICE CHIEF OF STAFF  
COL. J. BARNETT, NEW YORK ENGINEER DISTRICT  
COL. F. A. FRECH, OFFICE, CHIEF OF ENGINEERS  
G. W. BRAZIER, OFFICE, CHIEF OF ENGINEERS  
D. M. CRABTREE, OFFICE, CHIEF OF ENGINEERS  
A. P. NORWOOD, OFFICE, CHIEF OF ENGINEERS  
W. E. SCHOENIAN, OFFICE, CHIEF OF ENGINEERS  
H. B. ZACKRISON, OFFICE, CHIEF OF ENGINEERS  
J. A. CARROLL, OFFICE, CHIEF OF SUPPORT SERVICES  
LT. COL. E. R. BREED, MILITARY TRAFFIC MANAGEMENT AND  
TERMINAL SERVICE  
D. GOODMAN, MILITARY TRAFFIC MANAGEMENT AND TERMINAL  
SERVICE  
LT. COL. R. W. STEVENS, ARMY SECURITY AGENCY  
COL. W. H. FRITZ, OFFICE, ASSISTANT CHIEF OF STAFF, COMMUNI-  
CATIONS-ELECTRONICS  
J. A. ARNTSON, ARMY MATERIEL COMMAND  
LT. COL. H. C. OTTEN, OFFICE, ASSISTANT CHIEF OF STAFF FOR  
INTELLIGENCE  
LT. COL. V. C. WOLFE, OFFICE, DEPUTY CHIEF OF STAFF FOR  
LOGISTICS  
COL. A. E. SAARI, OFFICE, DEPUTY CHIEF OF STAFF FOR LOGISTICS  
LT. COL. G. E. McCHRISTIAN, OFFICE, DEPUTY CHIEF OF STAFF FOR  
LOGISTICS

COL. E. W. BOYD, OFFICE, ASSISTANT SECRETARY OF DEFENSE  
(ISA)

J. LOVELAND, U.S. MISSION, NATO

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PERSONNEL

LT. COL. J. H. RYAN, OFFICE, DEPUTY CHIEF OF STAFF FOR  
PERSONNEL

MAJ. K. L. MORRISON, OFFICE, DEPUTY CHIEF OF STAFF FOR  
PERSONNEL

LT. COL. R. S. HAAS, OFFICE OF THE SURGEON GENERAL

LT. COL. J. L. MOFFAT, OFFICE, DEPUTY CHIEF OF STAFF FOR  
LOGISTICS

LT. COL. D. P. KELLY, OFFICE, DEPUTY CHIEF OF STAFF FOR  
LOGISTICS

J. M. DUGAN, OFFICE, DEPUTY CHIEF OF STAFF FOR LOGISTICS

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DEVELOPMENT

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FORCE DEVELOPMENT

LT. COL. D. R. PAQUETTE, OFFICE, CHIEF OF RESEARCH AND  
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B. M. HORTON, HARRY DIAMOND LABORATORIES

LT. COL. T. K. GREER, COMBAT DEVELOPMENTS COMMAND

C. S. CLIFFORD, ARMY MATERIEL COMMAND

A. P. FLYNN, OFFICE, DEPUTY CHIEF OF STAFF FOR LOGISTICS

COL. J. A. KJELLSTROM, ASSISTANT DIRECTOR OF ARMY BUDGET,  
OPERATIONS, OFFICE OF THE COMPTROLLER OF THE ARMY

W. M. LOCKWOOD, OFFICE, DEPUTY CHIEF OF STAFF FOR LOGISTICS

P. W. JOHNSON, SPECIAL ASSISTANT FOR FAMILY HOUSING, OF-  
FICE, ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS  
AND LOGISTICS)

DEPARTMENT OF DEFENSE—MILITARY CONSTRUCTION, ARMY  
OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1969 actual	1970 estimate	1971 estimate
<b>ARMY</b>			
Personnel compensation:			
Permanent positions.....	39,069	58,615	54,077
Positions other than permanent.....	4,811	1,357	1,370
Other personnel compensation.....	1,007	1,123	1,043
Total personnel compensation.....	44,887	61,095	56,490
Direct obligations:			
Personnel compensation.....	29,925	26,660	24,100
Personnel benefits.....	2,470	2,212	2,020
Travel and transportation of persons.....	1,745	1,750	1,750
Transportation of things.....	436	425	425
Rent, communications and utilities.....	5,057	5,000	5,000
Printing and reproduction.....	204	200	200
Other services.....	106,316	106,000	106,000
Supplies and materials.....	8,046	8,000	8,000
Equipment.....	7,470	7,000	7,000
Lands and structures.....	272,531	405,803	597,455
Insurance claims and indemnities.....	30	20	20
Interest and dividends.....	30	30	30
Total direct obligations.....	434,260	563,100	752,000
Reimbursable obligations:			
Personnel obligations.....	14,962	34,435	32,390
Personnel benefits.....	1,214	2,793	2,708
Travel and transportation of persons.....	112	110	110
Other services.....	39,940	40,000	40,000
Lands and structures.....	199,248	245,162	245,292
Total reimbursable obligations.....	255,476	322,500	320,500
Total, Army.....	689,736	885,600	1,072,500
<b>ALLOCATION ACCOUNTS</b>			
Personnel compensation:			
Permanent positions.....	5	6	6
Positions other than permanent.....			
Other personnel compensation.....			
Total personnel compensation.....	5	6	6
Other services.....	32	32	32
Lands and structures.....	529	15,262	8,662
Total, allocation accounts.....	566	15,300	8,700
Total obligations.....	690,302	900,900	1,081,200
Obligations are distributed as follows:			
Defense-Military, Army.....	689,736	885,600	1,072,500
Transportation, Federal Highway Administration.....	566	15,300	8,700

**PERSONNEL SUMMARY**

<b>ARMY</b>			
Total number of permanent positions.....	5,790	5,909	5,440
Full-time equivalent of other positions.....	474	55	53
Average number of all employees.....	6,762	6,900	5,189
Average GS grade.....	8.9	9.2	9.1
Average GS salary.....	12,417	12,829	12,851
Average salary of ungraded positions.....	6,798	8,519	8,864
<b>ALLOCATION ACCOUNTS</b>			
Total number of permanent positions.....	5	5	5
Average number of all employees.....	1	1	1
Average GS grade.....	7.3	7.3	7.3
Average GS salary.....	8,634	9,551	9,670

DEPARTMENT OF DEFENSE—MILITARY CONSTRUCTION, ARMY  
PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Budget plan (amounts for construction actions programed)			Obligations		
	1969 actual	1970 estimate	1971 estimate	1969 actual	1970 estimate	1971 estimate
<b>Program by activities:</b>						
Direct:						
1. Major construction.....	410,530	307,928	607,800	343,805	446,500	656,500
2. Minor construction.....	10,000	10,000	10,000	9,656	9,000	12,000
3. Planning.....	43,510	39,698	40,500	36,491	60,600	33,500
4. Supporting activities.....	5,500	10,800	7,700	570	15,300	8,700
5. NATO infrastructure.....	47,000	50,000	50,000	44,304	47,000	50,000
Total direct.....	516,540	418,426	716,000	434,826	578,400	760,700
Total reimbursable.....	197,278	351,500	334,500	255,476	322,500	320,500
Total.....	713,818	769,926	1,050,500	690,302	900,900	1,081,200
Financing:						
Receipts and reimbursements from:						
Federal funds.....	-172,561	-234,500	-194,500	-172,561	-234,500	-194,500
Non-Federal sources.....	-24,717	-133,000	-148,000	-24,717	-133,000	-148,000
Unobligated balance available, start of year:						
For completion of prior year budget plans.....				-684,888	-699,418	-521,538
Available to finance new budget plans.....		-59,920			-59,920	
Reprogramming from prior year budget plans.....	-8,986	-46,906				
Unobligated balance transferred from other accounts.....	-16,407	-8,372		-16,407	-8,372	
Unobligated balance available, end of year:						
For completion of prior year budget plans.....				699,418	521,538	490,838
Available to finance new year budget plans.....	59,920			59,920		
Budget authority.....	551,067	287,228	708,000	551,067	287,228	708,000
Budget authority:						
Appropriation.....	548,126	287,228	708,000	548,126	287,228	708,000
Transferred from other accounts.....	2,941			2,941		
Appropriation (adjusted).....	551,067	287,228	708,000	551,067	287,228	708,000
Relation of obligations to expenditures:						
Obligations incurred, net.....				493,024	533,400	738,700
Obligated balance, start of year.....				373,714	416,414	499,814
Obligated balance, end of year.....				-416,414	-499,814	-758,514
Outlays.....				450,324	450,000	480,000

Mr. SIKES. The committee is ready to begin consideration of the Army military construction program for fiscal year 1971.

We are pleased to have as the first and principal witness the distinguished Assistant Secretary of the Army for Installations and Logistics, the Honorable J. Ronald Fox.

Mr. Secretary, I welcome you. I assure you that we await your statement with interest.

Will you proceed, please, Dr. Fox?

STATEMENT OF ASSISTANT SECRETARY OF THE ARMY, INSTALLATIONS AND LOGISTICS

Dr. Fox. Mr. Chairman and members of the committee, I would like to begin by introducing the gentlemen who are here with me today. I would like to start out by introducing two individuals with whom I believe you are familiar: Retired General Shuler, who is my deputy for installations, sitting immediately behind me and whom you know from years past.

Mr. SIKES. We know him well and appreciate very highly his good work through the years.

Dr. Fox. Next to him, on his right, is Mr. Paul Johnson, my deputy for family housing.

At the table here I want to introduce another gentleman who is no stranger to you, Gen. John Dalrymple.

Mr. SIKES. General Dalrymple is a very able witness.

Dr. Fox. He is the director of installations on the Army staff.

To my far right, Colonel Kjellstrom from the Comptroller's Office, on the Army staff, and to my far left Mr. Carton, who is the Chief of Program Development and Budget Branch in General Dalrymple's office.

Mr. Chairman, members of the committee, I am pleased to have the opportunity to appear again before this committee as you begin your consideration of the Army's military construction program for fiscal year 1971. As you recall, I appeared before you several months ago soon after I had undertaken the duties of Assistant Secretary of the Army (Installations and Logistics).

The Army request for fiscal year 1971 is \$716,000,000 in total obligational authority for military construction. This includes \$397,000,000 for the Safeguard ballistic missile defense system, \$50,000,000 for NATO; \$32,500,000 for minor construction, access roads and planning; and \$40,000,000 for construction in South Vietnam, including facilities to support Vietnamization. Of the total request, only \$196,500,000 will be available to satisfy our most necessary construction requirements for planned facilities in support of new missions and modernization of old facilities. This continues the relatively low level of military construction funding that I commented upon in my statement to you last year. Again, spending for higher priority purposes has limited the availability of funds for military construction. The mounting backlog of deferred construction for the Army is now estimated to be \$6.2 billion for fiscal year 1972 and future years. This deficiency backlog is exclusive of family housing, industrial facilities, Reserve component construction, and phase II Safeguard.

This year our program contains a proportionately larger amount for the improvement of facilities in support of medical activities. The request for \$44.8 million in this category constitutes approximately 25 percent of the construction programed for our permanent installations in the United States. The major portion of this is for a 760-bed hospital at Fort Gordon, Ga. We are also requesting approval of the first increment of the construction required for a badly needed modern 1,280-bed hospital at the Walter Reed Army Medical Center. We are planning to build the new facility so as to cause minimum disruption at the present hospital during the new construction.

Our program also contains \$17.4 million for four projects for air pollution abatement and 11 projects for water pollution abatement which will support the President's national program. These have been coordinated with the other Federal agencies involved and are being designed to conform with local and Federal standards.

The problem of construction cost escalation, which I commented upon last year, is still serious. A rise of 9 percent in 1970 is now predicted and will adversely affect our military construction. However,

we are now compensating for future construction cost escalation, I am pleased to say, in our budget estimates.

We have completed studies to find ways to improve actions and procedures related to the design of military construction projects with particular emphasis being placed on lowering design costs. Subsequently, procedural changes have been made which are providing lower design costs.

First, on design costs. Funds to be controlled and obligated by the Corps of Engineers are required to develop project criteria well in advance of the initiation of design. Under the present arrangement, planning funds are intended for use only for the actual design process. On many items today, however, it is impossible to initiate meaningful design without first having a knowledge of basic criteria requirements which can be determined only upon the completion of feasibility studies. Water pollution projects are examples. Without detailed information concerning the composition and characteristics of the wastes to be treated, it is impossible to design economically.

Second, on earlier start of design. A need exists for additional funds to start the design process earlier on projects which have a reasonable chance of surviving the review and approval system. The ability to design earlier would permit the development of much firmer budget estimates than is now possible, since only with completed plans can a valid estimate be prepared.

Third, on improving budget estimates. The Army contracted with the nationally known Turner Construction Co. to conduct a comprehensive study of military construction estimating procedures. The Turner Construction Co. report resulting from the study recommended that our projected cost estimates reflect costs at the time of construction, using cost trends in the local area for the specific type of construction proposed. The Turner report also recommended closer coordination between using services and the Corps of Engineers district offices during preparation of budget estimates in order that using agencies can take full advantage of the estimating knowledge which exists in Corps of Engineers district offices. The Department of the Army is taking action in these ways to insure that realistic cost projections are incorporated in budget estimates, and copies of the Turner report have been distributed to representatives of the Navy and Air Force.

Further, in order that budget estimates for future programs reflect reality in line with activities of the construction industry, project estimates in our fiscal year 1971 request take into account expected cost increases or decreases based more closely upon District Engineer costs experience at specific locations. Reality dictates that these allowances encompass labor, materials, equipment, and financing costs projected through the anticipated construction period, using as closely as possible the same policy that a prudent contractor would follow when submitting bids.

And fourth, on closer control of project design. To better control the actions of architectural and engineering firms under contract to the Corps of Engineers steps have been taken to incorporate into design contracts provisions requiring more rigid controls on scope and total project cost.

The revisions cited above have been made to basic Army regulations on Military Construction Programing, AR 415-15, and on Design Approvals, AR 415-20, to improve overall planning and execution of military construction.

In addition to the funds requested for military construction, we are requesting \$40.6 million for 1,700 new family housing units at 14 locations in the United States in the fiscal year 1971 family housing budget.

Mr. SIKES. Compared to what number in fiscal 1970?

Dr. Fox. 1,200 units in the 1970 program.

Our request also includes \$5.8 million for improvements, advance planning and design; \$47 million for debt payment; and \$152.8 million for the operation and maintenance support of the Army's existing family housing inventory. The total requested is \$246.2 million. No funds are being requested for the homeowners assistance program since appropriations to date plus receipts from sales of acquired properties are considered adequate to finance the program through fiscal year 1971 without additional appropriations.

When I appeared before you last year you emphasized your interest in the maintenance and repair of our facilities. At that time I shared your concern in this important area of facilities management, and I assure you that I continue to be concerned. As you are aware from previous testimony the Army request for the maintenance and repair "floor" in the fiscal year 1971 OMA budget has been reduced from the fiscal year 1970 figure of \$225 million to \$220 million. This reduction represents no lessening of our concern in this area; rather, it is a result of overall mission considerations within the constrictions of our total budget. Nonetheless, we are still falling behind in our facilities maintenance.

On the plus side we have made further progress over the past year in improving the management of this important facilities area. We have established reasonable functional staff manager control over maintenance and repair consistent with the desirable command flexibility in overall OMA. We are well along on the establishment of a system for integrated facilities management, of which maintenance and repair will be a part. Such a system will allow programing of all facility support funds in better balance, to include family housing, MCA, maintenance and repair, utilization of facilities, and all other programs that support an Army installation.

This concludes my brief prepared remarks. Maj. General Dalrymple, whom I am sure you know, will follow me with a more complete summary of the Army's fiscal year 1971 military construction appropriation request.

I will be pleased to answer questions the members of the committee may have.

#### BASIC ARMY MILITARY CONSTRUCTION PROGRAM

Mr. SIKES. Mr. Secretary, while your request for fiscal 1971 is \$716 million in total obligational authority, a very substantial part of this is taken up by Safeguard and other activities which are necessary for national defense or for support of our allies, but which are not directly in support of the general-purpose forces of our Army. The amount actually left for Army construction as we normally would think of it is, as

you state, \$196,500,000. This appears to me to be a very low level of funding for facilities for military bases.

What would have been the amounts for fiscal 1970 and for fiscal 1969 which are comparable to the \$196 million in fiscal 1971, excluding Safeguard, South Vietnam, NATO, and so forth?

Dr. Fox. I would like to ask General Shuler if he has that information.

Mr. SIKES. If it is not available, you may supply it for the record.

Mr. LONG. It would be very helpful to have it right now, Mr. Chairman.

Colonel McCHRISTIAN. Sir, from last year's budget, if you exclude the Safeguard, NATO infrastructure, and Vietnam, that leaves \$349 million. Excluding the planning, access roads, and minor construction, the figure which would be comparable to the \$196.5 million this year was \$313.2 million.

Mr. SIKES. Provide for the record a similar figure for fiscal 1969.

(The information follows:)

Excluding Safeguard, Southeast Asia, NATO, and the general authorization items, the fiscal year 1969 President's Budget included only \$190.9 million for facilities in support of new or current missions and modernization of old facilities.

#### EFFECT OF BUDGET CONSTRAINTS ON ARMY CONSTRUCTION PROGRAM

Mr. SIKES. This would indicate that the program for construction in the coming fiscal year is at one of the lowest levels in history. I must state this is disappointing to me. I am sure it is disappointing to the Army.

Mr. Secretary, does the Army staff make a realistic effort to improve this construction situation by obtaining additional funds in order to more adequately provide for the training needs, housing needs, and so forth, of our military forces?

Dr. Fox. Yes, sir.

Mr. SIKES. What is the problem?

Dr. Fox. Mr. Chairman, I believe the problem is one of severe constraints on the total Army budget at this point in time.

As I indicated to you several months ago when I met with you I intended to discuss with Secretary Shillito in the Office of the Secretary of Defense our specific needs in this area. I have done this on a number of occasions and I assure you that they are sincerely sympathetic to this need but we are all, as you know, under the constraint of severe budgeting at this point in time.

Unfortunately, the military construction shares a very significant part of that reduction that we are faced with.

#### ARMY'S PLANS TO MEET CONSTRUCTION DEFICIT

Mr. SIKES. Dr. Fox, it is evident that the Army's regular military construction program is very lean this year.

Would you repeat the figures you cited in your statement as to the Army backlog of deferred construction and the amount you are requesting this year for new missions and modernization of old facilities?

Dr. Fox. The total Army deficiency for fiscal year 1972 and future years, including facilities for new missions, current missions, replace-

ment and modernization, and general authorization is now estimated to be \$6.2 billion. This year, we are requesting \$196.5 million to support new missions and for replacement and modernization. This excludes Safeguard.

Mr. SIKES. What would you consider to be a satisfactory rate of construction to meet this \$6.2 billion deficit?

Dr. Fox. Our current thinking is that an annual level for MCA of \$650 million, exclusive of Safeguard, is desirable. Of this amount, approximately \$300 million is needed for replacement and modernization of overage facilities.

Mr. SIKES. Now that this \$6.2 billion deficit has been validated, have you received any guidance as to what the Army is going to be allowed to do about it?

Dr. Fox. We have only received tentative program guidance. However, we hope to begin to reduce the backlog of deficiencies in fiscal year 1972 if less austere limitations on military construction budget levels should exist.

EFFECT OF MARCH 1970 BASE REALIGNMENTS OF ARMY FISCAL YEAR 1971 PROGRAM

Mr. SIKES. Mr. Secretary, has the current program been adjusted to the new base realignment announcement which is anticipated in mid-March?

Dr. Fox. Yes, Mr. Chairman, it has been. It has been adjusted to that.

Mr. SIKES. So we can anticipate there will be no changes in the program as a result of that announcement?

Dr. Fox. That is correct.

Mr. SIKES. Do you have any further statement to make at this time on base closures, insofar as the Army is concerned?

Dr. Fox. I do not, Mr. Chairman. As you may know, the Secretary of Defense intends to make such an announcement during the month of March, to make it very shortly.

Mr. LONG. I hope you appreciate the fact that we are all getting unofficial figures from the people at the local level who know far more than I do or the Department of Defense admits. They seem to know what is going on at my bases. I am sure the other Congressmen here are having the same problem, with people calling up and telling them what the rumors are. We are in the dark. It does not make us look good.

Dr. Fox. The only thing I can say in response to that is I assure you the Secretary of Defense is aware of that problem and intends to move promptly to alleviate that situation.

Mr. CEDERBERG. Off the record.

(Discussion off the record.)

CONSTRUCTION REDUCTION

Mr. SIKES. Mr. Secretary, would you bring us up to date on the status of the fiscal 1970 military construction program? How much money have you been allowed to spend, how much is still frozen, what release date do you anticipate for the remainder?

Dr. Fox. I would like to ask General Dalrymple to present you with that.

General DALRYMPLE. Initially the Bureau of the Budget imposed certain restraints on the amount of expenditures that the services could make. That was 25 percent of fiscal year 1970 and prior years' moneys. Roughly, that would amount to about \$100 million for the Department of the Army to expend through June 1970. Subsequently relief was given in some areas. Items such as Safeguard were exempt initially; subsequently family housing and antipollution projects were exempt.

Mr. SIKES. Where are you now? Has any of this been released for construction?

General DALRYMPLE. Only those items that I have mentioned have been released. We have been proceeding at 25 percent of our scheduled rate throughout the year. The tentative date for this hold to be lifted is June 1970, sir.

#### NEW DEVELOPMENTS IN FAMILY HOUSING

Mr. SIKES. You mentioned, Mr. Secretary, housing design and efforts to reduce costs of housing. This, of course, is a matter in which this committee is very keenly interested. It has been difficult to get family housing in numbers that are adequate. The costs continue to escalate. That aggravates the problem and reduces the number available still further. What new design, what new thoughts has the Army been able to develop which could produce lower cost housing which would be satisfactory and would enable us to further alleviate the housing shortage?

Dr. Fox. There are several efforts underway, Mr. Chairman, some of which I am sure you are familiar with. One is the use of prefabricated, relocatable housing, which we are working with at this point in time. I might also add that we are using prefabricated housing at the Malmstrom and Grand Forks Safeguard locations.

#### ARMY'S USE OF MODULAR DESIGN FAMILY HOUSING

The second effort, to attempt to reduce the cost of this housing, is to use modular designed homes where we can. We feel this is a step toward more stable housing, more permanent housing than prefabricated. At Vint Hill in Warrenton, Va., we are doing some of that work.

#### USE OF TURNKEY FOR FAMILY HOUSING

We are also moving ahead with opportunities to use the turnkey concept, drawing upon the experience of local builders to put up our housing tailored to the specific needs and the specific advantages, economic advantages, of local building conditions.

Mr. SIKES. Is this concept to be utilized in the current budget?

Dr. Fox. Yes, Mr. Chairman. As a matter of fact, eight out of the 14 locations will be turnkey operations. As you may know, in the 1970 program at Fort Meade, we have 250 units, that is a turnkey operation, and at Fort Leavenworth it is 250 units. That is where we also have a turnkey operation.

Mr. SIKES. Mr. Nicholas.

Mr. NICHOLAS. Mr. Secretary, has the problem of performance bonding of contractors on turnkey housing been settled satisfactorily?

Dr. Fox. I would like to ask General Shuler or Mr. Johnson to answer that.

Mr. JOHNSON. We have not experienced any problem in bonding.

Mr. NICHOLAS. The Navy and the Air Force in some of their earlier turnkey projects had a problem with getting performance bonding for the turnkey contractors.

Mr. JOHNSON. We are using their experience in working up the RFP's for a Fort Meade project. To my knowledge, we have not experienced any problem in bonding. We actually are not that far along with the one that we are working on now.

Dr. Fox. I will say, Mr. Nicholas, that this problem has not been brought to my attention as a problem in the family housing area at all.

#### COST INCREASES AT WEST POINT

Mr. SIKES. The committee has expressed considerable concern about the cost of construction at West Point. We approved some appropriations in the last budget with apprehension that the money would not be adequate for the job. We expressed very strong interest in a more realistic effort by the Army to hold down mounting labor costs, especially portal to portal pay and travel expense costs in connection with West Point construction. We are told that the picture has worsened rather than improved. Are you in a position to comment on this situation?

Dr. Fox. I can comment on it initially, Mr. Chairman, and then I will ask General Dalrymple to add to my remarks.

A problem leading to additional costs at the West Point installation has been due to additional piling required as a result of running into fissures in the rock at that location. I am sure you are aware of the very difficult rock construction that is being encountered at that location.

If there are further problems there I would like to ask General Dalrymple to comment, in addition.

General DALRYMPLE. I would endorse what Dr. Fox said.

Mr. SIKES. What does this mean in relation to costs, and what are you doing to try to get costs down?

General DALRYMPLE. I believe initially your question was addressed to the control of wages, sir.

Mr. SIKES. That is one of the major cost problems, there.

General DALRYMPLE. To my way of looking at it, at this point relative to the academic building there has been no other than normal cost growth in labor. The problem associated with the academic building—and you will be getting a detailed briefing on this from the Engineer of the New York District—associates itself with foundation conditions.

Mr. SIKES. That is not responsive to the question. We want to know what you plan to do in order to hold down costs at West Point. From your answer, I would assume you plan to do nothing.

General DALRYMPLE. May I go off the record?

Mr. SIKES. All right.

(Discussion off the record.)

Mr. SIKES. Back on the record.

I want you to provide a realistic answer of what steps have been taken, if any, to bring about a reduction in the cost of construction at West Point.

General DALRYMPLE. There have been contacts made by officials of the Department of Army with the Department of Labor and with representatives of labor unions to encourage the control of labor prices in the West Point as well as other areas where construction is being performed by the Army.

Mr. SIKES. Have any of these contacts been productive and has there been a response which actually is reflected in potential savings?

General DALRYMPLE. The most recent contact with those officials has been within a period of the last three months. Not enough time has elapsed in that period to permit me to say that there have been definite responses, sir.

To go back to the academic building, we will have increased labor costs there, but not because of unusual labor cost growth. It is because the progress of the job is being delayed 1 year and there will be additional labor cost growth in that period of time. These additional labor costs will have to be compensated for in the deficiency that we are requesting in this bill, sir.

Mr. LONG. Mr. Chairman.

Mr. SIKES. One moment. Will you keep this committee informed on any developments in that area?

General DALRYMPLE. Yes, sir.

Mr. SIKES. Mr. Long.

Mr. LONG. Conceding that you have not had time enough to get any substantive answer on this, are you optimistic or pessimistic about your ability to get the cost down in the West Point area as a result of these negotiations?

General DALRYMPLE. I am more optimistic than I am pessimistic, sir.

#### HOMEOWNERS ASSISTANCE PROGRAM

Mr. SIKES. I note, Mr. Secretary, that there are no requests for additional funds for the Home Owners Assistance program. Does that mean that very little use is being made of this program by homeowners, that it has been found that there is no significant requirement for it?

Dr. Fox. No, sir, it does not mean that.

I have before me a detailed breakout of the appropriations, the receipts, the expenditures and the balance from 1968 through 1971.

Mr. SIKES. I think you should provide that for the record.

Dr. Fox. I will provide it.

(The information follows:)

## HOMEOWNERS ASSISTANCE PROGRAM—SUMMARY THROUGH FISCAL YEAR 1971

[In thousands]

Fiscal year	Appropriations	Receipts <sup>1</sup>	Expenditures <sup>2</sup>	Balance
1968.....	\$20,000	0	\$650	\$19,350
1969.....	6,200	\$6,567	15,960	16,157
1970.....	0	6,702	16,240	6,619
1971.....	0	4,200	9,960	859
Total.....	26,200	17,469	42,810	
Total appropriations and receipts.....				\$43,669
Total expenditures.....				42,810
Available for future years.....				859

<sup>1</sup> Receipts include revenue from sales by FHA and value of mortgages assumed, less principal payments.

<sup>2</sup> Expenditures include—(a) Payments to homeowners for losses on direct sales and/or foreclosures. (b) Administrative, operating, appraisal costs by FHA and OCE. (c) Payment for equity to homeowner. (d) Mortgages assumed.

Dr. Fox. What we have tried to do here is to maintain careful control of receipts versus expenditures so we are not in a position of coming to you to ask for additional funds when we can handle it out of the existing program.

Mr. SIKES. Of course, that is a procedure that we endorse, but the fact is we have appropriated less money each time than was requested in the budget. I had thought that possibly there has not been the need for the program that had been anticipated, that individuals owning property have been able because of improving economic conditions to handle their own problems in disposing of their homes and there has been less requirement for Federal assistance.

General DALRYMPLE. It is a fact, sir, that the number of claims that we have received has not matched up with our expectations.

Mr. SIKES. This is a healthy situation. We are glad it is the case.

General DALRYMPLE. That is right. We found we had enough money, funds left over from preceding years so we did not have to come back for additional ones. What subsequent base closures will generate we cannot anticipate at this time.

## FAMILY HOUSING DEFICIT

Mr. SIKES. What is the Army's estimate of the family housing deficiency for eligible Army personnel? Do you have any indication of whether the family housing situation has gotten worse or better in the past year?

Dr. Fox. The deficit after considering the family housing assets through fiscal year 1970 is 63,800 consisting of 28,700 units in the United States and possessions and 35,100 units in foreign areas. The family housing situation has not improved. As a matter of fact, it is deteriorating because community support that we had anticipated is not materializing.

Mr. SIKES. How are you handling housing for troops returning from Vietnam?

Dr. Fox. To provide family housing for troops returning from Vietnam, we are considering a number of courses of actions available to the Army in this regard. We plan to:

- (a) Use our leasing authority insofar as practicable.

(b) Use the housing referral service at each installation to the maximum extent.

(c) Terminate our waiting wives and ineligible housing programs through attrition.

(d) Place priority on our new construction programs at installations receiving SEA returnees.

(e) Utilize housing excessed by other services.

Mr. SIKES. What Army force level is your long-term planning based on?

Dr. Fox. Long term planning and permanent construction are based on a 925,000 man Army.

Mr. SIKES. What is the Army's estimate of a reasonable program to meet your deficiency in family housing over the next 10 years?

Dr. Fox. 4,000 units per year. This would substantially satisfy the Army's family housing requirements at permanent CONUS installations within the first 5 years. It would also provide for a considerable reduction in the deficit in foreign areas, either through rental guarantee or alternate means of construction.

#### BACHELOR HOUSING DEFICIT

Mr. SIKES. Provide for the record your estimate of bachelor enlisted and officer housing deficiencies in the Army.

Show what force level this estimate is based upon.

(The information follows:)

#### BACHELOR HOUSING DEFICIT<sup>1</sup>

	Bachelor officers	Bachelor enlisted
CONUS.....	12, 824	122, 613
OS.....	14, 356	57, 134
Total.....	27, 180	179, 747

<sup>1</sup> The force level on which this estimate is based is a 925,000-man Army.

#### SAFEGUARD

Mr. SIKES. Mr. Secretary, does the Safeguard request include only planning for the five future sites or does the request actually include funds such as land acquisition, which would require additional authorization?

Dr. Fox. Mr. Chairman, the funding for the Safeguard program includes primarily the Malmstrom, Mont., major construction activity, Grand Forks, N. Dak., and Whiteman land acquisition and major construction to completion.

Those are the three primary announced sites.

There is a small amount relative to the total of \$357 million. Approximately \$25 million to be allocated for design and land acquisition as required; continued research and development and major renovation or construction.

The bulk of the request, by far, is for the construction at the three sites which I described.

I would also like to add, Mr. Chairman, that on Thursday of this week General Starbird will appear before you and provide you with information on this, plus a substantial statement on the Safeguard program.

ALLOCATION OF ARMY CONSTRUCTION FUNDS BETWEEN MAJOR NEW UNDERTAKINGS AND PERSONNEL HOUSING AND OTHER FACILITIES

Mr. SIKES. Very well.

It has been noted that a substantial amount of the Army's military construction budget for fiscal 1971 is allocated to major programs which have high national priority such as Safeguard, Vietnamization, and pollution control. This is understandable. The problem is that there is a corresponding reduction in other normal construction such as housing, training facilities, et cetera. Are there any guidelines which are available to you which indicate that there will either be an increase in the budget level to accommodate these normal requirements or that there will be a reduction in the high priority items to permit an increase in future years in such items as housing and training facilities?

Dr. Fox. The specific amounts allocated to the Safeguard and other high priority programs vary from year to year depending upon the latest decisions that are made on the subsequent phases of this particular program. As such, Mr. Chairman, it is difficult for me to tell you that there will be a substantial lessening in the future years, at this point in time. That particular program, as you know, is designed to be responsive to the threat, and the progress in our SALT talks. At this point in time it is difficult to say what will happen in future years. I would like to say, however, that with respect to the national programs that there is not automatically a dollar-for-dollar offset on our basic Army Military Construction programs. They are treated as separate items. I would like to be able to say that they do not detract from the Army MCA budget at all but that is not true. In fact, some of the funding for this program, for these type of programs, is offset by the Army MCA budget and some of it is recognized as an additional requirement and not to detract from our programs. So it is handled in both ways and it is very sensitive to the budget constraints in the out-years.

Mr. SIKES. It would appear that a substantial amount of the Army's military construction budget this year has had to be allocated to major programs. The situation may well be the same next year. Do you have any indication whether these costs will be taken out of the Army's hide in future years as they seem to have been this year?

Dr. Fox. Frankly, some of both. Any large budget request superimposed on a "normal" MCA requirement is bound to affect to some degree the rest of the budget amount.

Mr. SIKES. There may be substantial sums which will be required as a result of new projects which you are undertaking. Examples are the establishment of a line of communications — the modernization of Walter Reed, and the consolidation and expansion of medical and other research and development facilities. There are substantial long-range costs involved here. Provide for the record the long-range costs of these projects.

(The information follows:)

The long-range construction costs are estimated to be as follows :

Project :	[Deleted]	Millions
Walter Reed Hospital.....		\$92.2
Western Medical Inst.....		29.0
Harry Diamond Labs.....		33.5

Mr. SIKES. Have you realistically assessed the costs of these new undertakings and compared them to the funds you need for troop housing, for example, and the level of funding which you can expect for the next few years?

Dr. Fox. Yes, the projects have been evaluated by the Army in light of all known current requirements, including troop housing and all other categories of needed facilities. Whenever projects of this magnitude are undertaken within a constrained budget, other needed projects must be deferred, and the situation is complicated by our large backlog of construction requirements. Decisions as to which projects should be undertaken and which should be deferred are based upon the Army's assessment of their relative priorities, and take into account the effect in future years of phased projects such as those you mentioned. While we should like to proceed faster in providing more adequate troop housing, as well as other categories of needed facilities, I believe the projects in question are of sufficient urgency at this time to merit the priorities they have been assigned.

#### MAINTENANCE OF REAL PROPERTY

Mr. SIKES. You mention, Mr. Secretary, the fact that the floor which the Appropriations Committee placed under the maintenance of facilities is proposed to be lowered from \$225 million in fiscal 1970 to \$220 million in fiscal 1971. Was this proposal made at the request of the Army?

Dr. Fox. No, sir. That reduction was not at the request of the Army. It was made by higher authority.

Mr. SIKES. What steps has the Army taken to revalidate its backlog of essential maintenance of facilities?

Dr. Fox. Each year we make an appraisal of the specific projects over \$10,000 that we consider essential but that were not accomplished in the previous year. At the end of fiscal year 1970 we anticipate the OMA backlog of essential maintenance and repair to be \$289 million. With our present level of funding we anticipate that that will increase at the end of fiscal year 1971 to approximately \$320 million.

Mr. SIKES. What effect will this year's request have on your maintenance backlog?

General DALRYMPLE. We will have \$220 million to match against the backlog and current requirements. We will have a growth of \$31 million, from \$289 million to \$320 million in the backlog related to operations and maintenance funds, sir.

#### INTEGRATED FACILITIES MANAGEMENT

Mr. SIKES. Would you describe in somewhat greater detail your system for integrated facilities management? Do that for the record.

(The information follows:)

The Integrated Facilities System (IFS) is a system under development for staff management of construction, maintenance and operation of Army facilities. It addresses management of facilities funded by all appropriations including family housing.

It is being developed and will be operated through DCSLOG Installations Directorate and Office, Chief of Engineers—organization staff channels at HQDA and their counterpart staff organizations at lower command echelons. It will be used extensively to support Facilities Engineering activities. Staff controls will be exercised by above organizations through their appropriate command channels. This will allow requisite flexibility and combine staff responsibilities with program and money controls. Management will utilize a common base of engineering factors and methods for facilities.

The Integrated Facilities System is a composite of, and integrates or restructures, as appropriate, the present construction system; the Real Property Inventory System; the Real Property Maintenance Activities (RPMA) System; and the Facilities Installation Management/Planning System. It adds a capability for assessing facility condition and facility readiness and converts the inventory system to a complete facility assets system with costs incorporated.

It will ultimately achieve staff control of an integrated facilities system (using a single source of facilities data common to all subsystems). It will allow facilities to be considered when making decisions related to Weapons Systems Analysis and Force Analysis.

These capabilities will provide facilities data input for evaluating and guiding decisions or alternate courses of action at Chief of Staff-Secretary of the Army levels (and OSD levels) of facilities management. Facilities data will be factually related to other major systems and will be reported in summary form which serves management and decision needs within the span of control and time available at OCS/OSA/OSD levels.

Facilities requirements impacts and alternative considerations will thus be available for military plans, programs, and budgets. The readiness of facilities and requirements to achieve readiness for contingency or full mobilization will be available. This will serve as a basis for facility decisions in terms of achieving a state of readiness in balance with readiness of troops and materiel.

The system will provide capability for inserting integrated facility requirements and alternatives throughout the complete Defense Planning, Programing, Budgeting System (PPBS) so that facility amounts are properly considered in the fiscal and programing processes that occur before Congress considers the budget.

IFS will ultimately be automated as appropriate but will operate on a largely manual (reduced mode) basis initially.

The IFS will, at all echelons, be staff supervised by a single functional manager and will eliminate programing and budgeting controls that duplicate engineering controls.

#### POLLUTION ABATEMENT

Mr. SIKES. The Army has numerous projects for air and water pollution abatement. This action I approve. It is anticipated there will be additional projects proposed in an amendment to the budget. I would like to have a listing of all projects for the record.

(The information follows:)

*Department of the Army—water pollution control projects*

<i>Installation and description</i>	<i>Cost</i>
Fort Belvoir, Va.: Sanitary sewer connection, Fairfax County facilities -----	\$2, 200, 000
Schofield Barracks, Hawaii: Secondary Sewage Treatment Plant---	2, 955, 000
U.S. Army Aeronautical Depot Maintenance Center, Texas: Industrial waste treatment facility-----	971, 000
Atlanta Army Depot, Ga.: Industrial waste treatment plant, Phase II -----	117, 000
Radford Army Ammunition Plant, Va.: Water pollution abatement facilities -----	784, 000
Cornhusker Army Ammunition Plant, Nebr.: Industrial waste treatment -----	650, 000
Hunter Liggett Military Reservation, Calif.: Sewage collection and treatment facilities-----	1, 691, 000
Tooele Army Depot, Utah: Waste stabilization ponds-----	249, 000
Rock Island Arsenal, Ill.: Separate sewer systems-----	2, 750, 000
Fort Wainwright, Alaska: Secondary sewage treatment plant-----	2, 430, 000
Fort Sill, Okla.: Sanitary sewer system (Camp Eagle)-----	155, 000
Alabama Army Ammunition Plant, Ala.: Secondary sewage treatment facilities-----	117, 000
Sierra Army Depot, Calif.: Waste stabilization pond-----	113, 000
Ridgewood Army Weapons Plant, Ohio: Sanitary sewer connection to municipal system-----	120, 000
Fort Riley, Kans.: Secondary sewage treatment plant, Funston area -----	207, 000
Fort Hamilton, N.Y.: Separate storm and sanitary sewers-----	575, 000
Fort Dix, N.J.: Improvements to sewage facilities-----	2, 624, 000
Fort George G. Meade, Md.: Sedimentation Lagoon-----	257, 000
Fort Sheridan, Ill.: Sewage treatment facility-----	2, 488, 000
Fort Lewis, Wash.: Sewage treatment facility improvement-----	1, 567, 000
Fort Ord, Calif.: Sewage outfall and plant modification-----	1, 642, 000
Anniston Army Depot, Ala.: Sanitary and industrial waste treatment facilities-----	915, 000
Badger Army Ammunition Plant, Wis.: Sanitary and industry waste treatment facilities -----	516, 000
Burlington Army Ammunition Plant, N.J.: Industrial waste treatment facilities-----	384, 000
Iowa Army Ammunition Plant, Iowa: Industrial waste treatment facilities -----	300, 000
Tobyhanna Army Depot, Pa.: Industrial waste treatment plant-----	115, 000
United States Military Academy, N.Y.: Secondary sewage treatment facilities -----	3, 299, 000

*Department of the Army—air pollution control projects*

<i>Installation and description</i>	<i>Cost</i>
Vint Hill Farms, Va.: Incinerator-----	\$475, 000
Carisle Barracks, Pa.: Heating plant fuel conversion-----	135, 000
Fort Jackson, S.C.: Multiple fuel conversion-----	506, 000
Fort Lee, Va.: Heating plant conversion-----	98, 000
Fort Benjamin Harrison, Ind.: Steam line extension-----	523, 000
Badger Army Ammunition Plant, Wis.: Fuel conversion, plant No. 1---	1, 088, 000
Radford Army Ammunition Plant, Va.: Electrostatic precipitation and stack-----	1, 549, 000

Mr. SIKES. What is Executive Order 11288?

Mr. NORWOOD. It has to do with water pollution control only. A new Executive Order of February 4, 1970, has been published that covers air and water pollution and supersedes the former two Executive Orders. The other one that is superseded would be the Air Pollution Control Executive Order No. 11282.

Mr. SIKES. I would like to know what the Army has done since the issuance of the order of 1966, 11288, and what steps it has planned for compliance with the current order?

Mr. NORWOOD. In 1966, two Executive orders were issued, 11282 on air pollution control and 11288 on water pollution control. Subsequently, \$25.9 million was authorized in MCA programs. I will provide a breakdown for the record.

(The information follows:)

*Project costs in millions of dollars*

MCA program (fiscal year 1968) :	
Air pollution-----	
Water pollution-----	8.8
MCA program (fiscal year 1969) :	
Air pollution-----	1.5
Water pollution-----	2.6
MCA program (fiscal year 1970) :	
Air pollution-----	6.4
Water pollution-----	6.6

Mr. NORWOOD. A new Executive Order 11507, issued on February 4, 1970, covers both air and water pollution control, superseding the two former orders. This order requires acceleration of the programs to have completed or underway by December 31, 1972, all necessary actions to abate and control pollution at existing Federal facilities. In addition, the executive branch directed the Department of Defense to increase its budget requests for pollution control in the fiscal year 1971 MCA program by an additional \$40 million. This results in a total of \$30.2 million in the Army's proposed water pollution control program in fiscal year 1971 (\$16.1 million of which is included in the proposed pollution control amendment). The air pollution control program for fiscal year 1971 is \$4.4 million (\$1.1 million of which is included in the proposed pollution control amendment).

To comply with the December 31, 1972, requirement, the Army is exerting maximum effort to place projects for correcting existing air and water pollution problems in the fiscal year 1972 MCA program.

Mr. SIKES. What is your estimate of the total cost to comply with current or likely future pollution standards as you now see it?

Mr. NORWOOD. If all the projects proposed in the fiscal year 1971 MCA program are authorized and funded, the Army will require approximately \$22 million for completion of the current water pollution control program and \$43 million for air pollution control, based on existing standards. It now appears that the deadline for completion by December 31, 1972, as provided in the current Executive order can be met in the water pollution control area. However, the lack of established standards for air pollution control in many areas of the country is expected to create difficulties in meeting the existing deadline. In addition, as standards are established in these areas, the estimated \$43 million remaining to be programmed will probably increase materially. Criteria to meet either existing or new standards and new treatment processes currently under development can also have some impact on the final cost of some projects.

Mr. SIKES. What is your long-range program for dealing with this problem?

Mr. NORWOOD. As mentioned earlier, Executive Order No. 11507, issued on February 4, 1970, requires that necessary actions required to bring Federal activities into compliance with air and water quality standards must be completed or underway by December 31, 1972. To meet this requirement, the Army is trying to program corrective ac-

tions in the fiscal year 1972 MCA program. If more stringent standards are developed, projects to provide for these standards will have to be programed in subsequent years.

#### INTEGRATED FACILITIES SYSTEM

Dr. Fox. Mr. Chairman, you referred a few minutes ago to our integrated facilities system, which you expressed an interest in learning more about. I think that this system will provide us an opportunity to present more clearly just what our needs are for the maintenance and repair of facilities. While we will provide you additional information for the record on that subject, I would like to highlight four or five parts of that system as we see it unfolding now.

Mr. SIKES. Very well.

Dr. Fox. I believe that a system which has the capability of IFS is necessary if we are to get over the hurdle in maintenance and repair.

Now, what we hope to derive out of this system are several factors, the first being a condition index on facilities. That is so that we will be able to appraise at the headquarters level the condition of the various facilities needing repair throughout the world.

Second, we hope to derive the annual maintenance requirements by types of facilities so that we can back up and substantiate our maintenance requirements.

Third, with this information we hope to be able to undertake a comparison of the costs of, one, maintaining existing facilities versus, two, building new facilities.

I think we need to have this kind of information in looking at our total military construction program.

Fourth. We need to maintain records of the specific maintenance that is spent on various facilities and the effect it has throughout the world.

The fifth fallout from this system, hopefully, will be a model for economic analysis of stationing alternatives. When we are looking at the total Army and determining how we can most economically station our various forces, we ought to have at our fingertips information on the condition of facilities, maintenance costs and the cost of building new facilities at those locations.

In this regard, and lastly, in appraising various force alternatives for the Army we believe that this information should be available so that we can use this input to offset us in determining what is the most appropriate distribution of various types of forces.

I should caution you that the information we need to accomplish these six tasks is not now readily available. This is a system that is of great interest to me. I believe we should collect this throughout the world and develop the software to process this information and make it available to the Army decision makers.

I hope that during the course of the next 2 to 3 years we will have a system developed here that will improve substantially our opportunity of making better appraisals of the maintenance and the backlog of maintenance.

Mr. SIKES. Mr. Secretary, what are the guidelines which are followed in determining the advisability of using buildings at a military installation rather than constructing new ones, possibly at other installations? Let me give you a case in point. My attention has been called

to a number of warehouse buildings at Edgewood. These apparently are well constructed, have considerable useful life left, and could be used for a number of purposes if converted. They aren't required for the Edgewood mission. Conceivably, it would be more economical to transfer activities to that base to utilize the buildings than it would be to construct other facilities at other bases where those particular activities are now in progress.

I realize there is a limit to the degree that this procedure can be followed. There comes a time when it costs you more money to shift an activity than it would to construct new facilities. So I am asking simply what the guidelines are that determine when you will build new facilities at Base A rather than moving an activity to Base B to use facilities already in being.

Dr. Fox. The question you ask, Mr. Chairman, is one that has prompted the development of the IFS, Integrated Facilities System. It is a question that has been with us, as you know, for a good many years, that is what we attempt to do in looking at bases and in determining our military construction requirements as to, first of all, looking at the need at a particular location, and so forth. That is, look at where the material is needed and try to place it as close to that location as possible.

Now, on a number of occasions we do have alternatives. Edgewood may provide one of those in the warehousing area that you are referring to. I am not immediately aware of the alternatives.

Mr. SIKES. I used that, primarily, as an example.

Dr. Fox. In referring to that situation as an example, the fact of the matter is we do not have an integrated facility system at this point in time to enable us to make that kind of a comparison.

I should point out that to make that comparison worldwide is a very complex undertaking that requires a very substantial amount of data.

Mr. SIKES. By way of expansion of this discussion, why don't you have someone research the records and, again using this as an example, tell us what has been done in an attempt to use those buildings and why it has not been possible to do so.

Dr. Fox. In light of General Dalrymple's long experience in this area I would like to ask him if he has anything to add to the comments I have made.

General DALRYMPLE. I would like to amplify these remarks by inserting something into the testimony later. However, in the absence of a sophisticated system as has been described by Dr. Fox in his discourse on the integrated facilities system we do have a system, as you are aware, sir, of review along command lines. All of these programs are based upon master plans, all are in 5-year plans in one form or another. But when the project finally sifts through and we have to decide whether we build a warehouse at Depot X or use an existing one at Y, that comes into play. The Headquarters of Army Materiel Command, for example, says "I need storage space of so many hundred thousand square feet. Now, if I have space at Depot Y and can use it I will not build at Depot X." It is this system of reviews, as the project passes through the Army commands and staffs, where the decision is made to pursue one route or another.

Mr. SIKES. I think what prompts my question is, how thorough is the review? How carefully do you seek to determine the availability of existing facilities before you construct new ones?

General DALRYMPLE. It is an exceedingly stringent review right now, brought about in part, of course, by the austere budget programs under which we are operating. At this point I would like to have inserted in the record the information you requested earlier on Edgewood Arsenal.

(The information requested follows:)

All vacant storage space is reported quarterly through Headquarters, U.S. Army Materiel Command, to Headquarters, Department of the Army, and a review is made of all available storage space prior to requesting construction of new warehouses. Installation mission and location, together with an economic analysis are tools used in the determination of use of the available space.

Concerning the vacant facilities at Edgewood Arsenal, there are nine warehouse-type buildings containing 117,679 square feet in the former Eastern Chemical Depot area. They were formerly used for storage of chemical warfare material and munitions and accordingly, are located in a remote area of the installation. The only utility service in this area is electricity.

In addition, there are 14 vacant buildings containing 112,679 square feet in the former Ordnance Assembly Plant area. These buildings are all explosive storage magazines and contain no utilities. They are also located in a remote area of the installation.

It has not been economically feasible to utilize these facilities for other functions since they are of such a specialized construction and the cost of bringing utilities into the area would be prohibitive.

Mr. TALCOTT. It seems to me the criteria are as important as the stringency. I think it is unwise sometimes to move a facility to an empty barracks or an empty hangar just because you have an empty building some place. The relocation, the mission, everything else could be disturbed by moving a sophisticated facility. For instance, one thing which is going on in my district is language training. You cannot move that into an empty barracks without thoroughly reconstructing the empty barracks. It is an entirely different system. I think the criteria is what the chairman is getting at rather than how stringent you are in applying the criteria.

Mr. SIKES. Will the new system replace any part of the present facilities management system or is it an addition?

Dr. Fox. The major parts of the new system can be described in two areas. First, formalizing and tying together a series of now separate appraisals and reviews, some of these described by General Dalrymple, so that we can appraise maintenance costs at the same time we are, for example, appraising costs of new construction at a location.

No. 2. Once this analysis has been made of how the systems can be tied together we need to develop the additional subsystems and data collection devices to fill in the gaps so that we can more readily answer the kind of questions that you are asking here. The analysis of the needs for subsystems on the integrated facilities system is now virtually completed and we are underway now developing the data collection systems, testing the data collection systems and developing the software that will enable us to obtain the output reports that will be useful in the consideration by the installations' decisionmaking.

Mr. SIKES. Do you know what the cost of developing and testing this system will be?

Dr. Fox. Yes, sir. I can present that to you. The cost for the full development and testing of the integrated facility systems is estimated to be approximately \$2.5 million.

Mr. SIKES. Over what period of time?

Dr. Fox. Over a period of 3 years, 1968 to 1970. The cost through October 1970 on the integrated facility system is \$2.75 million. We expect an additional \$3 million or so may be required to fully test and bring this system up to a point where it can be actually implemented.

#### MISSION CHANGES

Mr. SIKES. Does the fiscal 1971 military construction program reflect additional changes of missions or units other than those resulting from Southeast Asia?

Dr. Fox. No, sir. All changes in the mission reflected in the program are connected with the Southeast Asia drawdown.

#### IMPACT OF WITHDRAWAL OF FORCES FROM SOUTHEAST ASIA

Mr. SIKES. To what extent is the fiscal year 1971 military construction program planned to support the impact of the additional withdrawal of troops from Southeast Asia?

Dr. Fox. The fiscal year 1971 program was compiled to support the long range stationing plan within CONUS. It, therefore, includes facilities to support the long range Army strength, including units returning from SEA.

Mr. SIKES. What long-term and short-term impact on Army facilities in the United States do you foresee as a result of this withdrawal?

Dr. Fox. The withdrawal will make even more urgent the Army requirement for adequate facilities programed under the military construction program. The Army is attempting to minimize the short-term impact by returning units from Vietnam to locations where facilities can be made available by a minor shifting, reduction in the training load, or other means. However, the total Army construction deficiency of \$6.2 billion means that overage facilities in need of replacement will be used for a considerable time to come.

#### COST PROJECTIONS

Mr. SIKES. I am interested that you are using projected cost estimates which reflect costs at the time of construction. Is this the first time that the Budget Bureau has allowed the Army to estimate costs in this manner?

Dr. Fox. This new policy is in accordance with the Bureau of the Budget instructions that originated in 1969. The Department of Defense directed in its memorandum for preparation and submission of the fiscal year 1970 revised and fiscal year 1971 budget that the estimates be made on an analysis of the actual costs that would be required to complete the project. This requires an analysis, as you know, of the general price movements that will take place in a particular area affecting construction costs.

#### CONTROL OF NONAPPROPRIATED FUNDS

Mr. SIKES. In the fiscal year 1970 hearings this committee expressed interest in what is happening to nonappropriated funds. That is, how they are managed, how they are allocated, what your ground rules are, what protection is given to the use of the funds.

We suggested some procedures to achieve better management. What has the Army done in this regard?

Dr. Fox. Since that suggestion, Mr. Chairman, the Department of Defense has recently appointed an interservice study group consisting of representatives of Army, Navy, Air Force and the Office of Secretary of Defense. The specific purpose of this study group was to examine the existing procedures and controls pertaining to nonappropriated fund construction. The study group was directed to come up with suggestions for improvements in this area as needed.

I am told that in this calendar year we will have recommendations from the interservice committee. The Army is actively participating with this committee. I believe, Mr. Chairman, that this is a more desirable approach than having each of the services go off in its separate direction in dealing with this common problem that faces us all.

Mr. SIKES. I would like to have figures supplied to the committee showing the Army's utilization of nonappropriated funds for fiscal 1970 and anticipated utilization during fiscal 1971.

Major MORRISON. Because the Army has delegated to major field commanders approval authority for construction of morale, welfare, and recreational facilities financed from nonappropriated funds, the actual and programmed total expenditures of nonappropriated funds for fiscal years 1970 and 1971 are not available at headquarters, Department of the Army. This information will be obtained and provided to the committee in a Department of Defense report scheduled for submission on July 1, 1970.

#### POSSIBILITY OF FUTURE CONSTRUCTION FREEZES

Mr. SIKES. Mr. Secretary, this committee has from time to time had the problem of appropriating money in the face of freeze orders, or has made appropriations which were followed by freeze orders, so that much of the time there has been confusion about the way in which construction actually would be carried out. Do you feel the picture is any brighter for the fiscal 1971 program? In fiscal 1970 we completed our appropriations bill after a freeze order had been issued. That freeze order is still largely in effect. Do you think the picture is going to be any better for the fiscal 1971 program? Are we going to continue to have this confusion and, to some extent, chaos, and, inevitably, an increase in costs as a result of further delays?

Dr. Fox. For the reasons you just stated, Mr. Chairman, I share your hope that we will not be faced with that situation.

#### TERMINATION OF CONSTRUCTION FREEZE

As you know, the current freeze is scheduled to end June 30, 1970. In inquiries from various sources that I have at my disposal I have no indication at this point in time that the freeze will be extended. I should add that I have no firm assurance that it will not be extended, but I share your hope that we will be able to move ahead in an orderly manner and not have to delay the construction program that we are presenting to you today.

Mr. SIKES. The construction industry generally has been feeling the pinch of low construction programs partly because of the Govern-

ment freeze, partly because of high interest rates and for other reasons. It would appear that there are good reasons to lift the freeze now rather than wait until June 30. Has the Army made any inquiries into this matter or made any representations on it?

General DALRYMPLE. We have to the extent that we have supported the move by the Defense Department to permit such items as air pollution abatement and water pollution abatement projects to be exempted from the restrictions. We have also supported the release of the family housing funds in order to proceed with that very important program. Unilaterally we have not done anything of substance, sir.

Mr. SIKES. Are there questions?

#### NORTHEAST SEABOARD STUDY

Mr. PATTEN. Mr. Secretary, we spoke, last year, about a Northeast aviation study of quite a few fields, going up the Atlantic coast. My Senator made the headlines over the weekend discussing this study. I am like Dr. Long, I don't know why I can't ever learn anything. The newspapers were full of stories about this Northeast aviation study.

Mr. SIKES. Off the record.

(Discussion off the record.)

Mr. PATTEN. One big issue in our State is the new jetport which the Metropolitan New York Airport Authority wants. McGuire Air Force Base is within my area. Both Senators over the weekend indicated the matter is solved now, we are going to have civilian jets at McGuire. I have pressed—Mr. Shuler and others know this—and I have made phone calls within the past year, especially since last July, and truthfully I have never received any intelligence on this and I don't know whether what they said over the weekend is correct or not. But are you familiar or is anybody in the room familiar with this Northeast aviation study?

Dr. Fox. I am somewhat familiar with the study. I should point out that we have a limited role in this.

Mr. PATTEN. I don't mean you personally, I mean the establishment.

Dr. Fox. Yes. The study we contribute to is handled by the Office of the Secretary of Defense. But the McGuire problem is an Air Force problem I believe, as you may know.

Mr. PATTEN. Now, you have more airplanes than the Air Force.

Dr. Fox. But McGuire is an Air Force base.

Mr. PATTEN. It is Air Force, right. But this study is a Pentagon study, by the Department of Defense.

Dr. Fox. That is correct.

Mr. PATTEN. It includes everybody; the Navy has fields, and the Army has facilities, and the Air Force has bases among these bases that they are talking about. For instance, they phased out Stewart Air Force Base, in New York, and a few others. The Navy had Bennett Field over in Long Island which has been phased out. So if anyone can give me a little help on this Northeast aviation study of 21 fields that you said represents a \$6 billion replacement value, I would appreciate it.

## POLLUTION ABATEMENT

Incidentally, last year we appropriated \$13 million for air pollution and water pollution at many different sites. As I read your statement today, we are doing \$34.6 million in fiscal 1971. Now, with the magnitude of the interest in pollution it would seem to me this is a drop in the bucket.

General DALRYMPLE. Our present backlog, after we accomplish that which is in the current bill is estimated to be between \$60 million and \$75 million. This program is phased over a period of years for accomplishment. We will have to accelerate that time span now because of the President's Executive order in that he wants it accomplished more quickly.

Mr. PATTEN. This was all set before his speech last month.

General DALRYMPLE. We have had a 5-year program for air pollution control and water pollution control that we have explained earlier to the different committees.

Mr. PATTEN. I have no further questions.

Mr. SIKES. Are there other questions?

## PRIORITY LISTING

Mr. LONG. I would like to ask a question. I notice in connection with Edgewood that the priority is No. 3. But in connection with Aberdeen I think it says priority No. 2. I wonder if you can give me some idea of what the significance of that is.

General DALRYMPLE. Yes, sir. As you know, the committee staff asks the Army and I daresay other services as well, each year to establish an order of priority for projects within the overall program. This we assume to be so that as the committee reviews the various projects, it can determine those which the Army considers less important. If there are necessary reductions, these priorities could be taken into consideration.

Roughly 80 percent of the projects in this program are in priority No. 1, leaving 20 percent remaining to be divided equally between priorities No. 2 and No. 3. We are required to arrange them in some priority, sir.

Mr. LONG. Does this mean that items in priorities No. 2 and No. 3 are bound to slip?

General DALRYMPLE. Not so far as we are concerned. We would like to have them all. We think we have an extremely austere budget and would like to keep all these projects in the budget, sir.

Mr. SIKES. Are there questions?

## COST INCREASES IN CONSTRUCTION

Mr. CEDERBERG. Can you tell us the cost increase that you have experienced over the past year as you go to contract?

General DALRYMPLE. Yes, sir. Last year it did not quite reach the growth we had anticipated. This year we estimate it will be about 9 percent.

Mr. CEDERBERG. You mean in connection with the funds we are considering in this budget, fiscal year 1971?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. It will be 9 percent?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. What was the percentage last year?

General DALRYMPLE. The percentage in 1967 was 5.6. It went almost double that in 1968, 10.4 percent.

Mr. CEDERBERG. Why did it drop back to 5 percent? Is it due to the type of project or were the contractors just a little more hungry?

Dr. Fox. I believe I can comment on that. This fluctuation—and we have it here from the period of calendar years 1964 to 1969—is primarily the results of the economic pressures that are affecting prices right across the country. It is not the result of any substantial changes in the nature of the projects. The cost of materials and competitive pressures that exist will have a significant impact on this. I am sure that you are aware of the economic conditions in the country. The projection for 1970 is approximating 9 percent and for 1971 is approximately 10½ percent. This is in response to the overall economic pressures.

Mr. CEDERBERG. When you look at the wage demands alone, not only in the building industry but in others as well, I don't see how it could be much less than 10 percent. So the funds that we are talking about in this bill are substantially higher because of wage increases than they would have been a year ago.

Dr. Fox. That is correct; yes.

#### CONTROLLING COSTS

Mr. CEDERBERG. Is there anything that you can do in the way of new techniques or methods that could hold this increase down or even, hopefully, reduce it?

Dr. Fox. I hope that we can make some progress in this area by doing three things. One, by continuing to examine the modular construction approach I described earlier. I think this holds great potential, if we can exploit it, for controlling labor costs in this area. No. 2, it seems to me that we should continue to place emphasis of obtaining reliable competition, real competition on our projects as a factor toward driving these costs down.

No. 3, the turnkey method of construction that I described earlier, again I think holds some potential for the control of costs and for the tailoring of construction to a particular locality.

I am unable to suggest any techniques for maintaining the control of labor costs, as the construction firm has to deal with them. I believe labor costs again are simply a part of our own overall wage escalation problem across the country.

#### LEVEL OF ARMY CONSTRUCTION PROGRAMS

Mr. CEDERBERG. What was the total obligational authority requested in fiscal year 1970 in the Army for military construction? Last year's request. It was \$716 million in 1971. What was it in 1970?

General DALRYMPLE. \$496 million, sir.

Mr. CEDERBERG. It is now \$716 million?

General DALRYMPLE. That is right, sir.

Mr. CEDERBERG. So it is a fairly substantial increase this year over last year?

General DALRYMPLE. Largely for SAFEGUARD construction.

Mr. CEDERBERG. Largely in the SAFEGUARD area?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. How much was appropriated for SAFEGUARD last year?

Colonel McCHRISTIAN. \$97.1 million, sir.

Mr. CEDERBERG. So, taking SAFEGUARD out, you are using less for other activities in your construction program in spite of the increase in the total program?

Dr. Fox. Right.

Mr. CEDEBERG. We just are not making any headway at all?

General DALRYMPLE. It is an austere program, sir.

#### ENGINEERING RESEARCH LABORATORY

Mr. CEDERBERG. That is all I have.

General DALRYMPLE. I could ask Mr. Zackrison to add to Dr. Fox's statement on what we are doing to hold costs down. We can also address the engineering research laboratory which we have established at the University of Illinois. It will allow us to do research into the type of engineering that might give us a better product for less cost.

Mr. ZACKRISON. We have recognized the problem that we need to reduce construction costs, at least keep them down to a reasonable level. About 3 years ago I went to the National Academy of Sciences and asked them to appoint a committee to advise us as to what course of action we might take and what types of thinking we should do. As a result of their recommendations we came before the Congress and asked permission to build a research laboratory at the University of Illinois. This was completed this past summer, and we have charged them with the mission of making studies of systems engineering to see how we could reduce costs. Obviously, we have not really had a chance to get down the road very far but we think we have some clues as to how we might at least keep costs down, if not reduce costs materially. This program will probably take 3 to 4 years before we get real substantial results. We can't get them overnight but we think we can get some place.

Mr. SIKES. What is the main thrust of its work at this stage?

Mr. ZACKRISON. We are looking, first of all, into prefabricated buildings to see how we might reduce costs there and in what regions and for what types of facilities they might be used. We are looking into modular construction as well. Actually, the Corps of Engineers has sponsored modular construction for some 15 or 20 years but we have not had quite the cooperation from industry that we might have had. What we are trying to do is interest them in using more modular construction so that we can effect utilization of their construction methods.

Mr. SIKES. What you learn is going to benefit industry. It would appear that they would want to be cooperative.

Mr. ZACKRISON. We think so. We are finding quite a bit of cooperation from industry. As I say, however, we have not gotten far enough along to really tell you where we are going to get but we do feel definitely that we will get results here.

Mr. SIKES. Would you keep this committee advised on the findings and recommendations which come from this activity?

Mr. ZACKRISON. Very certainly, sir.

Mr. SIKES. We are very much interested in this.

Mr. JONAS. I don't understand your statement that you are not getting cooperation. Private industry has been in the modular construction business for a good many years. It is a question of you writing the specifications. They will bid on it.

Mr. ZACKRISON. They will bid on it but, first of all, to get into real modular construction you have to standardize different modules. All the manufacturers and construction people have not agreed on enough standardization of these modules to make effective utilization. In certain industries it has been more prevalent than in others, particularly in prefabricated housing.

Mr. JONAS. I know we have been talking about this very subject for years in this committee. I frankly cannot understand why you have to do so much study, why you can't go ahead and make some decisions. You are going to study this thing to death. That is the trouble with Government. Everybody wants to keep on studying some problem and nobody apparently wants to make a decision. I think the time has come when the study should be completed and somebody should be deciding whether we can go with this type of construction or whether we cannot. I don't see why you would have to build a new laboratory at the University of Illinois to study something that has been studied to death already.

#### MODULAR CONSTRUCTION

Dr. Fox. I would like to add to that by saying that the Army has moved in the modular construction area and the discussion that you have heard is an investigation of opportunity as to how we can move more rapidly. Right now at Vint Hill in Warrenton, Va., nearby, is a location where we have employed the modular construction as an attempt to make some decisions and to move out in this area. So I do not think you will find the Army resistant to any opportunity that we can find to reduce costs.

Mr. JONAS. What have you found out at Vint Hill? What have been the results there? What bugs in the thing?

Dr. Fox. What we have done is moved out and sent proposals for industry to respond here, as you suggested a moment ago, in the modular construction area. We are at this time awaiting response from industry on how we can move ahead in that particular area.

Mr. JONAS. That is what I cannot understand. Why do you have to discuss this in a preliminary way with industry? Why don't you write some specifications and see if you can get bids.

Dr. Fox. That is the situation we are in. The request for proposals has been issued to industry. Now, with the specifications and with the invitation to bid they must sit down and write their proposal and come up with their bid figure so that we can select the lowest cost bidder for moving ahead in this area.

#### OTHER TYPES OF FAMILY HOUSING CONSTRUCTION

Mr. JONAS. I can tell you that the homebuilding industry is quite active in this. They have come up with all sorts of different proposals, plastic houses, and so forth. I have an article on this in my little hometown newspaper. These people are putting up houses in 24 hours. Why are we so late in this? We could double our supply of houses or quadruple it if we would use some of these techniques that have been devel-

oped in the homebuilding industry and put up these houses on a whole-sale basis.

Dr. FOX. I have read just a little on the plastic house business. I am a bit concerned that if we were to move out very aggressively at this point in time that we may find ourselves faced with some of the problems experienced in the past in prefabricated housing area. That is, we may find ourselves paying a very small amount now for the initial construction and then having our present backlog of maintenance start to skyrocket. We would be concerned that that might not be a type of housing that is going to last us for the time period of which we are talking about here.

Mr. JONAS. We will never know until we try, will we?

Dr. FOX. No.

Mr. JONAS. Why don't you try a pilot project?

Dr. FOX. What we had hoped to do in this area, rather than spending the Army's money, since the industry is moving out on this, we would like to benefit from their observations in this area.

#### LAWS AND REGULATIONS PERTAINING TO LABOR WAGE RATES

Mr. JONAS. Are you restricted by any Executive order or law that deals with firms that are organized or can you deal with a contractor who operates under an open shop?

General DALRYMPLE. We have to deal with those who operate in accordance with the labor wage laws, sir.

Mr. JONAS. There is not anything in the law as I understand it that requires a contractor to operate a closed shop unless he has something in the contract with his employees that says he has to do it. Are you restricted in letting bids to companies that are organized?

Colonel FRECH. We are not required to award contracts to union contractors. However, we are required to comply with the Davis-Bacon Act which specifies the prevailing wage rates. These prevailing wage rates are usually the union wage rates in areas where the unions predominate.

Mr. JONAS. Are you required to take the statement from the Secretary of Labor as to what the prevailing wage rate is in a given locality?

Colonel FRECH. Yes, sir.

Mr. JONAS. I understand you are required to follow Davis-Bacon and I know what Davis-Bacon is, but the trouble with Davis-Bacon is the person who determines what the prevailing wage rate is. I could give you an example of some decisions made on construction down in Virginia where they used the District of Columbia prevailing wage rate. Do you have any say-so in ascertaining what the prevailing wage rate is in a given location?

Colonel FRECH. No, sir. They are determined by the Department of Labor and promulgated by the Solicitor, and we have to comply with those Davis-Bacon wage rates. We occasionally try to get special wage rates for construction of family housing because in many areas the residential construction trades are nonunion and their wage rates are less than the union rates in the local vicinity, but we have to comply with whatever Davis-Bacon wage rates are issued as the prevailing wage rates in that locality, which means if we hire a nonunion contractor he ends up frequently paying the union wage rates.

## CHANGE ORDERS

Mr. JONAS. What has been your experience this last year on change orders?

General DALRYMPLE. I don't think it has been a year that has been exceptional with respect to change orders. We always have change orders, modifications to contracts. One of the largest ones that we are faced with now for which we are asking a deficiency in this bill is the problem with foundations at West Point. That is about \$2.5 million. This is a substantial one, sir.

Mr. JONAS. We have known about the rock underpinning up there for a century or so. Was that not known in advance?

General DALRYMPLE. You are going to get a detailed explanation from the contracting officer, but I will tell you it was not discovered to be as extensive as it turned out to be, as excavation progressed. This requires longer footings, longer pilings, which Dr. Fox explained. Also additional time is now required in order to complete the job.

## UNOBLIGATED BALANCES

Mr. JONAS. Could you tell the committee if you have a projection right now as to what your unobligated balances will be in the military construction account as of June 30, 1970?

Mr. BRAZIER. As of June 30, 1970, we will have an unobligated balance of \$355,813,000.

Mr. JONAS. Does that come about largely or partially because of the construction freeze, or is it for other reasons?

General DALRYMPLE. Certainly partially because of the deferral and partially because of the unobligated balances due to the Safeguard program. Those are the two principal items, sir.

Mr. BRAZIER. Also we were a little bit late in obtaining our appropriation last year, which has moved some things back.

## UNEXPENDED BALANCES

Mr. JONAS. Would you have the figure there for unexpended balances?

Mr. BRAZIER. As of December 31, 1969, we had expended \$240 million.

Mr. JONAS. Do you have a projection of what that will be at the end of the fiscal year? I don't see how you can have the unexpended balance less than the unobligated balance. You are bound to obligate before you spend.

Mr. BRAZIER. Yes.

Mr. JONAS. So your unexpended balances should be substantially higher than your unobligated balance.

Mr. BRAZIER. Yes, sir; it is. As of December 31, 1969, we had an unexpended balance of \$1,255,583,000, including a fiscal year 1970 appropriation of \$287,288,000 approved December 29, 1969.

Mr. JONAS. That is what I would call an unexpended balance; is that right?

Mr. BRAZIER. Yes.

## STATUS OF FAMILY HOUSING CONSTRUCTION

Mr. JONAS. Now, General, have you got all of the family housing that was funded in the last bill under contract?

General DALRYMPLE. No, sir. However, we will have the majority under contract by the end of the fiscal year.

Mr. JONAS. Why have you not let those contracts? Were the funds not apportioned to you?

Colonel SAARI. The reason we don't have these under contract is because of the delayed appropriations bill. We have entered into final design since the first of the year on a number of these housing projects and we hope to have the bulk of them awarded before June 30.

Mr. JONAS. I asked that question because I read recently that one of our distinguished U.S. Senators, in complaining about military costs, cited family housing of the military as a classic example of waste, extravagance, and misuse of priorities, and he said, "Why, they even have more money for military family housing than the budget called for for model cities in 1970," which struck me as being a rather ridiculous comparison. I don't know how you can compare eggs and oranges, but he used that comparison.

Mr. SIKES. There may be more justification.

Mr. JONAS. Of course, model cities is only one brand new part of a massive program the Government is engaged in in subsidizing family housing for the poor. We have got public housing, we have rent supplements, we have interest subsidies, principal subsidies, a dozen different programs, but that is one of the examples which was cited of how we are all mixed up in our priorities.

This committee has always been very much interested in family housing for military people and we think the military, most of them, enlisted personnel particularly, are in the poverty category so far as net income is concerned. We are anxious to do what we can to help provide the necessary housing for the people who are in uniform.

Mr. SIKES. Mr. McFall.

Mr. McFALL. Off the record.

(Discussion off the record.)

Mr. McFALL. I would like to develop a little further what Mr. Jonas got into, as far as family housing is concerned.

As I understand, the answer was we will have under contract by the end of the fiscal year everything that has been financed up to this time.

General DALRYMPLE. No, sir; substantially, however.

Colonel SAARI. Almost all.

Mr. McFALL. Out of the last appropriation bill that would be how many?

Colonel SAARI. The total was 1,200 in the last bill. We expect to have better than 900 awarded by June 30, 1970.

Mr. McFALL. Then I would ask: What is the status of family housing provided by prior years' authorizations and appropriations? Do we have a backlog from prior years as well?

General DALRYMPLE. For example, at Leavenworth we invited bids for three prior year increments of family housing and received only one bid. It was extremely high and we could not make an award.

Mr. McFALL. Could you give me a little detail here and expand upon it for the record, if you like? If we have 900 or will have 900

of the 1,200 in the fiscal 1970 program under contract before the end of the fiscal year, what about the fiscal year 1969 program? What is the status of that? How many did we have there? Where are we?

Colonel SAARI. We had 500 units authorized and appropriated. Of that 500, 400 are now under construction at two sites. The remaining 100 units were authorized for Fort Leavenworth. We hope to have these under contract using the turnkey method by June 30 of this year.

Mr. McFALL. Go back then to 1968. Do we have anything left over from 1968?

Colonel SAARI. In fiscal year 1968 we have everything under contract or already completed except the 100 units at Leavenworth.

Mr. McFALL. Which puts the bulk at Leavenworth, where you are working on the turnkey?

Colonel SAARI. We are working on 250 units: 100 in 1969, 100 in 1968, and 50 in 1966. For 1966 and 1968 projects which total 150 units we hope to issue request for proposals on a one-step turnkey by sometime in May of 1970. However, we do not anticipate final award until perhaps August or September.

Mr. McFALL. Do you have any other backlog at any other location from prior years? We have covered 1970, 1969, 1968, and 1966.

Colonel SAARI. In 1967 we had no construction whatever. I have now outlined the complete backlog on new construction. We have all of our improvement projects for those years either completed or under construction.

#### FAMILY HOUSING MAINTENANCE

Mr. McFALL. How about maintenance funds for family housing? How do we stand there? Are we keeping up family housing in adequate repair?

Colonel SAARI. I would say on the whole, yes, up until fiscal year 1970 we were doing quite well. We were beginning to reduce our deferred maintenance backlog. As a matter of fact, in 1968 and 1969 we had reduced it by about \$4 million out of a total of \$28 million backlog.

Mr. McFALL. How does it stand now, Colonel?

Colonel SAARI. It is going up again, close to \$30 million, because in fiscal year 1970 the funds we received for operation and maintenance of the family housing inventory worldwide were not enough to take care of the special demands placed on us by Germany because of, first, the revaluation of the deutsche mark which took place during the past 6 months; and second, the local national wage rate increases which were being negotiated at the same time in Germany. These two requirements placed a heavy demand on our resources in the operation and maintenance account in fiscal year 1970 to the point where instead of realizing a further reduction in our deferred maintenance backlog we actually had a sizable increase.

Mr. McFALL. Are you discussing the inadequacy of appropriated funds or of the funds which were released to you by the Department of Defense—

Colonel SAARI. Inadequacy of appropriated funds primarily, because we could not foresee this emergency situation in Germany at the time we requested the funds of the Congress.

Mr. McFALL. Can you give me your best estimate of how much these inadequacies are that were produced by the German situation?

Colonel SAARI. I would say in family housing for Germany, it was approximately \$5 million.

Mr. McFALL. So this threw your worldwide program off by approximately \$5 million?

Colonel SAARI. Yes, sir; it did; exactly.

Mr. McFALL. Are you in any way compensating for this in the present budget?

Colonel SAARI. In the fiscal year 1971 budget request we have included the necessary funds to provide for these cost increases in Germany which will continue in fiscal year 1971. This budget request has no funds included in the operation and maintenance account which would compensate for the unusual increase in backlog incurred during fiscal year 1970.

Mr. McFALL. In your opinion, then, this would not bring us back up to the same level that we were beginning to approach in 1968 and 1969?

Colonel SAARI. No, sir; before the fiscal year 1970 cost increases in Germany we were down to a \$24 million to \$25 million level in the deferred maintenance backlog. The backlog that we would be working with in fiscal year 1971 is up to \$30 million. However, in the fiscal year 1971 budget request we have included \$2.5 million so that we can again begin to reduce the deferred maintenance backlog from this \$30 million figure.

Mr. McFALL. In your opinion then, are we making progress or falling behind?

Colonel SAARI. We were making some progress in fiscal year 1968 and 1969 but in fiscal year 1970 we have not progressed at all.

Mr. McFALL. There is presently a \$30 million backlog, which you are going to cut by \$2.5 million?

Colonel SAARI. \$2.5 million in 1971; yes, sir. We would like to reduce the backlog by 15 percent, or about \$5 million per year.

Mr. McFALL. Your goal would be \$5 million per year cut in the backlog?

Colonel SAARI. Yes, sir; this is our goal.

Mr. McFALL. You have only achieved in this budget \$2.5 million or half of what you would like to achieve?

Colonel SAARI. Yes, sir.

Mr. McFALL. Thank you.

#### SHELTER CONSTRUCTION FOR FAMILIES OF VIETNAMESE ARMED FORCES

Mr. JONAS. General, are you building shelters for families of the Vietnamese Armed Forces?

General DALRYMPLE. We do have some funds for a shelter program in Vietnam, sir.

Mr. JONAS. What kind of progress are you making with that?

Colonel MOFFAT. I would like to provide that for the record, sir.

Mr. JONAS. We will go into it in greater detail later.

Colonel MOFFAT. We have an apportionment request pending for about \$1 million in MCA funds from the unapportioned fiscal year 1969 MCA balance for Vietnam which would be used to construct dependent shelters for the Vietnamese Army.

Mr. JONAS. How many have you already built? There was money in last year's bill for that.

Colonel MOFFAT. No, sir. This will be the first MCA funds for dependent shelters. We have used O. & M. funds for this purpose to date and I would like to provide the details for the record.

Mr. JONAS. Didn't you have money in last year's bill?

General DALRYMPLE. Not MCA in 1970; no, sir. We had nothing in Vietnam for that.

Mr. JONAS. We approved a reprogramming request in here. I know we had quite a discussion about it.

Mr. SIKES. Off the record.

(Discussion off the record.)

Dr. FOX. It is my understanding that the program being referred to here, the special housing program approved by the Secretary of Defense, was not taken out of MCA but came out of operation and maintenance funds, O. & M.A. funds.

Mr. SHULER. We will check that, sir, but that is my understanding.

Mr. SIKES. I believe this was a Navy-administered program, isn't that right?

Dr. FOX. I believe that is correct.

Mr. SIKES. Clear up the record on it. This committee did approve a request for shelters for the South Vietnamese forces.

Mr. JONAS. As a part of Vietnamization.

Mr. SIKES. That is a correct. So we would like to have the details on the Army's program at this point in the record.

(The information follows:)

(a) A self-help shelter program for dependents of regular Vietnamese Army forces is scheduled to provide 8,228 family units at various locations in Vietnam using \$2.8 million of fiscal year 1967 and fiscal year 1968 O. & M. Army funds to procure materials only. As of December 31, 1969, 2,408 units have been completed and 3,440 units are under construction. In addition, facilities equivalent to 200 family units were provided when Camp Black Horse at Xuan Loc, Vietnam, was transferred from United States to Vietnamese Army forces in October 1969. Future transfers can be expected to include similar equivalents for dependent shelters.

(b) A request is being processed to use \$1 million of unapportioned fiscal year 1969 MCA funds appropriated for SEA support to finance lump-sum contract construction of an additional 1,625 shelters for dependents of Vietnamese Army personnel. If approved this will be the first MCA-funded project for this purpose, and the project contracts will be under U.S. supervision and control.

(c) A self-help shelter program for dependents of Vietnamese popular force personnel is financed with AID/DOD (O. & M. Army) funds to provide materials at a cost of approximately \$225 per family unit. The program status of December 31, 1969, is shown below:

Fiscal year	Funds (millions)	Family units		
		Programed	Complete	Under construction
1969.....	\$1.3	5,615	45	250
1970.....	3.5	15,764	.....	.....
1971.....	4.2	18,700	.....	.....
Total.....	9.0	40,079	45	250

Mr. SIKES. If there are no further questions, thank you very much, Dr. FOX, for your testimony and for the information which you gave to us on the fiscal 1971 budget program.

Dr. Fox. Thank you, sir.

Mr. SIKES. It is a pleasure to have you before us. We will excuse you at this time if you wish.

(Discussion off the record.)

Mr. SIKES. We will insert General Dalrymple's biographical sketch in the record at this point.

#### BIOGRAPHICAL SKETCH OF MAJ. GEN. JOHN C. DALRYMPLE

Maj. Gen. John C. Dalrymple was born in Brazil, Ind., on February 10, 1912. He was graduated from Rose Polytechnic Institute, Terre Haute, Ind., with a bachelor of science degree (electrical engineering) in 1933, and was commissioned a second lieutenant in the Corps of Engineers, U.S. Army Reserves, upon graduation.

General Dalrymple began his active military career in March 1941 as a lieutenant with the 24th Armored Engineer Battalion at Pine Camp, N.Y. He later took command of the 82d Engineer Combat Battalion at Camp Swift, Tex. He led the 82d Engineers into Normandy, France, in June 1944. For this and subsequent operations in the European Theater he was awarded the Silver Star Medal and twice earned the Bronze Star Medal. In March 1945, General Dalrymple took command of the 1117th Engineer Combat Group and directed its operations in the historic crossing of the Rhine. He was awarded the Legion of Merit for this action.

General Dalrymple graduated from the Command and General Staff College, Fort Leavenworth, Kans., in 1947, and the following year earned a master's degree in civil engineering from Iowa State College, Ames, Iowa. He served as deputy engineer, 3d Army at Fort McPherson, Ga., until 1949, at which time he returned to Germany. Initially holding command assignments as Commanding Officer, 555th Engineer Combat Group and Commanding Officer, 1st Engineer Combat Battalion, he subsequently became Assistant Deputy Chief of Staff for Operations, European Command.

Returning to the United States in August 1953, General Dalrymple attended the Armed Forces Staff College, Norfolk, Va. He was deputy district engineer of the U.S. Army Engineer District, Huntington, W. Va., from February 1954 to December 1955.

From 1956 to 1959, General Dalrymple was on duty at the Pentagon, Washington, D.C., as Chief of Plans, Office of the Chief of Research and Development, and later as executive officer to the Secretary of the Army.

General Dalrymple graduated from the National War College in June 1960, after which he was assigned as senior engineer adviser to the Republic of Korea Army as a member of the Korean Military Assistance Advisory Group. Upon his return to the United States in July 1961, he was designated district engineer, U.S. Army Engineer District, Little Rock, Ark.

General Dalrymple assumed command of the U.S. Army Engineer Division, North Atlantic, New York City, N.Y., as division engineer from 1962 to 1965. He was a member of the Board of Engineers for Rivers and Harbors during this period and was also a member of the Coastal Engineering Research Board. He was named Director of Military Construction in the Office of the Chief of Engineers on July 1, 1965. For his performance in those positions, he was awarded a second Legion of Merit.

On August 1, 1966, General Dalrymple became Director of Installations, Office of the Deputy Chief of Staff for Logistics, Department of the Army.

General Dalrymple is a past regional vice president of the Society of American Military Engineers and also formerly served on the Board of Directors of the Engineer Joint Council. He is a registered professional engineer in Arkansas and in the District of Columbia.

General Dalrymple is married to the former Dorothea Bell Smith of Brazil, Ind.

#### GENERAL STATEMENT

Mr. SIKES. You may proceed with your statement, General Dalrymple.

General DALRYMPLE. Mr. Chairman and members of the committee, I am Maj. Gen. John C. Dalrymple, Director of Installations, Office of the Deputy Chief of Staff for Logistics, Department of the Army.

It is always a privilege to appear before this committee and to present the Department of the Army's portion of the military construction appropriation request.

For fiscal year 1971, the Army is requesting \$716 million in total obligational authority for military construction, consisting of \$283,555,000 (excluding Safeguard) for new authorization in the proposed fiscal year 1971 military construction authorization bill, \$2,945,000 deficiency funding for projects authorized in prior years, \$397,000,000 for Safeguard Ballistic Missile Defense System, and \$32,500,000 for minor construction, access roads and planning which is authorized under continuing legislation. The TOA will be financed by the requested new obligational authority of \$708 million and recoupment of \$8 million for NATO. The Secretary of Defense has requested the Bureau of the Budget to amend the President's budget by reducing the appropriation for support of the Safeguard Ballistic Missile Defense System by \$40 million to \$357 million. General Starbird will discuss the Safeguard program with you later this week.

Of the total request, excluding Safeguard, \$175,122,000 is for construction within the United States and \$109,378,000 is for construction outside the United States, including Korea, Europe, Southeast Asia, Kwajalein Missile Range, and U.S. Army Security Agency sites. The program also includes a request for \$2 million for work at a classified location.

This year's program has been developed to meet our three major facilities requirements: to support our essential overseas missions, to permit deployment of the Safeguard Ballistic Missile Defense system, and to provide an increment of the essential facilities at the Army's permanent installations in the United States.

The largest single segment of our program for permanent installations is for the improvement of facilities in support of medical activities. This year's program is a continuation of our previous efforts in this area and includes several diverse needs. Facilities are being requested to satisfy our most urgent requirements for hospitals, clinics, medical laboratories and bachelor housing for medical trainees.

Before I give you some of the highlights of our program, I would like to call your attention to two tables shown on pages 3, 4, and 5 of the statement before you. Table I, on pages 3 and 4, shows the total obligational authority request by major commands in the United States and overseas, and the total new obligational authority required. Table II, on page 5, shows the TOA request by construction categories.

#### CONSTRUCTION COSTS

The problem of uninterrupted cost growth in the construction industry on which I commented last year is still with us, and experts are now predicting a rise of about 9 percent in 1970.

TABLE I.—Proposed fiscal year 1971 military construction, Army program

Command	Cost
INSIDE THE UNITED STATES	
U.S. Continental Army Command	\$111,152,000
1st Army	(23,662,000)
3d Army	(35,533,000)
4th Army	(17,667,000)
5th Army	(17,094,000)
6th Army	(16,671,000)
Military District of Washington	(525,000)
U.S. Army Materiel Command	33,938,000
U.S. Army Strategic Communications Command	3,259,000
U.S. Military Academy	11,101,000
U.S. Army Medical Department	10,216,000
U.S. Army Corps of Engineers	558,000
Military traffic management and terminal service	4,898,000
<b>Total, inside the United States (excluding Safeguard)</b>	<b>175,122,000</b>
OUTSIDE THE UNITED STATES	
U.S. Army, Pacific	46,190,000
Korea	(6,190,000)
Vietnam	(40,000,000)
Kwajalein Missile Range	560,000
U.S. Army Security Agency	2,535,000
U.S. Army, Europe	60,093,000
Germany	(8,902,000)
United Kingdom	(1,191,000)
NATO Infrastructure	(50,000,000)
<b>Total, outside the United States (excluding Safeguard)</b>	<b>109,378,000</b>
Classified location	2,000,000
Safeguard system	397,000,000
General authorization	32,500,000
Planning (regular)	(22,000,000)
Minor construction	(10,000,000)
Access roads (regular)	(500,000)
Total obligational authority requested	716,000,000
Less: recoupment from NATO	-8,000,000
<b>New obligational authority requested</b>	<b>708,000,000</b>

TABLE II.—PROPOSED FISCAL YEAR 1971 MILITARY CONSTRUCTION, ARMY PROGRAM—SUMMARY BY FACILITY CLASSES AND CONSTRUCTION CATEGORIES

	Total	Percent of total
Operational and training facilities	\$19,414,000	2.7
Maintenance and production facilities	12,523,000	1.8
Research, development, and test facilities	29,706,000	4.2
Supply facilities	6,239,000	0.9
Hospital and medical facilities	44,788,000	6.3
Administrative facilities	13,760,000	1.9
Housing and community facilities	53,240,000	7.4
Utilities and ground improvements	56,830,000	7.9
Safeguard	397,000,000	55.4
NATO	50,000,000	7.0
General authorization	32,500,000	4.5
<b>Total obligational authority requested</b>	<b>716,000,000</b>	<b>100.0</b>
Less: Recoupment from NATO	-8,000,000	
<b>New obligational authority requested</b>	<b>708,000,000</b>	

General DALRYMPLE. To minimize the effect on the Army construction program, we are continuing our efforts to improve our cost estimating and to complete the design of our projects at an early date so

that contracts can be awarded with least practicable delay. Progress is being made in this area, and we anticipate that we will be ready to award contracts on a significant portion of our program once funds become available.

#### PROGRAM HIGHLIGHTS

A number of items in this program justify specific mention.

#### HOSPITAL FACILITIES

The request of \$44.8 million for medical facilities constitutes approximately 25 percent of the construction programed for our permanent installations in the United States. The major facility that we are requesting is a 760-bed hospital at Fort Gordon, Ga., which will support not only that installation, but will also serve as a regional specialty military hospital for the southeastern portion of the United States. We have largely completed the design of this \$31 million project—it is 70 percent designed—and expect to request bids for construction as soon as funds are available.

This year we are also requesting approval of the first increment of the construction required to erect a modern 1,280-bed hospital at the Walter Reed Army Medical Center. In order to cause minimum disruption in patient care at the present hospital center, we are planning sequential development of this new facility; therefore, we are requesting \$10.2 million this year to provide interim facilities to house those medical activities which must be relocated, to clear the site for the new building, and to relocate and modernize the utilities needed for this new medical center. Under our current schedule we will accomplish this work initially; subsequently we will request funds from the Congress for the remaining construction of the hospital. The entire facility is under design, and we hope to award contracts for each increment shortly after the funds become available.

Mr. SIKES. Where will the new center be built?

General DALRYMPLE. Immediately behind the facade of the original building. We are keeping the front portion of that old hospital building and will modernize it.

The new facility will be a rectangular building immediately to the rear, several stories high.

Mr. SIKES. There is ample space there?

General DALRYMPLE. Yes, sir. There will be some razing of current buildings and some relocation, but there will be sufficient space. Would you care to look at the plot plan, sir?

Mr. SIKES. Yes.

General DALRYMPLE. Mr. Carton, who is from my office, will point out what we have here.

Mr. CARTON. This is the current building. The location of the new main building will be directly behind it. The existing buildings in that area which we will have to remove to make room are shown in green. The new main structure will be directly behind building No. 1.

#### BACHELOR HOUSING

General DALRYMPLE. The fiscal year 1971 program provides for construction of 3,022 barracks spaces and 524 bachelor officer quarters at permanent installations in the United States. This will provide another

small increment of our program to replace the inadequate World War II buildings in which a large proportion of our bachelors are still housed. The estimated cost for these projects is based upon statutory limitations for bachelor's housing which are proposed in the fiscal year 1971 military construction authorization bill.

#### RESEARCH AND DEVELOPMENT

To support our research and development program, we are requesting \$32.9 million. Of this amount, 0.6 million is to improve communication facilities for all users of the Kwajalein Missile Range. The continuing program for upgrading the White Sands Missile Range in New Mexico will require \$2.3 million this year.

The largest portion of the funds requested is for the initial increments of two major laboratory construction projects. \$14.0 million is required for the first phase of a three-phase program to relocate the facilities of Harry Diamond Laboratories, the Army's research and development laboratories which specialize in fuses and susceptibility of ordnance electronics materials to nuclear radiation. The laboratories will move from the present inadequate facilities in a combination of leased buildings, trailers, and a portion of the old National Bureau of Standards site to the vicinity of the Naval Ordnance Laboratory in Maryland.

The second large project requires \$7.0 million for the first phase of a three-phase program for the Western Medical Institute of Research. This project will provide a modern facility adjacent to the Letterman General Hospital in which we can bring together associated research with emphasis in this field of infectious diseases that have a serious impact on a military unit's combat effectiveness. This research will be particularly oriented toward communicable diseases which are of special importance in military medicine.

#### REDUCTION OF ENVIRONMENTAL POLLUTION

National programs call for reducing the pollution of our environment. Therefore the Army has included in the fiscal year 1971 program four projects for air pollution abatement and eleven projects for water pollution abatement. These projects will reduce particulate and sulfur oxide emissions from heating and production plants, provide treatment of industrial wastes, provide connections to regional sewage plants, and upgrade existing sewage treatment plants to conform with local and Federal standards. These projects have been coordinated with the other Federal agencies involved in pollution abatement and are generally timed with the environment improvement plans of the local communities. The total cost of this phase of the environmental pollution control program is \$17.4 million.

#### RECEPTION STATION, FORT DIX

The reception station at Fort Dix, N.J., receives and processes inductees at the rate of 1,300 men a week prior to their entering basic combat training. The main processing activity is now located in a building constructed in 1917; the other processing buildings were constructed during World War II. These substandard and inadequate buildings provide an inefficient facility for processing the new soldier

and certainly create an extremely poor impression on him at the outset of his military career. Initially this program includes \$5.7 million to provide permanent reception, processing and medical facilities.

#### DEPENDENT SCHOOLS

The adequacy of schools for his children is a very important factor in the soldier's choice of a career. The continuing requirement for improving the educational facilities for the dependent children in Europe has been recognized for several years. This year's program of \$2.1 million for an addition to an elementary school and conversion of existing buildings to a high school will reduce overcrowding and alleviate sub-standard conditions.

#### RELOCATION OF ACTIVITIES TO BAYONNE, N.J.

In November 1964, the Secretary of Defense announced the inactivation and disposal of the Military Ocean Terminal, Brooklyn. Adequate operational facilities are becoming available at Military Ocean Terminal, Bayonne. Needed now are facilities for administrative functions, and the Army requests \$3.0 million to provide this additional space.

#### CONTAINER LOADING FACILITIES

We are requesting \$1.5 million for the first increment of a five-phase program to modernize existing facilities at the Military Ocean Terminal, Oakland Army Base, Calif. The widespread trend toward containerization, and the development of modern cargo handling methods and automation in industry, demands corresponding modernization of military terminal facilities. Compatibility of commercial and military systems and methods is essential to efficient and economical operation of Army terminals which serve all of the Armed Forces. Approval of funds for the Oakland facility will provide a terminal on the west coast which is modern, efficient, compatible with industry and which will have the flexibility to react rapidly to abrupt increases in cargo movement demands.

#### MOVING TARGET SIMULATOR BUILDINGS

The modernization of the Army's weapons leads inevitably to a need for new training facilities. This year we are requesting projects at five installations to house equipment which will simulate moving targets and permit training for crews of Redeye and Chaparral/Vulcan air defense systems. This will improve the training in our new weapons systems, prevent loss of valuable training time, and reduce the need for actual aircraft in this training. The total cost is \$2.5 million.

#### AIRCRAFT MAINTENANCE FACILITIES

The rise in the Army's use of aircraft has brought a corresponding increase in the need for maintenance facilities. This program contains \$4.3 million for the improvement of existing installations which specialize in this work. Of this amount, \$3.4 million is for maintenance facilities for aircraft engines at the U.S. Army Aeronautical Depot Maintenance Center near Corpus Christi, Tex.

## ELECTRICAL SUPPLY AND DISTRIBUTION

The continuing rise in the demand for electrical power due to changes in communications, modern weapons, training techniques, and living standards has imposed severe strains on existing electrical utilities. To rectify this situation approval is requested to upgrade the electrical systems at seven major installations in the United States at a cost of \$4.3 million.

## REPUBLIC OF VIETNAM

Construction required under the "Vietnamization program" for support of the Army of the Republic of Vietnam, for American advisory teams, and for roads and bridges at a cost of \$40 million is reflected in this program. The Army has carefully reviewed the projects previously planned for this area and has realigned the previously authorized program to conform with current plans. This action permitted the accomplishment of construction work without requesting additional funds in fiscal year 1970. Now, however, it is necessary to request funds which will permit continuation of construction of a limited number of facilities in support of current programs.

## NATO INFRASTRUCTURE

Continuing the procedure established in fiscal year 1968 this program contains \$50 million to support the U.S. share of infrastructure construction for the collective defense of the North Atlantic Treaty Organization.

## SUMMARY

In summary I would like to point out that the appropriation requested in the program before you consists largely of construction in support of our forces overseas and the Safeguard ballistic missile defense system. In fact, 71 percent of the request before you is for these purposes.

The remaining portions of the program have been carefully developed to provide minimum essential improvements in our primary medical care facilities, research and development laboratories, environmental pollution abatement programs, operational and training facilities, maintenance and supply facilities, and basic utilities. A modest segment of the program is for projects for the troop housing and community support items which are so important to the morale and well-being of the American soldier.

This concludes my summary of the Army's fiscal year 1971 military construction appropriation request. The detailed project justifications supporting the Army request are contained in two books which have been furnished to the committee, one containing the unclassified data and the other containing classified material.

I will be pleased to answer questions the committee may have or to see that the answers are provided.

Mr. SIKES. Thank you very much, General.

The committee will resume its hearings at 2 o'clock.

AFTERNOON SESSION  
UNAPPORTIONED PROJECTS

MR. SIKES. General Dalrymple, could you provide for the record a listing of the Army's unapportioned projects and show the date on which you estimate the award of contracts.  
(The information follows:)

VALID PROJECTS FOR WHICH FUNDS HAVE NOT BEEN APPORTIONED

	Program amount	Estimated award date <sup>1</sup>
Fort Benjamin Harrison, Ind.: Hospital.....	4,320	(?)
Pine Bluff, Ark.: Sewage Trt Fac.....	169	October 1970.
Rock Island Ars, Ill.: R.I. Ave. Underpass.....	492	June 1970.
Air Defense: Improve Tact Power.....	846	September 1970.
Fort Belvoir, Va.:		
Runway Extension.....	431	June 1970.
Gen Instr Bldg.....	686	June 1970.
Fort Dix, N.J.:		
EM Club.....	976	June 1970.
Post Office.....	488	June 1970.
Fort Eustis, Va.: Classroom Addn.....	1,076	June 1970.
A. P. Hill, Va.: Mtce Fac.....	364	August 1970.
Fort Knox, Ky.: BOQ Alt.....	338	August 1970.
Fort Meade, Md.:		
HQ Bldg Addn.....	3,228	June 1970.
Post Office.....	346	June 1970.
Impr Rockenback Road.....	1,271	July 1970.
Fort Monroe, Va.: Storm Drainage.....	534	August 1970.
Fort Story, Va.: Winch Farm.....	430	June 1970.
Fort Benning, Ga.: Water Treat Plant.....	2,391	May 1970.
Fort Bragg, N.C.:		
Acad Bldg Addn.....	2,845	May 1970.
Tact Equip Shops.....	915	May 1970.
Fort Campbell, Ky.: A/C. Mtce Complex.....	444	June 1970.
Fort Gordon, Ga.:		
SE Signal School.....	6,405	September 1970.
Tact Eq Shops.....	655	May 1970.
Fort Jackson, S.C.:		
Barracks Complex.....	8,460	June 1970.
BOQ.....	1,835	September 1970.
Central Htg & Cooling Pit.....	2,077	June 1970.
Fort Rucker, Ala.:		
Maint Instr Fac.....	3,636	July 1970.
Cold Stor & Meat Proc Pit.....	604	September 1970.
BOQ.....	1,457	July 1970.
Fort Bliss, Tex.:		
GM Maint Bldg.....	2,004	June 1970.
Elect Feeder, Beaumont.....	94	May 1970.
Fort Hood, Tex.:		
Barracks Complex.....	14,991	October 1970.
Post Office.....	379	May 1970.
Fort Sam Houston, Tex.: Water Stor Tank.....	378	May 1970.
Fort Polk, La.:		
Alt Gen Instr Classrooms.....	841	September 1970.
Dental Clinic.....	512	September 1970.
BOQ.....	644	September 1970.
Chapel w/REF.....	854	May 1970.
Chapel w/REF.....	90	June 1970.
Fort Sill, Okla.: Grease Traps.....		
Fort Benjamin Harrison, Ind.:		
Air Cond Fin Ctr.....	3,800	September 1970.
Widen Aultman Ave.....	320	May 1970.
Fort Riley, Kans.:		
Road, Custer Hill to Forsyth.....	1,023	May 1970.
Corr Trg Fac.....	288	May 1970.
Gas Line, Custer Hill.....	186	May 1970.
Fort Leavenworth, Kans.:		
Parolee Barracks.....	156	June 1970.
Mental Hygiene Clinic.....	346	June 1970.
Presidio of Monterey, Calif.: Student Dorm.....	2,125	June 1970.
Presidio of San Francisco, Calif.:		
Chapel Addn.....	39	May 1970.
Ext Storm Drainage.....	706	May 1970.
Aberdeen Proving Ground, Md.:		
Auto Instr Bldgs.....	1,966	Sept. 1970.
Ext Utilities.....	346	September 1970.
Aeronautical Mtce Ctr, Tex.:		
Alt Anodyzing Shop.....	875	May 1970.
Hydraulic Shop & Text Fac.....	303	May 1970.

	Program amount	Estimated award date <sup>1</sup>
Detroit Arsenal, Mich.: Alt Bldg 230 ADP	770	August 1970.
Joliet AAP, Ill.: Air POL Abatement	4,643	December 1970.
Letterkenny AD, Pa.:		
Radiographic Insp Fac	1,049	August 1970.
Inclose Crane Struc	59	August 1970.
Ammo Class Fac	346	August 1970.
Fort Monmouth, N.J.: Post Office	269	June 1970.
New Cumberland AD, Pa.: Log Doc & Sys Agecy Fac	811	June 1970.
Radford Arsenal, Va.: Log ADP Ctr	1,641	June 1970.
Fort Wingate, N. Mex.: Fence & Ammo Dem Fac	217	May 1970.
Boston D/A, Mass.: Tree Topping	27	June 1970.
Fort Huachuca, Ariz.:		
EM Barracks w/Bn HQ	2,500	June 1970.
Laundry & Dry Cleaning Fac	1,032	May 1970.
Post Office	208	May 1970.
Brooke AMC, Tex.: Adm & Cisrm Bldg	9,891	June 1970.
Bayonne MOT, N.J.:		
Oper Lights Outside Areas	485	June 1970.
Addn Staem Cap	649	July 1970.
MOT Sunny Point, N.C.:		
Barge Loading Ramp	393	August 1970.
Exp North Holding Yard	980	May 1970.
Compl Class Yd Tracks	300	May 1970.
Fort Greely, Alaska: Power Pit Addn	743	June 1970.
Fort Wainwright, Alaska: Trainfire range	322	June 1970.
Schofield Barracks, Hawaii: Laundry	1,524	June 1970.
Fort Amador, C.Z.: Substation 3750 KVA	185	May 1970.
Fort Clayton, C.Z.:		
Air Cond Bldg 518	113	May 1970.
Air Cond & Impr Bldg 519	312	May 1970.
Incr Elec Distr Sys	293	May 1970.
Quarry Hts, C.Z.: Cent Air Cond Pit	365	June 1970.
Kwajalein: Marine Repair Fac	712	( <sup>2</sup> )
Location 204: Relocate Fac	1,763	( <sup>2</sup> )
Location 281: Transmitter Bldg	41	May 1970.
Germany:		
Basic Laodsite (N. Bavaria)	431	November 1970.
Conv Ht Pit (N. Wuert)	57	June 1970.
Support for Barracks (Palat)	716	September 1970.
Barracks w/o mess (7th Army)	359	September 1970.
Ht Mess & Latrines (7th Army)	354	July 1970.
Alt 97th Hosp (Taunus)	1,002	December 1970.
Jr. High School Addn (Taunus)	705	October 1970.
POL Storage (Various)	12,165	August/September 1970.
Badger Army Ammo Pit, Wisc.: Aeration Spillways & Dam	3203	August 1970.
MOT, Bayonne, N.J.: Secondary Sewage Treatment	3325	April 1970.
Fort Belvoir, Va.: Fuel Conversion, Plant T-2310	3116	June 1970.
Fort Campbell, Ky.: EM Service Club	3732	June 1970.
Charleston Army Depot, S.C.: Sanitary Sewer Line	362	March 1970.
Fort Hancock, N.J.:		
Secondary Sewage Treatment Fac	3254	July 1970.
Heating Plant Conversion	383	July 1970.
Secondary Sewage Treatment-HIG Add	3288	July 1970.
Holston Army Ammo Plant, Tenn.: Industrial Waste Treatment	3344	June 1970.
Iowa Army Ammo Plant, Iowa: Industrial Waste Treatment	3503	April 1970.
Fort Knox, Ky.: Expand Sewage Treatment Plant	3838	October 1970.
Letterkenny Army Depot, Pa.:		
Industrial Waste Col Sys	3250	April 1970.
Sewage Treatment Plant	3753	June 1970.
Fort Lee, Va.: Dental Clinic	3445	March 1970.
Michigan Army Missile Pit, Mich.: Fuel Conversion	3354	June 1970.
Picatinny Ars, N.J.: Fuel Conversion	3989	June 1970.
Red River Army Depot, Tex.: Industrial Waste Treatment	3686	May 1970.
Fort Riley, Kans.: Secondary Sewage Trtmt, Forsyth	3460	March 1970.
Savanna Army Depot, Ill.: Flood Erosion Prot	3274	April 1970.
Sunflower Army Ammo Pit, Kans.: Industrial Waste Trtmt	3251	June 1970.
MOT, Sunny Point, N.C.: Sewage Disposal Fac	3138	March 1970.
Detroit Defense Area, Mich.: Radar Facilities	3201	May 1970.
Vint Hill Farms, Va.: Storm Drainage	3136	May 1970.
Fort Wadsworth, N.Y.: Sanitary/Storm Sewer	3545	April 1970.
White Sands Missile Range, N. Mex.: SAM-D Fac	31,281	May 1970.
Southeast Asia, Vietnam	354,420	
Korea: Oper & Supp Fac (Unapportioned bal)	11,583	May 1970.
NATO Infrastructure, unapportioned balance	14,000	
Withheld balances of apportioned projects	14,068	
Total	233,999	
Unapportioned balance available	195,229	
Indicated deficit	38,770	

<sup>1</sup> Award dates are dates award could be made if projects were released and funds apportioned.

<sup>2</sup> Not determined.

<sup>3</sup> Apportionment requests have been submitted and are presently in process for those projects totaling \$64,900,000

## UNOBLIGATED BALANCES

Mr. SIKES. We have already gone into unobligated balances somewhat. I would like to have for the record the unobligated balance in "Military Construction, Army," as of the last available date, and an estimate of what it will be, on June 30, 1970, and June 30, 1971.

(The information follows:)

The unobligated balance of MCA funds as of December 31, 1969, was \$751,383,000. This includes the \$287,228,000 fiscal year 1970 appropriation approved December 29, 1969. The unobligated balance June 30, 1969, was \$622,613,000.

We estimate an unobligated balance of \$355,813,000 as of June 30, 1970, and \$289,200,000 as of June 30, 1971.

## EXPENDITURES

Mr. SIKES. Can you tell us your estimated expenditures in Military Construction, Army, for fiscal year 1971?

General DALRYMPLE. Our expenditure estimate for fiscal year 1971 is approximately \$480 million, sir.

Mr. SIKES. What assumptions did you make in estimating these expenditures?

Mr. BRAZIER. We estimate our expenditures on the basis that the present reduction plan will be lifted by the end of the fiscal year. Also, when we are given the go-ahead, we will award on a balanced-award schedule. There will be no crash program to try to catch up, in other words. Also, that funding will be available to us some time around next October.

Mr. SIKES. What assumptions were followed on the termination of the construction freeze?

Mr. BRAZIER. Mr. Chairman, the assumptions that I have previously listed, as far as our expenditures are concerned, are those that affect the freeze. In other words, we will not have a freeze after this fiscal year; we will be able to go ahead and make awards as we did before the freeze, and we will have money available from this program.

## CONSTRUCTION IN SOUTHEAST ASIA

Mr. SIKES. We will discuss the Army's fiscal 1971 request for Southeast Asia at a later time, but at this point tell the committee what funds you have available for construction in Southeast Asia and the rate at which construction is proceeding there.

General DALRYMPLE. The Congress has authorized and funded \$942 million, Army MCA for South Vietnam. Of that figure, as of the end of January last, we had an unobligated balance of \$105 million. We expect expenditures at a rate of about \$10 million per month, sir.

Mr. SIKES. Are we constructing now primarily for the Vietnamization program or does a considerable portion of this expenditure still relate to U.S. requirements?

General DALRYMPLE. With the exception of the small amount of \$2 million, the balance of \$38 million in the fiscal 1971 program will directly support the Vietnamization program. The \$2 million is to be used to construct facilities for U.S. advisers to the Vietnamese Army—and it, too, is indirectly for that same subject.

## COST LIMITATIONS FOR BACHELOR HOUSING

Mr. SIKES. What are the cost limitations which are proposed for bachelor officer and enlisted quarters for the fiscal 1971 construction program?

General DALRYMPLE. The bill calls for a limitation of \$11,000 per set of bachelor officer quarters; barracks are to be \$3,200 per man.

Mr. SIKES. How does this compare with fiscal 1970?

General DALRYMPLE. Last year the barracks were \$2,750 per man and BOQ's were \$10,000 per officer.

Mr. SIKES. Is space being increased or is it simply an increase in cost?

General DALRYMPLE. In the case of BOQ's, it is a cost growth, sir. In the case of barracks, we are going from 72 to 90 square feet per man and that increased it somewhat. There is also an element of cost growth too.

Mr. SIKES. Is 90 square feet the optimum space?

General DALRYMPLE. Ninety square feet, net, yes, sir; 145 square feet gross.

Mr. SIKES. That is the first time we have reached that level, is it not?

General DALRYMPLE. That is right, sir. On occasion under certain conditions we have had to come back to 55 square feet per man but we do not like to do that unless we have to, and seldom if ever do we do it for draftees.

## ENCROACHMENT

Mr. SIKES. Last year we discussed encroachment at military installations. Apparently the Navy and the Air Force have a more serious problem than the Army has in this respect. Is the situation generally as you described it last year or have there been additional encroachment pressures on Army bases?

General DALRYMPLE. It is generally as I described it last year. I do not think there is any significant change.

Mr. SIKES. It has not been worsening appreciably?

General DALRYMPLE. No, sir. We get quite a bit of correspondence having to do with "Give part of this post to us to make a park of it" or something of that kind. It is mostly persons interested in conservation or recreation rather than somebody wanting Government property for industrial development.

Mr. SIKES. Mr. Nicholas.

Mr. NICHOLAS. Has there been any particular increase in pressure for the Army to give up all or part of the Presidio of San Francisco for other uses?

General DALRYMPLE. We have had some correspondence suggesting that part of the Presidio of San Francisco be made a park. We have had correspondence from some people out there to urge the Army to work with the local interests, to hire a mutually acceptable architectural engineer who would design the Presidio master plan. The commander out there, General Larson, has met with the mayor and his staff. I understood they are developing a pretty fine working arrangement. I would say there has not been any significant pressure there. It is something that continues, sir.

## CONTRACTS OTHER THAN BY ADVERTISED COMPETITIVE BID

Mr. SIKES. What is the situation on the award of contracts other than by advertised competitive bids? In what situations are you awarding such unadvertised noncompetitive bids?

General DALRYMPLE. I have quite a bit of material on the situation as it applies to the award of bids with competition and without competition. For example, in the period January 1, 1969, to June 30, 1969, 87 percent of the bids were advertised, 12.9 percent negotiated and of that 12.9 percent that were negotiated, 1.4 percent was without competition and 11.5 percent with competition.

Mr. SIKES. What types of contracts could be awarded without advertised competition?

Mr. BRAZIER. Projects where a particular expertise is necessary sometimes have to be negotiated. Our overseas projects are also handled by negotiation, competitive negotiation. Within the United States there are some types of projects that require negotiation but we strive for competition wherever possible.

Mr. SIKES. I would like to have for the record a listing of the major contracts for the Army in fiscal 1970 awarded other than by advertised competitive bids, telling us what type of contracts they are, and the type of facility involved.

(The information follows:)

MCA PROJECTS AWARDED WITHOUT COMPETITIVE ADVERTISING DURING THE FIRST 6 MONTHS OF FISCAL YEAR 1970

Location and facility	Method of award	Amount
Germany:		
Einsiedlerhof, warehouse, site work	Contract negotiated in accordance with provisions of 10 U.S.C. 2304(a)(6) for property or services to be procured outside the United States and possessions. Competitive price proposals solicited.	\$229, 809
Einsiedlerhof, warehouse, structures	do	680, 370
Miesau:		
Warehouse, site work	do	1, 536, 884
Do	do	237, 977
Warehouses, buildings	do	1, 874, 297
Mann hina:		
Barracks, site work	do	941, 956
Barracks, buildings	do	2, 040, 522
Hinterweidenthal, POL storage	do	665, 771
Kaiserslautern:		
Warehouses, site work	do	2, 701, 080
Hardstands	do	214, 456
Germersheim:		
Boiler house	do	288, 043
Equip washing facility	do	336, 413
Alter 20-kilovolt service	do	5, 764
Bellheim, tank farm	do	973, 034
Pirmasens, warehouses, site work	do	1, 055, 247
Hanau, electrical work	do	25, 578
Morbach, ammo storage	do	332, 500
Pirmasens, clearing and feeding	do	19, 912
Hanau, north shoulder and ditch	do	64, 554
Stuttgart, upgrade power	do	13, 595
Pirmasens, 5 stock storage structures	Modification to previous contract with price proposals solicited.	233, 430
Germersheim, Depot maintenance shop	do	40, 286
Heidelberg, Mod building 28	do	20, 125
Frankfurt, reconstruction headquarters building	Modification to previous contract without price competition.	19, 014
Germersheim, storage facility	do	59, 854
Location 276, Laundry and dry cleaning plant and comm. building.	Contract negotiated in accordance with provisions of 10 U.S.C. 2304(a)(6) for property or services to be procured outside the United States and possessions. Competitive price proposals solicited.	343, 000
Italy, Autodin facilities		
	Modification to previous contract without price competition.	108, 856
Location 04, water supply facility		
	Modification to previous contract with price proposals solicited.	22, 109
Japan, fire alarm and deluge system		
	Contract negotiated in accordance with provisions of 10 U.S.C. 2304(a)(6) for property or services to be procured outside the United States and possessions. Competitive price proposals solicited.	165, 000
Korea:		
Pumping station and terminal POL facility	do	3, 211, 000
Troop housing, toilet and bath facilities	Modification to previous contract without price competition.	56, 335
POL pipeline, essential construction and changes	do	317, 021
Kwajalein, Nike X facilities		
	do	3, 108, 940
Thailand, enlisted men billeting facilities		
	Contract negotiated in accordance with provisions of 10 U.S.C. 2304(a)(6) for property or services to be procured outside the United States and possessions. Competitive price proposals solicited.	18, 605
Vietnam, high voltage power system		
	Modification to previous contract without price competition.	1, 817, 721

STATUS OF DESIGN OF FISCAL YEAR 1971 PROGRAM

Mr. SIKES. To what extent is the fiscal 1971 program based on preliminary engineering reports and on design estimates?

General DALRYMPLE. Something over 90 percent of the projects are, at some stage of design. Of that 90 percent, \$45 million are between 60 and 100 percent designed, \$83 million between 25 and 59 percent designed, and \$55 million between 1 percent and 24 percent designed.

## EXTENT OF COMPETITION FOR CONSTRUCTION CONTRACTS

Mr. SIKES. Do you anticipate serious problems in awarding contracts which already have been funded? I am thinking of the effect of cost escalation, and so forth, during the construction freeze.

General DALRYMPLE. So far our experience with few exceptions has not indicated that we would have problems in this regard. We recently opened bids on four projects. By "recently" I mean within the last month.

All of those four projects—and they were different types of projects at different locations—came within the money. It depends, of course, on how much longer the deferral continues. If it should continue significantly beyond June 1 then our problems would, I am sure, grow larger.

Mr. SIKES. Do you think the general reduction in construction has resulted in more competitive bidding?

General DALRYMPLE. I would like to ask someone from the Corps of Engineers to answer that question. These four projects might indicate that, those which I just quoted.

Mr. BRAZIER. At the present time we are in a situation where the escalation problem has eased off a little bit. We are not sure however, that it will stay eased. As you were told this morning the rate of cost growth during 1969 was less than during 1968. We use the same labor and materials markets that private industry does and our bidding experience generally follows that of private industry. In most cases we are getting good competition.

General DALRYMPLE. I do have now before me a piece of paper that indicates we have had exceptionally good bid response. This indicates we are getting perhaps a little better competition than we have gotten in the past.

## ABILITY TO AWARD PRIOR YEAR PROJECTS

Mr. SIKES. Are there any projects already funded, or in the bill before us, which you now know or which you anticipate cannot be built, because of funding or other reasons?

General DALRYMPLE. There will be some. I mentioned one this morning, the deficiency request for the Academic Building at West Point. This is about \$2.5 million which we have in this bill now as a deficiency. We also have another deficiency in here having to do with the sewage treatment facilities at Fort Jackson. Those are two that we know. There will probably be some others. I cannot identify any others at the moment, sir.

## SMALL BUSINESS SET-ASIDES

Mr. SIKES. Could you tell me whether small business construction set-asides are up or down in fiscal 1970 program? In that connection, I would like to have for the record a listing of the set-asides for small business above \$1 million on Army projects during fiscal 1970 showing the date of the award and the name of the firm receiving the contract.

(The information follows:)

Because of the construction reduction plan and the late appropriation of fiscal year 1970 funds, only three projects in excess of \$1,000,000, totaling \$21,356,352, were awarded to small business firms during the first half of fiscal year 1970 (1 July to 31 December 1969). The following list includes projects in excess of \$1,000,000 awarded to small business during the full calendar year 1 January 1969 to 31 December 1969.

Post	Date	Item description	Contractor name and city	Contract amount
Fort Knox, Ky.....	Mar. 20, 1969	Automotive instructional facility.	A. D. Roe Co., Inc., Louisville, Ky.	\$1,565,145
Fort Detrick, Md.....	Mar. 31, 1969	Central animal holding laboratory.	Frederick Construction Co., Inc., Frederick, Md.	1,602,064
Fort Meade, Md.....	do.....	Army headquarters building improvements.	Construction, Ltd., Bordentown, N.J.	1,561,300
Fort Eustis, Va.....	June 4, 1969	Addition to helicopter shop and classroom, airframe repair-paint shop and aircraft electric training shop.	Leon H. Partin Co., Inc., Newport News, Va.	1,679,000
Fort Dix, N.J.....	June 30, 1969	Training facilities—SEA.	Construction, Ltd., Bordentown, N.J.	1,498,000
Defense Construction Supply Center, Columbus, Ohio.	do.....	Repair and reroof warehouses 9, 12, and 17.	Tri-State Roofing of Ohio, Parkersburgh, W. Va.	1,044,100
Walter Reed Army Medical Center, District of Columbia.	do.....	Research facility—Forest Glen.	Tuckman-Barbee Construction Co., Inc., Washington, D.C.	1,713,025
Fort Jackson, S.C.....	Jan. 6, 1969	Family housing (160 units).	Northeast Construction of West Virginia, Albuquerque, N. Mex.	2,642,348
Fort Stewart, Ga.....	Jan. 17, 1969	Family housing (120 units).	Southwide Construction Co., Augusta, Ga.	2,084,858
Redstone Arsenal, Ala.....	do.....	Family housing (170 units).	Ranger Construction Co., Huntsville, Ala.	2,730,533
Pine Bluff, Ark.....	Apr. 11, 1969	Loading and assembly.	Nabholtz Construction Corp., Conway, Ark.	1,500,300
Fort Carson, Colo.....	Apr. 14, 1969	Ranges phase II.	Domenic Leone Construction Co., Trinidad, Colo.	1,039,500
Do.....	May 16, 1969	Firing ranges.	Chaney & Hope, Inc., Addison, Tex.	2,619,582
Redstone Arsenal, Ala.....	June 12, 1969	Research and development addition.	D. J. Barclay & Co., Gadsden, Ala.	1,822,875
Fort Rucker, Ala.....	do.....	Convert Knox Field to base field.	Crown Construction Co., Columbus, Ga.	1,016,436
Fort Benning, Ga.....	June 30, 1969	Improve on-post roads.	McMath-Trussell Co., Columbus, Ga.	1,592,617
Fort Jackson, S.C.....	do.....	Armed Forces engineering and exam station.	Chas. Craig Construction, Columbia, S.C.	1,044,000
Fort Carson, Colo.....	do.....	Bachelor officers quarters.	Whittmore, Reiman Construction, Pueblo, Colo.	1,456,770
White Sands Missile Range, N. Mex.	do.....	Range facilities phase IV.	Demar Construction Co., El Paso, Tex.	1,274,280
Presidio of San Francisco.....	Mar. 28, 1969	Family housing 102 units.	Cannon Construction Corp., Beverly Hills, Calif.	2,169,900
Tooele Army Depot, Utah.....	May 6, 1969	Ammunition maintenance facility.	M. Moring & Sons, Inc., Ogden, Utah.	1,249,900
Presidio of San Francisco.....	June 5, 1969	Rehabilitate 13 barracks buildings.	Main Cornice Works, Beverly Hills, Calif.	1,144,442
Fort Lewis, Wash.....	June 30, 1969	Army personnel center alt.	Pacific Ventures Seattle, Wash.	1,181,600
Defense Depot, Tracy, Calif.....	do.....	Warehouses, ADP and communication building and drainage.	Continental Heller Corp., Sacramento, Calif.	3,068,000
USMA, New York.....	Aug. 13, 1969	2d increment of barracks.	Sovereign construction Co., Ltd., Fort Lee, N.J.	15,830,000
Walter Reed Army Medical Center, District of Columbia.	Sept. 30, 1969	Community services facilities.	Glassman Construction Co., Inc., Washington, D.C.	3,463,000
Fort Monmouth, N.J.....	Oct. 30, 1969	100 units NCO family housing.	Hall Construction Co., Inc., Little Silver, N.J.	2,063,352
Total (27 projects).....				61,656,927

General DALRYMPLE. I have as a figure \$61.6 million which was let to small business in the \$1 million and over category. I am sure there were some of lesser value than that. Now, how that \$61.6 million for calendar 1969 compares to the previous year I would have to defer to someone else. May we provide that also for the record?

Mr. SIKES. All right.

(The information follows:)

This compares to a total of 19 projects in excess of \$1,000,000 totalling \$69,034,385 awarded to small business in the calendar year 1968.

#### NATO RECOUPMENT

Mr. SIKES. Your statement, General, indicated there will be a \$8 million recoupment for NATO. I believe there is a \$50 million request for Europe for the NATO Infrastructure. Is that correct?

General DALRYMPLE. There is a \$50 million request. The \$8 million recoupment is approximately what we expected to get. We expected to get about \$4 million per quarter recoupment.

Mr. SIKES. Last year I believe we received a larger recoupment, did we not?

General DALRYMPLE. We got \$4 million for each of three quarters, as I recall, I am not sure that we got it for the fourth quarter. Mr. Loveland who comes over from Brussels each year is here to back me up. We could have him reply to the \$8 million question, sir?

Mr. SIKES. Very well.

Would you come up front where we can talk to you about this?

The situation is that, apparently, during fiscal 1970 we planned to recoup about \$16 million and during fiscal 1971 it is anticipated there will be a recoupment of only \$8 million. The request for funds is approximately \$50 million. Why would there be this drop in recoupments and in the rate of recoupments? Could you explain the situation to us?

Mr. LOVELAND. Certainly, Mr. Chairman.

Our agreement as to the rate of recoupment runs through the end of calendar 1970. In presenting our estimate this year we only asked for a discount on our appropriation of \$8 million since the agreement only covers that amount this year. We expect to continue to recoup at some other rate after the end of this year but there is some question that some of the remaining logistic facilities to recover from the move from France will be funded directly by NATO rather than as a recoupment. That is to say we will not spend U.S. money and then recoup it. Therefore, we intend to continue to reap the rewards but they may not be recouped in money, they may be instead in new facilities.

Mr. SIKES. If you mean other countries are providing more facilities, what will be their value?

Mr. LOVELAND. What I mean is, as I explained last year we have not been able to build the entire \$96 million worth of facilities. We are coming to a point where we are scratching around for the small projects to make up as much as we can. We still are short of facilities, logistics facilities, to recuperate, and the other countries will fund these directly rather than the United States putting up the money first. But the value of the \$96 million will be the same.

Mr. SIKES. Does the new line of communications enter into this program?

Mr. LOVELAND. The LOC agreement? There may be some portions of those which will be recoupable.

Mr. SIKES. In the main, what type of facilities are you anticipating that other countries will provide in lieu of payments, if I follow you correctly?

Mr. LOVELAND. I do not expect them to provide facilities but rather to put up the money for us to build the facilities. The type facilities

I am talking about is warehouses, POL facilities and such as that.

Mr. SIKES. Why would it not go through the recoupment program as prior programs have?

Mr. LOVELAND. Because we have not spent the money yet. The decision has not been made but it is being considered seriously that rather than put up U.S. money and recoup it we should use the NATO money in the first instance.

Mr. SIKES. I think we would subscribe to that. But do I understand the decision has not actually been made on that?

Mr. LOVELAND. That is correct.

Mr. SIKES. Is there a good likelihood that it will be made favorably?

Mr. LOVELAND. I think so. I cannot guarantee it.

#### NATO ALLIANCE

Mr. SIKES. You were very helpful to me last August on these discussions in Great Britain.

What is the picture generally on NATO? What is the attitude of our NATO allies? Are they showing any stronger disposition to stand together against the common threat or do they feel that they can safely depend on the United States to carry the burden?

Mr. LOVELAND. Sir, in the U.S. mission we feel that they are standing very closely together. I think, however, that the Department of Defense answer should be supplied by OSD-ISA.

Colonel BOYD. We have asked NATO and Secretary of Defense Laird and Secretary of State Rogers have asked the Europeans to do more multilaterally. We feel that they are. We have agreed that they could and should do more and we have some signs that they have agreed with us that this is true. We are working closely with Senator Percy and an interdepartmental group on means to alleviate our balance of payments and budget sharing. We have told our NATO allies that the Infrastructure program was the type program that the United States felt should be in effect and we should have more programs like this, and we have had general agreement with this type statement.

Mr. SIKES. What is Senator Percy's role in this matter?

Colonel BOYD. As you know, as the NATO Parliamentarian, Senator Percy has made suggestions for further development of methods to share costs and alleviate the balance-of-payments problems of the U.S. forces' expenditures in Europe.

Mr. SIKES. Are there any questions on NATO?

Mr. CEDERBERG. No questions.

Mr. SIKES. Mr. Patten?

Mr. PATTEN. No questions.

Mr. SIKES. All right gentlemen. Thank you very much.

General questions?

#### RECEPTION CENTER, FORT DIX, N.J.

Mr. PATTEN. If 71 percent of your construction budget is for overseas, Safeguard, et cetera, General, then projects like your reception center at Fort Dix, which you have itemized, certainly are important; right?

General DALRYMPLE. Right, sir.

Mr. PATTEN. I meet these fellows and meet the families who go down there to visit them. It would be interesting to put into the record some of their remarks. I hope you do not let that little project slip. Considering the numbers of men you have in your care within the continental United States it just strikes me that if you can maintain the morale and spirit of our men on this modest little budget, I would be surprised. Now, I think you are under a strain. I do not expect you, like Mr. Moynihan, to have to answer for your remarks, but it does seem to be very little. You are talking about less than 25 cents out of \$1 in terms of replacing our facilities, deficiencies, and all the work that you have to do.

General DALRYMPLE. As I have mentioned earlier, it is an austere budget. We have saved a little bit at the reception center. When we first came before the committee with that project it was considerably higher in cost than it is today.

Mr. PATTEN. I noticed that.

General DALRYMPLE. What we have done is isolate the reception center building—that is an increment in this budget—and resited it, by locating it adjacent to existing permanent barracks. We can then use those barracks instead of having to build the barracks that would normally be in the reception center complex. That leaves then just one follow-on element of this personnel center of about \$3 million for a future year project.

Mr. PATTEN. That is all.

Mr. SIKES. Very well, gentlemen. Are we ready for the line item breakdown?

#### INSIDE THE UNITED STATES

Insert in the record page xiii.  
(The page follows:)

DEPARTMENT OF THE ARMY, MILITARY CONSTRUCTION, FISCAL YEAR 1971 PROGRAM  
COMMAND SUMMARY—INSIDE THE UNITED STATES  
[In thousands of dollars]

Command	Prior authorization	Proposed authorization	Proposed funding
Continental Army Command.....	363	110,789	111,152
U.S. Army Materiel Command.....		33,938	33,938
U.S. Army Strategic Communications Command.....		3,259	3,259
U.S. Military Academy.....	2,582	8,519	11,101
Army Medical Department.....		10,216	10,216
Corps of Engineers.....		558	558
Military Traffic Management and Terminal Service.....		4,898	4,898
Safeguard Systems Command.....		368,100	368,100
Total.....	2,945	540,277	543,222

## CONTINENTAL ARMY COMMAND

Mr. SIKES. Turn to Continental Army Command. We will insert in the record pages 1 and 2.

(The pages follow :)

## DEPARTMENT OF THE ARMY, MILITARY CONSTRUCTION FISCAL YEAR 1971 PROGRAM, INSTALLATION SUMMARY

[In thousands of dollars]

Continental Army Command	Prior authorization	Proposed authorization	Proposed funding
1st Army.....	0	23,662	23,662
Fort Belvoir, Va.....		2,759	2,759
Carlisle Barracks, Pa.....		368	368
Fort Dix, N.J.....		11,671	11,671
Fort Eustis, Va.....		260	260
Fort Knox, Ky.....		8,249	8,249
Fort Lee, Va.....		98	98
Fort George G. Meade, Md.....		257	257
3d Army.....	363	35,170	35,533
Fort Benning, Ga.....		55	55
Fort Bragg, N.C.....		202	202
Fort Campbell, Ky.....		497	497
Fort Gordon, Ga.....		31,447	31,447
Fort Jackson, S.C.....	1363		363
Fort Rucker, Ala.....		1,435	1,435
Fort Stewart, Ga.....		1,534	1,534
4th Army.....	0	17,667	17,667
Fort Bliss, Tex.....		1,527	1,527
Fort Hood, Tex.....		218	218
Fort Sam Houston, Tex.....		15,496	15,496
Fort Sill, Okla.....		426	426
5th Army.....	0	17,094	17,094
Fort Carson, Colo.....		846	846
Fort Benjamin Harrison, Ind.....		523	523
Fort Leavenworth, Kans.....		3,617	3,617
Fort Riley, Kans.....		7,674	7,674
Fort Sheridan, Ill.....		2,488	2,488
Fort Leonard Wood, Mo.....		1,946	1,946
6th Army.....	0	16,671	16,671
Hunter-Liggett Military Reservation, Calif.....		1,968	1,968
Fort Lewis, Wash.....		1,567	1,567
Presidio of Monterey, Calif.....		2,635	2,635
Fort Ord, Calif.....		3,497	3,497
Presidio of San Francisco, Calif.....		7,004	7,004
Military District of Washington: Fort Myer, Va.....	0	525	525
Total.....	363	110,789	111,152

<sup>1</sup> DEF.

## FORT BELVOIR, VA.

Mr. SIKES. We will take up first Fort Belvoir, Va. Please insert in the record page 4.

(The page follows:)

## FORT BELVOIR, VA., \$2,759,000

Fort Belvoir is located 11 miles southwest of Alexandria, Va. The mission of this installation is to command, train and provide logistical support to Engineer troop units and the Engineer School; to operate and maintain the U.S. Army Mobility Equipment Research and Development Center and the U.S. Military

Academy Preparatory School; to provide facilities for Headquarters Combat Developments Command and to support Davison Army Airfield. The program consists of anti-intrusion systems laboratories.

*Status of Funds*

Funded program not in inventory-----	\$12, 088, 000
Unobligated items, Jan. 31, 1970 (actual)-----	4, 316, 000
Unobligated items, June 30, 1970 (estimated)-----	1, 233, 000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
398	Anti-intrusion systems laboratories-----	170	18

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1967S	Aircraft hangar-----	1, 070	×	
1970	Phy security laboratory-----	183	×	
1970	Hospital addition and alterations-----	2, 900	×	
1970	Fuel conversion building T-2-----	116	×	
1970	Family housing, improvements-----	251	×	
1970	Runway extension-----	431		×
1970	Generator instr. building USAES-----	686		×

1. DATE	2. DEPARTMENT	3. INSTALLATION									
2 Feb 1970	ARMY	Fort Belvoir									
4. COMMAND OR MANAGEMENT BUREAU		6. STATE/COUNTRY									
First US Army		Virginia									
7. STATUS		9. COUNTY (U.S.)									
Active		Fairfax									
11. MISSION OR MAJOR FUNCTIONS		10. NEAREST CITY									
1918		Alexandria, 11 miles Northeast									
12. PERSONNEL STRENGTH		PERMANENT									
Command, train, and provide logistical support to Engineer Troop Units, Engineer Officers and specialists at the Engineer School; maintain and operate the USA Mobility Equipment Research and Development Center and the U. S. Military Academy Preparatory School; provide facilities for Headquarters Combat Development Command, Support Davison Army Airfield.		OFFICER (1) ENLISTED (2) CIVILIAN (3)									
AS OF 31 Oct 1969		2,701 7,724 5,738									
PLANNED (End FY)		LR 1,293 7,124 4,209									
INVENTORY		STUDENTS OFFICER (4) ENLISTED (5) CIVILIAN (6)									
		567 1,602									
LAND		LAND COST (\$000)									
OWNED		ACRES (1) 9,016									
LEASES AND EASEMENTS		IMPROVEMENT (\$000) (2) 1,192									
INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		221 26*									
TOTAL (\$000) (4)		124,107									
* \$25,700 one-time cost for easement.		124,133									
AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 0 (Unfunded - \$ 0 )		12,088									
AUTHORIZATION REQUESTED IN THIS PROGRAM		2,759									
ESTIMATED AUTHORIZATION - NEXT 4 YEARS		69,899									
GRAND TOTAL (c + d + e + f)		208,879									
SUMMARY OF INSTALLATION LINE ITEMS											
CATEGORY CODE NO.	LINE ITEM DESIGNATION	LINE ITEM TITLE	Page No	TENANT COMMAND		UNIT OF MEASURE		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
				a	b	c	d	e	f	g	h
310	398 - Anti-Intrusion Systems Laboratories	1	5	AMC	SF	54,949	2,759	54,949	2,759	54,949	2,759

Mr. SIKES. The request is for \$2,759,000 for an anti-intrusion systems laboratory. What is the anti-intrusion systems laboratory?

General DALRYMPLE. This would be a facility where we would engage in research and development on anti-intrusion devices. There would be a large number of scientists, engineers, and administrative people engaged in the experimentation and development of various sensor devices. These devices are ones which we have used with limited success, in certain areas of the world. They consist of hand-emplaced seismic-type intrusion detectors, miniaturization of hand-placed seismic-type detectors, a passive infrared intrusion detector and detectors based on the balanced pressure system.

Mr. SIKES. Where is this work being done at the present time?

General DALRYMPLE. It is being done in makeshift facilities at Fort Belvoir including some trailers. But it is being conducted, as much as is being conducted, at Fort Belvoir, sir.

Mr. SIKES. Is this associated with other research which is currently being done at Fort Belvoir?

General DALRYMPLE. This is associated with a project we had last year, the anti-intrusion systems laboratory, and to a certain extent the same group of scientists and engineers will utilize both facilities. It does have that association; yes.

Mr. SIKES. Are you speaking of the physical security laboratory which was funded last year for \$183,000?

General DALRYMPLE. That is right, sir.

Mr. SIKES. Is there any duplication here?

General DALRYMPLE. There is no duplication, sir.

Mr. SIKES. What is the relationship between the two?

Colonel PAQUETTE. The physical security laboratory that was funded at \$183,000 in fiscal year 1970 will be utilized by the same group of people. It was essentially an addition to an existing building at Fort Belvoir for a lesser number of people. There will be no duplication between this building and the construction we are asking for in fiscal year 1971.

Mr. SIKES. Can you tell us what the other services are doing in this area of research and development?

Colonel PAQUETTE. I have knowledge that the Navy is working on a few devices of this type; however, their devices are used primarily under water. We have the prime responsibility, I would say, in the Department of Defense. We do work for the Navy and the Air Force. However, where we get involved in their particular environment, such as water, they do their own work. We are the prime mover, however, in this area.

Mr. SIKES. Would it not be desirable to have all of this work done at one location or by one Service, or at least to have the Services coordinating at one location?

Colonel PAQUETTE. Sir, we coordinate with all the Services on these type devices, but I think the Army has the prime responsibility and the other work I would estimate to be very small indeed in relation to what we are doing. But I would be glad to provide for the record some of the work that we are doing.

Mr. SIKES. If you would, that would be helpful.

(The information follows:)

The Anti-Intrusion Laboratory at Fort Belvoir, Va., is engaged in the research and development of a number of anti-intrusion devices. Some of the devices being developed are:

- Anti-infiltration sensors.
- Contraband cargo sensors.
- Detection of metals at a distance (METRA).
- Protection of public figures from concealed handguns.
- Ambush detectors.
- Tunnel detectors.
- Mine detectors.

Mr. SIKES. Did you check to determine if there is existing space at other bases which would meet the requirements for the facility now proposed at Fort Belvoir?

Colonel PAQUETTE. Yes, sir, we have. We tried to do it along the functional line; that is, where is the expertise in this area. Also along the social lines, the people that are at Fort Belvoir who happened to get involved in this initially because of their work with soils, what the feelings were with regard to their leaving this area? We find that there are no other laboratories where we could place these people functionally and have them very effective.

I might add, sir, the mobility equipment R. & D. center at Belvoir where these people are located provides only an average of 86 square feet per man. We try to provide 120 or more feet for laboratory-type people such as scientists and engineers.

Some of the more interesting items that we are undertaking at Belvoir are: the anti-infiltration sensor which, of course, has been used quite effectively in Vietnam; also the aerial-delivered anti-infiltration sensors, the patrol and unit sensors; for protection of public figures from concealed handguns. Now, this project has been assigned by our Government to the Army because of the expertise at Belvoir. We are trying to come up with a solution to this problem.

Also contraband cargo detectors, with which if we make a breakthrough, we may be able to accomplish something with regard to the aerial problem.

Also mine neutralizers, tunnel detectors, ambush detectors and quite a number of others, but those are some of the more interesting ones.

Mr. SIKES. Thank you, Colonel. You made a good case.

Mr. TALCOTT. Would this research program be of any use in techniques to detect potential hijackers?

Colonel PAQUETTE. Sir, if we come up with something, for example, for protecting public figures from concealed handguns, we could use that across the board. We might detect a potential hijacker. This could be of assistance, of course, to the Federal Bureau of Investigation and other Government agencies who would be apprised of what we do come up with.

Mr. SIKES. Off the record.

(Discussion off the record.)

CARLISLE BARRACKS, PA.

Mr. SIKES. Turn to Carlisle Barracks and insert in the record page 6. (The page follows:)

## CARLISLE BARRACKS, PA., \$368,000

Carlisle Barracks is located at Carlisle, Pa. The mission of this installation is to provide administrative and logistical support for the operation of the Army War College, Army Institute of Advanced Studies, Dunham Army Hospital, and other units and activities. Carlisle Barracks also provides services and facilities to other installations as directed. The program provides an addition to Dunham Army Hospital.

*Status of Funds*

Funded program not in inventory.....	\$145, 000
Unobligated items, Jan. 31, 1970 (actual).....	145, 000
Unobligated items, June 30, 1970 (estimated).....	0

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
18	Addition to Dunham Army Hospital.....	\$21	25

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1968	Improve College Arms and Faith apartments.....	\$205	×	
1970	Religious educational facilities.....	150	×	



Mr. SIKES. The request is for \$368,000 for an addition to the hospital there. What is the status of planning on this project?

General DALRYMPLE. As of the end of February the design was 25 percent complete, sir.

Mr. SIKES. When do you anticipate you will be able to award a contract?

General DALRYMPLE. We would anticipate contract award in October of 1970.

Mr. SIKES. Now tell us something about the need.

General DALRYMPLE. Yes, sir. This item is to provide a clinical addition to the hospital at Carlisle Barracks. It will expand the present inadequate medical and dental facilities to the size necessary to accommodate an 82-percent increase in the outpatient workload which has been experienced since the hospital was built. It consists of an addition of 4,960 square feet and alterations of 2,010 square feet. It also provides for five dental chairs, sir.

Mr. SIKES. Will this complete the requirements for medical facilities at Carlisle Barracks?

General DALRYMPLE. Yes, sir.

#### FORT DIX, N.J.

Mr. SIKES. Turn to Fort Dix, N.J., and we will insert in the record page 8.

(The page follows:)

#### FORT DIX, N.J., \$11,671,000

Fort Dix is located 18 miles south of Trenton, N.J. The mission of this installation is to command and support an Army training center, train nondivisional combat units and operate a personnel center. Fort Dix also supports reserve components training. The program provides a reception station, a laundry and improvements to sewage.

#### Status of funds

Funded program not in inventory.....	\$24, 592, 000
Unobligated items, Jan. 31, 1970 (actual).....	9, 211, 000
Unobligated items, June 30, 1970 (estimated).....	1, 464, 000

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
172	Reception station.....	\$260	25
116	Laundry.....	130	20
180	Improvements to sewage facilities.....	130	0

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Walston Army Hospital.....	\$3, 471	×	
1970	EM service club.....	976		×
1970	Post office.....	488		×



Mr. SIKES. The request is for \$11,671,000; for a reception station, at a cost of \$5,668,000; laundry facilities, to cost \$3,379,000; and improvement to sewage facilities, for \$2,624,000.

You noted earlier the reception station is somewhat smaller than the one proposed last year. What again is the reason for the reduction in size?

General DALRYMPLE. We have resited the reception center to take advantage of some permanent barracks, and in this manner we will not have to construct troop housing facilities for this reception center.

Mr. PATTEN. General, I could be your advocate on this. I think you have the situation under control. Of course, even under your present plans I think you must be counting on using World War II barracks.

General DALRYMPLE. No, sir. We are siting it in the vicinity of new permanent barracks.

Mr. PATTEN. No further questions.

Mr. SIKES. General Dalrymple, we are very appreciative, incidentally, of the wall maps which the Army helped us obtain. They are very useful to us.

General DALRYMPLE. Thank you, sir.

Mr. TALCOTT. Does this complete the whole package at Fort Dix or is this just a start?

General DALRYMPLE. For the center there will be a follow-on project which is the overseas and transfer station. The amount will be approximately \$3 million. It will be a future year project.

Mr. TALCOTT. Will that complete the permanent installations at Fort Dix?

General DALRYMPLE. That will complete the requirement for the personnel center, sir.

#### OVERALL RECEPTION CENTER PROGRAM

Mr. SIKES. Last year we discussed the Army's program on reception centers. Has there been any change in the program?

Colonel RYAN. There are some plans that possibly might not require a reception center at Fort Polk, La. However, there is no other basic change.

Mr. SIKES. Provide for the record the current input and the long-range input load planned for Fort Dix and other Army reception centers.

(The information follows:)

The current weekly input and long range weekly input for Fort Dix and the other Army reception centers are:

Reception centers, Forts	Current input	Long-range (estimated) input
Dix.....	1,200	
Jackson.....	1,000	
Knox.....	900	
Leonard Wood.....	1,000	
Ord.....	1,000	[Deleted]
Lewis.....	700	
Polk.....	1,300	
Bragg.....	700	
Campbell.....	1,000	

Mr. SIKES. Have you surveyed the local commercial laundry facilities in the Fort Dix area to determine if commercial enterprises are able to undertake this laundry service?

Mr. DUDDING. Yes. A survey of all major commercial laundries located within the Fort Dix area was conducted to determine if a contractual arrangement could be established that would provide timely and quality laundry at reasonable costs. The only firms within a 45-mile radius of Fort Dix are the American Laundry Co., Trenton, N.J.; the Blakely Laundry, Trenton, N.J.; the Haverford Fabric Care Corp., Haverford, Pa.; and the Keystone Laundry, Asbury Park, N.J. All four laundries expressed interest; however, all have limited capacity and indicated that they were interested only under certain conditions. The American Laundry Co. indicated interest in processing only 10 items of organization equipment—that is, sheets, pillowcases, and so forth—and providing bundle service on a 50-cents-per-pound basis with extra charge for shirts. The Blakely Laundry did not submit a price list but indicated they would provide bundle service at \$3.20 per bundle, providing there were no more than five starch-and-press pieces and providing they would be given a long-term contract with stipulations allowing for advancement in price to offset any increases in labor or supply costs. The Haverford Fabric Care Corp. indicated they were interested only in 32 items of piecework, which represents a small portion of the total organizational workload, and none of the bundle or individual work. The Keystone Laundry was not interested in handling any of the bundle work and only 10 percent of the bulk work which was limited to 32 specific items on the condition that a long-term—4 or 5 years—contract is negotiated. The lowest charge quoted for bundle work—Blakely Laundry—was \$3.20 per bundle or \$166.40 annually. This same service is available for enlisted men in a Government-operated facility at a cost of \$5.40 per month or \$64.80 annually. Processing this work on commercial contract would result in a cost increase to the enlisted man of \$101.60 annually or 157 percent. The combined cost of processing the total workload at Fort Dix on commercial contract—using the actual workload for fiscal year 1968 as a basis—would be \$1,911,984. Cost of producing the same workload in a Government-operated facility is \$1,080,046. Therefore, contract costs would be \$831,938 or 77.03 percent greater than if this workload were processed in a Government facility.

Mr. SIKES. If commercial enterprises are able to perform the work at Fort Dix would it be necessary to construct the laundry project?

General DALRYMPLE. Yes, sir. If we could get a commercial establishment to provide the service at a cost that would be comparable to that for which we can do it on-post, it certainly would not be. The survey we made found that there were some three or four commercial laundries interested but had certain limitations or conditions in their proposed contracts. We finally came to the conclusion in our study that the contract costs would be about 77 percent greater than they would be if the clothing and other items of laundry were to be processed in a Government facility.

Mr. SIKES. You do not expect to be able to get contract work for the same price that you do Government-subsidized work, do you?

General DALRYMPLE. No, sir; but we thought \$832,000 was excessive. We could do it on base for \$1,080,000, and the commercial contract would cost almost \$2 million or \$1,912,000.

Mr. SIKES. When you say you could do it on the base for less cost—and, of course, you can—did you evaluate all of the costs to the Government in that connection?

Mr. DUDDING. Yes, sir; it was done on a comparative cost basis including all the extra costs such as transportation, taxes, insurance, things of that nature.

Mr. SIKES. Would you provide a breakdown of the comparison for the record?

Mr. DUDDING. Yes, sir.  
(The information follows:)

## (AR 235-4) COST ANALYSIS WORKSHEET—FORT DIX, N.J.

Cost elements	1st year of operation	2nd year of operation
<b>CONTRACT OPERATIONS</b>		
1. Contract cost (price paid to supplier).....	\$1, 837, 357	\$1, 837, 357
2. Transportation.....		
3. Contract administration, and related costs.....	69, 027	69, 027
4. Government furnished materials and supplies.....	1, 200	1, 200
5. Contractor use of Government owned equipment and facilities.....	2, 400	2, 400
6. Rehabilitation, modification or expansion of Government-owned equipment and facilities.....		
7. Incentive or premium costs.....		
8. Standby maintenance cost.....	12, 000	2, 000
9. Other costs.....	103, 950	
9a. Total.....	2, 025, 934	1, 911, 984
<b>GOVERNMENT OPERATIONS</b>		
10. Military personnel services.....		
11. Civilian personnel services.....	678, 966	678, 966
12. Other personnel costs.....		
13. Materials, supplies, utilities and other services.....	128, 648	128, 648
14. Maintenance and repair.....	2, 000	2, 000
15. Insurance (the sum of elements 10, 11, 12, 13, 14, and 19, multiplied by 0.003).....	2, 490	2, 490
16. Federal taxes.....	33, 624	33, 624
17. Depreciation.....	60, 142	60, 142
18. Interest.....	137, 339	137, 339
19. Overhead costs.....	20, 240	20, 240
20. Other indirect costs (the sum of elements 10, 11, 12, 13, 14, and 19, multiplied 0.02).....	16, 597	16, 597
20a. Total.....	1, 080, 046	1, 080, 046

Mr. SIKES. You claim a savings of \$832,000 based on your 1968 workload. The long-range personnel strength here is to be considerably reduced. Is this estimate of savings realistic?

Mr. DUDDING. Yes. As the troop strength at Fort Dix declines it is proposed to provide personal laundry service to military personnel stationed at Fort Monmouth and McGuire Air Force base, N.J. Personal laundry service is not available to these personnel from a Government-operated facility, nor is a commercial contract in existence to provide the service. Therefore, laundry service is obtained by military personnel on an individual basis.

Mr. SIKES. Will the project to improve sewage facilities complete the requirements at Fort Dix?

General DALRYMPLE. Yes, sir.

## CERTIFICATION OF WATER POLLUTION PROJECTS BY FWPCA

Mr. SIKES. Have all of the water pollution abatement projects in the regular fiscal year 1971 Army program been certified by the Federal Water Pollution Control Administration as being in timing with

the State program requiring adjacent communities to take related abatement measures?

General DALRYMPLE. That is correct, sir.

FORT EUSTIS, VA.

Mr. SIKES. We will turn to Fort Eustis, Va., please, and insert in the record page 12.

(The page follows:)

FORT EUSTIS, VA.—\$260,000

Fort Eustis is located about 20 miles northwest of Newport News, Va. The mission of this installation is to organize and train all types of Transportation Corps units and individuals. It supports the Transportation School, Transportation Engineering Agency, Aviation Materiel Laboratories, Combat Developments Command, and a subinstallation at Fort Story, Va. The program consists of air conditioning for a research and development facility.

*Status of funds*

[In thousands of dollars]

Funded program not in inventory.....	6,245
Unobligated items, Jan. 31, 1970 (actual).....	2,423
Unobligated items, June 30, 1970 (estimated).....	1,076

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
235	Air condition research and development headquarters building 401.....	\$15	5

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1969	BOQ—60 units.....	\$598	×	
1970	Cobra maintenance training hangar.....	749	×	
1970	Central Supply operations facility COSMOS.....	655		×
1970	Classroom addition—Maintenance training area.....	1,076		×

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Eustis				
4. COMMAND OR MANAGEMENT BUREAU First US Army		6. STATE/COUNTRY Virginia				
7. STATUS Active	5. INSTALLATION CONTROL NUMBER Virginia 215	9. COUNTY (U.S.) None				
8. YEAR OF INITIAL OCCUPANCY 1918		10. NEAREST CITY Newport News				
11. MISSION OR MAJOR FUNCTIONS						
<p>Organization and training of all types of Transportation Corps units and individuals, the logistical support of the Transportation School, Transportation Engineering Agency, Aviation Materiel Laboratories, Combat Development Command, and a sub-installation, Fort Story, Virginia.</p>						
12. PERSONNEL STRENGTH		SUPPORTED				
OFFICER (1)		OFFICER (2)	CIVILIAN (3)			
1,413		8,131	3,421			
ENLISTED (4)		ENLISTED (5)	CIVILIAN (6)			
3,421		744	6,213			
AS OF 31 Oct 1969		TOTAL (7)				
LB		19,922				
PLANNED (Est/FY)		TOTAL (8)				
1,029		14,654				
LB		1,385				
13. INVENTORY						
LAND		LAND COST (\$000)				
a. OWNED		IMPROVEMENT (\$000)				
8,114		102,074				
b. LEASES AND EASEMENTS		TOTAL (\$000)				
1		102,828				
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19						
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 6,245 ; (Unfunded - \$ 0 )						
e. AUTHORIZATION REQUESTED IN THIS PROGRAM						
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS						
g. GRAND TOTAL (c + d + e + f)						
21,974						
131,307						
SUMMARY OF INSTALLATION LINE ITEMS						
CATEGORY CODE NO.	LINE ITEM DESIGNATION		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
	LINE ITEM TITLE	Priority	Page No	SCOPE	ESTIMATED COST (\$000)	ESTIMATED COST (\$000)
310	235 - Air Condition Research & Development HQ Bldg 401	3	13	55,000	260	260
		AMC	SF	55,000	55,000	260

Mr. SIKES. The request is for \$260,000 to air-condition a research and development headquarters building.

Is there any change in the requirements for this building for the foreseeable future through change of mission or otherwise?

General DALRYMPLE. No, sir; not that we see at this moment, sir. It is a permanent building, built in the early 1950's. We expect it has at least a 50-year life.

Mr. SIKES. I see there is a reduction in personnel. What does that indicate? What is the reason for it?

General DALRYMPLE. In our planning for permanent construction throughout the United States we base our permanent construction on the long-range planned strength. So the fact that the strength today is higher than the projected strength would have no effect on our permanent construction at this post.

Mr. SIKES. Since personnel strength is going to decline, are there not other facilities on the post which would be freed and could be used for this purpose?

General DALRYMPLE. This, as you realize, sir, is the air-conditioning of an existing building which is currently in use for this research and development function.

When it was built in the early 1950's the criteria for air-conditioning did not permit air-conditioning to be installed in this building. What we are doing here is providing some comfort cooling and cooling for equipment to permit a more efficient operation.

Mr. SIKES. The committee understands it is the realistic thing to do but the question is, If space requirements are going to be reduced as a result of declining personnel, can you be certain there are no existing suitable air-conditioned facilities which would become available?

General DALRYMPLE. There are no other suitable facilities, sir.

Mr. SIKES. Will this project complete the requirements?

General DALRYMPLE. Yes, sir.

#### FORT KNOX, KY.

Mr. SIKES. Next, turn to Fort Knox, Ky. We will insert in the record page 14.

(The page follows:)

#### FORT KNOX, KY.—\$8,249,000

Fort Knox is located 30 miles south of Louisville, Ky. The mission of this installation is to operate the U.S. Army Armor School, U.S. Army Maintenance Board, U.S. Army Armor Board, and certain medical research activities. The installation commands, trains, and supports nondivisional armor units, a recruit training center, and supports Reserve component summer training. The program consists of a weapons training facility for the U.S. Army Armor School, and alterations and additions to the electrical system.

#### *Status of funds*

[In thousands of dollars]

Funded program not in inventory	24,802
Unobligated items, Jan. 31, 1970 (actual)	4,722
Unobligated items, June 30, 1970 (estimated)	1,176

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
263	Weapons training facility.....	\$350	0
243	Electric transmission alterations and additions.....	40	15

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Dental clinic.....	\$716	×	
1970	Armor and reconnaissance instruction facility.....	2,830	×	
1970	Modify sewage treatment plant.....	838	×	
1970	BOQ alterations.....	338		×



Mr. SIKES. The request is for \$8,249,000, primarily for a weapons training facility at the armored school. What is this facility: what does it replace? What is the need for it?

General DALRYMPLE. This is a weapons training facility at the armored school and the project will provide permanent classrooms and laboratories for armor weapons systems instruction, including tanks, howitzers, and automatic weapons.

At present this function is being performed in 25 temporary buildings, World War II type, which have deteriorated to the point that they constitute a fire and safety hazard. They possess insufficient space for classrooms and laboratories. Also, there is insufficient electric power to support the training aids in the weapons systems turret trainers.

Mr. SIKES. What will be done with the buildings?

General DALRYMPLE. We will demolish 25 buildings with a total area of 141,000 square feet.

Mr. SIKES. What is the status of design of the weapons training facility? When was design begun, and when will it be completed? When do you anticipate you will award the contract for this facility?

General DALRYMPLE. Design was started November 5, 1969, is 15-percent complete, and is scheduled to be completed in November 1970. Award of a construction contract is anticipated in January 1971.

Mr. SIKES. How do you stand in the overall program to replace armored school facilities at Fort Knox?

Colonel LINDBERG. The total permanent construction requirement for the armor school is 1,032,807 square feet. There is currently 244,742 square feet of permanent construction or approximately 24 percent of requirement. This project will provide an additional 206,315 square feet which will increase the total to 43 percent of the requirement.

Mr. SIKES. Could you break down the space to be provided in the weapons training facility for the record between classroom space, laboratory space, administrative space, and other space?

(The information follows:)

The space in the weapons training facility is allocated as follows:

	<i>Square feet</i>
Classrooms .....	29, 440
Laboratory areas.....	103, 315
Administrative areas.....	48, 924
Supply and small arms storage.....	6, 036
Mechanical equipment.....	6, 000

Mr. SIKES. What is the overall program for electrical and utilities improvement in Fort Knox?

General DALRYMPLE. In addition to the project for electrical transmission alterations and additions requested here, future year programs for Fort Knox include utilities projects for fuel conversions—air pollution control—heating plant, incinerator, fire protection sprinklers, roads and streets, traffic control, parking, sidewalks, railroad tracks, storm sewers, and fencing totaling approximately \$13,100,000.

Mr. SIKES. What will the electric transmission alterations and additions requested in the amount of \$705,000 provide?

General DALRYMPLE. This project provides 5,000 kv.-a. of additional electrical capacity to the present system. It provides for tie lines to interconnect four other substations. These interconnections will improve reliability of the whole electric distribution system by furnish-

ing alternate sources of power in the event of failure and to permit maintenance of substations without the necessity of interrupting service. It also provides for street lighting improvements.

Mr. SIKES. Questions on Fort Knox?

If not, we will go to the next project.

FORT LEE, VA.

Turn to Fort Lee, Va. Mr. Reporter, please insert in the record page 17.

(The page follows:)

FORT LEE, VA.—\$98,000

Fort Lee is located 3 miles northeast of Petersburg, Va. The mission of this installation is to command, train, and support units and activities assigned to the quartermaster center and to support other on-post and satellited units and activities. The program consists of a heating plant conversion.

*Status of funds*

Funded program not in inventory.....	\$8,673
Unobligated items, Jan. 31, 1970 (actual).....	2,585
Unobligated items, June 30, 1970 (estimated).....	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
117	Heating plant conversion.....	\$7	60

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Convert 30 units family housing.....	\$210	×	
1968	Sewage treatment plant.....	612	×	
1969	BOO, 150 units.....	1,528	×	
1970	Dental clinic.....	415	×	
1970	Post office.....	284		×

1. DATE <b>2 Feb 1970</b>	2. DEPARTMENT <b>ARMY</b>	3. INSTALLATION <b>Fort Lee</b>						
4. COMMAND OR MANAGEMENT BUREAU <b>First US Army</b>	5. INSTALLATION CONTROL NUMBER <b>FY 19 71 MILITARY CONSTRUCTION PROGRAM</b>	6. STATE/COUNTRY <b>Virginia</b>						
7. STATUS <b>Active</b>	8. YEAR OF INITIAL OCCUPANCY <b>Virginia 315</b>	9. COUNTY (U.S.) <b>Prince George</b>						
11. MISSION OR MAJOR FUNCTIONS <b>Commands, trains, and logistically supports units and activities assigned to the Quartermaster Center, provides logistical support to others on post and satellite units and activities.</b>	12. 1917 <b>Active</b>	10. NEAREST CITY <b>Petersburg, 3 miles Southwest</b>						
* Includes \$7,300 one-time cost for easement.	PERMANENT STUDENTS SUPPORTED			TOTAL (9)				
	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	CIVILIAN (7)	TOTAL (8)
	898	6,864	2,884	859	6,493			17,998
	b. PLANNED (End FY) <b>LR 1,478 6,082 2,836 511 1,255</b>							
	13. INVENTORY							
	LAND	ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)			
	a. OWNED	5,751	697	88,852	89,549			
	b. LEASES AND EASEMENTS	553	7*	0	7			
	c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 <b>69</b>							
	d. AUTHORITY NOT YET IN INVENTORY (Funded - \$ <b>8,673</b> ; (Unfunded - \$ <b>0</b> )							
	e. AUTHORIZATION REQUESTED IN THIS PROGRAM							
	f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS							
	g. GRAND TOTAL (c + d + e + f)							
<b>125,710</b>								
SUMMARY OF INSTALLATION LINE ITEMS								
CATEGORY CODE NO. a	LINE ITEM DESIGNATION LINE ITEM TITLE b		UNIT OF MEASURE c	TENANT COMMAND d	AUTHORIZATION PROGRAM SCOPE e	ESTIMATED COST (\$000) f	FUNDING PROGRAM SCOPE g	ESTIMATED COST (\$000) h
	821	117 - Heating Plant Conversion	1			98		98

Mr. SIKES. The request is for \$98,000 for heating plant conversion. Will this complete the requirements?

General DALRYMPLE. Yes, sir.

Mr. SIKES. What is involved?

General DALRYMPLE. Conversion of a boiler plant from a coal-fired system to a combination gas-oil fired system to eliminate air pollution.

FORT GEORGE G. MEADE, MD.

Mr. SIKES. Will you turn to Fort Meade, Md.? We will insert in the record page 19.

(The page follows:)

FORT GEORGE G. MEADE, MD.—\$257,000

Fort George G. Meade is located 18 miles south of Baltimore, Maryland. The mission of this installation is to train and support strategic Army forces and post troop units; to support Headquarters, First U.S. Army, National Security Agency, Reserve Components and ROTC summer training. The program consists of a sedimentation lagoon.

*Status of funds*

Funded program not in inventory	\$11,404
Unobligated items, Jan 31, 1970 (actual)	7,503
Unobligated items, June 30, 1970 (estimated)	4,845

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
198	Sedimentation lagoon	\$5	6

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Post office	\$346		×
1970	250 Units family housing	5,200	×	
1970	Kimbrough Army Hospital Addition	2,595	×	
1970	Improve Rockenbach Road	1,271		×
1970	Headquarters building addition—corps clos	3,228		×

<b>1. DATE</b> 2 Feb 1970	<b>2. DEPARTMENT</b> ARMY	<b>3. INSTALLATION</b> Fort George G. Meade			
<b>4. COMMAND OR MANAGEMENT BUREAU</b> First US Army		<b>5. INSTALLATION CONTROL NUMBER</b> Maryland 355		<b>6. STATE/COUNTRY</b> Maryland	
<b>7. STATUS</b> Active	<b>8. YEAR OF INITIAL OCCUPANCY</b> 1918		<b>9. COUNTY (U.S.)</b> Anne Arundel		
<b>10. NEAREST CITY</b> Baltimore, 18 miles North					
<b>11. MISSION OR MAJOR FUNCTIONS</b>					
Trains and prepares Strategic Army Forces for combat readiness; logistically supports and trains Post Troop Units; supports Headquarters, First U.S. Army, National Security Agency, Air Defense Units, and U.S. Army Field Maintenance; trains Reserve Components and provides ROTC Summer Training.					
<b>12. PERSONNEL STRENGTH *</b>					
a. AS OF <u>31 Oct 1969</u> 4,476 11,217 3,830 b. PLANNED (End FY) <u>LR</u> 1,840 11,907 2,866					
<b>INVENTORY</b>					
<b>LAND</b>		<b>ACRES (1)</b>		<b>TOTAL (\$000) (4)</b>	
a. OWNED	13,539	LAND COST (\$000) (2)	1,148	120,212	
b. LEASES AND EASEMENTS	20	IMPROVEMENT (\$000) (3)	1** 1	120,212	
c. INVENTORY TOTAL (Except Land rent) AS OF 30 JUNE 19 <u>69</u>					
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ <u>11,404</u> - - - - - ) (Unfunded - \$ <u>0</u> - - - - - )					
e. AUTHORIZATION REQUESTED IN THIS PROGRAM					
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS					
g. GRAND TOTAL (c + d + e + f)					
<b>SUMMARY OF INSTALLATION LINE ITEMS</b>					
<b>CATEGORY CODE NO.</b>	<b>LINE ITEM DESIGNATION</b>			<b>FUNDING PROGRAM</b>	
	<b>LINE ITEM TITLE</b>	<b>Priority</b>	<b>Page No</b>	<b>ESTIMATED (\$000) (f)</b>	<b>SCOPE (g)</b>
831	198 - Sedimentation Lagoon	1	20	257	257

\* Army only  
 \*\* \$1,100 one-time cost for easement

Mr. SIKES. The request is for a sedimentation lagoon for \$257,000. How are you presently removing accumulated sedimentation from the water treatment plant?

General DALRYMPLE. At the present time this filter backwash is being discharged directly into the Little Patuxent River. It is proposed here to provide for the removal of the solids from this filter backwash operation by creating a sedimentation lagoon.

Mr. SIKES. Will the item requested complete the sewage treatment facilities at Fort Meade?

General DALRYMPLE. It will complete the treatment of the water supply backwash operation at the water treatment plant at Fort Meade, sir.

Mr. SIKES. Very well. Are there questions?

Mr. PATTEN. How long will your lagoon last? How soon will you fill it up?

General DALRYMPLE. Once the sedimentation takes place, the effluent from that will be allowed to discharge into the Patuxent River. This is only a 5-acre lagoon. It will be necessary from time to time to remove those solids which have accumulated on the bottom of the lagoon and dispose of those solids. But they would not be dumped into and pollute the Little Patuxent River.

#### FORT BENNING, GA.

Mr. SIKES. Please turn to Fort Benning, Ga. We will insert in the record page 22.

(The page follows:)

#### FORT BENNING, GA.—\$55,000

Fort Benning is located at Columbus, Georgia. The mission of this installation is to command, train and provide logistical support for a division. It operates and supports the Infantry School and Infantry Board. It instructs, tests, and qualifies officers and enlisted men in airborne and ranger techniques and supports summer reserve component training. The program consists of air conditioning of the post office.

#### Status of funds

	<i>Thousands</i>
Funded program not in inventory.....	\$9, 489
Unobligated items, Jan. 31, 1970 (actual).....	2, 391
Unobligated items, June 30, 1970 (estimated).....	2, 391

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
288	Air conditioning post office building.....	\$4	25

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Family housing, 340 units.....	\$6, 615	×	
1970	Water treatment plant.....	2, 391		×

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Benning	
4. COMMAND OR MANAGEMENT BUREAU Third US Army		6. STATE/COUNTRY Georgia	
5. INSTALLATION CONTROL NUMBER Georgia 11 & 25; Alabama 22		9. COUNTY (U.S.) Muscogee, Chattahoochee, Ga. and Russell, Ala.	
7. STATUS Active		10. NEAREST CITY Columbus	
8. YEAR OF INITIAL OCCUPANCY 1919		11. MISSION OR MAJOR FUNCTIONS Development of leadership in all ranks, instruction of Infantry Officers and selected enlisted personnel in standardized techniques and tactics; training of officers in the duties and responsibilities of Commander and staff at regimental or battle group level and of tactical operations at brigade and division levels; instructing, testing, qualifying officers and enlisted men in Airborne and Ranger techniques and tactics. Furnish administrative and logistical support to a Division. Conduct basic training command operations.	
* \$1,400 one-time cost for easement.			

CATEGORY CODE NO.	LINE ITEM DESIGNATION		PRIORITY	Page No	TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM			ESTIMATED COST (\$000)	ESTIMATED COST (\$000)																																							
	LINE ITEM TITLE	b					SCOPE	e	f			SCOPE	g	h																																				
740	288 - Air Condition Post Office Building		3	23			55				55																																							
<table border="1"> <tr> <td colspan="2">12. PERSONNEL STRENGTH</td> <td colspan="2">PERMANENT</td> <td colspan="2">STUDENTS</td> <td colspan="2">SUPPORTED</td> <td colspan="2">TOTAL</td> </tr> <tr> <td>OFFICER (1)</td> <td>ENLISTED (2)</td> <td>CIVILIAN (3)</td> <td>OFFICER (4)</td> <td>ENLISTED (5)</td> <td>OFFICER (6)</td> <td>ENLISTED (7)</td> <td>CIVILIAN (8)</td> <td>OFFICER (9)</td> <td>TOTAL (10)</td> </tr> <tr> <td>a. AS OF 31 Oct 1969</td> <td>4,294</td> <td>33,449</td> <td>5,945</td> <td>3,221</td> <td>10,096</td> <td></td> <td></td> <td></td> <td>57,005</td> </tr> <tr> <td>b. PLANNED (End FY)</td> <td>LR 3,183</td> <td>28,678</td> <td>3,078</td> <td>1,554</td> <td>2,596</td> <td></td> <td></td> <td></td> <td>39,089</td> </tr> </table>											12. PERSONNEL STRENGTH		PERMANENT		STUDENTS		SUPPORTED		TOTAL		OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	OFFICER (9)	TOTAL (10)	a. AS OF 31 Oct 1969	4,294	33,449	5,945	3,221	10,096				57,005	b. PLANNED (End FY)	LR 3,183	28,678	3,078	1,554	2,596				39,089
12. PERSONNEL STRENGTH		PERMANENT		STUDENTS		SUPPORTED		TOTAL																																										
OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	OFFICER (9)	TOTAL (10)																																									
a. AS OF 31 Oct 1969	4,294	33,449	5,945	3,221	10,096				57,005																																									
b. PLANNED (End FY)	LR 3,183	28,678	3,078	1,554	2,596				39,089																																									
13. INVENTORY																																																		
LAND		ACRES (1)		LAND COST (\$000)		IMPROVEMENT (\$000)		TOTAL (\$000)																																										
a. OWNED	182,110		4,945		176,737				181,682																																									
b. LEASES AND EASEMENTS	190		1*		0				1																																									
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69									181,683																																									
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 9,489; (Unfunded - \$ 841)									10,330																																									
e. AUTHORIZATION REQUESTED IN THIS PROGRAM									55																																									
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS									53,754																																									
g. GRAND TOTAL (c + d + e + f)									245,822																																									

SUMMARY OF INSTALLATION LINE ITEMS

Mr. SIKES. The request is for \$55,000 to air-condition a post office building. What is the remaining useful life of the building, itself?

General DALRYMPLE. This is a building built back in 1943. It is a permanent building, a brick outer wall construction on a concrete foundation.

Mr. SIKES. Is it large enough?

General DALRYMPLE. Yes. We expect it to last until about 1985, sir.

FORT BRAGG, N.C.

Mr. SIKES. Turn to Fort Bragg, N.C. Insert in the record page 24. (The page follows:)

FORT BRAGG, N.C.—\$202,000

Fort Bragg is located 10 miles northwest of Fayetteville, North Carolina. The mission of this installation, which houses the XVIII Airborne Corps., is to command, train and support an Airborne Division and other airborne units, to test airborne equipment and techniques, and to support the U.S. Army John F. Kennedy Center for Military Assistance. The program consists of a moving target simulator building.

STATUS OF FUNDS

	<i>Thousands</i>
Funded program not in inventory.....	\$20,954
Unobligated items Jan. 31, 1970 (actual).....	5,531
Unobligated items June 30, 1970 (estimated).....	3,760

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
291	Moving target simulator building.....	\$12	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Tactical equipment shops.....	\$915	-----	X
1970	Academic building addition.....	2,845	-----	X

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Fort Bragg							
4. COMMAND OR MANAGEMENT BUREAU Third US Army		5. INSTALLATION CONTROL NUMBER North Carolina 255		6. STATE/COUNTRY North Carolina							
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1918		9. COUNTY (U.S.) Cumberland & Hoke							
11. MISSION OR MAJOR FUNCTIONS Headquarters of the XVIII Airborne Corps, the 82nd Airborne Division and the 12th Support Brigade; responsible for command, training and logistical support of an airborne division and other airborne units; testing airborne equipment and procedures; and support of the US Army John F. Kennedy Center for Military Assistance including the Institute for Military Assistance and Special Forces Groups.		12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969 b. PLANNED (End FY LR)		PERMANENT OFFICER (1) ENLISTED (2) CIVILIAN (3)		STUDENTS OFFICER (4) ENLISTED (5) OFFICER (6) CIVILIAN (7)		TOTAL (8)			
		31 Oct 1969		4,186 44,123 4,744		493 736		54,282			
		LR		4,525 37,600 2,582		420 91		45,218			
		13. INVENTORY		ACRES (1)		LAND COST (\$000) (2)		TOTAL (\$000) (4)			
		LAND		130,689		3,927		212,204			
		a. OWNED		9		9*		9			
		b. LEASES AND EASEMENTS				0		0			
		c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19		69		335		212,213			
		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$		20,954		): (Unfunded - \$		21,289			
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM						202			
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS						28,718			
		g. GRAND TOTAL (c + d + e + f)						262,422			
SUMMARY OF INSTALLATION LINE ITEMS											
CATEGORY CASE NO.		LINE ITEM DESIGNATION		TENANT COMMAND		UNIT OF MEASURE		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
				c		d		e		f	
				Priority		Page No		SCOPE		ESTIMATED COST (\$000)	
				2		25		4,500		202	
171		291 - Moving Target Simulator Building				SF		4,500		4,500	
								202		202	

\* \$9,400 one-time cost of easement.

## MOVING TARGET SIMULATION BUILDING

Mr. SIKES. The request is for \$202,000 for a moving target simulator building. What is this?

General DALRYMPLE. This is one of five such projects in the program this year. The others being at Fort Bliss, Fort Hood, Fort Carson, and Fort Riley. It is to be used to house a moving target simulator that will train gunners and crews of Redeye and Chaparral-Vulcan systems. It will supplement or replace the requirement for live aircraft.

Mr. SIKES. Is this primarily for Redeye and Chaparral use?

General DALRYMPLE. Vulcan as well sir.

Mr. SIKES. What is the status of these two weapons systems?

General DALRYMPLE. Redeye is in the system. The Chaparral-Vulcan units, I believe, are being activated and trained at Fort Bliss at the moment.

Mr. GIBBONS. The battalions are being trained at Fort Bliss now, Mr. Chairman. I am from the Office of the Assistant Chief of Staff for Force Development.

We are getting deliveries, as the battalions are activated.

Mr. SIKES. What missiles, what weapons other than Redeye and Chaparral can use this simulator?

Mr. GIBBONS. At present there are no others, sir. This could be used for any system that might be developed where visual tracking would be required of the gunners.

Mr. SIKES. Do you think it might be, in time, adaptable for the Dragon and the Extended Lance?

Mr. GIBBONS. No, sir.

Mr. SIKES. The Redeye and Chaparral are both very important weapon systems and, of course, we must have the proper training aids.

Explain how this simulator works and tell us what your total program is for providing this type of building at Army installations.

Mr. GIBBONS. Mr. Chairman, the moving target simulator provides actual environment simulation, including hostile targets, to facilitate training of Redeye and Chaparral/Vulcan gunners. This technique of training can be applied to any direct-line-of-sight air defense system in which target tracking is accomplished visually by the operator. The moving target simulator provides the realistic sights and sounds to an operator employing a Redeye, Chaparral, or Vulcan training device. Environmental realism is achieved through the use of a large display area, color presentation, photographic and projection techniques, and stereophonic sound. Target images are projected on a display screen, which is a segment of a 40-foot-diameter sphere. Realistic backgrounds are used to provide the trainee with reference points, to aid in relative range assessment. Dynamic target images are provided by projected motion picture film representing target size and aspect, with changes in azimuth and elevation being provided by a servocontrolled, gimballed mirror system which directs the project images onto the display screen. Stereophonic target sound is provided by magnetic recorded sound stripes on the target motion picture film. Target infrared emission is furnished to complete the simulation of the tactical environment. The target emission projector provides realistic target signature, in the proper infrared spectrum, superimposed on the target image.

The total program for moving target simulators will require buildings at Redstone Arsenal, Ala.; Fort Lewis, Wash.; Fort Benning, Ga.; Fort Stewart, Ga.; Fort Campbell, Ky.; Korea; Germany; and Hawaii. These are in addition to the projects requested in the fiscal year 1971 program for Fort Bliss, Tex.; Fort Carson, Colo.; Fort Hood, Tex.; and Fort Riley, Kans.

Mr. SIKES. What is the status of procurement for the moving target simulator to be housed in this building? When will the equipment be delivered? What is the estimated construction time for this facility? Provide for the record the same information for the other similar facilities in the program.

Mr. GIBBONS. One prototype is now in use at Fort Bliss. Contract for five production models is expected to be let prior to end of fourth quarter, fiscal year 1970. Current planning is for procurement and delivery of remaining sets in fiscal year 1972. The first moving target simulators are scheduled for the training facility at Fort Bliss, with delivery of three sets in April 1971; one set in May 1971 and three sets in January 1972. Original delivery schedule provided for the Fort Bragg set to be delivered in March 1973; the Fort Hood set in June 1973; the Fort Carson set in July 1973; and the Fort Riley set in September 1973. It is contemplated that the delivery schedule will be adjusted to have the Fort Bragg and Fort Hood sets delivered in January 1973; the Fort Carson set in February 1973; and the Fort Riley set in March 1973 to assure MTS are available when construction is completed. It is anticipated that construction contracts can be let 30 days after funds are made available. Construction time for the facilities at Forts Bragg, Carson, Hood, and Riley is estimated at 180 working days and the facility at Fort Bliss is estimated at 365 working days.

Mr. SIKES. When was the Redeye system approved for introduction into the Army, and what is the anticipated life of this system in the Active Army?

Mr. GIBBONS. The Redeye system was approved by OSD in November 1965. Anticipated life of the system is a minimum of 10 years from December 1968.

Mr. SIKES. Will the Army divisions have a continuing requirement for the moving target simulators? For how many years?

Mr. GIBBONS. Yes, sir. Divisions will have a continuing requirement as long as Redeye and Chaparral/Vulcan systems are in the inventory. It is anticipated that the simulator will be used for a minimum of 10 years.

Mr. SIKES. Are there questions?

Mr. TALCOTT. How were the five places selected for these simulators?

Mr. GIBBONS. The moving target simulator will be placed at division type centers, where we have large troop concentrations, where there will be Vulcan-Chaparral battalions as well as Redeye teams. In addition, we are trying to place the training device in such a position that other troops could be moved in who have this same type of equipment. In other words, for example some of the reserve forces will probably have the same type weapons. By locating these at division stations where we also train a great number of reserve component personnel, they could also use the same moving target simulators.

Mr. TALCOTT. They are mostly going to be located at permanent stations?

Mr. GIBBONS. At long-range permanent stations.

Mr. TALCOTT. Not ones you contemplate reducing or disestablishing?

Mr. GIBBONS. No, sir. We are making every effort to place these at permanent division installations.

Mr. TALCOTT. Thank you.

General DALRYMPLE. Four of them are at division stations, Hood, Carson, Riley and this one at Fort Bragg. Now, Fort Bliss is the air defense training center.

Mr. TALCOTT. I see.

General DALRYMPLE. Fort Bliss is where there would be a larger accumulation of the simulators than there would be at other stations, sir.

Mr. TALCOTT. Thank you.

Mr. SIKES. Thank you.

#### JFK CENTER FOR MILITARY ASSISTANCE

When were the JFK Center for Military Assistance and the Institute for Military Assistance established at Fort Bragg? What is the number of personnel, including students, presently assigned to these activities?

Lieutenant Colonel LINDBERG. In 1952, the Psychological Warfare School was transferred from Fort Riley to Fort Bragg, N.C. At that time it was grouped with newly organized units of special forces and units of psychological warfare. It was given a new name—Psychological Warfare Center. In 1956, the name was broadened to the Special Warfare Center. The activity took on the responsibility of developing doctrine and training personnel in special forces and psychological warfare. In 1960, counterinsurgency operations were added to the list of specialties for doctrine and for training. In March 1964, the Center was officially renamed the U.S. Army John F. Kennedy Center for Special Warfare, in honor of the late Commander in Chief. In May of 1969, the name was changed to the John F. Kennedy Center for Military Assistance. The Institute for Military Assistance was formed in May 1969. The Institute consists of the Special Forces Operation School, the School Brigade, and the Military Assistance School. There are 3,314 personnel assigned to these activities. The John F. Kennedy Center has 396, the Institute for Military Assistance has 1,009, and there are 1,909 students attending the Institute.

#### FORT CAMPBELL, KY.

Mr. SIKES. Turn to Fort Campbell, Ky. We will insert in the record page 26.

(The page follows:)

#### FORT CAMPBELL, KY., \$497,000

Fort Campbell is located 8 miles northeast of Clarksville, Tenn. The mission of this installation is to provide for the support and training of a division and other nondivisional combat units. The program consists of a post office.

#### *Status of funds*

Funded program not in inventory	\$1, 636, 000
Unobligated items, Jan. 31, 1970 (actual)	1, 636, 000
Unobligated items, June 30, 1970 (estimated)	1, 176, 000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
224	Main post office.....	\$27	2

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status	
			Released	Mar. 10, 1970 Deferred
1970	EM service club.....	732	X	
1969	Tactical equipment shop.....	538	X	
1970	Aircraft maintenance complex.....	444	-----	X

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Campbell		6. STATE/COUNTRY Kentucky
4. COMMAND OR MANAGEMENT BUREAU Third US Army		5. INSTALLATION CONTROL NUMBER Tennessee 155 Kentucky 145		
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1942		
11. MISSION OR MAJOR FUNCTIONS Support and training of a division and other non-divisional combat units.		9. COUNTY (U.S.) & Trigg, Ky; Montgomery & Stewart, Tenn.		
		10. NEAREST CITY Clarksville, Tenn., 8 miles Southeast		
		12. PERSONNEL STRENGTH		
		a. AS OF 31 Oct 1969 778		
		b. PLANNED (End FY LR) 1,760		
		13. INVENTORY		
		OFFICER ENLISTED CIVILIAN		
		OFFICER (1) (2) (3) (4) (5) (6) (7) (8)		
		ENLISTED OFFICER (6) (7) (8)		
		CIVILIAN (6) (7) (8)		
		TOTAL (9)		
		22,515		
		23,626		
		TOTAL (\$1000)		
		LAND COST (\$1000)		
		IMPROVEMENT (\$1000)		
		TOTAL (\$1000)		
		149,753		
		149,783		
		1,636		
		497		
		22,743		
		174,659		
SUMMARY OF INSTALLATION LINE ITEMS				
CATEGORY CODE NO. a	LINE ITEM DESIGNATION b		AUTHORIZATION PROGRAM	
	PRIORITY	PAGE NO	ESTIMATED COST (\$1000)	FUNDING PROGRAM
740	224 - Main Post Office	3 27	13,725	497
			13,725	497
		SF	13,725	497

\* \$29,000 one-time cost for easement.

Mr. SIKES. The request is for \$497,000 for a main post office. Now, explain the need for this post office.

General DALRYMPLE. This is to replace an existing post office housed in a World War II temporary building so as to provide badly needed interior space for both employees and patrons. It will also provide the necessary security and additional loading and maneuvering space for the trucks. The present structure causes an inefficient utilization of personnel and delays in the processing of mail.

Upon completion of this construction we will demolish 11,100 square feet of a temporary facility.

Mr. SIKES. Are there no other permanent facilities available which could house the post office at Fort Campbell?

General DALRYMPLE. There is no facility which could be used for this requirement, sir.

Mr. SIKES. Are there questions?

Mr. PATTEN. I am just wondering, I have seen post offices go up heretofore. Now, this is close to 14,000 square feet and it looks like a lot of money. It is a modest building. The air conditioning runs it up by \$55,000. You say it is \$27.50 per square foot. Will it be more than one story?

General DALRYMPLE. There is a single story building here. \$27.50 a square foot with air conditioning, we feel, is a good price. It has an index of one, that is, a geographical cost index of one which would mean it costs the same as one would in the Washington area, which is about that price.

FORT GORDON, GA.

Mr. SIKES. Turn to Fort Gordon, Ga. Insert in the record page 28. (The page follows:)

FORT GORDON, GA., \$31,447,000

Fort Gordon is located 12 miles southwest of Augusta, Ga. The mission of this installation is to support the U.S. Army Southeastern Signal School, the U.S. Army Military Police School, the U.S. Army Civil Affairs School and assigned STRAF units. It is also currently an Army Training Center. The program consists of a 760-bed hospital.

*Status of funds*

Funded program not in inventory	\$42,245,000
Unobligated items, Jan. 31, 1970 (actual)	10,286,000
Unobligated items, June 30, 1970 (estimated)	10,286,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
61	Hospital	\$1,041	70

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Air conditioning and electrical system—27 units, family housing.	\$91	×	
1970	BOQ-299 units	3,226	×	
1970	SE signal school	6,405		×
1970	Tactical equipment shops	655		×



Mr. SIKES. The request is for \$31,447,000 for a hospital. This appears to be about the largest amount that I have seen requested for an Army hospital.

Mr. TALCOTT. It is more like a NASA project.

General DALRYMPLE. It is a large hospital, sir. Its cost per square foot is \$45.75. It is a 760-bed hospital which is quite a large one, sir.

Mr. SIKES. How does that compare with the cost of civilian hospitals?

Colonel HAAS. I am not really familiar with the cost of civilian hospitals, sir, but I can furnish it for the record.

Mr. SIKES. All right.

(The information follows:)

In the most recent review of medical building costs published by McGraw-Hill's construction weekly, "Engineering News Record," June 19, 1969, the mean per-square-foot cost for general hospital buildings, including fixed equipment, was \$36.92 for the South. This mean is based on five contract awards during the first half of 1968 for hospitals over 100 beds which received Hill-Burton funds. "Engineering News Record," December 18, 1969, showed an increase in building costs of 10.9 percent through December 1969 and forecast an 8.7-percent increase for 1970. Using these estimates a mean cost of \$44.50 per square foot can be expected for general hospitals in the South by the end of 1970. The Veterans' Administration experienced costs of \$34.31 per square foot at their hospital in Tampa, Fla., contracted in October 1968. In July 1969 their hospital at Lexington, Ky., was contracted at a cost of \$43.46 per square foot. In 1969 the Department of the Air Force experienced a cost of \$46.56 per square foot for their composite medical facility at Columbus Air Force Base, Columbus, Miss. Mr. John G. Steinle, consultant, in the January 1970 issue of "Hospital Topics" reviewed estimates of cost for hospital construction by department. The median costs of construction per square foot which he reports are as follows:

<i>Area</i>	<i>Median cost, square feet</i>
Pharmacy -----	\$56. 70
Central service-----	49. 65
General stores-----	29. 76
Housekeeping -----	31. 30
Dietary -----	42. 60
Cafeteria -----	37. 20
Radiology -----	68. 90
Radiotherapy -----	92. 74
Radioisotope laboratory -----	82. 61
Surgical suite-----	106. 74
Labor suite-----	68. 76
Delivery suite-----	93. 34
Laboratory (exclusive of morgue)-----	82. 17
Morgue -----	42. 64
Emergency -----	67. 29
Intensive care-----	53. 20
Postsurgical recovery-----	51. 17
Coronary care-----	62. 39
Nurseries and related areas-----	58. 97
Medical records-----	46. 74
Physical medicine and rehabilitation-----	39. 96
General offices-----	37. 90
Business office-----	38. 67
Medical-surgical nursing area (including circulation)-----	48. 94
Obstetric nursing area (including circulation)-----	44. 79
Pediatrics (including circulation)-----	52. 34
Psychiatry (including circulation)-----	47. 94
Lobby and related areas-----	38. 24
Boiler plant-----	32. 74
Maintenance and shops-----	29. 62

Mr. TALCOTT. May I suggest that you compare it with the Veterans' Administration hospitals also, which I think might be more compara-

ble than civilian hospitals with their obstetrics, geriatrics, and all that sort of thing which may be involved.

Mr. SIKES. That is a very good suggestion.

Mr. CARTON. The Veterans' Administration hospital comparison back in 1964 was about \$37 a square foot. That was the price from 1964 for a comparable hospital.

Mr. TALCOTT. In Georgia?

Mr. CARTON. No, sir. That was North Carolina, Oteen, N.C.

Mr. TALCOTT. How many beds were in that one?

Mr. CARTON. It is a 500-bed hospital.

Mr. SIKES. See what you can provide in the way of comparable current costs for private and Veterans' Administration hospitals.

Mr. CARTON. Yes, sir.

(The information follows:)

The average cost of 12 recently constructed civilian and three Veterans' Administration hospitals adjusted for cost growth and to the Fort Gordon area index are respectively \$45.64 per square foot and \$49.87 per square foot. Fort Gordon hospital is programed for \$45.75 per square foot.

Mr. SIKES. The statement given to the committee earlier indicated that this would serve as a Southeastern central hospital. How is it proposed that this will be done?

Colonel HAAS. The hospital is now serving as a specialized treatment center for Southeast Asia patients. Some time ago we completed a study and found that about 30 percent of our troop strength was in this part of the United States. Therefore, it seemed logical that instead of shipping them to Walter Reed or to Brooke, that they should be kept as close to their training area as possible because of the economic aspects and rapid return.

Mr. SIKES. Would this make it possible to reduce the hospital facility requirements at any other base?

Colonel HAAS. We feel that after Southeast Asia they may, sir.

Mr. SIKES. Is there anything projected now in the way of future reductions?

Colonel HAAS. At this time; no, sir.

Mr. SIKES. You are going to build a new Walter Reed, and a new hospital for the patients of the Southeastern area, at Fort Gordon. Does that mean that the requirements for Walter Reed will be lessened?

Colonel HAAS. No, sir. Valley Forge is rapidly deteriorating. This is also a regional hospital. We are uncertain as to how much longer that particular facility can be maintained.

Mr. SIKES. Which of the functions currently stationed at Fort Gordon is scheduled to be retained in the long range on the program?

Major MORRISON. All major functions currently stationed at Fort Gordon are scheduled to be retained in the Army's long-range program. These functions include the following major activities: Southeast Signal School, Military Police School, Civil Affairs School, U.S. Army Training Center, U.S. Army Hospital, U.S. Army Garrison, and miscellaneous units.

Mr. SIKES. Provide for the record a listing of the number of personnel presently assigned to each of the major activities here and the number contemplated for the long-range program.

(The information follows:)

Following are the authorized military strengths and student/trainee loads for major activities at Fort Gordon as of December 31, 1969:

Activity	Authorized TOE/TD strength	Student/trainee load
Southeast Signal School.....	3, 876	8, 490
Military Police School.....	490	414
Civil Affairs School.....	79	55
U.S. Army Training Center.....	2, 326	8, 033
U.S. Army Hospital.....	1, 035	-----
U.S. Army Garrison.....	1, 134	-----
Miscellaneous units.....	115	-----
Total.....	9, 055	16, 992

The planned long-range strength for Fort Gordon is 25,359 military. Based on fluctuations in the overall Army strength, together with deployments of units and individuals, modifications can be expected which would serve to influence the strength of specific units and activities at any given point in time. However, the overall long-range strength will remain relatively constant.

Mr. PATTEN. Mr. Chairman, if you say it fast, it is \$40,000 per room. Now, in New Jersey, we put up 100 rooms 2 years ago for \$2,400,000 which would be about \$24,000 per room. Our hospital was brick, fire-proof, fire resistant, with auditoriums and cafeteria and other facilities. This is a high figure, I think, compared to private hospitals. You probably can justify it.

General DALRYMPLE. Did you say \$45,000 per room?

Mr. PATTEN. I said \$40,000 a room. You have 750 beds which times \$40,000 would be \$30 million instead of \$31 million. That \$40,000 does not include any land values. Will it include the cost of demolition—

General DALRYMPLE. The chairman asked us to compare this particular project not only with civilian hospitals but also with Veterans hospitals which may be more similar to Army hospitals. The reason for that is the difference in the markup of the buildings. If you wish to go to see your doctor in New Jersey you would not go to a hospital to see him, you would go to a medical office center. When a military man goes to see his doctor he goes to a hospital because the clinic is in the hospital along with the beds.

So to take the overall value or cost of a hospital and divide it by the number of beds you are certain to come out with a cost per bed that would differ widely from civilian hospitals because of this extensive outpatient or clinical area contained in the hospital itself.

Mr. SIKES. When was the requirement for this hospital originally surveyed? Has this requirement been reconfirmed in the last year?

Colonel HAAS. The requirement for the project was surveyed by a Department of Defense committee on April 1, 1966. The scope of the project was approved by the Hospital Planning Review Committee, Office of the Secretary of Defense, on April 7, 1967. The requirement for the project was last reconfirmed by the committee on October 2, 1969.

Mr. SIKES. What is the cost index in this area?

General DALRYMPLE. The cost index for Fort Gordon is 0.95.

Mr. SIKES. Do you feel that you can build this project at the required scope and within the cost estimate?

General DALRYMPLE. The hospital at the present time, sir, is 72 percent in design. That is well along and we think we have a good figure here. We think we can build it with the money that is in this budget sir.

Mr. SIKES. When could you initiate construction?

General DALRYMPLE. Next December, we hope.

Mr. SIKES. How does the estimated cost of this hospital compare with recent experience by the Army or other services in hospital construction?

General DALRYMPLE. The average cost of 12 recently constructed military hospitals—Army and Air Force—adjusted for cost growth and to the Fort Gordon area index is \$45.52 per square foot. Cost of the Fort Gordon Hospital requested here is \$45.75 per square foot.

Mr. SIKES. Does this hospital incorporate any of the operating expense-saving design features which are being studied by the Office of the Secretary of Defense?

Colonel HAAS. Sir, this hospital was too far along in design to take advantage of a study that will not be completed until next September, if you are speaking of the new generation of hospitals study.

Mr. SIKES. Have you taken advantage of any cost saving features in civilian hospitals or Veterans hospitals that have become known in recent months?

Colonel HAAS. We are incorporating in this a completely new automated materials handling system that we feel will have some labor-saving connotations.

Mr. SIKES. Would it be advantageous to postpone this construction until the labor-saving operating expense design features can be included?

Colonel HAAS. I do not believe so, sir. This is of course, my opinion. Again, some of these things that they are developing may or may not in the long run save people.

Mr. SIKES. Are there questions?

Mr. TALCOTT. Mr. Chairman.

When was this hospital originally proposed?

General DALRYMPLE. It was authorized but not funded in fiscal year 1969.

Mr. TALCOTT. 1969 was really the first time it came up. You have always been sort of timid about proposing hospitals of even \$16 million in value. Yet here all of a sudden you have a \$31 million hospital. How do you get so bold for this area?

General DALRYMPLE. The load?

Mr. TALCOTT. No. Why so bold a proposal here? Usually you would have done it incrementally or you would have had it in the pipeline for a few more years.

General DALRYMPLE. This is replacing a hospital that was built in World War II that has a 1,600-bed capacity. The daily load for fiscal year 1969 was 879 beds per day. So we are after a large hospital. This is one of the major hospitals, as was pointed out, that we have had under consideration. Compared to the small hospital at Fort Benjamin Harrison and the small one at West Point, this is a major effort, sir.

Mr. TALCOTT. Have you estimated what the increase in personnel will be, that is, hospital personnel such as doctors, nurses' aides, and all this after the completion of the hospital?

Colonel HAAS. Sir, we are already operating, as the General said, over 800 beds there now. We presume the staffing will be approximately what it is there now. It is a specialized treatment center for the Southeast Asia effort.

Mr. TALCOTT. What are the specialties involved?

Colonel HAAS. There would be specialties of general surgery, general medicine, obstetrics, pediatrics, psychiatrics, orthopedics, ophthalmology—

Mr. TALCOTT. Everything at the hospital is a specialty, then; is it not?

Colonel HAAS. Yes, sir.

Mr. TALCOTT. I forgot how you categorize these things.

I have no further questions.

Mr. SIKES. How many beds do you expect to operate after it becomes a southeastern regional hospital center?

General DALRYMPLE. I would anticipate it would be 760 beds. Now, some of those are earmarked for OB cases, some for retired veterans.

Mr. SIKES. What is the total capacity of the new hospital to be?

General DALRYMPLE. 760 beds, sir.

Mr. SIKES. What will you do with the existing buildings?

General DALRYMPLE. We intend to tear down 138 temporary buildings with almost 500,000 square feet. This hospital at the present time is in 138 separate wooden World War II buildings.

Mr. SIKES. Are there further questions?

(No response.)

FORT JACKSON, S.C.

Turn to Fort Jackson, S.C. Insert in the record page 29A.  
(The page follows:)

FORT JACKSON, S.C., \$363,000

Fort Jackson is located at Columbia, S.C. The mission of this installation is to command, train and support an Army Training Center and to support reserve component summer training. The installation also commands and supports a U.S. Army Reception Station. The program provides for deficiency funding for a sewage treatment facility authorized by Public Law 89-568.

*Status of Funds*

Funded program not in inventory-----	\$44, 829, 000
Unobligated items, Jan. 31, 1970 (actual)-----	12, 372, 000
Unobligated items, June 30, 1970 (estimated)-----	12, 372, 000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
72	Sewage treatment facility (DEF)-----		(1)

<sup>1</sup> Being designed by the city of Columbia, S.C.

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status, March 10 1970	
			Released	Deferred
70	BOQ—161 units-----	\$1, 835	-----	X
70	Central heating and cooling plant-----	2, 077	-----	X
70	Em barracks complex (2500)-----	8, 460	-----	X

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Jackson		9. COUNTY (U.S.) South Carolina	10. NEAREST CITY Columbia
4. COMMAND OR MANAGEMENT BUREAU Third United States Army		5. INSTALLATION CONTROL NUMBER South Carolina 455		6. STATE/COUNTRY South Carolina	
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1917		9. COUNTY (U.S.) Richland	
11. MISSION OR MAJOR FUNCTIONS					
12. PERSONNEL STRENGTH					
Command, training and logistical support of a major Recruit Training Center, and a U. S. Army Reception Station. Support of summer reserve component training.					
13. INVENTORY					
LAND		ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)
a. OWNED		52,593	1,550	83,641	85,191
b. LEASES AND EASEMENTS		6	3*	0	3
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69					
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$		44,829	0	0	85,194
e. AUTHORIZATION REQUESTED IN THIS PROGRAM					44,829
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS					0
g. GRAND TOTAL (c + d + e + f)					29,340
					159,363
SUMMARY OF INSTALLATION LINE ITEMS					
CATEGORY CODE NO. a	LINE ITEM DESIGNATION		UNIT OF MEASURE	FUNDING PROGRAM	
	LINE ITEM TITLE b	Priority	c	ESTIMATED (\$000) (f)	ESTIMATED (\$000) (g)
831	PRIOR AUTHORIZATION P.L. 89-568 72 - Sewage Treatment Facility (DEF)	1	d		363

Mr. SIKES. The request is for a sewage treatment facility, in the amount of \$363,000. This is a deficiency item.

General DALRYMPLE. That is correct, sir.

Mr. SIKES. Explain the situation, please.

General DALRYMPLE. The Government's share of this project is now estimated at \$2.1 million. It was authorized in fiscal year 1967 at \$1,441,000 and subsequently in fiscal year 1969, there was a deficiency authorization of \$304,000. The current working estimate requires an additional deficiency authorization of \$363,000. That is the amount this project requests, sir.

The higher cost is a result of the withdrawal of the Jackson-Gills Creek Public Service District from participation in the project. This is a joint project with the city of Columbia, S.C. This district was originally going to participate in the cost of operating this system.

Mr. SIKES. Why is it not doing so?

Mr. NORWOOD. No, sir, I cannot give the reason why they withdrew.

General DALRYMPLE. We can provide that for the record.

Mr. NORWOOD. They just decided not to, as far as I know.

Mr. SIKES. So the U.S. Government had to pick up the tab?

General DALRYMPLE. Pick up their part of the tab. It is a part of the tab. The total cost of the project is \$13,572,000. The Government part of it is \$2,108,000, sir.

Mr. SIKES. Was there no binding agreement that the different groups would carry out their responsibility?

General DALRYMPLE. I would have to provide that for the record, sir.

Mr. TALCOTT. I would like to know if we are going to be proceeding ahead of the other local systems, if we are going to be providing a better service or a more complete service.

General DALRYMPLE. No, sir. This is a joint project with the city of Columbia, which is still the major contributor to the system.

Mr. TALCOTT. I see. So only part of the group withdrew?

General DALRYMPLE. That is right. This Jackson-Gills Creek Public Service District is the one. I will have to determine the reason for their withdrawal and if I can, I will try to determine the cost of their participation before they withdrew.

Mr. SIKES. Will this amount complete the requirements?

General DALRYMPLE. Yes, sir.

Mr. SIKES. Are there further questions?

Mr. PATTEN. Will their failure to participate negate our good work?

General DALRYMPLE. No, sir. This is a project which is being constructed by the city of Columbia, S.C.

Mr. PATTEN. But if this district is not going to participate, will they still pollute the water?

Mr. NORWOOD. I do not know, truly, what this public service district is doing in the way of taking care of their portion of the pollution load. They had every opportunity to join this overall community effort with the city of Columbia, and Fort Jackson and, of course, the Jackson-Gills—

Mr. SIKES. This group which has dropped out of the project, will it benefit from the project?

Mr. NORWOOD. I do not see how they could. They will have no connection with it, no part in it.

Mr. SIKES. If they were not going to have any benefit why would they have ever been in it?

Mr. NORWOOD. They were never in it. They were offered the opportunity to be in it and they declined after dragging their feet for almost 2 years. They then finally declined to join.

Mr. SIKES. Provide the details for the record.  
(The information follows:)

A preliminary report was prepared in 1964 by an engineering firm for the city of Columbia, S.C. to study the feasibility for the city of Columbia to participate with West Columbia and the Jackson-Gills Creek Public Service District in construction of primary sewage treatment facilities. The costs were prorated for each party on the basis of proportionate sewage flows.

In 1965 the Army inquired on the possibility of Fort Jackson participating in the community facilities. The engineer furnished the city of Columbia a revised study to include Fort Jackson, again prorating all the costs on the basis of flow. A project for \$1,441,000 was authorized and funded in the fiscal year 1967 MCA program to participate with the city. Subsequently the State of South Carolina and the Federal Water Pollution Control Administration determined that the proposed community plant should provide secondary treatment. Again Fort Jackson's share was prorated on the basis of flow and a project was authorized and funded in the fiscal year 1969 MCA program for \$304,000 to provide the Army share for secondary treatment.

The Jackson-Gills Creek Public Service District has had a sewer line to the Congaree River for several years, and therefore determined that it could build its own secondary plant at the river at less expense than participating with the city of Columbia. This it decided to do.

Subsequently the municipal plant size was reduced from 23 million gallons per day to 20 million gallons per day. Redesign was necessary, and the time lapse had necessitated re-estimating all the costs to be consistent with attendant cost growth. Thus the Fort Jackson share, still based on prorata share of flow, requires the new request for \$363,000 in the fiscal year 1971 MCA program.

A study has been completed (February 1970) considering the feasibility of unilateral sewage treatment plant construction by Fort Jackson versus participation with the city of Columbia at a total estimated cost of \$2,108,000. The study reveals that over a 25-year period it will be more economical for Fort Jackson to provide its proportionate share of construction costs and operation and maintenance costs of the proposed municipal facilities than to construct, operate, and maintain its own facilities.

#### FORT RUCKER, ALA.

Please turn to Fort Rucker, Ala. Insert in the record page 30.  
(The page follows:)

#### FORT RUCKER, ALA., \$1,435,000

Fort Rucker is located 10 miles south of Ozark, Ala. The mission of this installation is support of the Army Aviation Center where individual pilot training for fixed and rotary wing Army aircraft is conducted. It also supports advanced training for organization maintenance of aircraft. The program consists of an aviation accident research building.

#### *Status of funds*

Funded program not in inventory-----	\$13, 730
Unobligated items, Jan. 31, 1970 (actual)-----	8, 316
Unobligated items, June 30, 1970 (estimated)-----	5, 697

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
177	USARB aviation accident research building.....	70	25

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
70	WO advanced training facilities.....	\$1,293	×	
70	Instrument trainer building.....	1,326	×	
70	Cold storage warehouse and meat processing.....	604	-----	×
70	BOQ—140 units.....	1,457	-----	×
70	USAAVNS maintenance instruction facility.....	3,636	-----	×

1. DATE	2. DEPARTMENT	3. INSTALLATION								
2 Feb 1970	ARMY	Fort Rucker								
4. COMMAND OR MANAGEMENT BUREAU		6. STATE/COUNTRY								
Third US Army		Alabama								
7. STATUS		9. COUNTY (U.S.)								
Active		Ozark, 10 miles North								
11. MISSION OR MAJOR FUNCTIONS		10. NEAREST CITY								
Support of the Army Aviation Center whose mission is to provide individual pilot training for all fixed wing and rotary wing aircraft and advanced training for organization maintenance; and development of aviation doctrines and techniques.		Dale and Coffee								
12. PERSONNEL STRENGTH		PERMANENT								
a. AS OF 31 Oct 1969		OFFICER (1)								
b. PLANNED (End FY LR)		ENLISTED (2)								
		CIVILIAN (3)								
		OFFICER (4)								
		ENLISTED (5)								
		OFFICER (6)								
		ENLISTED (7)								
		CIVILIAN (8)								
		TOTAL (9)								
		20,723								
		8,008								
13. INVENTORY		SUPPORTED								
LAND		LAND COST (\$000)								
a. OWNED		IMPROVEMENT (\$000)								
b. LEASES AND EASEMENTS		TOTAL (10)								
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		86,404								
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____) (Unfunded - \$ _____)		0								
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		0								
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		13,730								
g. GRAND TOTAL (c + d + e + f)		18,939								
		120,508								
SUMMARY OF INSTALLATION LINE ITEMS										
CATEGORY CODE NO.	LINE ITEM DESIGNATION		TENANT COMMAND		UNIT OF MEASURE		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
	LINE ITEM TITLE	Priority	Page No	SCOPE	ESTIMATED (\$000)	SCOPE	ESTIMATED (\$000)	SCOPE	ESTIMATED (\$000)	
610	177 - U. S. Army Board Aviation Accident Research (USABAAR) Building	1	31	41,463	1,435	SF	41,463	41,463	1,435	

\* \$500 one-time cost for easement.

## ARMY'S FLIGHT TRAINING PROGRAM

Mr. SIKES. What are the present flight training missions of Fort Rucker, Fort Stewart, and Fort Wolters? Will all three be permanent flight training centers? Provide detailed information on that for the record.

(The information follows:)

Fort Rucker, Ala., conducts advanced fixed wing and rotary wing training for initial entry student pilots, and conducts numerous courses to provide advanced qualification for rated aviators. Student output from initial entry training for fiscal year 1971 is forecast to be approximately 5,500 officer aviators. Fort Wolters, Tex., conducts primary flight training for initial entry rotary wing aviators, including foreign military. Fiscal year 1971 student output is forecast to be 4,500 student aviators who then enter advanced training phase at either Fort Rucker or Fort Stewart. Fort Stewart/Hunter Army Airfield conducts primary flight training for fixed wing aviators; advanced rotary wing training for Vietnamese Air Force student pilots; and flight training for qualification in the AH-1G (Huey Cobra). Projected aviator output for fiscal year 1971 is just under 3,000. Department of the Army initial entry training requirements for fiscal year 1972 through fiscal year 1975 (active duty United States) is projected at approximately 3,000 per year, assuming a significant reduction in Southeast Asia requirements.

Fort Rucker and Fort Wolters will be retained as permanent flight training facilities for the long-range future. Flight training at Fort Stewart/Hunter AAF will continue until resources at Fort Rucker and Fort Wolters can handle all training requirements. Current training courses at Stewart which may remain there so long as the requirement exists are the AH-1G (Cobra) qualification courses (1,100 pilots to be trained in fiscal year 1971), and the advanced rotary wing course for VNAF pilots (680 in fiscal year 1971). Fort Stewart/Hunter AAF will not be a permanent aviation training facility.

Mr. SIKES. What is the basis for the significant decline in long-range personnel strength at Fort Rucker?

Colonel GALLIHER. The long-range personnel strength figures reflect the installation's authorized strength in accordance with the current Department of the Army stationing plan for permanent construction. The significant decline from currently assigned strengths reflects the greatly reduced aviation training requirements foreseen following the cessation of hostilities in Vietnam and return to peacetime strengths and training requirements. This reduction in training requirements and personnel strengths at Fort Rucker will not result in any excess of permanent facilities as there are presently over 900 mobilization type World War II temporary buildings still in use on the installation.

## AVIATION ACCIDENT RESEARCH BUILDING

Mr. SIKES. The request is for \$1,435,000 for the U.S. Army Board Aviation Accident Research Building. What are you using there now?

General DALRYMPLE. The activities are presently housed in 10 World War II type mobilization buildings and in a classroom facility in which is located the automatic data processing equipment. These 10 World War II buildings consisting of some 33,000 square feet will be demolished upon the completion of this project. This item would provide a modern permanent facility for this mission which is expanded research activities for the U.S. Army Board Aviation Accident Research.

Mr. SIKES. Does this board function other than at Fort Rucker?

General DALRYMPLE. This is the home of the research board, sir.

Mr. SIKES. Is this its headquarters and also its home?

General DALRYMPLE. That is right, sir.

Mr. SIKES. It does not operate elsewhere?

General DALRYMPLE. No, sir. It obtains data from other places where accidents occur but this is where the research on accidents is performed.

Mr. SIKES. Are there other buildings at other flight training centers such as Fort Stewart or Fort Wolters which could accommodate this function?

Colonel GALLIHER. We have researched this and we have not found any suitable building at Fort Wolters or Fort Stewart or other locations where we would put this facility. One of the primary reasons for being at Fort Rucker is that is the Army's aviation training center and there are several other aviation-related activities at Rucker which the board deals with directly in their accident research program.

Mr. SIKES. There is a significant decline in the long-range personnel strength here, I presume in anticipation of a drop in the pilot training rate following the Vietnamese war. Would that have any bearing on the requirements for this structure?

Colonel GALLIHER. No, sir. We do not feel that any decline in aviation activities would affect our need for this structure. There will be a decline in the pilot training rate, we are aware of that. We feel, however, that the significant growth that we have experienced in Army aviation, though it will level off, will continue at a high level for the future and that our accident experience has shown that our safety program has not kept pace with our growth in aviation activities. We feel we need to increase the capabilities of this research activity.

Mr. SIKES. Have you taken into account the fact that there will be a reduction in the number of personnel in training and thereby a lessened requirement for some facilities either at Fort Wolters, Fort Walker or Fort Stewart? From that standpoint have you sought to determine whether there are existing facilities which could meet this requirement?

Colonel GALLIHER. Yes, sir. We have considered that. The Stewart-Hunter complex, for instance, is programed for the long-range stationing of a division. Flight training activity even though phased out of there will not generate any additional facility. The facilities at Fort Wolters will continue as our primary helicopter training school. The facilities there are also primarily World War II construction as they are at Fort Rucker. So we do not foresee that any permanent facilities will be generated by any phasedown in aviation training.

Mr. SIKES. What is the status of procurement of the ADPE equipment to be housed in the U.S. Army Board aviation accident research building? When will this equipment be delivered to the site? What is the estimated construction time for this facility?

Colonel GALLIHER. We have programed procurement of ADPE during second quarter fiscal year 1972. Delivery schedules will be planned to permit installation at an appropriate time in the building construction schedule and allow the earliest use following completion of the building and equipment installation. Normal time for construction of this type and size facility would be about 15 months.

Mr. SIKES. How is this ADP activity carried out at the present time?

Colonel GALLIHER. The present method of accident research and data analysis is a manual/mechanical system using punched card records. Each accident is coded and recorded on a series of punched cards. The limited number of accident parameters which can be coded by this method are then analyzed and compared to accumulated data on past accidents to identify trends and possible cause factors which should receive further analysis and investigation. Analyses requiring information from reports which cannot be coded on punched cards because of their limited capacity must be processed manually by detailed review of the accident report from the field and manual comparison with earlier accident reports. Planned use of ADPE will permit electronic storage and programed processing of much more accident information from each field report. Data will be available by instantaneous retrieval and accident cause factors and trends can be monitored and identified by appropriate computer programing. Starting in the fourth quarter fiscal year 1970, USABAAR will have an interim ADPE capability through use of a contracted service. This ADPE contracted service is part of the contract to identify ADP programs and equipment required to achieve the modern management information system required for this activity. This interim system gives us an immediate ADP capability while permitting us adequate time to develop and trouble-shoot software programs and accurately identify ADPE capabilities required.

Mr. SIKES. What number of personnel have been assigned to this activity for the last 3 years, and what is anticipated for the long-range program?

Colonel GALLIHER. The average end-of-month strength for calendar year 1967 was 74; for calendar year 1968, 89; and for calendar year 1969, 113. The long-range program for this activity projects a requirement for an authorized strength of 239; however, assuming reduced workloads expected in the post-Vietnam era and expected budget restraints, this number may not be reached or required.

Mr. SIKES. Under survival measures you list a unit cost of \$80. Do I have the right impression?

Colonel GALLIHER. Yes, sir. This figure was questioned earlier and I have checked and have been assured by the district engineer at Mobile that these figures are in line with their most recent experience in survival construction, the most recent experience they have had being in the past year at \$75 per space.

Mr. PATTEN. Again there comes to my mind the problem of duplication. We hear in the civilian field of the FAA doing research and tests on accidents. We hear of at least one other governmental unit doing research. Would you say there is no duplication here?

General DALRYMPLE. We have gone to the other services and to the FAA to determine if this mission could be collected with their missions. We have found that the environment under which Army aircraft operate as compared to the high performance aircraft of the Air Force, are dissimilar. Both the Navy and the Air Force have their laboratories. The Army is in need of its laboratory to investigate and research accidents it is having. A relatively high number of Army aircraft are involved.

Mr. PATTEN. No further questions.

## ARMY AIR SUPPORT

Mr. TALCOTT. Mr. Chairman.

Is there some division in the Army so far as the philosophy toward the use of air support by the Army? Is there an intramural squabble about this? Some generals may be thinking they do not need Army provided air support and some generals may want it. You might have a new commander at a certain base who will emphasize air support and then another commander comes in and says, "We do not need air support" so he disestablishes the airfield in connection with an Army base.

General DALRYMPLE. That has not come to my attention. Of course, it probably wouldn't in my business. But I do, for example, know that in Vietnam we used both types of air support, high performance support from the Navy and from the Air Force, and the Army has gunships such as the Armed UH-1's and the Cobra that are organic to the Army.

Mr. TALCOTT. But you have not noticed any intramural argument that has caused you trouble so far as programing construction of airfields?

General DALRYMPLE. No, sir; I know of none.

Mr. TALCOTT. The reason I asked, Mr. Chairman, is that at Fort Ord, Calif., which is in my district, suddenly some years ago they built an airfield right next to the Army base to use for air support training and proficiency requirements, this sort of thing. This was a surprise to us in the area because they took a section of land which many of the local people had anticipated for a district airfield. Suddenly the Army built an airfield on that piece of land. It did it so quickly, overnight, that they have the landing strip directed in the wrong direction: about 30 degrees away from the prevailing wind. Then recently they sort of disestablished it, and this is good news to the local people because they think they may be able to get this property back for the purpose of a district airfield.

But it suggests to me that maybe there is some intramural problem within the Army about whether they really need Army air support, are really going to use it, or whether they intend to go ahead with air training within the Army, that sort of thing. I think we should know in developing airfields and the type of a program we are discussing here, if the Army is or is not going to supply air support. Perhaps we should let the Air Force carry out this program.

General DALRYMPLE. I know of no such controversial idea, sir.

Mr. TALCOTT. I hope not, because I think air support is very helpful.

General DALRYMPLE. I am sure you would find a lot of high ranking commanders in Vietnam today who think so, too. As a matter of fact, one of General Abrams' deputies, as you know, is a deputy for air.

Mr. TALCOTT. No further questions.

Mr. PATTEN. This project reminds me of when we used to have fun with the alphabet, this USABAAR is really something, they are really pressing the limit here.

## MARIANNA AIRFIELD

Mr. SIKES. One of your outlying fields has been Marianna Airfield, formerly an air base. There is very considerable use of that field by aircraft from Rucker, which has resulted in considerable wear and tear

on the field. I have discussed with General Shuler some corrections and repairs which I think are justified. I understand that there is some question as to whether you will continue to use the field or not. But whether or not it is needed in the future, I think the Government has a responsibility for bringing it up to date, placing it back in the condition, or as nearly in the condition it was in when you found it. Will you follow through and advise me of what you find?

FORT STEWART, GA.

Turn to Fort Stewart, Ga. Insert in the record page 32.

FORT STEWART, GA., \$1,534,000

Fort Stewart is located about 42 miles southwest of Savannah, Ga. Its mission is to maintain and operate armor and artillery firing ranges for visiting active Army units and to support Reserve component summer training. It operates and maintains the U.S. Army Flight Training Center. The program consists of two projects for electrical distribution systems improvements.

*Status of funds*

Funded program not in inventory	0
Unobligated items, Jan. 31, 1970 (actual)	0
Unobligated items, June 30, 1970 (estimated)	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
93	Convert 4.16 kv. system to 13 kv.	\$23	25
96	Electric distribution system improvement HAAF	61	24

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.				



Mr. SIKES. The request is for \$1,534,000 for an electrical distribution system improvement for \$1,150,000 and converting a 4.16-kilovolt system to 13-kilovolt system in the amount of \$384,000.

Would you explain the significance of the change in personnel strength, the long-range strength from 3,000 to 24,000?

General DALRYMPLE. The form 1390 shows the strength as of October 1969 being 15,000 and the planned long-range strength as 24,000.

Mr. SIKES. Last year the long-range strength was shown as 3,000 and this year it is projected to be 24,000. Is this all due to the division to be put here?

General DALRYMPLE. Yes, sir. It is based on the planning mentioned by Colonel Galliher, that consideration was being given to putting a division in the Fort Stewart-Hunter complex.

Mr. SIKES. Are there facilities available?

General DALRYMPLE. There is a significant amount of facilities that could be used, particularly the flying facilities themselves.

Mr. SIKES. Are they not World War II facilities in the main?

General DALRYMPLE. The flying facilities at Hunter are first rate, sir.

Mr. SIKES. Not the flying facilities but the living and training facilities.

General DALRYMPLE. We would need to put in some troop housing at Stewart and we need to build some family housing. The facilities that were built in support of Southeast Asia, the gunnery ranges and items of that nature, are all ones that we could use for a division should we station one there.

Mr. SIKES. We are talking about \$72 million worth of construction requirements, are we not?

General DALRYMPLE. That is what we list as requirements for the next 4 years based on a division going into those locations.

Mr. SIKES. This does not include family housing. What family housing will there be?

General DALRYMPLE. Let us provide that for the record, sir.

Mr. SIKES. Then you are talking about more than \$100 million in total for the Fort Stewart complex in the next 4 to 5 years. That represents a large part of what, I must regretfully assume, will continue to be a small construction program nationwide. Now, I am sure that you are going to give careful thought to a program of that type before you embark upon it. I do not presume to tell you where you should locate a division, but you would certainly be subjected to some very searching questions on the availability of other areas when you ask for this kind of money.

General DALRYMPLE. We recognize that, sir.

Mr. SIKES. Is this a firm decision or is this one that is being discussed?

General DALRYMPLE. It is being discussed, sir.

Mr. SIKES. I would like to have a listing for the record of the requirements anticipated at Fort Stewart and Hunter in the event it is decided to place a division there.

(The information follows:)

The Army has identified a long-range requirement of \$108 million in MCA and \$40 million in family housing funds to accommodate a division at Fort Stewart/Hunter. The MCA requirements were developed from a stationing study. A listing by category is as follows:

Facility class :	<i>Estimated cost (million)</i>
Operational and training facilities-----	\$2.6
Maintenance facilities-----	7.2
Supply facilities-----	4.1
Hospital and medical facilities-----	9.3
Administrative facilities-----	1.6
Troop housing and community support facilities-----	78.6
Utilities and grounds improvement-----	4.6
Total -----	108.0

Mr. SIKES. Would there be a requirement for the type of facilities we have been discussing other than for a division?

Colonel BLANK. After the phasedown, the ranges that were built at Fort Stewart would continue to be used for general training. However, the other training facilities would be devoted principally to this division helicopter and fixed-wing training would revert to Fort Wolters and Fort Rucker.

Mr. SIKES. All the utility projects now before us in the amount of \$1,534,000, are in support of the long-range base usage plan or the current use?

Colonel BLANK. Yes, sir. The long-range use of the plant there.

Mr. SIKES. Does that mean that if a division were not placed there you would not need these items?

Colonel BLANK. If Fort Stewart is to continue to be used, sir, the upgrading of the electrical system would be needed to support current operations. The same is generally true of Hunter Army Airfield. However, if the division does not go into Hunter Army Airfield then its mission would be questionable; that is, the whole installation's mission.

Mr. SIKES. Will the projects requested here complete the requirements in the respective areas?

General DALRYMPLE. Yes, sir, for upgrading the electrical distribution systems at Fort Stewart/Hunter.

Mr. SIKES. I am not sure that I understand you on the previous question. For the current training program aside from the possible use for a division will you need these two items?

Colonel BLANK. Yes, sir.

Mr. SIKES. Questions? If there are no questions, gentlemen, we will resume the hearings at 10 o'clock in the morning. Thank you very much.

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WEDNESDAY, MARCH 4, 1970.

FORT BLISS, TEXAS

Mr. SIKES. The committee will come to order. We will take up first Fort Bliss. Insert in the record page 36.  
(The page follows:)

FORT BLISS, TEX.—\$1,527,000

Fort Bliss is located in El Paso, Tex. The mission of this installation is to provide facilities and support for the U.S. Army Air Defense Center, U.S. Army Air Defense School, and U.S. Army Air Defense Board. Fort Bliss supports and supervises training of general reserve and zone of interior type units and provides logistical support for William Beaumont General Hospital. It also operates an Army training center. The program consists of moving target simulator buildings.

*Status of funds*

Funded program not in inventory-----	\$6, 668, 000
Unobligated items, Jan. 31, 1970 (actual)-----	4, 309, 000
Unobligated items, June 30, 1970 (estimated)-----	2, 098, 000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
319	Moving target simulator buildings-----	\$70	30

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Chaparral-Vulcan training facility-----	\$1, 132	×	
1970	Confinement facility-----	927	×	
1970	Ammo area improvements-----	152	×	
1970	Electric feeder-Wm Beau Hospital-----	94		×
1970	GM maintenance buildings-----	2, 004		×



Mr. SIKES. The request is for \$1,527,000 for a moving target simulator building.

General DALRYMPLE. This is another of the five in this program, sir. This is for training the crews of the Redeye and Chaparral-Vulcan weapons. This will be the largest of the five. The other four are located at division stations and will be used to train division personnel. This is at the Air Defense Center and will be used to train a large number of men.

Mr. SIKES. Fort Bliss is a very large installation. I would assume that it has buildings that are not in use. Are there any which can house these simulators in a proper manner?

General DALRYMPLE. No, sir.

Mr. SIKES. Why not?

General DALRYMPLE. As you know, Fort Bliss is one of our very important stations; as I mentioned earlier, it is the Air Defense Center. It is constantly training personnel in the manning and maintenance of our Air Defense weapons. We even have seen fit to use part of Biggs Air Force Base to take care of the expansion at Bliss. We feel we need this particular building there, that we have no other place that we could house these simulators appropriately. This calls for a rather unique structure in that it has a high ceiling clearance in order to simulate the conditions under which approaching aircraft would appear to the gunner.

Mr. SIKES. What is the status of prior year construction at Fort Bliss?

General DALRYMPLE. We have five projects in the fiscal year 1970 program for \$4.3 million.

Colonel FRECH. The 1970 program, sir, as you know, included the electric feeder for William Beaumont Hospital in the deferred program; the guided missile maintenance buildings are in the deferred program. Also the confinement facility has been placed in the execution program under the 25 percent, and the same for the ammunition area improvements, which have also been placed in the execution program.

Mr. SIKES. What is the status of the Safeguard training facilities? Provide that for the record.

(The information follows:)

#### STATUS OF THE SAFEGUARD CENTRAL TRAINING FACILITY

During the past year, requirements for the Safeguard Central Training Facility have been reexamined. Initially it was intended to construct facilities to support a full 12-site deployment at a cost of approximately \$15 million. At present, the intent is to provide only what is required to support deployment of those sites currently recommended for approval, but with provisions for expansion should further deployments be made. Currently planned construction for the central training facility totals approximately \$7 million. We shall have details on this construction given in the Safeguard hearing you intend to hold on March 5 with the Safeguard system manager, and the division engineer, Huntsville Division, Corps of Engineers.

Mr. SIKES. Questions?

Mr. CEDERBERG. I have no questions. But I think this last question should be asked on every one of these projects because then when we go through we will know what has been deferred from previous appropriations. You may be asking these questions with respect to all of them. I have missed some of the questions.

Mr. SIKES. That is a good suggestion. Will you go back through the record, General, and provide in each instance a statement of the status of the prior year construction?

General DALRYMPLE. Off the record, please?

Mr. SIKES. Yes.

(Discussion off the record.)

Mr. CEDERBERG. Is there anyone here who can give me just a brief explanation of what the Redeye and Chaparral-Vulcan air systems are? What are we talking about?

General DALRYMPLE. I can address the Redeye, and we have someone here who can amplify on that later. It is a hand-held weapon for the individual soldier to use against aircraft. It is a heat-seeking infrared type weapon.

Mr. CEDERBERG. Is it for low-flying aircraft?

General DALRYMPLE. The data as to the range I will have to get from someone else.

Mr. SIKES. What is the effective range of the Redeye weapon in its present configuration?

Mr. GIBBONS. I do not have that information, sir.

Mr. CEDERBERG. Is it operational anywhere at the present time?

Mr. GIBBONS. The Redeye is operational. I just do not happen to know offhand the effective range of the weapon.

Mr. McFALL. Do you have a general idea?

Mr. GIBBONS. Normally, for low-flying aircraft over troops, sir, but to give the exact meters and so forth, sir, I just don't know.

Mr. McFALL. I presume it is half a mile, or something like that.

Colonel KJELLSTROM. I don't have the information on range. It has been classified Standard A since December 1968.

Mr. SIKES. This is a weapon that has had a long development history. It has had some difficulties in overcoming some of the earlier problems. Apparently these have been overcome. It is now in the hands of troops for testing and training. I don't know whether it has been issued for use in the field or not.

Colonel KJELLSTROM. Yes, it has been. Initial deployment of Redeye teams, exclusive of those in South Vietnam, was completed in August of 1969.

Mr. CEDERBERG. We do not have enemy planes flying over South Vietnam as of now, do we; low-flying planes?

Mr. SIKES. There is very occasionally a Mig. This is not the type of target that this would be used against.

Mr. CEDERBERG. I wouldn't think so.

Mr. SIKES. This normally is used against low-flying aircraft, normally the slower flying aircraft that would be used in close ground support. It is a hand-carried weapon. One individual can use it against low-flying aircraft.

Mr. McFALL. Similar to a bazooka or something like that?

Mr. SIKES. Yes. Much more sophisticated but the same concept as a bazooka. This is an antiaircraft weapon as opposed to an antitank weapon. It helps to keep enemy aircraft honest, keeps them from getting too close.

General DALRYMPLE. The Chaparral-Vulcan is a vehicle-mounted weapon, the Vulcan employs the Gatling gun principle of rotating barrels. It has some protection on the carrier for the operators of the weapon.

Mr. SIKES. Yes. It is armorplated.

Mr. CEDERBERG. We are talking about more sophisticated antiaircraft weapons, is that right?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. That is all.

General DALRYMPLE. May we go off the record?

Mr. SIKES. Off the record.

(Discussion off the record.)

FORT HOOD, TEX.

Mr. SIKES. Turn to Fort Hood, Tex. Insert in the record page 38. (The page follows:)

FORT HOOD, TEX.—\$218,000

Fort Hood is located at Killeen, Tex. The mission of this installation is to command, train, and support two armored divisions and a corps headquarters, and to support Reserve components summer training. The program consists of a moving target simulator building.

*Status of funds*

Funded program not in inventory	\$32,974,000
Unobligated items, Jan. 31, 1970 (actual)	15,370,000
Unobligated items, June 30, 1970 (estimated)	15,370,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
313	Moving target simulator building	\$17	30

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	10 enlisted mens barracks complex (3,300)	\$14,991		X
1970	Post office	379		X



Mr. SIKES. The request is for \$218,000, for another moving target simulator building. Is the requirement for this the same as those previously discussed?

General DALRYMPLE. It is the same as the buildings at the other division stations.

Mr. SIKES. Is there no existing building at this base which can be used?

General DALRYMPLE. This is true, sir.

FORT SAM HOUSTON, TEX.

Mr. SIKES. We will take up Fort Sam Houston, Tex., Mr. Reporter, please insert in the record page 40.

(The page follows:)

FORT SAM HOUSTON, TEX.—\$15,496,000

Fort Sam Houston is located at San Antonio, Tex. The mission of this installation is to support Headquarters, 4th U.S. Army and Brooke Army Medical Center. The program provides a barracks complex, bachelor officer quarters, and electrical distribution system improvements.

*Status of funds*

Funded program not in inventory.....	\$1,604,000
Unobligated items, Jan. 31, 1970 (actual).....	524,000
Unobligated items June 30, 1970 (estimated).....	378,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
55	Barracks complex, medical training center.....	\$635	16
56	Bachelor Officer quarters.....	120	0
46	Electric distribution system improvement.....	20	50

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Medical laboratory.....	\$146	X	
1970	Water storage tank.....	378		X
1969	Central supply operations facility, COSMOS.....	1,226		X

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Fort Sam Houston								
4. COMMAND OR MANAGEMENT BUREAU Fourth US Army				6. STATE/COUNTRY Texas								
7. STATUS Active				9. COUNTY (U.S.) Bexar								
5. INSTALLATION CONTROL NUMBER Texas - 265				10. NEAREST CITY San Antonio, Southwest (adjoining)								
8. YEAR OF INITIAL OCCUPANCY 1870				PERMANENT								
11. MISSION OR MAJOR FUNCTIONS Headquarters, Fourth US Army and support of the Brooke Army Medical Center. Provide administrative and logistical support (medical, supply, and hospital facilities excepted), training areas, and supply and maintenance for above, their subordinate activities and units, and other Army activities or units generally located within Fourth US Army area of responsibility.				PERSONNEL STRENGTH		STUDENTS		TOTAL				
12. *				OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	TOTAL (9)
a. AS OF <u>31 Oct 1969</u>				3,060	15,096	5,070	1,478	1,702				26,406
b. PLANNED (End FY)				LR 1,572	9,414	3,676	771	1,435				16,868
13.				INVENTORY								
a. OWNED				ACRES (1)		LAND COST (\$000)		IMPROVEMENT (\$000)		TOTAL (\$000)		
b. LEASES AND EASEMENTS				3,147	1,464	67,741	0	69,205				
c. INVENTORY TOTAL (Except Land rent) AS OF 30 JUNE 19 69				1	0**	0	0	69,205				
d. AUTHORIZATION NOT YET IN INVENTORY (funded - \$ _____)						1,604	0	1,604				
e. AUTHORIZATION REQUESTED IN THIS PROGRAM								15,496				
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS								18,950				
g. GRAND TOTAL (c + d + e + f)								105,255				

SUMMARY OF INSTALLATION LINE ITEMS			AUTHORIZATION P PROGRAM			FUNDING PROGRAM			
CATEGORY CODE NO. a	LINE ITEM TITLE b	Priority	Page No	TENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED COST (\$000) f	SCOPE g	ESTIMATED COST (\$000) h
				721	55 - Barracks Complex - Medical Training Center	1	41	Men	2,696
724	56 - Bachelor Officer Quarters	1	43	Men	200	2,420	200	2,420	
812	46 - Electric Distribution System Improvement	1	44			373	373	373	
						15,496		15,496	

\* Includes Brooke Army Medical Center.  
\*\* \$100 one-time cost for easement.

Mr. SIKES. The request is for \$15,496,000 which includes a barracks complex-medical training center, bachelor officers' quarters, and electric distribution system improvement.

General DALRYMPLE. This barracks complex is to provide permanent troop housing for almost 2,700 medical trainees at the medical training center.

Mr. SIKES. Can we see on a map where this base is located? Do you have a map showing it?

Mr. CARTON. No, sir.

General DALRYMPLE. It is in San Antonio, Tex.

Mr. SIKES. Does it support Brooke Army Medical Center?

General DALRYMPLE. That is right, sir. This is the requirement for the housing of medical trainees. They are presently housed in World War II barracks.

Mr. SIKES. They are presently housed in World War II barracks. Last year, we provided funds for administrative and classroom buildings at the Brooke Army Medical Center. This was to free some permanent-type barracks being used for administrative and classroom space for the medical center.

General DALRYMPLE. Last year's project was for administrative and classroom buildings.

Mr. SIKES. That is right.

General DALRYMPLE. In the amount of \$9.9 million.

Mr. SIKES. As I recall, unless I am mistaken, a part of the justification was that it would also vacate some buildings which formerly were barracks, to return them to barracks use.

Mr. CARTON. That is correct, sir. This project will free buildings which are converted barracks. The barracks spaces provided when we free up those buildings is 1,742 spaces. We still have a deficiency beyond that. This project addresses the additional deficiency.

Mr. SIKES. What about your workload in this area? There are a number of installations in the San Antonio area which were heavily funded last year. Here again there is a substantial backlog of construction. I assume that the fiscal 1970 program is still pending insofar as construction is concerned. Are you going to have more construction than you can properly handle?

General DALRYMPLE. We do not anticipate that, sir. Of course, here again we are confronted with the limitation of the freeze and its duration.

Mr. SIKES. At this point I would like for the record a breakdown showing the military construction in the San Antonio area which is pending so that we can get a better feel of how much there is awaiting construction.

(The information follows:)

There are no MCA projects currently under construction in the San Antonio area. The following MCA projects have been authorized and funded but are not yet under construction:

Fort Sam Houston:	
Centralized supply operations facility.....	\$1, 226, 000
Water storage tank.....	378, 000
Brooke Army Medical Center:	
Administration and classroom building.....	9, 891, 000

In addition the other services have \$19,648,000 in unawarded construction projects in the San Antonio area.

Mr. SIKES. What type of facilities are you now using for barracks?

General DALRYMPLE. These are World War II buildings that have outlived their life expectancies, sir.

Mr. SIKES. What is the status of design of the barracks complex-medical training center which you are requesting in the amount of \$12,703,000? When do you anticipate that design will be complete and that you can award contract?

General DALRYMPLE. Design is 17 percent complete. Design should be complete by October 1970 and contract awarded by December 1970.

Mr. SIKES. Where do the Navy and Air Force train medical corpsmen? How recently have you investigated the possibility of training some or all of your medical corpsmen at existing Navy or Air Force training facilities?

Colonel HAAS. The Navy Department conducts basic medical corpsmen training at two locations: U.S. Naval Hospital, San Diego, Calif., and U.S. Naval Hospital, Great Lakes, Ill. The Air Force conducts training of medical corpsmen at Sheppard Air Force Base, Wichita Falls, Tex. Both services conduct training of higher skilled medical technicians at selected service hospitals throughout the United States. In November 1965, the Deputy Assistant Secretary of Defense, Health Affairs, directed that a study be conducted on the feasibility of training medical technicians and other personnel on an intraservice basis. This study, conducted by the Surgeons General, was completed in January 1966 and concluded that the services should continue to conduct medical technician and related training within the individual services. The conclusions of the study were approved by the Department of Defense and became the basis of the DOD position to continue this training within each of the three services for the foreseeable future.

Mr. SIKES. Will any permanent buildings be vacated as a result of the construction of this facility? If so, to what use will they be put?

Colonel HAAS. No permanent facilities will be released as a result of the construction of this project. Approximately 200 enlisted women in training at the Medical Training Center will move from permanent quarters in the 2700 area to the new barracks complex. The vacated spaces in the 2700 area will be filled by other enlisted women currently housed in temporary World War II buildings.

Mr. SIKES. What will you do with the present temporary buildings?

General DALRYMPLE. We will demolish 85 temporary buildings with a total area of just under 300,000 square feet.

Mr. SIKES. I have seen some of these and they certainly should be demolished.

Are you sure you have evaluated the availability of the permanent type barracks buildings which are going to be returned to barracks use as a result of last year's construction?

General DALRYMPLE. Yes, sir. This requirement is over and above the 1,742 spaces that will be released by that project in last year's program.

Mr. SIKES. Are there questions?

Mr. PATTEN. Will there be a savings as a result of this construction?

General DALRYMPLE. Based on reduced operations and maintenance costs, we estimate savings of about \$320,000 annually.

Mr. SIKES. Are there further questions?

Mr. CEDERBERG. No.

Mr. SIKES. You are requesting bachelor officer quarters in the amount of \$2,420,000.

Will this building house permanent or student officer personnel?

Major MORRISON. The primary purpose of this building is to house permanent party officers assigned to Headquarters, 4th U.S. Army and Brooke Army Medical Center. However, if the present high rate of TDY student officers attending the Medical Field Service School continues following completion of this building, it may be used to house TDY student officers until the TDY requirement subsides.

Mr. SIKES. I note that there are some 1,300 units of community support for enlisted personnel, but only some 230 units listed for officer personnel. Would it not be possible for officers to make greater use of off-base community support at this base?

Major MORRISON. As a result of the bachelor housing survey conducted at Fort Sam Houston on July 28, 1969, it was found that only 230 sets of quarters were available in the local community which could be classified as adequate accommodations at a reasonable cost for bachelor officers. The construction of this BOQ would still leave approximately 769 officers who would be required to live in substandard accommodations or offpost.

Mr. SIKES. Will the electric distribution system improvement in the amount of \$373,000 complete the requirement in the south area at Fort Sam Houston?

General DALRYMPLE. Yes, sir.

FORT SILL, OKLA.

Mr. SIKES. Turn to Fort Sill, Okla. Please insert in the record page 45.

(The page follows:)

FORT SILL, OKLA., \$426,000

Fort Sill is located 4 miles north of Lawton, Okla. The mission of this installation is to command, train and support artillery and surface-to-surface missile units; to activate and train STRAF artillery units; to support the Army Artillery and Missile School, Artillery Advanced Individual Training Center and Reserve components summer training. The program consists of an electrical substation.

Status of funds

Funded program not in inventory.....	\$5, 854, 000
Unobligated items, Jan. 31, 1970 (actual).....	738, 000
Unobligated items, June 30, 1970 (estimated).....	90, 000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
70	Electric substation.....	\$17	30

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Missile electronic shop addition.....	\$648	X	
1969	Maintenance evaluation facility.....	72		X
1970	Grease traps-wash racks.....	90		X

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Sill		
4. COMMAND OR MANAGEMENT BUREAU Fourth US Army		5. INSTALLATION CONTROL NUMBER Oklahoma - 755		
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1871		
11. MISSION OR MAJOR FUNCTIONS Responsible for command, training, and logistical support of artillery and surface-to-surface missile units; activation and training of STRAF Artillery Units; maintain and operate the Army Artillery and Missile School and the Artillery Advanced Individual Training Center; and, support of reserve components summer training.				
12. PERSONNEL STRENGTH a. AS OF <u>31 Oct 1969</u> b. PLANNED <u>(End FY 1R)</u>		PERMANENT OFFICER (4) ENLISTED (5) CIVILIAN (6)		SUPPORTED ENLISTED OFFICER (7) ENLISTED (8) CIVILIAN (9)
		2,980 22,974 4,027		1,861 3,073
		2,205 18,774 2,587		1,628
13. INVENTORY				
LAND		ACRES (1)		LAND COST (\$000) (2)
a. OWNED		94,304		
b. LEASES AND EASEMENTS		34,317		2,418
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19		0		128,573
d. AUTHORIZATION NOT YET IN INVENTORY (funded - \$		-69		0
e. AUTHORIZED AUTHORIZATION REQUESTED IN THIS PROGRAM		5,854		0
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				426
g. GRAND TOTAL (c + d + e + f)				39,574
				176,845
SUMMARY OF INSTALLATION LINE ITEMS				
LINE ITEM DESIGNATION				
CATEGORY CODE NO. a	LINE ITEM TITLE b	Priority	Page No	FUNDING PROGRAM
812	70 - Electric Substation	3	46	426

Mr. SIKES. The request is for \$426,000 for an electric substation. You now have a leased substation which is in use there, do you not?

General DALRYMPLE. Yes, sir. We have a small one that we lease for about \$2,400 per year.

Mr. SIKES. That is cheaper over the long run than paying \$426,000 for your own facility. Why do you not continue to use it?

General DALRYMPLE. We would continue to use it but what is really required is increased capacity of the system. The maximum allowable load on the present system is 8,345 kilovolt amperes and it will be exceeded in 1970. The purpose of this is to provide for expanded service. By doing this we can eliminate this small leased substation.

Mr. SIKES. Could you use an existing facility or build a small facility and profitably continue to use the leased substation?

Mr. CRABTREE. No, sir; I do not think that we can because our most efficient operation would be from one distribution point. The more substations, the more points of delivery that we add into it, reduces the efficiency and introduces problems of operations that I do not think would be wise here.

Mr. SIKES. Provide for the record the planned projects which will increase the load and the quantitative data which should be on the justification sheet.

(The information follows:)

*Fort Still, Okla.*

Planned projects and the kilovolt-ampere requirement to support each is as follows:	Kilovolt-ampere
a. Rehabilitation of building 750.....	300
b. Aircondition housing area 600.....	1,000
c. Aircondition 9 dormitories.....	1,100
d. Rehabilitation of building 730, Snow Hall (lighting and air conditioning) .....	1,000
e. Normal annual growth of 300 kilovolt-amperes per annum for 5 years.....	1,500
Total projected kilovolt-ampere load requirement.....	4,900
Calendar year 1970 kilovolt-ampere load is.....	8,940
Approximate total load in 5 years.....	13,840

The existing leased 1,500 kilovolt-ampere transformer will be released to the owners. The existing Government-owned 6,000 kilovolt-ampere substation plus the proposed 7,500 kilovolt-ampere substation will provide for the above planned requirements of the installation.

Mr. SIKES. Are there questions?

Mr. McFALL. Off the record.

(Discussion off the record.)

Mr. McFALL. Who do you rent this station from?

Mr. CRABTREE. From the local utility supplier, the Public Service Co. of Oklahoma. We rent it from them very reluctantly. They have only done this as a service to us.

Mr. McFALL. Would they reluctantly build you another one of the size you want and rent that to you? This is what I want to know.

Mr. CRABTREE. I don't think so.

Mr. McFALL. Have you asked them?

Mr. CRABTREE. I cannot answer that.

Mr. McFALL. If they will provide you with a substation which will meet these requirements perhaps we should let them. What is the relationship between the substation you have now and the new requirement?

Mr. CRABTREE. The substation that we have now is 1500 kv.-a. and we have a requirement for 7,500 kv.-a.

Mr. McFALL. Would they rent you one which is five times as powerful as that for five times the amount of money per year, around \$12,000?

Mr. CRABTREE. No, I do not think they would. They have to pay the same amount for it that we will.

Mr. SIKES. Let's be sure about this. Please make the inquiry and advise the committee what you learn.

General DALRYMPLE. Yes, sir.

(The information follows:)

The present 1,500 kv.-a. substation was leased several years ago from the Public Service Co. of Oklahoma, the electric supplier for Fort Sill at that time. Since then, power has been obtained from the Southwestern Power Administration, an agency of the Government. The original supplier of the leased equipment no longer benefits from its use other than the nominal rental and no longer has any interest in leasing such equipment. Policies of the Southwestern Power Administration do not include furnishing transformers for customers's use. Construction by the Army is the only alternative.

FORT CARSON, COLO.

Mr. SIKES. Turn to Fort Carson, Colo. Please insert in the record page 48.

(The page follows:)

FORT CARSON, COLO.—\$846,000

Fort Carson is located 7 miles south of Colorado Springs, Colo. The mission of this installation is to provide facilities and support for the 5th Infantry Division and nondivisional support units. The program consists of a moving target simulator building and a fuel conversion project.

*Status of funds*

Funded program not in inventory.....	\$21, 207, 000
Unobligated items, Jan. 31, 1970 (actual).....	8, 270, 000
Unobligated items, June 30, 1970 (estimated).....	

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
266	Moving target simulator building.....	\$11	25
265	Fuel conversion.....	25	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Consolidated field maintenance shop.....	\$6, 865	X	
1970	Family housing; 150 units.....	3, 300	X	



Mr. SIKES. The request is for \$846,000, for a moving target simulator building and a fuel conversion project. I assume the moving target simulator building is of the same priority as previous ones?

General DALRYMPLE. That is correct, sir, the same type.

Mr. SIKES. It is priority 3, which would indicate it is not of very high urgency.

General DALRYMPLE. We have them in different priorities, sir. This is priority 3.

Mr. SIKES. Why would this be in priority 3 and others in priority 1?

General DALRYMPLE. In setting up the priorities that the committee requested, sir, we had to lay down some ground rules and the ground rules were generally these: that 80 percent of the projects would be placed in category 1, 10 percent in category 2, and 10 percent in category 3. You may recall in answer to a question from the committee yesterday I mentioned that as far as we are concerned we would like to put all of them in priority 1, but we just cannot do that and stick by the ground rules. So this one becomes priority 3.

Mr. SIKES. This one is not as urgent as the others?

General DALRYMPLE. If we had to drop any this would be one of the first to go.

Mr. SIKES. You are requesting fuel conversion for 215 buildings. What is the necessity for this?

General DALRYMPLE. This is to reduce our operating costs and eliminate firing duties performed by military personnel. It will provide for the conversion of these small, hand-fired, coal-burning, heating plants by installation of gas distribution and service lines to serve these heating plants.

Mr. SIKES. Is this the total cost?

General DALRYMPLE. Yes, sir. This is the total cost, \$623,000.

Mr. SIKES. Are they permanent buildings?

Mr. CARTON. No, sir; these are temporary type buildings.

Mr. SIKES. How long will you continue to use them?

Mr. CARTON. The current schedule is these will remain in use for at least 7 years. The estimated savings per year at the present time is \$98,500, in operation and maintenance costs through the conversion.

Mr. SIKES. Per year?

Mr. CARTON. Yes.

Mr. SIKES. Are the buildings in use at this time?

General DALRYMPLE. Yes.

Mr. SIKES. Questions?

Mr. PATTEN. Is this included in your original statement as a pollution project?

General DALRYMPLE. No, sir; this is not principally justified as an anti-pollution project.

Mr. PATTEN. Why can't you take credit for it? You are justifying this on the grounds that it is necessary to come up to public standards. It would not be farfetched for you to take a little credit for pollution control, would it?

Mr. SCHOENIAN. It does serve a dual function in that we reduce costs, which was the primary purpose of it, and it will eliminate the use of coal at this installation with its attendant pollution. I cannot answer why it was not put in as an air pollution project, as such.

Mr. PATTEN. You are trying to build up credit, you will be held to account for that which you have done. It would seem to me that you should not spare these little credits, if you can get them, on air pollution.

Mr. LONG. May I ask my Democratic colleague why he is so anxious to have a Republican administration claim credit for all these things?

Mr. PATTEN. I am a student of ecology.

Mr. CEDERBERG. Even Democrats breathe air.

FORT BENJAMIN HARRISON, IND.

Turn to Fort Benjamin Harrison. Insert in the record page 51.  
(The page follows:)

FORT BENJAMIN HARRISON, IND.—\$523,000

Fort Benjamin Harrison is located 14 miles northeast of Indianapolis, Ind. This installation supports the Army Finance Center, the Army Finance School, the Adjutant General's School, and the Defense Information School. The program consists of extension of a steam line.

*Status of funds*

Funded program not in inventory.....	\$11,838,000
Unobligated items, Jan. 31, 1970 (actual).....	10,542,000
Unobligated items, June 30, 1970 (estimated).....	8,440,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
92	Steamline extension.....	\$16	0

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1969	BOQ-203 units.....	\$2,102	×	
1970	Widen Aultman Ave.....	320		×
1970	Air conditioning finance center.....	3,800		×
1969	Hospital, 55-bed.....	4,590		×

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Benjamin Harrison		4. COMMAND OR MANAGEMENT BUREAU Fifth US Army
4. COMMAND OR MANAGEMENT BUREAU Fifth US Army		5. INSTALLATION CONTROL NUMBER Indiana - 175		
7. STATUS Active		9. COUNTY (U.S.) Indiana		
11. MISSION OR MAJOR FUNCTIONS Support of Army Adjutant General School, Army Finance School, Defense Information School, Army Finance Center, tenant activities and major satellites, including sub-post Camp Atterbury.		10. NEAREST CITY Indianapolis, 14 miles Southwest		
12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969 b. PLANNED (End FY IR)		PERMANENT STUDENTS SUPPORTED OFFICER ENLISTED CIVILIAN OFFICER ENLISTED OFFICER ENLISTED CIVILIAN (1) (2) (3) (4) (5) (6) (7) (8)		
13. LAND a. OWNED b. LEASES AND EASEMENTS c. INVENTORY TOTAL (Excl. Land rent) AS OF 30 JUNE 19 d. AUTHORIZATION NOT YET IN INVENTORY (Planned - \$ ) e. AUTHORIZATION REQUESTED IN THIS PROGRAM f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS g. GRAND TOTAL (c + d + e + f)		INVENTORY LAND COST (\$000) IMPROVEMENT (\$000) TOTAL (\$000) (1) (2) (3) (4) 2,680 271 43,548 43,819 0 0 0 0 -69 11,838 Jr. (Unfunded - \$ ) 11,838 523 12,133 68,313		
SUMMARY OF INSTALLATION LINE ITEMS				
CATEGORY CODE NO. a	LINE ITEM TITLE b	PRIORITY	PAGE NO.	FUNDING PROGRAM ESTIMATED COST COST COST COST COST (#000) (f) (g) (h)
822	92 - Steam Line Extension	1	52	11,000 523 11,000 523

Mr. SIKES. The request is for \$523,000 for a steam line extension. Would you explain the requirement?

General DALRYMPLE. This is necessary to reduce operating and maintenance costs for heating and to eliminate a source of air pollution. It will provide for a steam line from the main central heating plant to connect with the underground system presently serving the existing hospital. This steam line will also provide service from the central heating plant to serve the hospital contemplated for the future. It will eliminate the need for the temporary plant which is now used to heat the existing hospital.

FORT LEAVENWORTH, KANS.

Mr. SIKES. We will turn to Fort Leavenworth. Please insert in the record page 53.

(The page follows:)

FORT LEAVENWORTH, KANS.—\$3,617,000

Fort Leavenworth is located at Leavenworth, Kans. The mission of this installation is to support the U.S. Army Command and General Staff College, the U.S. Disciplinary Barracks, U.S. Army Combat Developments Command Combat Arms Group and Institute of Combined Arms and Support, and U.S. Army Strategic Communications Command Mid-West Telecommunications Center. The program consists of an administrative support building for the U.S. Army Combat Developments Command.

*Status of funds*

Funded program not in inventory-----	\$1,097,000
Unobligated items, Jan. 31, 1970 (actual)-----	502,000
Unobligated items, June 30, 1970 (estimated)-----	502,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
55	Administrative support building—USACDC-----	\$170	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Parolee barracks-----	\$156	-----	×
1970	Mental hygiene clinic-----	346	-----	×
1966, 1968, 1969	Family housing, 250 units-----	5,300	×	

1. DATE	2. DEPARTMENT	3. INSTALLATION	4. COMMAND OR MANAGEMENT BUREAU	5. INSTALLATION CONTROL NUMBER	6. STATE/COUNTRY	7. STATUS	8. YEAR OF INITIAL OCCUPANCY	9. COUNTY (U.S.)	10. NEAREST CITY	TOTAL (g)
2 Feb 1970	ARMY	Fort Leavenworth	Fifth US Army	Kansas 395	Kansas	Active	1827	Leavenworth	Leavenworth	5,722
<p>11. MISSION OR MAJOR FUNCTIONS</p> <p>Supports the U. S. Army Command and General Staff College; the U. S. Disciplinary Barracks; Munson Army Hospital; Headquarters U. S. Army Combat Developments Command Combat Arms Group; U. S. Army Combat Developments Command Institute of Combined Arms and Support; and U. S. Army Strategic Communications Command Mid-West Telecommunication Center.</p>										
12.	PERSONNEL STRENGTH	CIVILIAN (f)	OFFICER (g)	ENLISTED (h)	OFFICER (i)	ENLISTED (j)	OFFICER (k)	ENLISTED (l)	OFFICER (m)	ENLISTED (n)
a.	AS OF 31 Oct 1969	634	2,109	1,609	1,370					5,722
b.	PLANNED (End FY LR)	876	1,327	1,455	1,136					4,794
13. INVENTORY										
a.	OWNED	LAND COST (\$000)	IMPROVEMENT (\$000)	TOTAL (\$000)						
b.	LEASES AND EASEMENTS	0	52	51,529						
c.	INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69	0	0	0						
d.	AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ (Unfunded - \$ )	1,097	0	1,097						
e.	AUTHORIZATION REQUESTED IN THIS PROGRAM									
f.	ESTIMATED AUTHORIZATION - NEXT 4 YEARS									
g.	GRAND TOTAL (c + d + e + f)	62,010								
SUMMARY OF INSTALLATION LINE ITEMS										
CATEGORY CODES (a, b, c, d, e, f, g, h, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z)	LINE ITEM DESIGNATION	LINE ITEM TITLE	PRIORITY	PAGE NO	TENANT COMMAND	UNIT OF MEASURE	SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)
610	55 - Administrative Support Building - USACDC		1	54	ODC	SF	78,400	3,617	78,400	3,617

Mr. SIKES. The request is for \$3,617,000 for an administrative support building. Do you have a map showing the location of this building on the reservation?

General DALRYMPLE. No, sir.

Mr. SIKES. What can you tell me about it?

General DALRYMPLE. This is a building required to support the missions of the Army Combat Developments Command agencies located at Fort Leavenworth.

Mr. SIKES. What is the connection between the Army Combat Developments Command and the Command and General Staff College at Fort Leavenworth?

General DALRYMPLE. The Combat Developments Command, as I am sure you realize, sir, has agencies throughout the country at our various installations. It has one in California, one at Fort Knox, at the Armored School there, and one at the Infantry School. It has the Combat Arms Group headquarters, the Institute of Combined Arms and Support, and the Combined Arms Research Office at Fort Leavenworth, Kans., which work very closely with the Command and General Staff College faculty.

Mr. SIKES. All right. Again, now, continue your discussion of the requirement.

General DALRYMPLE. It is required to provide space for these agencies at Fort Leavenworth and to return to the Command and General Staff College space which the agencies now use which is critical for the college use. The facility will house almost 400 personnel. It will be a reenforced concrete building with exterior masonry walls, will contain automatic data processing and security areas, closed circuit television and a utility tunnel for steam and water lines. It is the only economically feasible means of providing the Combat Developments Command agencies noncollege space at Fort Leavenworth. Space is very critical there, sir.

Mr. SIKES. Are there existing facilities elsewhere which have been considered for this purpose?

General DALRYMPLE. The decision has been made that this is the only economically feasible place to situate it. We have identified savings of slightly over \$20,000 a year brought about by the termination of rental contracts we have for certain commercial vans which we are using at the moment to assist us in solving this requirement.

Mr. SIKES. \$20,000—at that rate it would take a long, long time to pay off \$3,600,000.

General DALRYMPLE. That is true. The most critical need is to return the present space occupied by these agencies back to the Command and General Staff College.

Mr. SIKES. Have you considered the use of existing facilities at other locations?

Mr. GIBBONS. No sir. The close proximity of U.S. Army Combat Developments Command and the U.S. Army Command and General Staff College Agencies for training support coordination is essential for the proper development of doctrinal material.

Mr. SIKES. What has been the growth in the number of personnel at this plant assigned to the U.S. Army Combat Developments Command in the past 5 years? What is projected in the long-range program?

Mr. GIBBONS. Sir, in fiscal year 1966 there were 280 personnel assigned to CDC agencies at Fort Leavenworth, Kans. At that time only a portion of the Combined Arms Research Office was present at the installation and the CDC agencies did not have an automatic data processing capability. In fiscal year 1967 there were 351 personnel assigned, in fiscal year 1968 there were 384 personnel, in fiscal year 1969 there were 359 personnel and at the end of fiscal year 1970 there will be 397 personnel. The present long-range program contemplates that the 397 figure will remain constant.

Mr. SIKES. In which buildings are you carrying out the functions of the U.S. Army Combat Developments Command at Fort Leavenworth at the present time?

Mr. GIBBONS. Sir, space needed by the Command and General Staff College and two rented trailers are being used by USACDC. The Command and General Staff College needs 21,595 square feet of additional floor space of which 18,739 square feet are presently available but occupied by noncollege activities in Bell Hall. This project will return 18,739 square feet to the college.

Mr. SIKES. Could you describe the educational automatic data processing facility which will be installed by the General Staff College in space to be vacated as a result of the construction of this facility?

Lieutenant Colonel LINDBERG. The educational automatic data processing facility will contain automatic data processing equipment in the form of remote time sharing computer input/output devices such as teletypewriters and cathode ray tubes to be used for presenting computer concepts instruction to members of the staff and faculty and students in support of the college computerized educational system.

The facility will also serve as an automatic data processing equipment maintenance area and an automatic data processing systems documentation and library area.

Mr. SIKES. What is the situation on space for the General Staff College? You only identified 18,739 square feet. Who needs the remainder of the space occupied by the Combat Developments Command?

Mr. GIBBONS. CDC agencies now occupy 15,053 sq. ft. of space in the Academic Building (Bell Hall), 21,406 sq. ft. of space in Post Headquarters Building, 4,128 sq. ft. of space in Stotsenberg Hall and 4,809 sq. ft. in rental vans and the basement of a BOQ. Because CDC occupies space in Post Headquarters building, a portion of the post general staff was moved to Bell Hall (3,686 sq. ft.), and an additional portion were relocated to the basement of post headquarters and other temporary facilities (17,720 sq. ft.). The Department of Nonresident Instruction of the college (5,500 sq. ft.) is housed in Stotsenberg Hall.

Provision of this project provides 18,739 sq. ft. in Bell Hall for college use (CDC element 15,053 sq. ft. and relocation of the post staff 3,686 sq. ft. to post headquarters). Relocation of the CDC element from post headquarters to space provided by this project releases 21,406 sq. ft. of space which will house the post element moved from Bell Hall (3,686 sq. ft.), and post elements now housed in the basement of post headquarters and other temporary facilities (17,720 sq. ft.). The CDC agency now housed in Stotsenberg Hall (4,128 sq. ft.) is provided space by this project. The Department of Nonresident Instruction of the college (5,500 sq. ft.) will move from Stotsenberg Hall to space vacated by CDC in Bell Hall. Stotsenberg Hall will be demolished as previously scheduled. CDC agencies now occupying the

basement of a BOQ and vans 4,809 sq. ft. will move into space provided by this project.

Mr. SIKES. Questions?

Mr. CEDERBERG. Here at Fort Leavenworth you are asking for an administrative building to cost \$3,617,000. Now, look at Fort Leavenworth under the "Department of the Army execution portion of reduction plan, direct Federal and leased construction in the United States and overseas, summary"; a revised summary which, from looking at it, looks like it might be designed to confuse Congress. It says "Fort Leavenworth, 250 units of family housing"; then it says "Family housing, \$5,300,000; November 1969 plan, \$7 million; February 1970 plan, \$5,300,000." Then it shows more units of family housing, 1969 plan, \$4,110,000; February 1970 plan, zero.

This does not mean you are cutting family housing at Fort Leavenworth, does it?

General DALRYMPLE. No, sir. Perhaps you were not here yesterday when my chief of family housing division and Mr. Paul Johnson from the Secretary's office discussed the problem at Leavenworth. We have three increments of housing, two each of 100 units and one of 50 units that have been in prior year programs. We have had unsuccessful results in letting those out to contract.

Mr. CEDERBERG. Why?

General DALRYMPLE. We did not get the proper bid response, for one thing. We received only one bid on the three increments of housing. It was, as I recall, \$30,000 per unit, or more. So now we put these three increments into two turnkey packages. Before the end of June this year, we hope to be able to contract for at least a part of the housing.

Mr. CEDERBERG. In other words, it is fair to say that you are going to spend all the money that has been appropriated for family housing at Fort Leavenworth?

General DALRYMPLE. Certainly we are if we get responsive bids, sir.

Mr. CEDERBERG. The only reason I bring the matter up is because I think it would be unfortunate to fund an administrative support building and then have a reduction in family housing.

General DALRYMPLE. No, sir. We are very short of family housing there. The student body at the Command and General Staff College has been increased over the past few years. It is a very significant increase. While we do have some community support from the city of Leavenworth, Kans., we still require on post housing and even the units that you see there will not take care of the shortage.

Mr. CEDERBERG. Off the record.

(Discussion off the record.)

#### FORT RILEY, KANS.

Mr. SIKES. Turn now to Fort Riley. Please insert in the record page 55.

#### FORT RILEY, KANS.—\$7,674,000

Fort Riley is located 4 miles northeast of Junction City, Kans. The mission of this installation is to command, train, and support an infantry division and other combat and combat support units and to support Reserve component summer training. The program consists of a moving target simulator building and tactical equipment shops.

## Status of funds

Funded program not in inventory	\$36,704,000
Unobligated items, Jan. 31, 1970 (actual)	2,202,000
Unobligated items, June 30, 1970 (estimated)	1,957,000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
215	Moving target simulator building	\$16	25
207	Tactical equipment shops and facilities	250	9

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1969	BOQ—20 units	\$245	X	
1970	Forsyth sec sewage plant	460	X	
1970	Gas line—Custer Hill	186		X
1970	Road—Custer Hill to Forsyth	1,023		X
1970	Correctional training facility	288		X



Mr. SIKES. The request is for \$7,674,000 for a moving target simulator building and tactical equipment shops and facilities. The latter has priority 1, while the target building has priority 3. I think we understand about the moving target simulator building from previous discussions. Tell us about your requirements for the tactical equipment shops and facilities, at a cost of \$7,308,000.

General DALRYMPLE. Yes, sir. This is one of three such projects in our program this year. The project will provide a support and maintenance shop, two tactical equipment shops, equipment storage building, oil house, dispatcher's office, wash platform, grease racks and fueling systems.

Mr. SIKES. Are any headquarters facilities included in this?

General DALRYMPLE. A dispatcher's office is included in it, sir; no headquarters, sir.

It will provide maintenance shops for a cavalry squadron and engineer battalion, and a direct support maintenance battalion, organic units to a mechanized infantry division.

Mr. SIKES. Are these tactical equipment shops to largely support units which have duplicate sets of equipment stored in Europe?

Colonel BLANK. The 24th Division is now located at Fort Riley and these shops would be furnished for the 24th Division. However, there has recently been an announcement that the 1st Division will return to Fort Riley and the 24th Division will be inactivated. So these shops will serve first the 24th and subsequently the 1st Division upon its return.

Mr. SIKES. Is there relationship with the equipment stored in Europe?

General DALRYMPLE. These shops will provide for the maintenance of equipment organic to those elements of the Division at Fort Riley, namely, the two brigades that will be there. The one brigade that remains in Europe, of course, would have its own shops as appropriate.

Mr. SIKES. So there is no direct connection between the two?

General DALRYMPLE. Only in that when this unit is redeployed to Europe on a rotating basis the equipment that it had been using would be maintained in these shops.

Mr. SIKES. That equipment would be maintained at Fort Riley and not transported to Europe with the unit?

General DALRYMPLE. That is the way I understand it, sir.

Mr. SIKES. What I am trying to establish is, whether there will be a continuing requirement for the shops and their equipment even though the units are rotated to Europe?

General DALRYMPLE. There will be, sir.

Mr. SIKES. Are there questions?

Mr. McFALL. You have a reduction in strength planned for Fort Riley, indicated on page 55.

General DALRYMPLE. You are looking at October 1969 strength which is 23,751 and our long-range strength is some 4,000 less than that.

Mr. McFALL. Can you just briefly bring us up to date? What has been your construction at Fort Riley, what is your planned construction at Fort Riley? Is this one of the bases that you have had a continuing program for rebuilding the base?

General DALRYMPLE. This base has been in our inventory since the latter part of the 1800's. It is one of the old Indian forts. It has had some additional acreage added to it within the last 4 or 5 years. It is

one of our long-range permanent stations. It was the home of the 1st Infantry Division before the 1st Infantry deployed to Vietnam.

As Colonel Blank just mentioned, the 24th Infantry Division, less one brigade, is there now. When the 1st Division comes back as part of the announced reduction in Vietnam it will go to Fort Riley and the 24th will be inactivated. The First then will take over what has been the 24th's mission.

Mr. McFALL. That accounts for the reduction in strength in the figures which we mentioned?

General DALRYMPLE. Throughout this document you will generally find that the long-range strength is less than the current strength. That is brought about by the fact that the Army has expanded to about 1.5 million people due principally to the Vietnam situation. Our current planning on long-range strength is based on ———.

Mr. McFALL. That does not affect the need for this particular project in any way?

General DALRYMPLE. No, sir. The need for this project is based on our long-range planning, the figure of ——— which we are carrying at this time as our long-range Army strength.

Mr. McFALL. As I recall, this is one of the bases which has been selected for your long-range reconstruction. You have had similar large construction programs here in earlier years. You probably expect some additional construction.

General DALRYMPLE. Yes, sir. We have an inventory of about \$125 million there now, and funded, though not yet in the inventory, is some \$37 million. Over the next 4 or 5 years we will probably put in \$10 million or so more.

Mr. McFALL. For example, what did we do last year and the year before?

General DALRYMPLE. Last year we had four projects, a sewage treatment plant; a road from the Custer Hill area to the Camp Forsyth area; a correctional training facility, you may remember; and installation of a gas line to Custer Hill. Some of these projects are in the deferred status. One in particular I know is in the 75-percent deferred status—the road. It is the largest item of the four, a little over \$1 million. I believe we just let the contract on the correctional training facility, sir.

Mr. CARTON. No, sir. You are thinking of the contract on Fort Bragg.

General DALRYMPLE. That is right.

Mr. McFALL. What is the status, then, of the previously funded construction at Fort Riley?

Mr. CARTON. A large amount of that construction is underway. You may be thinking of some large barracks complexes which were approved several years ago.

Mr. McFALL. Yes.

Mr. CARTON. They are part of the some \$37 million previously authorized but not in the inventory. They are in varying stages of construction.

Mr. McFALL. But all are underway, properly underway; they have not been frozen or put off?

Mr. CARTON. I think most of those were placed under contract before the freeze caught us. The major items that were stopped at Riley were a portion of the 1970 program for which funds were not received

until late last year. When we got the funds we were already faced with the construction reduction plan. But the major projects at Riley are underway.

Mr. McFALL. Thank you.

Off the record.

(Discussion off the record.)

Mr. SIKES. What are you using now for the tactical equipment shops?

General DALRYMPLE. We are using miscellaneous shops and converted stables, all but two of which were built in the early days of World War II.

Mr. SIKES. Some of those stables are better than anything you can get now because they are permanent construction and very good construction. What is the necessity for eliminating that type of facility?

Colonel BLANK. Sir, the division is located in another part of the post where the new barracks are built.

Mr. SIKES. How far away from the present facilities?

General DALRYMPLE. About 4 miles, as I recall, sir.

Mr. SIKES. What requirements will you have for the buildings that are now in use?

General DALRYMPLE. Buildings now in use will all be destroyed, all of them temporary, all World War II.

Mr. SIKES. How many are temporary and how many are permanent?

General DALRYMPLE. All 45 are temporary structures. We will destroy these 45 with a total square footage of about 180,000 square feet.

Mr. SIKES. Are you destroying any of the semipermanent or permanent type buildings such as the stables?

General DALRYMPLE. I will verify that for the record.

Mr. SIKES. I would trust this would be looked at carefully because those buildings that I have seen are better than most of the construction you can get now.

Mr. CARTON. Only temporary buildings will be destroyed.

Mr. SIKES. All right. Thank you.

FORT SHERIDAN, ILL.

Turn to Fort Sheridan. Insert in the record page 59.  
(The page follows:)

FORT SHERIDAN, ILL., \$2,488,000

Fort Sheridan is located at Highland Park, Ill. The mission of this installation is to support Headquarters 5th U.S. Army and ARADCOM firing batteries in the 5th U.S. Army area. The program provides sewage treatment facilities.

*Status of funds*

Funded program not in inventory-----	\$6,427,000
Unobligated items, Jan. 31, 1970 (actual)-----	2,472,000
Unobligated items, June 30, 1970 (estimated)-----	2,210,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
34	Sewage treatment facility-----	\$75	0

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1969.....	B00-24 units.....	\$262	X	
1970.....	Headquarters building addition—Corps clos.....	2,210		X

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Sheridan	
4. COMMAND OR MANAGEMENT BUREAU Fifth US Army		6. STATE/COUNTRY Illinois	
5. INSTALLATION CONTROL NUMBER Illinois - 805		9. COUNTY (U.S.) Lake	
7. STATUS Active		10. NEAREST CITY Highland Park	
11. MISSION OR MAJOR FUNCTIONS Fifth U. S. Army Headquarters Provide logistical support to ARADCOM firing batteries in the Fifth U.S. Army area. Provide complete financial accounting services to Headquarters Fifth US Army and Fort Sheridan and partial services to activities in the thirteen (13) states, comprising the Fifth US Army area to include National Guard units in Illinois and Wisconsin. Provide medical and dental services, including supply and maintenance support to Headquarters Fifth US Army, Fort Sheridan and satellite units.			
12. PERSONNEL STRENGTH			
a. AS OF 31 Oct 1969		OFFICER ENLISTED CIVILIAN	
746		2,369 1,951	
b. PLANNED (End FY LR)		483 1,727 1,701	
13. INVENTORY			
LAND		ACRES (1)	
a. OWNED		729	
b. LEASES AND EASEMENTS		0	
c. INVENTORY TOTAL (Except land tent)		69	
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$)		6,427	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		0	
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		0	
g. GRAND TOTAL (c + d + e + f)		6,427	
LAND COST (\$000)		IMPROVEMENT (\$000)	
286		25,206	
TOTAL (2)		25,492	
TOTAL (3)		25,492	
TOTAL (4)		2,488	
TOTAL (5)		16,431	
TOTAL (6)		50,838	

CATEGORY CODE NO. e	LINE ITEM DESIGNATION b	LINE ITEM TITLE b	Priority	Page No	SUMMARY OF INSTALLATION LINE ITEMS			FUNDING PROGRAM			
					TENANT COMMAND c	UNIT OF MEASURE d	ESTIMATED (\$000) i	AUTHORIZATION PROGRAM SCOPE e	ESTIMATED (\$000) f	FUNDING PROGRAM SCOPE g	ESTIMATED (\$000) h
832	34 - Sewage Treatment Facility		3	60			2,488				2,488

Mr. SIKES. The request is for \$2,488,000 for a sewage treatment facility which has a priority of three. Does that go back to the discussion we had a little earlier? You can afford to give this one priority 3, knowing that you are going to fund it anyway, because it says antipollution?

General DALRYMPLE. No, sir. This goes back to the 80 percent-10 percent-10 percent where we placed some items in lower priorities than others. This is a tie-in with the North Shore Sanitary District in the vicinity of Fort Sheridan.

Mr. SIKES. It is going to cost \$700,000 to do that. Is that a reasonable and legitimate charge?

Mr. NORWOOD. I think that is a reasonable charge. We have had negotiations with them for some time now. Obviously, we try to get the best possible price.

Mr. SIKES. What was their asking price?

Mr. NORWOOD. I cannot answer that here.

Mr. SIKES. All right. Give us more information for the record with respect to the discussions, the asking price and the justifications, and the reason for this connection with the North Shore Sanitary Districts.

General DALRYMPLE. Yes, sir.

(The information follows:)

The North Shore Sanitary District, by letter April 8, 1969, proposed a connection charge fee of \$650,000 as Fort Sheridan's pro rata share of advanced waste treatment facilities with discharge to the Des Plaines River. This proposal is in keeping with the objective of the Lake Michigan Enforcement Conference to remove all sewage discharges to Lake Michigan.

On the basis that formal negotiations had not been completed, the estimated cost for the connection charge was increased to \$700,000 to cover the probable cost growth that would accrue prior to completion of formal agreement. Further negotiations are tentatively scheduled for the week of March 16, 1970.

Mr. SIKES. Will this complete the requirement for sewage disposal at Fort Sheridan?

General DALRYMPLE. Yes, sir.

Mr. NICHOLAS. Do you have an agreement at the present time with the North Shore Sanitary District to insure that the charge will only be the \$700,000 shown here?

Mr. NORWOOD. It is my understanding this is so.

Mr. NICHOLAS. You do?

Mr. NORWOOD. Yes.

Mr. SIKES. Confirm that for the record.

General DALRYMPLE. Yes, sir.

(The information follows:)

Formal agreement has not yet been consummated on the exact amount of the connection charge. It is our best estimate at this time that the \$700,000 carried in the project for this purpose will be sufficient.

#### FORT LEONARD WOOD, MO.

Mr. SIKES. Turn to Fort Leonard Wood, Mo. Insert in the record page 61.

(The page follows:)

#### FORT LEONARD WOOD, MO., \$1,946,000

Fort Leonard Wood is located 29 miles southwest of Rolla, Mo. The mission of this installation is to command and support an Army training center and to train and support nondivisional units. It also supports Reserve components summer training. The program consists of bachelor officer quarters.

*Status of funds*

Funded program not in inventory-----	\$18,358,000
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
139	Bachelor officer quarters-----	109	0

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1968	Equip instr. building-----	\$156	-----	×

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Fort Leonard Wood		
4. COMMAND OR MANAGEMENT BUREAU Fifth US Army		5. INSTALLATION CONTROL NUMBER Missouri 599		6. STATE/COUNTRY Missouri		
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1941		9. COUNTY (U.S.) Pulaski		
11. MISSION OR MAJOR FUNCTIONS Provides command guidance, administrative and logistical support for the: US Army Training Center, Engineer; US Army Reception Station; US Army Hospital; and various other assigned or attached TOE and TD units. It also provides support for US Army Reserve, Army National Guard and other satellited activities.		12. PERSONNEL STRENGTH a. AS OF 31 Oct. 1969 1,883 34,027 2,739 b. PLANNED (End FY LR) 979 25,787 1,502		10. NEAREST CITY Rolla - 29 miles Northeast		
		13. INVENTORY		TOTAL (\$000)		
		LAND		LAND COST (\$000)		
		a. OWNED 70,963		IMPROVEMENT (\$000)		
		b. LEASES AND EASEMENTS 13		c. INVENTORY TOTAL (Excluding land rent) AS OF 30 JUNE 19 69 166,854		
		c. INVENTORY TOTAL (Excluding land rent) AS OF 30 JUNE 19 69 166,854		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 0)		
		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 0)		e. AUTHORIZATION REQUESTED IN THIS PROGRAM 18,358		
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM 18,358		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS 45,184		
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS 45,184		g. GRAND TOTAL (c + d + e + f) 232,342		
		g. GRAND TOTAL (c + d + e + f) 232,342				
SUMMARY OF INSTALLATION LINE ITEMS						
CATEGORY CODE NO.	LINE ITEM DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	SCOPE	ESTIMATED COST (\$000)
	Priority	Page No	c	d	e	f
724	139 - Bachelor Officer Quarters	3 62		MN	124	1,946
					124	1,946
						1,946

Mr. SIKES. The request is for \$1,946,000 for bachelor officer quarters. Why has this a priority No. 3?

General DALRYMPLE. Part of the same general reasons which I mentioned before, that as far as we are concerned they are all high priority items. We would just as well have them all in priority 1. We have a very austere budget this year. This has been carefully screened. However, we have to, conforming with the committee's request, indicate some order of priority. This was one that was put in priority No. 3, sir.

Mr. SIKES. What are the long-term missions for this station?

General DALRYMPLE. The long-term mission for Fort Leonard Wood is to provide command guidance, administrative and logistical support for the U.S. Army Engineer Training Center, the U.S. Army Reception Station, the U.S. Army Hospital, and various other assigned or attached units. It will also provide support for U.S. Army Reserve, Army National Guard, and other satellited activities.

Mr. SIKES. What is the bachelor officer housing situation here?

General DALRYMPLE. This item is required to provide permanent housing for 124 bachelor officers at Fort Leonard Wood. There are only 220 adequate existing spaces on the installation with a long range requirement to support 496 bachelor officers. The only other available facilities are substandard accommodations in temporary World War II mobilization type buildings and 10 units of community support housing. If this project is not approved, these personnel must continue to live in substandard housing which contributes to low morale and low retention rates for junior officers in the military service.

#### HUNTER-LIGGETT MILITARY RESERVATION, CALIFORNIA

Mr. SIKES. Take up Hunter-Liggett Military Reservation, Calif. Please insert in the record page 64.

(The page follows:)

#### HUNTER-LIGGETT MILITARY RESERVATION, CALIF., \$1,968,000

Hunter-Liggett Military Reservation is located at King City, Calif. The mission of this installation is to support training conducted by the U.S. Army Training Center, Fort Ord, Calif.; Reserve and National Guard units during field training; and training and testing conducted by the Combat Developments Command Experimentation Command. The program consists of a special purpose building for the Combat Developments Command Experimentation Command and an enlisted barracks.

#### Status of funds

Funded program not in inventory.....	\$1,055,000
Unobligated items, January 31, 1970 (actual).....	0
Unobligated items, June 30, 1970 (estimated).....	0

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
219	CDCEC special purpose building.....	\$50	25
21	EM barracks without mess.....	72	10

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.....				

1. DATE		2. DEPARTMENT		3. INSTALLATION				
2 Feb 1970		ARMY		Hunter-Liggett Military Reservation				
4. COMMAND OR MANAGEMENT BUREAU				6. STATE/COUNTRY				
Sixth US Army				California				
7. STATUS				9. COUNTY (U.S.)				
Active				Monterey				
11. MISSION OR MAJOR FUNCTIONS				10. NEAREST CITY				
Permanent location for the Combat Developments Command Experimentation Command. Provide logistical and administrative support for training conducted by the U. S. Army Training Center, Fort Ord. Provide areas and support for Reserve and National Guard Units during field training.				King City				
12. PERSONNEL STRENGTH				PERMANENT				
a. AS OF <u>31 Oct 1969</u>				OFFICER (1)	ENLISTED (2)			
b. PLANNED (End FY <u>LR</u> )				CIVILIAN (3)	ENLISTED OFFICER (6)			
				STUDENTS (4)	CIVILIAN (8)			
				INCLUDED WITH Fort Ord	ENLISTED (7)			
				55	TOTAL (9)			
					189			
13. INVENTORY								
LAND		ACRES (1)		LAND COST (\$000) (2)				
a. OWNED		166,372		1,569				
b. LEASES AND EASEMENTS		2		0				
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 <u>69</u>								
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ <u>1,055</u> ); (Unfunded - \$ <u>0</u> )								
e. AUTHORIZATION REQUESTED IN THIS PROGRAM								
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS								
g. GRAND TOTAL (c + d + e + f)								
30,443								
SUMMARY OF INSTALLATION LINE ITEMS								
CATEGORY CODE NO.	LINE ITEM DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		ESTIMATED COST (\$000).	
	Priority	Page No			SCOPE	ESTIMATED COST (\$000)		SCOPE
141	2	65	CDC	SF	21,000	744	21,000	744
722	1	66		MN	326	<u>1,224</u>	326	<u>1,224</u>
Totals							1,968	1,968

Mr. SIKES. The request is for \$1,968,000 for enlisted men's barracks without mess, and for a CDCEC special purpose building. What was this reservation previously called? This is not the name that has been associated with it previously, is it?

General DALRYMPLE. Yes, sir; Hunter-Liggett has been the name for some time now, sir.

Mr. SIKES. It is a permanent location for the Combat Developments Command Experimentation Command. What does that mean?

General DALRYMPLE. This center is used to serve as a field laboratory for the evaluation of objective field experimentation of those concepts of tactics and operations which are directed by the Headquarters, U.S. Army Combat Developments Command at Fort Belvoir. It is a highly instrumented facility that can make these field tests and experimentations and based upon them deduce certain recommendations which are then accepted by the Army and result in changes in tactics and operations. I would like to have Mr. Gibbons, of the Army staff, elaborate on that, if he will.

Mr. GIBBONS. The experimentation command actually tests in the field those concepts of tactical deployment, administrative type operations for units from company level right on up through division and part of the field army type operations. They actually use some troops to go to do the problems, to actually test what has been developed in the line of doctrine or concepts, as to where troops should be located, what type of support they should have, what type of air support, and everything that is related to combat, sir.

Mr. SIKES. Is this the only Army installation of its kind, or is the mission similar to that at Fort Benning, for instance, or Fort Bragg?

Mr. GIBBONS. No, sir. This is the only experimentation command for testing combat developments, sir. The Combat Developments Command agencies at the schools work directly in conjunction with the individual schools on armor, on infantry, on air. They are specifically designed for the branches of service, whereas the Experimentation Command examines it over the broad scope of operations, sir.

Mr. SIKES. The number of personnel appears to be quite low. Is there anything particularly significant to be attached to that?

Mr. GIBBONS. No, sir. The size of the unit has been determined on exactly what their mission is, to keep it at the minimum number of personnel to support the mission.

Mr. SIKES. Is this base used for Reserves and National Guard, as well as for Regular Army forces?

Mr. GIBBONS. The concept, sir, once adopted, would also be incorporated in the type training furnished to the Reserve and National Guard troops, but this is primarily geared to the operation of the active Army in combat operations. Of course, as the doctrine and techniques are developed these are passed on to the Reserve components in the line of training.

Mr. SIKES. Do I understand correctly that this is not a training base as such?

Mr. GIBBONS. Yes, sir; that is correct.

Mr. SIKES. What do you have now in the way of building facilities for the two items requested here?

General DALRYMPLE. The special purpose building—its function is performed now in trailers located at Hunter-Liggett and in two World War II buildings at Fort Ord, some 80 miles away. The present en-

listed men's barracks are single story hutments which are not insulated. Bivouac-type latrines are located some several hundreds yards away. These temporary hutments have resulted in a series of complaints by the soldiers who have had to use them. There are no permanent enlisted facilities there. This item would be the first increment of enlisted men's permanent barracks and we are requesting one barracks which would house 326 men.

Mr. SIKES. Will that take care of all of your requirements?

General DALRYMPLE. No, sir. We have a requirement for over 3,000. This would be the initial increment. There is very little in the way of permanent construction at Hunter-Liggett, sir.

Mr. SIKES. I see that you plan to build \$20 million worth of construction in the next 4 years. Apparently we are embarking on a rather ambitious program. Why can you not conduct this activity at existing stations?

Mr. GIBBONS. Sir, when the experimentation command was originally conceived three boards of general officers did examine various locations. The decision that Hunter-Liggett was best suited was developed on the type of terrain available, the acreage, and other factors taken into consideration, even including the fact that any other installations may be necessary; what additional construction would be required to support the experimentation command. Each of the three boards of general officers concluded that Hunter-Liggett was best situated to have it because of its terrain and availability of facilities.

Mr. SIKES. I must admit that this leaves me somewhat cold. I am thinking of base closures and reductions in personnel. I know that there will be facilities available in other areas, some of them with large reservations. I am not certain that we should embark on a new program of this nature. It does not sit well with this committee to be told that we do not need facilities in one base but we are going to build \$20 million worth of facilities at another base for what is essentially a new program.

I would like to be given more assurance than I now have that this is the best place for this experimentation and that there are no other suitable locations with existing facilities which could be used. So I think I am going to ask, General, that this matter be resurveyed and that additional information be provided for the committee on this question.

General DALRYMPLE. Yes, sir.

Mr. SIKES. Mr. McFall.

Mr. McFALL. Couldn't we have a presentation on this?

Mr. SIKES. Do we have a map showing this?

Mr. McFALL. I know the terrain fairly well. It is just 71 miles down the coast from Fort Ord. It is an old base that was used many years ago. Could we have some kind of a study, some kind of a presentation as to what you are going to do here? This is a new kind of thing, this combat developments experimentation. How would you like to proceed with this resurvey, Mr. Chairman? I was thinking that they might come in and give us a presentation.

Mr. SIKES. That would be the best way.

General DALRYMPLE. All right. We will arrange with Mr. Nicholas to make a presentation for the committee, sir.

(Editor's note: See page 325.)

Mr. McFALL. Off the record.

(Discussion off the record.)

Mr. McFALL. For the record, what is the long-range strength proposed for this station?

(The information follows.)

(Mr. GIBBONS.) After the announced reduction of 1,051 enlisted spaces, the planned long range strength of CDCEC will be 326 officers, 21 warrant officers, 2,426 enlisted personnel, and 88 civilians. To this must be added the garrison support type personnel from Fort Ord which will be 63 officers and 322 enlisted personnel. Total personnel strength at Hunter-Liggett Military Reservation will be 389 officers, 21 warrant officers, 2,748 enlisted personnel, and 88 civilians.

Mr. McFALL. Describe the mission of the CDCEC special purpose building and the type of activity which will be carried out here. How is this activity being conducted at the present time? What is the status of design of this facility?

Mr. GIBBONS. The special purpose building will house the tactical simulation center and the pictorial center of CDCEC. The tactical simulation center supports scientific and military simulation activities designed to isolate the key elements of field experimentation through economical, two sided gaming techniques on scaled terrain models. This enables the military and scientific staff of CDCEC to examine proposed field experimentation and determine measurable and observable data which may be collected. It also provides a responsive and economical method of reexamining critical or questionable field data through post play simulation. The experiments are photographed and provide a means of reducing information to useable data and as doctrine and concepts are approved furnish data as well as film footage that can be used in developing training films and literature. At present a standard mobile home trailer has been modified for field support at HLMR and a daily messenger service is required between HLMR and Fort Ord (80 miles distant) to transport film and administrative matters. As of February 28, 1970, design of this facility was 25-percent complete. It is estimated that design will be 100-percent complete in July 1970.

Mr. McFALL. What is your long-term program for providing barracks spaces at Hunter-Liggett? How does this compare with your schedule for moving personnel to this reservation?

Mr. GIBBONS. Sir, a barracks complex for 1,630 spaces is currently planned for the fiscal year 1973 program at an estimated cost of \$8,257,000. The balance of barracks spaces required are anticipated to be requested in the fiscal year 1975 program. Personnel will be moved to Hunter Liggett Military Reservation as permanent facilities become available.

Mr. SIKES. What kind of vegetation does the reservation now have? Are there marketable tree stands, or scrub type trees and grass there?

Mr. GIBBONS. The vegetation varies, of course. It ranges from sand to scrub trees and grass. Having been a private who served there, I know it gets pretty rough in some of the places. I am trying to do this from memory of what I have gone through down there.

#### WILDLIFE AND FORESTRY MANAGEMENT

Mr. SIKES. It seems that an area of this type which is not heavily used would offer some possibilities for forestry management, wildlife management. Do you know what kind of program you have there?

Mr. GIBBONS. No, sir; I do not.

Mr. SIKES. Would you provide that information for the record?  
(The information follows:)

Hunter-Liggett has 170,000 acres in a fish and wildlife management program that features excellent deer, quail, and dove hunting with some fishing. Public is allowed access on a first come-first served basis for hunting and fishing.

Forest management is not suited to 40 percent of the area where the annual rainfall is under 20 inches. On 60 percent of the area the rainfall grades from 20 to 60 inches annually. Most of this area is covered in a highly flammable chaparral-type growth with a scattering of trees that have developed to commercial sizes. In February 1969 a research program in tree planting was initiated by the Army to develop tree planting techniques that may prove successful in establishing a desirable forest cover. Obstacles are formidable.

General DALRYMPLE. We have wildlife management at all of our bases. I do not know about forestry management at this station, however.

Mr. McFALL. They would not have that. They just have scrub oaks, not many trees.

Mr. CEDERBERG. It is typical of California.

Mr. SIKES. Now, I was not going to say that.

Mr. McFALL. Well, you know the redwoods stop a few miles from there, shall we say.

Mr. GIBBONS. A few miles north; yes, sir.

Mr. PATTEN. Nearly every time the Marines or the Navy come in with their bases in California they tell us about encroachment problems. Every base in California has air traffic problems, or urban encroachment problems. I just wonder if it is smart to proceed with a \$30 million project here in fast-growing California.

Mr. CEDERBERG. They will not encroach here.

Mr. McFALL. Not at Hunter-Liggett.

Mr. GIBBONS. This is located in the vicinity of King City. I think the smallest town is called Joplin. There does not seem to have been any major growth in population in this area, sir.

Mr. PATTEN. Is this south of San Francisco?

Mr. GIBBONS. Approximately 80 miles south of Fort Ord.

Mr. McFALL. 90 miles south of San Francisco.

Off the record.

(Discussion off the record.)

#### FORT LEWIS, WASH.

Mr. SIKES. Turn to Fort Lewis. Insert in the record page 67.  
(The page follows:)

#### FORT LEWIS, WASH., \$1,567,000

Fort Lewis is located 15 miles east of Olympia, Wash. The mission of this installation is to command, train, and support an infantry division and non-divisional units and to support reserve components summer training. The program consists of sewage treatment facility improvement.

#### *Status of funds*

Funded program not in inventory	-----	\$6,054,000
Unobligated Items, Jan. 31, 1970 (actual)	-----	0
Unobligated Items, June 30, 1970 (estimated)	-----	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
323	Sewage treatment facility improvement.....	\$90	18

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.....				

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Lewis		TOTAL (\$000) (2)																																																																														
4. COMMAND OR MANAGEMENT BUREAU		6. STATE/COUNTRY		50,306																																																																														
5th US Army		Washington		26,703																																																																														
7. STATUS Active	5. INSTALLATION CONTROL NUMBER Washington - 465	9. COUNTY (U.S.) Pierce and Thurston																																																																																
8. YEAR OF INITIAL OCCUPANCY 1917	10. NEAREST CITY Olympia, 15 miles West																																																																																	
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">PERMANENT</th> <th colspan="3">SUPPORTED</th> <th rowspan="2">TOTAL (\$000) (2)</th> </tr> <tr> <th>OFFICER (1)</th> <th>ENLISTED (2)</th> <th>CIVILIAN (3)</th> <th>OFFICER (4)</th> <th>ENLISTED (5)</th> <th>CIVILIAN (6)</th> </tr> <tr> <td>2,662</td> <td>43,423</td> <td>4,221</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">11. MISSION OR MAJOR FUNCTIONS Station for a permanent Infantry Division. Command, training and logistical support for non-Divisional units. Supports National Guard and Army Reserve component summer training.</td> <td colspan="3">12. PERSONNEL STRENGTH * a. AS OF 31 Oct 1969 b. PLANNED (End FY LR)</td> <td></td> </tr> <tr> <td colspan="2"></td> <td colspan="3">13. INVENTORY</td> <td></td> </tr> <tr> <td colspan="2"></td> <td>LAND (\$000)</td> <td>IMPROVEMENT (\$000)</td> <td colspan="2">TOTAL (\$000) (4)</td> </tr> <tr> <td colspan="2"></td> <td>84,125</td> <td>162,071</td> <td colspan="2">162,907</td> </tr> <tr> <td colspan="2"></td> <td>2,521</td> <td>6**</td> <td colspan="2">6</td> </tr> <tr> <td colspan="2"></td> <td colspan="3">c. INVENTORY TOTAL (Excepi land invt) AS OF 30 JUNE 19 69</td> <td>162,913</td> </tr> <tr> <td colspan="2"></td> <td colspan="3">d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 6,054; (Unfunded - \$ 0)</td> <td>6,054</td> </tr> <tr> <td colspan="2"></td> <td colspan="3">e. AUTHORIZATION REQUESTED IN THIS PROGRAM</td> <td>1,567</td> </tr> <tr> <td colspan="2"></td> <td colspan="3">f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS</td> <td>30,774</td> </tr> <tr> <td colspan="2"></td> <td colspan="3">g. GRAND TOTAL (c + d + e + f)</td> <td>201,308</td> </tr> </table>					PERMANENT		SUPPORTED			TOTAL (\$000) (2)	OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	CIVILIAN (6)	2,662	43,423	4,221				11. MISSION OR MAJOR FUNCTIONS Station for a permanent Infantry Division. Command, training and logistical support for non-Divisional units. Supports National Guard and Army Reserve component summer training.		12. PERSONNEL STRENGTH * a. AS OF 31 Oct 1969 b. PLANNED (End FY LR)						13. INVENTORY						LAND (\$000)	IMPROVEMENT (\$000)	TOTAL (\$000) (4)				84,125	162,071	162,907				2,521	6**	6				c. INVENTORY TOTAL (Excepi land invt) AS OF 30 JUNE 19 69			162,913			d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 6,054; (Unfunded - \$ 0)			6,054			e. AUTHORIZATION REQUESTED IN THIS PROGRAM			1,567			f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS			30,774			g. GRAND TOTAL (c + d + e + f)			201,308
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SUMMARY OF INSTALLATION LINE ITEMS																																																																																		
CATEGORY CODE NO. a	LINE ITEM DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM	FUNDING PROGRAM																																																																												
	LINE ITEM TITLE b	Priority	c	d	ESTIMATED COST (\$000) e	SCOPE f	ESTIMATED COST (\$000) g																																																																											
831	323 - Sewage Treatment Facility Improvement	1	68		1,567		1,567																																																																											

\* Includes Madigan General Hospital.  
\*\* Includes \$5,700 one time cost for easement.

Mr. SIKES. The request is for \$1,567,000 for a sewage facility improvement program. Does this complete all the requirements?

General DALRYMPLE. Yes, sir.

PRESIDIO OF MONTEREY, CALIF.

Mr. SIKES. Next, turn to Presidio of Monterey. Mr. Reporter, please insert in the record page 69.

(The page follows:)

PRESIDIO OF MONTEREY, CALIF., \$2,635,000

The Presidio of Monterey is located at Monterey, Calif. The mission of this installation is to support operations of the Defense Language Institute. The program provides bachelor officer quarters.

*Status of funds*

Funded program not in inventory-----	\$4,006,000
Unobligated items, Jan. 31, 1970 (actual)-----	2,125,000
Unobligated items, June 30, 1970 (estimated)-----	2,125,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
35	Bachelor officer quarters-----	\$125	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Student dormitory-----	\$2,125	-----	X

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Presidio of Monterey	
4. COMMAND OR MANAGEMENT BUREAU Sixth US Army		6. STATE/COUNTRY California	
5. INSTALLATION CONTROL NUMBER California - 305		9. COUNTY (U.S.) Monterey	
7. STATUS Active	8. YEAR OF INITIAL OCCUPANCY 1900	10. NEAREST CITY Monterey	
11. MISSION OR MAJOR FUNCTIONS Responsible for operation of the Department of Defense Language Institute.			
12. PERSONNEL STRENGTH			
a. AS OF 31 Oct 1969			
b. PLANNED (End FY LR )			
13.			
LAND		LAND COST (\$000)	
a. OWNED	402	IMPROVEMENT (\$000)	
b. LEASES AND EASEMENTS	0	10,666	
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		0	
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 4,006 )		0	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		2,635	
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		10,326	
g. GRAND TOTAL (c + d + e + f)		27,649	
SUMMARY OF INSTALLATION LINE ITEMS			
LINE ITEM DESIGNATION			
CATEGORY CODE NO. a	LINE ITEM TITLE b	PRIORITY Page No	FUNDING PROGRAM
724	35 - Bachelor Officer Quarters	3 .70	200 2,635 200 2,635
			200 2,635 200 2,635
			200 2,635 200 2,635

Mr. SIKES. The request is for \$2,635,000 for bachelor officer quarters. What is the bachelor officer housing situation here?

General DALRYMPLE. This project is required to provide permanent housing for 200 officer and civilian students assigned to the Defense Language Institute, west coast branch. There are only 90 adequate existing spaces on the installation with a long range requirement to support 451 bachelor officers. The only other existing facilities are wooden temporary buildings constructed in 1903 and 1941 and private rentals in the adjacent community. Since the majority of the occupants are students of the Defense Language Institute, intensive home study requirements which include memorization of dialogue and use of tape recorders, reflects the necessity for providing suitable accommodations where they can quietly and efficiently study. This project would provide adequate housing for 200 PCS and TDY officers living off-post with a resultant savings of approximately \$174,000 annually in payment of housing allowances and approximately \$297,000 in TDY costs. If this project is not approved these personnel must continue to live in substandard temporary buildings or off-post.

Mr. SIKES. Are there questions?

Mr. CEDERBERG. Off the record.

(Discussion off the record.)

FORT ORD, CALIF.

Mr. SIKES. Let us take up Fort Ord. Insert in the record page 71. (The page follows:)

FORT ORD, CALIF., \$3,497,000

Fort Ord is located 4 miles north of Seaside, Calif. The mission of this installation is to command, train, and support an Army Training Center and nondivisional units and to support the Combat Developments Command Experimentation Command at Hunter-Liggett Military Reservation, Common Specialist School, Reception Center, and Reserve component summer training. The program consists of construction of a commissary sales store and sewage outfall and plant modification.

*Status of funds*

Funded program not in inventory.....	\$27, 329, 000
Unobligated items, Jan. 31, 1970 (actual).....	445, 000
Unobligated items, June 30, 1970 (estimated).....	

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete
			Jan. 31, 1970
157	Commissary sales store.....	\$95	25
225	Sewage outfall and plant modification.....	85	5

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.....				

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Fort Ord			
4. COMMAND OR MANAGEMENT BUREAU Sixth US Army		5. INSTALLATION CONTROL NUMBER 05625		6. STATE/COUNTRY California			
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1940		9. COUNTY (U.S.) Monterey			
11. MISSION OR MAJOR FUNCTIONS Fort Ord provides the headquarters for the U. S. Army Training Center, Infantry, provides for the command, operation, training, administration, service and support of the Common Specialist School, Reception Center and general reserve units. In addition, the Combat Developments Command Experimentation Command is based at Fort Ord.		12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969 1,388 b. PLANNED (End FY LR) 1,333		PERMANENT OFFICER (1) 1,388 ENLISTED (2) 32,799 CIVILIAN (3) 2,476		SUPPORTED OFFICER (4) 1,333 ENLISTED (5) 24,333 CIVILIAN (6) 1,619	
13. INVENTORY a. OWNED 28,701 b. LEASES AND EASEMENTS 1 c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 1969 27,329 d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 0) e. AUTHORIZATION REQUESTED IN THIS PROGRAM (Unfunded - \$ 0) f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS 3,497 g. GRAND TOTAL (c + d + e + f) 193,631		LAND COST (\$000) 871		IMPROVEMENT (\$000) 113,811		TOTAL (\$000) 114,682	
* \$2,000 one-time cost for easement.							
SUMMARY OF INSTALLATION LINE ITEMS							
CATEGORY CODE NO.	LINE ITEM DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM		ESTIMATED COST (\$000)
	LINE ITEM TITLE	PRIORITY			SCOPE	SCOPE	
740	157 - Commissary Sales Store	1		SF	79,540	79,540	1,855
831	224 - Sewage Outfall and Plant Modification	1					1,642
Totals							3,497

Mr. SIKES. The request is for \$3,497,000 for a commissary sales store and a sewage outfall and plant modification. Is the commissary situation the same as when you discussed the project last year?

General DALRYMPLE. Yes, sir.

Mr. SIKES. Will the sewage outfall and plant modification complete the requirements and bring you in compliance with Federal and State regulations?

General DALRYMPLE. Yes, sir.

Mr. SIKES. Are there questions?

Mr. CEDERBERG. We are talking about a commissary sales store at Fort Ord; is that right?

General DALRYMPLE. Yes.

Mr. CEDERBERG. For \$1,855,000?

General DALRYMPLE. Yes, sir.

#### DEFERRAL LIST

Mr. CEDERBERG. On the reduction list there is a commissary sales store in 1970 which is on the deferred list, for \$1,655,000. Was that cut out?

General DALRYMPLE. The Armed Services Committee cut it out.

Mr. CEDERBERG. How did it get into a deferral program? Was the first deferral list made up before the bill, then?

General DALRYMPLE. Yes.

Mr. CEDERBERG. You would have deferred it, then, if you had gotten it?

General DALRYMPLE. We had to defer 75 percent of the programmed projects, sir.

Mr. CEDERBERG. How could you defer something you did not have?

Mr. CARTON. We did not have a bill in November.

Mr. CEDERBERG. You put it in the proposed deferred projects, but you did not defer it, then?

General DALRYMPLE. No, sir. It dropped out, of course, when it was not authorized.

Mr. CEDERBERG. Then some of these deferrals that you have in the earlier list dropped out of the program.

General DALRYMPLE. We were required to submit this before we had a bill.

Mr. CEDERBERG. Before you had a bill?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. So you put in the deferred list some of these things that you thought we would defer anyway.

General DALRYMPLE. No, sir. We deferred 75 percent of them and listed as 25 percent—

Mr. CEDERBERG. Is this that same commissary sales store?

General DALRYMPLE. It is the only one in the program, sir.

Mr. CEDERBERG. It went up in cost by \$200,000.

General DALRYMPLE. That is right, \$1.6 million to \$1.8 million in 1 year.

Mr. CEDERBERG. That is more than 10 percent.

General DALRYMPLE. A little more than 10 percent.

Mr. CEDERBERG. Is this one of those that takes into account the cost increase that you are talking about in your general statement?

General DALRYMPLE. That is right, sir.

Mr. CEDERBERG. The general increase was, overall, about nine.

General DALRYMPLE. We are counting about 10 percent. We are using as a base an Engineering-News Record index of 800 and escalating it 10 percent on the basis that there will be an increase of 10 percent by about January of 1971 at which time this would probably go to contract.

Mr. CEDERBERG. That is all I have.

Mr. McFALL. Are there any other questions on Fort Ord?

PRESIDIO OF SAN FRANCISCO, CALIF.

Turn to the Presidio of San Francisco. Insert in the record page 74. (The page follows:)

PRESIDIO OF SAN FRANCISCO, CALIF.—\$7,004,000

The Presidio of San Francisco is located at San Francisco, Calif. The mission of this installation is to support Headquarters, 6th U.S. Army, Letterman General Hospital and sixth region U.S. Army Air Defense Command. The program consists of the first phase of construction of facilities for the Western Medical Institute of Research.

*Status of funds*

Funded program not in inventory	-----	\$2, 411, 000
Unobligated items, Jan. 31, 1970 (actual)	-----	745, 000
Unobligated items, June 30, 1970 (estimated)	-----	745, 000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
83	Western Medical Institute of Research, Phase I	\$410	10

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
70	Extend storm drain system-Increment 3	\$706	-----	×
70	Post chapel addition	39	-----	×

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Presidio of San Francisco	
4. COMMAND OR MANAGEMENT BUREAU Sixth US Army		6. STATE/COUNTRY California	
5. INSTALLATION CONTROL NUMBER California - 781		10. NEAREST CITY San Francisco	
7. STATUS Active	8. YEAR OF INITIAL OCCUPANCY 1850	9. COUNTY (U.S.) San Francisco	
11. MISSION OR MAJOR FUNCTIONS To provide housing, work facilities and administrative and logistical support, as required, to active force and reserve component units, activities and installations of Sixth U. S. Army, Letterman General Hospital, Sixth Region U. S. Army Air Defense Command, other Army and Government agencies on and off post in the Sixth U. S. Army area.			
12. PERSONNEL STRENGTH		STUDENTS	
a. AS OF 31 Oct 1969		OFFICER (1)	ENLISTED OFFICER (6)
b. PLANNED (End FY LR)		CIVILIAN (2)	CIVILIAN (8)
		2,213	4,048
		3,331	203
		4,497	244
		1,498	76
		2,971	164
13. INVENTORY			
LAND		LAND COST (\$000)	
a. OWNED	1,779	IMPROVEMENT (\$000)	
b. LEASES AND EASEMENTS	2	99	58,026
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		TOTAL (\$000)	
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 2,411; Unfunded - \$ 0 )		58,125	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		2,411	
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		7,004	
g. GRAND TOTAL (c + d + e + f)		20,879	
		88,419	

CATEGORY CODE NO. a	LINE ITEM DESIGNATION b	LINE ITEM TITLE b	PRIORITY PAGE No	SUMMARY OF INSTALLATION LINE ITEMS			AUTHORIZATION PROGRAM			FUNDING PROGRAM		
				TEENANT COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED (\$000) f	SCOPE g	ESTIMATED (\$000) h			
310	83 - Western Medical Institute of Research - Phase I	TSG	75		SF	98,946	7,004	98,946	7,004	98,946	7,004	

Mr. McFALL. We have an investigative report on this project.

You are requesting phase 1 of facilities for the Western Medical Institute of Research (WMIR) in the amount of \$7,004,000. What is the total cost of the three phases of this facility proposed at the Presidio?

General DALRYMPLE. The first phase now before you is \$7 million. Phase 2 we estimate now at about \$10.8 million and phase 3 at about \$11.2 million. We are talking about our total cost of the three phases of an estimate of \$29 million.

#### CONSOLIDATION OF ARMY MEDICAL RESEARCH

Mr. McFALL. Is this a part of a larger program to consolidate Army medical research facilities?

General DALRYMPLE. I have asked Colonel Dirks to assist me in replying to the questions from the committee. He is from the Surgeon General's Office.

Colonel DIRKS. The answer simply is "Yes." Now, if I may, I would be happy to dilate on this from some charts I have.

Mr. McFALL. Go ahead. I believe we should have some of this in the record.

Colonel DIRKS. Our command presently operates 13 medical research institutes and laboratories worldwide, 11 of which are located in the continental United States. These are depicted on the map which you see here. You will note there are only nine dots. I bring this to the attention of the committee for explanatory purposes. One dot represents three institutions located in the Washington area. They are as follows:

A. U.S. Army Research Institute of Environmental Medicine, Natick, Mass.;

B. U.S. Army Medical Equipment Research and Development Laboratory, Fort Totten, N.Y.;

C. U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, Frederick, Md.;

D. U.S. Army Medical Biochemical Research Laboratory, Washington, D.C.

E. U.S. Army Institute of Dental Research, Washington, D.C.

F. Walter Reed Army Institute of Research, Washington, D.C.;

G. U.S. Army Medical Research Laboratory, Fort Knox, Ky.;

H. U.S. Aeromedical Research Laboratory, Fort Rucker, Ala.;

I. U.S. Army Institute of Surgical Research, Fort Sam Houston, Tex.;

J. U.S. Army Medical Research and Nutrition Laboratory, Denver, Colo.; and

K. Letterman Army Institute of Research, Presidio of San Francisco, Calif.

Our long-range plan is to consolidate these 11 facilities into six facilities which are depicted on the next map. The six facilities would be: Our U.S. Army Research Institute of Environmental Medicine at Natick, Mass.; the present Army Medical Research Institute of Infectious Diseases at Fort Detrick in Frederick, Md.; our current Walter Reed Army Institute of Research at Washington; our U.S. Aeromedical Research Laboratory at Fort Rucker, Ala., and expanded capability at the U.S. Army Institute of Surgical Research at Fort Sam Houston, Tex., which for the purposes of this chart is indicated

as Brooke Army Institute of Research, and expanded capability which we now identify as the Western Medical Institute of Research.

The current request is for the first phase of this expansion project.

Mr. McFALL. Actually you have eliminated or consolidated everything at Walter Reed so that you have two in the Washington area, at Fort Detrick and Walter Reed. What are the other consolidations?

Colonel DIRKS. We will eliminate the Army Medical Equipment Research and Development Laboratory at Fort Totten, N. Y., combining it with our Institute at Houston, Tex.

#### CONDUCT OF MEDICAL RESEARCH IN-HOUSE AND BY CONTRACT

Mr. LONG. Could I ask why the Army feels it is necessary to go this extensively into medical research? Why can't you have it done on contract with various medical schools and research institutes such as the Rockefeller Institute, and so on? Why wouldn't it be cheaper and perhaps better?

Colonel DIRKS. Our current program of medical research is the combined program involving in-house effort and supplementary contract effort to cover these areas which we cannot accomplish in-house. The program currently consists of approximately 58 percent in-house work and 42 percent under contract. This includes something over 1,150 contracts at the present time. Portions of our research program must necessarily be done in-house in order for us to maintain scientific expertise, in order to be able to deal with the specific military medical problems, to identify specific problem areas that pertain to the soldier patient, particularly as he encounters difficulties in the field environment.

Mr. LONG. I can understand why you would need some in-house, because you have to have a good deal of expertise in order to ask the right questions. You have to know what the problems are, in order to look around and see who can do it, but why does it have to be such a low ratio of contract to in-house research?

Colonel DIRKS. Our program focuses entirely on the military medical problems. Again, we in the military are more concerned with these problems than our civilian contemporaries. So it is only as we begin to address these problems that we are able to stimulate interest in the civilian community in our particular problem.

Mr. LONG. I understand.

Colonel DIRKS. To this extent it seems that the appropriate balance, the ideal balance which we would like and which we had up through 1967 was essentially a 50-50 operation.

Mr. LONG. But you are below 50-50 now.

Colonel DIRKS. We are now; with the recent reduction in our budget, it has been necessary for us to make certain adjustments and we have made some adjustments in-house, made some adjustments of those under contract and we are trying again to effect this ideal balance but have not yet attained that objective.

Mr. LONG. Wouldn't this be a good time to do it? That is to say, instead of relocating why not close down some of these facilities, and just expand your contracts?

Colonel DIRKS. On the basis of our best analysis we find that to do the same type of work under contract that we would do in-house, it would cost anywhere from 20 to 33 percent more to do it under contract.

Mr. CEDERBERG. If I may; when you contract out to another institution, what is the general overhead that you have to pay that institution?

Colonel DIRKS. It ranges considerably depending upon the way in which they calculate it, from 20 percent to, with certain industrial concerns where they list it as 150 percent. It depends upon the manner in which the calculation is made. I am not as sufficiently adept at accounting to be able to explain the difference in the formulation.

Mr. CEDERBERG. This has been one of my concerns about a lot of this institutional contracting, not only in the medical area but in other areas. Universities are charging overhead of 30 and 40 percent. I can remember years ago when we had a 15-percent overhead in the law. Then that ceiling was broken and it has gone way up to what it is at the present time.

Mr. LONG. It is a hidden subsidy to the university.

Mr. CEDERBERG. Of course it is. You could not operate a medical school in the United States without Federal assistance, whether it comes from NIH or from you, Colonel.

Colonel DIRKS. Our best bargain under contract is with the universities where the overhead generally ranges between 20 and 28 percent. Our poorest bargains seem to be in the industrial community where we must pay a much higher rate of overhead to get certain kinds of work done which is not normally done.

Mr. MCFALL. Let's go right ahead with the presentation and perhaps we will get these questions answered and develop much of this as we go along.

#### CONSOLIDATIONS

Colonel DIRKS. Turning to your question with respect to the closings again, the Medical Equipment Research and Development Laboratory at Fort Totten, N.Y., the function of that is programed to be combined with our Institute of Surgical Research at Fort Sam Houston, Tex. This is contingent, of course, upon further construction which is programed for future years.

The closing of the Medical Biomechanical Research Laboratory in the Washington, D.C., area is also destined to be combined with our Institute of Surgical Research, in a larger institute. I will have to correct myself on one item. Our current Institute of Dental Research is colocated with the Walter Reed Army Institute of Research in the same building and the intent is it will, in fact, simply again be absorbed into that Institute as a single administrative body without additional construction or without change in its particular function.

We plan to close the Army Medical Research Laboratory at Fort Knox, and a portion of the function of that is intended ultimately to move to our Western Medical Institute of Research and one portion of it is programed to go to the Institute of Surgical Research at Fort Sam Houston in Texas. We plan to close the Medical Research Laboratory—I should say close the Medical Research and Nutrition Laboratory at Denver, Colo., a major portion of which is programed to be combined with the Letterman Army Institute of Research in the Western Medical Institute of Research. The other portion will go to the Army Research Institute of Environmental Medicine at Natick, Mass.

So to summarize, the ones to be deleted are: The U.S. Army Medical Equipment Research and Development Laboratory at Fort Totten, N.Y., the U.S. Army Medical Biomechanical Research Laboratory at Washington, the U.S. Army Medical Research Laboratory at Fort Knox, Ky., the U.S. Army Medical Research and Nutrition Laboratory at Denver, Colo. I believe I have addressed the question with respect to the long-range consolidation and I have also indicated our program for consolidation at the Western Medical Institute of Research.

Mr. McFALL. Would you, then, reply to why the consolidation is necessary?

Colonel DIRKS. We feel consolidation is necessary for the following reasons: The current work is being done in overcrowded facilities. Exemplary of this is our problem at the Walter Reed Army Institute of Research where we have scientists working in broom closets with equipment and scientists spilling out into the corridors to find places to work. At the Medical Research Laboratory at Fort Knox our laboratory is occupying 30 buildings, of which 21 are dilapidated, obsolescent World War II barracks buildings which have been converted into makeshift laboratories. Many of these are in poor repair and the floors require shoring up to support certain items of heavy equipment in a laboratory, such as large refrigerated centrifuges. Our Medical Research and Nutrition Laboratory in Denver is in World War II and World War I constructed facilities which are again in bad shape and in need of renovation.

Mr. McFALL. It is cheaper to try to consolidate than to renovate?

Colonel DIRKS. This is our best assessment of the situation; yes, sir. By comparative analysis we find that to renovate and continue the rather excessive overhead cost of operating facilities which I have described to you will, in fact, be offset by the total construction cost of the Western Medical Institute of Research and its operation, and the gains in terms of administrative overhead, logistical burden, in a period of 7.7 years.

Mr. McFALL. Is the total cost \$29 million?

General DALRYMPLE. This \$29 million is just for this particular one.

Colonel DIRKS. That is correct. I am referring to consolidation at Western Medical Institute of Research.

Mr. McFALL. The \$29 million is just for that?

Colonel DIRKS. Yes.

Mr. McFALL. What is the total cost of the program?

Colonel DIRKS. That is a much larger figure. The total cost of the entire long-range program is \$83 million, approximately.

Mr. McFALL. Over the same 3-year period or over what period?

Colonel DIRKS. This is to be phased over a period of approximately 5 years budgetwise with the construction phase of approximately 7 years.

Mr. McFALL. Provide for the record the military construction required to effect this consolidation for the entire program, showing the projects and the fiscal years in which they are proposed so that we will have your entire picture before us.

(The information follows:)

The military construction that would be required to effect the consolidation plans of the U.S. Army Medical Research and Development Command (USAMRDC) to include projects and proposed fiscal-year construction are as follows:

	Fiscal year—				1975 and beyond
	1971	1972	1973	1974	
1. Western Medical Institute of Research.....	1 7,004	2 10,873	3 11,182	-----	-----
2. Central Medical Institute of Research (Brooke Army Institute of Research).....	-----	1 10,000	2 8,000	-----	-----
3. Walter Reed Army Institute of Research.....	-----	-----	4 7,150	4 7,910	5 5,857
4. Army Aeromedical Research Laboratory.....	-----	-----	-----	6 4,312	-----
5. Army Research Institute for Environmental Medicine.....	-----	-----	-----	-----	4 11,000
Cumulative total.....	-----	-----	-----	-----	83,288

- 1 Phase I.  
 2 Phase II.  
 3 Phase III.  
 4 Addition.  
 5 Rehabilitation.  
 6 Replacement.

#### SAVINGS FROM CONSOLIDATIONS

Mr. McFALL. Can you identify savings from the consolidation proposed at the Western Medical Center, and can you identify savings from the total consolidation program? First address yourself to the Western Medical Center.

Colonel DIRKS. The monetary savings at the Western Medical Institute for Research are not very great. Over a 50-year life expectancy of the building we would expect a saving of only \$300,000. The other savings to be realized are in the area of better utilization of our scientists and improved, more cohesive research programs attuned to our more acute medical needs as we identify them in particularly tropical medical areas.

In addition, we will have an overall savings for the command in terms of the reduction in the administrative requirements for administrative space and personnel to operate the various headquarters of the separate laboratories by consolidating the resources.

In addition, we will have a savings in terms of the logistical and overhead requirements for support. But the total savings over the 50-year life span of the Western Medical Institute for Research, our best analysis gives us about \$300,000, which admittedly is not a great saving in dollars.

The saving may be in lives of military men in the future who may be exposed to these disease threats which we propose to address.

Mr. McFALL. Yes, but we were, I think, addressing ourselves to the savings that might be shown in ordinary items such as operation and maintenance, things of that nature. We hope that they will be very, very large. The savings in lives and the greater efficiencies in medical research and the kind of impact that that may have on the Army, I don't think you could project this or even predict it at this time. We hope it is very, very large. But what about the rest of the program now? Can you identify savings from the total consolidation program of the operation and maintenance type?

Colonel DIRKS. A careful analysis has not been made of the total program with respect to this type of activity and therefore I cannot identify specific dollar savings nor personnel savings.

## ARMY MEDICAL RESEARCH

Mr. McFALL. What is the amount of medical research carried out by the Army now?

Colonel DIRKS. Our total budget this year is \$42.3 million.

Mr. McFALL. We discussed the contracting out of a portion of it. What is that, again?

Colonel DIRKS. That is 42 percent of the total effort.

Mr. McFALL. Would you give us an idea of the need for the Army to conduct basic medical research? I imagine there is much that can be said but tell us briefly about it.

Colonel DIRKS. Yes. It is imperative that we conduct basic medical research in order to develop such items as vaccines which will protect our troops from those kinds of infectious diseases which are peculiar to the combat environment or to our basic training centers. Exemplary of the type of problem that I make reference to is our development of a meningococcal vaccine. This vaccine has been developed because of basic research done by one of our scientists wherein he identified the proper chemical procedure for extracting the capsular polysaccharide of the meningococcal organism in a large molecular weight form which made it possible for this material to stimulate protective antibody formation in the recipient.

In essence, what I have said is that our scientists identified the basic chemical procedure for producing a suitable material that would provide protection against meningococcal infection, a feat which had heretofore not been accomplished by many other scientists who have tried this before, worldwide. As you know, meningococcal disease is a peculiar problem to our basic trainees. This is because assemblies of large numbers of young men from various parts of the country in a short space of time expose them to a risk of infection which is unusual and not found when they are retained in their home environment. So that within the first 3 weeks of a basic training course we have an unusual incidence of meningococcal disease.

Mr. McFALL. We have had a number of incidents of this type over the past several years.

Colonel DIRKS. That is correct.

Mr. McFALL. I have not noted outbreaks in the last year or 2. Has this been as a result of your program?

Colonel DIRKS. The scares to which you make reference are those of a kind which made the newspapers at Fort Ord a few years ago. By the use of our vaccine in the future we expect to prevent such outbreaks of disease. Among our vaccinees we have now put this vaccine into something over 30,000 men and we have had only one case of meningococcal disease and that was very mild, that is now among the vaccinees who have received the vaccine.

Mr. McFALL. The Marines had some cases last year. Presumably they will also have this type of research available to them.

Colonel DIRKS. They will, indeed; yes, sir. In fact, we have cooperated with the Department of Navy and with the Marines in our studies on this particular vaccine.

Mr. McFALL. How is the Army's medical research program coordinated with that of the other services, other Government agencies, and private research?

Colonel DIRKS. The coordination with other Federal agencies is accomplished within the Department of Defense formally at the Joint Medical Advisory Committee level which is a committee advisory to the Director of Defense Research and Engineering.

In addition, our coordination occurs informally between the Army Medical Research and Development Command and the Director of the Bureau of Medicine and Surgery, Department of Navy, and with the Director of Medical Research for the Air Force Systems Command.

Mr. McFALL. The level of medical care in the Vietnam conflict has been praised as at a very high level as compared with the kind of medical care in Korea and World War II. Has this resulted from the kind of research done in these facilities?

Colonel DIRKS. Yes, indeed, it has. For example, our concern with the problems of the soldier in the field is reflected by the presence of a team belonging to our Command which is addressing the problems of combat surgery at the 24th Evacuation Hospital at Long Binh, Republic of Vietnam.

In addition, a team which we recently had serving with the 9th Infantry Division in the Mekong Delta addressed the problems of skin disease within that Division, and through its studies reduced the frequency of serious disabling skin disease from 36 percent among the combat troops in contact with the enemy to about 6 percent.

Mr. McFALL. Off the record.  
(Discussion off the record.)

#### EXPANSION OF ARMY IN-HOUSE MEDICAL RESEARCH

Mr. McFALL. Will the total consolidation plan which you propose provide for medical research at the current level or at an expanded level?

Colonel DIRKS. It will, in fact, permit medical research at an expanded level in-house. It will accommodate what we consider to be the appropriate natural growth of a healthy research program.

Mr. McFALL. Is this realistic in view of the decreased funds likely to be available for military research?

Colonel DIRKS. It is realistic in recognition of the fact that we still encounter many of the same problems encountered in previous wars and for which we have not yet found solutions. The solution must be sought and can be sought most effectively between wars rather than after combat actually breaks out.

#### PERSONNEL IN ACTIVITIES PROPOSED TO BE CONSOLIDATED AT PRESIDIO

Mr. McFALL. How many personnel are presently conducting the research which is proposed to be consolidated at WMIR? In what locations? Provide a detailed listing for the record.

(The information follows:)

The following personnel are presently conducting research which is proposed to be consolidated at WMIR:

*Letterman Army Institute of Research, Presidio of San Francisco, Calif.*

Present authorized strength:

Military	-----	94
Civilian	-----	8
Total	-----	102

*U.S. Army Medical Research Laboratory, Fort Knox, Ky.*

Present authorized strength (Blood Transfusion Division not included) :	
Military -----	74
Civilian -----	105
Total -----	179

*U.S. Army Medical Research and Nutrition Laboratory, Fitzsimons General Hospital, Denver, Colo.*

Total personnel (nutritional research not included) :	
Military -----	73
Civilian -----	71
Total -----	144

*Walter Reed Army Institute of Research, Washington, D.C.*

Behavioral science (16 military and 28 civilian) and one-half of infectious disease (32 military and 51 civilian) :	
Military -----	48
Civilian -----	79
Total -----	127

Mr. McFALL. How many personnel are proposed for WMIR?

Colonel DIRKS. The proposed number of personnel for Western Medical Institute of Research are 289 military and 308 civilian.

Mr. McFALL. What surveys have you conducted to see if civilian personnel employed at the current locations are willing to move to San Francisco?

Colonel DIRKS. A study was completed in June 1966 by this Headquarters which concluded from previous DOD experiences that approximately 30 percent of the civilian personnel employed at the current laboratory locations would be willing to move to San Francisco.

## MILITARY HOUSING IN SAN FRANCISCO

Mr. McFALL. What is the military housing situation in San Francisco?

Colonel SAARI. Based on permanent strength levels prior to the assignment of the Western Medical Institute of Research to the Presidio of San Francisco, there were sufficient on-post family housing units plus adequate existing off-post community support to meet the long range military family housing requirements.

Mr. McFALL. How many additional units of family housing will be required as a result of the consolidation at WMIR?

Colonel SAARI. WMIR personnel will not require any additional family housing units at the Presidio in order to implement the consolidation of WMIR. The majority of military personnel will live off-post as they do now at their existing laboratory locations. However, as a result of this consolidation, there may be a need to program as many as 100 additional family housing units at some time in the future, if subsequent family housing survey data justifies the requirement.

## OTHER AREAS CONSIDERED

Mr. McFALL. What is the area cost factor in San Francisco?

General DALRYMPLE. 1.2, sir.

Mr. McFALL. What other installations did you consider in selecting a site for the Western Military Institute of Research?

Colonel DIRKS. We considered Fort Lewis, Wash. as a possible site for this center: based upon the availability of medical talent in the San Francisco area, availability of an industrial base, availability of elements of the pharmaceutical industry and the opportunity for sateliting this program upon one of our larger general hospitals, were all considerations which caused us to select the Presidio of San Francisco area for the siting of this proposed Institute.

Mr. McFALL. I presume that that was the most important thing, to get it close to a large hospital such as you have.

Colonel DIRKS. This was our major consideration, yes, sir, in terms of the fact that our research is soldier-patient oriented and this is the center of concentration of the soldier problems.

Mr. PATTEN. Before the time expires, since I cannot be here later on, let me ask this question, which is unrelated to this matter.

Mr. McFALL. Mr. Patten.

#### ASSIGNMENTS OF DOCTORS IN MILITARY SERVICE

Mr. PATTEN. We are going to make a new Selective Service law. It strikes me that many young doctors want to go where there is research. In medical school he may have devoted himself to, say, kidney or some other specialty. Now, I just want to tell you that my life has been made miserable by the Selective Service System with respect to doctors. It is certainly a closed corporation. We feel that the doctors pretty much run their own system. Is that right?

Colonel DIRKS. I wish that were completely true, sir.

Mr. PATTEN. Well, I am asking you because I intend to do a job on this Selective Service law. This phase of the doctors, I am not up on that at all. I have heard our State officials say that a good doctor is a \$500,000 asset. Now, when we think in terms of our millions of men, this \$30 million does not phase me much because I know you will produce. But I am thinking of a young fellow who has been through medical school, has a wife and two or three kids and then he gets a notice: Vietnam. Here he has devoted a lot of time and money and probably a couple of extra years in a particular specialty and then that seems to be ignored. Now, we hesitate to interfere. In fact, I am afraid it would be fatal if we even pick up the telephone and have the fellow on the other end think you are trying to use your influence.

Colonel DIRKS. Let me indicate to you first that I agree with your statement about the fact that every doctor who is interested in medicine would like to do some research as a part of his practice. We think this is a healthy attitude.

The quality of medical care provided in any hospital, any medical center environment, is raised by having an opportunity to do research as part of the total operation of that center or hospital. I am not prepared to address the question of the Selective Service law in great detail, but I would say that we would greatly appreciate knowing about young men who have an interest in and a documented capability for doing research. We have a limited number of spaces where we can place these individuals but the majority of our military medical researchers are in fact doctors who come in either under the doctor draft or under the Berry Plan Deferral System. The doctor whom I identified as having helped us make the breakthrough to produce the meningococcal vaccine was one of these doctors who came to us and vol-

unteered for a third year of service in order to make his contribution in research. It was during that 3-year period that he made his breakthrough. So I agree with you wholeheartedly in the fact that we should utilize this extremely valuable resource to the maximum when these young men come into the military. We are endeavoring to do so within the personnel constraints available to us within the Army Medical Department.

Mr. PATTEN. I do not expect that at this meeting of the Military Construction Subcommittee that we can pursue very far changes that we would like to make in the Selective Service System, especially with respect to doctors. But if you or some of your friends do have some thoughts about what we could do to improve the System, your ideas will be held confidential. When we are in committee discussing Selective Service, I would like to make a contribution in this area, if you think there would be some merit to it or if some of your friends think there would be some merit to it.

Let's take an individual, and his family, where they have put in the money, made the investment and then, right now, the draft notices are out.

Mr. McFALL. Off the record.

(Discussion off the record.)

Mr. PATTEN. If we could do something about some of these individual cases we get with young men just out of medical school—and I have two of them right now where I do not believe that justice has been done. Now, I don't know whether to make an issue of it or not. You are in the field, I presume, if you are talking about 600 doctors, you may take 30 at these research centers. We cannot take care of every one of them. Probably everybody isn't as good as they think they are. You have a lot of other factors there, too. You limit your research to the things that somebody else is not doing, which are related to your military problems. So if we have a fellow who is a brain specialist, he may not be in the particular area in which you are working. A fellow who has a kidney specialty may not be up your alley. You probably leave that to the public arena, the hospitals, the doctors, the universities, and other areas.

Colonel DIRKS. Actually, Mr. Patten, we do address the questions as they apply to our military problem. For example, the neurosurgeon and his talents are addressed toward the problem of head injury in the combat theater. We are embracing this in our medical research program within the Army Medical Research and Development Command. Similarly, we are concerned with the problems of kidney failure as relates, for example, to severe malaria. Currently the Army has a team which is identified as the 629th Medical Detachment, otherwise known as the Renal Unit, presently located with the 3d Field Hospital in Saigon, Vietnam, taking care of patients with this kind of problem. The reason that these young men are able to do this and are at the same time studying how it might be done better is because we have had an interest in studying this particular problem.

Mr. PATTEN. I would like to be positive and would like to be with the team. The doctors have not been marching, have not been making noise. As far as the general public is concerned, they do not know of the problems with relation to your work and the Selective Service and things of that type. But when you meet these individuals it is rough.

Colonel DIRKS. If you have such an individual, if you will encourage him to write direct to our office we would be happy to respond to him and indicate what the possibilities may be for utilizing his talents within our own command at the time he is planning to come into service. If he has already received orders to go to service in Vietnam, what we will be able to do may be limited but even that should not discourage him from making contact with us. This is accomplished by his writing a letter to the commanding officer of the Army Medical Research and Development Command, Forrester Building, Washington. We would be happy to hear from him.

Mr. PATTEN. He would not be hurt by doing that?

Colonel DIRKS. Not at all; no, indeed. We receive such inquiries daily. It helps us to identify people—

Mr. PATTEN. You may be justified in moving out of Fort Totten. I am wondering whether we are doing the right thing, or whether we should look into this some more. I don't know if it is in the national interest to put all our dollars in the San Francisco Bay area, in California.

#### ARMY'S RESEARCH IN TROPICAL MEDICINE

Mr. McFALL. How are you currently conducting research in tropical medicine? Why is it necessary to expand this research in the post-Vietnam time frame?

Colonel DIRKS. Repeatedly in our history, infectious tropical diseases have been the scourge of our armies when they have been deployed to tropical areas, particularly in time of war. Many of these diseases remain to be conquered. Most of them are potentially preventable. It is between wars that the techniques for prevention must be developed when time permits thoughtful, careful research. To accomplish such research, adequate facilities must be provided. The seething trouble spots in today's world are found predominantly in tropical or subtropical environments where these diseases abound. Before committing troops to such areas, we must, if possible, develop the medical weapons necessary to conquer these enemies. At present, inadequate facilities limit severely research upon schistosomiasis, trypanosomiasis, dengue, sandfly fever, diarrheal diseases, and malaria. All of these diseases have the capacity to immobilize armies by explosive outbreaks. Research in tropical medicine is being conducted by four Army medical research institutes, two medical research teams, and 35 contractors. The largest of our 13 units, the Walter Reed Army Institute of Research in Washington, D.C., with a staff of 1,209, is the current, severely overcrowded, principal center for Army research in tropical medicine as well as for research on most other military medical problems. It serves as the base in the continental United States for a large research team now operating in Thailand and a smaller team operating in the Republic of Vietnam. These teams are investigating the tropical disease problems endemic to the countries in which they are working. As these teams collect specimens for study, they accomplish the more simple analyses in their overseas locations. At the same time, they provide samples for more detailed and complex analysis to the Walter Reed Army Institute of Research. The latter is severely handicapped by shortage of laboratory space so that many specimens must be stored for extended periods in the frozen state until they can be examined. Tropical skin disease research is now being accomplished at the Letterman Army Institute of Research.

If closer alliance of this effort with other elements of tropical medicine research could be achieved, as proposed in the Western Medical Institute of Research, it would strengthen the program enormously through rapid exchange of information and research results among scientists on the staff and through joint utilization of a badly needed research microbiological laboratory which is planned for the new institute. Studies of the etiology, ecology, and epidemiology of infectious diseases in the areas in which they are located provide the focus for the work of the Army Medical Research Unit, Malaysia, and the Army Medical Research Unit, Panama. These small units of six and 17 persons and located in Kuala Lumpur, Malaysia, and Balboa Heights, C.Z., respectively, must ship large numbers of their specimens, collected on field trips, to the already heavily congested Walter Reed Army Institute of Research for sophisticated investigation.

Mr. MCFALL. What is the nature of the facilities in which you are presently conducting research at (1) Walter Reed; (2) Fort Knox; (3) Fitzsimons General Hospital?

Colonel DIRKS. The Infectious Diseases Unit, Walter Reed Army Institute of Research, Washington, D.C., occupies square footage in building 40, main section, Walter Reed Army Medical Center. Three of the wings of the main section were completed between 1924 and 1933 and were designed to serve as the Army's Graduate School of Medicine and the Walter Reed General Hospital Administration Building. Most of the present laboratories were converted one at a time from space intended for classroom or office use. The resulting utility system is a confused and complex arrangement, completely corroded in places and inordinately expensive to maintain. Electrical distribution allows no flexibility often prohibiting the installation of new equipment. Lighting is well below recommended levels. There are at least 30 separate air conditioning systems and some 200 window units. The systems are outdated and cannot provide precise control of temperature and humidity.

The U.S. Army Medical Research Laboratory, Fort Knox, Ky., occupies 30 buildings, of which 21 are World War II barracks. These 28-year-old wooden structures (1942) are simply worn out. These buildings were not built for heavy loading laboratory use, and the rotting structural timbers are twisting and endangering the structural integrity of the buildings. The nine permanent and semipermanent buildings utilized for research require extensive modification to permit efficient use and space allocation. The utility distribution systems and air handling system are generally ineffective and do not meet acceptable laboratory standards. This multiple building layout, with its separation of efforts, is inefficient and hinders proper performance of assigned research missions.

The U.S. Army Medical Research and Nutrition Laboratory, Fitzsimons General Hospital, Denver, Colo., occupies 4¾ World War I (1918) and World War II (1942) two-story structures with exterior masonry walls. Although these buildings are largely World War II vintage, they are reasonably good structurally, since they were built

to higher than average standards; however, planning did not consider their use for complicated laboratory purposes, and they are at the end of their economic life. Utility distribution and air handling systems are inflexible resulting in inordinately expensive modifications to continue operations. Storage in converted corridors, ramps, and porches indicates the overcrowded conditions. There is no refrigerated storage outside because of lack of space. Inadequate and substandard laboratory animal holding areas do not meet the standards of the "Guide for Laboratory Animal Facilities and Care" of the Institute of Laboratory Animal Resources of the National Academy of Sciences, and must be renovated or replaced.

#### CLINICAL SUPPORT FOR FITZSIMONS GENERAL HOSPITAL

Mr. McFALL. Can you continue to use the facilities at Fitzsimons General Hospital and how will you provide for clinical research at Fitzsimons General Hospital in their tuberculosis activity?

Colonel DIRKS. It is respiratory diseases.

Mr. McFALL. Will the proposed location of research activities from Fitzsimons disrupt the research which is being conducted there? Can you give us an idea about that and then expand on it for the record?

Colonel DIRKS. I would be happy to give you a brief idea now, if I may.

Our intent is to make available those facilities which are still usable to Fitzsimons General Hospital for continuation of necessary clinical research functions, for expanded support and laboratory functions.

A portion of the work done presently in the Microbiology Division of the Army Medical Research and Nutrition Laboratory at Denver is in support of diagnosis of pulmonary disease and related to the treatment of patients in the hospital. This function will be transferred to the hospital laboratory. The clinical research facilities already in operation and the clinical research program already in operation at Fitzsimons General Hospital will be expanded as appropriate to continue studies to develop new information regarding better treatment of this type of respiratory illness.

Mr. McFALL. In order to support Fitzsimons General Hospital are you going to duplicate some of the activities being relocated?

Colonel DIRKS. No, sir; we would not. The functions that would be absorbed in the clinical research program at Fitzsimons should be an integral part of any major hospital operation today.

These will not be duplicated. Our studies at the Institute of Research in San Francisco will be more tightly focused on specific mission-oriented military medical problems in the field.

#### FACILITIES IN USE AT THE PRESIDIO

Mr. McFALL. What facilities is the WMIR currently using at the Presidio? Provide that for the record.

(The information follows:)

Letterman Army Institute of Research (LAIR) is currently occupying Letterman General Hospital Annex Buildings as listed in the following chart:

Function	Building	Square feet	Built	Age (years)
Headquarters, LAIR.....	1015 lower.....	12,889	1924	46
Dental.....	1014 upper.....			
Experimental animal laboratory.....	1013 lower.....	22,287	1933	37
Biochemistry.....	1011 lower.....	211,646	1917	53
Medical, surgical.....	1011 upper.....			
Dermatology.....	1010 lower.....	212,280	1941	49
Do.....	1010 upper.....			
Microbiology.....	1006 lower.....	313,352	1917	53
Animal, facilities.....	668 (1½ mile away).....	18,249	1914	56

<sup>1</sup> 2 floors plus basement.

<sup>2</sup> 1 floor plus basement.

<sup>3</sup> 1 floor.

Mr. McFALL. What are you currently using for animal holding facilities at the Presidio?

Colonel DIRKS. Letterman Army Institute of Research is currently using 18,249 gross square feet of animal holding space located in a converted mule barn (bldg. 668) some 1½ miles from the institute.

Mr. McFALL. Have you thought of using the similarly constructed building adjacent to the present animal holding building for additional animal holding space?

Colonel DIRKS. The use of the adjacent stable structure as a possible animal holding area for WMIR was considered and rejected. It is unacceptable as a laboratory animal holding area for the institute. It is a 56-year-old building which would require extensive rehabilitation. Its basic structure and size will not accommodate either animal production or infected animal holding needed for WMIR. The distance between this facility and our proposed location of the WMIR would require an extensive animal ferrying program. Acceptable facilities for the proper care of laboratory animals require complete temperature, humidity, and all other aspects of environmental control.

Mr. McFALL. How much animal holding space do you propose in the new facilities? At what cost? Provide that for the record.

(The information follows:)

The proposed animal space in the new facility is as follows:

Test Animal or Experimental Animals holding.....	10,400 NSF
Quarantine or Holding.....	24,050 NSF
Production.....	14,400 NSF
Support.....	7,500 NSF
<b>Total.....</b>	<b>56,350 NSF</b>

FY 71 PHASE I 12,650 NSF @ \$61.50/SF equals \$777,975.00

FY 72 PHASE II 40,050 NSF @ \$64.57/SF equals \$2,586,028.50

FY 73 PHASE III 3,650 NSF @ \$67.80/SF equals \$247,470.00

56,350 NSF total

\$3,611,473.50

These cost projections are comparable to similar animal facilities constructed recently, i.e., (1) Research Facility, Forest Glen, Washington, D.C.; \$2,856,000 appropriated in FY 69 for 55,000 square feet equals \$51.92/SF. A similar facility if constructed at WMIR in June 1972 escalated at 6.1%/yr increase equals \$62.00 per square foot. (2) Animal Resources Facility, Pennsylvania State University equalled \$45/SF (June 1967 midpoint of construction. (A similar facility if constructed at WMIR in June 1972 (midpoint in construction) escalated at 6.1%/yr increase in construction equals \$60.64/SF.

Mr. McFALL. What is the status of design of Phase I of the facility? When do you expect final design to be complete? When do you expect to award a contract?

Colonel DIRKS. The design is 12 percent completed as of February 27. Final design will be completed by February 25, 1971. We expect to award a construction contract in June of 1971.

Mr. McFALL. Thank you very much, Colonel. We enjoyed your testimony. We will resume at 2 o'clock.

#### AFTERNOON SESSION

Mr. SIKES. The committee will come to order.

#### FORT MYER, VA.

The first item for discussion, this afternoon, is Fort Myer, Va. We will insert in the record page 77.

(The page follows:)

#### Fort Myer, Virginia—\$525,000

Fort Myer is located in Arlington County, Virginia. The mission of this installation is to provide housing and other facilities for the Chairman, Joint Chiefs of Staff, Army Chief of Staff and other General Officers of the Department of the Army General Staff, and to support members of all military services assigned to critical missions in the Military District of Washington. The program provides for expansion of a boiler plant.

#### Status of funds

Funded Program Not in Inventory	-----	\$7,374
Unobligated Items, Jan. 31, 1970 (actual)	-----	1,501
Unobligated Items, June 30, 1970 (estimated)	-----	735

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
74	Boiler plant expansion	\$31	6

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Enlisted men barracks	\$796	×	-----
1969	Chapel center	735	-----	×

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Fort Myer				6. STATE/COUNTRY Virginia		10. NEAREST CITY Arlington, Virginia		TOTAL (\$000) (4)									
4. COMMAND OR MANAGEMENT BUREAU Military District of Washington				5. INSTALLATION CONTROL NUMBER Virginia - 045375				9. COUNTY (U.S.) Arlington		PERMANENT OFFICER ENLISTED OFFICER (6) CIVILIAN (8)		TOTAL (\$000) (8)									
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1863		12. PERSONNEL STRENGTH * AS OF 31 Oct 1969 207 2,092 1,112 324 4,085 1,327		INVENTORY		STUDENTS		SUPPORTED		TOTAL (\$000) (9)									
11. MISSION OR MAJOR FUNCTIONS To provide housing and other facilities for the Chairman, Joint Chiefs of Staff, the Chief of Staff of the Army, and the Chief of Staff of the Air Force, and the General Officers of the General Staff, and to provide administrative and/or logistical support as assigned by the Commanding General, Military District of Washington, for the Third Infantry Reinforced Battalion; personnel on duty or attached to the Military District of Washington, Departments of Army, Navy and Air Force assigned to critical mission activities; and to various units, installations and civilian activities within the Military District of Washington. * Army strength only.				13. INVENTORY		LAND COST (\$000) (1)		IMPROVEMENT (\$000) (2)		TOTAL (\$000) (4)		TOTAL (\$000) (9)									
				LAND		ACRES		LAND COST (\$000)		IMPROVEMENT (\$000)		TOTAL (\$000)		TOTAL (\$000)							
				a. OWNED		370		64		24,098		24,162		24,162							
				b. LEASES AND EASEMENTS		0		0		0		0		0							
				c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		69		69		69		69		69							
				d. AUTHORIZATION NOT YET IN INVENTORY (Planned - \$ ) (Unfunded - \$ )		7,374		0		0		0		0							
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				g. GRAND TOTAL (c + d + e + f)				525									
19,001				51,062				51,062				51,062									
SUMMARY OF INSTALLATION LINE ITEMS																					
CATEGORY CODE NO. a		LINE ITEM DESIGNATION b		LINE ITEM TITLE b		PRIORITY c		PAGE NO. d		TENANT COMMAND e		UNIT OF MEASURE f		AUTHORIZATION PROGRAM g		ESTIMATED COST (\$000) h		SCOPE i		ESTIMATED COST (\$000) j	
821		74 - Boiler Plant Expansion				1		78		BTU		40		525		40		525		525	

Mr. SIKES. The request is for \$525,000 for a boiler plant expansion. Would you explain that requirement, General?

General DALRYMPLE. Yes, sir. Required here is construction of an addition to the existing boiler plant. This is a plant addition to house a 40 million B.t.u. boiler which would insure that there would be no interruption of supply during peak loads at Fort Myer, Virginia. At the present time supply is marginal. With the new construction that is coming up it will become less adequate as time goes on. This would provide that boiler plant addition for roughly \$500,000, sir.

Mr. SIKES. Is it true that it is only if the most recently installed boiler were to fail you would have a shortage of capacity?

General DALRYMPLE. Yes, sir. If the 40 million B.t.u. per hour boiler were to fail during cold weather with the current demand of 55 million B.t.u. per hour the plant capacity would be limited to 42 million B.t.u. per hour in the three old boilers and it would be necessary to curtail steam service to some facilities. Because of age and condition of these boilers, it is questionable whether full capacity of 42 million B.t.u. per hour could be developed for any extended period of time.

Mr. SIKES. Will you check with the other services to see if it is also their policy to provide extra boiler capacity in the event one boiler fails?

General DALRYMPLE. I will.  
(The information follows:)

The Department of Navy provides spare boiler capacity, in event of failure of one boiler, for hospitals and central heating plants where interruption of steam supply is critical and would seriously affect the mission. Standby capacity is not provided for other plants.

The Department of the Air Force provides standby capacity in varying degrees: for hospitals with two boilers, each boiler must be able to carry the entire load; for other steam plants, each of three boilers must be able to carry 40% of the load if the type of boiler permits an overload of 20% for extended periods; for high temperature water plants, each of two boilers must be able to carry 60% of the load if the type of boiler permits an overload of 40%. Where these conditions cannot be met, one boiler is provided as standby.

Mr. SIKES. Are there questions?

#### ARMY MATERIEL COMMAND

Mr. SIKES. We will take up at this time Army Materiel Command and insert in the record page 79.

(The page follows:)

[In thousands of dollars]

	Prior authorization	Proposed authorization	Proposed Funding
Army Materiel Command:			
Aberdeen Proving Ground, Md.....		340	340
Aeronautical Maintenance Center, Tex.....		3,442	3,442
Anniston Army Depot, Ala.....		915	915
Badger Army Ammunition Plant, Wis.....		1,604	1,604
Burlington Army Ammunition Plant, N.J.....		384	384
Charleston Army Depot, S.C.....		67	67
Harry Diamond Laboratory, Md.....		14,020	14,020
Edgewood Arsenal, Md.....		990	990
Iowa Army Ammunition Plant, Iowa.....		300	300
Letterkenny Army Depot, Pa.....		410	410
Fort Monmouth, N.J.....		3,274	3,274
New Cumberland Army Depot, Pa.....		99	99
Picatinny Arsenal, N.J.....		752	752
Radford Army Ammunition Plant, Va.....		1,549	1,549
Sierra Army Depot, Calif.....		256	256
Tobyhanna Army Depot, Pa.....		115	115
Watervliet Arsenal, N.Y.....		1,362	1,362
White Sands Missile Range, N.Mex.....		2,261	2,261
Yuma Proving Ground, Ariz.....		1,798	1,798
Total.....	0	33,938	33,938

#### ABERDEEN PROVING GROUND, MD.

Take up first Aberdeen Proving Ground, Md. Insert in the record page 80.

(The page follows:)

#### Aberdeen Proving Ground, Md.—\$340,000

Aberdeen Proving Ground is located 30 miles northeast of Baltimore, Md. The mission of this installation is to engage in research, engineering, test and evaluation of weapons, ammunition, automotive material, and combat equipment. The installation provides logistics support to Headquarters, U.S. Army Test and Evaluation Command and the Ordnance Center and School. The program consists of a vulnerability testing laboratory.

#### Status of funds

Funded program not in inventory.....	\$7,866,000
Unobligated items, Jan. 31, 1970 (actual).....	2,312,000
Unobligated items, June 30, 1970 (estimated).....	2,312,000

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
229	Vulnerability testing laboratory.....	\$22	25

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1968.....	Improve 18 units family housing.....	\$125	-----	-----
1970.....	Extend utilities and roads.....	346	×	×
1970.....	Automotive instruction buildings.....	1,966	-----	×

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Aberdeen Proving Ground								
4. COMMAND OR MANAGEMENT BUREAU		6. STATE/COUNTRY								
J. S. Army Materiel Command		Maryland								
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1918								
11. MISSION OR MAJOR FUNCTIONS Plans, directs, and conducts testing and evaluation of Army weapons and equipment. Conducts research and development in propulsive force systems, vulnerability of weapons and warheads, aerodynamic performance of projectiles, human factors engineering, coatings and chemicals, limited warfare items and techniques. Conducts training in maintenance, supply, and packaging of materiel and equipment. Develops and reviews AMC and Ordnance concepts and objectives.		9. COUNTY (D.S.) Harford		10. NEAREST CITY Baltimore, 30 miles Southwest						
		12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969 b. PLANNED (End FY IR )		STUDENTS						
		PERMANENT		SUPPORTED						
		OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	CIVILIAN (6)	OFFICER (7)	ENLISTED (8)	TOTAL (9)
		664	3713	6367	507	3013				14,264
		740	3713	5306	390	1973				12,122
		LAND		ACRES (1)		LAND COST (\$000) (2)		IMPROVEMENT (\$000) (3)		TOTAL (\$000) (4)
		a. OWNED		71,205		4,401		127,602		132,003
		b. LEASES AND EASEMENTS		88		20*				20
		c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19		69						132,023
		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$		7,866		); (Unfunded - \$		0		7,866
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM								340
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS								37,995
		g. GRAND TOTAL (c + d + e + f)								178,224

LINE ITEM DESIGNATION			SUMMARY OF INSTALLATION LINE ITEMS			AUTHORIZATION PROGRAM			FUNDING PROGRAM		
CATEGORY CODE NO.	LINE ITEM TITLE	Priority	Page No	TENANT COMMAND	UNIT OF MEASURE	SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)
				c	d	e	f	g	h		
310	229 - Vulnerability Testing Laboratory	2	81		SF	3,600	340	3,600	340	3,600	340

\*Includes \$19,800 one-time cost for easement.

Mr. SIKES. The request is for a vulnerability testing laboratory at a cost of \$340,000. Tell us something about this.

General DALRYMPLE. Various items of Army equipment must be subjected to real and simulated effects from both conventional and unconventional weapons. This testing would determine the vulnerability of that Army equipment to these attacks—that is, attacks by conventional as well as unconventional weapons.

Mr. SIKES. I am sure you are doing this now. What facilities do you have and what is the requirements for new facilities?

General DALRYMPLE. This would be a new facility that would replace the function now being performed in scattered buildings in Aberdeen and, in some places, under tarpaulins. We tried to get this building in fiscal year 1968 but it was determined by the Armed Services Committee that we did not have substantial reason for it and it was not authorized.

Mr. SIKES. Is it in this year's authorization bill?

General DALRYMPLE. We have not been before the authorization committee, sir.

Mr. SIKES. Is it being submitted this year?

General DALRYMPLE. It will be submitted; yes, sir.

Mr. SIKES. Aberdeen does a lot of very important work.

How is vulnerability testing currently carried out at Aberdeen?

Colonel PAQUETTE. Sir, at the present time we use outdoor areas and temporarily assigned areas. These practices require us to set up and take down our testing apparatus as we move from one temporary location to another. This is a very inefficient method of conducting these important tests. Our outdoor areas are subject to adverse weather conditions that causes delays in testing and damage to test equipment.

Mr. SIKES. Is the function of vulnerability testing an integral part of the research carried out at this center?

Colonel PAQUETTE. Yes, sir. The Ballistic Research Labs is the element of the Aberdeen Research and Development Command that accomplishes the vulnerability testing.

#### AERONAUTICAL DEPOT MAINTENANCE CENTER, TEXAS

Mr. SIKES. Take up Aeronautical Depot Maintenance Center, in Texas, Insert in the record page 82.

(The page follows:)

#### AERONAUTICAL DEPOT MAINTENANCE CENTER, TEXAS, \$3,442,000

This installation is located 10 miles south of Corpus Christi, Texas. The mission of this installation is to perform depot maintenance on fixed wing and rotary wing army aircraft. Maintenance includes overhaul, repairs, modifications, retrofit and modernization. The program consists of aircraft maintenance facilities.

#### *Status of funds*

Funded program not in inventory	\$4,372,000
Unobligated Items, 31 Jan 1970 (actual)	1,597,000
Unobligated Items, 30 June 1970 (estimated)	1,597,000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
34	2 turbine engine test cells .....	39	24
36	Alter engine cleanup shop .....	48	30
40	Aircraft bearing shop .....	72	30
41	Expand power train shop .....	38	30

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970.....	Hydraulic shop and test facility.....	303	-----	×
1970.....	Alter aircraft anodizing shop.....	875	-----	×
1969.....	Power train test facility.....	462	-----	×

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Aeronautical Depot Maintenance Center		
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		6. STATE/COUNTRY Texas		
7. STATUS Active	8. YEAR OF INITIAL OCCUPANCY 1941 - Navy 1961 - Army	9. COUNTY (U.S.) Nueces	10. NEAREST CITY Corpus Christi, 10 miles North	
11. MISSION OR MAJOR FUNCTIONS Perform 5th echelon, maintenance of mission-essential aeronautical equipment to meet the operational requirements of Department of Army by performing maintenance programs and support functions such as overhaul, repairs, modifications, retrofit, modernization, fabrication, avionics, and special projects. Provide aero depot on-time-job training (military) including Operation "Flat-Top". Maintain mobilization readiness and prepositioned depot stocks. Process Army aircraft for overseas shipment and provide engineering service for Army Materiel Command. Support floating maintenance facility.				
12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969 b. PLANNED (End FY )				
13. INVENTORY				
LAND	ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)
a. OWNED				*
b. LEASES AND EASEMENTS				*
c. INVENTORY TOTAL (Exclpt Land rent) AS OF 30 JUNE 19 69				*
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 4,372 ; Unfunded - \$ 0 )				4,372
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				3,442
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				13,351
g. GRAND TOTAL (c + d + e + f)				21,165

CATEGORY CODE NO. a	LINE ITEM DESIGNATION b	Priority	Page No	SUMMARY OF INSTALLATION LINE ITEMS		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
				TENAV'T COMMAND c	UNIT OF MEASURE d	SCOPE e	ESTIMATED (\$000) f	SCOPE g	ESTIMATED (\$000) h
211	34 - Two Turbine Engine Test Cells	2	83			675		675	
211	36 - Alter Engine Cleaning Shop	2	84		SF	33,600	819	33,600	819
211	40 - Aircraft Bearing Shop	1	85		SF	18,200	1,283	18,200	1,283
211	41 - Expand Power Train Shop	1	86		SF	37,900	665	37,900	665
	Totals						3,442		3,442

Mr. SIKES. The request is for \$3,442,000, including new testing facilities. What will these facilities be used for, principally?

General DALRYMPLE. These engine test cells perform tests on the turbine engines that are used in the UH-1 aircraft, the CH-47, the COBRA, the AH-56, and the OV-1 aircraft engines. We have a total requirement for 13 test cells to provide this work. We have eight cells that are adequate, two that are inadequate and three that are funded but not yet in the inventory. This leaves a deficit of the two that we are requesting today, sir.

Mr. SIKES. This would complete the requirements?

General DALRYMPLE. That is right, sir.

Mr. SIKES. What are you using now?

General DALRYMPLE. We are using eight adequate ones and two sub-standard ones, sir.

#### PROJECTED WORKLOAD

Mr. SIKES. Is the workload going to increase or remain constant?

General DALRYMPLE. Colonel Boehnke, would you address that question?

Colonel BOEHNKE. We are finalizing our fiscal year 1971 requirements in our St. Louis meeting this week. We will not have final knowledge of that until the end of the week but as of now our engine overhaul in ARADMAC is performed at Corpus Christi. In fiscal year 1971 we will pick up additional aircraft mission at ARADMAC.

Mr. SIKES. You are in the process of entering into a contract with the Navy for some helicopter engine overhaul. What would be the effect of that contract on your requirements for facilities in Army installation?

Colonel BOEHNKE. Sir, the Naval air rework facility at Pensacola will only overhaul airframes, not engines. This will still be done at ARADMAC.

Mr. SIKES. Off the record.

(Discussion off the record.)

Mr. SIKES. So, you do anticipate a continuing and expanding requirement. The work which is to be done by the Navy at Pensacola is for airframes and would not affect the requirement set forth in this request for new facilities?

Colonel BOEHNKE. Yes, sir.

#### ARMY AIRCRAFT OVERHAUL DEPOTS

Mr. SIKES. Does the Army plan to utilize three depots to provide aircraft maintenance support?

Colonel BOEHNKE. Sir, I am familiar with the aircraft overhaul portion of the depots and it is still our intent to develop three prime depots to accomplish our aircraft overhaul.

Mr. SIKES. What do you have now?

Colonel BOEHNKE. At the present time our three prime depots are Sharpe, New Cumberland and ARADMAC.

Mr. McFALL. ARADMAC is at Corpus Christi?

Colonel BOEHNKE. Yes.

Mr. SIKES. What is the current status of the plan to utilize the three? Will they continue at about the present level of activity?

Colonel BOEHNKE. We are in the process right now of reworkloading the depots. Sharpe will do more OH6 than they have in the past.

Mr. SIKES. Off the record.

(Discussion off the record.)

Mr. SIKES. Proceed.

Colonel BOEHNKE. ARADMAC's mission will be changed a bit to start overhauling the OH-58 helicopter which is coming into the inventory. We expect to continue overhauling the CH-47 at New Cumberland as the prime depot for that work. Now, we have prime depots close to the prime manufacturers in these three areas of the country.

Mr. SIKES. Why are you proposing to move the overhaul of the OV-1 from Sharpe to New Cumberland?

Colonel BOEHNKE. We have never overhauled the OV-1; we have only done minor repair there. We have done minor repair on the OV-1 at New Cumberland and Sharpe, both. At the same time the long-range plans are to build up Sharpe for the U-21 airplane and New Cumberland for the OV-1 airplane.

Mr. SIKES. Do you anticipate any significant increase in the aircraft maintenance workload? The records do not indicate that. I have before me current and planned inventories for the UH-1, the AH-1, the CH-47, OV-1.

Colonel BOEHNKE. As far as we can determine right now, these workloads will remain fairly constant.

Mr. SIKES. What you are trying to do is to update the facilities, not provide additional capacity; is that correct?

Colonel BOEHNKE. Yes, sir.

Mr. SIKES. List for the record the type of aircraft maintenance work done at each of the three depots at the present time. Show what type of work is proposed to be accomplished at each depot in the fiscal year 1971 through fiscal year 1975 and in the long-range time frames. Provide for the record the Army's current inventory and the planned inventory levels for the UH-1, CH-47, AH-1G, and OV-1.

Also show the current and long-range maintenance workload for these aircraft. Indicate whether the planned levels represent Army objectives or OSD-approved plans.

(The information follows.)

The three depots are presently performing overhaul, repair, or inspections on the following aeronautical items:

1. ARADMAC

- a. UH-1
- b. AH-1
- c. T53 engines
- d. T55 engines
- e. T63 engines
- f. All aircraft components

2. New Cumberland Army Depot

- a. CH-47
- b. OH-13
- c. OH-23
- d. O-1
- e. OV-1
- f. U-1
- g. U-6

## 3. Sharpe Army Depot

- a. OH-6
- b. OH-23
- c. O-1
- d. OV-1
- e. U-1
- f. U-6
- g. U-8

By fiscal year 1971 it is our intent to develop primary depots which will specialize in overhaul of the following items (all depots will continue to do some repair and inspections on all types of aircraft) :

## 1. ARADMAC

- a. UH-1
- b. AH-1
- c. OH-58
- d. T53 engines
- e. T55 engines
- f. T63 engines
- g. All aircraft components

## 2. New Cumberland Army Depot

CH-47

## 3. Sharpe Army Depot

OH-6

Long-range plans include overhaul of OV-1 airplanes at New Cumberland Army Depot and overhaul of U-21 airplanes at Sharpe Army Depot. However, overhaul requirements and depot capabilities after fiscal year 1971 cannot be specifically determined at this time.

As of February 27, 1970, the Army's current and planned inventories are as follows:

ACFT	Dec. 31, 1969	June—				
		1970	1971	1972	1973	1974
UH-1	[Security information deleted.]					
AH-1						
CH-47						
OV-1						

The current and programed long-range maintenance workload for the above aircraft are shown below :

	Fiscal year 1970	Fiscal year 1971
UH-1.....	684	1,051
AH-1.....	147	159
CH-47.....	68	94
OV-1.....	16	16

Since anticipated inventories remain fairly constant, we are assuming that the workloads will remain approximately the same for future years.

The planned inventory levels shown above reflect OSD approval for procurements through the fiscal year 1971 funded delivery period. Inventories beyond that period are Army objectives.

## ARMY AIRCRAFT MAINTENANCE IN-HOUSE VERSUS CONTRACT

Mr. SIKES. What percentage of Army aircraft maintenance is done in-house? Does the Army plan to alter this picture, or is this being discussed with the Office of the Secretary of Defense?

Colonel BOEHNKE. The Army overhaul maintenance done in-house for fiscal year 1970 is 44 percent for aircraft, 57 percent for engines, and 55 percent for components. The anticipated figures for fiscal year 1971 are 48 percent for aircraft, 72 percent for engines, and 55 percent

for components. OSD has directed that the services develop the capability to perform in-house 70 percent of the depot level maintenance for mission essential aircraft.

Mr. SIKES. What savings can you identify as a result of the alteration to the engine cleaning shop and the construction of an aircraft bearing shop? Provide the details of these savings for the record.

(The information follows:)

The following cost savings for the engine cleaning shop and the aircraft bearing shop are shown below:

a. Engine cleaning shop (savings \$45,000).—Although removal of corrosive fumes and vapors for health and safety is a prime requirement, some cost savings are obtained by elimination of a second shift due to an increase in efficiency. These annual cost savings are shown below:

Maintenance and utilities savings from elimination of a second shift.....	\$15,000
Second shift pay differential savings.....	30,000
<b>Total savings.....</b>	<b>45,000</b>

b. Aircraft bearing shop (savings \$4,218,000).

#### PRESENT OPERATION (1969)

Facility	Number of bearings processed	Number of bearings reclaimed	Cost (thousands)
Navy.....	80,000	40,000 (50 percent)....	\$250 (\$3.12 each).
Commercial.....	10,000	5,000 (50 percent)....	214 (\$21.43 each)
ARADMAC.....	360,000	197,000 (54 percent)....	1,811 (\$5.03 each).
<b>Total.....</b>	<b>450,000</b>	<b>242,000</b>	<b>2,275</b>
New bearings procured.....		120,000	6,360 (\$53 each).
<b>Total reclaimed and procured.....</b>		<b>362,000</b>	<b>8,635</b>

#### PROPOSED OPERATIONS WITH NEW FACILITY

ARADMAC (processed 1st time).....	450,000	360,000 (80 percent)....	2,264 (\$5.03 each).
ARADMAC (processed 2d time).....	112,000	34,000 (30 percent)....	563 (\$5.03 each).
	<b>562,000</b>	<b>394,000</b>	<b>2,827</b>
New bearings procured.....		30,000	1,590 (\$53 each).
<b>Total reclaimed and procured.....</b>		<b>424,000</b>	<b>4,417</b>

Note: Savings 1 year, \$4,218,000.

Mr. SIKES. Are there questions, on my right?

Mr. McFALL. As I understand it, at Sharpe, you have now OH-6, OV-1, O-1, U-6, U-8, and OH-23. In the future you are going to reduce that to just the OH-6 and U-21?

Colonel BOEHNKE. No, sir. If you notice, it is overhaul and repair. Normally we develop one prime depot for overhaul. Each of the depots will probably do minor repairs, depending on the requirement generated in that local area. Probably all depots will do some of the repair on all of the aircraft but when you get into the major overhaul then it is more economical to go to a prime depot.

Mr. McFALL. Off the record.

(Discussion off the record.)

Mr. McFALL. On the record.

As I understand it, these three were to be designated as the three depots for all aircraft depot repair work in the Army. But only the work at Corpus Christi has been implemented in an announcement. The rest of it has not been implemented as yet; is that correct?

Colonel BOEHNKE. No, sir; because, as you know, we won't know for sure until the end of the week, but as of now we will be moving more of the OH-6's into Sharpe for overhaul with a bigger load there. For example, they will be doing crash damage work which they did not before, and which takes more man-hours. We will be doing more CH-47 in the New Cumberland Depot in 1971 than we did in 1970.

Mr. McFALL. Let's go off the record.

(Discussion off the record.)

Mr. SIKES. Mr. Nicholas has a question or two at this point.

Mr. NICHOLAS. You are requesting two turbine engine test cells for \$675,000. Can you indicate what the total requirement for turbine engine tests cells is at ARADMAC?

General DALRYMPLE. Thirteen. You will see that in item 23.

Mr. NICHOLAS. The justification material states that there are eight permanent and two substandard cells, one of which is a mobile cell which will accomplish the current workload by use of multi-shifts. It also states three cells provided in fiscal 1969 MCA program would provide additional workload capacity when completed. It goes on to say:

However, by fiscal year 1972 the two substandard cells will be out of operation because the fixed cell and the utilities for the mobile cell will have been demolished as a result of an extension to runway 17-35 planned by the Navy.

Have you checked with the Navy to determine in which fiscal year they are planning this runaway extension?

General DALRYMPLE. Originally they planned it in 1972. A more recent check indicates it will now be fiscal year 1974.

Mr. NICHOLAS. Will these two test cells be required then?

Colonel BOEHNKE. Yes, sir. Those are substandard cells. They cannot be used for final runs on any of the aircraft engines. They are used presently to make some minor checks. They do not have sufficient horsepower to test the newer engines. They cannot make qualification runs on them. The runway extension is incidental; it has nothing to do with the requirements.

Mr. SIKES. Can you find out the reason for which this runway extension is required and provide that for the record?

(The information follows:)

The Naval Air Station, Corpus Christi, Tex., has a primary runway (runway 13-31) 8,000 feet long. The crosswind runway (runway 17-35) is 5,000 feet long. The Navy wants to extend runway 17-35 to 8,000 feet in order to upgrade to an all jet capability.

Mr. SIKES. Further questions?

Mr. CEDERBERG. No.

Mr. SIKES. Very well.

#### ANNISTON ARMY DEPOT, ALA.

Mr. SIKES. Turn to Anniston Army Depot. Insert in the record page 87.

(The page follows:)

#### ANNISTON ARMY DEPOT, ALA., \$915,000

Anniston Army Depot is located 10 miles west of Anniston, Ala. The mission of this installation is the receipt, storage, and issue of general supplies and ammunition in 3d Army, and the performance of depot maintenance for artillery, combat vehicles, fire control equipment, vehicle armament mounts, small arms and ammunition. The program consists of an industrial waste treatment plant.

*Status of funds*

Funded program not in inventory-----	\$964, 000
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

DESIGN INFORMATION

Item No. Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
68 Sanitary and industrial waste treatment facilities-----	45	0

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None -----				

1. DATE		2. DEPARTMENT		3. INSTALLATION																						
2 Feb 1970		ARMY		Anniston Army Depot																						
4. COMMAND OR MANAGEMENT BUREAU		5. INSTALLATION CONTROL NUMBER		6. STATE/COUNTRY																						
U. S. Army Materiel Command		A1a-12		Alabama																						
7. STATUS		8. YEAR OF INITIAL OCCUPANCY		9. COUNTY (U.S.)																						
Active		1942		Calhoun																						
10. NEAREST CITY		11. MISSION OR MAJOR FUNCTIONS		12. PERSONNEL STRENGTH																						
Anniston, Alabama (10 miles east)		Receipt, storage and issue of general supplies and ammunition within assigned area of distribution (Third Army). Performs depot maintenance on combat vehicles, artillery, fire control, small arms, combat vehicle assemblies, vehicle armament mounts and ammunition. Receives and stores returned general supplies and ammunition. Performs militarization of general supplies and ammunition. Stores strategic and critical materials for the General Services Administration. Performs calibration service for southeastern CONUS. Receipt, inspection, repair, storage and issue of Chemical, Bacteriological, Radiological and Engineering items for Civil Defense.		<table border="1"> <thead> <tr> <th>OFFICER (1)</th> <th>ENLISTED (2)</th> <th>CIVILIAN (3)</th> <th>OFFICER (4)</th> <th>ENLISTED (5)</th> <th>CIVILIAN (6)</th> <th>TOTAL (7)</th> </tr> </thead> <tbody> <tr> <td>23</td> <td>14</td> <td>4,424</td> <td></td> <td></td> <td></td> <td>4,461</td> </tr> <tr> <td>31</td> <td>13</td> <td>3,255</td> <td></td> <td></td> <td></td> <td>3,299</td> </tr> </tbody> </table>		OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	CIVILIAN (6)	TOTAL (7)	23	14	4,424				4,461	31	13	3,255				3,299
OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)	CIVILIAN (6)	TOTAL (7)																				
23	14	4,424				4,461																				
31	13	3,255				3,299																				
13. INVENTORY		14. LAND COST (\$000)		15. IMPROVEMENT (\$000)		16. TOTAL (\$000)																				
LAND		(1)		(2)		(3)																				
a. OWNED		15,214		245		69,481																				
b. LEASES AND EASEMENTS		32		7*		7																				
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 1969		32		7*		69,488																				
d. AUTHORIZATION NOT YET IN INVENTORY (Planned - \$ 964 )		964		1,053		2,017																				
e. AUTHORIZATION REQUESTED IN THIS PROGRAM						915																				
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS						8,717																				
g. GRAND TOTAL (c + d + e + f)						81,137																				
SUMMARY OF INSTALLATION LINE ITEMS																										
CATEGORY CODE NO.	LINE ITEM DESIGNATION		PRIORITY	PAGE NO	AUTHORIZATION PROGRAM		ESTIMATED COST (\$000)																			
	a	b			c	d		e	f	g	h															
831	68 - Sanitary and Industrial Waste Treatment Facilities			88		915		915																		

Mr. SIKES. The request is for sanitary and industrial waste treatment facilities, at a cost of \$915,000. Will this complete the requirements and bring you into compliance with State and Federal standards?

General DALRYMPLE. Yes, sir.

Mr. SIKES. Are there questions?

Mr. PATTEN. Is this included in the total work you are doing to keep up with the antipollution effort?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. Off the record.

(Discussion off the record.)

#### BADGER ARMY AMMUNITION PLANT, WISCONSIN

Mr. SIKES. Turn to the Badger Army Ammunition Plant, in Wisconsin. Please insert in the record page 89.

(The page follows:)

#### BADGER ARMY AMMUNITION PLANT, Wis., \$1,604,000

This installation is located midway between Baraboo and Sauk City, Wis., or about 8 miles from both communities. The mission of this installation includes manufacture of double base propellants, ball powder and rocket grains; receipt, surveillance, maintenance, renovation, demilitarization, salvage, storage and issue of assigned field service stocks; and mobilization planning. The program provides a fuel conversion project and sanitary and industrial waste treatment facilities.

#### *Status of funds*

Funded program not in inventory.....	\$203, 000
Unobligated items, Jan. 31, 1970 (actual).....	203, 000
Unobligated items, June 30, 1970 (estimated).....	203, 000

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
3	Fuel conversion plant No. 1.....	40	0
2	Sanitary and industrial waste treatment facility.....	16	0

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Aeration spillways and dam.....	\$203	×	-----

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Badger Army Ammunition Plant	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		6. STATE/COUNTRY Wisconsin	
5. INSTALLATION CONTROL NUMBER Wisconsin 125		9. COUNTY (U.S.) Sauk	
7. STATUS Active		10. NEAREST CITY Baraboo, Wisconsin	
8. YEAR OF INITIAL OCCUPANCY 1942		11. MISSION OR MAJOR FUNCTIONS Manufacture Double Base Propellants, "BALL POWDER", Roll Powder and Rocket Grains.	
12. PERSONNEL STRENGTH			
a. AS OF 31 Oct 1969			
b. PLANNED (End FY )			
13. INVENTORY			
PERMANENT		SUPPORTED	
OFFICER (1)	ENLISTED (2)	OFFICER (4)	ENLISTED (7)
2	0	53	
CIVILIAN (3)		CIVILIAN (8)	
0		55	
TOTAL (9)		TOTAL (9)	
55		55	
ACRES (1)		LAND COST (\$000) (2)	
7,417		818	
IMPROVEMENT (\$000) (3)		TOTAL (\$000) (4)	
97,953		98,771	
LEASES AND EASEMENTS		IMPROVEMENT (\$000) (3)	
24		0	
INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		TOTAL (\$000) (4)	
0		98,771	
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 203 ; (Unfunded - \$ 0 )			
e. AUTHORIZATION REQUESTED IN THIS PROGRAM			
1,604			
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS			
451			
g. GRAND TOTAL (c + d + e + f)			
101,029			
SUMMARY OF INSTALLATION LINE ITEMS			
LINE ITEM DESIGNATION		AUTHORIZATION PROGRAM	
CATEGORY CODE NO. a	LINE ITEM TITLE b	UNIT OF MEASURE d	SCOPE e
		TENANT COMMAND c	ESTIMATED COST (\$000) f
	Priority Page No	SCOPE g	ESTIMATED COST (\$000) h
821	3 - Fuel Conversion - Plant No. 1	1	90
831	2 - Sanitary & Industrial Waste Treatment Facs	1	-91
Totals			
		1,088	1,088
		516	516
		1,604	1,604

Mr. SIKES. The request is for \$1,604,000 for a fuel conversion plant and sanitary and industrial waste treatment facilities.

What is the longtime requirement for this Army ammunition plant? I am thinking about the fact that the Secretary of the Army stated in testimony to the Defense Subcommittee that ammunition procurement for the Army in fiscal 1971 would be down by 26 percent after fiscal 1970. If the situation should continue to improve in South Vietnam conceivably 1972 requirements would be still less.

Is this likely to lead to the inactivation of any of the Army ammunition plants?

General DALRYMPLE. I would like to ask Colonel Wolfe, who is my expert on ammunition plants, to respond to that question, sir.

Colonel WOLFE. Some of our plants could very well close down, sir, but for the present time Badger will remain active. If our requirements should decrease over a long period of time it could conceivably, along with other plants be inactivated. However, it is one of our plants to be retained in the inventory for mobilization.

Mr. SIKES. So that requirements such as this, fuel conversion and waste treatment facilities, are longtime requirements regardless of the state of activity of the base; is that a fair statement?

Colonel WOLFE. That is a fair statement.

General DALRYMPLE. Yes, sir.

Mr. SIKES. I note from information provided in last year's hearings that Sunflower AAP, Volunteer AAP, and Badger AAP produce products which can be manufactured at other locations. Would this indicate that one or more of these three are likely candidates for closure in the near future?

Colonel WOLFE. Mr. Chairman, these three plants are required through calendar year 1971 based on our current production schedules and are part of the Army's permanent mobilization base. We are reasonably certain these plants will remain active through calendar year 1972. Our present plan is to keep these plants operating for an undetermined period while we reconstitute our war reserve stocks in addition to meeting peacetime training requirements.

#### MISSIONS OF ARMY AMMUNITION PLANTS

Mr. SIKES. Last year you provided information for the record on the mission of seven Army ammunition plants. Provide the same information for all Army ammunition plants.

(The information follows:)

## ARMY AMMUNITION PLANTS AND THEIR MISSIONS

Plant	Location	Mission (items produced)
Alabama AAP	Childersburg, Ala	Manufacture propellants and explosives (TNT, DNT, tetryl).
Badger AAP	Baraboo, Wis	Manufacture artillery and small arms propellants and rocket grains.
Burlington AAP	Burlington, N.J	Metal parts for 81 mm. projectile and medium-caliber cartridge cases.
Cornhusker AAP	Grand Island, Nebr	Load, assemble, and pack major-caliber artillery projectiles.
Gateway AAP	St. Louis, Mo	Metal parts for 175 mm. and 8-inch artillery projectiles.
Hays Shell Plant	Pittsburgh, Pa	Metal parts for 105 mm. cartridges.
Holston AAP	Kingsport, Tenn	Manufacture composition B, cyclotol, and other explosives.
Indiana AAP	Charlestown, Ind	Manufacture artillery propellants and igniter charges; load, assemble, and pack artillery and mortar propellant charges.
Iowa AAP	Burlington, Iowa	Load, assemble, and pack medium- and major-caliber artillery projectiles and components.
Joliet AAP	Joliet, Ill	Manufacture lead azide, TNT, DNT, and tetryl; load, assemble, and pack medium- and major-caliber artillery ammunition.
Kansas AAP	Parsons, Kans	Manufacture lead azide; load, assemble, and pack mines and medium-caliber artillery ammunition.
Lake City AAP	Independence, Mo	Manufacture small arms ammunition.
Lone Star AAP	Texarkana, Tex	Load, assemble, and pack medium-caliber ammunition; grenades, mortars, 105 mm. cartridge case rework, related components.
Longhorn AAP	Marshall, Tenn	Load, assemble, and pack missile motors; tracers, pyrotechnics manufacture composition solid propellants
Louisiana AAP	Shreveport, La	Load, assemble, and pack medium- and major-caliber artillery ammunition; mines, 155 millimeter projectiles.
Milan AAP	Milan, Tex	Load, assemble, and pack mortar, medium-caliber ammunition, rockets, and related components.
Newport AAP	Newport, Ind	Manufacture TNT; load chemical munitions.
Radford AAP	Radford, Va	Manufacture variety of propellants, TNT, solventless rocket and mortar increment, load, assemble, and pack rocket motors.
Ravenna AAP	Ravenna, Ohio	Load, assemble, and pack 40 mm. grenades, artillery ammunition, mines, and related components.
Riverbank AAP	Riverbank, Calif	Manufacture medium- and major-caliber cartridge cases and medium-caliber projectiles.
Scranton AAP	Scranton, Pa	Metal parts for major-caliber artillery projectiles.
St. Louis AAP	St. Louis, Mo	Do.
Sunflower AAP	Lawrence, Kans	Manufacture propellants.
Twin Cities AAP	Minneapolis, Minn	Manufacture small arms ammunition and metal parts for 155 mm. projectiles.
Volunteer AAP	Chattanooga, Tenn	Manufacture TNT.

## ANTIPOLLUTION PROJECTS AT BADGER

Mr. SIKES. What is the relationship between the fiscal year 1971 project for sanitary and industrial waste treatment facilities and the fiscal year 1970 project for aeration spillways and dam?

General DALRYMPLE. The fiscal year 1970 project provided for construction of aeration spillways and a 25-acre pond to increase the dissolved oxygen content and provide for sedimentation of solids, respectively, for the industrial wastes and for primary domestic sewage treatment effluent. These waste waters are combined in a small stream on post prior to entering the sedimentation pond and aeration spillways.

The fiscal year 1971 project proposes construction of secondary components at the sewage treatment plant and acid neutralization facilities for industrial wastes. Effluents from both these facilities will be discharged to the stream for final polishing.

Mr. SIKES. Will the projects proposed in the 1971 program at Badger complete the requirements in their respective areas and bring you into compliance with Federal and State regulations?

General DALRYMPLE. No, sir. One additional project for the installation of catalytic reduction units on the nitric acid plant costing \$500,000 will be required to meet Federal and State regulations on air pollution control. No additional projects will be required for water pollution control.

## BURLINGTON ARMY AMMUNITION PLANT, N.J.

Mr. SIKES. Let us take up next Burlington Army Ammunition Plant, in New Jersey. Please insert in the record page 92.  
(The page follows:)

## BURLINGTON ARMY AMMUNITION PLANT, N.J., \$384,000

Burlington Army Ammunition Plant is located at Burlington, N.J. The mission of this installation is the manufacturing of 81-mm. projectiles and 105-mm. cartridge cases. The program provides industrial waste treatment facilities.

*Status of funds*

Funded program not in inventory-----	0
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
1	Industrial waste treatment facilities-----	18	60

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None-----				



Mr. SIKES. The request is for industrial waste treatment facilities, at a cost of \$384,000. Is the situation the same here?

General DALRYMPLE. That is correct. This is one of 11 such treatment facilities, sir.

Mr. SIKES. Does this bring you into full compliance with all Federal and State regulations?

General DALRYMPLE. It does, sir.

CHARLESTON ARMY DEPOT, S.C.

Mr. SIKES. Turn to Charleston Army Depot. Insert in the record p. 94.

(The page follows:)

CHARLESTON ARMY DEPOT, S.C., \$67,000

Charleston Army Depot is located at Charleston, S.C. The mission of this installation is the receipt, assembly, storage, and shipment of transportation floating and rail equipment sets of repair parts, kits, and technical service operating supplies. It performs depot maintenance of transportation floating and rail equipment. The program consists of a refrigerated battery storage facility.

*Status of funds*

Funded program not in inventory-----	\$143,000
Unobligated items, Jan. 31, 1970 (actual)-----	143,000
Unobligated items, June 30, 1970 (estimated)-----	62,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
53	Refrigerated battery storage-----	5	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970-----	Sanitary sewer line-----	62	X	
1970-----	Industrial waste treatment plant-----	81	X	



Mr. SIKES. The request is for \$67,000 for refrigerated battery storage. Does this complete the requirements?

General DALRYMPLE. Yes, sir.

Mr. SIKES. What are you using now?

General DALRYMPLE. We are using storage that is not refrigerated and we are getting a short life out of the batteries.

Mr. SIKES. Do you have an amortization figure on this?

General DALRYMPLE. About 3 years. This will save us \$23,000 a year, sir.

Mr. SIKES. Are there questions?

Mr. PATTEN. Why is it the batteries in our cars go dead in cold weather?

General DALRYMPLE. In cold weather the viscosity of the oil causes a heavy load on the battery.

Colonel KJELLSTROM. Off the record.

HARRY DIAMOND LABORATORIES, MARYLAND

Mr. SIKES. Turn next to the Harry Diamond Laboratories. Mr. Reporter, insert in the record page 96.

(The page follows:)

HARRY DIAMOND LABORATORIES, MARYLAND, \$14,020,000

Harry Diamond Laboratories, now located in Washington, D.C., is to be moved to the Naval Ordnance Laboratory property at White Oak, Md. The mission of this installation is to conduct research and development in physical sciences and engineering directed toward meeting military characteristics for fuzes and related items. It conducts research, development and testing to determine susceptibility of ordnance electronics material to nuclear radiation effects and ways and means of developing less susceptible material. The program consists of the first phase of a planned three-phase construction program to relocate the laboratory facilities.

*Status of funds*

Funded program not in inventory.....	0
Unobligated items, Jan. 31, 1970 (actual).....	0
Unobligated items, June 30, 1970 (estimated).....	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
2	Relocate laboratory facilities, phase I.....	\$800	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.....				

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Harry Diamond Laboratories (HDL)				
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER 008-405		6. STATE/COUNTRY Maryland				
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1953		9. COUNTY (U.S.) Montgomery				
11. MISSION OR MAJOR FUNCTIONS Conducts research and development in physical sciences and engineering directed toward meeting military characteristics for fuzes and related items. Performs National Development and Industrial Engineering Support mission for proximity fuzes. Conducts research, development and testing to determine susceptibility of ordnance electronics material to nuclear radiation effects and ways and means of developing less susceptible material. Provides consulting and liaison service		12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969 b. PLANNED (End FY LR 20)		STUDENTS OFFICER (2) CIVILIAN (2) ENLISTED OFFICER (6) ENLISTED CIVILIAN (6)				
13. LAND a. OWNED b. LEASES AND EASEMENTS c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69 d. AUTHORIZATION NOT YET IN INVENTORY (Planned - \$ _____); (Unfunded - \$ _____) e. AUTHORIZATION REQUESTED IN THIS PROGRAM f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS g. GRAND TOTAL (c + d + e + f)		ACRES (1) 137		LAND COST (\$000) IMPROVEMENT (\$000) TOTAL (\$000) (4) 85 0 85 14,020 19,449 33,554				
SUMMARY OF INSTALLATION LINE ITEMS								
CATEGORY CODE NO. a	LINE ITEM DESIGNATION b		LINE ITEM TITLE c	UNIT OF MEASURE d	TENANT COMMAND e	ESTIMATED PROGRAM SCOPE f	ESTIMATED PROGRAM SCOPE g	ESTIMATED PROGRAM SCOPE h
	310	2 - Relocate Laboratory Facilities, Phase I	Priority 1	SF		149,954	14,020	149,954

Mr. SIKES. This request is for the relocation of laboratory facilities, Phase 1. Phase 1 is to cost \$14,020,000. What will the subsequent request amount to?

General DALRYMPLE. There will be two follow-on phases. Phase 2 will be about \$8.9 million and phase 3 is estimated at \$10.5 million.

Mr. SIKES. You are requesting relocation of the laboratory. This is to provide a completely new facility.

What does the laboratory accomplish?

#### MISSION OF HARRY DIAMOND LABORATORY

General DALRYMPLE. I am going to ask the technical director of the Harry Diamond Laboratories, Mr. Horton, to give you a dissertation on that, sir.

Mr. HORTON. Sir, the Harry Diamond Laboratories is an effort which grew out of the defense work of the National Bureau of Standards during World War II. It was separated from the Department of Commerce and made into a separate installation first under the Office of the Chief of Ordnance, now under the Army Materiel Command. It is one of the largest central laboratories of the Army Materiel Command and its purpose is to support all of the commodity commands, research and development in certain areas, specializing in electronic ordnance, proximity fuzing, certain intelligence projects, radar projects in support of special needs, target detection for special purposes, fluidics and transient radiation effects on electronic equipment. Those are the principal areas.

Mr. SIKES. It would appear from that listing that at least some of these are being researched by private industry. Is that not true?

Mr. HORTON. Yes. There is a great deal of competence in private industry in these fields. We serve as the main repository of expertise within the Government in the electronics ordnance field.

Mr. SIKES. Is there a necessity for duplication of what is being done by private industry?

Mr. HORTON. Sir, I do not feel that there is real duplication in the sense in which you may feel. The Harry Diamond Laboratories conduct research and exploratory development, in the early phase of development, necessary to get designs of equipment which will satisfy the military characteristics demanded of the services. About 10 percent of our research is done under contract. Exploratory development is about 25 percent out of house. But when we get to engineering development of a project the work is about equally split between in-house and out-house effort. In the early phases, because of our long experience in the field of electronic ordnance, specifically for gun rugged or missile rugged systems, we do the original design. After having gotten prototypes which prove that we can satisfy the technical characteristics, we go to industry and industrial concerns which you speak of are very helpful in innovating not only sometimes improving the design but also making this more conformable to their manufacturing techniques. So we serve only in the leading portion of the development and in the early phases of production of items for the military.

## PRESENT FACILITIES

Mr. SIKES. Where are your facilities now located?

Mr. HORTON. On the old National Bureau of Standards grounds at Connecticut and Van Ness.

Mr. SIKES. Are these inadequate at the present time?

Mr. HORTON. Yes. They are considered inadequate. There have been a number of surveys which have indicated they feel they are below the standards required to carry out the kinds of operations we do.

Mr. SIKES. You propose to move where?

Mr. HORTON. Out to 137 acres of land which have been cut off the Naval Ordnance Laboratory site at White Oak, specifically for the Army's use, intended for our relocation.

Would you like to have a brief illustration of what the plans are?

Mr. SIKES. Yes, I would.

In the meantime may I ask what would you do with the existing site?

Mr. HORTON. The General Services Administration will take control of this site as soon as we vacate it. In fact, they already have plans underway for its redevelopment as an international center using it as the headquarters of the Organization of American States, also for chanceries, and also Federal buildings. I am prepared to discuss that, if you wish.

## ACCOMPLISHMENTS OF HARRY DIAMOND LABORATORIES

Mr. SIKES. What are some of the accomplishments of the laboratory in recent years? What are some of your products which represent a significant contribution?

Mr. HORTON. The Harry Diamond Laboratory I believe represents the largest investment of talent and experience in gun rugged and ordnance rugged electronic field. In addition to that—

Mr. SIKES. I am not sure that I understand that terminology "gun rugged and ordnance rugged." What does that mean?

Mr. HORTON. Gun rugged means that you can actually shoot a complete radar fuse or radar terminal guidance system out of a gun and have it survive and operate successfully. Also, we are able to develop different kinds of electronic ordnance which will survive the continual vibration which often occurs in missiles. That is why I distinguish between gun rugged and the missile area. They are sort of a different kind of environment. Both these have high acceleration forces, big, what we call, setback forces and oftentimes there is a high angular acceleration.

These are very difficult to survive. The laboratories were actually historically the first to successfully demonstrate that you could have a proximity fuse based on a munition and the tests were carried out during World War II. More recently we have been deeply engaged in the development of integrated circuit techniques and have contributed to that field. We started the field known now as fluidics. We made the basic inventions of fluid amplifiers. Our inventors are the ones who first originated the idea of so-called thermal power supply which is used not only in our work but in that of other ordnance laboratories both in the Atomic Energy Commission and in the Defense Department. I could name other fields. We are the first ones to measure, for example, the electromagnetic pulse which was radiated from a nuclear detona-

tion. We are currently designated the Defense Department experts, if I may use the word, for transient radiation effects. That is, when a nuclear weapon is detonated those effects which are immediate and of high intensity but of only short duration, they tend to have a tremendous effect upon the electronic ordnance systems whether they be those from a gun or from a missile. Now, we are the designated laboratory to maintain the expertise in that area.

Mr. SIKES. Well, this does sound very significant and it is extremely interesting. When you left the proximity fuse you pretty soon lost me. I knew about that one. I guess that dates me.

All of this is, of course, very significant. Would you please go ahead and make your presentation.

#### HISTORY OF EFFORTS TO OBTAIN NEW FACILITIES

Mr. CEDERBERG. May I ask just a couple of questions before we get into the briefing? How long has this Laboratory been at the old Bureau of Standards site?

Mr. HORTON. Its inception was there, sir. The first building built specifically for this purpose was in 1940.

Mr. CEDERBERG. So you have been there since that time with the Bureau of Standards?

Mr. HORTON. Our organization has.

Mr. CEDERBERG. Your organization has been there?

Mr. HORTON. Yes.

Mr. CEDERBERG. How long since the Bureau of Standards has moved out?

Mr. HORTON. They moved out in part and finally in about 1966.

Mr. CEDERBERG. You knew you were going to have to move out, then, did you not?

Mr. HORTON. Yes, sir.

Mr. CEDERBERG. Why didn't you get prepared for this move long ago?

Mr. HORTON. The Harry Diamond Laboratories management has sought to get the satisfactory solution to our space problem essentially since its inception. We were separated formally from the Bureau of Standards in 1953. At that time it was understood that suitable space provision would be made between the Commerce Department and the Defense Department for adequate provision of our facilities.

However, no formal agreement actually took place. As a consequence we were uncertain as to where we would be located for a number of years during which time first the Army, without success, and then the Secretary of Defense, again without success, sought to get permanent use of these facilities.

The General Services Administration as early as 1964 indicated that it was not compatible with their long-range planning for this site for the Harry Diamond Laboratories or in fact any ordnance Defense laboratory to be located there. They had other plans for this. This was concurred in by the National Capital Planning Commission.

In 1968 Congress concurred in the positions of the GSA and the National Capital Planning Commission by ceding the southern half of the site on which we are located, and which houses two of our buildings, over to the State Department for disposition and use as chanceries.

General DALRYMPLE. We submitted it to OSD in 1968. We recognized the need for it. We submitted it to Congress last year. The Armed Services Committees denied authorization.

Mr. CEDERBERG. The reason I bring this question up is I served as the chairman on another subcommittee charged with the responsibility of the National Bureau of Standards. Now, you are telling us that these Harry Diamond Laboratories were a part of the Bureau of Standards at one time?

Mr. HORTON. Until 1953.

Mr. CEDERBERG. Until 1953. Then they were transferred to the Defense Department?

Mr. HORTON. Yes, sir.

Mr. CEDERBERG. In that other subcommittee we started this Bureau of Standards operation out at Rockville many years ago. The reason they went out there was because of not only the crowded conditions at the existing site on Connecticut Avenue, but because of the requests for the use of it—there were going to be other uses for the site. I am frankly surprised that this has not been done earlier. I am concerned about the cost that we are going to incur now as compared to what it would have cost if you had made your move at the time the Bureau of Standards did. What are we talking about here in terms of the total cost for this move?

General DALRYMPLE. We are talking about \$30 million to \$35 million at this time, sir.

Mr. CEDERBERG. Are you familiar with the figures that were originally given to the Congress on the cost of that Bureau of Standards operation out at Rockville?

Mr. HORTON. If you are speaking of the changes in our escalation price, generally, sir, yes.

Mr. CEDERBERG. There were substantial increases.

Mr. HORTON. Yes.

Mr. CEDERBERG. I can't pull all the figures out of my head right now, but it was at least 30 percent, I believe.

I am just wondering whether we are going to go down another Bureau of Standards road here and wind up with a \$60 million proposition instead of \$34 million one.

Mr. HORTON. Sir, we have had a party looking at this problem for some time, and I have personally been escorted through the National Bureau of Standards with a team. We are aware of the cost of the construction and the history of escalation that occurred there.

Mr. CEDERBERG. You will not build any \$45,000 flagpoles out here, will you?

Mr. HORTON. No, sir; we certainly will not. We are confident that under the Corps of Engineers system that we would not be permitted such luxury nor do we have any desire to engage in some of the extensive and very detailed services which are available throughout that laboratory. Our laboratory will be of a more modest demand.

#### ADDITIONAL SQUARE FOOTAGE PROVIDED IN NEW FACILITY

Mr. CEDERBERG. Let's see how modest. How many square feet do you have now?

General DALRYMPLE. 409,000 square feet.

Mr. CEDERBERG. You have existing space of 409,000 square feet?

Mr. HORTON. Yes.

Mr. CEDERBERG. How many square feet do you anticipate when this is completed?

Mr. HORTON. 562,000 net square feet.

Mr. CEDERBERG. 562,000?

Mr. HORTON. Net square feet. When completed, there will be 733,000 gross square feet.

Mr. CEDERBERG. That is modest?

Mr. HORTON. Yes.

Mr. CEDERBERG. From a little over 400,000 to way over 500,000. There may be a difference of opinion as to whether or not that is modest.

Mr. HORTON. Yes.

Mr. CEDERBERG. Why do you need those extra square feet? Are you that short of space where you are?

Mr. HORTON. Sir, in a qualitative way I must say we are quite crowded. We are well below the standards recommended for industrial laboratories, other Government laboratories also.

Mr. CEDERBERG. This brings you up to that standard?

Mr. HORTON. This was to bring us up to a reasonable standard, yes.

#### PROPOSED SITE

Mr. CEDERBERG. Are you going to have to buy any more property?

Mr. HORTON. No, sir. The property is already owned by the Government and has already in fact been transferred by the Navy over to the Army.

Mr. CEDERBERG. So you categorically tell this committee that if they approve this transfer you are not going to go out and buy more property for this laboratory?

Mr. HORTON. No more land; no.

Mr. CEDERBERG. No more land.

These are just a few items that I wanted to nail down, Mr. Chairman.

#### COST GROWTH

Mr. SIKES. Did you get into the question of cost growth?

Mr. CEDERBERG. I am assuming, as far as cost growth is concerned, that the general statement made at the opening of these hearings applies to this project. You have already cranked in the cost escalations that you foresee not only in this project but in all the projects in this program; is that correct?

General DALRYMPLE. That is right, sir.

Mr. SIKES. What was the cost figure when the project was submitted for authorization last year?

General DALRYMPLE. \$12,781,000.

Mr. SIKES. Does the difference reflect inflation and increases in construction costs?

General DALRYMPLE. Yes, sir. It projects a 1971 date of award.

Mr. CEDERBERG. Have you taken the land borings that are necessary out there, and everything, so that you are not going to come back and tell us that you have a crack like you have at West Point?

General DALRYMPLE. We took a number of core borings at West Point, too, and still came up with unforeseen faults. But the design of this project is about 25 percent complete at the moment, sir.

Mr. CEDERBERG. I think it is going to be an interesting experience for this subcommittee to look at this as it goes along. Obviously, if you are going to have a laboratory, you are going to have to get out of your present facilities. They have already taken the lease away from you, in effect. Is that correct?

Mr. HORTON. With a time delay fuse, yes.

Mr. CEDERBERG. A time delay fuse. But, as a practical matter, you are going to have to get out?

Mr. HORTON. Yes.

Mr. CEDERBERG. So I suppose the sooner we get on with this thing the better off we will be.

#### NECESSITY FOR WASHINGTON AREA LOCATION

Mr. SIKES. Is there some magic about being in Washington, having a new plant in Washington? Have you looked at the possibility of using one of the facilities that has been made available or is about to be made available as a result of the base realignment action?

General DALRYMPLE. In studying the location, sir, we looked at some 45 pieces of Government property in or near the National Capital region including Quantico, Woodbridge, Anacostia, Morningside in Maryland.

Mr. SIKES. Why Washington? Why must it be in Washington?

Mr. CEDERBERG. Yes.

General DALRYMPLE. I will defer to Mr. Horton in a moment but it was finally narrowed down to seven sites in the general area of Washington.

Mr. HORTON. The experience in changing, in the closing of bases and moving laboratories has been that the most competent members of your staff are not nearly as likely to move to a new location as those who may not be in a position to be as mobile and command quite the salary.

Mr. SIKES. I understand a lot of people want to move away from Washington to get into safer areas.

Mr. HORTON. Yes, I agree; that is a very good point. However, we have a number of staff members who are engaged in graduate work and continuing their education. We are very active in staff development. The Washington area provides a number of very fine universities and a variety of technical fields which fit in with our needs. We actually have graduate students in almost every school in the Washington area.

Mr. SIKES. So, you really have not looked outside of Washington for a suitable location at an existing military facility?

Mr. HORTON. AMC has looked outside the Washington area but the Director of Laboratories has concluded that it would not be feasible to move this staff and this particular group of people to another area and do it effectively.

Mr. SIKES. Will you continue to do the same type of work at the new installation as you are doing at the present facility?

Mr. HORTON. Yes, sir; there is no change in work, just in mandatory relocation.

## NUCLEAR REACTOR

Mr. SIKES. What use do you make of the nuclear reactor which is at Forest Glen?

Mr. HORTON. We use it daily. We have about one nuclear pulse per hour. This gives us a high intensity burst of neutrons which are used to determine the response of the electronic systems to nuclear radiation. It is used by all of the services, including Navy and Air Force projects, as well as Army.

Mr. SIKES. What is your planned workload for experiments using the reactor in the foreseeable future, say in the next 5 to 10 years?

Mr. HORTON. There is every indication that the importance of nuclear simulation facilities will grow because of our inability to have air bursts and the decreasing likelihood that we will be able to have as many underground bursts as we want, which underground bursts are very expensive, by the way. Therefore, I believe the use of simulation devices such as the nuclear reactor will be of increasing importance in the future if we are going to provide an adequate defense system.

Mr. SIKES. Could you not meet your projected research needs by modifying the current reactor instead of procuring a new one?

Mr. HORTON. Sir, we have looked at that, and, although the present nuclear reactor is in good operating shape, I have some figures here I would like to give you concerning its reuse. First of all, from a technical viewpoint, the present nuclear reactor does not have near the volume for exposure which the new reactor will have.

Mr. SIKES. Is there requirement for the additional volume?

Mr. HORTON. For the most effective weapons development, we need to be able to expose a complete guidance system to a uniform intensity of nuclear radiation. The present HDL reactor will permit nuclear flows of 3 times 10 to the 14th neutrons per square centimeter, which is a current reasonable goal to withstand, in only a 70-cubic-inch volume.

The new facility will permit an even larger dose by a factor of 3. I should correct that. The flows went from 3 times 10 to the 14th power up to 1 times 10 to the 15th, and the volume goes from 70 cubic inches up to 565 cubic inches, or about 2 gallons.

Mr. SIKES. What is the cost of the nuclear reactor, the new one?

Mr. HORTON. It is just a little over \$2 million.

Mr. SIKES. What will be done with the present one?

Mr. HORTON. The present one will be removed, some of the instrumentation and parts can be used with the new reactor, but, for the most part, the new reactor, of larger volume, will require new workings as well as the new building. The Surgeon General is happy to have the present building for use as a storage area and other experimental purposes, but he does not wish to continue operation of the reactor as a reactor.

Mr. SIKES. Then there will be no use for the reactor itself?

Mr. HORTON. No, sir; it will be phased out.

Mr. SIKES. Do you require the new reactor at the time the laboratory is built or would it serve the purpose to postpone the procurement of a new reactor for another year or two, or even longer?

Mr. HORTON. Sir, there are two kinds of urgency. First, the urgency for us to get out of our present space, part of which is leased and for which we do not desire to be tenants. The other is GSA's plan, as approved by the National Capital Planning Commission, to get us

out of the present site. But there is another kind of urgency for an improved reactor and that is to be able to expose an entire guidance package to these nuclear effluents. As you may know, there is difficulty in making some electronic systems which are required in guidance systems, even in an inertial guidance system. There are very often thousands of active devices such as transistors which are sensitive to nuclear radiation. If you were going to have a system survive you need to design as best you can to meet a certain threat level; if you have a nonuniform field you may well be unable to establish with any realism what you can withstand.

In other words, you need a nuclear reactor which is powerful enough so that you can get at some distance from the source of the radiation and have uniform effluence through this volume.

#### POWERPLANT AND SOUTH SIDE

Mr. SIKES. You told us what you propose to do with the present site. What is the schedule for the use of the site at the present powerplant on the south portion of the property?

Mr. HORTON. I have a letter from the GSA which gives the latest information on this. It is dated February 20 and is signed by the Acting Commissioner of Public Buildings Service: "In view of the foregoing we may find it necessary to request your organization to vacate at least a portion of the facilities in the chancery center by February 1971 and in the area north of Van Ness Street within the next 5 years." The chancery area is south of Van Ness Street. The one already authorized by the Congress to be disposed of either by sale or lease to foreign governments, that is. In that area we have a powerplant and a computer facility.

Mr. SIKES. What plans do you have in the event the powerplant site is claimed on schedule?

Mr. HORTON. This, of course, would be up to the Corps of Engineers working with the GSA to work out some way to provide heat, water, and power to these buildings. I have heard an off-the-cuff estimate of \$1 million to provide temporarily this power that would be needed to keep these buildings operating. I am not able to validate that estimate, however.

Mr. SIKES. What is the schedule for relocation of the Washington Technical Institute and other major activities now occupying the south site?

Mr. HORTON. I do not have firm information on that. I would like to defer answering that for the record.

(The information follows:)

Any sale, demolition, or new construction of the proposed chanceries on the south site must honor the current occupancy permits issued by the General Services Administration. The Washington Technical Institute is the only major tenant on the south site. The Washington Technical Institute's initial 3-year permit expires February 1, 1971.

In addition to the Washington Technical Institute there are only two other tenants on the south site. The Army Medical Museum will occupy buildings 1 and 8 until the spring of 1971 when they will move to Walter Reed. U.S. Geological Survey occupies buildings 10 and 24 which have no expiration date but have a 90-day cancellation notice on building 10 and a 30-day cancellation notice on building 24.

## NORTH SITE

Mr. SIKES. What can you tell us about the relocation of the activities occupying the north site?

Mr. HORTON. We have attempted to get information on that since in part it depends upon the action of Congress to provide additional sites. Now, I am not prepared to answer that.

Mr. SIKES. Is it proposed to move major functions from Frankford Arsenal to the new site of the Harry Diamond Laboratories?

Mr. HORTON. No, sir.

## LEASEHOLD ACQUIRED BY CONDEMNATION

Mr. SIKES. What is the current situation regarding the leasehold acquired by condemnation at the present leased facility?

Mr. HORTON. We are actually using one of the leased facilities which is a road, under a certificate of taking. We are under court order to vacate, but the certificate of taking has permitted the Government to operate this. The longest that we can anticipate using this road is by July of 1971. Beyond that we cannot be assured that the court will allow us to use this road. We did win a jury trial last time and got the court order to continue to use the road.

Mr. SIKES. I think we interrupted you. You were going to tell us something about your plans. Do you wish to proceed?

Mr. HORTON. Yes, sir, if I may.

Mr. PATTEN. Can you point that road out on that map?

Mr. HORTON. It is right here.

Mr. PATTEN. I remember that now, yes.

## PRESENT SITE—PLANNED USE

Mr. HORTON. This is Connecticut and Van Ness. The bulk of our laboratory facilities is in this area in yellow; here is the powerplant for the whole area. Our computer center is here. Incidentally, the Washington Technological Institute is in the quadrangle of buildings which is the old headquarters of the National Bureau of Standards. These are leased facilities. We have this road leased, costing us \$10,600 a year to use. The reason for its price is the owner of this land wishes to develop this site into a high rise office building. The owner of this site previously owned this building and at that time he was glad to have us use that road but he sold this building. There is no elevator, no way to get heavy equipment in and out. Even bringing it in the back way it has to be hand carried upstairs. We do have a fair amount of heavy equipment that has to be handled in that way.

This shows what will happen when the GSA building plan is put into effect. This is all divided up for chanceries, where our main headquarters is.

I understand one of the foreign governments has already indicated a preference for this particular site where the powerplant is.

Here is a three-phase schedule for our move. The triangle indicates the date on which ground would be broken for that phase. We are in here today asking for authorization for this first phase. The other phases follow 1 year behind. If they are funded as requested it would permit us to vacate the land by the time the GSA has indicated we should be out.

## NEW SITE

The new site is cut out of the southern portion of the Naval Ordnance Laboratory. You may remember that the Naval Ordnance Laboratory ground extends from New Hampshire Avenue west and along the southern edge is Powder Mill Road. We have gotten that piece of land facing on Powder Mill Road. This is the main laboratory complex here. This is Piney Branch going down through the facility which will require a bridge across the creek.

This now is the eastern part of our laboratory. That bridge carries you across Piney Branch. This is where the nuclear reactor will be located.

## AURORA FACILITY

This is an aurora facility, an extremely high intensity gamma ray facility also used for nuclear simulation work. This is already under construction. It was authorized by Congress in the 1969 budget for the Defense Atomic Support Agency.

## NUCLEAR REACTOR

Mr. SIKES. How far from the new laboratory in miles would the present reactor be?

Mr. HORTON. About 6 miles.

Mr. SIKES. How far is the present reactor from the present laboratory?

Mr. HORTON. It is almost 10 miles.

Mr. SIKES. So from the standpoint of location there would not be a problem about the continued use, for the time being, of the present reactor.

Mr. HORTON. It would be a better situation than what we have now, that is right. However, there still are costs associated with that.

May I say the reason it was located out there is because there was no land at our present site to locate it.

Mr. SIKES. How far would the nuclear reactor be from the new laboratory?

Mr. HORTON. The new reactor would be at the new laboratory.

Mr. SIKES. At the new laboratory?

Mr. HORTON. Yes.

Mr. SIKES. I wanted to establish that for the record.

You are a capable witness, Mr. Horton.

Are there questions?

Mr. McFALL. I have no questions.

## NO MOVE FROM FRANKFORD ARSENAL TO HARRY DIAMOND PLANNED

Mr. PATTEN. We were told last year that you were going to move some of these HDL people up to Frankford. How did that work out?

Colonel PAQUETTE. That is in my area, that particular question. We were not going to move anyone from Harry Diamond to Frankford nor were we going to move anybody from Frankford to Harry Diamond. I am aware of the fact that that rumor started and we quickly squashed it—but I guess not quickly enough.

Mr. PATTEN. I have nothing further.

Mr. CEDERBERG. Off the record.

(Discussion off the record.)

Mr. SIKES. Thank you, Mr. Horton.

Mr. McFALL. We will proceed now.

FRANKFORD ARSENAL, PA.

Turn to Frankford Arsenal, Pa. What is the status of the relocation of the R. & D. facilities from Frankford?

Colonel PAQUETTE. We had a request in the fiscal year 1970 military construction authorization for an addition to the Army Mechanics and Materials Research Center at Watertown, Mass. The request was for \$4.9 million, of which \$610,000 was for the people located at Frankford to be relocated up at Watertown. That project was deferred; therefore the relocation has been deferred. There is no action being taken.

Mr. McFALL. Very well.

IOWA ARMY AMMUNITION PLANT, IOWA

Turn to Iowa Army Ammunition Plant. Please insert in the record page 101.

(The page follows:)

IOWA ARMY AMMUNITION PLANT, IOWA, \$300,000

Iowa Army Ammunition Plant is located 5 miles west of Burlington, Iowa. The mission of this installation is to load, assemble and package various items of medium and major caliber artillery ammunition, warheads, demolition blocks, and fuzes. The program consists of industrial waste treatment facilities.

*Status of funds*

Funded program not in inventory	-----	\$503,000
Unobligated items, Jan. 31, 1970 (actual)	-----	503,000
Unobligated items, June 30, 1970 (estimated)	-----	503,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
4	Industrial waste treatment facilities	\$15	60

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Industrial waste treatment	\$503	×	-----

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Iowa Army Ammunition Plant		TOTAL (\$000) <b>58,202</b>	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		6. STATE/COUNTRY Iowa		TOTAL (\$000) <b>58,202</b>	
7. STATUS Active		9. COUNTY (U.S.) Des Moines			
5. INSTALLATION CONTROL NUMBER 16105		10. NEAREST CITY Burlington, 5 miles east		TOTAL (\$000) <b>58,202</b>	
8. YEAR OF INITIAL OCCUPANCY 1941		PERMANENT			
11. MISSION OR MAJOR FUNCTIONS Production at this installation consists of the loading, assembling, and packaging of various items of medium and major caliber artillery ammunition, warheads, demolition blocks, and fuzes.					
12. PERSONNEL STRENGTH					
a. AS OF <u>31 Oct 1969</u>					
b. PLANNED (End FY )					
13. INVENTORY					
LAND		ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)
a. OWNED		19,326	3,504	54,698	58,202
b. LEASES AND EASEMENTS					0
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 68					58,202
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____)				0	503
e. AUTHORIZATION REQUESTED IN THIS PROGRAM					300
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS					1,192
g. GRAND TOTAL (c + d + e + f)					60,197
SUMMARY OF INSTALLATION LINE ITEMS					
CATEGORY CODE NO.	LINE ITEM DESIGNATION		UNIT OF MEASURE	ESTIMATED (\$000)	ESTIMATED (\$000)
	LINE ITEM TITLE	PRIORITY	SCOPE	SCOPE	SCOPE
831	4 - Industrial Waste Treatment Facs	1		300	300

Mr. McFALL. Will the industrial waste treatment facilities complete the requirements here and bring you into compliance with State and Federal regulations?

General DALRYMPLE. Yes, sir.

Mr. McFALL. Very well.

LETTERKENNY ARMY DEPOT, PA.

Turn to Letterkenny Army Depot. Insert in the record page 103. (The page follows:)

LETTERKENNY ARMY DEPOT, PA. \$410,000

Letterkenny Army Depot is located 5 miles northwest of Chambersburg, Pa. The mission of this installation is to receive, store, maintain and distribute general supplies, conventional ammunition and guided missiles. It also supports the U.S. Army Materiel Command Major Item Data Agency, Logistic Systems Support Center, Facilities and Services Center, Maintenance and Engineering Office, Equipment Manuals Field Office, Depot Maintenance Control Center and Depot Data Center. The program consists of a depot transport outloading facility.

*Status of funds*

Funded program not in inventory	\$2,749,000
Unobligated items, January 31, 1970 (actual)	2,457,000
Unobligated items, June 30, 1970 (estimated)	2,457,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
90	Depot transport outloading terminal	\$16	25

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Sewage treatment plant	\$753	×	
1970	Industrial waste collection system	250	×	
1970	Radiographic inspection facility	1,049		×
1970	Ammo class building	346		×
1970	Inclose crane structure building 350	59		×

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Letterkenny Army Depot	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER Pennsylvania 345		6. STATE/COUNTRY Pennsylvania	
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1942		9. COUNTY (U.S.) Franklin	
11. MISSION OR MAJOR FUNCTIONS Receipt, storage, issue, care and preservation and depot maintenance of general supplies, conventional ammunition and guided missiles. Houses and supports special missions and activities as: USAMC Major Item Data Agency, AMC Logistic Systems Support Center, US Army Audit Agency (AAA) Resident Office, US Army Electronic Command Liaison Office, 28th Ordnance Detachment, AMC Facilities and Services Center, AMC Maintenance Engineering Office, AMC Equipment Manuals Field Office, AMC Depot Maintenance Control Center, and AMC Depot Data Center.		12. PERSONNEL STRENGTH a. AS OF <u>31 Oct 69</u> b. PLANNED (End FY LR)		10. NEAREST CITY Chambersburg, 5 miles Southeast	
		PERMANENT		STUDENTS	
		OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	ENLISTED-OFFICER (6)
		34	33	5,740	(7)
		44	26	5,608	(8)
		LAND		IMPROVEMENT (\$000)	
		a. OWNED	b. LEASES AND EASEMENTS	TOTAL (\$000)	
		20,597	56	LAND COST (\$000)	(4)
			18*	(2)	(5)
		c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		IMPROVEMENT (\$000)	(6)
		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 2,749 ; Unfunded - \$ 0 )		0	(7)
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM		68,979	(8)
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		0	(9)
		g. GRAND TOTAL (c + d + e + f)		70,716	(10)
				2,749	(11)
				15,159	(12)
				89,034	(13)

SUMMARY OF INSTALLATION LINE ITEMS			AUTHORIZATION PROGRAM			FUNDING PROGRAM		
CATEGORY CODE NO. a	LINE ITEM TITLE b	Priority Page No	TENANT COMMAND	UNIT OF MEASURE	SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)
			c	d	e	f	g	h
441	90 - Depot Transport Outloading Terminal	1 - 104		SF	91,940	410	91,940	410

\* \$17,900 one-time cost for easement.

## STATE OF THE ART IN POLLUTION ABATEMENT FACILITIES

Mr. PATTEN. How comfortable do you feel making that statement, with your knowledge of these pollution facilities? Do you think these things which we are building, are they the best? Are they adequate, or do we have a lot to learn about them?

General DALRYMPLE. Certain things we are going to learn as we go along, but the ones that we have designed up to this point are adequate, can do the job, and are very, very necessary. This is a purely engineering solution, as far as I can see, with considerable money attached to it.

Mr. PATTEN. Would today's plant be similar to a sewage disposal plant which was built 30 years ago?

General DALRYMPLE. There have been changes in treatment methods, changes certainly in standards. Higher standards are required today. We used to get by with a primary treatment. Now we have to go to secondary and ever better treatment than that. I would like to ask Mr. Zackrison to comment on that.

Mr. ZACKRISON. The state of technical knowledge in pollution control is sufficient to take care of our requirements, not that we cannot improve on them in the future but I happen to have chaired a committee of the National Academy of Sciences dealing with this problem. It was the consensus of all these experts that we had the knowledge but did not have the money. It will involve modifying fuels, processes producing pollution, and stopping the use of many materials. If you provide us with the money I think we can solve the problem. But the money that we are talking about nationwide is a terrific amount.

Mr. PATTEN. Would you throw a figure out? Is it \$100 billion, \$50 billion?

Mr. ZACKRISON. For the nation as a whole probably \$50 billion to \$100 billion, in that order. It is going to take a long time to solve.

Mr. McFALL. Using the same kinds of plants that we are currently considering here?

Mr. ZACKRISON. Those that we are currently using. The chances are we can develop new methods to do this more economically and efficiently. I feel personally that we cannot wait for the new methods, that we are going to have to get on with it now or our environment will be so polluted that we will never be able to recover.

Mr. McFALL. With the present state of the art and the expenditure of a suitable amount of money, that is what you mean?

Mr. ZACKRISON. We can accomplish the job.

Mr. CEDERBERG. Off the record.

(Discussion off the record.)

## COST OF OPERATION OF POLLUTION CONTROL FACILITIES.

Mr. PATTEN. I would like to note that those who did act under some of our previous legislation for Federal aid now find that the costs of operation, particularly of the Lake Valley Sewage Commission or the Raritan Valley Sewage Commission in our area, are getting to be a much greater burden on the local tax budget than we were ever told or ever anticipated. It is a big factor.

Mr. ZACKRISON. I think the main problem is we are setting higher standards than we were talking about even 2 years ago. That is doubling, tripling, even quadrupling the cost.

## DEPOT TRANSPORT OUTLOADING TERMINAL

Mr. McFALL. What are you currently using for depot transport outloading terminal facilities at Letterkenny Army Depot?

Mr. DUGAN. We are currently using two docks, the southwest and northwest docks. These docks currently used are too narrow and are a prevalent safety hazard. The current docks are only 12 feet wide. The newly proposed dock will be 30 feet wide and will permit the use of forklifts between the dock and the vans without constant fear of an accident because of the limited operating space for loading truck vans.

Mr. McFALL. Can you identify savings as a result of the alteration of these facilities?

Mr. DUGAN. Yes, sir.

General DALRYMPLE. This project will generate about \$77,500 annually. So it will be amortized in less than seven years.

## EDGEWOOD ARSENAL, MD.

Mr. SIKES. Turn to Edgewood Arsenal, Md. Insert in the record page 99.

(The page follows:)

## EDGEWOOD ARSENAL, MD., \$990,000

Edgewood Arsenal is located 15 miles northeast of Baltimore, Maryland. The mission of this installation includes research and development of chemical, smoke, and flame weapons systems and research and development in nuclear defense and radiological techniques. It is also responsible for pilot production, storage and maintenance of chemical warfare materiel. The program consists of an addition to an automatic data processing facility.

*Status of funds*

Funded program not in inventory	\$653,000
Unobligated items, 31 Jan 1970 (actual)	0
Unobligated items, 30 June 1970 (estimated)	0

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
164	Addition to ADP facility	\$34	23

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None				

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	FY 1971 MILITARY CONSTRUCTION PROGRAM		3. INSTALLATION Edgewood Arsenal						
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER Maryland 45		6. STATE/COUNTRY Maryland						
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1918		9. COUNTY (U.S.) Baltimore & Harford						
11. MISSION OR MAJOR FUNCTIONS The Army's principal commodity center for research and development of chemical, smoke and flame weapons systems and research and development in nuclear defense and radiological techniques. Pilot production storage and maintenance of chemical warfare materiel.		10. NEAREST CITY Baltimore, 15 miles SW		12. SUPPORTED TOTAL (\$000) 5,476						
		13. INVENTORY		TOTAL (\$000) 5,503						
		LAND COST (\$000)		IMPROVEMENT (\$000)						
		894		93,158						
		78*		78						
		653		94,130						
		990		653						
		19,153		990						
		114,926		114,926						
SUMMARY OF INSTALLATION LINE ITEMS										
CATEGORY CODE NO. a	LINE ITEM DESIGNATION b	LINE ITEM TITLE c	PRIORITY d	PAGE NO. e	UNIT OF MEASURE f	TENANT COMMAND g	AUTHORIZATION PROGRAM SCOPE h	ESTIMATED COST (\$000) i	SCOPE j	ESTIMATED COST (\$000) k
141	164 - Addition ADP Facility		3	100	SF			26,250	26,250	990

Mr. SIKES. The request is for \$990,000 for an addition to the ADP facility.

EFFECT OF NATIONAL POLICY ON USE OF BIOLOGICAL AND CHEMICAL AGENTS

I think we need to know first what the continued requirement for facilities will be at Edgewood before we discuss the particular equipment that is covered by this request. What can you tell about the future of Edgewood in view of the new national policy on the use of biological and chemical agents?

Colonel BLANK. Sir, the President's announced policy reaffirmed no first use of lethal chemicals in war and extended that policy to include incapacitating agents.

Mr. SIKES. Does that mean you cannot use tear gas?

Colonel BLANK. No, sir, it does not.

Mr. SIKES. You can use tear gas?

Colonel BLANK. As I understand the policy, tear gas may be used, sir.

Mr. SIKES. That would be encouraging to the troops, who found it a very effective way to stay alive and to get the enemy out of difficult positions without having to kill him.

Mr. LONG. Wouldn't you think it was more humane to have the enemy soldier weeping than to have his wife weeping?

Mr. SIKES. That is a good point.

The use of tear gas I would assume would bring that about.

All right, go ahead.

Mr. LONG. It is a good way to incapacitate without killing, and I would think would be a humane instrument. I do not understand the opposition to it.

Mr. SIKES. The Communists are against it.

Mr. LONG. Except when they use it.

Mr. SIKES. They are against our using it. That causes some other people to get excited sometimes.

Go ahead.

Colonel BLANK. The policy also affirms that the United States would retain a deterrent retaliatory capability in chemical weapons. The R.D.T. & E. to support the deterrent capability effort will continue to be conducted at Edgewood Arsenal.

Mr. LONG. Will you yield?

Mr. SIKES. Yes.

Mr. LONG. It has been my understanding that actually this policy does not affect the operation at Edgewood in any significant way.

Mr. SIKES. Is that true?

Colonel BLANK. Yes, sir.

Mr. LONG. The policy is mainly directed against biological warfare. The Edgewood mission is very largely to test defensive weapons and all sorts of decontaminants. That mission would continue under the President's policy. Is that correct?

Colonel BLANK. That is correct, sir.

Mr. SIKES. Edgewood has performed a useful and important service for many years and I presume it has the only significant capacity in our Defense Establishment for this particular type of activity. Is that correct?

Colonel BLANK. Yes, sir.

Mr. SIKES. Again are we to assume by your answers that the work in progress at Edgewood is of a type that will continue at substantially the same level under the new national policy?

Colonel BLANK. May I furnish that for the record?

Mr. SIKES. Yes.

(The information follows:)

The work in progress at Edgewood Arsenal will continue at substantially the same level as approved by Congress in fiscal year 1970.

#### STATUS OF ARMY MATERIEL COMMAND'S FIVE-YEAR ADP PROGRAM

Mr. SIKES. What is the current status of the Army Materiel Command's 5-year ADP program?

Mr. ARNTSON. The name of that program, sir, is the AMC 5-year ADP program. If you will recall, in earlier years we did call it the National ADP program for AMC logistics management. It was considered wise to change it because of the acronym, NAPALM. The program is currently on schedule with a prototype, first installation of the commodity command level to go into operation on July 1 this year.

Mr. SIKES. Where?

Mr. ARNTSON. At the Aviation Systems Command in St. Louis.

Then progressively during fiscal year 1971 the program will be instituted at each one of the national inventory control points and commodity centers to include Edgewood Arsenal and Picatinny Arsenal.

Mr. SIKES. Does the system tie in to other Army ADP systems such as COCOAS?

Mr. ARNTSON. Yes. The Army system in total is made up of wholesale levels which are the AMC levels and retail levels for the CONUS installations and for overseas commands commonly called the retail levels. Our system ties into theirs.

Mr. SIKES. Have any major problems been encountered in the implementation of the system?

Mr. ARNTSON. Not to date; no, sir.

Mr. SIKES. What computer support for the scientific and engineering missions of Edgewood Arsenal will be provided by the computers to be installed in this addition?

Mr. ARNTSON. The site will accommodate a centralized computer facility to support both the business-type and scientific/engineering applications for the arsenal. Selection of a scientific computer to meet the total known mission is in the final stages of approval by the Army.

Mr. SIKES. What is the status of selection and procurement of computer equipment to be installed here?

Mr. ARNTSON. The business-type computer has been selected by the Department of the Army. A specific delivery order will be issued subsequent to successful completion of a Readiness Review by the Army Staff. The scientific computer is in the final stage of selection by the Army.

Mr. SIKES. Keep us informed of the progress of this procurement.

FORT MONMOUTH, N.J.

Mr. SIKES. Turn to Fort Monmouth, N.J. Insert in the record page 105.

(The page follows:)

## FORT MONMOUTH, N.J. \$3,274,000

Fort Monmouth is located at Red Bank, N.J. The mission of this installation is the design, development and improvement of communications, electronic warfare, radar, meteorological, photographic and related ground and air signal equipment. The installation supports the U.S. Army Signal Center and School, U.S. Army Satellite Communications Agency and the U.S. Army Combat Developments Command Communications and Electronics Agency. The program consists of a tactical fire direction training facility and hospital alteration and addition.

*Status of funds*

Funded program not in inventory	\$2, 072, 000
Unobligated items, 31 Jan. 1970 (actual)	1, 778, 000
Unobligated items, 30 June 1970 (estimated)	269, 000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
106	Tactical fire direction training facility	\$31	5
97	Addition and alterations, Patterson Army Hospital	145	10

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Electronic warfare laboratory	\$1, 509	X	
1966	100 units family housing	1, 947	X	
1970	Post office	269		X

2. DEPARTMENT ARMY		3. INSTALLATION Fort Monmouth	
2 Feb 1970		FY 1971 MILITARY CONSTRUCTION PROGRAM	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		6. STATE/COUNTRY New Jersey	
5. INSTALLATION CONTROL NUMBER New Jersey 555		9. COUNTY (U.S.) Monmouth	
7. STATUS Active		10. NEAREST CITY Red Bank	
8. YEAR OF INITIAL OCCUPANCY 1917		PERMANENT	
11. MISSION OR MAJOR FUNCTIONS Provide Command, logistical and administrative support for Headquarters, US Army Electronics Command, in the performance of research, development, procurement and production of electronic material by the US Armed Forces. Furnish logistical and administrative support for the US Army Signal Center and School, the US Army Satellite Communications Agency, and the Fort Monmouth Offices of the US Army Combat Development Command Communications and Electronics Agency, Project Mallard, and the US Army Communications System Agency.		PERSONNEL STRENGTH	
		OFFICER ENLISTED CIVILIAN	
		OFFICER (2) ENLISTED (3) CIVILIAN (4)	
		827 3,404 9,338 562 6,125	
		9. AS OF 31 Oct 1969	
		10. PLANNED (Encl FY LR)	
		900 3,424 6,281 274 2,533	
		INVENTORY	
		LAND COST (\$000)	
		ACRES (1)	
		LAND COST (\$000)	
		IMPROVEMENT (\$000)	
		TOTAL (\$000)	
		OWNED 626 188 37,996 38,184	
		LEASES AND EASEMENTS 401 0 0 0	
		INVENTORY TOTAL (Exclpt Land Inv) AS OF 30 JUNE 19 69 2,072 38,184	
		AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 0 (Unfunded - \$ 2,072) 2,072	
		AUTHORIZATION REQUESTED IN THIS PROGRAM 3,274	
		ESTIMATED AUTHORIZATION - NEXT 4 YEARS 13,263	
		GRAND TOTAL (c + d + e + f) 56,793	
SUMMARY OF INSTALLATION LINE ITEMS			
LINE ITEM DESIGNATION			
CATEGORY CODE NO.	LINE ITEM TITLE	PRIORITY Page No	FUNDING PROGRAM
171	106 - Tactical Fire Direction Training Facility	3 106	517 13,200 517 13,200
530	97 - Addition and Alterations, Patterson Army Hospital	107 2	2,757 26,940 2,757 26,940
	Totals		3,274 3,274 3,274 3,274
			43-538 484

Mr. SIKES. The request is for \$3,274,000 for a tactical fire direction training (TACFIRE) facility and addition to, and alteration of, Paterson Army Hospital.

#### TACFIRE SYSTEM NOT YET APPROVED

Has the TACFIRE system been approved for servicewide use?

Major LINCOLN. The Tactical Fire Direction System is currently under development by a contractor, Litton Industries, and it is a total contract that includes both development and production. In that sense, assuming it meets the specifications and the Army's requirements during testing, it will be approved for full use throughout the active Army for field artillery units.

Mr. SIKES. Is this installation coincident with or subsequent to the servicewide approval?

Major LINCOLN. Training will start after the decision has been made to produce the system for Army-wide use, for training.

Mr. SIKES. Let me be sure that we understand each other. Are you building a facility here for a system that you do not know is going to be approved for servicewide use?

Major LINCOLN. At this moment, sir, we have no formal production go-ahead in the contract. The system must undergo a 1-year engineering test and a service test conducted by the Test and Evaluation Command under AMC. If the system passes the test and meets the Army's requirements then it will be produced for Armywide use.

Mr. SIKES. Do you need this facility as a part of the program for determining whether the system is going to be approved?

Major LINCOLN. No, sir; we do not. It is for training mostly enlisted men and some officers in what the TACFIRE system is and the maintenance of the system.

Mr. SIKES. Then if TACFIRE system is not approved for servicewide use I assume there would be no requirement for the facility; is that correct?

Major LINCOLN. That is correct, sir. It is a special-purpose installation for teaching and training. However, the expansion of the existing facilities is required for TACFIRE.

#### TACFIRE SYSTEM

Mr. SIKES. Will you tell us for the record what TACFIRE is?

Major LINCOLN. TACFIRE is a system of tactical ruggedized and militarized computers and peripheral devices being built from the ground up. These are not commercial items that are reconfigured as we often do with some of our tactical ADP equipment. It is being built from the ground up and will be installed in shelters and carried in 2½-ton trucks. In this mode it will provide fire direction centers for field artillery fire of control and fire planning and greatly increase the overall effectiveness of these activities in the field artillery.

Mr. SIKES. I am not sure that I understand how it is used. Does it direct the fire of an entire battery or an entire command?

Major LINCOLN. It can be used to direct the fire of a single weapon, a single tube, or a battery, a battalion of three batteries or an entire division artillery consisting of at least four battalions. So it more or less stops at the division level and can control all the way down to a single tube, if necessary.

## VULNERABILITY OF TACFIRE TO ENEMY FIRE

Mr. SIKES. How vulnerable is the TACFIRE system to enemy fire?

Major LINCOLN. Although TACFIRE equipment has little built-in protection from enemy fire, normal procedures of cover, concealment, and tactical employment will greatly reduce vulnerability from enemy fire. The fire direction center is mounted in a shelter on a 2½-ton truck and any attempt to damage specific critical components by small arms fire would be difficult at best. Furthermore, the most forward element, the firing battery, has only a single, small component, the battery display unit (BDU). The BDU will be emplaced in a well protected emplacement with very limited vulnerability to enemy fire. The battalion and division artillery systems are further to the rear of the tactical area, and are less vulnerable. The TACFIRE system is no more vulnerable than the present manual/FADAC system.

Mr. SIKES. What would be the effect on our fire direction capabilities if a stray enemy round were to knock out an operating TACFIRE center?

Major LINCOLN. TACFIRE essentially automates several manual procedures, that will be retained after the TACFIRE is fielded. If an operating TACFIRE center is knocked out, the center has the capability to revert to manual procedures and continue operating. In addition, operational data is periodically transmitted to adjacent centers. Adjacent units have the capability to continue missions for a center that is temporarily out of action.

## SCHEDULE FOR EQUIPMENT DELIVERY

Mr. SIKES. The justifications say that the equipment contract for this facility was awarded during the second quarter of fiscal year 1968 and is scheduled for delivery in the first quarter of fiscal year 1973. Tell us for the record:

- a. What type of equipment is this that is on order?
- b. Is it interchangeable with other TACFIRE equipment?
- c. How does the delivery schedule of this equipment compare to the delivery schedule for other operational or training TACFIRE equipment?
- d. How many TACFIRE equipment sets are presently on order?  
(The information follows:)

TACFIRE equipment will consist of a militarized 3d generation computer, high and low speed storage devices, artillery control console, digital plotter map, electronic tactical display, data terminals, and message entry devices for external elements.

All TACFIRE equipment currently under development is first of a kind ADP equipment. No equipment is currently operational, and the present development effort will provide the first issue. All TACFIRE equipment is interchangeable, and the components themselves are modular for ease of maintenance.

This equipment will constitute the first delivery of TACFIRE equipment.

The total package procurement contract provides for 16 division artillery sets, 103 battalion sets, 20 sets of missile battalion components, and 22 sets of training equipment.

Mr. SIKES. Is Fort Monmouth the only base at which TACFIRE training will be conducted?

Major LINCOLN. TACFIRE training will be conducted at both Fort Monmouth and Fort Sill, Okla. Fort Sill will conduct organizational level maintenance training, while Fort Monmouth will conduct higher level maintenance training.

Mr. SIKES. Could you not conduct the maintenance training at some other base if this facility were denied?

Major LINCOLN. Fort Sill does not have the resources to conduct the Fort Monmouth maintenance training, and no other base presently has facilities or instructional support to accomplish the training mission.

ADDITION AND ALTERATION OF PATERSON ARMY HOSPITAL

Mr. SIKES. Thank you, Major Lincoln. What is the status of design for the addition and alteration to the Paterson Army Hospital?

General DALRYMPLE. Twenty-five percent designed as of the end of February. We estimate a contract award in November of this year, sir.

Mr. SIKES. What are you using at the present time?

General DALRYMPLE. We are using accommodations at the present time which are greatly overloaded. By building this clinical addition to the hospital we will accommodate an outpatient workload which has increased over 100 percent since the original hospital was constructed in 1958.

Mr. SIKES. When will you be able to award the contract?

General DALRYMPLE. November of 1970, sir.

Mr. SIKES. Are there questions?

Mr. CEDERBERG. You are going to have a reduction in your enlisted personnel here in your long-range program, are you not?

General DALRYMPLE. As I mentioned earlier, these permanent constructions are based on the long-range strength and there is a reduction overall from 20,000 to roughly 13,000.

Mr. CEDERBERG. Are you still going to need that additional hospital space?

General DALRYMPLE. Yes, sir. The clinical space, the outpatient space is critical.

Mr. CEDERBERG. That is all.

U.S. MILITARY ACADEMY, N.Y.

Mr. SIKES. Next, turn to the U.S. Military Academy at New York. We will insert in the record pages 134 and 135.

(The pages follow:)

U.S. MILITARY ACADEMY, N.Y., \$11,101,000

The U.S. Military Academy is located 10 miles south of Newburgh, N.Y. The mission of the academy is to instruct and train the corps of cadets, the members of which will be the future officers of the Regular Army Establishment. The program consists of academic facilities alterations, range expansion, secondary sewage treatment facilities, and road construction and deficiency funding for an academic building authorized by Public Law 90-110.

*Status of funds*

Funded program not in inventory-----	\$97, 021, 000
Unobligated items, January 31, 1970 (actual)-----	17, 421, 000
Unobligated items, June 30, 1970 (estimated)-----	0

## DESIGN INFORMATION

Item No.	Line items	Design cost (thousands)	Percent complete Jan. 31, 1970
106	Academic facilities alterations.....	600	5
100	Range expansion.....	25	30
97	Secondary sewage treatment facilities.....	136	100
104	Washington/Ruger Road Interchange.....	185	70
93	Academic building (DEF).....	1,120	100

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line items	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Indoor rifle pistol range.....	\$607	X	
1970	Cadet activities center.....	16,814	X	
1970	Family housing, improve 40 units.....	319	X	
1968	Expand Camp Buckner (partial).....	747		X
1968	Hospital (100 bed).....	6,449		X
1968	Utility for hospital.....	1,273		X
1968	BOQ, 36 units.....	562		X

## U.S. MILITARY ACADEMY

[Dollars in thousands]

	Page number	Prior authorization	Proposed authorization	Proposed funding
Installation: U.S. Military Academy, New York.....	135	\$2,582	\$8,519	\$11,101



Mr. SIKES. The current request is for \$11,101,000. Part of this is a prior authorization for the deferred academic building in the amount of \$2,582,000.

DEFICIENCY REQUEST FOR ACADEMIC BUILDING

General Dalrymple, what was the original appropriation for this building?

General DALRYMPLE. Originally it was \$12,224,000. Then we had to get additional funds which brought the total up to \$14,361,000. The deficiency today before you brings it up to \$16,943,000 and the deficiency amount is \$2,582,000.

Mr. SIKES. What is the status of the building?

General DALRYMPLE. The status of the building is that it is under construction. This will be shown to you by some diagrams and the plans and specifications which Colonel Barnett has.

Mr. SIKES. There are also requests for other items, a road interchange at \$3,700,000, a secondary sewage treatment facility at \$3,299,000, range expansion at \$472,000. Academic facility alteration at \$1,040,000.

COST OF CONSTRUCTION AT WEST POINT

The cost of construction at the U.S. Military Academy has been a very aggravating situation. Costs have seemed to be extremely high, often unreasonably high at this installation. The committee has noted with concern that there may be significant additional costs resulting from the way in which wage rates are made up, including travel pay and costs. We are unhappy with this situation and unhappy with the fact that it is constantly necessary that Academy officials come back for more money. We have no disposition to deny the Academy the facilities that it needs. We recognize the requirement for adequate facilities. We have attempted to provide them. We have specified that we want a stronger effort made to keep these costs in line. Frankly, I do not see any appreciable improvement. I hope you are going to be able to show us more improvements than have been previously brought to our attention in this area.

I think it would be well for you to discuss the general situation, tell us where we are now in this matter of trying to hold down costs at West Point.

Colonel BARNETT. Sir, I am the New York District Engineer. The particular information which I am prepared to brief on deals only with the Science Building for which the deficiency request is in the present funding. I think it would be easy for me to comment in general terms on some of the factors that are at play here.

Mr. SIKES. Please do.

Colonel BARNETT. There is great competition for skilled labor, the biggest competitor being the metropolitan area of New York across the river. The commercial construction going on there is of a nature that the practice there is encouraged of paying for premium time and this has a significant impact on the locals in the vicinity of West Point—they are Newburgh locals in fact—so that they are not as heavily populated as they would be in ordinary circumstances.

It is likely, although I do not have data to back this up, that the individuals with the higher skills are more prone to go where the higher

pay exists than are the individuals with the lower skills. I think that would be true under any set of circumstances regardless of the particular geography involved.

As a result contracts that they are able to negotiate are very favorable to the individual worker. I know you have examined some of the data that we sent you on the particulars of some of the current contracts. The likelihood is that the contracts to be negotiated in the near future—and there are about four of them, I think, will result in even more favorable settlements. I know that the unions involved, particularly the locals involved, look to some of the very favorable settlements by other trades in the New York area in the immediate past as precedents which they do not want to depart from—a human failing but, nevertheless, it has a significant impact on our ability to build at a reasonable price.

Mr. SIKES. You are not offering any encouragement for holding costs down.

Mr. LONG. Will the chairman yield?

Mr. SIKES. First, is that right?

Colonel BARNETT. I am not, sir.

Mr. SIKES. I yield, Mr. Long.

Mr. LONG. Is it necessary to deal with the unions? Can't you hire nonunion workers in areas where the unions are making unreasonable demands?

Colonel BARNETT. That is up to the contractors, sir. It is not directly our doing.

Mr. LONG. What is your contract situation? Can't you get enough pressure—aren't the contractors anxious enough to get the work so that they are willing to hire the kind of labor that would enable them to offer a reasonable bid?

Colonel BARNETT. I understand the question. There is limited interest in bidding at West Point.

Mr. SIKES. How many bidders do you normally have.

Colonel BARNETT. On the last three big jobs we had under four. The last job we opened only last month, a small job for the rifle and pistol range, a little over \$500,000, which is small, we had an extraordinary turnout of 11 bidders, three of which were under the Government estimate.

We were happily surprised and very encouraged by that. But, nonetheless, it was a very small job.

It appears that the big jobs, the million-dollar-or-more jobs, have not in the last few years attracted a significant number of bidders and we have no clues that there will be a change in that pattern at this point.

#### CONTROL OF COST OF CADET ACTIVITIES CENTER

Mr. SIKES. Are you familiar with the language in the conference report on last year's military construction appropriation bill, particularly in connection with the Cadet Activities Center?

Colonel BARNETT. I read that; yes, sir.

Mr. SIKES. Are you prepared to discuss what steps the Army has taken to comply with that language or are you only prepared to discuss the items presently before us?

Colonel BARNETT. Only the latter, sir. I did not prepare any special material with relation to the activities center.

Mr. SIKES. Do you know what steps, if any, the Army has taken to deal with the high costs at West Point?

Colonel BARNETT. Yes, sir, I do.

We are at this point completing the design of the Cadet Activities Center. When we gave the notice to the architect to commence the final design, that notice given at the end of summer last, I personally contacted the principal of the firm. Our conversations were along this line: "We know that so many dollars are available for this job. We know that we have had on other occasions to seek additional funds for jobs that we were not able to award for the moneys authorized and appropriated. We do not want to do that for the Activities Center. If you design this job for more than the target figure we have told you, you are wasting your time and mine." The gist of his reply to that was along the line that: "I understand completely. Furthermore, I want to assure you that our firm's performance over the last number of years has been a certain number of percentage points within the target, which is very favorable and I do not remember that percentage right now."

Since that time our project engineer on the job has instructed the architect frequently to remember our target costs. In the intervening two design reviews which occurred that has been the opening statement: "We have got to look at this design in terms of the moneys that we have. We cannot look at it in terms of what we might like to put in that building."

I believe in all sincerity that the reviews have been conducted along that line.

The current review is of the final drawings. It is going on right now. So is the preparation of the final estimate. When we looked at the target estimate prepared at the 80-percent design point it was within the funds. That is the status of it as best I can recollect.

Mr. SIKES. General Dalrymple, I want to report to this committee before we mark up this bill on just exactly what is being done to get costs in line, more in line. I recognize the difficulties at West Point. Please see that we are kept up to date.

General DALRYMPLE. Yes, sir.

#### LABOR POOL IN WEST POINT AREA

Mr. SIKES. Mr. Patten.

Mr. PATTEN. Your remarks would indicate that the help comes from the Newburgh area. I thought previously we were told many of the locals came out of New York City and that part of our trouble is that they take a couple of hours riding back and forth, and that is included in the costs.

Colonel BARNETT. Some of them are. Stonecutters I believe is one New York local. But, for example, carpenters is a Newburgh local and I believe plumbers are Newburgh.

Mr. PATTEN. You have had quite a lot of industrial building in the Newburgh area; right? There have been a few plants put up which have run into millions of dollars.

Colonel BARNETT. Sir, I do not know.

Mr. PATTEN. We had the large contractors down here and I went out with them Tuesday night. One or two of them had contracts for

\$3 million and were telling me some of their experiences. The truth is, though, you are not hitting the nail on the head with the hammer. These fellows were talking to me about the difficulties they have and some of the practices there that would put you into a cost factor of 1.9. These fellows are doing millions of dollars worth of construction all over, other than Government. They are big operators. They do not confine themselves to this area. It was quite a revelation to hear two or three of them talk and tell of their experiences. It is no ground for a neophyte, I can tell you that.

Mr. LONG. I am not quite sure I understand you. Do you mean that their experience is quite different from the experience the Colonel has been telling us about?

Mr. PATTEN. No. But how they meet it and what they did about it is quite interesting.

Mr. LONG. If you have to bring stonecutters up from New York at these excessive transportation charges, why not redesign your building so that you do not build with stone? Can you do that type of thing so that you are designing around your costs?

Colonel BARNETT. To answer your particular question, it would not seem appropriate for these particular buildings to do that.

Mr. LONG. You mean it would not be in keeping with the area?

Colonel BARNETT. That is correct.

Mr. SIKES. Yes.

Colonel BARNETT. To answer the more general question of whether we can design around high cost items, we certainly can and, in fact, we must, not only at West Point but in a good many other districts, or we would be unable to build a facility for anything like that.

Mr. SIKES. Your Student Activities Building is not going to be faced with stone?

Colonel BARNETT. No, sir; it will be brick.

Mr. SIKES. Because it is in another area where existing buildings are predominantly brick?

Colonel BARNETT. That is right.

Mr. SIKES. But the other portions of the Academy are faced with stone and a building of any other material would look out of place.

Mr. CEDERBERG. It just is not practical to change the facade of some of those buildings at West Point. But really part of our cost escalation is because of the stone faces on many of the buildings up at West Point, is it not?

Colonel BARNETT. That is not true on this building.

Mr. CEDERBERG. Not on this one, but on some of the other buildings it was true.

Colonel BARNETT. That is right.

Mr. SIKES. Are you ready to go ahead with your briefing?

Colonel FRECH. During his briefing he will refer to these photographs, sir.

#### ACADEMIC BUILDING

Colonel BARNETT. At the end strength of the expanded Corps of Cadets, there is a requirement for 284 classrooms. Thayer, Bartlett, and Washington Halls will provide a total of 218. The remaining 66 section rooms are in this facility. The administrative space for three academic departments is needed to accommodate the expanded faculty; and 50,000 square feet of laboratory space will provide for a 50-percent

increase in laboratory space compared to a 70-percent increase in the size of the Corps.

Preliminary site location studies were performed in 1963 and the spring of 1964. During the fall of 1964, the architect was directed to reanalyze three possible sites for comparison with the Thayer Road site. This brought to seven the number of possible sites that had been seriously considered. These are shown on photograph No. 1.

Site A. The present site.

Site B. Where the hospital is presently located.

Site C. Where the Central Apartments are presently located.

Site D. North of the Library in the vicinity of the tennis courts.

Site E. Where Grant Hall and the South Barracks are presently located.

Site F. Where East Barracks are presently located.

And another site, not shown, just north of the present site adjoining the Administration Building.

In general, all of the sites that involved replacing an existing facility were estimated to be too expensive because of the added cost of providing for the displaced facility.

The site just north of the present site encountered too many existing utility systems.

At the Site D, north of the library, rock lies only three to four feet below the surface. Construction of a building that would harmonize with its surroundings at that location was estimated to be more expensive than the present site because large amounts of rock would have to be excavated to provide for the basement levels. The alternative of spreading out, to create a wide, low structure would encroach significantly on the remaining open areas surrounding the plain. These areas had already been reduced by the necessary addition to Washington Hall and further reduction would not be consistent with increasing demands that would be placed upon those open areas by an increased strength of the Corps.

The site selection was reviewed by an architectural advisory panel whose report states in part as follows:

"We offer the following recommendations. The Military Academy should adopt a land-use plan which this site typifies.

"a. Maintain a pedestrian campus with close clustering of buildings.

"b. Preserve the scarce and precious flat land for outdoor use.

"c. Use the difficult, steeply contoured land as building sites."

The present site, Site A, conforms to all of these recommendations.

The problem that has resulted in the increased costs has been the unexpectedly difficult rock conditions that have been encountered. Please note that I have been careful to say "unexpectedly" difficult rock conditions. This site was known to be difficult. Photograph No. 2—taken last summer—1 year after the start of construction—shows the general area of construction. The site is on a rugged rock slope. There is limited access. It is surrounded by the powerhouse, the Administration Building, Grant Hall and the South Barracks, the Hospital, and the Central Apartments. A main thoroughfare, Thayer Road, borders the job site. Through this area runs a concentration of utilities and communications lines emanating from the powerhouse and the Administration Building.

Photograph No. 3 looks north along the slope. It shows the benching process, the method of rock excavation specified by the contract which

recognized the difficult site condition and required a meticulous and painstaking process of rock excavation—drilling and blasting small quantities of rock at a time, never more than an 8-foot high cut at a time, bolting the newly exposed vertical rock face, and then proceeding with the benching operation.

Mr. LONG. I cannot help think, if you will pardon a pun, that whoever chose this site for location of the Military Academy must have had some of this rock in his head.

Mr. PATTEN. It was Kosciusko.

Mr. LONG. In those days they had a much harder time working with rock than they do now, with all the explosives that we have. You certainly convinced me that this is a tough place to build a building. Why was the Academy located there in the first place?

Colonel BARNETT. I am sorry, but I am not privy to that.

Mr. PATTEN. They have always bragged about it.

Colonel BARNETT. The fortifications existed before it was taken on as an institution of higher learning. The site was chosen tactically.

Mr. SIKES. It is a very historic area, of great historic significance.

Mr. LONG. Haven't they always had high costs there?

Colonel BARNETT. It has been an expensive place to build.

Mr. LONG. You spoke of this "unexpectedly" bad rock condition. It looks to me as if everywhere you go in every direction you have rock. I want to know why this was unexpected.

Colonel BARNETT. Rock itself is not bad because, in fact, you want rock for the foundations wherever you can get them. But you hope you find the kind of rock you are looking for. I think the problem here is that we did not find the kind of rock we were looking for.

Mr. CEDERBERG. New York City itself is on rock, is it not?

Colonel BARNETT. Yes, sir. The unexpected nature of it is over the type and condition of the rock that we found, not that there was rock there.

Mr. CEDERBERG. Is this the area where we had to change the road, too?

Colonel BARNETT. Yes. Part of this project involves relocation of the road down under its present level in fact, under this building, to where it reconnects so that it does not interfere with pedestrian traffic.

Mr. LONG. This is going to obtain with future construction there. If you could not find a better location for this building, isn't this also going to be true of future buildings?

Colonel BARNETT. To some degree that is certainly true; yes.

Mr. CEDERBERG. Are we going to have any more there?

Mr. SIKES. We can't afford any more.

Colonel BARNETT. The number of ideal building sites at West Point and most other campuses in the country is fast dwindling as all these institutions expand. I know from reading the history of the site selection for this building that there was a significant search for a proper site for it, indicating that the site was neither simple nor obvious. I guess it is going to become less simple and less obvious each time you try to put a new structure there. But that is generally true of most of the places where people are settling in great quantities and I guess New York is as good an example as any.

Mr. SIKES. There is \$44 million of construction yet to come.

Mr. McFALL. That might not build very much.

Mr. SIKES. It might not.

Mr. PATTEN. For the sake of the record, and then we can drop it, Kosciusko picked West Point. Your Superintendent up there, when he takes visitors around always extolls Kosciusko's judgment. You have a big tablet up there. I have never heard anything derogatory about his selection of West Point.

Mr. LONG. Until now.

Mr. PATTEN. In all fairness, that happened almost a century ago. Your people have been high in their praise of the help that General Kosciusko gave and they credit him with laying out West Point, and selecting the site. From a military standpoint they have had nothing but praise. I never heard anything derogatory about his original conception.

Colonel BARNETT. I assure you that I think Kosciusko chose wisely. It is a lovely place.

Mr. SIKES. Please proceed, Colonel.

Colonel BARNETT. This type of operation prevented the use of mass production techniques and severely restricted the equipment operating area as shown on photographs No. 4 and No. 5.

All of this that I have described was anticipated in the site selection and considered in the design of the building.

The next four photographs (6 through 9) show the nature of the rock excavation for the foundation of the Academic Building.

The building is literally hung on the side of the cliff. Rock was known to be fractured. Access is limited. However, as I have stated, these circumstances were anticipated, and allowances were made for the expected difficulties of this site.

Recognizing the potential difficulties of the site, we felt it was necessary to take unusual steps to examine the geology.

This sketch (chart 1) shows the subsurface explorations that were conducted. There were three groups of borings: these shown in blue were taken in 1964; these shown in red in 1965, and these shown in yellow were drilled in 1967. These holes, surrounded by a black ring, are where borehole camera photography was used to supplement the examination of core samples. Most of the holes were vertical; these with an arrow attached were drilled at an angle into the face of the rock.

There are a total of 72 boreholes; 44 of these within the building line, 14 deliberately placed outside the building line to investigate conditions down the slope from where the loads would be applied. The remainder were spotted before the final shape and location of the building were known.

This is a very comprehensive subsurface survey. It was considered adequate and comprehensive by the designers who prepared it as well as by the Government engineers who reviewed and approved it. These included representatives from the New York District, the North Atlantic Division, the Office of the Chief of Engineers, and the Ohio River Division Laboratory. This last group recommended the borehole photography and later performed the actual work of taking and interpreting the photographs. Although there may be debate about what constitutes a normal site survey, it is our judgment that this represents a survey that is about  $2\frac{1}{2}$  times more detailed than normal.

Mr. LONG. And still you were surprised.

Colonel BARNETT. Yes, sir.

Mr. LONG. Did you have statistical sampling experts to help you evaluate the samples you took?

Colonel BARNETT. Yes, sir. We had the Corps of Engineers, the primary AE, his structural consultants, and his consultants from the University of Illinois, all the Government people, and so forth.

Mr. LONG. Including sampling experts, people who understand the theory of sampling?

Colonel BARNETT. Yes, sir.

Mr. LONG. I am a little bit surprised. I would not know how you would do this. Modern sampling theory is very good.

Colonel BARNETT. That is right.

Mr. LONG. I do not see how you could have had surprises like that with that number of samples.

Colonel BARNETT. There are a lot of them there. When you look at the area involved, the number taken is unusually high.

The subsurface exploration disclosed that the rock at this site was layered in varying depths, and that the layers were all generally slanted down toward the river. In addition, there were fracture planes that ran generally perpendicular to the layers dividing the rock into truncated prisms of varying size and orientation. Some of the seams were narrow and free of any loose or foreign material. Other seams varied considerably in width from seam to seam as well as along the length of any one seam, and were filled with decomposed rock or clay.

Mr. LONG. Could you put in the record the names of the statistical sampling experts relied upon for this situation?

Mr. SIKES. Very well.

(The information follows:)

No statistical sampling experts were hired as consultants for this foundation design, but five geological experts were involved who are qualified in the use of statistical methods as they are used in geological explorations related to foundation engineering. These individuals were:

Mr. A. Barbero, chief, Foundations and Materials Branch, New York Engineer District (19 years experience; B.S., civil engineering).

Mr. M. Eligator, principal of firm, Weiskopf and Pickworth, New York, PE: District of Columbia, New York, and Maryland. (21 years experience: B.S., civil engineering).

Dr. D. V. Deere, professor, civil engineering and geology, University of Illinois (25 years experience; Ph. D., civil engineering; M.S., geology).

Dr. E. J. Cording, associate professor, engineering and geology, University of Illinois (Ph. D. civil engineering; M.S., civil engineering).

Mr. R. E. Barnett, chief, Geology Branch, Ohio River Division Labs U.S. Army Corps of Engineers, (30 years experience; B.S., geology).

Mr. LONG. Also add their qualifications.

Colonel BARNETT. Yes, sir.

Mr. SIKES. I note that you have to actually bolt this rock in place.

Colonel BARNETT. Yes, sir. That is correct. The theory of the bolting is that by tensioning the bolts you keep the layers of rock from sliding over each other. The bolts in fact did not take the load of the rock, they only increase the friction between the layers so that you do not get this sliding.

Mr. LONG. One more question on this. You had some unpleasant surprises here, but did this change anything? Had you known about this problem in the beginning could you have done it any cheaper?

Colonel BARNETT. I am sure we could have avoided some of the costs. The particular part of the costs that I am confident about is that part which is involved in the impact cost on the contractor which I will explain a little later in the briefing, if I may. It has to do with the effect of the change of this part of the work on his performance

of the rest of the work. Had we known about it, that part we could have avoided at the time. I do not believe that we could have avoided all of the direct costs here.

Mr. LONG. Can you give us some idea of what this unexpected difficulty added to your costs over what they would have been if you had known about it to begin with.

Colonel BARNETT. Yes, sir. That figure is what we estimate to be the value of the changes, the physical changes to the work that resulted from the rock conditions that we found, \$376,000.

Mr. LONG. That was the additional cost?

Colonel BARNETT. That is the additional cost that I do not believe we could have avoided had we known precisely what was under there.

Mr. LONG. That represents the unavoidable costs?

Colonel BARNETT. Yes, sir. Now, the other part of the problem, though, is that which deals with the impact of this on the remainder of the job. Now, this is a fairly new problem to us.

In February of 1968 a Government Interagency Committee changed the Armed Services Procurement Regulations and ultimately the changes clause of our general provisions of our contract, to recognize that a contractor could be reimbursed for the impact of changed conditions. Prior to that time he was only eligible to be reimbursed for those costs directly related to the change which, in our judgment, is this price on this job.

Our contract for this building includes that new clause. The contractor then is entitled under our contract to be reimbursed for his additional costs accruing downstream. That is the serious problem. That is the additional \$2.1 million.

Now, this circumstance has not been tested in the courts. All of the contractors and all of the Government contracting officers in this business are aware of its presence in the contracts now but we do not have precedents in terms of decision as to how it will be developed. Our expectation, based upon the language of the contract, is that this is about what we would pay the contractor. I would like to mention here, if I may, that we have not negotiated with this contractor for these costs.

Mr. McFALL. Would you explain again how the eligibility, or the alleged eligibility of the ripple effect costs—if you want to call them that—came about? By a change in the regulations, you say?

Colonel BARNETT. It was a change in the Armed Services Procurement Regulations and in fact directed by the Government Interagency Committee. In fact, this affects more than just the Corps of Engineers contracts. It affects other Government agency contracts, as well. It goes back to a Supreme Court decision of the United States versus Rice when, in fact, the contractor was judged not to be eligible for payment of amounts that he had claimed as a result of impact on a job which he did for the Government. On the basis of this decision by the courts the Interagency Committee felt that the Government was in fact doing the contractors a disservice, that they were in fact entitled to be paid for some of these things, typically those involved in the Rice decision, and we think those that impact on this job, and they changed the procurement regulations.

Mr. McFALL. So that regulation is incorporated into this contract. There is a new provision which permits him to claim this money in

addition to the ordinary cost that we would have been allowed prior to that? The clause was in the contract.

Colonel BARNETT. This clause was in this contract when it was awarded. The change in the procurement regulations was in February of 1968. This contract was awarded in August of 1968.

Mr. LONG. If you do not have this eligibility then it is going to be very hard to get contractors to bid on difficult projects and you are probably going to pay though the nose in this type of situation. You will probably save money in the long run through this.

Colonel BARNETT. I am sure that was one of the considerations of the committee when they recommended this.

Mr. LONG. But that makes it all the more important that you get very accurate samples.

Colonel BARNETT. That is right.

Mr. LONG. It does seem to me that you ought to take a look at who was giving you your statistical evaluation of your borings. It strikes me as bordering on the incompetent. I think it is a mystery that should be cleared up. I do not believe that modern-day sampling techniques are that far off.

Colonel BARNETT. I would like to explain to you just quickly how the building was designed to accommodate to this site.

I have explained what the site was like. You have seen the photographs. The designers felt that the best way to put this building where it was to carry the vertical loads of the building down through the fractured rock that existed at the surface by a series of pilings that would be drilled in until they had a hole with 10 feet of sound rock in the bottom of it. That was the criterion. So the foundation—this is a typical section through just about the middle of the building, looking north, with Thayer over here and the river down here (indicating) showing what the design called for in terms of rock removal and the designed length of the caissons that were to be sunk. I think it is interesting to see what the changes are that were required. They required in general terms not just at this section but elsewhere, additional rock removal as shown outlined in red. It required additional sinking of caissons in places where we could not find a sound 10 feet of rock at the bottom of the hole at the time and required additional lateral supports to some of these walls that were intended to be supported by rock but the rock had to come out.

Mr. PATTEN. Is this one, in the picture here?

Colonel BARNETT. Yes. That is the thing that drills the 30-inch diameter hole, in which hole the caisson piling is sunk. That hole is drilled and a geologist is lowered down into the hole with a flashlight and a magnifying glass and he has to find 10 feet, vertically, of sound rock at the bottom of that hole or we have to go farther to meet the criterion for the security of the load.

Well, that problem is not a terribly abnormal problem. When you look back at this money, that is not an abnormal amount of contingency in a job of this size. In fact, it is within the project contingency that we started out with.

Our problem is that we are now confronted financially with the ripple cost which is not in the programed amount and was not because this was programed before the procurement regulation was changed even though we awarded the contract subsequent to that.

Mr. SIKES. Off the record.

(Discussion off the record.)

Mr. PATTEN. How far along are you on this job? Have you gotten all your foundations in?

Colonel BARNETT. We have about 4 to 5 weeks' work remaining on the foundations. Picture No. 10 shows you the building as it existed on the 19th of January.

Mr. SIKES. In view of this problem, do you still feel that you should stay with the site that has been selected?

Colonel BARNETT. Sir, I think that is a very important question. In September last, 1969, we convened a gathering of all the people who had participated both in the selection of the site and in design of the foundations, and we reviewed the present circumstances and the question was addressed to them: "Should we materially alter the concept of our design?" They said no. In fact, in spite of the changed conditions we are convinced that this type design, with the caisson sunk into the rock, rather than removing all the rock, should be continued.

One of the principal considerations was that the most obvious alternative to this would be to take out all the rock and build on a flat bench. Now, with Thayer over here and the hospital over here (indicating), this stratified, slant rock continues up through here. (Indicating.) There was grave concern that if this restraint were removed we would likely see the beginnings of foundation failure occurring out here under existing structures or under the road, or both. The cost of that additional removal as compared to the cost of additional changes that were made here still favored this design. The other part of this that would be interesting to you is to understand how we estimated these impact costs because we are all somewhat new at this.

We took the contractor's work plan and schedule which is a logic-type plan. On that chart each activity which he performs is assigned a dollar value for the labor and materials. In fact, he is ultimately paid his progress payments on the basis of this. So it is to his advantage to have those numbers accurately reflect the job. We identified all the activities that would still remain to be done after he completed the foundations and estimated what the split of labor and materials was for each one of those activities. Then for labor we contacted the leaders of the local unions, determined the expiration date of current contracts, what the current rates were, what their expectations of changes were. For materials costs we even contacted the major suppliers to determine when their current price schedules would change for steel or for stone and things like this. We assigned those changes to the values that we had estimated from his plan and schedule. On the basis of this, then we determined the change in the total cost of the job by having these activities occur in a different price frame than they were priced by the contractor in his bid.

That is the basis for that amount of money.

As I say, we have not negotiated with the contractor for this. One of the reasons is that I, as the contracting officer, do not have the authority to negotiate with him unless I have adequate funds for the Government-estimated cost. I do not. So that is the Government estimate of the costs not yet validated by the contractor's own figures.

Mr. SIKES. Is there anything else?

Colonel BARNETT. No, sir.

Mr. SIKES. Thank you very much for giving us the story on the situation. We will insert the remainder of your statement in the record.

(The remainder of Colonel Barnett's statement follows:)

In brief summary, the unexpected conditions that were encountered were unboltable rock seams in the vicinity of columns K6-K8, a large pocket of deteriorated rock in the vicinity of columns K8-K14, and unboltable rock seams in the vicinity of columns G6-G12. There were other, smaller effects, such as discovery of a seam or seams within the bottom 10 feet of a hole drilled for a caisson. In spite of our careful exploration of the site we encountered serious foundation problems after we began excavation.

I believe the reasons that we did are as follows:

(a) The borings obviously missed some of the unsuitable rock. For example, borings were taken here and here, and unsuitable rock was found here, on G line.

(b) Where borings disclosed a seam that would be boltable at the location of the borehole, the seam became worse along its length to the degree that it could not be bolted.

(c) Where small diameter boreholes indicated solid rock suitable for a hole for piling, the large diameter holes drilled for piling intercepted faults or seams that were unacceptable in the bottom of a load-bearing hole.

In further recognition of the difficulties associated with the site, extra care was taken during design as well as during subsurface exploration. The A/E was given additional fee to compensate for the extra effort that would be required. In turn, the A/E (O'Connor & Kilham) obtained the services of a structural designer associate (Weiskopf & Pickworth) to augment their staff; and Weiskopf & Pickworth engaged Dr. Donald Deere of the University of Illinois, and his associate, Dr. Cording, as consultants on the rock mechanics aspect of the design. These are highly qualified organizations and individuals, recognized experts in their fields, and especially selected because their talents and experience were known to encompass problems of the nature that would be encountered in this job.

The designers decided that the best means for carrying the vertical loads of the structure safely into sound rock was to use a series of concrete piling sunk into 30-in.-diameter holes drilled through the fractured rock sufficiently far to provide for 10 vertical feet of sound rock at the bottom of each hole. This would avoid placing substantial loads on layered rock that might slide toward the river. It would also avoid the possibility of having Thayer Road and the Hospital foundations fail if excavations of large quantities of material on the side of the slope permitted the layered rock that might extend under Thayer Road to slide into the excavation once the restraint was removed.

I might add that at a conference in September of 1969, all of the engineers and geologists who participated in the design and construction concluded that the adopted design was still best suited to the site in spite of the changed conditions that had been encountered.

This chart (chart 2 w/o overlay) shows a typical cross-section of the building looking from south to north. The original design called for the excavation of only that rock in the shaded area.

The principal, and most costly, design changes (chart 1 overlay) that resulted from the unexpected conditions are shown here in red and included the removal of additional quantities of rock, the drilling and sinking of piling to greater depths, the increased number of rock bolts to be installed, the provision of structural floor slabs in the basement areas in lieu of slabs on grade, and the bolting of one of the foundation walls to support it laterally.

Our estimate of the direct cost of the changes is shown here. Compared to the original project contingency of \$642,000, this total is not abnormal. In fact, it confirms the engineering feasibility of the site.

The contractor has been working now for 17 months, and photograph No. 10 shows the condition of the building. There are two to three months of work remaining to complete all foundations and a portion of the south end of the building has been erected. In our judgment, the earliest he can be expected to provide occupancy is June 1971. Contract completion would be about three months later or a total of 12 months beyond the original contract completion date.

It is important to understand why it has taken that long to accomplish the relatively small, but complex, changes that have been required.

First, to protect the rock that was known to contain numerous planes of weakness, it was necessary to severely limit the manner in which rock could be blasted for removal. The specifications limited the amount of explosive per drilled hole and the total amount of explosive in any one shot. To insure compliance with this, sensing devices were installed in nearby buildings to monitor the shocks as blasting was conducted. In addition to the limit on blasting, there was a pre-

scribed sequence for bolting and securing exposed portions of rock before adjoining portions could be cut or removed. To achieve the required finished surfaces of the rock faces, the specifications required carefully controlled drilling and splitting before there could be any production excavation. This very precise dental work is not at all comparable to production-type excavation in quarries or in more normal foundations.

Second, the nature of the site with its precipitous slopes and its single road for access put a very definite limit on the type and amount of equipment that could be employed at any one time. When the large drilling equipment was used in certain locations, it effectively prohibited anything but small scale operations on the remainder of the site.

Third, each unexpected condition of the rock had to be carefully examined to determine how best to adapt to the changed conditions, and although the additional engineering that was necessary was done with great emphasis on speed, the three major redesigns and several smaller redesign efforts consumed time during which the contractor had to shift to another area of the site.

Fourth, the extension of foundation work into an additional winter season further aggravated the delay because of the added difficulties of doing that kind of work under severe weather conditions.

All of these factors contributed to the delay of about 12 months in contract completion, and it is this delay which has resulted in the serious fiscal problem because of the so-called ripple effect on the contract costs.

Ripple effects, or the payment of impact costs (as it is sometimes called), is fairly new to Government contracting procedures. Specifically, prior to February of 1968, a contractor who experienced a ground condition different from that which the Government represented he would find, was entitled to time and money for the additional work required to meet the changed conditions. He frequently incurred another type of cost for which he was not reimbursed by the Government. These costs are the added expense to the contractor for doing the remainder of his original contract work because such work has been delayed by the change or has been altered as a result of the changed condition.

In 1968, a Government interagency committee modified the standard contract clause that dealt with changed conditions to provide for payment of impact costs due to the ripple effect, and that clause is a part of our contract for the academic building.

Our estimate for the cost of the ripple effect is \$2,102,000 prepared as shown here.

I believe it is important for you to understand how we estimated the amount of the impact costs.

We took the contractor's work plan and schedule which he is required to submit to the contracting officer. On it, each activity shown is assigned a dollar value which represents the costs of labor, materials, overhead and profit that go into that particular activity. We identified all of the activities that would remain to be completed after the foundations, and for each dollar value we estimated the portion that was assignable to labor and that assignable to materials.

We contacted the leaders of the local labor unions, determined when their current labor contracts expire, and for those that will expire within the 12 months by which the contract has been extended prepared an estimate of the expected change in labor rates.

We contacted the suppliers of the major categories of materials and learned from them when they expected to change their current pricing schedules.

We applied these two as average percentage increases to labor and materials to obtain the amounts shown here.

We have recorded data of the amount of his field overhead and the amount of his home office overhead which we added to the labor and material estimates.

I believe the rest are self-explanatory.

This amount is our estimate of the impact costs to which the contractor may be entitled.

Faced with this deficiency, we have considered what alternatives exist. They are: Finish the job with present funds at reduced scope; terminate the present contract and readvertise whenever additional funds are available, or obtain additional authorization and funds to permit us to complete the project at the authorized scope.

We have considered possible reductions in scope that could reduce the estimated amount of the deficiency. This chart shows some of the features that were considered and what the estimated recoverable value of the item would be if it were deleted from the work to be performed. This sum obviously will not meet our total needs, and it would be necessary to eliminate major portions of the

building, as listed here (chart 7), if we must cover our deficit by reducing the scope of the project.

The alternative of terminating and readvertising would incur additional costs for termination and mobilization as well as probable increased construction costs at the time of readvertising. We have no reason to expect that the required use date could possibly be met by that procedure, and the impact would be most severe on the user.

In summary, I have tried to present you with two principal ideas:

First, that all reasonably prudent steps were taken by responsible and qualified personnel to avoid surprises on the foundations and yet their worst expectations were far exceeded.

Second, that the rules of contracting were significantly changed by the Government's acceptance of liability for ripple effects, and that the results, in this contract, far exceed the normal contingencies that are provided in the project funding.

#### STATUS OF PRIOR-YEAR PROGRAMS

Mr. SIKES. What is the status of prior-year programs at the Military Academy? Supply that for the record.

(The information follows:)

All USMA projects from fiscal year 1964 (the start of the expansion program) through fiscal year 1970 are completed except as follows:

(a) Six projects are under construction:

Fiscal year 1965, Washington Hall, 99.9 percent complete.

Fiscal year 1966, family housing, 65 percent complete.

Fiscal year 1967, Thayer Road relocation, 16 percent complete.

Fiscal year 1968, Academic Building, 30 percent complete.

Fiscal year 1969, 2d increment of barracks, 13 percent complete.

Fiscal year 1970, indoor rifle-pistol range, 0 percent complete.

(b) Two fiscal year 1966 projects, the hospital and the BOQ, have been reprogrammed to future years because all bids received in May 1969 exceeded the authorizations.

(c) The fiscal year 1966 utilities project is complete except for extension of utilities to the new hospital and school sites. This work will be done when the hospital and school are constructed. (The utilities to the school will be funded from this project; the hospital utilities will be included in the hospital funding.)

(d) The fiscal year 1968 secondary sewage facilities have been reprogrammed for fiscal year 1971 because the authorization and appropriation were used to award the academic building in August 1968 (with the approval of the four congressional committees).

(e) The fiscal year 1968 expansion of Camp Buckner has been partially completed. The remaining work is scheduled to be done this fall.

(f) The final design for the fiscal year 1970 cadet activities center is now being reviewed. We expect to award a construction contract by this June.

#### STATUS OF CONSTRUCTION FOR EXPANSION OF U.S. MILITARY ACADEMY

Mr. SIKES. Tell us where you stand now in your total program of construction to meet the expansion of the Academy.

Colonel FRECH. Approximately 73 percent of the expansion projects have been authorized and funded by Congress, and 27 percent remain in the fiscal year 1971 and future year programs. Within the approved 73 percent, 31 percent are completed, 30 percent are under construction, and 12 percent are not yet started. Future year expansion projects total about \$30 million in fiscal year 1972 through 1976.

#### ITEMS RELATED TO COST OVERRUNS

Mr. SIKES. Which of the items here are related to cost overruns at the Academy?

Colonel FRECH. The academic building deficiency is a direct result

of increased costs resulting from unexpected foundation problems that have arisen during construction. A part of the road interchange and relocation project is due to high bids on the fiscal year 1967 project for relocation of Thayer Road. These high bids precluded award of the total fiscal year 1967 project and the parts that were not awarded are included in the fiscal year 1971 project. The secondary sewage treatment project is also indirectly related to cost overruns. This project is a resubmission of a fiscal year 1968 project that was not awarded because the authorization and appropriation were used (with approval of the congressional committees) to permit award of the academic building when all bids for that project significantly exceeded the programed amount.

#### ACADEMIC FACILITIES ALTERATION

Mr. SIKES. Will the academic facilities alteration complete the requirements for academic facilities at the Academy?

Colonel FRECH. Yes, sir.

Mr. SIKES. Describe the type of work you propose to do in Thayer and Bartlett Halls.

Colonel FRECH. Rooms being vacated by departments moving into the new academic building will be remodeled to accommodate the expanded functions of departments remaining in Thayer and Bartlett Halls. Work will include removal of existing partitions and erection of new partitions, installation of acoustic tile ceilings and vinyl asbestos tile or acid resistant flooring, painting, relocation of certain laboratory equipment and modification of utilities services, heating, ventilating, air conditioning, and communications to meet the revised layout of classrooms.

Mr. SIKES. Will the item proposed here complete the alteration of Thayer and Bartlett Halls?

Colonel FRECH. Yes, sir.

Mr. SIKES. How does the schedule for the completion and beneficial occupancy of the fiscal year 1969 academic building for classroom use tie in with the schedule for the alterations of Thayer and Bartlett Halls which you are proposing this year?

Colonel FRECH. We expect to complete the academic building for use in the 1971-72 school year. It is planned to award a construction contract by May 1971 for the academic facilities alteration and start on-site work when classes end in early June 1971.

#### ABILITY TO CARRY OUT CONSTRUCTION PROGRAMED

Mr. SIKES. You will be constructing two major facilities, the cadet activities center and the academic building, at essentially the same time. Do you feel that the construction industry in the West Point area can meet this workload without further cost escalation?

Colonel FRECH. Yes. Most phases of work on the academic building will be complete before the corresponding phase starts on the cadet activities center, so there should be no significant competition for the same construction trades on the two buildings at the same time.

## LABOR CONTRACTS

Mr. SIKES. When do the local labor contracts come up for renegotiation? Does this present the likelihood of further cost increase?

Colonel FRECH. Based on past experience, the new labor contracts will almost certainly call for higher wages than the current contracts. However, these increases will not affect existing contracts except where we run into unexpected delays, as on the academic building. Expiration dates for the current wage contracts for the various trades are as follows: bricklayers, contract expired December 31, 1969, new contract being negotiated; carpenters and laborers, May 31, 1970; roofers and asbestos workers, June 30, 1970; plumbers and marble workers, June 30, 1971; electricians, December 31, 1971; painters, May 31, 1972; ironworkers, June 30, 1972.

## RANGE EXPANSION

Mr. SIKES. You are requesting a range expansion in the amount of \$472,000. How does the 50-point pistol range in this program relate to the indoor pistol and rifle range approved in the fiscal year 1970 program?

Colonel FRECH. The indoor pistol range in the fiscal year 1970 program is a 30-point range supporting the cadet competitive marksmanship program. The 50-point pistol range in the fiscal year 1971 program has both bull's-eye and silhouette targets, and is required for summer field training.

Mr. SIKES. I note that you propose to use Army engineer troops for the construction of this project. Can you give us some examples of places where engineer troop units have accomplished such work in the United States?

Colonel FRECH. The only recent example is the fiscal year 1968 tank range at Camp Pickett, Va. The majority of this work was done by contract, but some of the earthwork was done by an engineer unit.

Mr. SIKES. Why don't you expand the use of these troops for construction at the Academy?

Colonel FRECH. We are considering doing other work at the Academy with engineer troops, but the engineer company at West Point has a limited range of assigned skills. The table of organization and equipment is for a theater of operations, thereby limiting the unit's ability to deal with certain types of projects. Engineer troops are used wherever possible on direct-support projects, such as work on fire-breaks, training areas, and minor training construction in keeping with the unit's skills.

Mr. SIKES. How long have you operated this range as a safety hazard to family housing?

Colonel FRECH. This range was closed in May 1969 to prevent possible injury to children who might be playing in the hills behind the range. The new housing area itself is not in the danger area.

## SEWAGE-TREATMENT FACILITY

Mr. SIKES. Will the secondary sewage-treatment facilities requested in the amount of \$3,299,000 complete the requirements and bring you into compliance with Federal and State standards?

Colonel FRECH. Yes, sir.

## ROAD INTERCHANGE

Mr. SIKES. Provide for the record the relationship of the road interchange and completion of Thayer Road relocation to the previous 1968 project for work on Thayer Road.

(The information follows:)

The two projects combined provide a means of routing traffic around instead of through the cadet area. The 1967 project covered the southern portion of the bypass, and this 1971 project covers the northern portion as well as some parts of the 1967 project that could not be awarded because bids exceeded available funds.

Mr. SIKES. Will this complete the requirements and eliminate the safety hazard in this area?

Colonel FRECH. This will complete necessary major vehicular and pedestrian traffic projects in this area. An improved traffic-flow project for areas on post but outside the main cadet area is proposed for fiscal year 1975.

## CADET ACTIVITIES CENTER

Mr. SIKES. Could you briefly outline for the record the steps that the Army has taken to comply with the language in the conference report last year relating to the cadet activities center? Provide for the record a detailed listing of the items which have been deleted from the proposed activities center in order to bring the cost within the amount allowed.

(The information follows:)

Final plans and cost estimate based on 80-percent design are currently being reviewed to provide bidding documents for a project that can be constructed within the authorization and appropriation of \$16,814,000. Advance notice to bidders will be sent to approximately 35 general contractors having a capability to construct a project of this magnitude. This will be followed by personal contacts by District Engineer representatives in an effort to stimulate bidding interest. After bids are received and prior to award of a construction contract, data required by the conference report will be furnished the Committees on Appropriations. A cost estimate based on 80-percent design, currently being reviewed, indicates the following:

Base bid, building and site work-----	\$15,946,000
Additives (not in order of priority)	
Kitchen equipment-----	130,000
Connections to kitchen equipment-----	25,000
19 plumbing fixtures in stage dressing areas-----	19,000
Sound reinforcement, controls, and wiring-----	96,000
Stage rigging-----	199,000
Passenger elevator-----	65,000
Snow-melting equipment-----	100,000
Pedestrian bridge-----	370,000
Slate in lieu of bluestone on terraces-----	65,000
Demolition of coal silo-----	116,000
Planting, seeding, and topsoil-----	99,000
Total additives-----	1,284,000
Total CWE (base bid plus additives)-----	17,230,000

The following items have been eliminated or reduced, and are not included in the above estimate:

Reduced stage lighting.....	\$75,000
Reduced quality of seating.....	20,000
Eliminate 50 percent of vinyl wall covering.....	40,000
Omit light control draperies.....	33,000
Revised parking area.....	25,000
Asphalt sidewalks in lieu of concrete.....	30,000
Eliminate stone facing on overpass and retaining walls.....	30,000
<b>Total</b> .....	<b>253,000</b>

Mr. SIKES. Are there questions? Thank you very much, Colonel Barnett.

Colonel BARNETT. Thank you, sir.

THURSDAY, MARCH 5, 1970.

Mr. McFALL (presiding). The committee will come to order.

We will resume the hearings with New Cumberland.

Insert in the record page 108.

(The justification page follows:)

NEW CUMBERLAND ARMY DEPOT, PA., \$99,000

New Cumberland Army Depot is located 7 miles southwest of Harrisburg, Pa. The mission of this installation is to receive, store and issue general supplies. It performs depot maintenance of weapons, aircraft components, fire fighting, rescue and safety equipment. The depot houses the POL laboratory for the 1st Army area and the Military District of Washington. The program consists of grinding rooms and electrical facilities.

*Status of funds*

Funded program not in inventory.....	\$1,701,000
Unobligated items, Jan. 31, 1970 (actual).....	1,371,000
Unobligated items, June 30, 1970 (estimated).....	811,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
50	Grinding rooms and electric power building 7.....	\$5	8

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
70	Alter warehouse 84-storage modernization.....	\$560	×	
70	Logistics doctrine and systems agency facility.....	811		×

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION New Cumberland Army Depot			
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER 39400				6. STATE/COUNTRY Pennsylvania	
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1918		9. COUNTY (U.S.) York			
10. NEAREST CITY Harrisburg		PERMANENT		STUDENTS		SUPPORTED	
11. MISSION OR MAJOR FUNCTIONS Develop, identify and manage assignment of materiel and supplies. Establish and maintain Army Master Item Data File and provide worldwide supply data information pertinent to materiel and supplies of the Army. Perform maintenance, modification, care and preservation of Army ground and chemical warfare equipment. Repair, overhaul and modify aircraft components and equipment. Perform general field maintenance for National Guards and Reserves. Support AMC Logistics Control Offices and US Army Logistics Doctrine Systems Agency.		OFFICER		CIVILIAN		OFFICER	
		ENLISTED (2)		ENLISTED (5)		ENLISTED (6)	
		STRENGTH (1)		STRENGTH (3)		STRENGTH (7)	
		AS OF 31 Oct 1969		AS OF 31 Oct 1969		AS OF 31 Oct 1969	
12. PERSONNEL STRENGTH		149		3,389		3,657	
13. PLANNED (End FY LR)		205		2,596		3,295	
LAND		ACRES (1)		LAND COST (\$000) (2)		IMPROVEMENT (\$000) (3)	
OWNED		876		344		27,992	
LEASES AND EASEMENTS		11		0		0	
INVENTORY TOTAL (Exclpt Land rent) AS OF 30 JUNE 19 69		69		1,701		28,336	
AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ Unfunded - \$)		-		-		-	
AUTHORIZATION REQUESTED IN THIS PROGRAM		-		-		-	
ESTIMATED AUTHORIZATION - NEXT 4 YEARS		-		-		-	
GRAND TOTAL (c + d + e + f)		-		-		12,823	
GRAND TOTAL (c + d + e + f)		-		-		42,959	
SUMMARY OF INSTALLATION LINE ITEMS							
CATEGORY CODE NO.		LINE ITEM DESIGNATION		TENANT COMMAND		FUNDING PROGRAM	
a		b		c		d	
211		50 - Grinding Rooms and Electric Power - Bldg 7 1 109		Priority Page NO		ESTIMATED SCOPE (\$000) h	
				SF		ESTIMATED SCOPE (\$000) h	
				2,600		2,600	
				99		99	

Mr. McFALL. This request is in the amount of \$99,000. Is there an expanded aircraft maintenance mission at New Cumberland?

General DALRYMPLE. Colonel Boehnke.

#### ALLOCATION OF ARMY AIRCRAFT DEPOT WORKLOAD

Colonel BOEHNKE. Yes, this is part of the prime depot complex that I discussed yesterday. We intend to maintain or increase our CH-47 overhaul at New Cumberland.

Mr. McFALL. There would be the main base at Corpus Christi and a western base at Sharpe and this one in the East.

Colonel BOEHNKE. Yes, sir.

Mr. McFALL. We discussed yesterday the type of aircraft and helicopters which are going to be overhauled and repaired at these three different depots.

What criteria are you going to use as to where these aircraft are going to be overhauled and repaired versus where they are going to originate from?

Presumably your eastern New Cumberland base would take care of much of your inventory in the East, and the other bases which are in different parts of the country would have the same sort of regional coverage. Do you want to speak about that?

Colonel BOEHNKE. The regional aspect is one part of it. We would like to keep the prime depot close to the prime manufacturer which for the CH-47 would be Boeing Vertol, in the Pennsylvania area.

We would like to keep the Bell Aircraft at ARADMAC and the Hughes Aircraft at Sharpe. This makes it cheaper for transportation of parts and technical data.

Mr. McFALL. So at ARADMAC at Corpus Christi you would have AH-1 and UH-1. What is the AH-1?

Colonel BOEHNKE. The Cobra.

Mr. McFALL. And the OH-58.

Colonel BOEHNKE. Is the new Bell observation helicopter.

Mr. McFALL. These other engines are aircraft engines, the T-53, T-55, and T-63.

Colonel BOEHNKE. Yes, they are all aircraft engines.

Mr. McFALL. What planes do you use those for?

Colonel BOEHNKE. The T-53 engine goes in the UH-1 and Cobra.

Mr. McFALL. I thought perhaps they were fixed wing aircraft engines.

Colonel BOEHNKE. The T-53 is used in the OV-1 aircraft.

Mr. McFALL. And the T-63?

Colonel BOEHNKE. That goes in the OH-6 and OH-58.

Mr. McFALL. Actually it is almost all helicopter work.

Colonel BOEHNKE. Primarily; yes, sir. We do the aircraft engines for the OV-1 and some of the U-21.

Mr. McFALL. The helicopters that would be stationed in the West—you say you had the CH-47 out in the West—where would that be overhauled? Do you bring that all the way back to Pennsylvania to have it overhauled and repaired?

Colonel BOEHNKE. Yes, sir, we would.

Mr. McFALL. Can you give us some rationale for this?

I presume the other alternatives would be to take it to either Corpus Christi or Sharpe and avoid the transportation cost. Could you compare the two possibilities?

In one instance, I presume, you would have to have everything set up to repair all sorts of aircraft at each one of the three depots, which would be expensive. So you find that it is less expensive to transport them back and forth across the country, is that right?

Colonel BOEHNKE. Yes, sir.

When you get into overhaul of these aircraft it requires expensive and sophisticated jigs and tools and equipment. It is much cheaper to concentrate these in one depot and build up your expertise and stockage of parts, tools, and equipment in one place, than to try to do this among all the depots. It is much cheaper to do it at one place.

Mr. McFALL. You select the airplanes for this purpose because of the closeness of the manufacturer. Is that what I understood you to say?

Colonel BOEHNKE. I believe they have more or less developed this way because New Cumberland Depot, with its nearness to Sikorsky and Boeing-Vertol, built up an expertise, tools and equipment, and technical data. The same way at Sharpe with Hughes Aircraft.

Mr. McFALL. Did you consider the deployment of the planes throughout the country in determining this as well?

Colonel BOEHNKE. We have been through the period when they have all returned to the west coast from the Pacific area. We also have to consider bringing them back across the east coast. It depends where the inventory shifts to.

The transportation cost in comparison with the cost of building up a depot is cheaper.

Mr. McFALL. Strategically you would want one depot on the east coast, one on the west coast and one somewhere relatively in between, which is Corpus Christi.

Colonel BOEHNKE. Yes, sir.

All the depots can do some repair to all the aircraft, so they can take care of that within the area.

#### EXPANSION OF MISSION AT NEW CUMBERLAND

Mr. McFALL. What is the schedule for the expansion of the mission at New Cumberland?

Colonel BOEHNKE. For fiscal year 1971, we are in the process now at our conference at St. Louis in finalizing the workload which may change a little bit. As of right now we plan to put 70 overhaul CH-47's through Cumberland. As a comparison we did 54 there last year. In another respect we would be doing fewer repairs at New Cumberland. That is dependent on the output from the factory. It all comes in there for repair. Our overhaul mission is expanding next year at New Cumberland.

Mr. McFALL. Presumably your schedules at Sharpe and ARADMAC are also being determined at the same time in this conference.

Colonel BOEHNKE. Yes, sir. This conference will determine what our requirements will be.

We are in the process of finalizing the requirement for fiscal 1971 for aircraft overhaul.

Mr. McFALL. When will this be finalized?

Colonel BOEHNKE. The conference is finished this Saturday. So we will have to have it by then.

Mr. McFALL. So there will be accurate and complete information sometime next week on just how you are going to do this.

Colonel BOEHNKE. Yes, sir.

#### GRINDING ROOMS AND ELECTRICAL POWER

Mr. McFALL. Describe the inadequacies of the existing electrical power in the shop area at New Cumberland.

General DALRYMPLE. The existing power is inadequate in building 7 and it is restricting the installation of new equipment. It is also causing workload schedules to be met on an overtime and multishift basis.

We intend to furnish and install an additional 500 kilovolt-ampere electric power facility including necessary wiring, switch gear, and ground systems to serve three bays of this building 7. This is a project costing \$99,000.

Mr. McFALL. What are the present power needs for the facility and what are projected in your long range plans as compared to the power supply currently available?

Colonel BOEHNKE. The current power supply for building 7 is 118 kilovolt-amperes. Current power requirements for the grinding room and installation of new equipment is 368 kilovolt-ampere. A total of 500 kilovolt-amperes is required (an additional 132 kilovolt-amperes for future planning).

#### PICATINNY ARSENAL, N.J.

Mr. McFALL. Turn to Picatinny Arsenal, and insert in the record page 110.

(The justification page follows:)

#### PICATINNY ARSENAL, N.J., \$752,000

Picatinny Arsenal is located 4 miles northwest of Dover, N.J. This installation is the Army's research and engineering center for nuclear and nonnuclear ammunition, other than small arms. The program includes an addition and alterations to an automatic data processing facility.

#### Status of funds

Funded program not in inventory.....	\$1,326,000
Unobligated items, 31 Jan. 1970 (actual).....	989,000
Unobligated items, 30 June 1970 (estimated).....	989,000

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent completed Jan. 31, 1970 <sup>e</sup>
76	Addition and alteration to ADP facility.....	\$50	25

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	Fuel conversion-air pollution control.....	\$989	×	

Mr. McFALL. What are you currently using for a computer facility?

General DALRYMPLE. Existing facilities are not large enough to house the additional ADP equipment that is required, and they do not meet the requirements for power, fire protection, or security measures to support the more sophisticated ADP equipment to be installed. This will provide for an addition to one building, of 7,700 square feet, and alterations to another building, alterations consisting of 24,700 square feet.

The alterations will block in the windows and install sprinkling systems, partitions, air-conditioning and the necessary electric power. The addition will be a reinforced concrete building, concrete block, steel frame, with built up roof and raised floor, including necessary security measures, sprinkler system, and air conditioning.

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Picatinny Arsenal		
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		6. STATE/COUNTRY New Jersey		
5. INSTALLATION CONTROL NUMBER New Jersey 855		9. COUNTY (U.S.) Morris		
7. STATUS Active		10. NEAREST CITY Dover, 4 miles Southwest		
8. YEAR OF INITIAL OCCUPANCY 1879		11. MISSION OR MAJOR FUNCTIONS A field installation of the US Army Munitions Command with national mission responsibilities, including national development and national industrial engineering and support mission responsibilities, including development industrial engineering, preproduction, and maintenance engineering with respect to ammunition pyrotechnics and nuclear artillery and munitions including demolition types.		
12. PERSONNEL STRENGTH a. AS OF 31 Oct 1969		PERMANENT		
b. PLANNED (End FY LR)		STUDENTS		
		OFFICER ENLISTED CIVILIAN		
		OFFICER (1) ENLISTED (2) CIVILIAN (3)		
		OFFICER (4) ENLISTED (5) OFFICER (6) CIVILIAN (7)		
		TOTAL (8) (9)		
		9,145		
		7,991		
13. INVENTORY		IMPROVEMENT (\$000)		
a. OWNED		LAND COST (\$000)		
b. LEASES AND EASEMENTS		IMPROVEMENT (2)		
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		TOTAL (4)		
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____) (Unfunded - \$ _____)		70,527		
e. AUTHORIZED AUTHORIZATION - NEXT 4 YEARS		69,622		
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		0		
g. GRAND TOTAL (c + d + e + f)		70,629		
		1,326		
		752		
		4,610		
		77,317		
SUMMARY OF INSTALLATION LINE ITEMS				
CATEGORY CODE NO. a	LINE ITEM DESIGNATION		FUNDING PROGRAM	
	LINE ITEM TITLE b	PRIORITY Page No	ESTIMATED COST (\$000) i	ESTIMATED COST (\$000) h
141	76 - Addition and Alteration to ADP Facility	1 111	752	752
		UNIT OF MEASURE d	SCOPE e	SCOPE g
		SF	32,400	32,400

\* \$101,700 one-time cost for easement.

The total cost of the project is \$752,000 and this completes the requirement.

(Discussion off the record.)

Mr. McFALL. Is the new system being installed here similar to the one we discussed at Edgewood?

General DALRYMPLE. Yes, sir.

Mr. PATTEN. What is the easement here of \$101,700? Does anyone know?

You have a one-time cost for an easement.

Mr. LOCKWOOD. I do not know. If you would like we could submit that for the record. It is probably a powerline easement or right-of-way. You notice in many of these sheets it indicates easement separately by asterisks.

Mr. PATTEN. This whole area of Morris County is one of the wealthiest counties in the country. It has changed considerably since it was advisable to go there with the Picatinny installation. Our State grows at least 10 or 20 percent every 10 years. In north Jersey it is hard to touch any real estate. Today, with the new highways, getting to the Picatinny area is no problem, anymore. There are many who commute from quite a distance.

(Discussion off the record.)

Mr. PATTEN. I imagine you have an encroachment problem at Picatinny. I am thinking in terms of another 10 years.

General DALRYMPLE. I do not know the area as well as you do. I remember when I was North Atlantic Division Engineer I used to go out there occasionally and Dover was not developing too rapidly at that time. Perhaps these new highways that you mentioned have improved that situation.

Mr. PATTEN. You can be there from New York City in no time today. There is a peripheral road around New York, 287, and Essex County put in Route 10 which is six lanes. So commuting from Picatinny to New York is not any more of a problem than commuting from McLean, Va., to Washington. I do not have any doubt you will have encroachment problems.

(Discussion off the record.)

#### RADFORD ARMY AMMUNITION PLANT, VIRGINIA

Mr. McFALL. We will go on to Radford, and insert in the record page 112.

(The justification pages follow:)

#### RADFORD ARMY AMMUNITION PLANT, VIRGINIA, \$1,549,000

Radford Army Ammunition Plant is located at Radford, Va. This plant is a primary source of military propellants and rocket grains. The program consists of an electrostatic precipitator and stack.

#### *Status of funds*

Funded program not in inventory-----	\$1, 641, 000
Unobligated items, Jan. 31, 1970 (actual)-----	1, 641, 000
Unobligated items, June 30, 1970 (estimated)-----	1, 641, 000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
2	Electrostatic precipitator and stack.....	\$90	0

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970.....	Log ADP Center—Operations building.....	\$1,641	.....	X

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Radford Army Ammunition Plant	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER Virginia 65		6. STATE/COUNTRY Virginia	
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1940		9. COUNTY (U.S.) Montgomery	
10. NEAREST CITY Radford		11. MISSION OR MAJOR FUNCTIONS This plant is a primary source of military propellants and rocket grains for the DOD Production Base Support and other high priority programs.		12. PERSONNEL STRENGTH a. AS OF <u>31 Oct 1969</u> b. PLANNED (End FY )	
		PERMANENT		SUPPORTED	
		OFFICER (1)	ENLISTED (2)	OFFICER (3)	ENLISTED (4)
		2	0	77	79
		CIVILIAN (5)		CIVILIAN (6)	
		0		0	
		ACRES (7)		IMPROVEMENT (\$000) (8)	
		4,154		505	
		LEASES AND EASEMENTS (9)		102,274	
		7		0	
		INVENTORY TOTAL (Except Land rent) AS OF 30 JUNE 19 69		102,279	
		1,641		0	
		AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ )		1,641	
		1,641		0	
		ESTIMATED AUTHORIZATION - NEXT 4 YEARS		1,549	
		5,135		5,135	
		GRAND TOTAL (c + d + e + f)		111,104	
13. INVENTORY					
SUMMARY OF INSTALLATION LINE ITEMS					
LINE ITEM DESIGNATION		TENANT COMMAND		AUTHORIZATION PROGRAM	
LINE ITEM TITLE		UNIT OF MEASURE		ESTIMATED COST (\$000)	
Priority Page No		d		f	
821 2 - Electrostatic Precipitator and Stack		1 113		1,549	
CATEGORY CODE NO.		SCOPE		SCOPE	
a		e		g	
				h	
				1,549	

Mr. McFALL. Do you anticipate that Radford will be carried in the Army inventory as an active plant for the foreseeable future?

General DALRYMPLE. Yes, sir.

Mr. McFALL. What is your total program to eliminate air pollution at this plant?

General DALRYMPLE. This project is for one and a half million dollars. There will be projects in future years for conversion of a boiler plant and for air pollution control on a chemical processing facility. That will total \$2.1 million additional, sir.

(Discussion off the record.)

Mr. McFALL. What is the air pollutant from this particular installation?

Colonel WOLFE. You have sulfuric oxides, nitro bodies and other mists that are present, SO<sub>2</sub>'s. These will be taken care of by installing precipitators on some of the stacks. There will be nitro bodies which get into the water from the manufacture of TNT. These nitro bodies are not necessarily harmful but when they are released into water and the sun hits them, they turn red and you have the resultant red water problem in the manufacture of TNT.

Mr. McFALL. Do you have a large populated area that is being affected by this plant and this air pollution?

Colonel WOLFE. There is not a large populated area there. At Roanoke, however, there is a rather substantial population.

Mr. PATTEN. You did not say anything about the smell. If you have a little SO<sub>2</sub> around, the smell is terrific.

(Discussion off the record.)

#### SIERRA ARMY DEPOT, CALIF.

Mr. McFALL. Turn to Sierra Army Depot, Calif.

Please insert page 114 in the record.

(The justification page follows:)

#### SIERRA ARMY DEPOT, CALIF., \$256,000

This installation is located 36 miles southeast of Susanville, Calif., and 60 miles northwest of Reno, Nev. The mission of this installation includes receipt, storage, maintenance, renovation, and distribution of ammunition and components, and general supplies; receipt, storage and maintenance of special weapons material; and restoration of conventional, guided missile and special weapons ammunition. The program provides a fuel conversion project to reduce air pollution.

#### Status of funds

Funded program not in inventory	\$170,000
Unobligated items, Jan. 31, 1970 (actual)	0
Unobligated items, June 30, 1970 (estimated)	0

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
31	Fuel conversion	15	25

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.				

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Sierra Army Depot	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER California 815		6. STATE/COUNTRY California	
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1942		9. COUNTY (U.S.) Lassen	
10. NEAREST CITY Reno, Nevada, 60 miles South		PERMANENT		STUDENTS	
11. MISSION OR MAJOR FUNCTIONS The primary mission of the Depot is receipt, storage, maintenance, renovation and distribution of ammunition and components, and general supplies. Receipt, storage and maintenance in special weapons material. Restoration of conventional, guided missile and special weapons ammunition to a serviceable condition. Surveillance includes the observations, test, study, grading and classification of ammunition and special weapons. Material and guided missiles in movement, storage and use with respect to serviceability, hazard and rate of deterioration.		PERSONNEL STRENGTH a. AS OF 31 Oct 1969 b. PLANNED (End FY LR) 13.		SUPPORTED	
		OFFICER (1) 29		OFFICER (4) 29	
		ENLISTED (2) 162		ENLISTED (7) 162	
		CIVILIAN (3) 1,422		CIVILIAN (8) 1,422	
		30		911	
		ACRES (1) 81,270		LAND COST (\$000) 54	
		LAND OWNED (2) 16,283		IMPROVEMENT (\$000) 0	
		LEASES AND EASEMENTS (3) -		38,276	
		INVENTORY TOTAL (Exclpt Land rent) AS OF 30 JUNE 19 a. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ b. AUTHORIZATION REQUESTED IN THIS PROGRAM (Unfunded - \$ c. ESTIMATED AUTHORIZATION - NEXT 4 YEARS d. GRAND TOTAL (c + d + e + f)		31,853	
		-		0	
		-		170	
		-		256	
		-		4,929	
		-		75,538	
SUMMARY OF INSTALLATION LINE ITEMS					
CATEGORY CODE NO.		LINE ITEM DESIGNATION		FUNDING PROGRAM	
a		b		c	
821		31 - Fuel Conversion		256	
		Priority Page No		ESTIMATED (\$000)	
		1 115		256	
		UNIT OF MEASURE		SCOPE	
		d		e	
		TENANT COMMAND		ESTIMATED (\$000)	
		c		f	
		SCOPE		SCOPE	
		e		g	
		ESTIMATED (\$000)		ESTIMATED (\$000)	
		f		h	
		SCOPE		SCOPE	
		g		h	

Mr. McFALL. Will this project complete the requirements and bring you into compliance with State and local regulations on air pollution?

General DALRYMPLE. Yes, sir.

Mr. McFALL. I notice from the sheet that the project will be amortized in a little over 3 years.

General DALRYMPLE. Yes, sir.

TOBYHANNA ARMY DEPOT, PA.

Mr. McFALL. Turn to Tobyhanna Army Depot.

Insert in the record page 116.

(The justification page follows:)

TOBYHANNA ARMY DEPOT, PA., \$115,000

Tobyhanna Army Depot is located 21 miles southeast of Scranton, Pa. The mission of this installation is to receive, store, issue and maintain general electrical and electronic supplies in the 1st U.S. Army area and the Military District of Washington; to maintain photographic and radar equipment and special purpose vehicles. The program consists of an industrial waste treatment plant.

*Status of funds*

Funded program not in inventory-----	\$268,000
Unobligated Items, Jan. 31, 1970 (actual)-----	0
Unobligated Items, June 30, 1970 (estimated)-----	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
42	Industrial waste treatment plant.-----	\$7	50

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.				

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Tobyhanna Army Depot			
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		5. INSTALLATION CONTROL NUMBER Pennsylvania 780		6. STATE/COUNTRY Pennsylvania			
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1953		9. COUNTY (U.S.) Monroe			
11. MISSION OR MAJOR FUNCTIONS Receipt, storage, issue and maintenance of general electrical and electronic supplies within the First Army Area and Military District of Washington; maintenance of photographic and radar equipment and special purpose vehicles and provide installation support to the attached organizations.		12. PERSONNEL STRENGTH a. AS OF <u>31 Oct 1969</u> b. PLANNED (End FY LR) c.		PERMANENT OFFICER (1) ENLISTED (2) CIVILIAN (3) TOTAL (4)		SUPPORTED OFFICER (5) ENLISTED (6) CIVILIAN (7) TOTAL (8)	
		13. INVENTORY		LAND COST (\$000)		IMPROVEMENT (\$000)	
		a. OWNED		1,419		175	
		b. LEASES AND EASEMENTS		351		1*	
		c. INVENTORY TOTAL (Except Land rem) AS OF 30 JUNE 19 69		69		0	
		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$		268		0	
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM					
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS					
		g. GRAND TOTAL (c + d + e + f)				38,902	
						38,903	
						268	
						115	
						4,455	
						43,741	

CATEGORY CODE NO.	LINE ITEM DESIGNATION	LINE ITEM TITLE	Priority	Page No	SUMMARY OF INSTALLATION LINE ITEMS			FUNDING PROGRAM							
					TENANT COMMAND	UNIT OF MEASURE	ESTIMATED (\$000)	SCOPE	ESTIMATED (\$000)	SCOPE	ESTIMATED (\$000)				
a	b	c	d	e	f	g	h	i	j	k					
831	42 - Industrial Waste Treatment Plant		1	117		TG	115			115					115

Mr. McFALL. Will this item complete the requirement and bring you into compliance with State and Federal regulations?

General DALRYMPLE. Yes, sir.

Mr. PATTEN. May I inject, last night's paper stated that we are not proceeding to clean up the Potomac River because various experiments are going on with reference to the sewage disposal plant. Did you happen to catch that in last night's Star?

General DALRYMPLE. I did not notice it, sir.

Mr. Norwood, did you notice that?

Mr. NORWOOD. Yes, sir; I saw it.

Mr. PATTEN. We have a lot to learn still, in this area; haven't we?

Mr. NORWOOD. I think so, sir.

Mr. PATTEN. That is all, Mr. Chairman.

WATERVLIET ARSENAL, N.Y.

Mr. McFALL. Next is Watervliet Arsenal.

Please insert in the record page 118.

(The justification page follows:)

WATERVLIET ARSENAL, N.Y., \$1,362,000

Watervliet Arsenal is located at Watervliet, N.Y. The mission of this installation includes research and development, engineering, production and procurement of mortars, recoilless rifles, cannon assemblies and components, and training devices. The program includes a weapons development laboratory.

*Status of funds*

Funded program not in inventory-----	\$2, 668, 000
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
23	Weapons development laboratory-----	\$72	12

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None	-----			

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Watervliet Arsenal						
4. COMMAND OR MANAGEMENT BUREAU		5. INSTALLATION CONTROL NUMBER FY 19 71 MILITARY CONSTRUCTION PROGRAM				6. STATE/COUNTRY				
U. S. Army Materiel Command		33990		9. COUNTY (U.S.) New York						
7. STATUS Active		1830		10. NEAREST CITY Watervliet						
11. MISSION OR MAJOR FUNCTIONS Responsible for: Mortars, recoilless rifles, cannon assemblies and components, training devices and associated equipment for the preceding, including: Research, design and development; product and production engineering; maintenance engineering support as assigned; production and procurement; industrial mobilization projects; planning, technical direction, accomplishment and evaluation of assigned basic and applied research.		12. PERSONNEL STRENGTH a. AS OF <u>31 Oct 1969</u> b. PLANNED (End FY <u>IR</u> ) 13.		PERMANENT		SUPPORTED				
				OFFICER (2)	ENLISTED (2)	CIVILIAN (3)	OFFICER (5)	ENLISTED (7)	CIVILIAN (8)	TOTAL (9)
				16	6	3,945				3,967
				19	1	2,798				2,818
				INVENTORY						
		LAND		ACRES (1)		LAND COST (\$000) (2)		IMPROVEMENT (\$000) (3)		TOTAL (\$000) (4)
		a. OWNED		136		98		22,042		22,140
		b. LEASES AND EASEMENTS		0		0		0		0
		c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69		69						22,140
		d. AUTHORIZATION NOT YET IN INVENTORY (funded - \$ )		2,668		0				2,668
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM								1,362
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS								4,618
		g. GRAND TOTAL (c + d + e + f)								30,788
SUMMARY OF INSTALLATION LINE ITEMS										
CATEGORY CODE NO.		LINE ITEM DESIGNATION		TENANT'S COMMAND		UNIT OF MEASURE		AUTHORIZATION PROGRAM		FUNDING PROGRAM
310		23 - Weapons Development Laboratory		3		SF		ESTIMATED COST (\$000)		ESTIMATED COST (\$000)
				Priority		Page NO		SCOPE		SCOPE
				3		119		52,274		52,274
								1,362		1,362

Mr. McFALL. What is the design status of this Weapons Development Laboratory which is to cost \$1,362,000?

General DALRYMPLE. The design is 16 percent complete as of the end of February.

We would expect to award the contract next December, sir.

Mr. McFALL. Would you discuss the need for the new function?

General DALRYMPLE. It provides urgently needed additional lab facilities to accomplish design of advanced weapons.

I would like to call on Mr. Clifford to elaborate on that answer, sir.

Mr. CLIFFORD. The Weapons Development Laboratory is needed to support the large cannon oriented type of research and development to be used to support the Army, Air Force, and Navy. This lab is the second phase of the improvement of the R. & D. laboratories to support Watervliet.

Mr. McFALL. I notice in the justification you give an example of the significance of the work accomplished. In the conduct of these studies at the arsenal you doubled the life of the 175-millimeter gun tube resulting in a first year's saving in excess of \$22 million.

Mr. CLIFFORD. That is right.

Mr. McFALL. When was this done?

Mr. CLIFFORD. This was done in fiscal year 1969. This was savings in fiscal year 1969.

Mr. McFALL. Do you have any other examples? This is a very fine example of what might be done at this installation. Are you doing other things of this kind?

Mr. CLIFFORD. Yes, sir, we are still trying to develop better weapons and to utilize materials necessary to do this, and this lab will do that type of work.

We have to have these facilities to complete the research work in this area.

Mr. McFALL. The justification says if the approval of the project is delayed, current as well as planned critical weapons projects are going to be delayed.

Could you give the committee on or off the record some of the curtailment details?

Mr. CLIFFORD. I would have to supply that for the record because I do not know just which weapon we are talking about. I know what weapons are available.

The 105-millimeter howitzer, the 152-millimeter gun, the 155 howitzer, and the 175-millimeter gun, but which one particularly would be delayed I cannot answer.

Mr. McFALL. Is the person who wrote up the justifications in the room?

General DALRYMPLE. I interpret it as the application of the same type of treatment that was given to the 175-mm. tubes to these other tubes that Mr. Clifford has referred to.

Mr. McFALL. Let us provide that for the record because when your man wrote up the justification presumably he was saying something from the information that was available to him concerning the necessity for this plant. When he wrote it he said that critical weapons development is going to be curtailed.

I think perhaps we ought to have some details on what weapons would be delayed.

General DALRYMPLE. We will supply that, sir.

(The information follows:)

The development of the following weapons would be curtailed: 155 mm. howitzer; 152 mm. gun launcher; improved long-range 8-inch howitzer; 105 mm. XM 204; 155 mm. out of battery firing howitzer; advanced light antitank program; company and battalion mortar systems; advanced concepts studies high-pressure high-velocity tank cannon and artillery. Actual data from firing in the field cost upward to \$10 million for weapons. Collecting comprehensive data in the laboratory using simulated test firings plus some actual firing data for collation purposes cost less than \$2½ million, thus saving at least 75 percent of the actual field firing data cost. Examples: The 105 mm. costs \$35 for field-firing cycle versus \$5 for simulated firing cycle. The cost of the actual field firing includes ammunition. Without this project, the capability will not be available to test the whole gun thoroughly, including the ancillary components such as bore evacuator holes and missile guide slots for weapons above the 105 mm. size. These facilities are required for establishing correlation between simulated and field testing. Without the facilities of the project the time frame for testing those weapons listed in the 1391 and above will be delayed from 3 to 5 years. Present facilities can handle two weapons at one time. Testing of a weapon requires a time frame of approximately 2 years. This project will double the capacity and reduce testing time for most weapons by one-half to 1 year. Without these facilities, new design concepts will not be tested in a laboratory prior to getting into costly actual firing. Existing concepts include composite materials and high-strength sheet steel wrapped configurations. These concepts have been generated to reduce crack propagation and thereby yield increased tube life. Increases in tube life are reflected in reduced manufacturing costs of a gun tube, and reduced logistics effort. New design criteria for future weapons that will preclude premature fatigue fractures occurring in the field in conjunction with meeting field and logistic requirements will be severely hampered with delays of a minimum of 2 years. With this facility, prediction of the actual life of the weapons may be made with greater accuracy and precision.

Mr. McFALL. Mr. Patten.

Mr. PATTEN. What is the need of \$50,000 for a connecting overhead passageway? Is that from the upper floor of one building to the same floor of another?

Mr. CLIFFORD. Yes, sir.

Mr. PATTEN. Would you know about how long it is?

Mr. CLIFFORD. Yes, sir. This is a 37-foot passage on the second floor to connect the two laboratories so they can interphase in the development of their particular work. Instead of having one building, you have two and it is connected with this high-level passageway.

Mr. McFALL. So they do not have to walk around on the street, I suppose.

Mr. CLIFFORD. Yes. Also for carrying instruments back and forth from building to building. As you well know, there is a lot of inclement weather in that area and we have to protect the instruments in going from one lab to another.

Mr. PATTEN. In other words, you think the traffic warrants spending that \$50,000 for the passageway?

Mr. CLIFFORD. Yes.

Mr. McFALL. I notice the number of personnel at the facility is scheduled to decrease.

Does this indicate that you could use existing space? You are going down from 3,967 to 2,818 in line with the kind of reduction being announced today. Does this have any relation to the request for space?

Mr. CLIFFORD. As I know about the reduction, sir, it is in the indus-

trial side of the house and there are only 21 spaces that are coming out of the R. & D. area. This will have no effect on this building.

Mr. McFALL. How does the work of the Weapons Development Lab relate to that done at Frankford Arsenal, or that proposed for the Weapons Research and Engineering Center to be set up by the Army sometime in the future at an undisclosed location?

Mr. CLIFFORD. In answer to question No. 1, Frankford does the development of fire control which supports the weapons we are developing here. On question No. 2, the Weapons Development Center has not been formulated yet, and we do not know what the relationship would be.

Mr. McFALL. Do you know anything about the new Engineering Center which the Army is considering?

Mr. CLIFFORD. Yes, sir.

Mr. McFALL. How far off is this?

Mr. CLIFFORD. At this point in time I believe that it will only be developed on paper and not a physical plant. It will be melding together of various organizations not collocated into one group, but with headquarters at one physical location point.

Mr. McFALL. A sort of reorganization instead of a rebuilding.

Mr. CLIFFORD. Yes, sir.

Mr. McFALL. Will this project complete the requirements?

Mr. CLIFFORD. Yes.

#### WHITE SANDS MISSILE RANGE, NEW MEXICO

Mr. McFALL. Turn to White Sands. Please insert in the record page 120.

(The page follows:)

#### WHITE SANDS MISSILE RANGE, NEW MEXICO, \$2,261,000

White Sands Missile Range is located 28 miles northeast of Las Cruces, N. Mex. This installation is a national range with a mission to test and evaluate missile and rocket systems and related material. It supports all range users including Army, Navy, Air Force and systems contractors. The program consists of range facilities.

#### *Status of funds*

Funded program not in inventory	\$10,118,000
Unobligated items, Jan. 31, 1970 (actual)	3,218,000
Unobligated items, June 30, 1970 (estimated)	1,281,000

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
225	Range facilities—Phase VI	\$87	30

#### PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1968	SAM-D facilities	\$266	X	
1970	SAM-D facilities	1,281	X	
1970	Range facilities—PH 5	1,937	X	

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION White Sands Missile Range	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Materiel Command		6. STATE/COUNTRY New Mexico	
5. INSTALLATION CONTROL NUMBER New Mexico		9. COUNTY (U.S.) Dona Ana Otero, Sierra, Lincoln, and Socorro	
8. YEAR OF INITIAL OCCUPANCY 1945		10. NEAREST CITY Las Cruces, 28 miles Southwest	
7. STATUS Active			
11. MISSION OR MAJOR FUNCTIONS A National Range performing test and evaluation of missile and rocket systems and related material. Provides specialized technical support of all range users, including Army, Navy, Air Force, and systems contractors.			
12. PERSONNEL STRENGTH		STUDENTS SUPPORTED	
a. AS OF 31 Oct 1969		OFFICER ENLISTED OFFICER ENLISTED CIVILIAN	
b. PLANNED (End FY LR)		OFFICER ENLISTED OFFICER ENLISTED CIVILIAN	
290		290 1,498 4,610	
339		339 2,400 4,784	
13. INVENTORY			
LAND		LAND COST (\$000)	
a. OWNED		IMPROVEMENT (\$000)	
b. LEASES AND EASEMENTS		TOTAL (\$000)	
c. INVENTORY TOTAL (Excludes land rent) AS OF 30 JUNE 19 68		136,230	
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ 10,118; Unfunded - \$ 0)		136,226	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		2,261	
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		20,613	
g. GRAND TOTAL (c + d + e + f)		169,318	
* \$1,200 one-time cost for easement.			
SUMMARY OF INSTALLATION LINE ITEMS			
CATEGORY CODE NO.	LINE ITEM DESIGNATION	TENANT COMMAND	UNIT OF MEASURE
390	225 - Range Facilities - Phase VI	DL	DL
Priority	Page NO	ESTIMATED COST (\$000)	ESTIMATED COST (\$000)
2	121	2,261	2,261

## STATUS OF PRIOR YEAR PROJECTS

Mr. McFALL. What is the status of construction of prior year projects at White Sands, General?

General DALRYMPLE. Phase 5 which the Congress authorized and funded last year has been released.

The surface-to-air missile development facility, the SAM-D that was also authorized and funded last year has been released also.

The first one is in the sum of \$1.9 million, and the second item is for \$1.3 million for a total of \$3.2 million. Both projects in the 1970 program have been released, sir.

Mr. McFALL. Are there any projects at White Sands which have not been released?

Mr. FLYNN. There are no projects deferred at the present time under the construction reduction plan or any other reduction at White Sands.

## EXTENT OF JOINT USE

Mr. PATTEN. May I ask, General, is the Army in charge of everything at White Sands, or is NASA in one area, and the Air Force in another area? Do they all use the facilities jointly?

General DALRYMPLE. I am going to ask Colonel Paquette to address that in a moment. The Army is responsible for the ranges that all agencies use. Some of the facilities are in co-use but all are not.

Colonel PAQUETTE. The White Sands Missile Range as well as the Kwajalein Missile Range are both national missile ranges that the Army has responsibility for operating. We accomplish host-tenant agreements and provide space and various pieces of equipment.

## WORKLOAD

Mr. PATTEN. With the reduction we have made in these budgets, especially NASA, I am surprised that your workload will be 20 percent higher in the future.

Colonel PAQUETTE. One of the reasons for this phased improvement program at White Sands that has been going on for some time now and we hope will be completed within the next 5 years, is through the use of improved automated devices and equipment to reduce people at White Sands, while at the same time our workload has gone up. In fact, I have a figure here.

The one project listed on the total project that you have there, sir, we estimate will save a million dollars by just the addition to the range control, building 300. That addition is just part of the seven projects in the total project this year.

A further indication of this, since July 1968, we have reduced approximately 500 people at White Sands, and at the same time we have had a workload increase measured in data units from 16.5 to 18 million. A data unit is a reduction of test readings to something you can analyze. This is the primary reason for this kind of improvement at White Sands.

Mr. McFALL. Colonel Paquette, page 120 in referring to the number of people at White Sands Missile Range shows October 31, 1969, 6,398, and planned in fiscal year, 7,523. How does this jibe with your statement concerning a reduction?

Colonel PAQUETTE. Since 1968 we have lost 500 people. They are being included in this 6,398. As far as the increase, I am quite sure the increase is attendant to the Safeguard program and some of the R. & D. involved in the Safeguard. I am quite sure this will be reduced within the next 5 years to something less than 7,500.

Mr. McFALL. If I understand your statement correctly, between 1968 and 1969, you had a reduction of 500 people due to the more adequate utilization of personnel. But with the Safeguard workload you are going to have an increased number of people.

Colonel PAQUETTE. As you know, White Sands is doing a great deal of missile oriented work to include Safeguard. From our responsibility, which is running the total range, we have lost 500 people.

Mr. McFALL. Does this account for the \$1 million saving, the personnel?

#### SAVINGS

Colonel PAQUETTE. The \$1 million, sir, I just pointed out as an example. This is what we are quite sure we will save just by an addition to the range control building, which is one of the seven projects listed.

Mr. McFALL. It would be interesting if you would provide for the record some additional detail on the million dollar savings.

(The information follows:)

White Sands Missile Range has designed what is referred to as the Advanced Range Testing, Reporting and Control (ARTRAC) System. The entire system is scheduled to be operational at White Sands by September 1972. The range control building houses the majority of the ARTRAC automatic data processing equipment which will control, collect, and rapidly process test data. When this facility is completed and the ARTRAC system is operational, the proportionate share of R. & D. savings to the range user is estimated to be at least \$1,000,000 per year. These savings can be attributed to the following:

a. An overall decrease in project development times and costs because of better data and more rapid compilation of test reports. Test program objectives will be accomplished with fewer missiles because the user might be able to eliminate the fourth or fifth test in a sequence if he has a chance to analyze the data from previous tests and make the necessary modifications to the missile.

b. The number of missiles terminated early in flight will be reduced because safety considerations can be analyzed in real time. In past years, several good missiles have been destroyed in flight because the information necessary for good inflight safety analysis was not available in time to be considered by the safety officer.

Mr. PATTEN. You got along up to now without this air conditioning. Has something changed so that you need it now?

Colonel PAQUETTE. I believe the air conditioning is for the addition to the structures we intend to construct.

General DALRYMPLE. It is not comfort cooling, it is equipment cooling. It is to keep the operating equipment at a temperature so it can function properly, sir.

Mr. PATTEN. Air-conditioning does not come free or cheap, does it?

General DALRYMPLE. No, sir. You realize when we put in these heat generating automatic data processing equipment we really have to install large air-conditioning systems.

Mr. PATTEN. What is your source of power out there?

General DALRYMPLE. Commercial power, sir.

Mr. PATTEN. It is expensive, is it not?

General DALRYMPLE. I do not think I could answer that directly. I would not think it would be any more expensive than any place in the country, sir.

Mr. PATTEN. I have heard figures here for housing, for comfort, where the cost of power for air conditioning was a big item. I have heard it is \$60 a month at sometimes of the year in this New Mexico area.

That is worse than our cost for heating the house in winter. Do any of you have personal knowledge of that?

General DALRYMPLE. I do not, sir.

Mr. McFALL. During the fiscal 1970 hearings the list of the major programs being conducted at White Sands was furnished the committee. Have there been any major changes in the programs since that time?

Colonel PAQUETTE. No, sir.

#### OFF RANGE FIRING

Mr. McFALL. What weapons are used in off-range firing? What is the schedule for increased SRAM testing?

Colonel PAQUETTE. I will have that in a moment.

Mr. McFALL. Why don't you put that in the record?

(The information follows:)

The Pershing and Athena missiles are launched from off-range ground complexes into the WSMR. Hound Dog and SRAM are air launched systems which originate from off-range airborne locations and impact at WSMR. Five SRAM missiles have been launched as of 10 March 1970 — additional SRAMs' and a dummy subsystem test are scheduled during the remainder of fiscal year 70. The schedule for fiscal year 71 is as follows: (Confidential) The SRAM project is scheduled to terminate after the third quarter fiscal year 71 launches.

Mr. McFALL. How are you now providing coverage to off-range firings, and why is it necessary to have additional tracking sites at this time?

Please put that information in the record, too.

General DALRYMPLE. Yes, sir.

(The information follows:)

The following WSMR equipment located in Utah provides off-range coverage (both metric and telemetry):

#### Green River, Utah:

FPS-16 radars.....	2
MPQ-12 radar.....	1
MPS-19 radar.....	1
Nike-Ajax surveillance radar.....	1
Telemetry vans.....	2
Telemetry station.....	1
Communications frequency monitoring and timing station.....	1

#### Moab, Utah:

Timing van.....	1
Telemetry van.....	1

#### Blanding, Utah:

MPS-25 radars.....	2
MPQ-12 radar.....	1
Telemetry van.....	1
Timing van.....	1

#### Monticello, Utah:

Telemetry van.....	1
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There is also one telemetry station located at Mount Taylor, N. Mex. Three additional telemetry/transmission sites would assure full position coverage of the entire missile flight path from launch to impact and would provide for real time operations. Real time operations would materially contribute to flight safety, project engineering control and reduced Government contract costs.

## REAL TIME DATA CAPABILITY

Mr. McFALL. Why is it necessary to have real time data capability for test firings?

Colonel PAQUETTE. Sir, the off-range telemetry system is only marginally satisfactory because WSMR does not have a capability to transmit real time telemetry data to the central data processor at WSMR for real time operations. An improved relay system of three off-range sites would permit us to have such a capability. It would materially contribute to flight safety and project engineering control during the actual flight of the missile. For example, if the missile motor suddenly stops this would be immediately detected and the safety control would possibly be able to restart the missile and save the mission. In addition, real time operations would reduce the time required to compile data and furnish it to the range user. This would, in turn, reduce development time and contract costs. Furthermore, real time operations will also materially reduce turn-around time between missile firings.

Mr. McFALL. Is this necessary for operation of the range? How have you managed without it, and which of the items listed is required solely to support this capability?

Colonel PAQUETTE. Yes, sir; complete off-range real time telemetry coverage is necessary to effectively acquire the required test data on missile flights. We have been able to manage without it, but, our inability to follow the complete flight and to obtain full data transmission of the missile position at all times has resulted in some aborted flights in the Athena project and the ballistic missile target system project. The precision tracking system, the mobile optical sites and the addition to the range control building will be used to collect data in the real time mode. However, depending on mission test objectives, these projects could also be used in a nonreal time mode.

(Discussion off the record.)

## LONG-RANGE PROGRAM

General DALRYMPLE. Mr. Chairman, hopefully we will complete all 11 phases of which this is phase 6, in the next 5 years.

Mr. McFALL. If you want to add detail for that, will you do so for the record, showing the amount of funds in each one of the phases?

(The information follows:)

## FIRST 5 PHASES OF CONSTRUCTION FOR RANGE IMPROVEMENTS AT WHITE SANDS MISSILE RANGE

	Fiscal year	Cost in thousands
Phase I .....	1965	\$2,685
Phase II .....	1967	2,336
Phase III .....	1968	1,549
Phase IV .....	1969	1,433
Phase V .....	1970	1,937
Total .....		9,940

## PLANNED FOLLOW-ON PHASES FOR RANGE IMPROVEMENT

	Fiscal year	Cost in thousands
Phase VI.....	1971	\$2,261
Phase VII.....	1972	3,828
Phase VIII.....	1973	4,214
Phase IX.....	1974	4,338
Phase X.....	1975	4,233
Phase XI.....	1976	5,241
Total.....		24,115

<sup>1</sup> Current year.

## GAMMA RADIATION FACILITY

Mr. McFALL. What gamma radiation facilities are there in the Army and Defense inventory? Why do you need another one here?

Colonel PAQUETTE. Sir, as Mr. Horton pointed out yesterday, our Harry Diamond labs has the responsibility for missile fuses. They test the fuse and ruggedize it to withstand radiation. We assembly the entire missile and take it to White Sands for firing. There are some component areas that are not tested in our labs for gamma radiation effects to the total missile. This is what we do at White Sands. That is the requirement for the gamma radiation facility at White Sands, to complete testing, when the missile is assembled for firing.

I might also point out that we have the equipment on hand and I believe our MCA request was deferred last year because of budget restrictions. So we have the equipment on hand and no place to put it.

Mr. PATTEN. Do you have any other facility which is larger than this?

Does any other Army installation have over 2 million acres?

Mr. LOCKWOOD. No, sir. This is our largest installation from an acreage standpoint.

Mr. LONG. I figured this is one-tenth or a little less than one-tenth of 1 percent of the entire land area of the United States. You ought to go out and see it sometime, just to see what it looks like.

Mr. McFALL. Provide for the record a detailed justification of the requirement for each of the 7 primary facilities listed in the justification sheets.

(The information follows:)

1. *Precision tracking system.*—These two sites are concrete pads, stable pedestals with electric power situated in specific geographic locations. These pads will be used by mobile tracking radars. This tracking system will eventually have 14 sites to accomplish high precision tracking for any missile launches from WSMR launch sites or from off-range launch sites with impacts on-range. This construction will complete eight of the planned 14 sites.

2. *Mobile optical sites.*—These 11 mobile sites are required to provide trajectory data of individual missile firings and other flight test missions conducted at White Sands. Lack of these sites severely limits the capability for real time operational data. As weapons have become more sophisticated, the requirements for more advanced test equipment has developed on a parallel with new systems. These mobile sites will provide more flexibility in collecting trajectory data and cost less than installation of fixed, fully instrumented sites. Also, the cost of supporting short duration off-range projects will be greatly reduced, data collection enhanced and site preparation minimized.

3. *Addition to range control building.*—This addition will provide for an expanded control system as follows: Data display, analog computer facility, meteorological display area, computer terminal area, and a data check quality assessment area. The data check function will couple with the existing scientific

and engineering computer located at the range control building site. This expansion will ultimately reduce data delivery time to scientists and engineers for immediate analysis.

4. *Optical calibration facility.*—This facility is required to calibrate and maintain existing long focal length optical instruments and to perform acceptance testing on new optical systems being procured in the range modernization program. This requirement is critical due to the necessary use of more sophisticated optical instruments and focal lengths of over 50 inches. The crucial point is that the longer focal lengths and improved capabilities cannot be evaluated, acceptance tested, or calibrated with present facilities. When these instruments are shipped to other facilities for calibration, they are out of calibration upon return to WSMR because of shipping and handling. The same situation exists with respect to maintenance, including disassembly, cleaning, recoating, alinement, and calibration. This deficiency results in degraded optical images and data inaccuracies below the inherent capability of the system design.

5. *Gamma radiation facility.*—White Sands has the mission of testing missile components in a nuclear environment. This facility is required to house a pure gamma radiation source system. The gamma radiation equipment is on hand but no facility exists in which to place this equipment. It must be understood that this is a test facility and not a R. & D. facility. This project must be completed in order to provide quarterly assurance testing of military hardware to insure that the production system will perform properly in a hostile nuclear environment. The construction of this gamma radiation facility will result in an estimated annual savings of \$140,000; \$20,000 in TDY and man-hours lost due to sending equipment and personnel to Los Alamos and Kirtland AFB, N.M. and \$120,000 estimated required for transportation and TDY cost to a Fort Worth, Tex., commercial radiation facility.

6 and 7. *Multifunction array radar, Ratscat substitution.*—There are two problems pertinent to White Sands' range power requirements: (1) the midrange area power requirements exceed the present power line capacity, and (2) the existing power line from Holloman Air Force Base to the radar target scatter facility (Ratscat) located at midrange is presently supplied by a powerline which requires excessive maintenance and is in a very poor state of repair due to corrosion of the pole guy lines. An engineering study has shown that the most economical solution of these two problems is to build 34,000 feet of new powerline from the existing multifunction array radar (MAR) site substation to the main north-south powerline at a cost of \$298,000. Also, construction of a new substation at the radar target scatter facility will eliminate the need for a replacement line from Holloman Air Force Base.

#### YUMA PROVING GROUND, ARIZONA

Mr. McFALL. Turn to Yuma Proving Ground.

Insert in the record page 123.

(The page follows:)

#### YUMA PROVING GROUND, ARIZONA, \$1,798,000

Yuma Proving Ground is located at Yuma, Ariz. The mission of this installation is to perform engineering and service tests of research and development projects; to conduct surveillance and acceptance tests on production material; and to support other research and development activities. The program consists of a test preparation facility and water system improvement.

#### Status of funds

Funded program not in inventory-----	\$1,646,000
Unobligated items, Jan. 31, 1970 (actual)-----	734,000
Unobligated items, June 30, 1970 (estimated)-----	0

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
100	Test preparation facility.....	\$60	25
99	Water system improvement.....	40	20

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	High explosive facility.....	\$231	×	
1970	Family housing, improve 4 units.....	240	×	
1970	Sewage lagoon.....	503	×	

1. DATE		2. DEPARTMENT		3. INSTALLATION		4. COMMAND OR MANAGEMENT BUREAU		5. INSTALLATION CONTROL NUMBER		6. STATE/COUNTRY		7. STATUS		8. YEAR OF INITIAL OCCUPANCY		9. COUNTY (U.S.)		10. NEAREST CITY		11. MISSION OR MAJOR FUNCTIONS		12. PERSONNEL STRENGTH		13. INVENTORY		14. ACRES		15. LAND COST (\$000)		16. IMPROVEMENT (\$000)		17. TOTAL (\$000)					
2 Feb 1970		ARMY		FY 1971 MILITARY CONSTRUCTION PROGRAM		U.S. Army Materiel Command		Arizona 985		Arizona		Active		1943		Yuma		Yuma		Plan, conduct, record, and report the results of engineering tests of air delivery materiel, long range tube artillery, and support air delivery test of other materiel as assigned. Plan, conduct, and support desert environmental tests of Army Materiel. Provide technical resources and support for Arctic environmental tests as directed. Plan, conduct, record, and report on other engineering, engineer design, production and post production tests as directed. Support other research and development and production activities as directed.		AS OF 31 Oct 1969		OFFICER ENLISTED (1) (2)		CIVILIAN (3) (4)		OFFICER ENLISTED (5) (6)		CIVILIAN (7) (8)		OFFICER ENLISTED (9) (10)		CIVILIAN (11) (12)		TOTAL (13) (14)	
a		b		c		d		e		f		g		h		i		j		k		l		m		n		o		p							
310	100 - Test Preparation Facility	2	124	SF	19,983	1,140	19,983	1,140	1,140	19,983	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140					
841	99 - Water System Improvement	2	126			658		658																													
		Totals																																			

SUMMARY OF INSTALLATION LINE ITEMS

CATEGORY CODE NO.	LINE ITEM DESIGNATION	LINE ITEM TITLE	Priority	Page No	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
					ESTIMATED (\$000)	SCOPE	ESTIMATED (\$000)	SCOPE
310	100 - Test Preparation Facility		2	124	1,140	19,983	1,140	19,983
841	99 - Water System Improvement		2	126	658		658	
		Totals			1,798	19,983	1,798	19,983

Mr. McFALL. What are you currently using for a test preparation facility at Yuma?

Colonel PAQUETTE. We currently have a small building where we take various ammunition and change the composition of their propellants and the explosive charge. This small facility is restricted under our current requirements to between 300 and 500 pounds of high explosive material.

#### RELOCATION OF TEST FUNCTIONS TO YUMA

Prior to about 4 years ago that is all we really required. About that time Aberdeen Proving Ground came up with the idea, and I believe the Navy was involved also, in adding propellants to provide a better artillery projectile. We did not have the room at Aberdeen to do this work because of the restrictions of the range there.

So we moved this kind of work out to Yuma Proving Ground. We had a couple of projects in fiscal 1970, two more this year and we will have another one in our next year's program. This will provide a capability to continue our research and development work in increasing the capacity of artillery projectiles.

(Discussion off the record.)

#### FUTURE CONSTRUCTION AT YUMA

Mr. McFALL. You have \$28 million worth of improvements here already, and you expect to have, by the end of the next 4 years, \$36 million in improvements.

You have projected an \$8 million construction program here. Is that right, Mr. Lockwood?

Mr. LOCKWOOD. Do you mind repeating the question, sir?

Mr. McFALL. This is the first part of a phased development. You have \$28 million worth of improvements at this base and over a million acres. At the end of the next 4 years it will have something like \$36 million of improvements. Can you give us a description of the necessity for the rather large and extensive construction at Yuma Proving Ground?

Colonel PAQUETTE. This extended range munitions program, when moved from Aberdeen to Yuma, required certain facilities—and I should like to point out, sir, they are very small facilities, but highly technical. For example, we require 12- to 18-inch walls in the high explosive facilities to protect the technicians. This is really not a large program. But because we do not have the room at Aberdeen to fire and test these projectiles, we moved the function to Yuma. I believe that the \$36 million also includes some housekeeping-type construction. I think we could provide that for the record.

General DALRYMPLE. Sir, we have in past programs which you gentlemen have authorized and funded, \$1.6 million. That shows up under line D.

Mr. McFALL. I see that.

General DALRYMPLE. The present inventory is \$28.7 million, roughly. Then we have \$1.6 million that is ready to go, part of it under construction now.

The sum of \$1.798 million is in this program this year. That is what is before you. So over the next 4 years we would have \$4.6 million additional, sir.

Mr. LONG. Would the Chairman yield?

Mr. McFALL. Yes.

#### FUTURE USE OF ABERDEEN PROVING GROUND

Mr. LONG. The point was made that testing functions were shifted from Aberdeen to Yuma because Aberdeen lacked space to do the testing. This, of course, makes me feel a little insecure since the closure of Fort Holabird, which is in my district, was just announced. It involves the phase out of several thousand people in 3 years.

Naturally I am worried about Aberdeen, which is the bread and butter of one county in my district. We have been doing a good deal of construction there, and I felt pretty good about it. Does the fact that you do have some problems because of lack of room for testing at Aberdeen, put the future of Aberdeen in jeopardy?

General DALRYMPLE. I do not know if you were here when Colonel Paquette mentioned the development of certain types of boosted charges requiring extended range for the different projectiles which caused us to get out of the more or less restricted area of Aberdeen. So far as I know, this does not prejudice the future of Aberdeen, sir.

Mr. LONG. This happens to be a special problem you could not handle there.

General DALRYMPLE. We had to go out where we had more real estate.

We do get quite a few letters from people living in the vicinity of Aberdeen and other places who complain that the explosions are shattering their windows.

Mr. LONG. I get a letter about this once every week or two. It is certainly true that area is building up. There is tremendous construction going on all around it. We want to keep the proving ground, but we also want to have that development. I would like some reassurance that this does not hurt our long run prospects. I would presume that we would have more and more of the intellectual, paper, and brain work there.

More of the leg work could be done out where you have more ground. I wonder whether this confirms my feeling.

General DALRYMPLE. This is a test facility. This is to test something after it has been researched.

Mr. LONG. So you feel pretty optimistic about the future of Aberdeen?

General DALRYMPLE. I know nothing that would prejudice the future of Aberdeen, sir.

#### FUTURE PROGRAM AT YUMA

Mr. McFALL. There are two more questions on Yuma, General. One, will you briefly state for the record the nature of the improvement which will be coming, which is indicated by the \$4.6 million that we discussed earlier?

General DALRYMPLE. Yes, sir.

Mr. McFALL. These would be the same kind of facilities?

General DALRYMPLE. Yes, to support testing.

Mr. McFALL. To monitor the same kind of thing we are talking about at White Sands.

General DALRYMPLE. Yes, sir. The major facilities included in the \$4.6 million are an armament weapons repair facility, an ammunition receiving/shipping building, and storage igloos. There may be some small administrative-type facilities there, too.

Mr. McFALL. I would assume this would be true.

#### WATER SYSTEM IMPROVEMENT

Will the water system improvement complete the requirement for water at Yuma?

Colonel BLANK. Yes, sir; it will.

Mr. McFALL. What is your source of supply?

Colonel PAQUETTE. Wells, sir. Years ago we started with wells and have continued the system.

Mr. McFALL. Is it adequate?

Have you made surveys to determine that your wells are going to provide sufficient water for the increased population?

Colonel PAQUETTE. Yes, sir. Our engineering problem in that area is that there is some subsurface shifting and we have had some difficulty with well casings.

However, this has happened over a period of a number of years. We have it pretty well in hand. We do not anticipate any difficulty in planning this well. However, we cannot use the one facility we requested, the test preparation facility, without the well because we do not have water in that area.

Mr. McFALL. There is a requirement for water. It is not for cooling.

Colonel PAQUETTE. No, sir; it is an industrial-type water requirement.

#### FORT HUACHUCA, ARIZ.

Mr. McFALL. Let us turn to Fort Huachuca and insert in the record page 128.

(The page follows:)

#### FORT HUACHUCA, ARIZ., \$2,383,000

Fort Huachuca is located 41 miles east of Bisbie, Ariz., and is the headquarters for the U.S. Army Strategic Communications Command (USASTRATCOM). This command is the principal manager for the Army's portion of the Defense Communications System (DCS), including extensions, restoration, engineering, leasing, installation, and operation of the DCS (Army). This command also provides engineering, installation, and technical support services, as required, for non-DCS communications and operation of the non-DCS communications system as assigned. The program includes an enlisted service club and a chapel with religious education facility.

#### Status of funds

Funded program not in inventory	-----	\$13,008,000
Unobligated items, January 31, 1970 (actual)	-----	9,437,000
Unobligated items, June 30, 1970 (estimated)	-----	9,437,000

#### DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
31	Enlisted men's service club	52	25
94	Chapel with religious education facility	56	25

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970	100 units of family housing.....	\$2,190	×	
1970	Post office.....	208		×
1970	Laundry and drycleaning facilities.....	1,032		×
1970	2 enlisted men's barracks complex (660).....	2,500		×
1969	3 enlisted men's barracks complex (978).....	5,697		×

1. DATE		2. DEPARTMENT		3. INSTALLATION													
2 Feb 1970		ARMY		Fort Huachuca													
4. COMMAND OR MANAGEMENT BUREAU		5. INSTALLATION CONTROL NUMBER		6. STATE/COUNTRY													
US Army Strategic Communications Command		Arizona - 005 & 009		Arizona													
7. STATUS		8. YEAR OF INITIAL OCCUPANCY		9. COUNTY (U.S.)													
Active		1882		Cochise													
11. MISSION OR MAJOR FUNCTIONS		12. PERSONNEL STRENGTH		10. NEAREST CITY													
Provide logistics and administrative support to tenant organizations, including an Army Major Field Command (US Army Strategic Communications Command) and an AMC Class II activity (Army Electronic Proving Ground). Resources and assistance to the Army Area Commander in support of emergency plans. Provide training support to Active Army and Reserve Component Units.		AS OF 31 Oct 1969		Bisbee, 41 miles East													
		PLANNED (End FY LR)															
		OFFICER (1)		ENLISTED (2)		CIVILIAN (3)											
		704		6,513		3,101		38		196						TOTAL (9)	
		777		6,767		1,800		5		168						10,552	
																9,517	
13. INVENTORY		LAND		ACRES (1)		LAND COST (\$000) (2)		IMPROVEMENT (\$000) (3)		TOTAL (\$000) (4)							
a. OWNED		71,841		0		86,241		0		86,241							
b. LEASES AND EASEMENTS		1,770		0		0		0		86,241							
c. INVENTORY TOTAL (Except Itemd) AS OF 30 JUNE 19 69										13,008							
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ (Unfunded - \$ )										2,383							
e. AUTHORIZATION REQUESTED IN THIS PROGRAM										30,896							
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS										132,528							
g. GRAND TOTAL (c + d + e + f)										132,528							
SUMMARY OF INSTALLATION LINE ITEMS																	
CATEGORY CODE NO.	LINE ITEM DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM			FUNDING PROGRAM									
	Priority	Page No			SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)							
740	31 - Enlisted Men's Service Club	2	129	SF	27,800	1,163	27,800	1,163									
740	94 - Chapel w/Religious Education Facility	2	130	SF	25,100	1,220	25,100	1,220									
				Totals		2,383		2,383									

## RELOCATION OF INTELLIGENCE FUNCTIONS FROM FORT HOLABIRD, MD.

Mr. McFALL. Has there been any change in mission at Fort Huachuca since we last discussed this base with you?

General DALRYMPLE. As you know, sir, there was an announcement made that the intelligence function—not an announcement but a notification to Members of the Congress—would move from Fort Holabird, Md., to Fort Huachuca, Ariz. That does change the mission of the station to that extent, sir.

Mr. McFALL. The justification shows that the estimated authorization for the next 4 years will increase to \$30.9 million from \$21.7 million shown last year. In view of this information, is that information correct?

General DALRYMPLE. The information before you, sir, on page 128 for the next 4 years is \$30.9 million.

Mr. McFALL. In view of the change of mission which is being announced at this time, is that information correct?

General DALRYMPLE. I am trying to determine where the \$21.7 million is derived, sir.

Mr. McFALL. That was shown in last year's hearing.

Page 128 of this year's justification book indicates that the mission or major function of Fort Huachuca is to be logistics, administrative support, et cetera, but it does not include the additional mission that would come from Holabird. If we are moving the whole intelligence function from Holabird, how much is it going to cost us?

General DALRYMPLE. May I go back to the other question? I think I have the answer to it, sir.

Last year when we estimated the next 4-year authorization to be \$21.7 million, which you were quoting and I could not find for the moment, we were considering a different set of 4 years than the document before you.

One year dropped out on the near side and we picked up an additional year on the far side. That is the difference between the \$21 and \$30.9 million.

The \$30.9 million does not take into consideration the Fort Huachuca assumption of the intelligence function.

The reason it does not is because these documents were prepared well before the decision to move was made.

## COST OF HOUSING INTELLIGENCE FUNCTION AT FORT HUACHUCA

Mr. LONG. If the Chairman would yield, I would like to ask, then, as the Congressman who represents the Fort Holabird area, what will be the sum of money that you will ask Congress to provide to transfer all the intelligence functions from Fort Holabird to Huachuca in Arizona?

General DALRYMPLE. Mr. Lockwood, do you have that?

Mr. LOCKWOOD. Yes, sir.

The studies on this relocation provide for about \$4.1 million for construction requirements to accommodate the intelligence command at Fort Huachuca.

Mr. LONG. What about family housing? It is my understanding that you plan to move about 600 civilians out there and about 900 military.

I would appreciate your putting the exact figure in the record of what that is.

(The information follows:)

A total of 1,536 spaces (950 military, 586 civilian) will be transferred from Fort Holabird to Fort Huachuca.

Mr. LONG. At any rate, you are moving about 1,500 civilians and military personnel. I would like to know what will be the housing problems, housing cost, both for the civilian and military people, who will be involved in this transfer.

Mr. LOCKWOOD. As to the Army civilian personnel, we do not provide them housing in a relocated move.

For the military personnel, Colonel Saari.

Colonel SAARI. Sir, we will have to verify this after the complete transfer has been made, but about 30 percent of the military population that is moved usually is the percentage that is eligible for family housing.

Mr. McFALL. Let us stop for a moment, Colonel Saari. General Dalrymple, this has just been announced by the President and the Department of Defense. I would assume at this time you are not prepared to answer all the questions that would be put to you concerning the move from Fort Holabird to Fort Huachuca. Am I correct in this assumption?

General DALRYMPLE. You are correct. Anything I would give as an answer today would have to be qualified, sir.

Mr. McFALL. It seems inconceivable to me that they would propose to move this intelligence function from Holabird to Fort Huachuca, at what appears to be a very high cost.

Mr. LONG. At a time when we are trying to save money and not increase spending.

Mr. McFALL. Fort Huachuca is in a very inaccessible place, if my previous information about Huachuca is correct. I think we should have a complete hearing on this at a future time when you will have available to you all the details of the move. You should be able to explain why Holabird is not sufficient for this function and why the Army claims that Fort Huachuca is a better location for it. You should also have figures on how much it will cost the United States to move this function from Holabird to Fort Huachuca, so that we can evaluate the claimed economies that will result from this move.

I would think that Dr. Long, as the Congressman representing the area of Fort Holabird, would have a long list of questions, and he would want them answered on the record.

Mr. LONG. I want to thank the Chairman for a very constructive suggestion, and I want to endorse it. I would like to know when this hearing will be, because I will hear from people in my district who will be tremendously inconvenienced and burdened by this move. I was told that somebody in Falls Church, who had lived here for 18 years, had to move to Fort Huachuca and he did not want to go. I think you will get a tremendous drop out of some of your best civilian and military people who will not want to go there.

In addition to that, we are supposed to be trying to save money. This is the whole purpose of Defense Department cutbacks. I have to go before my people and say, sure, I support the defense cuts. We need them to lower taxes. We need them to hold down inflation. Here you have a proposal, which in the guise of being a defense cut is a defense

increase. I find it very difficult to understand. I think Congressman McFall certainly reflects my bewilderment. He has been on this committee a lot longer than I have and knows more about it. If he has difficulty understanding it, I have twice as much difficulty.

General DALRYMPLE. We will put together such a presentation as you wish and let you know as early as possible when we are prepared.

Hopefully, we would answer all the detailed questions I am sure you would wish to ask, sir.

Mr. LONG. I will circulate the news of the hearing to my constituents and find out some of the problems they foresee. Maybe you will have a few weeks to do it, and you will probably need that much time.

General DALRYMPLE. We will need a little time, sir.

(Discussion off the record.)

FORT RITCHIE, MD.

Mr. McFALL. We will turn to Fort Ritchie, Md. Please insert in the record page 131.

(The justification page follows:)

FORT RITCHIE, MD., \$876,000

Fort Ritchie is located 8 miles southeast of Waynesboro, Pa. The mission of this installation is to support the Alternate Joint Communication Center. The program consists of electric power improvements.

*Status of Funds*

Funded program not in inventory	\$167,000
Unobligated items, Jan. 31, 1970 (actual)	0
Unobligated items, June 30, 1970 (estimated)	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
330	Site "R"—Electric power improvements, phase I	50	5

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None.				

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Fort Ritchie																																									
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Strategic Communications Command		6. STATE/COUNTRY Maryland																																									
5. INSTALLATION CONTROL NUMBER Maryland 625; Pennsylvania 745		9. COUNTY (U.S.) Washington																																									
7. STATUS Active		10. NEAREST CITY Waynesboro, Pa., 8 miles Northwest																																									
11. MISSION OR MAJOR FUNCTIONS		12. PERSONNEL STRENGTH																																									
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">PERMANENT</th> <th colspan="2">STUDENTS</th> <th colspan="2">SUPPORTED</th> <th rowspan="2">TOTAL</th> </tr> <tr> <th>OFFICER (1)</th> <th>CIVILIAN (2)</th> <th>OFFICER (3)</th> <th>CIVILIAN (4)</th> <th>(5)</th> </tr> <tr> <td>a. AS OF 31 Oct 1969</td> <td>47</td> <td>741</td> <td>674</td> <td></td> <td>1,462</td> </tr> <tr> <td>b. PLANNED (End FY70 LR)</td> <td>245</td> <td>1,172</td> <td>284</td> <td></td> <td>1,701</td> </tr> </table>		PERMANENT	STUDENTS		SUPPORTED		TOTAL	OFFICER (1)	CIVILIAN (2)	OFFICER (3)	CIVILIAN (4)	(5)	a. AS OF 31 Oct 1969	47	741	674		1,462	b. PLANNED (End FY70 LR)	245	1,172	284		1,701																	
PERMANENT	STUDENTS		SUPPORTED		TOTAL																																						
	OFFICER (1)	CIVILIAN (2)	OFFICER (3)	CIVILIAN (4)		(5)																																					
a. AS OF 31 Oct 1969	47	741	674		1,462																																						
b. PLANNED (End FY70 LR)	245	1,172	284		1,701																																						
*\$8,200 one-time cost for easement.		13. INVENTORY																																									
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>LAND</th> <th>ACRES (1)</th> <th>LAND COST (\$000) (2)</th> <th>IMPROVEMENT (\$000) (3)</th> <th>TOTAL (\$000) (4)</th> </tr> <tr> <td>a. OWNED</td> <td>1,335</td> <td></td> <td></td> <td>46,807</td> </tr> <tr> <td>b. LEASES AND EASEMENTS</td> <td>19</td> <td>102</td> <td>46,705</td> <td>8</td> </tr> <tr> <td>c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69</td> <td>8*</td> <td></td> <td>0</td> <td>46,815</td> </tr> <tr> <td>d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____; Unfunded - \$ _____)</td> <td>167</td> <td></td> <td>0</td> <td>167</td> </tr> <tr> <td>e. AUTHORIZATION REQUESTED IN THIS PROGRAM</td> <td></td> <td></td> <td></td> <td>876</td> </tr> <tr> <td>f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS</td> <td></td> <td></td> <td></td> <td>6,015</td> </tr> <tr> <td>g. GRAND TOTAL (c + d + e + f)</td> <td></td> <td></td> <td></td> <td>53,873</td> </tr> </table>		LAND	ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)	a. OWNED	1,335			46,807	b. LEASES AND EASEMENTS	19	102	46,705	8	c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69	8*		0	46,815	d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____; Unfunded - \$ _____)	167		0	167	e. AUTHORIZATION REQUESTED IN THIS PROGRAM				876	f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				6,015	g. GRAND TOTAL (c + d + e + f)				53,873
LAND	ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)																																							
a. OWNED	1,335			46,807																																							
b. LEASES AND EASEMENTS	19	102	46,705	8																																							
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 69	8*		0	46,815																																							
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____; Unfunded - \$ _____)	167		0	167																																							
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				876																																							
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				6,015																																							
g. GRAND TOTAL (c + d + e + f)				53,873																																							
SUMMARY OF INSTALLATION LINE ITEMS																																											
LINE ITEM DESIGNATION		FUNDING PROGRAM																																									
CATEGORY CODE NO.	LINE ITEM TITLE	ESTIMATED SCOPE (\$000)	ESTIMATED SCOPE (\$000)																																								
812	969.330 - Site "R" - Electric Power Improvements, Phase I 132	876	876																																								

Mr. McFALL. This is a classified project which we will discuss later.

ARMY MEDICAL DEPARTMENT

Army Medical Department—Installation

Proposed  
authorization

Walter Reed Army Medical Center, D.C.----- \$10, 216, 000

WALTER REED ARMY MEDICAL CENTER, D.C.

Mr. McFALL. Army Medical Department, Walter Reed Army Medical Center, insert pages 140 and 141 in the record.

(The justification page follows:)

WALTER REED ARMY MEDICAL CENTER, DISTRICT OF COLUMBIA AND MARYLAND,  
\$10,216,000

Walter Reed Army Medical Center is located in Washington, D.C. The mission of this medical center is to provide medical treatment for members of the armed services and their dependents, to engage in medical research and development, and to support all medical center activities. The program consists of relocation of services and utilities expansion to permit future construction of a new Walter Reed General Hospital.

Status of funds

Funded program not in inventory-----	\$14, 412, 000
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
85	Relocate services and expand utilities-----	\$400	32

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
None	-----			

<b>1. DATE</b> 2 Feb 1970	<b>2. DEPARTMENT</b> ARMY	<b>3. INSTALLATION</b> Walter Reed Army Medical Center		<b>6. STATE/COUNTRY</b>
<b>4. COMMAND OR MANAGEMENT BUREAU</b> Army Medical Department		<b>5. INSTALLATION CONTROL NUMBER</b> 008 865		
<b>7. STATUS</b> Active		<b>8. YEAR OF INITIAL OCCUPANCY</b> 1908		
<b>11. MISSION OR MAJOR FUNCTIONS</b> Treatment of sick and injured personnel of the Armed Services and their dependents; medical research and development; and support of all Walter Reed Army Medical Center Activities.		<b>9. COUNTY (U.S.)</b> District of Columbia		
		<b>10. NEAREST CITY</b> Washington, D. C.		
		<b>12. PERMANENT</b>		
		<b>OFFICER</b>		
		<b>ENLISTED</b>		
		<b>CIVILIAN</b>		
		<b>OFFICER</b>		
		<b>ENLISTED</b>		
		<b>CIVILIAN</b>		
		<b>SUPPORTED</b>		
		<b>ENLISTED</b>		
		<b>CIVILIAN</b>		
		<b>TOTAL</b>		
		<b>(2)</b>		
		<b>8,234</b>		
		<b>6,303</b>		
		<b>INVENTORY</b>		
		<b>LAND COST (\$000)</b>		
		<b>(2)</b>		
		<b>IMPROVEMENT (\$000)</b>		
		<b>(3)</b>		
		<b>TOTAL (\$000)</b>		
		<b>(4)</b>		
		<b>40,887</b>		
		<b>39,334</b>		
		<b>0</b>		
		<b>40,887</b>		
		<b>14,412</b>		
		<b>10,216</b>		
		<b>87,678</b>		
		<b>153,193</b>		
<b>SUMMARY OF INSTALLATION LINE ITEMS</b>				
<b>LINE ITEM DESIGNATION</b>				
<b>CATEGORY CODE NO.</b>	<b>LINE ITEM TITLE</b>	<b>Priority</b>	<b>Page No.</b>	<b>FUNDING PROGRAM</b>
510	85 - Relocate Services and Expand Utilities	1	142	ESTIMATED SCOPE (\$000) 10,216
				ESTIMATED SCOPE (\$000) 10,216

## CONTRIBUTIONS OF MR. H. S. ZACKRISON

Mr. McFALL. I note a recent story in the Engineering News Record about men who made marks in 1969. We are very proud to note that Mr. H. S. Zackrison is noted in here. The article states that he is a prime mover in establishing the construction engineering research lab at the University of Illinois and in the Corps of Engineers' new effort to apply systems to the total construction process. Congratulations.

Mr. ZACKRISON. Thank you very much.

Mr. McFALL. They list the men who are recognized as serving the best interests of the construction industry in the year 1969. We are very proud of Mr. Zackrison.

General DALRYMPLE. Thank you, sir.

RELOCATE SERVICES AND EXPAND UTILITIES FOR NEW HOSPITAL  
CONSTRUCTION

Mr. McFALL. You are requesting \$10,216,000 to relocate services and expand utilities prior to construction of a new hospital. When is it planned to construct a new hospital at Walter Reed?

General DALRYMPLE. We intend to complete the hospital as far as authorization and funding with a request in fiscal 1975. This is the initial increment which will allow us to relocate some facilities, to relocate some utilities, and to add utilities that would eventually serve the new hospital. In subsequent years we will come in for requests for moneys to build the 1,280-bed hospital. The fiscal 1975 request is scheduled to be for the final increment of the hospital construction. At this time we estimate that the hospital will cost in the neighborhood of \$75 million, and that will be our request in fiscal 1972. We will request a follow-on requirement of about \$6.9 million in fiscal year 1975. It will take several years to actually construct the hospital.

## COST OF WALTER REED MASTER PLAN

Mr. McFALL. Our investigative report says that the total estimated cost of construction necessary to completely implement the master plan is \$184 million, plus. Does that coincide with your figures?

Colonel BLANK. Sir, the master plan is for the Walter Reed Medical Center, which includes considerably more than just the hospital. It includes facilities for the Walter Reed Army Institute of Research, as well as barracks, BOQ's, service facilities, and other such things. I do not have a total estimated cost for ultimate master plan execution. I would like to call Colonel Haas.

Colonel HAAS. Yes, sir.

Mr. McFALL. Will you give us some detail on the cost figures you have for the total cost of the Walter Reed Medical Center, so that we can have in the record an indication of the entire plan that we are contemplating at present.

Colonel HAAS. Sir, based on the current estimates of the work still required and under construction at the Center, both associated with the hospital and the other center activities, the cost is approximately \$185 million.

Mr. McFALL. Let us break this down. Fiscal 1973 plans include what, Colonel? Do you have that?

Colonel HAAS. Yes, sir. It includes a service facilities project at Walter Reed Army Medical Center, and a project at Forest Glen which is a part of the Medical Center, for Walter Reed Army Institute of Research.

Mr. McFALL. Would you put in the record at this time, General and Colonel, your planned construction for fiscal 1973, 1974, 1975, 1976, and the construction planned at the Center after fiscal 1976 to complete implementation of the master plan.

General DALRYMPLE. Yes, sir.

Mr. McFALL. Also include whatever cost estimates you may have. At this present time, undoubtedly, the out-year estimates would be rough. But we would like an indication of the entire future construction at the Medical Center.

(The information follows:)

*Future military construction projects, to include projects under construction, for  
Walter Reed Army Medical Center*

Projects under construction :	
Armed Forces Institute of Pathology addition.....	\$5,248,000
Community facilities, Forest Glen.....	3,600,000
Walter Reed Army Institute of Research Annex, Forest Glen.....	2,376,000
Fiscal year 1971 :	
Site preparation and utilities relocation, new Walter Reed General Hospital.....	10,216,000
Fiscal year 1972 :	
New Walter Reed General Hospital.....	75,000,000
Fiscal year 1973 :	
Service facilities, Walter Reed Army Medical Center.....	3,586,000
Walter Reed Army Institute of Research expansion, Forest Glen	7,950,000
Fiscal year 1974 :	
Enlisted barracks and service club, Walter Reed Army Medical Center .....	6,050,000
Walter Reed Army Institute of Research Veterinary Medicine Facility, Forest Glen.....	7,910,000
Fiscal year 1975 :	
Alterations to building No. 1, Walter Reed General Hospital....	6,922,000
Parking facilities, Walter Reed Army Medical Center.....	8,640,000
Fiscal year 1976 :	
Bachelor officers quarters and officers open mess, Walter Reed Army Medical Center.....	6,607,000
Laboratories for Institute of Dental Research and U.S. Army Regional Dental Activity, Walter Reed Army Medical Center	3,665,000
Guest house, Walter Reed Army Medical Center.....	1,699,000
Future :	
Rehabilitate building No. 40, Walter Reed Army Institute of Research .....	5,857,000
Addition to Armed Forces Institute of Pathology.....	21,370,000
Addition to Walter Reed Army Institute of Nursing.....	1,341,000
Greenhouses, Walter Reed Army Medical Center.....	666,000
Parking facilities, Armed Forces Institute of Pathology.....	4,410,000
Post restaurant, Walter Reed Army Medical Center.....	490,000
Noncommissioned officers open mess, Walter Reed Army Medical Center .....	1,004,000

The projects in fiscal year 1973 and after are rough estimates and will be refined during design and prior to submission as a part of the military construction appropriation program.

RELATIONSHIP OF FISCAL YEAR 1971 REQUEST TO CONSTRUCTION  
OF NEW HOSPITAL

Mr. McFALL. If we provide funds for the project this year, does it follow that we must fund the hospital next year as well? Is that a part of the plan?

General DALRYMPLE. It could continue to operate even if funds were deferred next year, could it not?

Colonel HAAS. Yes, sir. But at a much reduced capability. It would cause further delay.

General DALRYMPLE. Your question relates to the ability of the hospital to continue its mission, and that is why I deferred to Colonel Haas, sir.

Mr. McFALL. How would it be affected? We want to make sure what we are committing ourselves to if we fund this.

Colonel HAAS. The facilities to have relocated services are quite austere, yet a usable facility will result. The longer the delay in construction of the new hospital, the longer the hospital will have to operate at a reduced capacity.

Perhaps if I go to the chart I could explain it better.

This outlines the main campus of 113 acres of Walter Reed. The buildings in green are those that must be removed in order to make way for the new facilities constructed in this area.

General DALRYMPLE. Would you point out the main building?

Colonel HAAS. It is right here, sir. What we will be doing in this fiscal year 1971 project is to remove the facilities which must continue to operate in order to have a hospital from the area to be demolished into other buildings around the campus, demolish these buildings and construct preengineered buildings. These buildings will house a radiology laboratory, and a metabolic ward. Connecting corridors are included in order to keep the patients from the inclement weather. We also plan to construct two temporary parking facilities, one to the southeast part of the campus, and the other directly below the Memorial Chapel, in order to accommodate for the parking loss in the area that we are going to have to demolish buildings.

SUPPORT FACILITIES FOR HOSPITAL

Mr. McFALL. What supporting facilities for the hospital are you planning in subsequent years? At what cost?

Provide a list for the record.

(The information follows:)

*Planned supporting facilities pertaining directly to Walter Reed General Hospital*

Fiscal year 1972:		
	New Walter Reed General Hospital.....	\$75,000,000
Fiscal year 1973:		
	Service facilities, Walter Reed Army Medical Center.....	3,586,000
	Walter Reed Army Institute of Research Expansion, Forest Glen .....	7,950,000
Fiscal year 1974:		
	Enlisted barracks and service club, Walter Reed Army Medical Center .....	6,050,000
Fiscal year 1975:		
	Alterations to Building No. 1, Walter Reed General Hospital..	6,922,000
Fiscal year 1976:		
	Bachelor officers quarters and officers open mess, Walter Reed Army Medical Center.....	6,607,000
	Guest house, Walter Reed Army Medical Center.....	1,699,000
Future:		
	Addition to Walter Reed Army Institute of Nursing.....	1,341,000
	Post restaurant, Walter Reed Army Medical Center.....	490,000
	Noncommissioned officers open mess, Walter Reed Army Medi- cal Center.....	1,004,000

## USE OF EXISTING FACILITIES

Mr. McFALL. What type of facilities are you currently using at Walter Reed?

What use are you planning to make of the existing facilities in the long-range modernization program?

Colonel HAAS. The hospital is currently serviced in 30 separate permanent buildings constructed in increments from 1908 through 1941. The existing facilities of Walter Reed General Hospital, except the headquarters building, Building No. 1, will be demolished.

## REQUIREMENT FOR NEW HOSPITAL

Mr. McFALL. How many beds will the new hospital provide?

Colonel HAAS. It is a 1,280-bed facility with 40 research beds.

Mr. McFALL. How is this requirement calculated?

Colonel HAAS. We completed a study of our entire class 2 or regional hospital system before endeavoring to decide on the size of Walter Reed and of our total requirements. The number of beds is necessary for the regional hospitalization of the northeastern part of the United States, plus the patients in the local area, and the necessary beds to support the teaching mission of the hospital.

Mr. McFALL. How does it compare with your present patient load?

Colonel HAAS. There are between 1,200 and 1,600 patients, depending on how you identify them. We have on the record about 1,600, but this includes quite a few that are on convalescent leave from Vietnam wounds.

Mr. McFALL. A 1,280-bed facility would handle this larger number?

Colonel HAAS. No, sir. We are required to build only for the permanent peace time strength of the Army.

Mr. McFALL. It would be necessary to take care of this additional load through other facilities at the hospital.

Colonel HAAS. We would have to put them somewhere else and utilize some of our temporary facilities which would still remain.

## HOSPITAL LOADING DURING WARTIME

Mr. McFALL. That is what I was trying to get at. You now have facilities which would take care of this increased load, but you would not be able to accommodate them in the new hospital.

Colonel HAAS. We look forward to the cessation of hostilities which will reduce the requirement to peacetime levels.

Mr. McFALL. How will you accommodate patients here while the new hospital is under construction?

Colonel HAAS. During that period this will be a 900-bed facility. Some of the beds being in buildings outside of the construction area plus 200 patients at Forest Glen.

Mr. McFALL. Is this the best time to build the hospital in view of the load on the facilities created by Vietnam? Should it be delayed until later in view of the necessity for using present facilities?

Colonel HAAS. We have other assets to take care of the Vietnam situation.

Mr. McFALL. Has this all been considered in the plan so there will not be any disruption of the ability of the hospital to take care of the Vietnam workload?

Colonel HAAS. We will handle the Vietnam workload elsewhere, sir.

## FISCAL YEAR 1971 REQUEST

Mr. McFALL. What part of this year's request provides for patient bed space?

Colonel HAAS. Approximately \$400,000.

Mr. McFALL. What part provides for other functions in direct support of the medical services of Walter Reed.

Colonel HAAS. As I mentioned, one preengineered building will house the requirement for radiology and laboratory services; the other will be directed toward metabolic research and beds.

Building No. 4 will be rehabilitated to accommodate the administrative activities in buildings that are being demolished. Building No. 7 will be rehabilitated to accommodate the entire dental facility which must be moved from the construction site.

Also included is renovation of the boiler plant and the expansion of the air conditioning to support the new facility. Then there is some rehabilitation in one floor of Building No. 33-A for administrative services, plus the NP wards at Forest Glen.

## BUILDINGS ALTERED FOR TEMPORARY USE

Mr. McFALL. What ultimate use will be made of the buildings which are to be altered and added in this request?

Colonel HAAS. Sir, the preengineered building can be removed and fill the requirement for space at Forest Glen.

Eventually the buildings that are being rehabilitated will have to be eliminated from the campus.

Mr. McFALL. The investigative staff report states that existing facilities will be altered to provide Administrative facilities at costs of \$25 and \$30 per square foot.

Also a gasoline station will be altered and a credit union at a cost of \$37 per square foot. Is this the most economical method of providing for these functions on an interim basis?

Colonel HAAS. I do not have the same costs on administrative space. The administrative figure is much less than that.

Sir, could that be the eventual renovation of Building 1?

Mr. McFALL. Since I am sure you have not read the investigative report, in order for you to answer intelligently I think you need a little more information. Let me read to you the investigative report and then perhaps you will have the necessary information.

The report says:

Building No. 4, the present commissary and quartermaster sales store, which has an area of 37,000 plus gross square feet, is to be used for administrative functions during the interim period. The architect estimated these alterations will cost \$933,000, or about \$25 per square foot.

That is where we got our cost figure of administrative space costing \$25 per square foot for alteration. Isn't this a rather high cost for alterations for temporary use of space?

Colonel HAAS. Sir, I have the same figure and the total number of square feet. Mine is broken down to rehabilitation, plumbing, ventilation, air conditioning, and electric power. Ultimately, I have a different breakout, but the cost figure is \$932,000. I would like to defer the cost of alterations.

General DALRYMPLE. Could I ask Mr. Zackrison?

Mr. McFALL. I see you are not an engineer.

Mr. ZACKRISON. The alteration part would cost approximately \$11 a square foot. The biggest item here is the air conditioning which is \$265,000 of this total. As Colonel Haas has stated, the alterations are really much lower, it is \$414,000.

Mr. McFALL. This is permanent air conditioning for this building, which would be utilized after the administrative functions are transferred into the new building?

Mr. ZACKRISON. That is my understanding.

Mr. McFALL. We do not have a cost of \$25 a square foot to provide for temporary occupancy. That is the point I want to make.

Colonel HAAS. I can answer that. These buildings will not be used following the interim period of 5 or 6 years.

Mr. McFALL. They are going to be used for only 5 or 6 years?

Colonel HAAS. Yes, sir.

Mr. McFALL. Is this a proper way to spend \$933,000, to provide occupancy for 5 or 6 years? There ought to be an answer.

Presumably you have studied this.

Colonel HAAS. Maybe if I elaborate a little further.

(Discussion off the record.)

#### ALTERNATE SITES CONSIDERED

Colonel HAAS. Initially when it was planned to build the new hospital, it was planned to place it closer to building No. 1. This would completely disturb all the food service, the urology clinic, and cause a great deal of discomfort in the surgery suite because of the blasting and other construction activity which would conflict with the normal activities of performing a surgical operation. This is a very high cost area to try to relocate.

Then it was decided to move back and over to a northwest location, moving away from building No. 1. But this would destroy all our surgical and intensive care capability, and it is also costly to move.

It was planned that building No. 4 would be renovated for the laboratory and X-ray at a cost of over \$80 a square foot for the interim period. So we studied further to come up with the location for the hospital that would least disrupt the facilities and move those facilities which are least costly to move from the construction site.

Throughout the construction period there will still be the responsibility of taking care of patients, training interns and residents, and providing all medical services. So it was a tradeoff situation of attempting to determine which was the best course of action in relocating services considering the cost.

(Discussion off the record.)

Mr. McFALL. I recognize this is a difficult problem because you are trying to keep the hospital in operation while you are building, and that is inevitably going to be somewhat costly. But it seems to me what we have here is space to cost \$25 a square foot being used for administration for 5 or 6 years. Isn't it possible that it could be done with temporary buildings or trailers or things of this nature which would have some value afterward? This is an engineering question, I guess, which is not necessarily yours to answer, Colonel.

I realize you have gone into this and this is probably your best possible plan. I just want to have a complete answer for the record.

(Discussion off the record.)

General DALRYMPLE. Based on the information you have given us based on the investigative staff's report we would like to look into this situation a little further and provide you with additional information, sir.

(Discussion off the record.)

(The information follows:)

The new Walter Reed General Hospital will provide 1,280 beds plus 40 beds for research. This total was calculated on the basis of local, regional, and overseas peacetime requirements for beds and the number of beds necessary to support the residency and intern programs. The beds occupied are currently averaging 1,200. During the construction period 700 inpatients will be cared for at the main post and 200 at Forest Glen. The \$10,216,000 will provide for patient bed space, medical support, and other functions as follows:

[In thousands]

	Patient bed space	Medical support	Other functions
Demolition.....			\$320
Preengineered building (laboratory, pathology, physical therapy, occupational therapy).....		\$1,268	
Building 7.....		165	
Building 4.....		333	600
Building 15 (boiler plant).....			664
Building 33A.....		38	38
Building 48 (air-conditioning plants).....			1,029
Building 82 (credit union).....			175
Preengineered building.....		376	
Neuropsychiatric wards, Forest Glen.....	\$400		
Connecting corridors.....		398	
Electrical service and street lights.....		480	49
Reconnect outside utilities and pneumatic tube and gases.....		273	
Paving, parking, walks, etc.....		300	102
Site preparation.....			71
Oxygen and fire alarm.....		33	
Communications.....		347	100
Steam and chilled water.....		1,323	1,300
Storm drainage.....			134
Total.....	400	5,334	4,482
Grand total.....			10,216,000

All buildings except the permanent structures shown on the approved master plan will be removed. Preengineered structures included in this request will be relocated to Forest Glen. Older buildings converted for interim use will be demolished.

Alterations of existing permanent buildings for patient-related administration is considered to be the most economical method for providing interim facilities.

Since submission of the fiscal year 1971 military construction appropriation to Congress and the study by the investigation and survey team time phase requirements for the post exchange service facility and the credit union have been restudied. It has been determined that the service station will be retained in its present location for a portion of the construction period and that the credit union will remain in its present location. The specimen laboratory that was to occupy the credit union area will be relocated. The administrative functions to be housed in building 4 are in direct and indirect support of patients. For example, the personnel and finance office in building 4 handle patient records and finances, and direct access to this building from patient areas must be (and is) provided. The construction of temporary buildings to house these functions was considered but rejected due to lack of available land. Additional administrative functions were located to a portion of building 33, which is directly east of building 4. These functions are related to those to be housed in building 4, and the close proximity will reduce staff travel or enhance efficiency. Again, no land is available for construction of suitable temporary or preengineered structures, except for the two preengineered structures included in this request. These structures are adaptable for use to meet known requirements at Forest Glen following occupancy of the new Walter Reed General Hospital.

The highest priority hospital for construction in the fiscal year 1971 program is the new Fort Gordon, Ga., hospital. Its status of design is such that an award for construction can be made within fiscal year 1971. The highest priority hospital for construction in fiscal year 1972 is the new Walter Reed General Hospital. In order to support this fiscal year 1972 priority, the relocation of services and expansion of utilities need to be accomplished in fiscal year 1971. The mission of Walter Reed General Hospital is seriously hampered by inadequacies, overcrowding, and personnel ineffectiveness resulting from the dispersion of both professional and administrative activities throughout 46 buildings and two separate parts.

The periodic reports from the contractor for the Department of Defense study on reduction of hospital operating costs are reviewed by the Walter Reed General Hospital project officer. Any design features which can reduce operating costs are being incorporated in the design of this hospital.

NOTE.—In lieu of modifying building 82, space will be altered for a specimen collection laboratory in building 1 which will remain as a permanent building.

### CORPS OF ENGINEERS

Mr. McFALL. The next command is the Corps of Engineers. Please insert in the record page 143.

(The page follows:)

#### CORPS OF ENGINEERS

[In thousands of dollars]

Installation	Prior authorization	Proposed authorization	Proposed funding
Topographic Command, Kansas City field office, Missouri.....		558	558

#### KANSAS CITY FIELD OFFICE, TOPOGRAPHIC COMMAND, MO.

Mr. McFALL. Kansas City Field Office, Topographic Command, Mo. Insert page 144 in the record.

(The page follows:)

## KANSAS CITY FIELD OFFICE, TOPOGRAPHIC COMMAND, Mo., \$558,000

The Kansas City Field Office, U.S. Army Topographic Command, is located at Kansas City, Mo. The mission of this installation is the production of topographic maps, charts, pictomaps, map auxiliaries and other cartographic projects in support of the Department of Defense. The program provides alterations of the physical security facility.

*Status of funds*

Funded program not in inventory-----	0
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

## DESIGN INFORMATION

Item No. Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
1 Physical security facility alteration-----	15	25

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
		Released	Deferred
None			

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION <b>FY 1971 MILITARY CONSTRUCTION PROGRAM</b> Kansas City Field Office, Topographic Command		6. STATE/COUNTRY Missouri
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Corps of Engineers		5. INSTALLATION CONTROL NUMBER 21075		9. COUNTY (U.S.) Missouri
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY 1951		10. NEAREST CITY Kansas City
11. MISSION OR MAJOR FUNCTIONS				
<p>The Kansas City Field Office is responsible for the complete and ready-for-reproduction execution of all cartographic projects assigned by the US Army Topographic Command, Washington, D. C. These projects include the production of topographic maps, charts, pictomaps, and map auxiliaries in support of the Department of Defense.</p>				
12. PERSONNEL STRENGTH				
a. AS OF <b>31 Oct 1969</b>		b. PLANNED (End FY )		
OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	OFFICER (4)	ENLISTED (5)
0	0	218	0	218
13. INVENTORY				
LAND		ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)
a. OWNED				
b. LEASES AND EASEMENTS				
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 <u>    </u> : (Unfunded - \$ <u>    </u> )				
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ <u>    </u> )				
e. AUTHORIZATION REQUESTED IN THIS PROGRAM				
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS				
g. GRAND TOTAL (c + d + e + f)				
TOTAL (\$000) (4)				
TOTAL (\$000) (5)				
TOTAL (\$000) (6)				
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Mr. McFALL. I notice from the justifications that the mission for which you are altering this space is already being carried out at two other locations in the United States. Why is it necessary to establish a third location for this work?

Colonel OTTEN. More and more of the work which we are doing is being accomplished in the classified area. It requires a classified facility to protect the security of the work which is being done.

Mr. McFALL. The justification goes on and says:

Further conversion of the Washington and Providence facilities is not considered to be possible since the unclassified missions must be continued because additional specialized personnel are required and facilities are not available at these locations.

Do you feel you have to set up another operation in Kansas City in order to take care of all the workload of the U.S. Army Topographic Command?

Colonel OTTEN. In general this is only to change the facilities. If we changed additional facilities in the Washington area it would probably cost more, plus it would change the balance. The people are already working in Kansas City in cartographic work. It is better to give them the facilities so that they can continue only in a classified or secure environment.

Mr. McFALL. Could you describe generally the classified mission which is to be carried out here?

General DALRYMPLE. I am afraid we cannot, sir.

Colonel OTTEN. I can say it is classified cartographic work. It is still in the same field of mapping.

Mr. McFALL. We want to have a description of it. Do you want to do that in the classified session?

General DALRYMPLE. Perhaps the Colonel can give you something of a general nature that would suffice.

Mr. McFALL. Can you give us some general information that we can put in the record, or can we go off the record? Somewhere we will have to have the answer.

(Discussion off the record.)

Colonel OTTEN. I can only say we are still making maps. We are not doing anything other than that. I cannot discuss why it is classified or anything to the effect why it is necessary to be kept secure.

Mr. McFALL. Then when we take up classified projects I would suggest we discuss this so that we will know what your workload is and why you need to set up a new facility somewhere.

Mr. PATTEN. May I ask one question at this point? Why should we spend \$600,000 on a GSA-leased building? It is a frame building?

Colonel OTTEN. No, sir; it is a permanent brick and concrete building.

Mr. PATTEN. How long is the lease?

Colonel OTTEN. It is a Government building. The terminology "GSA lease" means that the GSA controls occupancy and allows us to use it but it is a Government building on Government property.

Mr. PATTEN. We do not have some landlord 10 years from now demanding we restore it to the original condition? We won't have to spend another \$600,000?

Colonel OTTEN. No, sir.

Mr. PATTEN. I have no further questions.

Mr. McFALL. The committee will recess until 2 o'clock.

THURSDAY, MARCH 5, 1970.

## SAFEGUARD BALLISTIC MISSILE DEFENSE SYSTEM

## WITNESSES

LT. GEN. A. D. STARBIRD, SAFEGUARD SYSTEM MANAGER, OFFICE,  
CHIEF OF STAFF OF THE ARMY

BRIG. GEN. R. P. YOUNG, DIVISION ENGINEER, U.S. ARMY ENGI-  
NEER DIVISION, HUNTSVILLE

COL. D. H. THOMAS, CHIEF, PROGRAMS, BUDGET, AND MANPOWER  
DIVISION, U.S. ARMY SAFEGUARD SYSTEM OFFICE

Mr. SIKES. The committee will come to order.

We are prepared to hear General Starbird, Safeguard System Man-  
ager, discuss the Safeguard ballistic missile defense system as now  
scheduled for fiscal year 1971.

General Starbird, this committee always is interested in your testi-  
mony. We have followed the Safeguard program very closely and the  
committee has supported it. We will be glad to have you proceed as you  
wish.

General STARBIRD. Mr. Chairman, I have a statement that I believe  
would be helpful if I read it.

## SAFEGUARD BUDGET REQUEST

Mr. SIKES. Before you begin your statement, I would like to have in-  
serted in the record pages 152, 153, 164, 165, and 206 of the justifi-  
cations, and General Starbird's biographical sketch.

(The pages follow:)

Safeguard Systems Command:

Installation:

Safeguard, various:

Proposed authorization-----	\$368, 100, 000
Proposed funding-----	368, 100, 000



## Safeguard Systems Command (O/S) :

## Installation :

## Kwajalein Missile Range, Marshall Islands :

Proposed authorization-----	\$3,760,000
Proposed funding-----	\$3,760,000

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION General Authorization		10. NEAREST CITY				
4. COMMAND OR MANAGEMENT BUREAU		5. INSTALLATION CONTROL NUMBER		9. COUNTY (U.S.)				
7. STATUS		8. YEAR OF INITIAL OCCUPANCY						
11. MISSION OR MAJOR FUNCTIONS								
12. PERSONNEL STRENGTH								
a. AS OF _____		PERMANENT		SUPPORTED				
b. PLANNED (End FY )		OFFICER (1)	ENLISTED (2)	CIVILIAN (3)	ENLISTED OFFICER (6)	ENLISTED (7)	CIVILIAN (8)	TOTAL (9)
13. INVENTORY								
a. OWNED	LAND	ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	TOTAL (\$000) (4)			
b. LEASES AND EASEMENTS								
c. INVENTORY TOTAL (Except Land rent) AS OF 30 JUNE 19 _____								
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____); (Unfunded - \$ _____)								
e. AUTHORIZATION REQUESTED IN THIS PROGRAM								
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS								
g. GRAND TOTAL (c + d + e + f)								
SUMMARY OF INSTALLATION LINE ITEMS								
CATEGORY CODE NO. a	LINE ITEM DESIGNATION b		TELETYPE COMMAND c	UNIT OF MEASURE d	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
					SCOPE e	ESTIMATED COST (\$000) f	SCOPE g	ESTIMATED COST (\$000) h
	Planning:	NA	Page No					
	T00500 - Regular Program		207				22,000	
	T93002 - SAFEGUARD		208				18,500	
	Access Roads:							
	T00502 - Regular Program		209				500	
	T93003 - SAFEGUARD		210				7,200	
	Minor Construction							
	T00501 - Regular Program		211				10,000	
	Total						58,200	

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION <b>FY 1971 MILITARY CONSTRUCTION PROGRAM</b>		3. INSTALLATION <b>SAFEGUARD</b>	
4. COMMAND OR MANAGEMENT BUREAU SAFEGUARD System Command		5. INSTALLATION CONTROL NUMBER		6. STATE, COUNTRY	
7. STATUS		8. YEAR OF INITIAL OCCUPANCY		9. COUNTY (U.S.) <b>CONUS - Various</b>	
11. MISSION OR MAJOR FUNCTIONS Develop and assure the timely, effective deployment of the SAFEGUARD Ballistic Missile Defense system.		10. NEAREST CITY			
12. PERSONNEL STRENGTH					
a. AS OF _____		PERMANENT	STUDENTS	SUPPORTED	
b. PLANNED (End FY _____)		OFFICER (7)	OFFICER (4)	OFFICER (6)	
		CIVILIAN (3)	ENLISTED (5)	ENLISTED (7)	
				CIVILIAN (8)	
				TOTAL (9)	
13. INVENTORY					
a. OWNED		ACRES (1)	LAND COST (\$000) (2)	IMPROVEMENT (\$000) (3)	
b. LEASES AND EASEMENTS					
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 _____					
d. AUTHORIZATION NOT YET IN INVENTORY (Planned - \$ _____)					
e. AUTHORIZATION REQUESTED IN THIS PROGRAM					
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS					
g. GRAND TOTAL (c + d + e + f)					
<b>SUMMARY OF INSTALLATION LINE ITEMS</b>					
CATEGORY CODE NO.  149	LINE ITEM DESIGNATION  T93000 - Tactical Facilities (SAFEGUARD)		UNIT OF MEASURE  MA	ESTIMATED COST (\$000)  368,100	ESTIMATED COST (\$000)  368,100
	LINE ITEM TITLE  Page No	TEENANT COMMAND  c	SCOPE  e	SCOPE  f	SCOPE  g

BIOGRAPHICAL SKETCH OF LT. GEN. ALFRED D. STARBIRD, SAFEGUARD  
SYSTEM OFFICE

General Starbird graduated from the U.S. Military Academy in 1933 and received a degree in civil engineering from Princeton University in 1938.

Prior to World War II, General Starbird served on various engineer assignments; was a member of the U.S. Olympic Pentathlon Team in 1936; and served as an instructor at the U.S. Military Academy.

In 1942, he was assigned to the War Department General Staff. He served on temporary duty with the 1st Division Staff during its landings in North Africa and with the V Corps during its landings and early operations in Normandy. He commanded an engineer combat group in the 3d Army from January through June 1945 and then returned to the War Department General Staff.

Since World War II, General Starbird has served in various assignments in the Pacific, CONUS, and in Europe where he served as Secretary of SHAPE. After 2 years in the Office of the Chief of Engineers he was named Director of Military Applications of the Atomic Energy Commission and served in that assignment from 1955 to February 1961. In November 1961, he was called from his assignment as Division Engineer, North Pacific Engineer Division to organize Joint Task Force 8 and to command it during the planning, preparation, and execution of Operation DOMINIC, the 1962 nuclear test series. In October 1962, he was named Director of the Defense Communications Agency and, on August 21, 1963, the additional function of manager, National Communications System. In November 1967, General Starbird was selected to be the manager of the Sentinel System (now Safeguard System).

CHANGE IN BUDGET REQUEST

Mr. SIKES. Unless it is covered in your statement, you might tell us at this time how the current request differs from the budget request.

General STARBIRD. It is not covered in my statement, Mr. Chairman. The budget request was for \$397 million. The refined request that we have now submitted, and will be discussed in the testimony, is \$357 million, a reduction of approximately \$40 million, and the necessary correspondence on that from the Department officially will be forthcoming shortly. That comes about basically in this way, sir. At the time we had to prepare the budget submission, discussions were still underway as to exactly what would be the timing, scope, concept and the like. Therefore, we took an estimate and prepared that for the budget submission. As quickly as a decision was firmly reached, we started our revision of the estimates, and you have, therefore, in the \$357 million the revised estimates.

STATEMENT OF LT. GEN. ALFRED D. STARBIRD

Mr. SIKES. Now would you proceed with your statement?

General STARBIRD. Mr. Chairman and members of the committee, we appreciate the opportunity to present to you today the Army's request for military construction appropriation for the Safeguard program for fiscal year 1971. With me is Brig. Gen. Robert P. Young, Division Engineer, Huntsville Division Corps of Engineers. His division was established to carry out the MCA portion of the deployment program. He operates under the command and in accordance with the policies and procedures of the Chief of Engineers. However, he is under my operational control for the Safeguard military construction program.

## SAFEGUARD DEPLOYMENT

I realize you heard testimony last week from Secretary Laird which covered Safeguard as well as other programs. However, I do believe it would be helpful if I remind you in part of what he said and then elaborate in more detail on specifically what construction is involved in the approved and the recommended Safeguard program.

(a) On March 14, 1969, the President announced that he had re-oriented the United States ballistic missile defense deployment and renamed it Safeguard. He stated that the objectives of this deployment were:

1. Protection of our land-based retaliatory forces against a direct attack by the Soviet Union.
2. Defense of the American people against the kind of nuclear attack which Communist China is likely to be able to mount within the decade.
3. Protection against the possibility of accidental attacks from any source.

He stated also it was to be a phased commitment:

It will be implemented not according to some fixed, theoretical schedule, but in a manner clearly related to our periodic analysis of the threat. (Chart 1)

A first phase only was recommended for authorization in 1970. It was to consist of the site complex in the Minuteman fields near Grand Forks AFB, N. Dak., and Malmstrom AFB, Mont. This limited deployment would have as its objective, as reported to the House Appropriations Committee:

1. Providing operational experience " \* \* \* in order to check out the entire system under realistic conditions \* \* \* "
2. Providing " \* \* \* protection for at least a limited portion of the Minuteman force."

The President had also announced on March 14, 1969 that, " \* \* \* this program will be reviewed annually from the point of view of (a) technical developments, (b) the threat, (c) the diplomatic context including any talks on arms limitation."

(b) Substantial MCA authorization and appropriation had been given in fiscal years 1968 and 1969 for the Sentinel deployment, and this was available for application to the Safeguard requirements. Secretary Laird, however, decided that he would not proceed with any activities onsite at Grand Forks and Malmstrom until there was a clear indication that the Congress approved proceeding. In early October 1969, after both the Senate and House had passed fiscal year 1970 DOD authorization bills which, while different in some respects, contained identical authorizations for the Safeguard system, the Corps of Engineers moved on site at Grand Forks and Malmstrom and initiated the gathering of detailed engineering data to complete the design. I will return later to describe in more detail where we now stand.

(c) On January 30, the President announced that he had completed his annual review after reexamining the deployment at a meeting of the National Security Council, and had decided to " \* \* \* go forward with both the first phase and the second phase of the ABM system \* \* \* " On February 24, Secretary Laird explained that the fiscal year 1971 phase 2 step requested would be a limited one including deploy-

ment at one additional site complex in the Minuteman fields, the Whiteman complex. It would include proceeding with the installation of additional Sprint at the Grand Forks and Malmstrom complexes. It would also include certain advanced preparation at five other sites, though proceeding with deployment of these additional sites was not requested at this time. The five others are: Northwest, Northeast, Michigan/Ohio, the National Capital Area, and near Warren AFB, Wyo. The Army is requesting appropriation of \$357 million in MCA for the continuing of the deployment to include completion of Grand Forks and Malmstrom, accomplishment of the construction at Whiteman, the necessary added Sprint facilities at Grand Forks and Malmstrom, and advance preparations at the five other sites.

#### FUND REQUIREMENTS THROUGH 1971

Let me now be more specific as to what the already appropriated, and what the requested, funds for Safeguard are designed to accomplish.

(a) (Chart 2) First, Grand Forks and Malmstrom will be basically similar. They will consist of a long-range perimeter acquisition radar (PAR) site, a missile site radar (MSR) site, certain Spartan and Sprint missiles collocated with the MSR and remote Sprint missile sites. The location of these with respect to one another is as shown on this chart. The Whiteman complex is generally similar to Grand Forks and Malmstrom but there is no PAR site in that complex.

(b) (Chart 3) A PAR site would appear as shown on this chart. There would be a large hardened PAR radar building, an underground hardened powerplant, support facilities and a family housing area. (Chart 4) An MSR site would have: the large hardened radar building; the underground hardened powerplant; underground hardened cells in which the collocated Sprint and Spartan are located; support facilities and a family housing area.

(c) (Chart 5) A remote Sprint site is a much simpler site and has only the hardened underground missile cells and limited support facilities. There is, incidentally, no housing there and the personnel there come out from the MSR site.

(d) The program also requires certain R.D.T. & E. test facilities at the Kwajalein missile range, a central training facility for the specialized Safeguard operating and maintenance personnel, and mission depot facilities.

(e) (Chart 6) In simplified form, the complexes already authorized and requested for full authorization this year would have sites of the types I have just described as shown on this chart. For ease, I have shown separately those sites on which we are authorized to proceed by prior year legislation as well as the additional facilities requested for fiscal year 1971.

(f) Finally, there were certain funds appropriated in fiscal year 1968 and fiscal year 1969 which were expended for Sentinel sites and which are not applicable to Safeguard. The only site where construction was initiated was at the Boston PAR but surveying had been accomplished at several others. Incidentally, the amount of funds expended on that type of activity is approximately \$18 million.

## SCHEDULES

The Safeguard program calls for the three complexes I have discussed to be fully installed, checked out, and taken over by their military operating crews in the fall of 1974 for Grand Forks, Malmstrom in the spring of 1975, and Whiteman in mid-1975. To accomplish this, the schedule shown on this chart would have to apply (chart 7). As you can see, to realize the schedule a major construction contract for the Grand Forks site should be awarded in early April of this year, advanced site contracts for Malmstrom in May 1970, and a major construction contract for Whiteman in March 1971.

## FUNDING TO DATE

On this next chart (chart 8), I have shown the MCA funds made available to date for Sentinel/Safeguard and how they have been, or will be applied. I have shown the estimated amounts also by separate locations. I must repeat, however, these are estimates only in view of the fact that bids for the first major contract are yet to be received. Some adjustment as between exact sites and their facilities will necessarily occur.

(a) As you can see from the first column, the appropriation made available to date has been \$335 million.

(b) Of this amount, as shown by the first line, we did accomplish work related to Sentinel which is not usable for Safeguard in the amount of \$18 million. This includes certain survey and design at several potential Sentinel sites and the more advanced work accomplished at the Sentinel Boston site.

(c) The remaining \$317 million is being applied to the Safeguard program in amounts shown by the succeeding lines: Grand Forks, Malmstrom, Whiteman, advanced preparation of additional sites, Kwajalein test area, the central training facility, and for standard design in support of the tactical construction.

## FUNDS REQUESTED IN FISCAL YEAR 1971

On this chart (chart 8), I have shown the amount requested in fiscal year 1971, \$357 million, and the locations where these would be employed. As you can see, the use of these funds is indicated.

## SPECIAL USAGE

Also included within the fiscal year 1971 MCA budget is a request for temporary family housing for supervisory Government personnel and their dependents at Safeguard sites during the construction and installation and test intervals.

I appreciate the opportunity of explaining in summary the Army's Safeguard MCA fiscal year 1971 request to you. I, with General Young and our staff members here, will be pleased to answer any questions you may have.

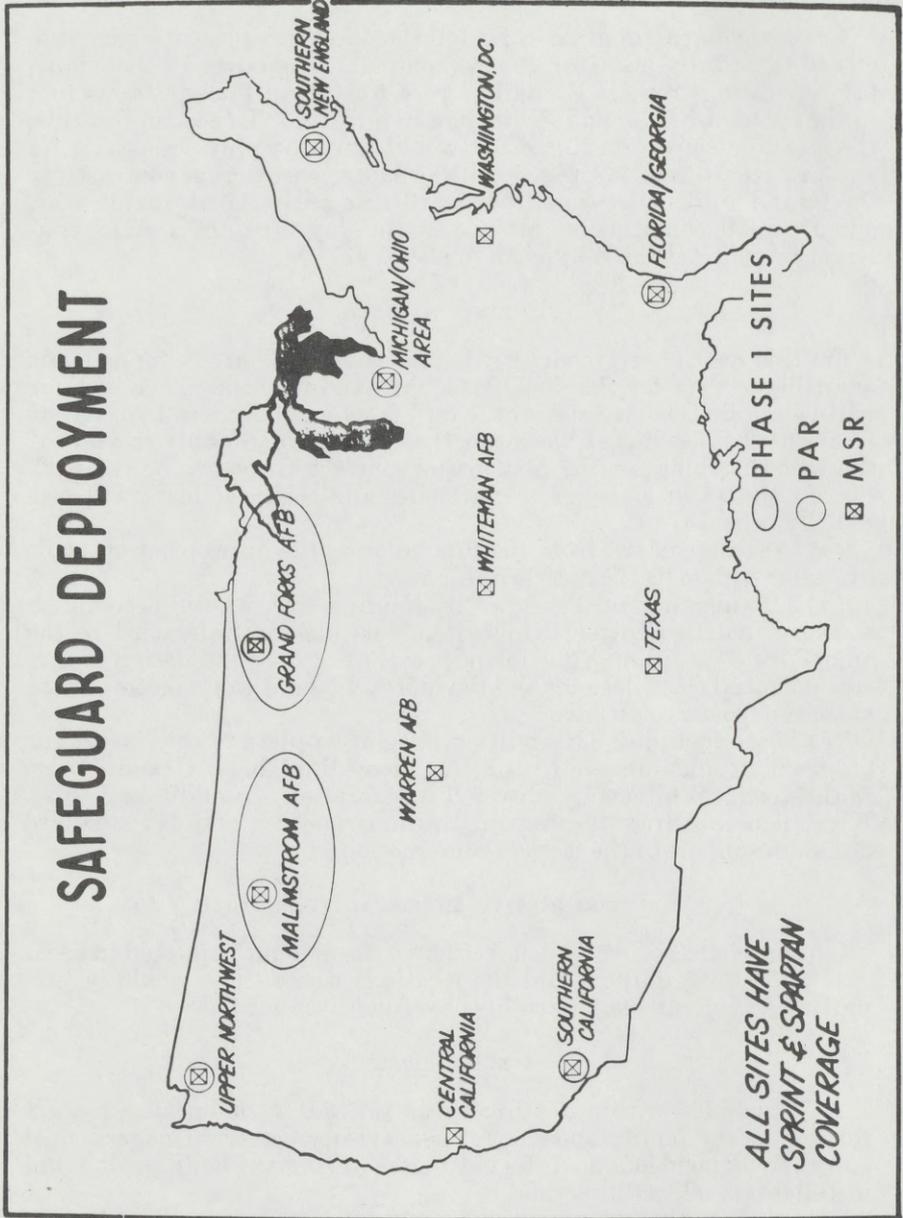
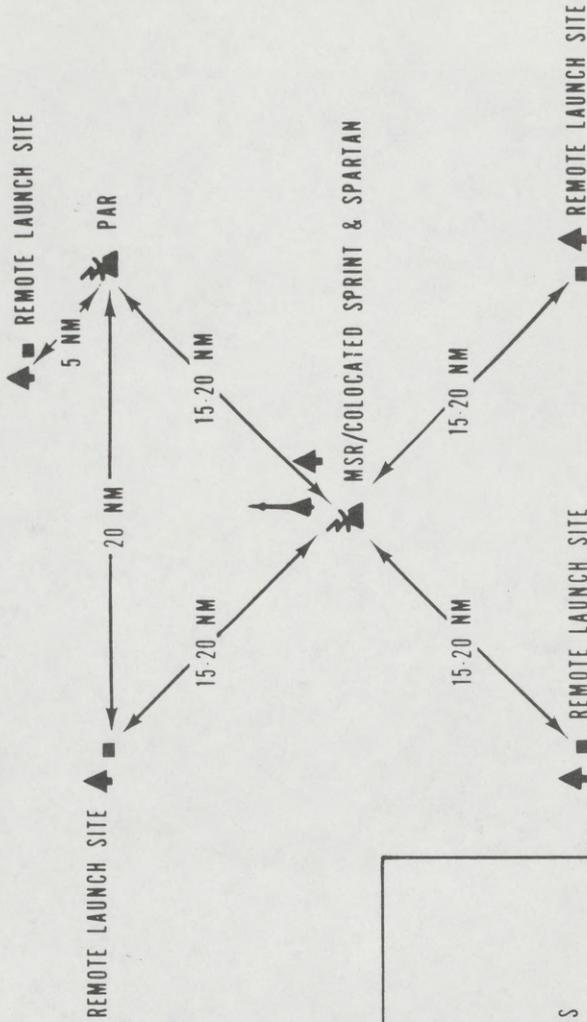


Chart 1

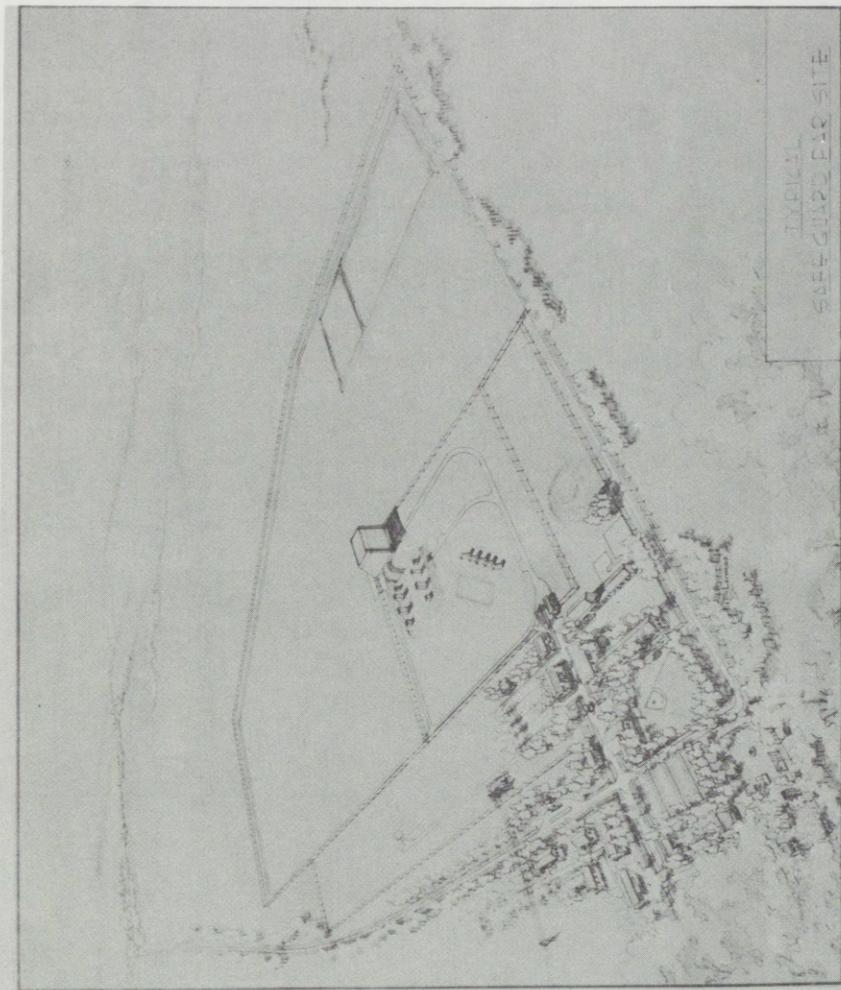
# A PHASE 1 SITE COMPLEX (WITH REQUESTED PHASE 2 ADDITION)



**LEGEND**

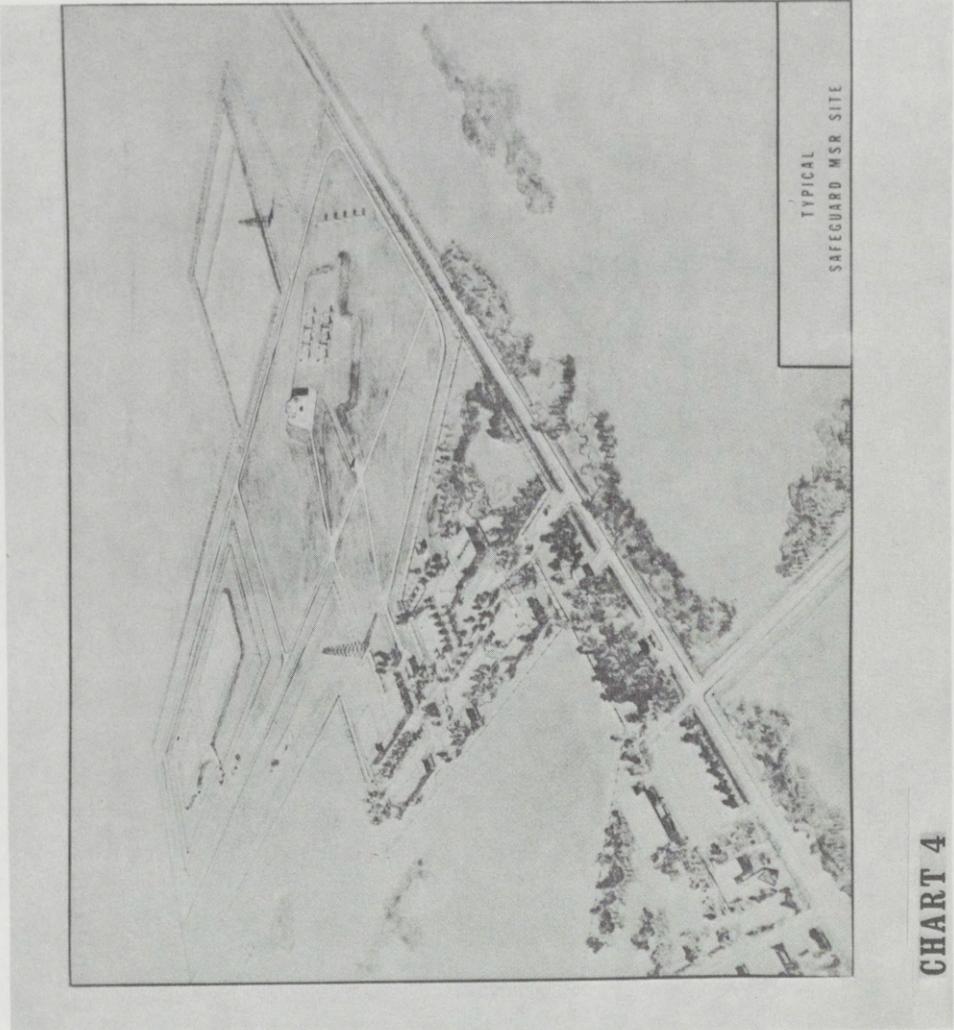
- ▲ SPRINT MISSILES
- ▲ SPARTAN MISSILES
- ▲ SAFEGUARD RADAR INSTALLATION
- REMOTE INSTALLATION

Chart 2



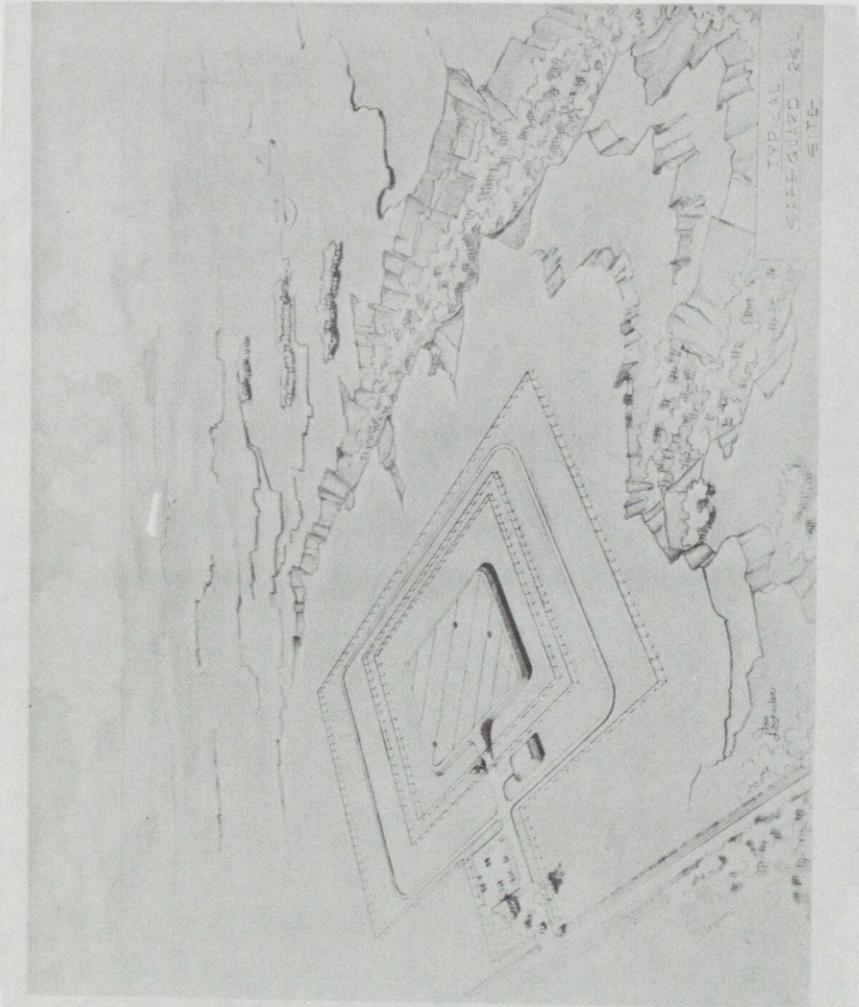
TYPICAL  
SALT GUARD PIER SITE

CHART 3



TYPICAL  
SAFEGUARD MSR SITE

CHART 4



**CHART 5**

PRIOR YEAR SITE AUTHORIZATIONS AND  
THOSE REQUESTED FOR FY 1971

<u>SITE</u>	<u>PRIOR YEAR AUTHORIZED STARTS</u>	<u>REQUESTED FOR FY 1971</u>
Grand Forks	PAR MSR 2 Remote Launch Sites (RLS)	2 Added RLS
Malmstrom	PAR MSR 2 RLS	2 Added RLS
Whiteman		MSR 4 RLS
Survey & Engineering for Five Phase 2 Sites		Northwest Northeast Michigan/Ohio National Capital Area Near Warren AFB, Wyoming
MCA in Support of R&D (Kwaj)	X	X
Central Training Facility	X	
Mission Depot Facilities		X

CHART 6

# SAFEGUARD CONSTRUCTION & I & T SCHEDULE

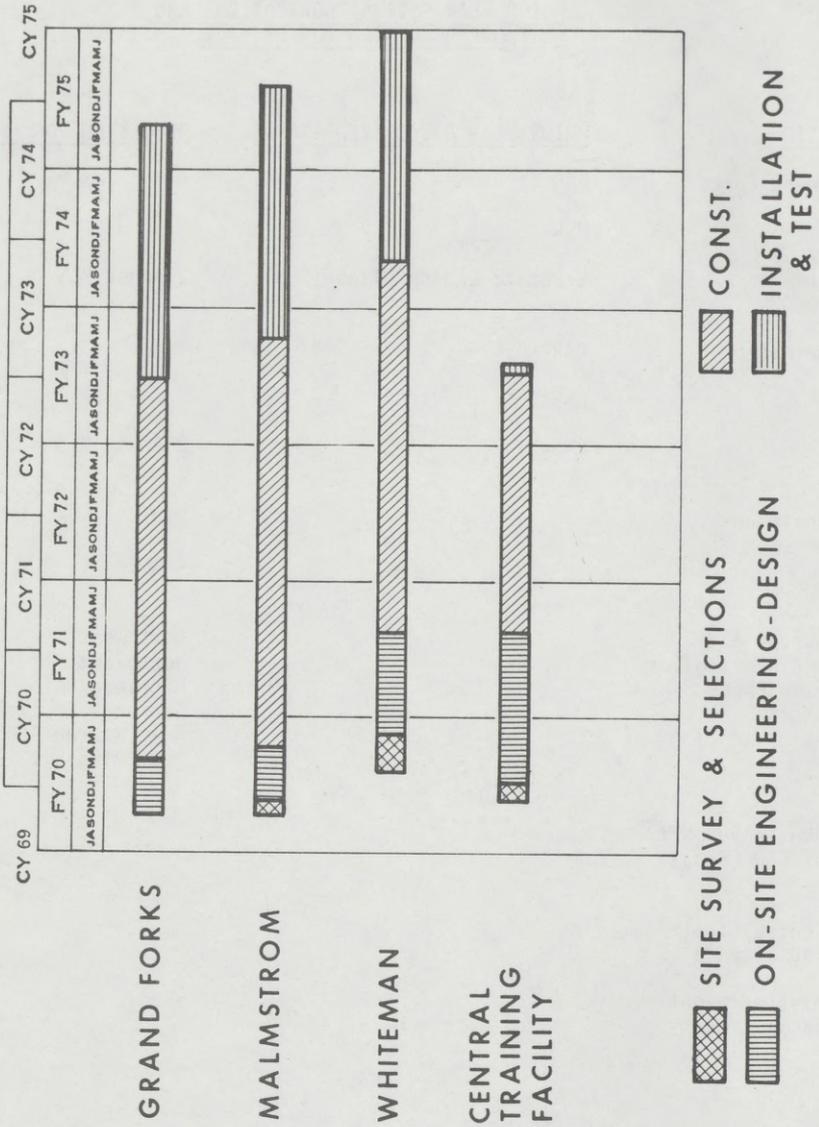


Chart 7

FUNDING  
(\$ in Millions)

<u>SITE</u>	<u>USE OF FUNDS APPROPRIATED FY 68-70</u>	<u>FY 71 REQUEST</u>	<u>TOTAL</u>
SENTINEL Effort not applicable to SAFEGUARD	\$18 Design & Construction	0	\$18
Grand Forks	\$191 Design, Land Acquisition, Major Construction	\$41 Complete Construction	\$232
Malmstrom	\$49 Design, Land Acquisition, Advance Construction	\$149 Major Construction to Completion	\$198
Whiteman	\$3 Design	\$127 Land Acquisition, Major Construction to Completion	\$130
Advance Site Preparation for Five Phase 2 Sites	\$4 Design	\$15 Design & Land Acquisition as Required	\$19
R&D Support (Kwaj)	\$27 Essential RDTE Construction	\$3 Continue RDTE Construction	\$40*
Central Training Facility	\$7 Construction		\$7
Mission Depot Facility & Area Offices		\$5 Major Construction or renovation to Completion	\$5
Standard Design	\$36	\$17	\$53
<b>TOTALS</b>	<b>\$335 M</b>	<b>\$357 M</b>	<b>\$702 M*</b>

\*Includes \$10 million for years FY 72-75 for Kwajalein R&D support Facilities.

CHART 8

Mr. SIKES. Thank you, General Starbird. You have given us a very interesting statement.

#### USE OF FISCAL YEAR 1970 FUNDS

What can you tell us about the adequacy of the fiscal 1970 funds for the purposes outlined?

General STARBIRD. For the purposes outlined, the 1970 and earlier appropriated funds should take care of the requirements as broken down in the schedule, chart 8, sir.

Mr. SIKES. Will all of the appropriated funds be utilized?

General STARBIRD. They all will be, sir, and we keyed our 1971 requirement to the amounts that would be committed in 1971.

#### SCHEDULES FOR CONTRACT AWARDS

Mr. SIKES. Will you be able to maintain the contract schedules that you suggested in your statement?

General STARBIRD. We think we will, sir. Actually the requests for bid for the first site, Grand Forks—are already out. Near the end of this month they are due to be received, evaluated, and award made in early April.

#### EXTENT OF COMPETITION FOR SAFEGUARD CONSTRUCTION CONTRACTS

Mr. SIKES. Has the interest which has been indicated given reason to believe there will be spirited competition between bidders?

General STARBIRD. I would like to ask General Young, the division engineer to answer that, if he would, please.

General YOUNG. I am not sure that I could define it as spirited competition.

Mr. SIKES. Are there several bidders?

General YOUNG. Yes; we would expect several bidders. It is a contract in excess of \$100 million. I might tell you that 37 firms asked to be prequalified to bid, and of those 20 firms were prequalified as either being able to bid alone or to sponsor a joint venture. Seventeen were qualified to participate in a joint venture. So there are adequate firms for several joint ventures.

Our indication is that a number of major firms have gone together into joint ventures because of the size and the risk involved in that kind of a construction project in North Dakota. We are expecting a minimum of three bids and possibly a fourth. We think for this size of a contract and knowing who is bidding it will be true competition.

Mr. SIKES. Is this a negotiated competitive bid?

General YOUNG. No, sir; this is a straightforward competitive bid to go to the lowest bidder.

#### SLIPPAGE FROM SCHEDULE SET FORTH FOR FISCAL YEAR 1970 PROGRAM

Mr. SIKES. Has there been slippage from the schedule outlined in the fiscal 1970 program?

General STARBIRD. There has been a retardation of the schedule. Actually it has been a threefold retardation. In the first place, we had hoped initially to get on site in the middle of the year, but decided

it would be prudent to wait until Congress acted, as I said in my statement; and we lost a few months due to that cause.

General Young had gone out separately in September to try to get a better and multiple set of estimates as to the reasonable time for construction. After he got those estimates back we decided to lengthen the contract construction period to increase the chances of bid and to decrease the amount of these bids. So that was the second cause. Then quite recently when it was decided that Whiteman would be requested for authorization, we put in a slightly additional delay, and the reason for that was this: We were trying to hold the last site as early as possible before that time because, of course, the production base as contrasted with the construction stays up until we have the last site in. Our last site in this case became Whiteman. It was no longer Malmstrom. So we decided to lengthen the phase 1 site schedule a little more in the interest of trying to reduce the construction cost involved. So there are those three causes and they have caused about a 9-month delay over the schedules I presented last year.

#### POSSIBILITY OF EXPEDITING CONSTRUCTION

Mr. SIKES. If there should be reason to expedite this construction in order to insure the availability of the system at an earlier date, could that be accomplished?

General STARBIRD. Yes; it could be. However, when you start compressing the schedule beyond that that we presently have, you probably have to pay a cost for that compression.

We have tried to balance off what would be a reasonable schedule with minimum compression against the increased cost that would come in other appropriations. We believe we have that balance now. Also, we have saved out a very short period of time as a contingency time. This is standard practice, but there is in the program about 45 days to 2 months. If we did not have to use it, it could permit us to make up unforeseen events that may occur; it could shorten time to readiness.

Mr. SIKES. What would be the shortest time in which you could visualize a useful program if you were directed to undertake a crash program.

General STARBIRD. We are building these features, sir, so that they can incorporate improvements should they become necessary. It is a little difficult to say how long they would be useful. We believe that any system in periods like 10, perhaps 15 or 20 years, might require changes. We are building the radar which we believe is the one to take care of the current objectives. We are building in provision in the radars so that you could incorporate more power, more selectivity in the future. With respect to the missiles, you probably will remember, we are building our missile silos for the area type defender, the Spartan, so they can accommodate an improved missile should we find that the research and development and the threat warrants putting it in.

To answer your question directly, I would say something over 10 years, but I do not know how much more.

Mr. SIKES. If you were required to expedite construction, what would be the greatest possible saving in construction time you could achieve on the first two sites?

General STARBIRD. I believe it might be feasible to make up 2 to 3 months on that schedule.

If we tried to do that, there is a fair chance that the bids might not fall within acceptable conditions for award. It is rather certain that the increase in cost would be very substantial.

Mr. SIKES. There have been several major changes in the ABM program. Have you acquired property at Boston, for instance, or elsewhere in anticipation of the program as recently set forth?

General STARBIRD. We acquired in fee simple only a very limited area, three-tenths of an acre at Boston.

However, we did do certain work up there under a right of entry, and we had condemnation proceedings in effect. The total of the construction work involved was of the order of 2 to 3 million. We are currently negotiating with the landowners to determine their damages, and to determine what the settlements would be.

I say "we," of course the Justice Department does this, but the Corps of Engineers is their agent in this case.

#### SCHEDULE AND FUNDING FOR FIVE ADDITIONAL SITES

Mr. SIKES. Are you in a position to discuss the schedule for construction, installation, and checkout of the additional five sites for which money for planning and other funds is requested at this time?

General STARBIRD. Yes; I can. It is a definite fact that you cannot get around, that you must follow a sequence of events to ready a site.

I will give typical times on this. In the first place, you must find a site, select it, acquire it, and do the detailed engineering to permit you to request a bid. This requires a year or slightly more if there are no serious difficulties. Then you must do your construction before you can start your installation. This is approximately 2½ years. Then, after that you can do your installation and checkout. For the first site, this requires approximately 2 years but rapidly reduces as you get experience to about a year and a half. As you brought out, Mr. Chairman, one part of the modified phase 2 request for authorization is for authorization to proceed at five sites to do the preliminary work that could save you that first year, or slightly more. To define that work we would do the surveying necessary to select the site. We would also, during that period of time, initiate engineering and try to bring our engineering plans up to a point where we were prepared to request a bid.

We would also acquire the land for the sites if required during fiscal year 1971 time frame. None of these different sites has been approved by the President for deployment. However, the five sites, one, none, or several, might be approved by him for deployment and then by the Congress at some later date. This would occur generally in the summer or early fall. We would be prepared for these sites to move out with a saving of a year's time should the threat reveal that it was necessary to proceed.

Mr. SIKES. The amount of planning money which is to be spent at these sites is less than that shown on the schedule which you provided for the record last year. Are any of the planning funds which are re-

quested this year to be used for advance site preparation for the five additional sites?

General STARBIRD. Yes, sir. For the actual survey and engineering about \$15 million worth of effort is contemplated, and the request is to cover that work. Last year, as you bring out, there was a request for advance preparation authority. We carried money in the request for appropriation at an amount totaling about \$28 million for the preliminary engineering survey, and for land acquisition of sites beyond the phase 1. It was decided not to proceed with that effort directly. Some of the moneys concerned—about \$7 million of that \$28 million—is being carried over to apply against this current plan. In addition to that, about \$17 million was applied to standard plans, to designs that could be used for any site, the first, second, third, fifth or tenth, should that come along. The remaining amount of the \$28 million was used for other purposes, or is programmed against features for award this year.

Mr. SIKES. What procedure will you follow in the use of funds for land acquisition at these sites?

General STARBIRD. We will use funds that actually were in the initial \$28 million last year carried over for any acquisition we would make.

#### REMOTE SITES AT PHASE 1 INSTALLATIONS

Mr. SIKES. The Army is requesting additional remote launch sites at the phase 1 locations. The initial operating dates for the first two sites are October 1974 for Grand Forks, and February 1975 for Malmstrom. Is it necessary to construct remote sites this year in order to meet the IOC date of the first two sites?

General STARBIRD. We think so, sir, and we reviewed this quite carefully before we asked for it in this year. The current plan is to actually make the award on those remote sites in the spring of 1971. This would be prior to the time that we could expect an authorization if we delayed a year.

#### SCHEDULE AND FUNDING FOR WHITEMAN

Mr. SIKES. The schedule for construction at Whiteman assumes that site survey and selection will begin at about this time and on-site engineering and design will commence in May of this year.

Are you planning to use prior year funds for this purpose?

General STARBIRD. I have to say as of the moment I am not quite certain, and let me explain that, if I may. Let me say we will use prior year funds, but I am not quite sure that the schedule we show is the one that rigidly we will follow, and this is the reason, sir. When we made up that schedule we adopted an optimum schedule, and as you point out, it shows we would start survey and engineering work within 2 to 3 months. However, Whiteman is a place where we are a little more favorably fixed than anywhere else except at Warren, in that we have made tentative site selection and we have made certain surveys. We are examining that data to see exactly when we would have to go back in order to hold to our schedule.

## SITE ACTIVATION SCHEDULES FOR FIVE ADDITIONAL SITES

Mr. SIKES. We have already discussed somewhat the schedule for five additional sites for which you are requesting planning and other funds. Can you give us a more detailed picture of your schedule for site surveys and selections; onsite engineering; and design, construction, and installation and test at these sites?

I am going to suggest that this be prepared for the record.  
(The information follows:)

## SITE ACTIVATION SCHEDULES FOR THE FIVE ADDITIONAL SITES

Assuming equipment readiness dates for one or more of the five additional sites in 1976 and 1977, we would need to start site selection in the near future and initiate onsite surveys and design investigations in early summer of 1970. These would be completed in the summer of 1971. We should also award an architect-engineer contract for development of standard plans for a two-face PAR in the summer of 1970. Other architect-engineer design contracts would be awarded in the latter part of 1970 and in 1971. Award of major construction contracts would start in the late fall of 1971 and would continue through fall 1972. Construction completions would occur in late 1974 and in 1975 in a manner which would permit installation and test of the weapon system equipment prior to the 1976-77 readiness dates.

Mr. SIKES. Do you expect shorter construction or installation and test time at these installations as a result of experience gained at the other sites?

General STARBIRD. Yes, we do; but let me break that out into parts. As far as the engineering is concerned, when you repeat the engineering even with a different architect-engineer firm, and particularly in view of the standard design, you gain certain time. In construction generally, no, from the point of view of experience, but the first two sites are very far north where you have bad weather conditions, whereas most of the other sites are somewhat more favorably fixed weather-wise. In installation and test, yes. As I mentioned a moment ago, we start out with the first sites with over 24 months for that detailed installation, test, and checkout, and this drops back about 6 months at later sites. We have in our schedules reflected this, sir.

## ALLOWANCES FOR DELAYS IN SITE ACQUISITION

Mr. SIKES. What allowances have been made for possible delays in schedule?

General STARBIRD. The only allowance specifically in there is the small amount of contingency time that we do have in to cover unforeseen difficulties that might arise.

Mr. SIKES. Is there a possibility of delays in land acquisition at any of the sites now proposed?

General STARBIRD. There is a possibility always. For the next site complex (Grand Forks and Malmstrom sites are already being acquired) at Whiteman, which is in the Minuteman field, we have made tentative selection, and generally the ground concerned is not ground that is under some high level of use. It is also not immediately adjacent to heavily built-up areas. It is in the area of the Minuteman fields. We

expect minimum problems there in connection with the acquisition. One of the reasons we want to get started on the five added sites not to be authorized at this time but only authorized for advance preparation is to determine whether or not there are problems in connection with finding and acquiring the sites.

#### LABOR AGREEMENTS

Mr. SIKES. Have you attempted to reach labor agreements in any of the areas in which this construction is to be conducted?

General STARBIRD. We have dealt here with labor and with organizations in the sense of trying to acquaint them with what was the situation. I believe General Young could better answer that particular question.

General YOUNG. Yes. We really have not attempted to negotiate with labor unions as such for a no-strike pledge. But we have been working very hard to develop an atmosphere of labor harmony in the areas concerned. At the national level we have briefed the union leaders and the Association of General Contractors, and we have had meetings with the Federal Mediation and Conciliation Service, and we have been in the North Dakota and Montana areas, including those people. We want them to understand Safeguard, understand the kind of labor and the amount of labor and what it involves vis-a-vis industrial unions and craft unions.

In addition when we do get started onsite we intend to have a volunteer management-labor organization which will have a twofold purpose. If you have a communications channel you have a tendency to know what is going to happen, and you have a vehicle to quickly solve disputes. We feel it is important, and that is about the line we have been working on.

#### FUNDING

Mr. SIKES. I would like to have information provided for the record that updates the funding information you gave us last year and which appears on pages 142 and 148 through 150 of our hearings.

(The information requested follows:)

STATUS OF SAFEGUARD MILITARY CONSTRUCTION FUNDS AS OF MARCH 1970 (\$ in Millions)

Major Category	I. Authorized/Appropriation			II. Reprogramming - SENTINEL <sup>1/</sup>		
	FY 68	FY 69	Total	FY 68	FY 69	Total
Planning/Design	4.0	36.0	40.0	+21.1	+5.1	+26.2
Construction	64.0	227.3	291.3	-47.3	-2.4	-49.7
Access Roads						
Support of R&D (Kwajalein Missile Range)	13.4	-	13.4	-	-	-
Total	81.4	263.3	344.7	-26.2	+2.7	-23.5

Major Category	III. Obligation Authority Available to Support OSD Approved SENTI- NEL Program			IV. Reprogramming to SAFEGUARD		
	FY 68	FY 69	Total	FY 68	FY 69	Total
Planning/Design	25.1	41.1	66.2	-	-14.6	-14.6
Construction	16.7	224.9	241.6		-72.9	-72.9
Access Roads					+4.5	+4.5
Support of R&D (Kwajalein Missile Range)	13.3 <sup>2/</sup>	-	13.3	-	-	-
Total	55.1	266.0	321.1	-	-83.0	-83.0

Major Category	V. Obligation Authority Available to Support OSD Approved SAFEGUARD Program				VI.
	FY 68	FY 69	FY 70	Total	FY 71 Request
Planning/Design	25.1	26.5	14.1	65.7	27.4
Construction	16.7	152.0	60.5	229.2	322.0
Access Roads		4.5	9.8	14.3	4.4
Support of R&D (Kwajalein Missile Range)	13.3	-	12.7	26.0	3.2
Total	55.1	183.0	97.1 <sup>3/</sup>	335.2	357.0

## NOTES:

1/ With appropriate Congressional approval, funds were reprogrammed to meet changes in requirements within the overall total of funds authorized and appropriated by the Congress for the Army.

2/ R&D support funds reduced by \$.1 M through reprogramming.

3/ Application of \$83.M of FY 69 authorized and appropriated funds to the FY 70 total obligation authority (TOA) requirement of \$97.1 M reduced the FY 70 new obligation authority (NOA) requirement to \$14.1 M.

## SAFEGUARD MILITARY CONSTRUCTION OBLIGATIONS BY SITE AND CATEGORY - \$ in Millions

Sites	FY 68 (Actual) 1 Jul 67-30 Jun 68		FY 69 (Actual) 1 Jul 68-30 Jun 69		FY 70 (Actual) 1st Qtr		FY 70 (Actual) 2 Qtr		Acc Rds
	Plan-Des	Const	Plan-Des	Const	Plan-Des	Const	Plan-Des	Const	
Grand Forks PAR			.52		-.52	2.06	.79	.19	.19
Grand Forks MSR	.55		.24		-.79	2.07	1.17	.03	
Malmstrom PAR			.24		-.24		1.37		
Malmstrom MSR			.37		-.37		1.56		
Whiteman MSR									
Advance Site Prep.*			.19		-.19				
R&D Support (Kwajalein)		2.12	.38	3.91	.21		.13		
Central Training Facility			.13		.02		.37		
Mission Depot Facilities and Area Offices			.02		-.02				
Misc Standard and Non-Tactical Design	1.73		1.28		16.26		4.33		
SENTINEL Effort Not Applicable to SAFEGUARD	11.79		11.87	5.94	-9.65	-3.93		.29	
Subtotal	14.07	2.12	15.24	9.85	4.71	.20	9.72	.51	.19
TOTAL		FY 68: 16.19		FY 69: 25.09		4.91		10.42	

\* Includes Northwest, Northeast, Michigan/Ohio, NCA and Warren, Wyoming.

SAFEGUARD MILITARY CONSTRUCTION OBLIGATIONS BY SITE AND CATEGORY - \$ in Millions

Sites	FY 70 (Estimated)		FY 70 (Estimated)		FY 71 (Estimated)		FY 71 (Estimated)	
	Plan-Des	3rd Qtr Const	Plan-Des	4th Qtr Const	Plan-Des	1st Qtr Const	Plan-Des	2nd Qtr Const
Grand Forks PAR	1.00	2.50	.08	65.00	3.24	5.00	1.00	1.00
Grand Forks MSR	1.86	3.00	.23	94.00	2.77	6.50	1.00	1.00
Malmstrom PAR	.50		.36	12.25		.60	1.20	5.40
Malmstrom MSR	1.50		.35	9.50		6.50	1.20	3.63
Whiteman MSR	.50		2.00			.70	1.48	.64
Advance Site Prep.								
R&D Support (Kwajalein)		8.94		4.23			3.42	5.13
Central Training Facility		.17		.03				
Mission Depot Facilities and Area Offices								.75
Misc Standard and Non-Tactical Design		3.17		2.50		2.16		4.35
SENTINEL Effort Not Applicable to SAFEGUARD								1.57
Subtotal	8.59	14.61	5.55	185.73	6.01	18.60	10.96	13.99
TOTAL		23.40		197.29		27.60		24.95

TOTAL FY 70: 236.02

## SAFEGUARD MILITARY CONSTRUCTION OBLIGATIONS BY SITE AND CATEGORY - \$ in Millions

Sites	FY 71 (Estimated)		FY 71 (Estimated)		FY 72		TOTALS
	Plan-Des	Const	4th Qtr	Acc Rds	Plan-Des	Const	
Grand Forks PAR	2.00	.32					83.47
Grand Forks MSR	28.68	3.41			4.00		149.14
Malmstrom PAR	52.00	3.24			2.05		78.97
Malmstrom MSR	89.69	2.26			3.54		119.73
Whiteman MSR	.20	70.82	28.66		20.27		129.67
Advance Site Prep.	5.00		3.55		.67	.45**	18.22
R&D Support (Kwajalein)			3.20		16.80		39.92
Central Training Facility	6.36						7.08
Mission Depot Facilities and Area Offices			4.23				5.73
Misc Standard and Non-Tactical Design	3.90		3.34		1.00	8.31***	52.33
SENTINEL Effort Not Applicable to SAFEGUARD							17.94
Subtotal	9.10	249.55	9.90		6.89	39.82	1.67
TOTAL		268.55	46.71			57.09	702.20
	TOTAL FY 71: 367.81						

\*\* Real estate acquisition for Northeast PAR and MSR and Northwest MSR.

\*\*\* Design estimated to be required after construction contract award and hence chargeable to construction funds.

## COST INCREASES—PHASE 1 SITES

Mr. SIKES. Costs for the phase 1 sites have increased from some \$200.9 million at Grand Forks and \$179.9 million at Malmstrom, as indicated last year, to \$232 million at Grand Forks and \$198 million at Malmstrom. What are the major cost differences, and is there any reason to feel that these costs will not continue to go up as the construction progresses?

General STARBRID. I think I can best answer that by taking a summary of what the costs were last year and the costs for the same items this year, and then explain what the changes are, and then I can go to the details of those particular sites, if you wish. Last year, the total estimated cost was \$490 million. The current estimate for the same phase 1 would be about \$518 million, or about a \$28 million increase for the period of time concerned. There have been some pluses and some minuses in this period. In the first place we have had significant price level increases which run something better than 7 percent in the estimate, or approximately \$32 million.

When I say this price level, I mean inflation.

So there is about a \$32 million increase right there. We have transferred some work that used to be PEMA funded over into MCA. That is because the work was more appropriately MCA. It was putting in piping and trays to carry cable and this sort of thing. The MCA increased by another \$32 million and the PEMA decreased through that. It was not a one-to-one transfer, however, in that for MCA we carry a 15-percent contingency until the award is made and in PEMA we do not carry such a contingency. On the other side of the ledger, we were able to knock out a portion of the central training facility at about \$9 million. When we reviewed overall our construction estimates, and refined them, they came down by \$24 million just because we were able to get into them in more detail and find things that were a little simpler. Therefore the net is about \$28 million. I can take each of the site complexes should you desire, but they both fall within that.

If you would prefer, rather than take your time, I would insert that for the record in detail.

(The information follows:)

PHASE 1 COST COMPARISON 1969 TO 1970—\$28 MILLION DIFFERENCE BETWEEN \$490 MILLION AND \$518 MILLION

(Dollars in millions)

Reason for change	Grand Forks	Malmstrom	Nontactical facilities and miscellaneous adjustments in estimates	Total
Price level (inflation).....	12.0	12.0	8.0	32.0
Added design due to criteria changes.....	.2	.2	1.6	2.0
PEMA interface transfer.....	15.4	14.5	2.1	32.0
Central training facility—reduction in scope.....			-9.0	-9.0
Mission depot—deleted from phase 1.....			-5.0	-5.0
Refined estimates (adjustments permitted by more advanced design).....	-11.1	-19.7	6.8	-24.0
Totals.....	16.5	7.0	4.5	28.0

## FINAL FOUR SITES

Mr. SIKES. Are any of the funds requested for fiscal 1971 to be used for the final four sites of the program?

General STARBIRD. No, none, sir.

## FUNDS REQUESTED IN FISCAL YEAR 1971 FOR FIVE PHASE 2 SITES

Mr. SIKES. Would you provide for the record details on the funds which are requested for the phase 2 sites in the fiscal 1971 budget? That can be provided for the record.

(The information follows:)

*Advance planning funds requested in fiscal year 1971 for the phase 2 sites*

	<i>Million</i>
Northwest.....	\$4.5
Northeast.....	3.3
National Command Authority.....	2.8
Michigan/Ohio.....	2.3
Warren.....	1.9
Total.....	14.8

Mr. SIKES. What additional funding would be required in later years to complete these sites?

General STARBIRD. I would have to provide that for the record. There is no commitment to make the deployment and we do not have a definite schedule, in the sense of schedules against cost. I will compute that.

(The information requested follows:)

Based on December 1969 price levels and site readiness dates in 1976-77, it would require a total of \$748 million MCA (\$479 million in fiscal year 1972 and \$269 million in fiscal year 1973) to complete construction of the Northwest, Northeast, National Command Authority, Michigan/Ohio and Warren sites.

## FUNDS REQUESTED IN FISCAL YEAR 1971 FOR WHITEMAN

Mr. SIKES. What are you requesting in fiscal 1971 for Whiteman?  
General STARBIRD. \$127 million for 1971.

## FUNDS REQUESTED IN FISCAL YEAR 1971 FOR PHASE 1 SITES

Mr. SIKES. Detail for the record the funding which is requested for phase 1 sites in the fiscal 1971 budget.

(The information follows:)

Fiscal year 1971 funding requested for Grand Forks totals \$41 million, and is required for completion of collocated nontechnical support facilities and for construction of four remote Sprint launch sites.

Fiscal year 1971 funding requested for Malmstrom totals \$149 million and is required for major construction of technical facilities and nontechnical support facilities at the PAR and MSR, and for construction of four remote Sprint launch sites.

Mr. SIKES. What additional funding would be required in later years to complete these sites?

Provide that for the record.

(The information follows:)

No additional MCA funding subsequent to fiscal year 1971 is currently estimated to be required to complete the Grand Forks and Malmstrom sites.

NO ADDITIONAL FUNDING REQUIRED FOR WHITEMAN IN LATER YEARS

Mr. SIKES. What additional funds will be required for Whiteman?

General STARBIRD. If you mean additional after 1971, none, sir. We would complete the obligation in 1971 and the first quarter thereafter before the authorization and appropriation could be expected. There is carried on chart No. 8, sir, a footnote which says \$10 million out of the \$702 million is for later year work at Kwajalein. That is on research, development, and test facilities at our test area.

These are all the later year funds that would be requested. To answer your point, \$10 million for research and test facilities.

TRAINING FACILITIES

Mr. SIKES. The cost of training facilities at Fort Bliss has decreased from \$15 million as shown last year to \$7 million this year. How was that accomplished?

General STARBIRD. What we did was to reexamine a different concept of construction. We last year carried the facilities necessary to train the people should we go to the full 12-site deployment. I had them redo it on the basis of building to meet only what was recommended for approval, in this case three sites, but with provision that you could increase if later deployments were made. This reduced the requirement in space and in dollars by the amount you said. I did have a table in the testimony inserted last year. Perhaps you would like me to take that table, change the figures, and insert it this year.

Mr. SIKES. If you will, please.

(The information follows:)

CENTRAL TRAINING FACILITY

1. Training facility construction at Ft. Bliss will be consolidated during Architect-Engineer design to insure maximum use of basic functional areas. This consolidation is expected to provide the following major areas:

	(\$ in thousands)	
	<u>Sq. Feet</u>	<u>Cost</u>
a. Administrative/Academic: Includes classrooms, instructor offices & training staff administrative space, technical library, and classified documents storage and processing areas.	53,770	\$1,257
b. Tactical Support Equipment Labs (Heavy & Light Diesels): Practical exercise areas for operation & maintenance of primary site power sources to include large diesel engines, generators, and ancillary equipment.	40,470	1,408
c. Electronic/Data Processing Labs: Practical exercise areas especially equipped with training devices, simulators and mock-ups to support instruction on maintenance and repair of tactical electronic and data processing equipment to include basic digital electronics.	25,460	752
d. Radar Training Labs: Practical exercise areas equipped with training devices, simulators, & mock-ups to support instruction on maintenance and repair of Perimeter Acquisition Radar & Missile Site Radar.	23,365	1,011
e. Site Support Training Area: Practical exercise areas equipped with training devices, simulators, mock-ups, etc. to support instruction in repair of electronic test equipment, special instruments used in repair of tactical SAFEGUARD equipment on site, and special purpose base support facilities such as test equipment to maintain training devices.	19,740	592
f. Missile Training Area: Deleted. To be accomplished on site.	-	-
g. Training Base Support: Warehouse, fencing, security aids, equipment installation, etc.	7,410	47
h. Site work and utilities.	-	1,355
TOTAL MAJOR CONSTRUCTION	170,215	\$6,422
2. Renovation of interim training facilities at Ft. Bliss.	11,000	\$158
3. Planning-Design for 1. and 2. above.	-	500
	<u>181,215</u>	<u>\$7,080*</u>

\* December 1969 inflationary level

## MISSION DEPOT FACILITIES AND AREA OFFICES

Mr. SIKES. What is proposed in the way of mission depot facilities and area offices?

General STARBIRD. I will speak first on the matter of mission depot facilities. We know that there must be a depot where we can repair and stock, for example, phase shifters, or circuit boards, which you have seen on computers that would be unique to the system. We will also stock there certain of the more standard items to have them readily available for rapid shipment out. These would be a part of the overall Army stock. We ought to have those under a single control so they are held to minimum levels, and we are working with the Army Materiel Command to find space in the amount of 400,000 square feet in one of their existing depots. We have not selected that depot.

The estimate is only that for modification. The exact dollar amount I will have to ask General Young and will ask him to give it in a moment. In addition there will be smaller modifications done at three of the existing depots that handle warheads. This is an estimate at this time. The details are not firm.

Could you elaborate and also cover the area offices?

General YOUNG. The current estimate on the depot is \$4.95 million, and for the area offices at the PAR and MSR for three sites is \$780,000. That totals to \$5.73 million. Actually, to round the whole numbers, this was rounded to five. It is actually a little closer to six.

Mr. SIKES. I would like to have for the record a more detailed breakdown of these estimates.

(The information requested follows:)

*Mission depot, warhead storage, and area office cost estimates*

Mission depot.....	\$4, 280, 000
Modifications to buildings at up to 3 depots for warhead assembly and storage.....	670, 000
Area and resident offices at tactical sites during construction and installation and test intervals:	
Grand Forks, Malmstrom, and Whiteman MSR's.....	505, 000
Grand Forks and Malmstrom PAR's.....	275, 000
Total.....	5, 730, 000

SAFEGUARD R. & D. FACILITIES, KWAJALEIN

Mr. SIKES. There is a request for \$3.2 million for Safeguard R. & D. facilities at Kwajalein. Would you explain this requirement?

General STARBIRD. Yes, sir. The Kwajalein Atoll is our primary test area.

We have a big radar there and it is the only place we can fire our missiles to full range under control of the radar. The amount requested is to carry out the modification of one more cell at that range, one more cell for the Spartan missile. I mentioned that we were developing, and might well deploy, an improved Spartan. It is a longer missile. Of the total, about \$1,600,000 is attributable to that modification of the cell. Then in addition there was certain damage to the shore and to the floating dock at the island where our radar is. Repairs on the shoreline are \$500,000, and to construct the jetty and modify the pier is about \$210,000. Then there is one other cell modifi-

cation we want to make. We want to put a tactical cover on one of the existing Spartan cells which has only an R. & D. cover and the cost of that is \$206,000.

#### ACCESS ROADS

Mr. SIKES. What is the basis of the request of \$7.2 million for access roads, if that is the correct figure?

General STARBIRD. I would like to ask General Young to cover the matter of access roads.

General YOUNG. Yes, the amount is \$4.4 million, sir, for Whiteman, which is based on the requirement for an MSR and remote sites. It is based on a reasonable knowledge of the area but not in the same detail we have in North Dakota and Montana at this time.

#### COST OVERRUNS

Mr. SIKES. Do you anticipate cost overruns in the military construction portion of the Safeguard program?

General STARBIRD. We think the estimates are quite good now. We have had a very extensive period of study before the first contract is to be awarded in early April. However, on the other side, these are most complex structures. They are structures that are unique, and until we get our first bid we really won't know for sure whether the estimates are as excellently grounded as we hope they are. On the other side, the matter of cost overruns, we certainly would not expect to overrun the amount made available to us. However, there has been, and still is continuing escalation, and certainly escalation if it occurs will increase the cost.

Mr. SIKES. Thank you very much, General, for your response. Are there questions?

#### SCHEDULE FOR WHITEMAN

Mr. McFALL. What was the original schedule for the construction of Whiteman?

General STARBIRD. The Whiteman site was not authorized before. We had always visualized if it were—we try to think forward and say, if this site is authorized next year, when would it become available—we considered that if it was authorized in fiscal 1971 for start, it could be available in mid-1975.

Mr. McFALL. I mean in the original plan, when you got the authorization of Grand Forks and Malmstrom. Presumably you were going to come in for other sites later and another phase and so on. What was the original plan?

General STARBIRD. It was somewhat earlier and I will have to go back and get it. At that time we had a schedule which, if Whiteman had also been approved in fiscal 1970, then we would be able to bring it in in mid-July.

Mr. McFALL. Mid-July of what year?

General STARBIRD. Mid-July 1975.

Mr. McFALL. When the plan was changed to Safeguard so you would have the two sites.

General STARBIRD. If that is what you mean, back under the old Sentinel plan it was somewhat earlier. The first site under Sentinel

was to be the Boston site in October 1972. However, when the reorientation was made and we went to a new set of sites, then we changed the schedule. I will have to get you what the schedule was under the old Sentinel plan.

(The information follows:)

The equipment readiness date for Whiteman MSR under the Sentinel deployment schedule was July 1, 1973.

Mr. McFALL. AS I understood the Safeguard plan, the authorization that was obtained last year was to be sufficient for at least another year before further authorization would be requested. Am I correct in this?

General STARBIRD. That is correct. We have not spent any money on Whiteman during the year.

#### DATE ON WHICH PRESENT PROGRAM WAS SELECTED

Mr. McFALL. When were you advised that it would be necessary for you to prepare for authorization of Whiteman in this fiscal year?

General STARBIRD. What we had prepared in the answer to requests was a whole series of different alternatives. The alternatives ran all the way from no added authorization in this year but certain ones authorized in 1972, down to authorization that all 12 be authorized this year.

Mr. McFALL. When did you prepare this sort of schedule?

General STARBIRD. We started this sort of thing on request of the Office, Secretary of Defense, in very late October.

Mr. McFALL. Giving him a series of options of what he might request?

General STARBIRD. That is correct. He actually gave us guidance on what options he would like to see us cost and schedule. Each one is quite an exercise. When you change the schedule a little, for example, then you change the cost somewhat, particularly where it falls in one year or another.

Mr. McFALL. When did you receive notice from the Secretary of Defense that it was to be the option including Whiteman as propounded here in your statement today?

General STARBIRD. There were several options still alive with the Office of the Secretary of Defense until immediately before the Secretary's detailed announcement to the Congress as to what was the President's recommended program. To answer your question, a very few days before I got word informally but not as a formal announcement.

Mr. McFALL. In other words, you probably got it about the same time the rest of us got it when the President announced it.

General STARBIRD. No; actually the President announced that he was going forward. He may have decided on the option that he intended to proceed on. I do not know one way or another. But we still had several options we knew were being looked at, and we were modifying them very slightly—maybe moving a site by a quarter in time and recosting it. We were doing that right up until a very few days before Secretary Laird's announcement. There was almost a month's difference between the two. The President made his announcement that he intended to go forward with a phase 2 step on the 30th

of January, I think, and it was not until the 24th of February that Secretary Laird announced the details of that step.

#### ADJUSTMENT IN BUDGET REQUEST

Mr. McFALL. I am interested in the fact that your original estimate was \$397 million; but when you checked it out you came down to \$357 million, for which I am grateful. When you were costing it out it would seem that you would have had available almost the exact information as to how much it would cost.

General STARBIRD. We had variants, and even variants of variants, and we took one that we thought was a general indication of the middle ground of what we believed at the time was under most active consideration and we costed that.

#### DELAY IN SCHEDULE DUE TO WHITEMAN DEPLOYMENT

Mr. McFALL. You referred to a delay which came to about 9 months as the result of the way the whole thing was put together, including the action in requesting this add-on, Whiteman, which is before us. How much added delay do you think can be attributed to this request?

General STARBIRD. I can give you the exact number of months we retarded. When there was an announcement or decision that there would be another site authorized, we retarded each phase 1 site by 2 months. However, we did not do this because we were forced to. We did it because the cost of the program is very sensitive to the length of time in which the deployment is being carried out, particularly in research and development, and procurement where costs go on until you have finally gotten the last site in. There was a space of time, more than we thought necessary, between the second site and the Whiteman site. We lengthened by 2 months because we thought we could reduce our construction costs thereby without increasing our procurement or R.D.T. & E.

Mr. McFALL. It was merely a matter of a couple of months in order to save money.

General STARBIRD. Yes, sir.

#### STRATEGIC IMPORTANCE OF WHITEMAN DEPLOYMENT

Mr. McFALL. What is the strategic effect of the Whiteman deployment? What additional protection will it provide? It would provide protection for the Minuteman field where it is located. What other kind of protection would it provide?

General STARBIRD. Whiteman is the only site that contributes to all of the Safeguard objectives save one. It is the one that contributes to the most objectives. It contributes to the Minuteman defense, the hard point, close-in defense. It is a site required if you go on to give area coverage of the entire country against a light attack. You have to have one near there to cover the south-central part of the United States. Lastly, it is a site that would be in the area defense pattern for protection of the bombers, to allow alert bombers time to fly out

safely should it become necessary to put in a 12-site deployment to meet the SLBM attack against the bombers. It also contributes to a fourth objective which is accidental attack. The Montana and North Dakota sites give you a very light protection for about a third of the country. Whiteman increases this area. If the attack were an accident it could be targeted against any area, and therefore it contributes to that objective.

The only objective of the overall Safeguard deployment which Whiteman does not contribute to is the protection of the national command authorities—the authorities here in the Washington area—to let them have time to respond. Only the site in the National Capital area contributes to that objective.

#### SCHEDULE FOR DEPLOYMENT OF FIVE ADDITIONAL SITES

Mr. McFALL. Do you have any idea what the schedule might be for requests for authorization of any of the future sites, that is, the completion of the five.

General STARBIRD. I think there is no schedule. I am convinced that the course is as has been indicated by the President. He will decide on what added authorization is required in any year in his annual review that he makes that year. If it should become necessary to authorize these five, one of the five, or the final nine, then it would be the late 1970's before the deployment could be in. But to answer your specific question, no, I do not think there is any clear idea of exactly when any additional sites would be approved.

#### EXPENDITURES

Mr. McFALL. I have one final question. How much of the money that would be appropriated this year would you be able to expend in this fiscal year?

General STARBIRD. I will have to get an estimate of that, sir. As you know, we must obligate the full amount of a contract at the time we proceed, and much of this work will actually extend into the 1972 period.

Mr. McFALL. I should refine my question, and say, How much of the money that might be appropriated for the add-on, including Whiteman and the others would you expend in this fiscal year?

General STARBIRD. The added obligations for all appropriations in the fiscal year would be approximately \$400 million, of which an estimated \$50 million would be expended. With respect to MCA only, the estimated obligations would be \$188 million—including about \$40 million to be obligated in the first quarter of fiscal year 1972—of which \$11 million would be expended during the year.

Mr. SIKES. Isn't it true that the funds are available from prior year money for planning for the five sites?

General STARBIRD. That is right for the five sites. I was talking about what we would obligate during the year for those five, the \$40 million. Of that amount as I remember we estimate around \$3 million would be expended.

## DELAY DUE TO POSSIBLE DENIAL OF ADDITIONAL AUTHORIZATION

Mr. McFALL. If this were not authorized or funded in this year, what would be the delay for that part requested for this year? I think you went into that but I did not get the answer.

General STARBIRD. It would be delayed at least a year, assuming that there was no authorization until a year later.

Mr. LONG. Are you talking strictly about Whiteman?

Mr. McFALL. Whiteman and the added remote launch sites, the entire package that is being requested this year.

General STARBIRD. It is approximately a year.

Mr. McFALL. Thank you, Mr. Chairman.

Mr. SIKES. Are there further questions on my right?

Mr. PATTEN. I am just a little curious. Did the earthquakes out there affect your installations any?

General STARBIRD. No, sir. Our installations are not there but actually they are built pretty hard. They are built to withstand the shock that will occur from a nuclear burst close enough to cause an air overpressure of ——— pounds per square inch. They are rugged.

## MOVEMENT AWAY FROM CITIES

Mr. PATTEN. We ran into a political storm in Chicago and Boston. Is there a difference in these five sites so we might avert some of that controversy.

General STARBIRD. There is quite a difference. What we were trying to do under the Sentinel program was to place our sites close enough so that the short range Sprint missile could give a fairly high degree of protection to a part of a major city. That meant that we were trying to get into a point where we were only 6, 7, 8, 9, 10 miles from a fairly heavy portion of the built-up section. As has been announced, and been the intention since the reorientation, we will not make an attempt to protect against the heavier attack of the U.S.S.R. That protection will be gotten through deterrence against a third party such as the Chinese People's Republic. For a matter of several years at least, a light area defense should be able to handle all they can launch. We expect to be much more remotely located with respect to the heavily populated areas.

Mr. PATTEN. I have nothing further.

Mr. McFALL. Dr. Long.

## SIGNIFICANCE OF WHITEMAN DEPLOYMENT

Mr. LONG. General, a good deal of puzzlement, in addition to opposition—has arisen out of this whole program. Many of us can understand the decision to go ahead in Grand Forks and Malmstrom on the ground that you have to put something into hardware. You cannot go on with R. & D. forever. I can even understand making certain advance preparations on these other five sites. What puzzles me is Whiteman. It seems Whiteman is either too much or too little. If we do not have a real threat, then it is too much. Frankly, I do not think we have a threat that amounts to anything, as far as China is concerned. So to me it is too much. But if we did have a real threat

coming from China or from Russia, it is too little. It does seem to me Whiteman falls between two stools. On the one hand it is neither experimental, as in the case of Malmstrom and Grand Forks; on the other it is not strictly advance preparation as in the other five. For the record, I would appreciate your trying to clear up that puzzlement. I am sure you have seen it expressed in some of the newspaper columns.

General STARBIRD. Yes, I certainly have. I reread last night your questions of last year. One of the alternates considered was to proceed only with the two sites and delay.

Mr. LONG. And also do some advance preparation on the other.

General STARBIRD. There was another alternate that we looked at. The threat was carefully evaluated, and the buildup both in SS-11's, SS-9 and in technical improvement revealed through testing has been on the high side or possibly higher in some areas than was forecast before.

Mr. LONG. Then why not go ahead full speed on a much bigger program if you have that big a threat?

General STARBIRD. Of course, one of the sites being examined for advance preparation is Warren, which is another increment of the Minuteman defense. Also, as I stated, that one site, Whiteman, contributes not only to Minuteman defense but also area defense, and to SLBM defense should that be required. I think those are the primary factors that were driving. It was the increasing threat, Mr. Long, and the fact that Whiteman is a particularly valuable location to defend.

Mr. LONG. More than the other five.

General STARBIRD. In that it fulfills three missions. Except for Whiteman, Warren is one more of the same type except it gives lesser area protection. The area is less densely populated farther to the west than it is in the area between Kansas City, St. Louis and through there. The Washington site, or the National Capital area site, is an area defense site. It is a site designed particularly to take care of area defense of the densely populated eastern coast just as there are two sites in the total deployment on the west. The other sites, the three, Michigan-Ohio, northwest and northeast, complete the eyes, the PAR looking north, and would give us a fairly substantial coverage of the whole area should the Chinese threat continue to progress rapidly.

Therefore, to answer your point, the ones being readied have a lesser overall Safeguard objective application.

Whiteman has application to substantially all the missions, all except the protection of the National Capital authorities.

#### SALT TALKS

Mr. LONG. In listening to the Secretary, I got the impression, perhaps not justifiably, that this decision to move ahead on Whiteman was made primarily to have an obvious blue chip at the SALT talks. I am sure you are not dealing with those negotiations and that is not your function.

General STARBIRD. No, I am not.

## STRATEGIC ADVANTAGES OF SAFEGUARD

Mr. LONG. Do you see real strategic advantages to this Safeguard quite apart from the question of whether this is a useful blue chip in the negotiations with the Russians at Helsinki?

General STARBIRD. Sir, I would like to disqualify myself there. The progress of those negotiations—

Mr. LONG. I am leaving those out. My question assumes you know nothing about those negotiations. Is this justified quite apart from those negotiations—strictly on strategic grounds of defending the country?

General STARBIRD. I misunderstood your question. It is justified completely apart from those negotiations.

Mr. LONG. Do you feel that this is the best way to spend our strategic defense dollars to defend the United States? Are there other alternatives that we can spend our money on?

General STARBIRD. You have to treat me as a partisan on this because I have become enthused about the program, and the necessity for it. There are other ways. They have been discussed. For example, increasing our strategic offensive forces. Even otherwise defensively such as trying to conceal—

Mr. LONG. Minuteman, satellite protection.

General STARBIRD. That is what I mean.

Mr. LONG. Better submarine missiles and all that. There is a tremendous selection here of ways to defend the continental United States against the enemy. We are only spending really 12 percent of our total national defense budget on strategic defense.

I sometimes wonder whether in view of that small percentage we really think our strategic defense is so terribly important. I am interested to know whether this is the best way to spend our money. I never doubted that we would get some advantages from Safeguard. But I think we all, particularly those of us on the Appropriations Committee, have concerned ourselves with the question, Is this the best way to get defense value per dollar?

General STARBIRD. To answer your question as well as I can, from my point of view, the threats warrant accomplishing the steps that are recommended in Safeguard. Personally, then, if you let me be considered as a partisan, I think it is the best way. I have to say that as a partisan.

## CHINESE THREAT

Mr. LONG. I cannot help feeling that the Chinese are not insane, any more than anybody else.

It would be hard for them to hit us with the intercontinental missiles they have. We could retaliate by wiping out 200 or 300 million Chinese with just a small part of our offensive nuclear weapons.

The Chinese may have said, at one time or another, that they would not mind losing that many people. In my opinion, no country would politically survive the loss of a third of its people. The leaders would have a good chance of being among the missing. I seriously doubt that they would throw 20 or 30 missiles against us and risk the absolutely terrifying retaliation. And I doubt that the Chinese would leave themselves completely open to the Russians, whom, I gather, they distrust

and fear and hate as much as they do us. I just cannot understand why this is the best way to spend the defense dollar, when we have limited dollars to spend. For the time being, there are many other programs through which we could get greater value for our defense dollars.

General STARBIRD. I can only say it is not designed against the Chinese alone. It is designed against the several threats that are present and growing.

Mr. LONG. That concludes my questions, Mr. Chairman.

(Discussion off the record.)

Mr. McFALL. The committee will recess until 10 a.m. tomorrow.

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FRIDAY, MARCH 6, 1970.

BRIEFING ON HUNTER-LIGGETT MILITARY RESERVATION

Mr. SIKES. The committee will come to order.

General Dalrymple, I believe you are prepared to give us a briefing on the Hunter-Liggett Military Reservation, in California.

General DALRYMPLE. That is right, sir.

Mr. SIKES. The committee has asked to be brought up on the Army's plans for the conduct of experimentation there. Are you ready to proceed?

General DALRYMPLE. I would like to introduce Colonel Greer who will make the presentation.

Mr. SIKES. Will you proceed, please?

Colonel GREER. Mr. Chairman, gentlemen, I am Lieutenant Colonel Greer from U.S. Army Combat Developments Command, and this briefing will cover two major points: An explanation of our Experimentation Command's mission—CDCEC, as we refer to it—and the rationale for continuing CDCEC at Hunter-Liggett Military Reservation.

Mr. SIKES. Will you show us where this is on your map?

Colonel GREER. Yes, sir. This is the Monterey Peninsula which is about a hundred miles south of San Francisco; Fort Ord Military Reservation to the east of it. This is where CDCEC, all of its troops and headquarters are located now.

Hunter-Liggett Military Reservation is a little over 70 miles to the south and Camp Roberts is about 30 miles to the southeast of Hunter-Liggett.

Mr. SIKES. How far to the south is Los Angeles?

Colonel GREER. That would be about 300 miles, as I recall. It is about 400 from San Francisco to Los Angeles.

The Army employs several types of in-the-field evaluations to evaluate organizational, doctrinal, and material concepts. These include troop tests, combat evaluations, field evaluations, and field experiments. Field experiments are the most sophisticated of these evaluations. Their use is necessarily limited to the most important issues of combat developments. In a field experiment, every effort is made to simulate actual combat conditions and to use organization, doctrine, and material that are proposed for combat use. Every attempt is made to simulate a realistic enemy threat.

Critical data on performance and on effectiveness are collected under these field laboratory conditions to assist the decisionmaker in the selection of options.

The appropriate validity and reliability of data are further enhanced by conducting referral replications of each operation. CDCEC is the unique organization whose mission is to conduct these field experiments in any feasible area of military operations.

#### TERRAIN AND INSTRUMENTATION AT HUNTER-LIGGETT

Simulation of combat conditions includes simulation of the specific terrain of interest. Consequently, the location of CDCEC must provide as wide a variety of terrain conditions as possible. Instrumentation is used, and for two primary purposes. One, to simulate a condition of combat. For example, using fire simulators to simulate live fire. Two, to permit real time data collection without interfering with the realistic operation of units under test.

Each experiment is scientifically designed by preparing a detailed analysis to determine the data which must be collected to best answer the questions at issue. The experiment is then designed to collect data of the highest possible validity and reliability with the least expenditure of resources. Economy is facilitated by the location of instrumentation in terrain in such a way that a variety of experiments can be conducted with minimum relocation of instrumentation and communication sites. Over the years CDCEC has developed a terrain and instrumentation complex at Hunter-Liggett which would require years to develop at another location, building concrete pads, power lines, and road nets over this large reservation.

Mr. SIKES. What is their value?

Colonel GREER. It is impossible to estimate.

Mr. SIKES. What would be the cost of replacement?

Colonel GREER. It is almost impossible to estimate because most of this has been done with troop labor. We are talking about field roads to hilltops to replace instrumentation on high grounds. The buildings we are talking about are sheet metal buildings on concrete pads for sheltering instrumentation that is left in place. So these have been built up gradually over a period of years, and the cost has been relatively small. To do this at a new location, however, would have to be an expensive undertaking.

These sites on the terrain have been constructed as speech and data transmission lines. It would require both extensive construction and long experience to reconstruct a new site.

#### STUDIES OF OPTIMUM LOCATION FOR CDCEC

In the period 1958 through 1965, three high level boards studied the problem of proper location for CDCEC. The problem was studied again in 1969 at the request of the Chief of Staff, Army, and was again reconsidered earlier this year.

The factors favoring permanent stationing of CDCEC at Hunter-Liggett and the factors which argue against relocation have been invariably decisive in leaving it at Hunter-Liggett. The factors con-

sidered were, first, the natural environment which consists of weather, types of terrain, and acreage; second, the location environment which includes the intangible conditions of the physical location and the manmade environment, such as proprietary rights to terrain, availability of scientific support, air space utilization, radio frequency utilization, natural illumination, and availability of troop support. Finally, the administrative facilities required to support a command the size of CDCEC.

The natural environment has the most readily apparent effect on the suitability of a given location. The location environment may in particular cases be equally important. Hunter-Liggett has the best available natural environment with approximately 75,000 acres of maneuver-type area, consisting of flat to rolling, to moderately rough and broken terrain. The remainder is rough to mountainous terrain. The weather is basically temperate and stable with an extended dry season. No other installation considered as a location for CDCEC was found to be as suitable for year-round execution of a full schedule of experiments. The location factors are equally favorable. An important consideration for the economical conduct of experimentation is the unrestricted use of terrain. When two or more large experiments are scheduled simultaneously, little terrain remains available for use by other Army activities.

At Hunter-Liggett, only minor restrictions were encountered during the summer training period of Reserve components. Retention of competent scientific support with experience in field experiments and military operations is a major consideration. Scientific support is readily available in the Hunter-Liggett area.

#### AIR SPACE AND COMMUNICATIONS FREQUENCIES

Hunter-Liggett has restricted air space over most of its acreage, which permits unrestricted employment of indirect fire weapons and Army aviation experiments. Radio frequency interference is considered minimal at Hunter-Liggett Military Reservation. Over the years problems encountered have been resolved by obtaining authority to use specific frequencies, and in many instances designing and procuring equipment on the basis of available frequencies. The potential cost of modifying instrumentation and working out interference problems at another location is impossible to estimate, but CDCEC now has more than 160 frequencies authorized for use at Hunter-Liggett.

Clearing frequencies for use at a new location is a difficult and time-consuming process.

Hunter-Liggett provides isolation from artificial light which facilitates current priority experimentation in night operations where the absence of artificial light is essential to insure controlled light conditions.

#### PROXIMITY TO FORT ORD

The type of personnel used as experimentation subjects is a key factor in obtaining valid and reliable experimentation results. Personnel direct from advanced individual training centers have equivalent training and experience, and the high morale and initiative which are ideal for experimentation subjects.

## COST OF MOVING CDCEC FUNCTIONS

The training center at Ford Ord provides a ready source of this type of personnel. The direct costs of moving CDCEC personnel equipment and instrumentation to another post have been estimated as high as \$5 million. To this initial cost we must add several others:

First, the loss of at least 6 months and probably a year or more of CDCEC production.

Second, the cost in both money and time of developing and constructing new roads, buildings and sites to adapt the instrumentation to the terrain. This would be a far higher cost than that incurred in the gradual development of the complexes now installed at Hunter-Liggett.

Third, the movement to any other post would not eliminate the requirement for an MCA program for CDCEC since adequate facilities are not available at any installation which has adequate acreage.

## ADVANTAGES OF HUNTER-LIGGETT

Finally, no other installation provides the advantages of terrain, weather, and other environmental conditions that exist at Hunter-Liggett. The final map I have here shows the Hunter-Liggett Military Reservation itself, and I will point out to you on the map where the majority of the construction will take place—in this area here which has an adjacent airfield. That is all I have, sir.

Mr. SIKES. Thank you very much, Colonel. You have given us a good statement.

The matter which concerns the committee is the anticipated authorization of nearly \$21 million in future construction at a base which now has very little construction. The question of the essentiality of the present and future proposals naturally arises. The present proposal is only \$2 million, but it is the beginning of a much larger program. We want to know how essential the activity is and whether it can be done at other bases. This is particularly pertinent in view of the base closings and reductions which have just been announced. If there were other existing facilities where this work could be done we should not embark on a \$20 million spending program. You have made a good case for carrying out this work at Hunter-Liggett.

## ASSIGNMENT OF PERSONNEL TO HUNTER-LIGGETT

Military construction is usually one of the least important cost factors in these considerations. It is the day-to-day activities that are the major expense. This is an activity that has been carried on out of Monterey, primarily; is that right?

Colonel GREER. That is right, Fort Ord just east of Monterey.

Mr. SIKES. That means that under current conditions they have to travel back and forth from Fort Ord or live in tents. Is that what is happening?

Colonel GREER. They have quite a large number of temporary buildings at Hunter-Liggett that are occupied when they are down there on experimentation.

Mr. SIKES. How long are personnel normally at Hunter-Liggett?

Colonel GREER. It varies a lot with individuals. The key people in one of these experiments are the project teams who plan and put it in the field.

Mr. SIKES. What are the periods of time they spend there: 2 weeks, 2 months?

Colonel GREER. It may run much more than that for many of them. Six months or a year straight, depending on how long the experiment runs.

Mr. SIKES. Are they on temporary duty while there?

Colonel GREER. Yes, sir.

Mr. SIKES. Will they continue to be when the new structures are built?

Colonel GREER. Once the facilities are at Hunter-Liggett there will be no requirement for temporary duty except to go to other installations.

Mr. SIKES. Would that not in itself bring about a considerable saving?

Colonel GREER. Yes, sir. The savings are a little difficult to estimate with any degree of accuracy because while we have figures on the TDY cost of personnel going down there, we do not really have an accurate cost figure on the military transportation.

Mr. SIKES. Is there no permanent party, now, at Hunter-Liggett?

Colonel GREER. There is one field support company.

Mr. SIKES. You propose to have a permanent party. The work will be done in the main by people permanently assigned to Hunter-Liggett.

Colonel GREER. The construction program envisions moving the entire command and all of its troops to Hunter-Liggett.

Mr. SIKES. And when would that be possible under this program?

Colonel GREER. The program was originally supposed to start in 1967 and covered a 5-year period. But it has only been funded for minor items since that time. So it is behind schedule.

Mr. SIKES. Is it still a 5-year program?

Colonel GREER. It is essentially still a 5-year program.

#### CAMP ROBERTS

Mr. SIKES. Is there any connection with Camp Roberts that is nearby?

Colonel GREER. There were some troops at Camp Roberts from CDCEC. They are clearing out from Camp Roberts this week. The post is going to be completely inactivated starting next week.

Mr. SIKES. Are you going to declare it surplus?

Colonel GREER. No, sir. The post will just be on a standby basis.

#### FACILITIES AT HUNTER-LIGGETT

Mr. SIKES. Now tell us about the temporary facilities now at Hunter-Liggett. Are they not usable for the purposes for which you are asking new construction?

Colonel GREER. No, sir, only on a temporary basis. The conditions there are generally regarded to be somewhat inferior to the conditions under which troops live in Vietnam.

Mr. SIKES. Is it less adequate than the cantonment type of construction?

Colonel GREER. It is just thin wall construction. These buildings are actually shacks, sir. They have been improved to keep them warm enough in the winter.

Mr. SIKES. Are there questions?

Mr. PATEN. I have no questions.

Mr. SIKES. Mr. Cederberg?

Mr. CEDERBERG. Where is Camp Roberts in relation to Hunter-Liggett?

Colonel GREER. About 30 miles to the east.

#### CAMP ROBERTS

Mr. CEDERBERG. I was under the impression that Camp Roberts was closed long ago.

Colonel GREER. It is an inactive installation but we have had about 500 military personnel stationed there. They were moved there some years ago because there was not enough cantonment area at Fort Ord to accommodate them.

Mr. CEDERBERG. I recall 16 or 17 years ago I went out there as a member of this subcommittee because there was a big squabble as to whether we were going to close Fort Ord or Camp Roberts. General Swing, who is now retired, was in command out there. In order to assure everybody that a good look was taken at the question, we took a flight from Fort Ord to Camp Roberts. We felt that the decision to close Camp Roberts was a good decision. But it really has not been closed. That was nearly 16 years ago. I am amazed that we have had 500 troops at Camp Roberts for all of these years. But, you say that for all practical purposes Camp Roberts is on a standby basis.

Colonel GREER. Yes; the last of the troops should be out today. The water and lights will be shut off next week.

#### NEED FOR HUNTER-LIGGETT

Mr. CEDERBERG. I can appreciate the value of and need for a place like Hunter-Liggett. I think it was important for the chairman to make this record. This is an area in which serious questions can be raised, because we are closing other installations. We need to take a hard look at whether or not existing facilities could not be used. Having been down there, and having flown over the Hunter-Liggett installation, which has been there a long time, I can see it is quite ideal for the mission that you have at that base.

That is all I have.

Mr. SIKES. Thank you very much, Colonel. You have done a good job.

Colonel GREER. Thank you, sir.

Mr. SIKES. We will take up the classified projects.

(Discussion of classified projects followed.)

#### NATO INFRASTRUCTURE

Mr. SIKES. We will turn to "NATO Infrastructure." Insert in the record page 13.

(The justification page follows:)

1. DATE 2 Feb 1970	2. FISCAL YEAR 1971	3. DEPARTMENT ARMY		4. INSTALLATION NATO Infrastructure
<b>MILITARY CONSTRUCTION LINE ITEM DATA</b>				
5. PROPOSED AUTHORIZATION \$ 50,000,000		6. PRIOR AUTHORIZATION P.L.	7. CATEGORY CODE NUMBER 149	8. PROGRAM ELEMENT NUMBER 01005A
10. PROPOSED APPROPRIATION \$ 50,000,000		11. BUDGET ACCOUNT NUMBER 6100	12. LINE ITEM NUMBER T71000	13. LINE ITEM TITLE NATO Countries - Various
<b>SECTION A - DESCRIPTION OF LINE ITEM</b>				
14. TYPE OF CONSTRUCTION				
a. PERMANENT	<input checked="" type="checkbox"/>	18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY		
b. SEMI-PERMANENT	<input checked="" type="checkbox"/>	a. NO. OF BLDGS	b. NO. OF STORIES	c. LENGTH
c. TEMPORARY	<input type="checkbox"/>	d. DESIGN CAPACITY	e. GROSS AREA	f. WIDTH
15. TYPE OF WORK		19. DESCRIPTION OF WORK TO BE DONE		
a. NEW FACILITY	<input checked="" type="checkbox"/>	CAP. COST (\$ )		
b. ADDITION	<input checked="" type="checkbox"/>	20. PRIMARY FACILITY		
c. ALTERATION	<input checked="" type="checkbox"/>			
d. CONVERSION	<input type="checkbox"/>			
e. OTHER (Specify)	<input type="checkbox"/>			
16. REPLACEMENT				
17. TYPE OF DESIGN				
a. STANDARD DESIGN	<input checked="" type="checkbox"/>			
b. SPECIAL DESIGN	<input type="checkbox"/>			
c. DRAWING NO.	<input type="checkbox"/>			
23. QUANTITATIVE DATA (U/M )		22. TOTAL LINE ITEM COST		
a. TOTAL REQUIREMENT	NA	\$ 50,000		
b. EXISTING SUBSTANDARD	( )	\$ ( )		
c. EXISTING ADEQUATE	( )	\$ ( )		
d. FUNDED, NOT IN INVENTORY	( )	\$ ( )		
e. ADEQUATE ASSETS (c. & d.)	( )	\$ ( )		
24. RELATED LINE ITEMS		25. REQUIREMENT FOR LINE ITEM		
f. UNFUNDED PRIOR AUTHORIZATION		SECTION C - BASIS OF REQUIREMENT		
g. INCLUDED IN FY. PROGRAM		See detailed justification on following pages 14 thru 29.		
h. DEFICIENCY (a - f = i - j)				

Mr. SIKES. General Dalrymple, I believe you have a statement for us, on the NATO Infrastructure. The request is for \$50 million.

General DALRYMPLE. Yes, sir, I would like to ask Mr. Loveland from the NATO staff to come up please.

Mr. LOVELAND. Yes, sir.

STATEMENT ON NATO INFRASTRUCTURE PROGRAM

Mr. SIKES. There is apparently here a statement by Colonel Boyd. Will you read the statement, please?

Colonel BOYD. Yes, sir.

Mr. Chairman and members of the committee, I am pleased to have the opportunity to appear before your committee to support the proposals of the Department of Defense for an authorization of \$50 million for fiscal year 1971 as the U.S. share of the common funded NATO infrastructure program. Since fiscal year 1968, the U.S. contribution to the triservice infrastructure program has been funded under authorizations and appropriations for "Military Construction, Army." This program provides the facilities necessary to support NATO military forces which are intended for common use or have a high degree of common interest. The term covers such varied items as air fields, air defense facilities, communications, missile sites, war headquarters, nuclear storage sites, pipelines, and POL depots. It does not normally cover general purpose depots, troop billets, and other support facilities closely related to national standards and practices, although an exception has been made to fund such facilities from this program as reimbursement for certain of the U.S. costs for relocation from France. This exception will be discussed at greater length below.

The NATO infrastructure program was inaugurated by the North Atlantic Council in 1951 as a follow-on to a similar program which had been started in 1950 by the Western Union countries, of which the United States was not a member. Last year's Slice XX—NATO annual program for 1969—represented the last program under past cost-sharing agreements, and carried NATO through its 20th anniversary year. The program has been a most successful common endeavor and has been credited with supplying a large part of the cohesion among the Allies. Essential military facilities costing almost \$3 billion have been completed, and another \$1 billion are under construction or programmed. The program has given NATO a network of modern airfields, an efficient system of POL distribution and storage, common communications without which the NATO command structure could not function, essential air defense warning installations, and air and naval navigational aids. By jointly financing these and other types of facilities designed to enhance the effectiveness of NATO forces, NATO nations have demonstrated in a most realistic way their determination to provide for the common defense.

Now that the program has provided most of the basic facilities required in the common defense, its character is gradually changing. The requirement for major air and naval installations has given way to the new requirement for modernization and expansion of existing basic facilities. Airfields must be improved so that they can support today's more complex aircraft. The POL system must be modified to insure its ability to function in an emergency independently of that part of the

system located in France. Progress in technology has resulted in a most dramatic change in the communications area. One example is the project—to be completed by December 1970—for the NATO satellite communications system, based on the U.S. interim defense communication satellite system.

I would like to interject that the first launch of the NATO satellite will be on the 18th of this month.

Another example is the semiautomation and integration of NATO's early warning system to provide a control and reporting system for the air defense of Allied Command Europe. Finally, in order to make the program fully responsive to the needs of the new NATO "flexible response" strategy and associated force planning, we must provide facilities to support reinforcement on the flanks, improved air defense, and conventional capabilities for NATO air forces.

The new orientation of the program will provide a large proportion of facilities in support of U.S. forces. In particular, it now supports controlled humidity storage to maintain in good condition the equipment of our dual-based forces. Arrangements are underway to insure that the program will also include aircraft survival measures which are now being implemented by the U.S. Air Force, with the approval of Congress, on a prefinanced basis.

Last year we announced that we had made great strides in maximizing U.S. benefits from the program. The major such benefit has come from our success in persuading our Allies to share in up to \$96 million of our costs in relocating our forces from France. In effect, the Defense Planning Committee—the NATO Council less France—agreed in 1969 to reimburse us, under certain conditions, up to that amount if our military services can provide and justify sufficient fund requests. The agreement stipulates that we may recover this money at a maximum rate of \$4 million per quarter through the end of 1970, at which time a review will be made to determine the exact reimbursement rate required to complete the reimbursement by the end of 1973. I am pleased to inform you that the reimbursements have been proceeding as planned and all efforts are being made by DOD to maximize the U.S. recoupment.

As a consequence of the expiration of the latest cost-sharing period and coincident with NATO's 20th anniversary, the DPC ordered a review in 1968 of NATO's rules and procedures for implementing its infrastructure program. This review has been successfully completed and its results have been accepted by NATO. We have thus been able to modify certain unsatisfactory aspects of the program. Perhaps the most important of these agreed modifications is the new procedure for limiting the time during which the annual programs remain valid.

(For additional information see p. 398.)

We are approaching agreement within NATO of this procedure which should allow us in the very near future to close out the old infrastructure slices, under which the United States contributed as much as 43 percent, thus cutting our contribution to the program to the percentage of the latest cost-sharing agreement, that is, 25.8 percent for projects to which France contributes, and 29.7 percent to those in which she does not.

We continue to enjoy a greater benefit from this NATO program than could be expected from the size of our contribution thereto. In forming this conclusion, we have taken the position that facilities for

common use of all the nations, or for use by international headquarters, are shared on an equitable basis by the nations and would in any case have required common funding, since no host nation could be expected to pay the bill for such facilities. Our calculations are therefore exclusive of these facilities used in common by all nations. In 1968 we told you that slice XVIII included U.S. projects in the amount of 40 percent of all projects for use by national forces. We did less well in slice XIX but the U.S. total for slice XX, now approved, is over 50 percent. In the three annual programs, therefore, over 40 percent of all such national user projects were programmed for benefit of U.S. forces, but our contribution remains at 29.7 percent of the entire program. In the proposed slice XXI the percentage of projects for U.S. use is over 65. This slice has not been fully screened, however, so we must expect some modification from that figure in the approved slice. It is apparent, therefore, that we have a distinct financial interest in the continuing success of the NATO infrastructure program and that as long as we can fit our national programs into the available common funds, the United States will continue to benefit directly from this NATO effort.

I should like now to describe briefly, first, the NATO system for processing infrastructure projects, and second, how the U.S. mission to NATO (USNATO) arrived at the estimate of \$50 million for U.S. obligations for infrastructure during fiscal year 1971.

Each year the major NATO commanders draw up a list of construction or modernization projects which they consider essential for the support of their forces. These projects are reviewed multilaterally by the participating nations within the NATO Military Committee, the NATO Infrastructure Committee, and finally within the Defense Planning Committee—which is the North Atlantic Council without France. The projects finally selected make up the yearly infrastructure program or slice. In the United States, each proposed annual slice is reviewed thoroughly within the executive branch, starting with the interested subordinate military commands and continuing through the U.S. Commander in Chief, Europe, and the Commander in Chief, Atlantic, to the Joint Chiefs of Staff and the military departments, the Department of State, and all interested offices within the Office of the Secretary of Defense.

The final NATO slice is really an approved list of military construction requirements and nothing more. In some cases it may take several years before actual construction on a particular project is authorized. After slice approval, the host country in which a project is to be built takes full responsibility for the work. It must obtain the necessary land—at its own expense—plan utilities connections and access roads—which it later builds at its own expense—prepare engineering plans and specifications and develop cost estimates. When all is ready, it submits the project with all supporting data to the NATO Payments and Progress Committee for construction authorization and fund commitment. Before agreeing, the Payments and Progress Committee satisfies itself that the project still represents a valid military requirement, conforms to NATO criteria, is reasonable in cost, and is in other respects eligible under NATO infrastructure rules.

When the Payments and Progress Committee authorizes construction of an infrastructure project, the United States obligates funds

for its share of that project. Thus when we ask the Congress to provide \$50 million in fiscal year 1971 it is because we estimate that the NATO Payments and Progress Committee will give final authorization during that period for projects the U.S. share of which will total \$50 million. We try to make the estimate, despite many uncontrollable variables, as sound as we can. The estimate is done largely by the USNATO staff in Brussels who work daily on infrastructure matters with our allies and who are closest to the plans and progress of the various host countries.

Let me explain briefly how USNATO arrived at the estimate for fiscal year 1971. Last September, USNATO took the NATO infrastructure project backlog; that is, all the projects included in previously approved annual slices which had not yet been authorized by the Payments and Progress Committee for actual construction. This backlog is not identified completely in terms of individual projects. However, the basic records from which it is developed—host country semiannual financial reports—contain complete information, for any given location, by project category and by cost-sharing agreement, on the amount of money already authorized by the Payments and Progress Committee and the amount of money remaining to be authorized, judging by the latest cost estimate of the works in question. This initial step thus provides a firm base from which to start. To this USNATO then added its estimate of the contents of the subsequent slices which would require funding during fiscal year 1971. In this case, it was slice XX, which was approved December 1969, and slice XXI, scheduled for approval in the spring of 1970. From this total, USNATO then subtracted the amount of projects or parts thereof from all slices which it estimated would be given funding authorization by the Payments and Progress Committee between September and end-June 1969—in other words, prior to fiscal year 1970.

This gave the theoretical maximum amount of construction, divided by country, by category, and by cost-sharing agreement, which could come before the Payments and Progress Committee for funding authorization during fiscal year 1971. I might note that this amount totaled about \$460 million in estimated value. Because each element of this amount is also identified with a particular cost-sharing agreement, we can also readily compute what would be the U.S. share of this theoretical maximum.

USNATO has also applied country planning factors such as economic conditions, availability of contractor effort, and pace at which Ministry of Defense construction personnel are expected to process fund requests. It is on these bases that we have determined that our share of the fund obligations to be incurred in fiscal year 1971 will amount to \$50 million.

On the other hand, while maintaining our estimate of \$50 million as the requirement for new fund commitment authority, we have reduced our appropriation request by \$8 million to reflect the expected recoupment of relocation expenses at the rate of \$4 million per quarter through calendar year 1970. Obviously it is our intention to use the \$8 million recoupment, in addition to our fiscal year 1971 appropriation, to pay for our share of NATO fund obligations. This procedure is based on the assumption that the military services can process fund requests to the appropriate NATO committees at a rate which

would permit the full maximum recoupment during calendar year 1970 to which NATO has agreed. We recognize the possibility of having to reprogram funds from other sources in case maximum recoupments cannot be obtained.

Mr. SIKES. Colonel, I think you have given us a good summation of the NATO infrastructure program.

#### FISCAL YEAR 1971 REQUEST

Now, I want to try to summarize this, because there are areas which are difficult to understand. We are being asked to provide a \$50 million fund for NATO infrastructure, is that correct, for fiscal 1971?

Colonel BOYD. Yes, sir.

Mr. SIKES. Against that amount we hope that the NATO allies will provide what amount?

Mr. LOVELAND. I have the figure. The total to be spent this year we estimate to be \$161 million, of which \$50 million would be the U.S. contribution.

Mr. SIKES. If the NATO allies do not put up their part, which is \$111 million, is that right—

Mr. LOVELAND. Yes, sir.

Mr. SIKES (continuing). Are we requested to provide the difference?

Mr. LOVELAND. No, sir.

Each project as it is approved carries with it a commitment of each nation to provide its share of the funding.

Mr. SIKES. So we are being committed up to \$50 million against an estimated \$161 million of requirements; is that correct?

Mr. LOVELAND. That is correct.

Mr. SIKES. As the NATO nations put up their pro rata part of the \$161 million, do we then put up our pro rata part of the \$50 million?

Mr. LOVELAND. Exactly.

#### BACKLOG OF PROJECTS

Mr. SIKES. What is the significance of the figure \$460 million at the top of page 8 of your statement, Colonel Boyd?

Mr. LOVELAND. That is the total backlog of projects programed in annual slices and which have not as yet been funded.

They are past programs.

Mr. SIKES. Have they been built?

Mr. LOVELAND. They have not been built. They have been included in the program that is in the portion of the statement which talked about the approved "shopping list."

Mr. SIKES. Is the \$161 million slice which is anticipated for the fiscal year 1971 a part of this \$460 million?

Mr. LOVELAND. Yes; it is.

Mr. SIKES. If it were approved, there would be a backlog of \$299 million in approved projects.

Mr. LOVELAND. Yes, but in the meantime we would approve a new annual program for 1971.

Mr. SIKES. You would be adding to the \$460 million.

Mr. LOVELAND. That is correct.

## U.S. SHARE OF PAST PROGRAMS

Mr. SIKES. I note on page 2 of your statement, Colonel Boyd, that essential military facilities costing \$3 billion have been completed, another billion are under construction or programmed. How much of that \$3 billion was paid by the NATO allies and how much by the United States?

Colonel BOYD. This percentage factor has varied over the years. When we started, our initial share of the cost-sharing factor was 43 percent. As NATO countries have become more affluent we have adjusted the figure and we are now down to the figure of 29.7.

Mr. SIKES. Up to this point the NATO allies have paid their agreed pro rata share of the work that has been done; is that right?

Colonel BOYD. Yes, sir.

Mr. SIKES. On all work which is for NATO.

Colonel BOYD. Yes, sir.

Mr. SIKES. In addition there is work which is considered to be peculiar to the United States which is funded separately?

## RELOCATION FROM FRANCE

Colonel BOYD. Yes, sir. That which is peculiar to U.S. needs we fund. If it is peculiar to U.S. needs and generated by the fact that we were forced out of France, NATO has agreed to appropriate \$96 million toward those particular projects generated by our move from France.

Mr. SIKES. Is that separate and apart from the \$460 million figure of future projects?

Colonel BOYD. No, sir. This is to be prorated out because it is such a large sum and would interfere with the normal cycle, the agreement was that we would take this at \$4 million a quarter and at the end of the calendar year, we would meet with them again, find out what we had spent by that time, make a new rate of payments back to us, higher or lower, as the need came up, or as we could justify or, in our mind, hopefully agree to a new procedure whereby they would fund outright for military facilities which are required but for which we have not yet had the construction money appropriated.

Mr. SIKES. Are these funds credited to us? Will they be credited to the \$50 million which is requested for this fiscal year?

Colonel BOYD. Yes.

Mr. SIKES. So to the extent those amounts are paid in, would we have to pay less than \$50 million of U.S. funds?

Colonel BOYD. Our authorization would be \$50 million and our payment would be actually \$42 million in this case for this fiscal year.

Mr. SIKES. Are we being asked to fund \$42 million or \$50 million?

Colonel BOYD. Fund \$42 million, sir.

Mr. SIKES. I think this discussion is helpful because it is complicated, and we have difficulty understanding it. Of course, on the floor the difficulty is increased because the Members do not have the background that we have.

## PROGRESS IN IDENTIFYING FRELOC PROJECTS

Colonel Boyd, there are various figures that have been supplied to the committee regarding our progress in identifying projects and getting approval of the NATO Defense Planning Council. For instance, a recent staff investigative report states that U.S. European Command at the end of December 1969 had identified approximately \$73 million of approved projects for submission to NATO for possible reimbursement. It has compiled a list of possible additional eligible FRELOC projects authorized by Congress totaling \$86 million. An additional "shopping list" of FRELOC-related projects, which may be included in future budget requests, amounts to \$164 million.

A recent fact sheet supplied the committee staff states that, as of December 31, 1969, projects totaling \$30 million had been submitted to the NATO International Staff for review and \$12 million worth of projects have been screened and sent to the Payments and Progress Committee, of which \$8 million have been approved by the Payments and Progress Committee.

You made the statement that the reimbursement is scheduled to be \$4 million per quarter and that this reimbursement is proceeding as planned. Can you confirm the figures I cited above?

Colonel Boyd. At end calendar year 1969 a total of \$65 million of approved U.S. projects had been identified for submittal to NATO for possible reimbursement. In addition, \$26 million in projects included in the approved fiscal year 1970 U.S. military construction program had also been identified for possible reimbursement under the NATO relocation reimbursement agreement. A preliminary unfunded facilities requirements listing amounting to \$164 million has been developed. Projects in this latter list are now under review in the Department of Defense.

Also, as of December 31, 1969, projects totaling \$30 million have been submitted to NATO International Staff for review; \$20 million have been screened by the NATO International Staff, which has disallowed \$8 million as not being eligible under the relocation reimbursement agreement; and \$12 million have been recommended by the NATO International Staff to the NATO Payments and Progress (P&P) Committee for reimbursement. The NATO P&P Committee has approved \$8 million.

On the statement that reimbursements are proceeding as planned, we can confirm that the United States is receiving reimbursements at the agreed upon rate of \$4 million per quarter.

## REIMBURSEMENT FOR FRELOC COSTS

Mr. SIKES. What is the schedule for the reimbursement of the United States for FRELOC costs?

Colonel Boyd. Through the end of calendar year 1970 we will collect \$4 million per quarter, or a total of \$28 million per the current agreement. At that time we will present to the NATO Committee our estimate of the total requirement for recovery of our logistics system from the effects of the move from France. Presumably, the list of requirements will be more than enough to make up the remainder of the program; that is, \$96 million less the \$28 million collected by that time. It is foreseen that both we and our allies will prefer to con-

tinue the program by giving advance NATO funding to selected large projects from this list up to the maximum of the remaining \$68 million, rather than continuing to screen the hundreds of small projects for reimbursement of funds already spent. It is anticipated that the NATO Committee will continue to agree to a minimum rate of reimbursement of \$4 million a quarter in calendar years 1971-73.

Mr. SIKES. With the substantial amount of projects identified by USEUCOM, do you feel that the present limitation of \$4 million per quarter is reasonable?

Is the \$96 million total limit reasonable?

How do you propose that we recoup the additional hundreds of millions of dollars of facilities costs which have occurred or which may occur as a result of FRELOC in the future?

Colonel BOYD. When we proposed that NATO reimburse the United States up to \$96 million, that figure appeared to be reasonable. It now seems that we will require more than that amount to recover from the effects of the move from France. Since the \$96 million from NATO has been agreed as a ceiling, our only possibility to recoup for additional requirements is through the U.S. claim on France for the loss of use of facilities.

#### U.S. PAYBACK FROM NATO INFRASTRUCTURE

Mr. SIKES. You stated that a larger share of the most recent slices is going to U.S. projects and that the United States has, through negotiations, lowered its contribution from that of previous slices. Do you expect this trend to continue?

Colonel BOYD. We expect that the percentage of projects for use of U.S. forces in future NATO Infrastructure Slices will stabilize at about 40 to 50 percent of all national use projects. The cost sharing formula for Slices XXI through XXV—1970 through 1974—now agreed upon by all NATO nations, remains at 29.68 percent for the U.S. contribution.

#### RATE OF FRELOC REIMBURSEMENT

Mr. SIKES. Would it not be reasonable to assume that the rate of recoupment on the remainder of the \$96 million should be accelerated? In other words, since the agreement does expire at mid-year and a new agreement must be arrived at, would not a rate of \$24 million a year be more reasonable than the present approximately \$16 million? Why should we not assume that \$24 million is a reasonable rate and therefore reduce the Army request by \$12 million more to cover the recoupment in the second half of fiscal 1971? Why don't you try to get a higher recoupment from the NATO allies, and if you are trying, why aren't your efforts more effective?

Colonel BOYD. Let me answer in a general way and then I will ask Mr. Loveland to correct me on technical details.

When we moved from France to Germany on a crash basis in 1 year, we did not have time to program and plan new facilities, and we moved on a very catch-as-catch-can basis into what was available.

We are now in the process of the services and the Joint Chiefs reviewing the various construction activities that were completed or are now underway, to justify them and come up with the total figure of

what we have already expended for new facilities. We expect to have that study completed by July, and at the same time are moving ahead on the major deficiencies which are still lacking to replace those in France. When we go to the Infrastructure Committee of NATO, we will have a firm catalog of all the moneys expended in the past, what they bought and can review them with our NATO allies. We will also have a list, in case they do not approve, of the facilities which are still required which are of high priority and which we have not funded or requested funds from the Congress. Such things as expansion of POL and aerial ports of embarkation. We will then be in a position to secure congressional approval of the need, and then to ask NATO to go ahead and fund them in their entirety in advance.

Mr. SIKES. Do you want to add to that, Mr. Loveland?

Mr. LOVELAND. Yes, Mr. Chairman. You will remember the first day of the hearings on the general questions I had stated that we were contemplating a priori funding of those facilities still to be built. It now looks from experience factors as though we will be hard pressed to come up with \$50 million worth of projects which have already been built and which are eligible for this program. Therefore, we are talking perhaps something over \$46 million worth of facilities yet to be built.

I will be doing the negotiating with the committee, and you can have every confidence that we will get the maximum rate of reimbursement that is required to bring us up to the full \$96 million if we can support that amount by the end of calendar 1973.

We did not take the discount for the additional money on that basis, in that our present agreement through the first \$28 million only has \$8 million more to go.

The decision has not as yet been taken as to whether we will be getting old moneys back or whether we will be spending new NATO money.

However, should we recoup more than \$28 million from the old expenditures, it will be offered up next year in the request for our appropriations.

#### NATO ACE HIGH AND SATELLITE SYSTEMS

Mr. SIKES. Can you discuss the NATO Ace High and satellite systems and give us some estimate of the total cost of these systems?

In your discussion will you tell us about the necessity of another satellite communication system? Why would it not be possible for present U.S. satellites—and they are getting rather numerous—to handle this assignment?

Mr. LOVELAND. To start with, the Ace-High is the principal strategic network of the SHAPE area all the way from Norway down to Turkey. It is the backbone of the communications system and it is wholly NATO owned. It is done through tropospheric scatter systems connected with some microwave links. It is generally fully funded at this time. There are some improvements which will be required.

We are currently completing the short hop from Belgium to Italy as the France-Bypass line. We continue to use the lines through France

with French cooperation and funding. Ace-High is no longer an active issue except in its modernization and maintenance. To this has been added, as Colonel Boyd said, what we call the SATCOM-II System, the one which will be launched this month.

The system has a 3- to 5-year life, as you know, and the SATCOM-III currently being planned in NATO will be the replacement for this system and presumably the improvement of it. Use of U.S. systems will be one of the items examined by the expert group—the NATO joint communications and electronic committee. Development of a satellite in Europe, buying of a replica of one of the U.S. systems, all of these will be examined for the best political and cost effectiveness and military advantages.

Colonel BOYD. May I add to that, sir? The civilian side of NATO for political consultation has never had a real communication system responsive to the capitals. We have just approved within NATO a joint military-civil communications panel to discuss political and military communications needs. SATCOM-II that will be launched on the 18th of March is the first step. We have taken in advance the position that to talk about a SATCOM-III is fine, but that what NATO needs to do is to first make an assessment of all the communications that it currently has available and that could be merged into a system that could be available to both the civil and military without derogating from the command and control of the forces before we go any further in discussing major satellite programs. In other words, land lines, PTT, everything that is available will be considered before we merge ourselves into a new system and make sure we do so only after all alternatives have been considered.

I think we have general agreement throughout NATO that this is what we should do, although there is always the European desire to have their own satellite program.

Mr. SIKES. Are there further questions?

(No response.)

If not, I think this has been useful.

Gentlemen, both of you have been helpful. This has been a very useful discussion.

We are ready now to return to the line items in the unclassified book.

#### MILITARY TRAFFIC MANAGEMENT TERMINAL SERVICE

Mr. SIKES. Insert in the record page 146.

(The page follows:)

[Thousands of dollars]

	Prior authorization	Proposed authorization	Proposed funding
Military traffic management terminal service installation:			
Military Ocean Terminal, Bayonne, New Jersey.....		3,440	3,440
Oakland Army Base, California.....		1,458	1,458
Total.....	0	4,898	4,898

## PLANNED USE OF MILITARY TERMINALS

Mr. SIKES. In the event a major contingency should develop in Europe or Korea, for example, would the majority of shipments be made through military terminals or through regular commercial terminals?

Colonel BREED. Shipment would be made through both military and commercial terminals when major contingencies arise.

Mr. SIKES. Are military ocean terminals sized to handle normal military traffic during peacetime or are they sized so as to handle the majority of traffic during a contingency operation?

Colonel BREED. The military ocean terminals are sized to accommodate normal military traffic during peacetime and are capable of expanding to handling increased traffic during contingencies. This does not imply that the military terminals can handle all military traffic during major contingencies. We must rely on commercial facilities to assist us.

Mr. SIKES. What effect will the cancellation of the FDL ship program have on the projected use of military ocean terminals?

Mr. GOODMON. Cancellation of the capital FDL ship program will have no effect on the projected use of military ocean terminals.

## MILITARY OCEAN TERMINAL, BAYONNE, N.J.

Mr. SIKES. Now we will take up the military terminal at Bayonne, N.J. Insert in the record page 147.

(The page follows:)

*Military Ocean Terminal, Bayonne, N.J., \$3,440,000*

Military Ocean Terminal, Bayonne, is located at Bayonne, N.J. The mission of this installation is to load and discharge cargo for movement to CONUS and overseas destinations, to trans-ship cargo and passengers to CONUS destinations, and to embark and disembark passengers. The program consists of administrative facilities for relocation of DOD activities and an electric substation.

*Status of funds*

Funded program not in inventory.....	\$1,946,000
Unobligated items, Jan. 31, 1970 (actual).....	1,459,000
Unobligated items, June 30, 1970 (estimated).....	1,459,000

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent
			complete Jan. 31, 1970
37	Administrative facilities for relocation of DOD activities.....	\$200	5
38	Electric substation.....	25	15

## PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands)	Status—Mar. 10, 1970	
			Released	Deferred
1970.....	Additional steam capacity.....	649	.....	×
1970.....	Extended lighting, outside area.....	485	.....	×



Mr. SIKES. What is the requirement for these facilities at Bayonne, N.J.?

General DALRYMPLE. You will recall that in 1970 we asked for funds to provide some operating facilities at Bayonne, N.J.

#### MOVEMENT OF FUNCTIONS FROM BROOKLYN TO BAYONNE

The requirement was brought about by moving from the Brooklyn Army Terminal to this terminal which we obtained from the Navy. The requirement before you today is for administrative facilities to take care of the personnel who will move from Brooklyn, operating facilities having been accomplished in part with the—

Mr. SIKES. What are you using now?

General DALRYMPLE. At the present time we have in this building that is being altered by this project, I believe, three floors of administrative space while some of the personnel are still at Brooklyn. This project would provide for the renovation of two additional upper floors of this building to provide for the remaining administrative people to move into this facility.

Mr. SIKES. Will this project meet the space requirements for administrative offices?

General DALRYMPLE. That is right, sir.

Mr. SIKES. Will there be further projects in later budgets?

General DALRYMPLE. I cannot identify them, sir.

Colonel Breed?

Colonel BREED. No, sir.

#### LONG-RANGE MODERNIZATION PROGRAM FOR BAYONNE

Mr. SIKES. I see here that the authorization anticipated in the next 4 years is \$29 million. What does that mean?

Colonel BLANK. Sir, I believe the response that you just received related to additional administrative space. This does complete the requirement for administrative space. At the military ocean terminal in Bayonne, however, there is a modernization program that is proposed to develop a containerized port-handling facility. The dollars that are shown here, at any rate a good part of them, are for that modernization program.

Mr. SIKES. I would think that modernization would be most essential if it has not already been accomplished. I assume from your answer that modernization has not been accomplished?

Colonel BLANK. Yes, sir; it has not.

Mr. SIKES. Are there questions?

Mr. PATTEN. You had a similar item on the west coast; do you remember it?

Colonel BLANK. Yes, sir. That is in this program. The first phase of the modernization of the Oakland Terminal, our military ocean terminal in Oakland. The first phase of the modernization of the Bayonne Terminal we are programming for fiscal year 1972.

(Testimony later changed by Army to read "a future year.")

Mr. SIKES. Is this a permanent installation?

General DALRYMPLE. Yes, sir.

## ACTIVITIES BEING RELOCATED

Mr. SIKES. You are planning to relocate Department of Defense activities. What activities are these and from where are they being relocated?

Colonel BREED. The activities that will be relocated from Brooklyn Army Terminal are: Headquarters, Eastern Area, Military Traffic Management and Terminal Service, U.S. Air Force Water Port Logistic Office Det. 53, U.S. Navy Transportation Coordinating Office Representative, U.S. Army Dispensary, STRATCOM-MTMTS Communication Electronics Activity and Red Cross unit.

## COSTS ANNOUNCED DUE TO CLOSURE OF BROOKLYN TERMINAL

Mr. SIKES. When the decision was made to close the Brooklyn Army Terminal, what costs were included for new facilities for these DOD administrative offices?

Colonel BREED. An estimated \$636,000 was made for the cost to rehabilitate space for the DOD administration offices to be relocated from Brooklyn Army Terminal to an existing GSA building in Brooklyn, N.Y. It developed that extensive rehabilitation was required at an estimated cost of \$4 million to accommodate these activities. Funds were not available for this extensive rehabilitation.

## ELECTRIC SUBSTATION

Mr. SIKES. Will the electric substation requested here in the amount of \$400,000 complete the requirements for electrical distribution systems at Bayonne?

General DALRYMPLE. Yes, this completes all known requirements for electrical distribution systems. However, future year programs include two additional electrical projects, one for exterior lighting and one for standby electric generators, totaling approximately \$312,000, sir.

## OAKLAND ARMY BASE, CALIF.

Mr. SIKES. Turn to Oakland Army Base, Calif. Mr. Reporter, please insert in the record page 150.

*Oakland Army Base, Calif., \$1,458,000*

Oakland Army Base is located at Oakland, Calif. The mission of this installation is to command assigned installations and activities, to carry out the MTMTS single manager responsibilities for traffic management, ocean terminal operations, and related transportation service involved in the movement and transshipment in and through CONUS of cargo and personnel sponsored by Department of Defense and other Government agencies. The program consists of container handling facilities.

*Status of funds*

Funded program not in inventory-----	\$508,000
Unobligated items, Jan. 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

## DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
68	Container handling facility, phase I-----	\$85	25

*Project status, construction reduction plan.—None.*

1. DATE <b>2 Feb 1970</b>	2. DEPARTMENT <b>ARMY</b>	3. INSTALLATION <b>Oakland Army Base</b>	
4. COMMAND OR MANAGEMENT BUREAU <b>Military Traffic Management and Terminal Service</b>		6. STATE/COUNTRY <b>California</b>	
5. INSTALLATION CONTROL NUMBER <b>05605</b>		10. NEAREST CITY <b>Oakland, California</b>	
7. STATUS <b>Active</b>		9. COUNTY (U.S.) <b>Alameda</b>	
11. MISSION OR MAJOR FUNCTIONS <b>1940</b> Command assigned installations and activities; provide for area-wide implementation of MIMS Single Manager responsibilities for traffic management, ocean terminal operations and related transportation service involved in the movement and transshipment within and through CONUS of cargo and personnel sponsored by Department of Defense and other Government Agencies; develop and maintain plans for operational readiness under mobilization, emergency or special contingencies train related military units, military personnel and civilians as assigned; and provide administrative and logistical support to tenant satellite agencies.		PERMANENT OFFICER ENLISTED (1) 831 CIVILIAN (3) 2,534 TOTAL (2) 3,365	
12. PERSONNEL STRENGTH a. AS OF <b>31 Oct 1969</b> b. PLANNED (End FY <b>IR</b> )		SUPPORTED OFFICER ENLISTED (5) 0 CIVILIAN (8) 0 TOTAL (9) 0	
13. INVENTORY		IMPROVEMENT (\$000)	
LAND		LAND COST (\$000)	
a. OWNED 577		a. 1,648	
b. LEASES AND EASEMENTS 17		b. 3,536	
c. INVENTORY TOTAL (Except land not AS OF 30 JUNE 19 69) 508		c. 508	
d. AUTHORIZATION NOT YET IN INVENTORY (Unfunded - \$ )		d. 0	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		e. 1,458	
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		f. 5,647	
g. GRAND TOTAL (c + d + e + f)		g. 46,397	

SUMMARY OF INSTALLATION LINE ITEMS						
CATEGORY CODE NO.	LINE ITEM DESIGNATION	AUTHORIZATION PROGRAM		FUNDING PROGRAM		
		TEMANT COMMAND	UNIT OF MEASURE	ESTIMATED COST (\$000)	SCOPE	
		c	d	e	f	
153	68 - Container Handling Facility, Phase I	Page No 151		1,458		1,458

\* Average personnel load.

Mr. SIKES. There is a request here for a container-handling facility.

#### MODERNIZATION PROGRAM AT OAKLAND

The authorization for the next 4 years here will be \$5,647,000 as against some \$29 million in New Jersey.

If modernization is going to cost that much in New Jersey, how can it be accomplished for a lesser amount here?

General DALRYMPLE. Could you reply to that, Mr. Goodman?

Mr. GOODMAN. The modernization program at Oakland, as far as introducing container-handling and operating considerations—I don't handle the other part of it—will run \$14.5 million over a 5-year period. At Bayonne, that same consideration, meaning container-handling and straight-out operational considerations in the base itself, will run approximately \$11 or \$12 million at this time.

These are the operating parts of it, the cargo-handling portion of the project.

Mr. SIKES. What you are saying in essence is that New Jersey is not really that far behind California, I trust?

Mr. GOODMAN. Yes, sir. That is true.

Mr. PATTEN. Mr. Chairman, if you have not seen it, it is really fascinating, the development there in Elizabeth and on the New Jersey coast of container operations. There is no doubt it is successful. Of course, we know that throughout the world there is a problem with uniformity, the size of containers. Other problems are coming up and I don't doubt that you folks are aware of them. If all these containers are not the same size, it will make a big difference to the transport companies around the world.

Mr. GOODMAN. Yes, sir.

General DALRYMPLE. Mr. Chairman, the answer that you have just been given as to relative costs includes other than MCA. We will straighten that out for the record.

(The information follows:)

#### Five-year costs

Military Ocean Terminal Bay Area, Calif. :		<i>Million</i>
Total -----		\$14.5
MCA -----		8.5
PEMA -----		6.0
Military Ocean Terminal Bayonne, N.J. :		
Total -----		13.0
MCA -----		10.2
PEMA -----		2.8

#### CONTAINER-HANDLING FACILITY

Mr. SIKES. What further phases of the container-handling facility will there be?

Mr. GOODMAN. Terminal Development at Military Ocean Terminal, Bay Area is projected for a five phase program. The last four phases will cost \$2,642,000, \$1,171,000, \$921,000, and \$2,383,000 respectively for a total MCA program cost of \$8,575,000.

Mr. SIKES. What are you currently using for container handling facilities here?

Mr. GOODMON. At the present time, container loads of military cargo are shipped through commercial container facilities in the San Francisco Bay area. These facilities are located both in Oakland, Calif., and across the bay in San Francisco.

Mr. SIKES. What capability will the completed project give you in terms of the number of containers which can be efficiently processed through Oakland on a normal basis or which can be processed at maximum load in a contingency? How does this relate to your planned use of Oakland during peacetime and during contingencies?

Mr. GOODMON. Under conditions of normal workload, approximately 7,000 containers or 170,000 measurement tons of cargo could be processed per month through the fully developed terminal. The maximum capability in support of a contingency would be over 14,000 containers or approximately 350,000 measurement tons per month. With the improved breakbulk handling projected as a part of the complete program, this operating capability for Military Ocean Terminal, Bay Area, would be more than adequate for peacetime workloads, but would require augmentation by commercial facilities for a contingency of appreciable size.

## SAVINGS

Mr. PATTEN. What will be the savings as a result of the modernization programs at Bayonne and Oakland?

General DALRYMPLE. We estimate about \$2 million one-time savings at Bayonne. That is for the administration building we just described. At Oakland we estimate \$1 million for this phase 1 project plus \$2.5 million for the following phases that were described by Mr. Goodman, for a total of \$3.5 million a year after we accomplish the entire modernization program.

Mr. PATTEN. These are not one-time saving, they are annual savings?

General DALRYMPLE. Yes, sir.

## U. S. ARMY PACIFIC

Mr. SIKES. If you will, turn to U.S. Army, Pacific. Please insert page 155 in the record.

[Thousands of dollars]

	Prior authorization	Proposed authorization	Proposed funding
U.S. Army, Pacific installation:			
Korea, Various Locations.....		6,190	6,190
Vietnam, Various Locations.....		40,000	40,000
Total.....	0	46,190	46,190

Mr. SIKES. You have a request for \$40 million for Vietnam which will be discussed at another time.

## KOREA

Mr. SIKES. We will now turn to page 156 and insert that page in the record.

(The page follows:)

*8th U.S. Army, Korea, \$6,190,000*

The 8th U.S. Army is located in Korea. Its mission is to support the United Nations Command, to command and support the U.S. Forces Korea, and units of the 8th U.S. Army. The program consists of troop housing and support facilities.

*Status of funds*

Funded program not in inventory.....	\$26,865,000
Unobligated items, Jan. 31, 1970 (actual).....	24,055,000
Unobligated items, June 30, 1970 (estimated).....	11,583,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
508	Troop housing and support facilities.....	\$371	8

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (thousands) <sup>1</sup>	Status—Mar. 10, 1970	
			Released	Deferred
1969.....	Theater reliabil. mon. facilities.....	\$102	×	
1970.....	Operational and support facilities.....	1,323	×	

<sup>1</sup> Excludes costs for local labor and materials which are not limited by the construction reduction plan.

1. DATE 2 Feb 70	2. DEPARTMENT ARMY	3. INSTALLATION Eighth U. S. Army	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army, Pacific		6. STATE/COUNTRY Korea	
5. INSTALLATION CONTROL NUMBER		9. COUNTY (U.S.)	
7. STATUS Active		10. NEAREST CITY	
11. MISSION OR MAJOR FUNCTIONS To carry out the responsibility of the United Nations Command, U. S. Forces, Korea; and, the Eighth U. S. Army.			
12. PERSONNEL STRENGTH		PERMANENT	
a. AS OF _____		OFFICER (1) ENLISTED (2) CIVILIAN (3)	
b. PLANNED (End FY _____)		OFFICER (4) ENLISTED (5) CIVILIAN (6)	
		SUPPORTED	
		OFFICER (7) ENLISTED (8) CIVILIAN (9)	
		TOTAL (9)	
13. INVENTORY			
LAND		LAND COST (\$000) IMPROVEMENT (\$000)	
a. OWNED		(1) (2) (3) (4)	
b. LEASES AND EASEMENTS		( ) ( ) ( ) ( )	
c. INVENTORY TOTAL (Except Land rent) AS OF 30 JUNE 19 _____			
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____)		j. (Unfunded - \$ _____)	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM			
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS			
g. GRAND TOTAL (c + d + e + f)		26,865 6,190 108,526 141,581	
SUMMARY OF INSTALLATION LINE ITEMS			
CATEGORY CODE NO.	LINE ITEM DESIGNATION LINE ITEM TITLE	AUTHORIZATION PROGRAM	
		TENANT COMMAND	ESTIMATED PROGRAM
722	508 - Troop Housing and Support Facilities Troop Housing Tactical Equipment Shops & Facs Upgrade Electric Power	UNIT OF MEASURE	ESTIMATED (\$000)
		SCOPE	SCOPE
	Priority Page No 157	e	f
		d	6,190
			6,190

## TROOP HOUSING AND SUPPORT FACILITIES

Mr. SIKES. The request is for troop housing and support facilities. Tell us about the need for these facilities.

General DALRYMPLE. The troop housing is necessary to provide troops over there, some 46,000 of them, with upgraded troop facilities. They are presently living in quonset huts and makeshift hutments and we have, as you recall, sir, initiated a program in previous years which will take care of approximately 8,000 troop spaces. This will be another increment to upgrade the facilities for almost 2,000 additional enlisted men and officers.

## POSSIBLE USE OF TROOP LABOR IN KOREA

Mr. SIKES. Is there any troop labor being used in this construction?  
General DALRYMPLE. Not to my knowledge.

Mr. SIKES. Why not?

General DALRYMPLE. These are facilities, sir, for the troops of the 2d Division who are in a tactical situation.

Mr. SIKES. It seems that you could use Army Engineer troop units for some of this construction. Certainly that would help with the gold flow problem.

General DALRYMPLE. Colonel Moffat, do you have any information on that?

Colonel MOFFAT. Not in detail, sir, but I have knowledge that the Engineering troops are fully committed on the tactical site construction in the forward areas and construction of the various lines of defense.

Mr. SIKES. What has been done to try to obtain the services of additional troop units? The requirement for them presumably is being reduced in Vietnam. I take it this has not been explored. I am going to ask General, that the matter be thoroughly explored to determine if Engineer units now are available or will become available which could contribute to this construction and thereby reduce the gold flow problem and cut costs.

General DALRYMPLE. Yes, sir.  
(The information follows:)

Presidential decisions on further troop withdrawals from Vietnam may include Engineer Construction Battalions or Engineer units that could be used for this purpose. If such decisions include Engineer units restationing will be carefully examined in light of the force structure existing at that time.

Mr. PATTEN. Mr. Chairman, a year ago we had this matter surveyed. You can do a lot of things in Korea with local help and local contractors cheaper.

General DALRYMPLE. This contributes to the international balance-of-payments problems, sir.

## LONG-RANGE PROGRAM FOR KOREA

Mr. SIKES. The long-range program for the next 4 years is shown here at \$108 million, and last year it was shown as approximately \$40 million. Can you explain the rather startling change?

General DALRYMPLE. Yes, sir; we were able, after a long period of austerity in Korea to obtain a substantial authorization and funding

program for Korea. This has let us develop the overall fund requirement so that present undesirable facilities can be modernized or replaced.

Mr. SIKES. Are you saying that this is the first year that you have been able to reflect the actual needs?

General DALRYMPLE. We have been able to get a better fix, if you will, on the figure. That is why it has almost doubled since the one that you are referring to. The breakout is principally heavy in operational and training facilities which is \$54 million. In supply facilities which are sorely needed there, sir, we are programing \$33 million, and additional troop housing and community support for \$12 million. Those are the main items in the—

Mr. SIKES. At the rate of \$6 million a year it is going to be rather hard to work in \$108 million of funding in 4 years.

General DALRYMPLE. You are absolutely right, sir. But I should point out that last year we received almost \$24 million. This is an austere budget, there is no question about it, sir.

Mr. SIKES. Has the new \$108 million program been approved by OSD?

General DALRYMPLE. Yes, sir. It is in the 5-year Defense program.

#### CAMP STANLEY

Mr. SIKES. What units are stationed at Camp Stanley? What types of facilities are they now occupying? Will this complete the requirements for Camp Stanley?

General DALRYMPLE. Sir, the following units are now stationed in Camp Stanley: Headquarters, Headquarters Company, 36th Engineer Group (Combat), 11th Engineer Battalion (Combat), 512th Engineer Company (Dump Truck), 633d Engineer Company (Light Equipment), 60th Transportation Company (Tactical Support Base).

The existing housing is in quonset-type structures that are 12 to 14 years old and have deteriorated to a point where they are beyond economical repair and will be demolished. Roofs and walls leak, adequate heating in the winter is impossible and troops are subjected to hardship living and working conditions. The existing maintenance facilities constructed in 1953 are also inadequate temporary construction and no longer weatherproof. The projects submitted for inclusion in the fiscal year 1971 MCA program will not satisfy all of the requirements at Camp Stanley. Requirements for medical, administrative and community support facilities have been identified which will require future year funding.

Mr. SIKES. Provide for the record a breakdown of the work anticipated in the next 4 years by construction category.

(The information follows:)

Work anticipated in the next 4 years by construction category :

Category code	Facilities	Estimated authorization
100	Operational and training facilities.....	\$54,640,000
200	Maintenance and production facilities.....	3,551,000
400	Supply facilities.....	33,629,000
600	Administrative facilities.....	2,489,000
700	Troop housing and community support facilities.....	12,017,000
800	Utilities and ground improvements.....	2,200,000

## CONSTRUCTION STANDARDS

Mr. SIKES. Provide for the record a brief description of the construction standards used for the barracks, BOQ's, mess buildings, maintenance shops, and roads which are requested.

(The information follows:)

## CONSTRUCTION STANDARDS

**Barracks:** Three-story building with reinforced concrete foundation and frame; concrete masonry unit exterior and interior walls; reinforced concrete roof slab with built-up roofing; reinforced concrete floors with asphalt tile covering in corridors, dayrooms, and sleeping rooms; ceramic tile floor and wainscot in toilet and shower rooms; exposed ceilings; mechanical ventilation in toilets and shower rooms; oil-fired hot water heating system.

**Bachelor officer quarters:** Two-story building with reinforced concrete foundation and frame; concrete block exterior and interior walls; reinforced concrete roof slab with built-up roofing; reinforced concrete floors with asphalt tile covering in corridors, lounge, and sleeping rooms; ceramic tile floor and wainscot in toilet and shower rooms; exposed ceilings; mechanical ventilation in toilets and shower rooms; oil-fired hot water heating system.

**Mess buildings:** One-story building with reinforced concrete foundation and floor; prefabricated metal walls and roof; concrete block partitions; wall board on interior of exterior walls and on ceilings; asphalt tile covering on floor of dining area; mechanical ventilation system; oil-fired hot water heating system.

**Maintenance shop:** One-story building with reinforced concrete foundation and frame; concrete block exterior and interior walls; reinforced concrete roof slab with built-up roofing; exposed ceiling; mechanical ventilation system; oil-fired hot water heating system.

**Roads:** Roads are constructed of bituminous pavement and consist of the following: on a prepared subgrade provide 8'' to 12'' of nonfrost susceptible sub-base, 6'' to 8'' base course with 2'' bituminous penetration macadam wearing surface.

## ARMY PLANS FOR USE OF RELOCATABLE PIERS

Mr. SIKES. In connection with Korea, what is now the policy on the use and storage of floating piers? It will be recalled that in the beginning of the war in Vietnam, where port facilities were extremely meager, it was possible to obtain very good service from floating piers. Quite a number were built. I have been attempting to determine whether these will be retained in the inventory, stored for future emergency, or whether they will be scrapped.

I am told that some of these are going to be used in Korea. Is there anyone here prepared to discuss both topics, both the planned use of these piers in Korea and the overall projection for the use of the floating piers?

General DALRYMPLE. Yes, sir. I will call on Colonel Moffat to provide some details. Of course, having been in Korea for the period of time we have been there, we have a pretty good idea of what the port capacities are, the fixed port capacities. As you know, we are building an ammunition port at Chinhae which was authorized and funded in the past budget. Now I would like for Colonel Moffat to address specifically the DeLong pier situation as it pertains to South Vietnam, possible excesses and their utilization elsewhere.

Mr. SIKES. All right.

Colonel MOFFAT. First, I do not have specific information on the overall utilization of the DeLong pier assets the Army has now. With respect to Korea, recent reevaluation of the Korean seaport capacities

with respect to requirements of U.S. contingency plans indicates there is a capacity shortfall which can be satisfied by rapid installation of eight sections of DeLong piers for ammunition offloading and a construction of four Army functional component piers to handle the general cargo after contingency plans are put into effect.

Mr. SIKES. Does that mean the DeLong piers would be used for a temporary period or would they continue in use after the four Army functional component piers are built?

Colonel MOFFAT. No, they would continue in use, sir.

The analysis of the Korea seaport capacity discloses the D-plus ——— timeframe is the critical timeframe. The wartime capacities available upon completion of the Chinhae ammunition port indicates a short fall of approximately ——— short tons per day of ammunition discharge capacity and approximately ——— short tons per day for general cargo.

The capacities of the commercial ports in the locations necessary were considered on the basis that 75 percent of the port capacity would be available for military cargo and that in the case of ammunition offloading we would have a capability of offloading approximately ——— short tons over the beach at various locations. The Army is currently considering establishment of contingency storage, which we call operational project stocks, of eight sections of DeLong piers and four functional component piers to overcome this deficiency.

Mr. SIKES. Is that in addition to those previously mentioned?

Colonel MOFFAT. No, sir. The project stock requirements are being reviewed by the U.S. Army Equipment Authorization Review Center at Fort Belvoir. If approved, the stocks will be filled from available resources, which could include Southeast Asia excesses, or, if necessary, by procurement.

Mr. SIKES. Is that the complete requirement for emergency port facilities in Korea?

Colonel MOFFAT. That is correct, sir.

Mr. SIKES. Do I understand that you do not have the overall picture. On the plans for storage of these floating piers?

Colonel MOFFAT. I do not, sir.

Mr. SIKES. I am trying to establish whether they are going to be exceeded. If so we may have to do this whole thing over again in the next war.

General, will you make an effort to find out what the facts are?

General DALRYMPLE. Yes, sir.

(The information follows:)

DeLong piers belonging to the Army, now in use in RVN, will remain in place until no longer required for operations and then will be recovered. The piers which become available will be used for future contingency requirements. The piers will not be abandoned by the Army.

Mr. SIKES. That is all. Thank you, Colonel.

#### SAFEGUARD SYSTEMS COMMAND (O/S)

Mr. SIKES. Turn to Safeguard Systems Command (Overseas). Insert in the record page 164.

(The page follows:)

Safeguard Systems Command (O/S) :

Installation :

Kwajalein Missile Range, Marshall Islands :

Page number \_\_\_\_\_  
Proposed authorization \_\_\_\_\_ \$3,760,000

KWAJALEIN MISSILE RANGE, MARSHALL ISLANDS

Mr. SIKES. Turn to Kwajalein Missile Range and insert in the record page 165.

(The page follows:)

*Kwajalein Missile Range, Marshall Islands, \$3,760,000*

Kwajalein Missile Range is located at Kwajalein Atoll 2,100 miles west of Hawaii. The mission of this installation is to support the research, development, and test program for missile systems. The program consists of offsite communications facilities and Safeguard research and development facilities.

*Status of funds*

Funded program not in inventory \_\_\_\_\_ \$70,410,000  
Unobligated items, Jan. 31, 1970 (actual) \_\_\_\_\_ 19,816,000  
Unobligated items, June 30, 1970 (estimated) \_\_\_\_\_ 4,555,000

DESIGN INFORMATION

Item No.	Line item	Design cost	Percent
			complete Jan. 31, 1970
135	Offsite communications facilities _____	\$35,000	15
190	Safeguard R. & D. facilities _____	192,000	0

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programmed amount (thousands) <sup>1</sup>	Status, Mar. 10, 1970	
			Released	Deferred
1970	Civilian dormitory-ROI Namar _____	1,676	×	
1970	Live explosive storage facility _____	112	×	
1968	Guardian (Tac. Mar.) _____	3,843		×
1970	Marine repair facility _____	712		×

<sup>1</sup> Excludes costs for local labor and materials which are not limited by the construction reduction plan.

1. DATE 2 Feb 1970		2. DEPARTMENT ARMY		3. INSTALLATION Kwajalein Missile Range							
4. COMMAND OR MANAGEMENT BUREAU SAFEGUARD Systems Command - O/S		5. INSTALLATION CONTROL NUMBER 0		6. STATE/COUNTRY Marshall Islands							
7. STATUS Active		8. YEAR OF INITIAL OCCUPANCY		9. COUNTY (U.S.) 10. NEAREST CITY							
11. MISSION OR MAJOR FUNCTIONS Coordinate all planning, direction and control of the work and associated resources in all phases of research, development, and logistic support involved in developing an effective system for NIKE-X and SAFEGUARD.		12. PERSONNEL STRENGTH		PERMANENT		STUDENTS		SUPPORTED		TOTAL (\$000)	
		a. AS OF		OFFICER (7)	ENLISTED (2)	CIVILIAN (3)	OFFICER (9)	ENLISTED (7)	CIVILIAN (8)	TOTAL (5)	
		b. PLANNED (End FY)									
		13. INVENTORY		LAND COST (\$000)		IMPROVEMENT (\$000)		TOTAL (\$000)			
		a. OWNED									
		b. LEASES AND EASEMENTS									
		c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19									
		d. AUTHORIZATION NOT YET IN INVENTORY (Planned - \$ 70,410); (Unfunded - \$ 0)						70,410			
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM						3,760			
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS						15,231			
		g. GRAND TOTAL (c + d + e + f)						89,401			
SUMMARY OF INSTALLATION LINE ITEMS											
CATEGORY CODE NO.		LINE ITEM DESIGNATION		TENANT COMMAND		UNIT OF MEASURE		AUTHORIZATION PROGRAM		ESTIMATED COST (\$000)	
		LINE ITEM TITLE		Page NO		SCOPE		SCOPE		SCOPE	
812		135 - Offsite Communications Facilities				SF		5,144		560	
390		190 - SAFEGUARD R&D Facilities						5,144		560	
		Total						3,200		3,200	
								3,760		3,760	

Mr. SIKES. The request is for \$3,760,000.

Which of the projects here are directly related to the Safeguard program?

General DALRYMPLE. The communications facilities project which you see on page 166 is a general communications facility and the one you see on page 167 is an expansion of the Safeguard test program at Kwajalein. The latter one is for \$3.2 million and the one that has general application is \$560,000.

Mr. SIKES. What offsite communication facilities are available at this test range?

Colonel PAQUETTE. We have a number of them. I can provide that for the record.

Mr. SIKES. Please do so.

(The information follows:)

Eleven similar type communications facilities containing carrier terminal equipment can be found at the following locations within the Kwajalein Atoll:

# of Facilities	Location	Purpose
4	Kwajalein Ennylabegan Gugeegue Roi-Namur	The Kwajalein-Ennylabegan-Gugeegue (KEG) carrier system is an integral part of the overall range communications which connects the HF transmitters on Gugeegue and the HF receivers on Ennylabegan to the main control facility on Kwajalein and interfaces with local communications systems. The Roi-Namur to Kwajalein system which terminates at the main control facility on Kwajalein is used to pass sensor acquisition data from the radar complex on Roi-Namur to Kwajalein to the Gugeegue transmitter site as well as provide primary communications between Roi-Namur and Kwajalein.
2	Kwajalein Meck	The Kwajalein-Meck 120 channel system serves as the primary communications link between Meck and Kwajalein and interfaces with the overall KMR communications system.
4	Legan Eniwetak Omelek Gellinam	The Legan-Eniwetak-Omelek-Gellinam link is a separate 24 channel system used to connect scoring radars, remote telemetry stations and optical equipment primarily used in support of DOD offensive and defensive missile programs.
1	Roi-Namur* Gagan	The Roi-Namur-Gagan link is a separate 24 channel system used to connect scoring radars and optical instruments in the northern part of the Kwajalein Atoll to the overall KMR communications system. The Gagan facility is a separate terminal building. The terminal building at Roi-Namur is the same terminal building used for the Roi-Namur Kwajalein cable.*

Mr. SIKES. If you have a large number, what is the need for additional facilities?

Colonel PAQUETTE. Our facilities are saturated as far as communications equipment with respect to the amount of facilities that we require. These three facilities for \$560,000 would be used to house communication between instrumentation sites so that we can obtain data. These facilities will also serve Safeguard but they have a general application for the National Missile Range.

Mr. SIKES. Are there further questions? [No response.]

#### ARMY SECURITY AGENCY (O/S)

Mr. SIKES. Turn to the "Army Security Agency (Overseas)." Insert in the record page 168.

(The page follows:)

[In thousands of dollars]

Army Security Agency (O/S)	Prior authorization	Proposed authorization	Proposed funding
Installation:			
Location 03.....		59	59
Location 178.....		825	825
Location 277.....		178	178
Location 300.....		520	520
Location 321C.....		351	351
Location 321 D.....		602	602
Total.....		2,535	2,535

#### VARIOUS LOCATIONS, OVERSEAS

Mr. SIKES. Turn to "Various Locations, Overseas," and insert in the record pages 169 and 170.

(The pages follow:)

*ASA O/S, Various Locations, \$2,535,000*

This request is for various overseas locations operated by the U.S. Army Security Agency. The mission of the sites is to engage in communications and intelligence activities. The program consists of an electronics maintenance shop, troop housing and community facilities, utilities extension, controlled humidity warehouses, and an operations complex.

#### *Status of funds*

Funded program not in inventory.....	<sup>1</sup> \$11,061,000
Unobligated items, 31 Jan. 1970 (actual).....	2,951,000
Unobligated items, 30 June 1970 (estimated).....	1,804,000

<sup>1</sup> Includes only locations listed below.

DESIGN INFORMATION  
[Dollar amounts in thousands]

Item No.	Line Item	Design cost	Percent complete Jan. 31, 1970
642	Location 03: Electronics maintenance shop.....	\$3	20
	Location 178:		
21	Gymnasium.....	10	20
54	Utilities extension.....	31	20
	Location 277:		
4	EM barracks w/o mess.....	11	5
5	Bachelor officer quarters.....	4	5
3	Location 300: Controlled humidity warehouse.....	26	0
11	Location 321C: Operations complex.....	20	5
12	Location 321D: Troop support complex.....	35	5

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount (\$'000)	Status—Mar. 10, 1970	
			Released	Deferred
1969-70.....	Location 300—None. Location 03—None. Location 178—None. Location 277—None. Location 321-C—None. Location 321-D—None.			

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION Various Locations	
4. COMMAND OR MANAGEMENT BUREAU U. S. Army Security Agency		6. STATE/COUNTRY Overseas	
7. STATUS		9. COUNTY (U.S.) 10. NEAREST CITY	
11. MISSION OR MAJOR FUNCTIONS The US Army Security Agency is a Department of Army Field Agency engaged in intelligence activities.		12. PERSONNEL STRENGTH	
*Includes only locations listed.		PERMANENT	
		OFFICER (1)	CIVILIAN (2)
13. INVENTORY		STUDENTS	
		ENLISTED (4)	OFFICER (5)
LAND		SUPPORTED	
		ENLISTED (7)	CIVILIAN (8)
a. AS OF _____		TOTAL (9)	
b. PLANNED (End FY _____)			
13. INVENTORY			
LAND		LAND COST (\$000)	
a. OWNED		(2)	
b. LEASES AND EASEMENTS		IMPROVEMENT (\$000)	
c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 _____		(3)	
d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____; Unfunded - \$ _____)		(4)	
e. AUTHORIZATION REQUESTED IN THIS PROGRAM		0	
f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		11,061*	
g. GRAND TOTAL (c + d + e + f)		2,535	
		1,509	
		15,105	

SUMMARY OF INSTALLATION LINE ITEMS

CATEGORY CODE NO. a	LINE ITEM DESIGNATION b	PAGE NO	TENANT COMMAND c	UNIT OF MEASURE d	AUTHORIZATION PROGRAM		FUNDING PROGRAM	
					SCOPE e	ESTIMATED COST (\$000) f	SCOPE g	ESTIMATED COST (\$000) h
217	642 - Electronics Maintenance Shop <u>Location 03</u>	Pri 1 171		SF	1,920	59	1,920	59
740	21 - Gymnasium <u>Location 178</u>	Pri 1 172		SF	10,200	190	10,200	190
890	54 - Utilities Extension <u>Location 277</u>	Pri 1 173				635		635
722	4 - EM Barracks w/o Mess	Pri 1 174		MN	50	119	50	119
724	5 - Bachelor Officer Quarters	Pri 1 175		MN	5	59	5	59

1. DATE	2. DEPARTMENT	3. INSTALLATION					
2 Feb 1970	ARMY	FY 1971 MILITARY CONSTRUCTION PROGRAM(Continued)					
		Various Locations - Overseas					
SUMMARY OF INSTALLATION LINE ITEMS (Continued)							
LINE ITEM DESIGNATION		TENANT COMMAND	UNIT OF MEASURE	AUTHORIZATION PROGRAM	FUNDING PROGRAM		
CATEGORY CODE NO.	LINE ITEM TITLE	c	d	SCOPE e	ESTIMATED COST (\$000) f	SCOPE g	ESTIMATED COST (\$000) h
		Page No.					
442	3 - Controlled Humidity Warehouses <u>Location 300</u>	Pri 1 176	SF	72,000	520	72,000	520
141	11 - Operations Complex <u>Location 321-C</u>	Pri 1 177	SF	6,620	351	6,620	351
740	12 - Troop Support Complex <u>Location 321-D</u>	Pri 2 178	SF	27,590	602	27,590	602
	Totals				2,535		2,535

Mr. SIKES. You are requesting an electronics maintenance shop for \$59,000 at location 03. Will you be able to continue to use this location in Okinawa?

General DALRYMPLE. Yes, sir; we will be able to continue to use it.

Mr. SIKES. Will the bachelor officers quarters requested in the amount of \$59,000 at location 277 complete the requirement?

Colonel STEVENS. Yes, sir. Within the context of known present and future requirements this will provide sufficient officer billeting capacity at this location.

Mr. SIKES. Can you identify savings as a result of the construction of the controlled humidity warehouses which are requested at location 300 in the amount of \$520,000?

Colonel STEVENS. Yes, sir. The vehicles and electronic equipment they transport are currently stored in the open. Due to damage, caused primarily by condensation, they are not in the state of readiness required for their assigned tactical mission. There are two means by which this situation can be corrected; increase the maintenance, and consequently, maintenance personnel; or provide a controlled environment for the vehicles and equipment. The Army has selected the latter alternative due to the savings that can be achieved. Specifically, this facility, at a one time cost of \$520,000 will eliminate the need for approximately 120 additional maintenance personnel. These additional personnel incur an annual operating cost of \$660,000.

Mr. SIKES. Will the troop support complex at location 321D complete the requirements there?

Colonel STEVENS. Yes, sir. This project will complete the known present and future troop support requirements.

### U.S. ARMY, EUROPE

Mr. SIKES. Next, we will take up U.S. Army, Europe. Insert in the record page 180.

(The page follows:)

#### U.S. ARMY, EUROPE

[In thousands of dollars]

Installation	Prior authorization	Proposed authorization	Proposed funding
Franconia district, Germany.....		590	590
Hesse district, Germany.....		280	280
North Bavaria district, Germany.....		311	311
North Wuerttemberg district, Germany.....		548	548
Palatinate district, Germany.....		3,598	3,598
Rhineland district, Germany.....		730	730
7th Army Training Center, Germany.....		1,335	1,335
Vogelsberg district, Germany.....		1,510	1,510
Burtonwood Army Depot.....		1,191	1,191
Europe, various, infrastructure.....		50,000	50,000
Total.....	0	60,093	60,093

ARMY AND DEFENSE POSITION ON NEED TO MAINTAIN U.S. ARMY FORCES  
IN NATO

Mr. SIKES. The request is for \$60,093,000.

I would like to have for the record the official position of the Department of the Army and the Department of Defense on the need for maintaining the current level of Army forces in NATO.

(The information follows:)

The Department of the Army position is that our goal in Europe is security for the United States, and as a part of it, security for Western Europe. In concert with our allies we have erected a shield of military strength behind which we and our allies can prosper economically and socially, and each nation can pursue its own goals. This security system has many parts. No part can be substituted completely for another——.

It is by maintaining an array of defensive options, nuclear and conventional, that we can successfully deter the aggressive intentions, large or small, of the Warsaw Pact nations.——

We have such a force in Europe now, and the experience of the past 20 years suggests that it is about the right size, provided that we also maintain a rapid-reinforcement capability.

The land forces the United States currently has committed or oriented toward the NATO theater appear to be about the right size.——

The U.S. Army Forces committed or oriented to NATO are of three types: units in Europe, additional active forces in the United States, and Reserve Component Forces.——

In summary, our objective vis-a-vis Europe and the NATO Alliance should include:——

NEED FOR ADDITIONAL CONSTRUCTION IF ARMY FORCES ARE REDUCED

Mr. SIKES. If there were a reduction in Army troop strength, measurable reduction, would these projects still be in firm commitments, firm requirements?

General DALRYMPLE. If there were a major reduction?

Mr. SIKES. Yes.

General DALRYMPLE. No, sir.

Mr. SIKES. Where would the cutoff point be?

Colonel BLANK. Sir, the MCA projects in our program, other than NATO, really only amount to about \$10 million. Of that \$10 million, \$4.8 million are for projects that you have heard about, the ammo storage in the Saarland and LOC/PORT facilities at Burtonwood, U.K. These would be recouped through NATO, which leaves only about \$5.3 million requested in this program. To specifically identify which of these projects we could do without, we would have to identify the forces that are to be returned. However, we would like to point out that any significant reduction of our forces in Europe would probably require a much greater investment in MCA funds for facilities to accommodate these forces in the United States.

GERMANY—VARIOUS

Mr. SIKES. Turn to Germany.

Please insert in the record pages 181 and 182.

(The pages follow:)

*Germany various, \$8,902,000*

This request is for various locations operated by the U.S. Army, Europe. The mission of the installations is support of the U.S. Army, Europe. The program

includes maintenance and storage facilities, communications facilities, troop housing and community support facilities, and utilities.

*Status of funds*

Funded program not in inventory.....	
Unobligated items, Jan. 31, 1970 (actual).....	\$25,976,000
Unobligated items, June 30, 1970 (estimated).....	19,671,000

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
FRANCONIA DISTRICT			
23	Hardstand for tracked vehicles.....	15	0
22	Messhall.....	18	0
21	Expand water supply.....	4	0
HESSE DISTRICT			
14	Tank repair shop.....	19	25
NORTH BAVARIA DISTRICT			
30	Hardstand for tracked vehicles.....	4	0
31	do.....	9	0
29	Central heating barracks.....	2	100
NORTH WUERTEMBERG DISTRICT			
27	AUTOVON switching gear.....	26	0
26	Convert heating plants to oil.....	7	0
PALATINATE DISTRICT			
54	Ammunition storage facility—Saarland.....	110	90
RHINELAND DISTRICT			
36	Addition to elementary school.....	460	25
40	Convert heating plant.....	9	0
SEVENTH ARMY TRAINING CENTER			
9	Hangar and airfield facilities.....	44	0
31	Tactical equipment shops and facilities.....	30	25
VOGELSBERG DISTRICT			
22	High school—Hanau.....	90	0

PROJECT STATUS, CONSTRUCTION REDUCTION PLAN

Program year	Line item	Programed amount <sup>1</sup>	Status, Mar. 10, 1970	
			Released	Deferred
1969	Power upgrade, comm. facility.....	\$523,000	×	
1970	USAREUR command center.....	260,000	×	
1970	Transmission test stand.....	8,000	×	
1970	Extend heating plants.....	13,000	×	
1970	Rehabilitate 97th General Hospital.....	1,002,000		×
1970	Convert heat plant to oil.....	57,000		×
1970	Basic load sites.....	431,000		×
1970	Support facilities for enlisted men's barracks.....	716,000		×
1970	Junior high school addition.....	705,000		×
1970	Heat messhalls and latrines.....	354,000		×
1970	Enlisted men's barracks without mess.....	359,000		×
1969	Aircraft hangar.....	582,000		×
1969	Aircraft maintenance facility.....	390,000		×

<sup>1</sup> Excludes costs for local labor and materials which are not limited by the construction reduction plan.

1. DATE 2 Feb 1970	2. DEPARTMENT ARMY	3. INSTALLATION <b>FY 1971 MILITARY CONSTRUCTION PROGRAM</b> Germany - Various		
4. COMMAND OR MANAGEMENT BUREAU U. S. Army, Europe		6. STATE/COUNTRY Germany		
7. STATUS Active		9. COUNTY (U.S.) 10. NEAREST CITY		
11. MISSION OR MAJOR FUNCTIONS Support of U. S. Army, Europe		12.		
		PERMANENT		
		OFFICER ENLISTED (2)		
		CIVILIAN (3)		
		STUDENTS		
		OFFICER ENLISTED (4)		
		OFFICER (5)		
		CIVILIAN (8)		
		ENLISTED (7)		
		TOTAL (2)		
		a. AS OF _____		
		b. PLANNED (End FY _____)		
		13.		
		INVENTORY		
		LAND (1)		
		ACRES (1)		
		LAND COST (\$000) (2)		
		IMPROVEMENT (\$000) (3)		
		TOTAL (\$000) (4)		
		a. OWNED		
		b. LEASES AND EASEMENTS		
		c. INVENTORY TOTAL (Except land rent) AS OF 30 JUNE 19 _____		
		d. AUTHORIZATION NOT YET IN INVENTORY (Funded - \$ _____); (Unfunded - \$ _____)		
		e. AUTHORIZATION REQUESTED IN THIS PROGRAM		
		f. ESTIMATED AUTHORIZATION - NEXT 4 YEARS		
		g. GRAND TOTAL (c + d + e + f)		
		8,902		
		46,006		
		54,908		

CATEGORY CODE NO.		LINE ITEM DESIGNATION		SUMMARY OF INSTALLATION LINE ITEMS		AUTHORIZATION PROGRAM		FUNDING PROGRAM	
a		b		c	d	e	f	g	h
		LINE ITEM TITLE	Page No	TENANT COMMAND	UNIT OF MEASURE	SCOPE	ESTIMATED COST (\$000)	SCOPE	ESTIMATED COST (\$000)
452		<u>Franconia District</u>							
	23 - Hardstand	For Tracked Vehicles	Pri 1 183		SY	16,500	226	16,500	226
723									
	22 - Messhall		Pri 3 184		SF	8,000	296	8,000	296
841									
	21 - Expand Water Supply		Pri 1 185		TG	86	68	86	68
214		<u>Hesse District</u>							
	14 - Tank Repair Shop		Pri 1 186		SF	6,400	280	6,400	280
452		<u>North Bavaria District</u>							
	30 - Hardstand	For Tracked Vehicles	Pri 1 187		SY	2,625	74	2,625	74

1. DATE		2. DEPARTMENT		3. INSTALLATION			
2 Feb 1970		ARMY		Germany - Various			
FY 1971 MILITARY CONSTRUCTION PROGRAM (Continued)							
SUMMARY OF INSTALLATION LINE ITEMS (Continued)							
CATEGORY CODE NO. a	LINE ITEM DESIGNATION			AUTHORIZATION PROGRAM		FUNDING PROGRAM	
	LINE ITEM TITLE b	Page No	TENANT COMMAND c	SCOPE e	ESTIMATED COST (\$000) f	SCOPE g	ESTIMATED COST (\$000) h
			UNIT OF MEASURE d				
	<u>North Bavaria District Cont'd</u>						
452	31 - Hardstand For Tracked Vehicles	Pri 1 188		9,300	153	9,300	153
821	29 - Central Heating - Barracks	Pri 1 189	BT	2,000	84	2,000	84
	<u>North Wuertemberg District</u>						
131	27 - AUTOVON Switching Gear	Pri 1 190	SF	9,600	452	9,600	452
821	26 - Convert Heating Plants to Oil	Pri 1 191	BT	30,000	96	30,000	96
	<u>Palatinate District</u>						
421	54 - Ammunition Storage Facility - Saarland	Pri 1 192	SF	90,000	3,598	90,000	3,598
	<u>Rhineland District</u>						
730	36 - Addition to Elementary School	Pri 3 193	SF	19,930	595	19,930	595
821	40 - Convert Heating Plant	Pri 1 194	BT	16,000	135	16,000	135
	<u>Seventh Army Training Center</u>						
211	9 - Hangar and Airfield Facilities	Pri 1 195	SF	13,440	742	13,440	742
214	31 - Tactical Equipment Shops and Facilities	Pri 1 196	SF	12,000	593	12,000	593
	<u>Vogelsberg District</u>						
730	22 - High School Hanau	Pri 1 197	SF	139,000	1,510	139,000	1,510
	Totals						
					8,902		8,902

Mr. SIKES. The request is for \$8,902,000.

FRANCONIA DISTRICT—MESSHALL

You are asking for a messhall in Franconia at \$296,000. The GAO has been critical of the methods of programming messhall construction. Has the Army been responsive to this criticism or does it feel that it is not justified?

General DALRYMPLE. We made a complete review of all our projects to make sure we were not overbuilding. I would like to ask Mr. Carroll to elaborate on that, sir.

Mr. SIKES. All right.

Mr. CARROLL. We have gone along with the GAO recommendations. We have made drastic changes in our method of computing space requirements. Mainly, we have extended the serving period which enables us to feed more people in less space at less cost insofar as construction costs are concerned.

Mr. SIKES. Was the GAO right?

Mr. CARROLL. Basically, yes, sir. They applied a principle—

Mr. SIKES. Why was it necessary for them to tell you that you were wrong?

Mr. CARROLL. Actually we were already in the process of changing the space criteria for new construction. This is more or less the new look, as it were, in food service construction, not only in messhalls but in the feeding facilities throughout the country.

FRANCONIA DISTRICT—BASE WATER SUPPLY

Mr. SIKES. You are requesting \$68,000 to expand the water supply at a base in the Franconia district. This would provide for a water well, pumps, and so forth. What other alternatives did you study for providing an adequate water supply at this base?

Mr. NORWOOD. Purchased water from the nearest municipality was considered, but this would involve construction of about 6,000 linear feet of water line. Purchased water in Germany is very expensive, averaging \$0.62 per 1,000 gallons versus a CONUS average of \$0.19. Water was produced from wells at Army installations in Germany in fiscal year 1969 at an average unit cost of \$0.097 per 1,000 gallons. It is much more economical to drill the well proposed in this project than to purchase the water from a municipality.

HARD STANDS

Mr. SIKES. Could you discuss in general the necessity for hard stands for tracked vehicles, of which you have several in this request.

Mr. CHRISTENSEN. This year's request for hard stands for tracked vehicles in Germany are at three locations. These are: Ledward Barracks in the Franconia district, Schweinfurt; and two in the North Bavaria district at O'Brien Barracks Schwaback and Darby Caserne, Fuerth. All three locations lack concrete hard stands. Present parking areas are a combination of gravel or bituminous or vehicles are parked

within the streets or between buildings of the Casernes. Present conditions impair proper maintenance, cause safety hazards to personnel working on the equipment by being exposed to street traffic. During normal maintenance such as changing of oils and other lubricants, potential ground water contamination is incurred. Continual replacement of gravel and repair to bituminous areas and streets have been quite costly at all locations. Approval of these projects will provide adequate parking facilities and result in significant savings by labor reductions, water usage reduction and repair and maintenance costs to the present parking areas. Savings at each location have been conservatively estimated at \$50,000, annually.

#### AUTOVON SWITCHING CENTER-STUTTART

**Mr. SIKES.** What is the necessity for an AUTOVON switching center at Stuttgart?

**Colonel FRITZ.** Sir, the requirement for an AUTOVON Switching Center at Stuttgart, Germany, arises from the need to improve long distance telephone service by providing increased access to the worldwide Automatic Voice Network (AUTOVON) for the U.S. Military subscribers. The addition of an AUTOVON switch at Stuttgart will provide the capability of furnishing premium service to selected users at important U.S. Military Headquarters within Germany. It will also provide the most economical Command and Control Communications to the Military Departments by reducing to a minimum the length of both Government owned and leased circuitry.

The activation of the Stuttgart switch will partially satisfy the communication problems caused by the relocation of U.S. Forces and military missions from France and their subsequent relocation within the Federal Republic of Germany.

**Mr. SIKES.** The ammunition storage facility-Saarland is a classified item and will be discussed at a later time.

#### SEVENTH ARMY TRAINING CENTER

You are requesting \$742,000 for hangar and airfield facilities at the Seventh Army Training Center. What is the number, type, and mission of aircraft permanently assigned here? What is the average number and type of aircraft at the airfield from units in training?

**Colonel GALLIHER.** Aircraft permanently assigned at Grafenwoehr are five UH-1B's (four medical evac and one administrative use), two OH-13's for observation and command liaison, one O-1A for patrolling ranges and directing artillery fire in support of training, and one U-6A for command liaison and administrative support. An average of 12 transient aircraft are temporarily at Grafenwoehr at any one time for support of unit training. The predominant types of transient aircraft are OH-13, UH-1, CH-34, O-1, and U-6A.

**Mr. SIKES.** Are there questions? [No response.]

#### BURTONWOOD ARMY DEPOT, UNITED KINGDOM

**Mr. SIKES.** We will take up Burtonwood, United Kingdom. Place page 198 in the record, please.

(The page follows:)

*Burtonwood Army Depot, United Kingdom, \$1,191,000*

Burtonwood Army Depot is located in the United Kingdom. The mission of this installation is to receive, store, maintain and issue general supplies, ammunition and petroleum products. It performs depot maintenance including modification, repair, overhaul, and rebuild. The program consists of line of communications port storage facilities.

*Status of funds*

Funded program not in inventory-----	0
Unobligated items, January 31, 1970 (actual)-----	0
Unobligated items, June 30, 1970 (estimated)-----	0

DESIGN INFORMATION

Item No.	Line item	Design cost (thousands)	Percent complete Jan. 31, 1970
17	LOC port storage facilities-----	70	0

*Project status, Construction reduction plan.—None.*



Mr. SIKES. The request is for \$1,191,000 for LOC port storage facilities.

## RAILROAD SPUR

We have already discussed this project in some detail, but tell us why the railroad spur is necessary?

Colonel KELLY. Sir, first of all, Burtonwood did not have a railroad spur. It only has a single mode of access. The railroad spur is not directly and primarily or solely associated with the LOC/port plan but it is certainly related to our ability, once we get the equipment in and once we have to activate our line of communications, to remove war reserve stocks from the Burtonwood Depot in a timely manner. We have a stockage objective there of about ——— and it is our plan and our concept to move this out in about a ——— period. This involves moving sizable quantities, and even the English say that we will never be able to do it by truck alone.

Mr. SIKES. I am not sure that I have followed all your statement. Do you need the spur whether or not the new line of communication is installed?

Colonel KELLY. No, sir. If we are not going to have the line of communication we don't need the railroad.

Mr. SIKES. Is it necessary to have it now. Do you feel that you have sufficient indication that you are going to go ahead with the new line of communications?

Colonel KELLY. The necessity for the line of communications is so serious we are going to go ahead with it.

Mr. SIKES. The only question then would be the completion of the negotiations for base rights, is that correct?

Colonel KELLY. In ———; yes.

General DALRYMPLE. I think the importance of the various modes of transportation here requires stressing. Burtonwood is located near Liverpool up in the northwest corner of England. We are going to have to move the pre-positioned supplies and equipment to cross the channel. We cannot depend on highway travel alone or transloading. Therefore, we need to use the rail system and this spur.

## GENERAL AUTHORIZATION

Mr. SIKES. Next is a General authorization.

Insert in the record page 205.

(The page follows:)

[In thousands of dollars]

General authorization	Prior authorization	Proposed authorization	Proposed funding
Planning.....			40,500
Access roads.....			7,700
Minor construction.....			10,000
Total.....	0	0	58,200

Mr. SIKES. The request is for \$58,200,000.  
Insert in the record pages 207, 209, and 211.  
(The pages follow :)

1. DATE 2 Feb 1970	2. FISCAL YEAR 1971	MILITARY CONSTRUCTION LINE ITEM DATA			3. DEPARTMENT ARMY	4. INSTALLATION General Authorization
5. PROPOSED AUTHORIZATION \$		6. PRIOR AUTHORIZATION P.L.	7. CATEGORY CODE NUMBER 91211A	8. PROGRAM ELEMENT NUMBER 91211A	9. STATE COUNTRY CONUS and Overseas	
10. PROPOSED APPROPRIATION \$ 22,000,000		11. BUDGET ACCOUNT NUMBER 6300	12. LINE ITEM NUMBER B808 - T00500	13. LINE ITEM TITLE Planning		

SECTION A - DESCRIPTION OF LINE ITEM				SECTION B - COST ESTIMATES			
18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY				20. PRIMARY FACILITY			
14. TYPE OF CONSTRUCTION	a. NO. OF BLDGS	b. NO. OF STORIES	c. LENGTH	d. WIDTH	e. LENGTH	f. GROSS AREA	g. COST (\$)
a. PERMANENT							
b. SEMI-PERMANENT							
c. TEMPORARY							
15. TYPE OF WORK				CAP			
a. NEW FACILITY	19. DESCRIPTION OF WORK TO BE DONE						
b. ADDITION	advance and final design of public works construction and						
c. ALTERATION	for development of standard plans for repetitive-type						
d. CONVERSION	facilities.						
e. OTHER (Specify)							
16. REPLACEMENT							
17. TYPE OF DESIGN							
a. STANDARD DESIGN							
b. SPECIAL DESIGN							
c. DRAWING NO.							
				21. SUPPORTING FACILITIES			
a.							\$
b.							
c.							
d.							
e.							
f.							
				22. TOTAL LINE ITEM COST			
				\$ 22,000			

SECTION C - BASIS OF REQUIREMENT	
23. QUANTITATIVE DATA	25. REQUIREMENT FOR LINE ITEM
a. TOTAL REQUIREMENT (U/M)	Funds requested are required for advanced and final design and for continuation of work on
b. EXISTING SUBSTANDARD	development of standard plans. Design funds are to be used for final design of the FY 1971
c. EXISTING ADEQUATE	program and for advance design of the FY 1972 and future programs. Development of standards
d. FUNDED, NOT IN INVENTORY	consist of preparation of standard drawings for repetitive-type facilities which are considered
e. ADEQUATE ASSETS (c, f, d)	an integral part of Army installations. The use of such drawings at many installations results
	in considerable savings.
24. RELATED LINE ITEMS	
1. UNFUNDED PRIOR AUTHORIZATION	
2. INCLUDED IN FY _____ PROGRAM	
3. DEFICIENCY (a - c - f - d)	
4. FUNDED	
5. AUTHORIZED	



1. DATE 2 Feb 1970	2. FISCAL YEAR 1971	MILITARY CONSTRUCTION LINE ITEM DATA			3. DEPARTMENT ARMY	4. INSTALLATION General Authorization
5. PROPOSED AUTHORIZATION \$		6. PRIOR AUTHORIZATION PL	7. CATEGORY CODE NUMBER 91211A	8. PROGRAM ELEMENT NUMBER 91211A	9. STATE/COUNTRY CONUS and Overseas	
10. PROPOSED APPROPRIATION \$ 10,000,000.		11. BUDGET ACCOUNT NUMBER 6600	12. LINE ITEM NUMBER B829-T00501		13. LINE ITEM TITLE Minor Construction	

SECTION A - DESCRIPTION OF LINE ITEM				SECTION B - COST ESTIMATES				
18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY				20. PRIMARY FACILITY				
14. TYPE OF CONSTRUCTION	a. NO. OF BLDGS	b. NO. OF STORIES	c. LENGTH	d. WIDTH	U/M	QUANTITY	UNIT COST	COST (\$000)
a. PERMANENT							\$	10,000
b. SEMI-PERMANENT								
c. TEMPORARY								
15. TYPE OF WORK				21. SUPPORTING FACILITIES				
a. NEW FACILITY	16. DESCRIPTION OF WORK TO BE DONE							
b. ADDITION								
c. ALTERATION								
d. CONVERSION								
e. OTHER (Specify)								
16. REPLACEMENT								
17. TYPE OF DESIGN								
a. STANDARD DESIGN								
b. SPECIAL DESIGN								
c. DRAWING NO.								
				22. TOTAL LINE ITEM COST				
				\$ 10,000				

SECTION C - BASIS OF REQUIREMENT	
23. QUANTITATIVE DATA (U/M )	
a. TOTAL REQUIREMENT	
b. EXISTING SUBSTANDARD	( )
c. EXISTING ADEQUATE	
d. FUNDED, NOT IN INVENTORY	
e. ADEQUATE ASSETS (c + d)	
f. UNFUNDED PRIOR AUTHORIZATION	FUNDED
g. INCLUDED IN FY PROGRAM	AUTHORIZED
h. DEFICIENCY (g - e - f - d)	
24. RELATED LINE ITEMS	

This request will provide for unforeseen minor new structures, extensions, additions and those alterations and rehabilitations which result in an increase in capacity, for projects costing \$25,000 to \$200,000. It is contemplated that all projects of this nature, costing less than \$25,000 will be financed from the O&M appropriation. This is in accordance with the existing General authorization provision.

Mr. SIKES. You are requesting the following funds; planning, \$40,-500,000; access roads, \$7,700,000; minor construction, \$10 million.

What planning funds and what access roads funds do you anticipate will be carried over at the end of fiscal year 1970?

General DALRYMPLE. Mr. Brazier.

Mr. BRAZIER. At the end of fiscal year 1970, we anticipate minor construction funds of \$5.7 million to be unobligated. We anticipate planning money totaling \$10.7 million unobligated which includes \$7.8 million for Safeguard.

Mr. SIKES. What about access roads?

Mr. BRAZIER. As far as access roads are concerned, we anticipate that \$9.9 million will be unobligated which includes \$7.9 million for Safeguard.

Mr. SIKES. Will you need all the minor construction funds requested here?

General DALRYMPLE. Yes, sir. That is one of our most important items.

Mr. SIKES. What do you expect the unobligated balance to be as of the end of this fiscal year?

General DALRYMPLE. It is affected by the 75 percent freeze, you see, so it is an unrealistic balance that we are going into next year with. We think it is unrealistic. This minor construction is one of the most important areas we have in which we can execute urgent construction on a short-time basis without detailed justifications.

Mr. SIKES. I would like to have provided for the record a schedule by quarters of estimated obligations for planning for access roads and for minor construction for both the regular program and the Safeguard program for fiscal 1971.

General DALRYMPLE. Yes, sir.

(The information follows:)

ESTIMATED OBLIGATION

[In thousands]

	Quarter				Total fiscal year 1971
	1st	2d	3d	4th	
Planning:					
Regular program.....	\$6,000	\$4,500	\$6,000	\$5,050	\$22,000
Safeguard.....	6,600	10,960	9,100	6,890	33,550
Access roads:					
Regular.....	300	300	400	400	1,400
Safeguard.....	2,400	-----	9,900	-----	12,300
Minor construction.....	2,500	2,500	3,500	3,500	12,000

Mr. SIKES. You show a program amount for Safeguard of \$18.5 million under planning and \$7.2 million under access roads. These are not the latest estimates of what will be required for the phase 2 program?

Mr. CARTON. No, sir. These were modified in testimony by General Starbird yesterday and his testimony is now the latest figure.

Mr. SIKES. What are the comparable amounts?

Mr. CARTON. The access roads, sir, is approximately \$4.4 million. The planning is \$27.4 million.

Mr. SIKES. Is there any minor construction for Safeguard?

Mr. CARTON. No, sir; there is no minor construction.

Mr. SIKES. What part of this represents new obligational authority and what part would be funded by carryover balances?

Mr. CARTON. This is all new obligational authority.

Mr. SIKES. You have a request for \$10 million for minor construction. Show how this compares with the obligations in this program for fiscal year 1969 and those estimated for fiscal year 1970.

Mr. CARTON. The obligations in fiscal year 1969 were \$9,656,279. It is currently estimated that fiscal year 1970 obligations will be \$9 million.

Mr. SIKES. For the record, I would like to have a listing of minor construction projects approved for fiscal year 1970 and those in process at the present time.

General DALRYMPLE. All right, sir.

(The information follows:)

MILITARY CONSTRUCTION, ARMY MINOR CONSTRUCTION PROJECTS  
 APPROVED, FISCAL YEAR 1970  
 (AS OF 6 MAR 1970)

Location	Project Description	Approved Funded Cost
Letterkenny Army Depot, Pa.	NIKE-HERCULES Test Site	\$197,200
Sharpe Army Depot, Calif.	Liquid Fuel Facility	141,400
Heidelberg, Germany	Increase Power Supply at Campbell Brks	120,780
Sierra Army Depot, Calif.	Truck Interchange Yard	124,500
Finthen, Germany	Sewage Disposal Plant at Finthen Airfield	93,610
Carlisle Barracks, Pa.	Renovate Upton Hall	44,400
Ft Belvoir, Va.	Alterations to 9 Bldgs for Washington Field Activities Support Center	188,500
Nelligan, Germany	Helicopter Lighting and Parking, Nelligan Army Heliport	49,500
Ft Detrick, Md.	Security Fence and Road	71,632
Frankfurt, Germany	3,000 Line Dial Central Facility	124,520
Rock Island, Ill.	Technical Data Center	184,000
Ft Rucker, Ala.	Facilities for Initial Entry Fixed Wing Training	62,030
Schofield Bks, Hawaii	Alterations to Bldg 580 for Command and Control Operations Center Facility	49,400
Frankfurt, Germany	Nine Classrooms for Dependent School No. 1	187,900
Frankfurt, Germany	Eight Classrooms for Dependent School No.2	190,500
Darnstadt, Germany	Nine Classrooms for Dependent School	187,900
Kaiserslautern, Germany	Eight Classrooms for Dependent School	185,500
Nuernberg, Germany	Nine Classrooms for Dependent School	182,700
Baumholder, Germany	Eight Classrooms for Dependent School	190,500
Sacramento Army Depot, Cal.	Increase primary electrical distribution	180,000
Hunter Liggett Military	One Million-Gallon Water Storage Tank	175,000
Seoul, Korea	Religious Education Center Facility	105,000
Madison General Hospital Washington	Alterations and Addition to Radiology Building	132,100
Fort Tilden, N.Y.	Sanitary Sewer Facilities	126,000
Lexington-Blue Grass Army Depot, Ky.	Maintenance Shop Facilities	182,300
Fort Huachuca, Arizona	Horizontal Electromagnetic Pulse Simulator	154,000
Red River Army Depot, Tex.	Alterations to rebuild facility Building 422	189,900
Fort Knox, Ky.	Alterations to Buildings 6568 and 6569 for Adjutant General activities	106,900
Brooke Army Medical Center, Tex.	Alterations to Building 369 for health-care research program	47,300
Natick, Mass.	Alterations to Research Bldg. No. 3	63,900
Fitzsimmons General Hospi- tal, Colo.	Alterations to Miscellaneous Buildings	59,924
Rocky Mountain Arsenal, Colo.	Modifications to Production Ammunitions Building	192,800
Fort Jackson, S.C.	Alterations to Third US Army Training Aids Center	92,700
Frankfurt, Germany	Autodin Subscriber Terminal Facilities	54,500
Nahbollenbach, Germany	Autodin Subscriber Terminal Facilities	59,600
Giessen General Depot, Ger.	Autodin Subscriber Terminal Facilities	63,100
Germersheim General Depot, Germany	Autodin Subscriber Terminal Facilities	53,300

MILITARY CONSTRUCTION, ARMY MINOR CONSTRUCTION PROJECTS  
 APPROVED, FISCAL YEAR 1970  
 (AS OF 6 MAR 1970)

Location	Project Description	Approved Funded Cost
Miessau Ammunition Depot, Germany	Autodin Subscriber Terminal Facilities	\$ 50,100
Bremerhaven Staging Area, Germany	Autodin Subscriber Terminal Facilities	52,600
Rose Barracks, Bad Kreuznach, Germany	Autodin Subscriber Terminal Facilities	65,100
Smith Barracks, Baumholder, Germany	Autodin Subscriber Terminal Facilities	70,600
Dowds Barracks, Fulda, Ger.	Autodin Subscriber Terminal Facilities	55,900
Lee Barracks, Mainz, Ger.	Autodin Subscriber Terminal Facilities	55,200
Robinson Barracks, Stuttgart, Germany	Autodin Subscriber Terminal Facilities	61,100
Darby Kaserne, Nuernberg, Germany	Autodin Subscriber Terminal Facilities	81,300
Kaiserslautern, Germany	Autodin Subscriber Terminal Facilities	25,100
Fort Belvoir, Va.	Modify Building 219 for Finance and Accounting Office	122,100
Neubruecke, Germany	Correction of Fire Hazard in the 98th General Hospital	62,900
Bad Kreuznach, Germany	Fire protection facilities in the 56th General Hospital	65,600
Sacramento Army Depot, Cal.	Electronic Maintenance Facility	193,000
Okinawa	Standby Power, Camp Kue Hospital	138,200
Fort Benning, Ga.	Intensive Care Unit, Martin Army Hospital	34,100
Fort Rucker, Ala.	Addition to Radar Approach Control	89,100
Rocky Mountain Ars, Colo.	Alter security fence	32,500
USASA Location 276	Antenna Bases	91,000
Manheim, Germany	Nine Classrooms for dependent schools	187,900
Aschaffenburg, Germany	Eight classrooms for dependent schools	191,700
Butzbach, Germany	Six classrooms for dependent schools	151,000
Fort Buckner, Okinawa	Equipment maintenance facility, Machinato Service Area	198,100
Savanna Army Depot, Ill.	Electric power plant automation	49,000

MILITARY CONSTRUCTION, ARMY MINOR CONSTRUCTION PROJECTS  
 PENDING SECRETARIATE APPROVAL FY 1970  
 (AS OF 6 MAR 1970)

Edgewood Arsenal, Md.	Site Preparation for Automatic Data Processing Equipment	161,800
Fort Dix, N.J.	Security lighting & fencing	52,400
Ft Sam Houston, Tex.	Environmental Control for Classrooms	67,200
Ft Carson, Colo.	Modernize & Expand US Army Hospital	138,900
Ft Clayton, C.Z.	Replace community center facilities	195,400

Mr. SIKES. Mr. Nicholas?

POLLUTION ABATEMENT SUPPLEMENTAL PROJECTS

Mr. NICHOLAS. General Dalrymple, could you supply for the record, when the information becomes available, a listing of the additional pollution projects which will be a part of the proposed budget amendment?

General DALRYMPLE. Yes, sir.  
(The information follows:)

The following items are included in the proposed Pollution Abatement Amendment:

Air Pollution Abatement

<u>Location</u>	<u>Description</u>	<u>Cost (\$000)</u>
Carlisle Barracks, Pa.	Heat Plant Conversion	135
Fort Jackson, S. C.	Fuel Conversions	506
Vint Hill Farms, Va.	Incinerator	<u>475</u>
	Sub Total	1,116

Water Pollution Abatement

<u>Location</u>	<u>Description</u>	<u>Cost (\$000)</u>
Fort Belvoir, Va.	Sanitary Sewer Connection	2,200
Fort Hamilton, N.Y.	Separation of Sewer Systems	575
Fort Sill, Okla.	Sanitary Sewer System	155
Fort Riley, Kans.	Secondary Sewage Treatment	207
Hunter-Liggett MR, Cal.	Sewage Treatment Facilities	1,691
Aero Maint Ctr, Tex.	Industrial Waste Treatment	971
Alabama AAP, Ala.	Secondary Sewage Treatment	117
Atlanta Army Depot, Ga.	Industrial Waste Collection System	117
Cornhusker AAP, Nebr.	Industrial Waste Treatment	650
Radford AAP, Va.	Industrial Waste Treatment	784
Ridgewood AWP, Ohio	Sanitary Sewer Connection	120
Rock Island Arsenal, Ill.	Separation of Sewer Systems	2,750
Sierra Army Depot, Cal.	Waste Stabilization Pond	113
Tooele Army Depot, Utah	Waste Stabilization Ponds	249
Fort Wainwright, Alaska	Sewage Treatment Plant	2,430
Schofield Barracks, Hawaii	Sewage Treatment Plant	<u>2,955</u>
	Sub Total	16,084

General Authorization

Planning for Air & Water Pollution Abatement Projects	900
	<hr/>
Pollution Abatement Amendment Total	18,100

Mr. NICHOLAS. Would you also supply for the record the justification for these projects?

General DALRYMPLE. Yes, sir.  
(The information follows:)

Justifications for Projects Included in the Proposed Pollution Abatement Amendment

Air Pollution Abatement Projects

Carlisle Barracks, Pa.

This project is required to eliminate the major source of air pollution on this installation. It will also reduce annual operating and maintenance costs by approximately \$22,250.

The project provides for the conversion of four stoker coal-fired boilers in the central heating plant, Bldg No. 301 to use of natural gas. The plant was originally constructed in 1933 and expanded in 1941.

The coal-fired plant, located adjacent to a residential area in Carlisle Borough, has been a source of complaints by the residents through White House and Congressional channels because of excessive fly-ash emission. These emissions are approximately four times the Federal and state limits.

The accomplishment of this project will preclude the necessity of installing fly-ash control equipment costing \$58,600 to permit continued use of coal.

Fort Jackson, S. Carolina

This project is required to eliminate a major source of air pollution at this installation by changing the fuel used in heating units from coal to gas or oil. These heating units emit particulates in quantities which are far above those permitted by Federal standards. The completion of this project will permit these units to operate within the limits prescribed by Federal regulations.

Vint Hill Farms, Va.

This project is required to eliminate the only major source of air pollution at this installation.

Refuse is presently disposed of by open pit burning in violation of Federal and state regulations. The Department of the Army has approved a temporary waiver to continue the open burning until the incinerator can be built.

The area is not suitable for operation of a sanitary landfill and there is no other means of disposal available in the area.

Approximately 3,500 cubic yards of refuse are burned each month with particulate emissions of 1.5 tons per month which is 3.5 times the Federal and state limits.

Water Pollution Abatement Projects

NOTE: The following projects are all in timing with state programs requiring adjacent communities to take related abatement measures to achieve area-wide water pollution cleanup (Sec 807, PL 90-408).

Fort Belvoir, Va.

This project will provide for disposal of all Fort Belvoir sewage into the Fairfax County Sewage Treatment Plant. Tertiary (advanced) treatment of all wastes has been recommended by the Potomac River Enforcement Conference. Fairfax County will be required to provide tertiary treatment in accordance with the requirements of the Enforcement Conference.

This project is in consonance with the state and Federal policy of consolidating discharges into regional treatment plants in lieu of constructing a multiplicity of smaller plants.

Fort Hamilton, N. Y.

This project is required to provide for separation of the existing combined sanitary and storm sewer system. During periods of heavy rainfall, the combined sewage system overflows discharging untreated sewage into New York Bay. This practice is in violation of Federal and state requirements for water pollution abatement.

Project proposes separation of storm and sanitary sewers and construction of a new sanitary connection to a New York City sewer.

Fort Sill, Okla.

This project is required to provide for secondary treatment of domestic wastes at Camp Eagle. At present, a portion of the wastes generated at Camp Eagle are discharged to a sewage lagoon which discharges to Crater Lake. The balance of the sanitary wastes are discharged to septic tanks or leaching wells. The sewage lagoon was inspected by the F. W. P. C. A. and was reported as substandard. The lagoons will be replaced with a contact stabilization waste treatment plant.

Fort Riley, Kans.

This project is required to provide secondary sewage treatment for domestic wastes generated by the Camp Funston and Camp Whitside areas. The substandard effluent from the existing primary sewage treatment plant discharges to the Kansas River a tributary of the Missouri River. This practice is in violation of the Federal and state requirements for water pollution abatement.

Hunter-Liggett MR, Calif.

This project is required to provide a complete sewerage system including collection system and a secondary treatment plant for planned permanent construction on this post. The existing sewage treatment facility is not adequate to meet present requirements of the Post and will be totally inadequate with the addition of the proposed complex. The existing facility does not comply with the State requirements for pollution control.

Aeronautical Maintenance Center, Texas

This project is required to provide industrial waste treatment for concentrated acids and bases, phenols, greases and oils and hexavalent chromium. At present, a portion of the wastes is discharged into Corpus Christi Bay. This practice is in violation of Federal and state requirements for pollution abatement.

This facility will include an aerator, primary clarifier, holding tanks, mixing well, secondary clarifier, sludge beds, concentrated cyanide destruction unit, and an ion exchange system for treating the chromium wastes.

Alabama Army Ammunition Plant, Ala.

This project is required to provide secondary sewage treatment for domestic wastes generated at Alabama Army Ammunition Plant. At present the effluent (250,000 GPD) from the existing primary sewage treatment plant discharges into the Coosa River, a tributary of the Alabama River. This practice is in violation of Federal and state requirements for pollution abatement. The State of Alabama requires secondary treatment and chlorination of all wastes.

Proposed is the construction of an oxidation pond, including chlorination of the effluent. This project will provide adequate treatment of wastes and meet required standards.

Atlanta Army Depot, Ala.

This project is required to provide an industrial waste collection system to collect and deliver industrial wastes generated in the 400 Area on post to the new Industrial Waste Treatment Plant. No collection system exists in this area at the present time. The wastes are currently discharged into the storm drainage system which is in violation of Federal and state water quality standards.

This project will collect and direct the industrial wastes from the 400 Area to the new industrial waste treatment plant.

Cornhusker Army Ammunition Plant, Nebr.

This project is required to provide treatment of industrial waste water discharged from Bomb Loading Lines 1, 2, 3, and 4. Water contaminated with dissolved and suspended TNT is discharged from the Bomb Load Lines.

Radford Army Ammunition Plant, Va.

This project is required to provide industrial and sanitary waste treatment facilities at Radford Army Ammunition Plant to comply with Federal and state standards for water pollution abatement. Present treatment of industrial and domestic wastes is non-existent or inadequate to meet these standards. A large portion of the wastes are currently discharged into the New River.

Ridgewood Army Weapons Plant, Ohio

This project is required to provide for the discharge of all domestic sewage from the installation to the Hamilton County sewage system. At present the sewage is discharged untreated into storm sewers which discharge into Mill Creek, a tributary of the Ohio River. This practice is in violation of Federal and state requirements for water pollution abatement.

Rock Island Arsenal, Ill.

This project is required to provide for the separation of the combined storm and sanitary sewer system. During periods of heavy rainfall the combined sewage overflows, discharging untreated sewage into the Mississippi River. This practice is in violation of Federal and state requirements for water pollution abatement.

Sierra Army Depot, Cal.

This project is required to provide adequate treatment of wastes generated at Sierra Army Depot. The existing primary components (two Imhoff tanks) produce an unsatisfactory effluent which discharges into the existing sewage lagoons. Both Imhoff tanks (built in 1943) will be abandoned subsequent to expanding the sewage lagoons from 10 acres to 17 acres. The enlarged sewage lagoon will provide adequate treatment of wastes to comply with State standards for pollution abatement.

Tooele Army Depot, Utah

This project is required to provide adequate sewage treatment to conform to the State of Utah water pollution abatement requirements. At present, septic tanks are used for treatment of sewage. The septic tanks do not meet the requirements of the State of Utah.

Fort Wainwright, Alaska

This project is required to provide for construction of a contact stabilization plant providing secondary treatment of domestic wastes at Fort Wainwright. The two existing primary plants discharge to the Chena River. The present primary treatment is inadequate to meet Federal and state standards for water pollution control.

Schofield Barracks, Hawaii

This project is required to provide a new secondary sewage treatment plant which includes grit chamber, comminutor, primary settling, trickling filters and sludge digesters. These facilities are needed to provide adequate treatment of domestic waste to comply with Federal and state standards for water pollution abatement.

General AuthorizationPlanning Funds

Planning funds in the amount of \$900,000 are required for the design of the projects included in the proposed Pollution Abatement Amendment.

Mr. SIKES. Are there questions?

Mr. PATTEN. I have no questions.

Mr. CEDERBERG. No questions.

Mr. SIKES. This concludes the hearings on the regular Army construction program for fiscal year 1971 other than for the Vietnam program which will be discussed at another time. General Dalrymple, I want to express the appreciation of the committee to you and the members of your staff for your cooperation.

#### RETIREMENT OF GENERAL DALRYMPLE

You have been responsive and helpful to the committee. We recognize that you do have an extremely austere program and I think in the main that the information that you have given us justifies what you are trying to do. I wish you more luck in the future in getting a more realistic budget estimate which may include these items that you have had to carry over for so long and which obviously are needed to improve Army installations.

General DALRYMPLE. Thank you very much, sir.

Addressing the future, I would like to offer, since this is the last time I will be appearing before this committee, my personal thanks for what you gentlemen have done for the Army and my sincere appreciation for the consideration that you and the members of the committee have given me and the witnesses who supported me.

Mr. SIKES. You have done an extraordinarily good job before this committee. I know it is typical of the fine service that you have rendered throughout your career. The committee will regret to lose you but wish you well in whatever you undertake in the future.

Mr. CEDERBERG. I want to join in those sentiments. I think the General has done an excellent job in appearances before us.

Do I understand that you will be retiring?

General DALRYMPLE. That is correct, sir.

Mr. CEDERBERG. I think that you mentioned that to me at the Airleigh House meeting, didn't you?

General DALRYMPLE. Yes, sir.

Mr. CEDERBERG. This summer you are going to retire?

General DALRYMPLE. Anytime between now and the end of August.

Mr. SIKES. Thank you again.

General DALRYMPLE. Thank you, sir.

## ADDENDUM

(The following additional information was supplied in connection with the NATO Infrastructure Program discussed at page 333.)

NATO has now agreed to automatic deletion procedures, whose purpose is to reduce or avoid future backlogs of Infrastructure projects. These procedures apply to Slice XXI and subsequent annual slice programs. For past slices already approved (Slices XX and prior). Infrastructure projects not yet implemented are being reviewed, and a report will be provided to NATO by November 1970. We hope to be able to close out the old Infrastructure slices, under which the U.S. contributed as much as 43 percent, thus cutting our contribution to the program to the percentage of the latest cost sharing agreement (i.e., 25.8 percent for projects to which France contributes, and 29.7 percent to those in which she does not).

Earlier this year, the NATO Defense Planning Committee approved the financing of a new 5-year Infrastructure program for the years 1970-1974 (Slices XXI through XXV), and agreed that the ceiling be set at \$700 million. Although this amount falls short of the U.S. initial position of \$840 million, the new agreement does provide that NATO Military Commanders will program those urgent military requirements which can be accomplished within the ceiling, and report back the financial condition after programming of Slice XXIV in 1973. The new ceiling of \$700 million includes \$70 million allocated for relocation costs from France for U.S. and Canadian forces. The current cost sharing formula (U.S. share 29.68 percent, or \$207.7 million) remains unchanged.

## LIST OF WITNESSES

---

	Page
Arntson, J. A.....	1
Barnett, Col. J.....	1
Blank, Lt. Col. H. L.....	1
Boehnke, Lt. Col. R. H.....	1
Boyd, Col. E. W.....	2
Brazier, G. W.....	1
Breed, Lt. Col. E. R.....	1
Carroll, J. A.....	1
Carton, A. M.....	1
Christensen, G. R.....	2
Clifford, C. S.....	2
Crabtree, D. M.....	1
Dalrymple, Maj. Gen. J. C.....	1
Dirks, Col. K. R.....	2
Dugan, J. M.....	2
Flynn, A. P.....	2
Fox, Dr. J. R.....	1
Frech, Col. F. A.....	1
Fritz, Col. W. H.....	1
Galliher, Lt. Col. K. D.....	2
Gibbons, C. E.....	2
Goodman, D.....	1
Greer, Lt. Col. T. K.....	2
Haas, Lt. Col. R. S.....	2
Horton, B. M.....	2
Johnson, P. W.....	2
Kelly, Lt. Col. D. P.....	2
Kjellstrom, Col. J. A.....	2
Lincoln, Maj. J. B.....	1
Lindberg, Lt. Col. C. F.....	2
Lockwood, W. M.....	2
Loveland, J.....	2
McChristian, Lt. Col. G. E.....	1
Moffat, Lt. Col. J. L.....	2
Morrison, Maj. K. L.....	2
Norwood, A. P.....	1
Paquette, Lt. Col. D. R.....	2
Otten, Lt. Col. H. C.....	1
Ryan, Lt. Col. J. H.....	2
Saari, Col. A. E.....	1
Schoenian, W. E.....	1
Shuler, W. R.....	1
Starbird, Lt. Gen. A. D.....	285
Stevens, Lt. Col. R. W.....	1
Thomas, Col. D. H.....	285
Wolfe, Lt. Col. V. C.....	1
Young, Brig. Gen. R. P.....	285
Zackrison, H. B.....	1

LETTER TO THE EDITOR

Dear Sir,  
I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the above mentioned subject. I am sorry to hear that you are not satisfied with the result of the investigation. I have, however, to inform you that the same has been conducted in accordance with the instructions of the Board of Health, and that the result is as stated in the report. I am, Sir, very respectfully,  
Your obedient servant,  
J. H. [Name]

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# INDEX

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	Page
<b>Army Materiel Command</b> -----	169
Aberdeen Proving Ground, Md.-----	170
Aeronautical Maintenance Center, Tex-----	172
Anniston Army Depot, Ala-----	179
Badger Army Ammunition Plant, Wis-----	182
Burlington Army Ammunition Plant, N.J-----	186
Charleston Army Depot, S.C-----	188
Harry Diamond Laboratory, Md-----	190
Edgewood Arsenal, Md-----	207
Iowa Army Ammunition Plant, Iowa-----	202
Letterkenny Army Depot, Pa-----	204
Fort Monmouth, N.J-----	210
New Cumberland Army Depot, Pa-----	235
Picatinny Arsenal, N.J-----	239
Radford Army Ammunition Plant, Va-----	242
Sierra Army Depot, Calif-----	245
Tobyhanna Army Depot, Pa-----	247
Watervliet Arsenal, N.Y-----	249
White Sands Missile Range, N.Mex-----	253
Yuma Proving Ground, Ariz-----	260
<b>Army Medical Department</b> -----	272
Walter Reed Army Medical Center, D.C-----	272
<b>Army Security Agency (Overseas)</b> -----	360
<b>Continental Army Command</b> -----	54
<b>1st Army:</b>	
Fort Belvoir, Va-----	54
Carlisle Barracks, Pa-----	58
Fort Dix, N.J-----	61
Fort Eustis, Va-----	66
Fort Knox, Ky-----	68
Fort Lee, Va-----	72
Fort George G. Meade, Md-----	74
<b>3d Army:</b>	
Fort Benning, Ga-----	76
Fort Bragg, N.C-----	78
Fort Campbell, Ky-----	82
Fort Gordon, Ga-----	85
Fort Jackson, S.C-----	91
Fort Rucker, Ala-----	94
Fort Stewart, Ga-----	101
<b>4th Army:</b>	
Fort Bliss, Tex-----	104
Fort Hood, Tex-----	109
Fort Sam Houston, Tex-----	111
Fort Sill, Okla-----	115
<b>5th Army:</b>	
Fort Carson, Colo-----	118
Fort Benjamin Harrison, Ind-----	121
Fort Leavenworth, Kans-----	123
Fort Riley, Kans-----	127
Fort Sheridan, Ill-----	132
Fort Leonard Wood, Mo-----	135

IV

Continental Army Command—Continued	Page
6th Army:	
Hunter-Liggett Military Reservation, Calif.....	138, 325
Fort Lewis, Wash.....	143
Presidio of Monterey, Calif.....	146
Fort Ord, Calif.....	148
Presidio of San Francisco, Calif.....	151
Military District of Washington: Fort Myer, Va.....	167
<b>Corps of Engineers</b> .....	281
Kansas City field office, Topographic Command, Missouri.....	281
<b>General authorization</b> .....	373
Access roads.....	378
Minor construction projects.....	379
Planning funds.....	378
Pollution abatement supplemental projects.....	382
Obligations.....	378
<b>Military Traffic Management Terminal Service</b> .....	341
Military Ocean Terminal, Bayonne, N.J.....	342
Oakland Army Base, Calif.....	345
<b>NATO Infrastructure</b> .....	330, 388
<b>Safeguard ballistic missile defense system</b> .....	285
Access roads.....	318
Budget request, adjustment in.....	320
Contract schedules.....	302
Additional sites.....	304
Contracts, competition for.....	302
Cost overruns.....	318
Phase I sites.....	313
Delays.....	322
Expediting construction.....	303
Expenditures.....	321
Funding.....	302, 307
Additional sites.....	304
Phase I and phase II sites.....	314
Kwajalein, R. & D. facilities at.....	317
Labor agreements.....	307
Mission depot facilities and area offices.....	317
Remote sites at phase I installations.....	305
SALT talks.....	323
Scheduling.....	319
Five additional sites.....	321
Site acquisition delays.....	306
Site activation schedules for five additional sites.....	306
Slippage.....	302
Statement of Lt. Gen. A. D. Starbird.....	290
Strategic advantages of Safeguard system.....	324
Training facilities.....	315
Whitman, funds requested in fiscal year 1971 for.....	305, 314
Whitman, schedule for.....	305, 318, 378
Whitman deployment, strategic importance of.....	320, 322
<b>Safeguard System Command (overseas)</b> .....	355

	Page
<b>Statement of the Assistant Secretary, Installation and Logistics</b> -----	
Bachelor housing deficit-----	4
Base realignments-----	14
Change orders-----	9
Construction freezes-----	31
Cost control-----	24
Cost increases-----	27
Cost projections-----	26
Engineering research laboratory at the University of Illinois-----	23
Family housing-----	28
Construction, status of-----	10
Deficit-----	32
Maintenance funds-----	13
Funding-----	33
Allocations-----	8, 9
Homeowners assistance program-----	15
Integrated facilities management-----	12
Integrated facilities system-----	16
Labor wage rates, laws and regulations pertaining to-----	20
Maintenance of real property-----	30
Mission changes-----	16
Modular construction-----	23
Nonappropriated funds, control of-----	29
Northeast seaboard study-----	23
Pollution abatement-----	25
Priority listing-----	17
Program level-----	26
Troop withdrawals from S.E. Asia-----	27
Unexpended balances-----	23
Unobligated balances-----	31
Vietnamese armed forces, shelter program for families of-----	31
West Point cost increases-----	34
-----	11
<b>Statement of the Director of Installations</b> -----	36
Bachelor housing-----	39
Cost limitations-----	46
Construction costs-----	37
Contracts, completion for-----	49
Contracts other than by competitive bid-----	47
Design program for fiscal year 1971, status of-----	48
Encroachment-----	46
Expenditures-----	45
Fort Dix, N.J. reception center-----	52
Hospital facilities-----	39
NATO alliance-----	52
NATO recoupment-----	51
Project awards-----	49
Small business set-asides-----	49
Southeast Asia construction-----	45
Unapportioned projects-----	43
Unobligated balances-----	45
<b>U.S. Army, Europe</b> -----	364
Burtonwood Army Depot, United Kingdom-----	370
Germany—various-----	365
<b>U.S. Army, Pacific</b> -----	349
<b>US. Army Strategic Communications Command</b> -----	265
Fort Huachuca, Ariz-----	265
Fort Ritchie, Md-----	270
<b>U.S. Military Academy, N.Y</b> -----	215

