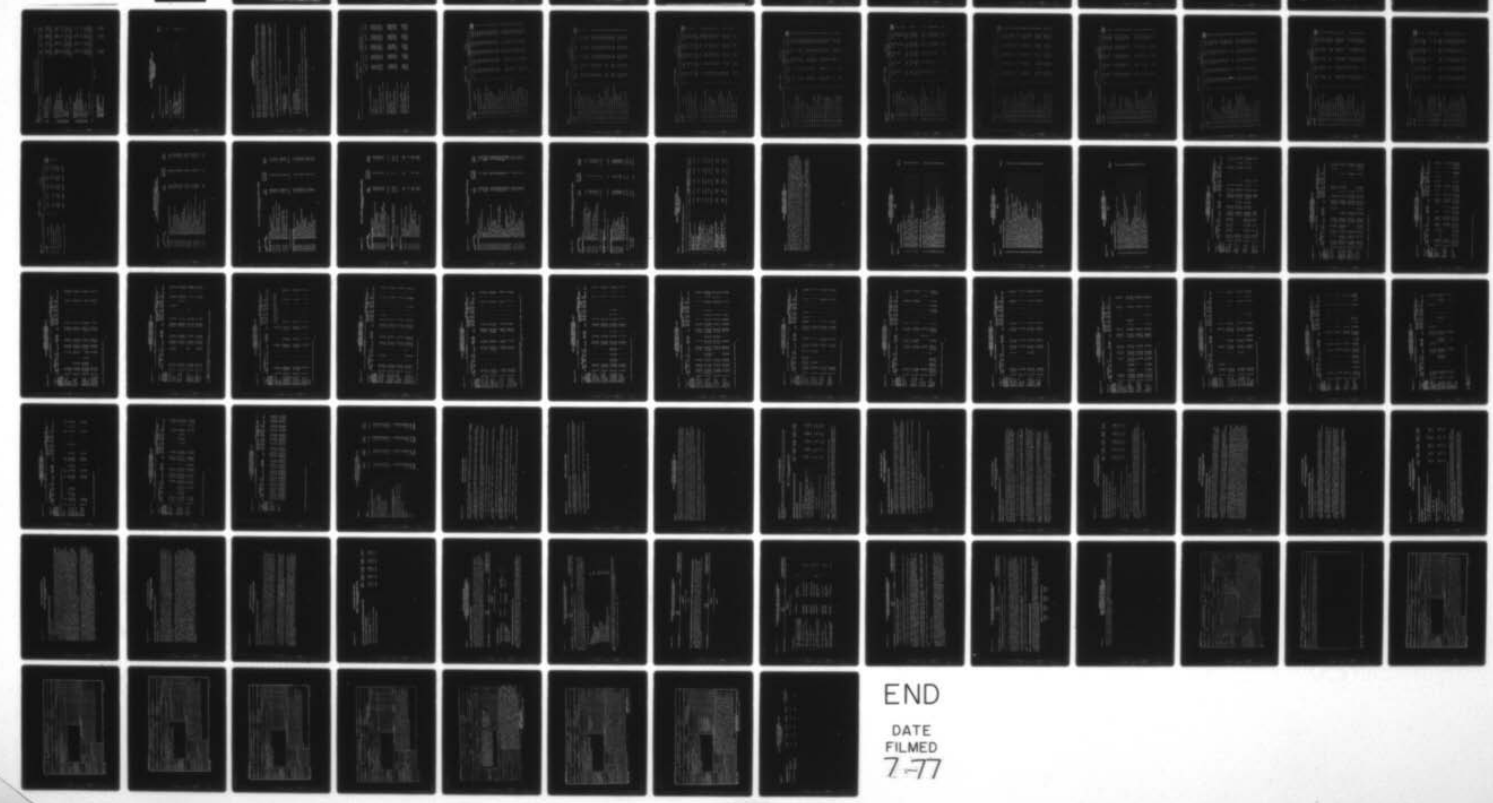
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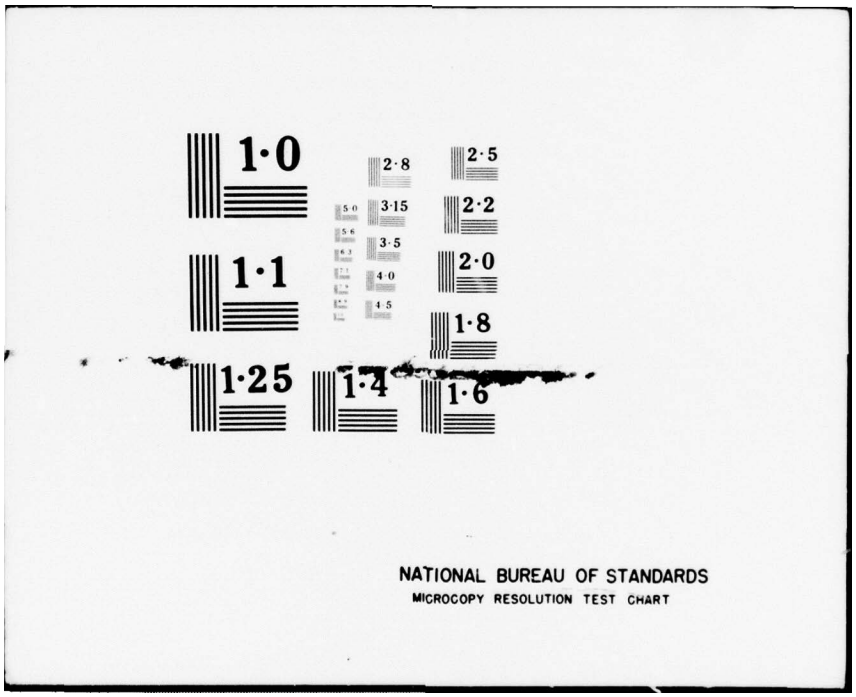
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DEPARTMENT OF THE ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1978

Submitted to Congress
January 1977

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This document contains

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
Justification of estimates for expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment.

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
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DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
APPROPRIATION LANGUAGE

Section 1

For expenses necessary for basic and applied scientific research, development, test, and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, as authorized by law; $2,615,700,000, to remain available for obligation until September 30, 1979. (10 USC 2353, 4503; Department of Defense Appropriation Act, 1977; additional authorizing legislation to be proposed.)

ARMY

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

Section 1 (Contd)

IDENTIFICATION CODE 21-2040-0-1-051

		BUDGET PLAN (AMOUNTS FOR ROT&E ACTIONS PROGRAMED)				OBLIGATIONS			
		1976 ACTUAL	TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	DIRECT:								
	1. TECHNOLOGY BASE	343,570	88,596	388,752	420,801	338,233	81,217	401,000	426,700
	2. ADVANCED TECHNOLOGY DEVELOPMENT	145,607	34,771	131,517	142,543	140,437	21,481	149,000	140,000
	3. STRATEGIC PROGRAMS	197,000	50,108	203,256	215,541	190,610	46,220	211,800	219,000
	4. TACTICAL PROGRAMS	935,025	244,599	1,188,724	1,431,164	904,108	237,031	1,217,000	1,437,300
	5. INTELLIGENCE AND COMMUNICATIONS	11,895	3,275	12,988	17,583	11,436	2,822	13,800	17,000
	6. PROGRAMWIDE MANAGEMENT AND SUPPORT	331,302	88,109	379,880	397,968	321,279	81,569	395,906	403,000
	TOTAL DIRECT	1,970,399	509,458	2,305,117	2,625,700	1,906,103	470,340	2,388,506	2,643,000
	REIMBURSABLE (TOTAL)	282,030	49,334	280,000	300,000	240,701	66,100	298,494	270,000
10.00	TOTAL	2,252,429	558,792	2,585,117	2,925,700	2,146,804	536,440	2,687,000	2,913,000
	FINANCING:								
	OFFSETTING COLLECTIONS FROM:								
11.00	FEDERAL FUNDS	-272,670	-53,378	-277,500	-297,500	-263,659	-53,774	-277,500	-297,500
13.00	TRUST FUNDS	-13,329	-4,401	-9,897	-10,000	-13,329	-4,399	-9,897	-10,000
14.00	NON-FEDERAL SOURCES	-1,054	-723	-2,500	-2,500	-1,058	-752	-2,500	-2,500
21.00	UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	-87,166	-176,406	-205,004	-103,121
	REPROGRAMING FROM OR TO PRIOR YEAR BUDGET PLANS	-7,368	5,823	.....	.....	.....	.....	.....	.....
24.00	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	176,406	205,004	103,121	115,621
25.00	UNOBLIGATED BALANCE LAPSING	.....	1,545	.....	.....	.....	1,545	.....	.....
	UNOBLIGATED BALANCE LAPSING, BUD PLAN	.....	.....	.....	.....	.....	.....	.....	.....
	BUDGET AUTHORITY	1,958,008	507,658	2,295,220	2,615,700	1,958,008	507,658	2,295,220	2,615,700
	BUDGET AUTHORITY:								
40.00	APPROPRIATION	1,958,008	507,658	2,280,816	2,615,700	1,958,008	507,658	2,280,816	2,615,700
44.10	SUPPLEMENTAL NOW REQUESTED FOR WAGE-BOARD PAY RAI	.....	.....	1,528	.....	.....	.....	1,528	.....
44.20	SUPPLEMENTAL NOW REQUESTED FOR CIVILIAN PAY RAISE	.....	.....	12,876	.....	.....	.....	12,876	.....
	RELATION OF OBLIGATIONS TO OUTLAYS:								
71.00	OBLIGATIONS INCURRED, NET					1,868,768	477,515	2,397,103	2,803,000
72.00	OBLIGATED BALANCE, START OF PERIOD					567,511	590,565	630,596	814,699
74.00	OBLIGATED BALANCE, END OF PERIOD					-590,565	-630,596	-814,699	-946,699
77.00	ADJUSTMENTS IN EXPIRED ACCOUNTS					-4,102	-776	.....	.....
						1,841,612	436,708	2,179,200	2,670,396
90.00	OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL					.....	.....	1,400	128
91.10	OUTLAYS FROM WAGE-BOARD PAY RAISE SUPPLEMENTAL					.....	.....	12,400	476
91.20	OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL								

IDENTIFICATION CODE 21-2040-0-1-051

		BUDGET PLAN (AMOUNTS FOR RDT&E ACTIONS PROGRAMED)				OBLIGATIONS			
		1976 ACTUAL	1976 ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	1976 ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	DIRECT:								
	1. TECHNOLOGY BASE	.....	.....	.....	.....	9,012	369	.....	.....
	2. ADVANCED TECHNOLOGY DEVELOPMENT	.....	.....	.....	.....	3,695	11	.....	.....
	3. STRATEGIC PROGRAMS	.....	.....	.....	.....	5,092	217	.....	.....
	4. TACTICAL PROGRAMS	.....	.....	.....	.....	23,209	1,088	.....	.....
	5. INTELLIGENCE AND COMMUNICATIONS	.....	.....	.....	.....	305	13	.....	.....
	6. PROGRAMWIDE MANAGEMENT AND SUPPORT	.....	.....	.....	.....	9,607	478	.....	.....
	TOTAL DIRECT	.....	.....	.....	.....	50,920	2,176	.....	.....
	REIMBURSABLE (TOTAL)	.....	.....	.....	.....	22,531	1,400	.....	.....
10.00	TOTAL	.....	.....	.....	.....	73,451	3,576	.....	.....
	FINANCING:								
	OFFSETTING COLLECTIONS FROM:								
11.00	FEDERAL FUNDS	.....	.....	.....	.....	9,021	-396	.....	.....
13.00	TRUST FUNDS	.....	.....	.....	.....	.....	2	.....	.....
14.00	NON-FEDERAL SOURCES	.....	.....	.....	.....	-4	-29	.....	.....
21.00	UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	-87,166	-4,698	.....	.....
	REPROGRAMING FROM OR TO PRIOR YEAR BUDGET PLANS	.....	-1,545	.....	.....	.....	.....	.....	.....
24.00	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	4,698	.....	.....	.....
25.00	UNOBLIGATED BALANCE LAPSING								
	UNOBLIGATED BALANCE LAPSING, BUD PLAN	.....	1,545	.....	.....	.....	1,545	.....	.....
	BUDGET AUTHORITY	.....	.....	.....	.....	.....	.....	.....	.....

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

1976 FISCAL YEAR PROGRAM

Section 1 (Contd)

IDENTIFICATION CODE 21-2040-0-1-051

		BUDGET PLAN (AMOUNTS FOR ROTE ACTIONS PROGRAMED)				OBLIGATIONS			
		1976 ACTUAL	1976 ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	1976 ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	DIRECT:								
	1. TECHNOLOGY BASE	349,570	.....	.....	.....	329,221	10,914	9,435	.....
	2. ADVANCED TECHNOLOGY DEVELOPMENT	145,607	.....	.....	.....	136,742	3,021	5,844	.....
	3. STRATEGIC PROGRAMS	197,000	.....	.....	.....	185,518	6,166	5,316	.....
	4. TACTICAL PROGRAMS	935,025	.....	.....	.....	880,899	30,833	23,293	.....
	5. INTELLIGENCE AND COMMUNICATIONS	11,895	.....	.....	.....	11,131	370	394	.....
	6. PROGRAMWIDE MANAGEMENT AND SUPPORT	331,302	.....	.....	.....	311,672	10,360	9,270	.....
	TOTAL DIRECT	1,970,399	.....	.....	.....	1,855,183	61,664	53,552	.....
	REIMBURSABLE (TOTAL)	282,030	.....	.....	.....	218,170	35,700	28,160	.....
10.00	TOTAL	2,252,429	.....	.....	.....	2,073,353	97,364	81,712	.....
	FINANCING:								
	OFFSETTING COLLECTIONS FROM:								
11.00	FEDERAL FUNDS	-272,670	-7,320	.....	.....	-272,670	-7,320	.....	.....
13.00	TRUST FUNDS	-13,329	3	.....	.....	-13,329	3	.....	.....
14.00	NON-FEDERAL SOURCES	-1,054	-51	.....	.....	-1,054	-51	.....	.....
21.00	UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	-171,708	-81,712	.....
	REPROGRAMING FROM OR TO PRIOR YEAR BUDGET PLANS	-7,368	7,368	.....	.....	.....	.....	.....	.....
24.00	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	171,708	81,712	.....	.....
	BUDGET AUTHORITY	1,958,008	.....	.....	.....	1,958,008	.....	.....	.....

IDENTIFICATION CODE 21-2040-0-1-051

		BUDGET PLAN (AMOUNTS FOR RDT&E ACTIONS PROGRAMED)				OBLIGATIONS			
		1976 ACTUAL	1TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	1TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	DIRECT:								
	1. TECHNOLOGY BASE	.....	88,536	.....	.....	.....	69,934	18,662	.....
	2. ADVANCED TECHNOLOGY DEVELOPMENT	.....	34,771	.....	.....	.....	15,449	16,322	.....
	3. STRATEGIC PROGRAMS	.....	50,108	.....	.....	.....	39,837	10,271	.....
	4. TACTICAL PROGRAMS	.....	244,539	.....	.....	.....	205,110	39,489	.....
	5. INTELLIGENCE AND COMMUNICATIONS	.....	3,275	.....	.....	.....	2,439	836	.....
	6. PROGRAMWIDE MANAGEMENT AND SUPPORT	.....	88,109	.....	.....	.....	70,731	17,378	.....
	TOTAL DIRECT	.....	509,458	.....	.....	.....	403,500	102,958	.....
	REIMBURSABLE (TOTAL)	.....	49,334	.....	.....	.....	29,000	20,334	.....
10.00	TOTAL	.....	558,792	.....	.....	.....	435,500	123,292	.....
	FINANCING:								
	OFFSETTING COLLECTIONS FROM:								
11.00	FEDERAL FUNDS	.....	-46,058	.....	.....	.....	-46,058	.....	.....
13.00	TRUST FUNDS	.....	-4,404	.....	.....	.....	-4,404	.....	.....
14.00	NON-FEDERAL SOURCES	.....	-672	.....	.....	.....	-672	.....	.....
21.00	UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	.....	-123,292	.....
24.00	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	123,292	.....	.....
	BUDGET AUTHORITY	.....	507,658	.....	.....	.....	507,658	.....	.....

Section 1 (Contd)

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

1977 FISCAL YEAR PROGRAM

IDENTIFICATION CODE 21-2040-0-1-051

		BUDGET PLAN (AMOUNTS FOR ROTE ACTIONS PROGRAMED)				OBLIGATIONS			
		1976 ACTUAL	1976 ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	1976 ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	DIRECT:								
	1. TECHNOLOGY BASE			388,752				372,903	15,849
	2. ADVANCED TECHNOLOGY DEVELOPMENT			131,517				126,834	4,683
	3. STRATEGIC PROGRAMS			203,256				196,213	7,043
	4. TACTICAL PROGRAMS			1,188,724				1,154,218	34,506
	5. INTELLIGENCE AND COMMUNICATIONS			12,988				12,570	-18
	6. PROGRAMWIDE MANAGEMENT AND SUPPORT			379,880				369,258	10,622
	TOTAL DIRECT			2,305,117				2,231,996	73,121
	REIMBURSABLE (TOTAL)			280,000				250,000	30,000
10.00	TOTAL			2,585,117				2,481,996	103,121
	FINANCING:								
	OFFSETTING COLLECTIONS FROM:								
11.00	FEDERAL FUNDS			-277,500				-277,500	
13.00	TRUST FUNDS			-9,897				-9,897	
14.00	NON-FEDERAL SOURCES			-2,500				-2,500	
21.00	UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS								-103,121
24.00	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS							103,121	
	BUDGET AUTHORITY			2,295,220				2,295,220	
	BUDGET AUTHORITY:								
40.00	APPROPRIATION			2,280,816				2,280,816	
44.10	SUPPLEMENTAL NOW REQUESTED FOR WAGE-BOARD PAY RAI			1,528				1,528	
44.20	SUPPLEMENTAL NOW REQUESTED FOR CIVILIAN PAY RAISE			12,876				12,876	

IDENTIFICATION CODE 21-2040-0-1-051

		BUDGET PLAN (AMOUNTS FOR RDT&E ACTIONS PROGRAMED)				OBLIGATIONS			
		1976 ACTUAL	TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE	1976 ACTUAL	TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE
	PROGRAM BY ACTIVITIES:								
	DIRECT:								
	1. TECHNOLOGY BASE				420,801				410,851
	2. ADVANCED TECHNOLOGY DEVELOPEMENT				142,543				135,317
	3. STRATEGIC PROGRAMS				215,541				211,957
	4. TACTICAL PROGRAMS				1,431,164				1,402,794
	5. INTELLIGENCE AND COMMUNICATIONS				17,683				16,582
	6. PROGRAMWIDE MANAGEMENT AND SUPPORT				397,968				392,378
	TOTAL DIRECT				2,625,700				2,569,879
	REIMBURSABLE (TOTAL)				300,000				240,000
10.00	TOTAL				2,925,700				2,809,879
	FINANCING:								
	OFFSETTING COLLECTIONS FROM:								
11.00	FEDERAL FUNDS				-297,500				-297,500
13.00	TRUST FUNDS				-10,000				-10,000
14.00	NON-FEDERAL SOURCES				-2,500				-2,500
24.00	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD								
	FOR COMPLETION OF PRIOR YEAR BUDGET PLANS								115,421
	BUDGET AUTHORITY				2,615,700				2,615,700

Section 1 (Contd) OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 21-2040-0-1-051	1976 ACTUAL	TQ ACTUAL	1977 ESTIMATE	1978 ESTIMATE
PERSONNEL COMPENSATION:				
11.1 PERMANENT POSITIONS	277,134	71,241	288,635	289,990
11.3 POSITIONS OTHER THAN PERMANENT	4,600	1,185	4,604	4,806
11.5 OTHER PERSONNEL COMPENSATION	1,170	341	1,225	1,022
TOTAL PERSONNEL COMPENSATION	282,904	72,767	294,464	295,820
DIRECT OBLIGATIONS:				
PERSONNEL COMPENSATION	240,187	62,035	251,135	254,444
12.1 PERSONNEL BENEFITS: CIVILIAN	21,011	5,519	23,349	23,634
21.0 TRAVEL AND TRANSPORTATION OF PERSONS	19,257	4,244	24,046	25,000
22.0 TRANSPORTATION OF THINGS	5,597	1,961	6,135	7,843
23.0 RENT, COMMUNICATIONS, AND UTILITIES				
23.2 OTHER RENT,COMMUNICATIONS,AND UTILITIES	16,103	3,751	20,161	20,631
24.0 PRINTING AND REPRODUCTION	1,646	970	1,934	2,269
25.0 OTHER SERVICES:				
25.4 CONTRACTS	.....	.....	.....	32,100
25.6 OTHER	1,503,862	368,437	1,959,807	2,164,423
26.0 SUPPLIES AND MATERIALS	47,397	13,095	48,842	56,499
31.0 EQUIPMENT	49,043	10,328	52,093	56,151
TOTAL DIRECT OBLIGATIONS	1,906,103	470,340	2,388,506	2,643,000
REIMBURSABLE OBLIGATIONS:				
PERSONNEL COMPENSATION	42,717	10,732	43,329	41,376
12.1 PERSONNEL BENEFITS: CIVILIAN	4,125	947	4,514	4,381
21.0 TRAVEL AND TRANSPORTATION OF PERSONS	4,547	1,349	5,842	4,706
22.0 TRANSPORTATION OF THINGS	724	207	764	691
23.0 RENT, COMMUNICATIONS, AND UTILITIES				
23.2 OTHER RENT,COMMUNICATIONS,AND UTILITIES	3,921	975	4,405	4,567
24.0 PRINTING AND REPRODUCTION	233	52	300	311
25.0 OTHER SERVICES:				
25.6 OTHER	155,794	43,150	209,847	184,970
26.0 SUPPLIES AND MATERIALS	12,088	4,066	11,532	10,760
31.0 EQUIPMENT	10,552	4,621	17,961	18,200
TOTAL REIMBURSABLE OBLIGATIONS	240,701	66,100	298,494	270,000
99.0 TOTAL OBLIGATIONS	2,146,804	536,440	2,687,000	2,913,000

PERSONNEL SUMMARY

TOTAL NUMBER OF PERMANENT POSITIONS	14,737	14,652	14,647
FULL-TIME EQUIVALENT OF OTHER POSITIONS	732	595	595
AVERAGE PAID EMPLOYMENT	15,150	15,027	14,999
AVERAGE GS GRADE	9.51	9.51	9.51
AVERAGE GS SALARY	$19,040	$20,073	$20,125
AVERAGE SALARY OF UNGRADED POSITIONS	$13,625	$14,946	$16,129

Section 2

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
PROGRAM ELEMENT LISTING
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PROGRAM ELEMENT LISTING
INTRODUCTION AND EXPLANATION OF CONTENTS

This section has been prepared for the purpose of providing summary program element budget information concerning the US Army Research, Development, Test, and Evaluation Program. The listing is preceded by two summaries: the first by Research Activities (Program Category), the second by Budget Activities.

A separate document, Descriptive Summaries, furnishes detail by project. In addition, it furnishes narrative information on all RDTE program elements and projects of $3.0 million or more. The index number in the right-hand column of this Program Element Listing refers to the appropriate page in the Descriptive Summaries. The funding information used in these volumes corresponds to that contained in the President's Budget.

A direct comparison of FY 1976, FY 19TQ, and FY 1977 data in this Program Element Listing with data shown in the Program Element Listing dated January 1976 will reveal significant differences. Many of the differences are attributable to the following factors:

a. A FY 1976 increase of $4.691 million representing additional recoupments from RDTE surcharges on Foreign Military Sales and transfer of reimbursements from prior years.

b. A FY 1977 net reduction of $81.1 million resulting from the following:

(1) Congressional reduction - $-95.5 million
(2) Proposed supplemental for civilian pay raises - +14.4 million

c. Reclassification to provide greater visibility and contribute to the effective management of the RDTE program such as the following:

(1) The Medical RDTE Program
(2) Combat Support Munitions
(3) Field Artillery Weapons Ammunition Development
(4) Mobility Equipment Technology
(5) Further extension of the Single Program Element Funding Concept.

d. Restructuring of the FY 1976, FY 19TQ, and FY 1977 programs for comparability to the FY 1978 program structure.

e. Planned RDTE effort to be accomplished at installations operating under the Army Industrial Fund (AIF) will require supplemental funds to cover civilian pay raises included in AIF stabilized rates.

Section 2 (Contd)

DEPARTMENT OF THE ARMY
FY 1978 R D T + E PROGRAM

SUMMARY

DATE: 03 JAN 1977

THOUSANDS OF DOLLARS

	FY 1976	FY 1977	FY 1977	FY 1978	FY 1979
SUMMARY RECAP OF RESEARCH CATEGORIES					
RESEARCH	80,746	20,245	97,884	103,531	117,184
EXPLORATORY DEVELOPMENT	268,824	68,351	290,868	317,270	330,915
ADVANCED DEVELOPMENT	468,517	113,775	469,900	586,234	839,949
ENGINEERING DEVELOPMENT	702,426	196,617	965,897	1,097,633	986,218
MANAGEMENT AND SUPPORT	332,301	87,890	381,184	399,017	438,003
RESEARCH AND DEVELOPMENT (FYDP PROGRAM 6)	1,852,814	486,878	2,205,733	2,503,685	2,712,269
OPERATIONAL SYSTEMS DEVELOPMENT	117,585	22,580	99,384	122,015	118,358
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY	1,970,399	509,458	2,305,117	2,625,700	2,830,627
SUMMARY RECAP OF BUDGET ACTIVITIES					
TECHNOLOGY BASE	349,570	88,596	388,752	420,801	448,099
ADVANCED TECHNOLOGY DEVELOPMENT	145,607	34,771	131,517	142,543	226,383
STRATEGIC PROGRAMS	197,000	50,108	203,256	215,541	244,435
TACTICAL PROGRAMS	935,025	244,599	1,188,724	1,431,164	1,459,276
INTELLIGENCE AND COMMUNICATIONS	11,895	3,275	12,988	17,683	14,694
PROGRAMWIDE MANAGEMENT AND SUPPORT	331,302	88,109	379,880	397,968	437,740
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY	1,970,399	509,458	2,305,117	2,625,700	2,830,627
SUMMARY RECAP OF FYDP PROGRAMS					
GENERAL PURPOSE FORCES	102,034	17,970	84,377	90,818	86,100
INTELLIGENCE AND COMMUNICATIONS	15,551	4,610	15,007	31,197	32,258
RESEARCH AND DEVELOPMENT (FYDP PROGRAM 6)	1,852,814	486,878	2,205,733	2,503,685	2,712,269
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, ARMY	1,970,399	509,458	2,305,117	2,625,700	2,830,627

Section 2 (Contd)

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

THOUSANDS OF DOLLARS

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	FY 1976	FY 1977Q	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
1	611014	IN-HOUSE LAB INDEPENDENT RESEARCH	1	12,248	3,255	14,637	14,722	17,200	U	1
2	611024	DEFENSE RESEARCH SCIENCES	1	68,498	16,990	83,247.	88,809	99,984	U	9
3	621054	MATERIALS	1	10,430	2,817	10,526	11,205	13,923	U	69
4	621114	ATMOSPHERIC INVESTIGATIONS	1	4,450	1,390	4,330	6,452	5,557	U	73
5	621204	FUZE, NUCLEAR WPNS EFFECTS, FLUIDICS	1	11,007	3,179	12,884	11,905	11,810	U	77
6	622314	AIRCRAFT WEAPONS TECHNOLOGY	1	1,600	500	1,842	1,227	1,310	U	81
7	622024	AIRCRAFT AVIONICS TECHNOLOGY	1	4,250	1,150	5,006	5,850	6,003	U	84
8	622094	AERONAUTICAL TECHNOLOGY	1	14,601	3,970	15,810	15,693	15,752	U	88
9	622104	AIRCRAFT TECHNOLOGY	1	768	250	995	1,230	1,283	U	92
10	623034	MISSILE TECHNOLOGY	1	27,894	5,688	28,340	28,500	30,140	U	96
11	625014	TANK AND AUTOMOTIVE TECHNOLOGY	1	7,462	1,601	7,163	6,980	8,585	U	112
12	626034	LARGE CAL + NUCLEAR TECH	1			1,000	1,500	3,348	U	115
13	626064	ADVANCE CONCEPTS LAB (TACOM)	1	14,364	4,382	13,574	11,032	9,945	U	119
14	626174	SMALL CALIBER + FIRE CONTROL TECHNOLOGY	1	15,626	3,380	17,711	17,500	18,648	U	121
15	626184	BALLISTICS TECHNOLOGY	1	4,269	970	4,121	3,832	3,544	U	125
16	626224	CHEMICAL MUNITIONS + CHEMICAL COMBAT SUPPORT	1	2,670	950	4,328	4,382	4,502	U	129
17	627014	COMMUNICATIONS ELECTRONICS	1	6,619	1,000	4,356	4,277	5,276	U	133
18	627034	CMBT SURV TARGET ACQ + ID	1			3,000	3,040	4,311	U	137
19	627044	MIL ENVIRONMENTAL CRITERIA DEV	1	10,208	2,358	11,211	15,022	14,647	U	141
20	627054	ELECTRICAL AND ELECTRONIC DEVICES	1	11,820	3,053	12,774	12,114	10,893	U	145
21	627064	CHEM BIO DEFENSE AND GENL INVEST	1	3,270	880	3,188	4,636	4,116	U	150
22	627074	MAPPING + GEODESY	1	6,330	1,491	5,143	5,246	5,063	U	153
23	627144	NIGHT VISION INVESTIGATIONS								157

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1976Q	FY 1977	FY 1978	FY 1979	S E C	DESCRIPTIVE SUMMARY PAGE NUMBER
24	62715A	TACTICAL SELF PROTECTIVE EM TECHNOLOGY	1						C	160
25	62716A	HUMAN FACTORS IN MIL SYSTEMS	1	4,009	1,150	3,863	5,505	6,622	U	164
26	62717A	ARMY PERSONNEL MANPOWER TECH	1	2,354	285	2,375	4,077	4,539	U	168
27	62719A	MIL CONSTRUCTION AND ENGR TECH	1	3,715	875	2,812	4,855	5,027	U	171
28	62720A	ENVIRONMENTAL QUALITY TECH	1	11,804	2,937	12,120	10,360	10,249	U	174
29	62721A	COMPUTER AIDED DESIGN-ENGR (M)	1	202					U	
30	62722A	ARMY TRAINING TECHNOLOGY	1	3,106	1,086	3,876	4,967	4,819	U	185
31	62723A	CLOTHING/EQUIP/PACKAGING TECH	1	2,672	551	2,406	3,450	3,934	U	188
32	62724A	FOOD TECHNOLOGY	1	8,880	2,080	9,725	8,062	6,723	U	193
33	62725A	COMPUTER AND INFORMATION SCIENCE	1	2,920	855	2,880	3,559	3,290	U	201
34	62726A	ARMY SUPPORT DARPA, MOMLS	1	400	100	1,000	2,000	2,000	U	206
35	62727A	NON-SYSTEM TRAINING DEVICES	1			2,500	2,300	4,250	U	209
36	62730A	CONSTRUCTION OPS TECH FOR COLD REGIONS	1	2,530	727	2,730	3,186	3,203	U	212
37	62731A	DESIGN CONSTRUCTION FOR MILITARY FACILITIES	1	4,625	1,135	5,032	6,254	6,463	U	215
38	62732A	RPV SUPPORTING TECHNOLOGY	1			1,500	1,500	3,000	U	218
39	62733A	MOBILITY EQUIPMENT TECHNOLOGY	1	8,813	1,907	8,914	9,926	12,002	U	221
40	62734A	MEDICAL TECH FOR DEF AGAINST CHEMICAL AGENTS	1	5,489	1,635	6,042	6,541	7,074	U	230
41	62735A	TACTICAL ELECTRONIC WARFARE (EW)	1							233
42	62737A	MIL INFECT DISEASE TECHNOLOGY	1	12,887	3,242	14,093	15,530	16,154	U	237
43	62771A	MIL PSYCHIATRY AND MICROWAVE INJURY	1	2,459	547	3,040	3,120	2,417	U	246
44	62772A	RECOVERY FROM INJURY	1	6,993	1,759	7,305	8,428	8,097	U	249
45	62773A	HELICOPTER COMBAT CREW ABN MEDICINE	1	1,681	423	1,838	2,026	2,211	U	254
46	62774A	MILITARY BURN TECHNOLOGY	1	545	137	747	657	717	U	257

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1976 TQ	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
47	62775A	COMBAT MAXILLOFACIAL INJURY	1	958	241	1,048	1,155	1,260	U	260
48	62776A	MED DEF AGAINST BIOLOGICAL AGENTS	1	6,359	1,600	6,657	7,663	7,564	U	263
49	62777A	MILITARY ENVIRONMENTAL STRESS	1	2,092	526	2,287	2,521	2,752	U	266
50	62778A	COMBAT MEDICAL MATERIEL	1	1,163	293	1,272	1,402	1,531	U	269
51	62779A	TEST MEAS DIAGNOSTIC EQUIP TECH	1	352	112	450	505	435	U	272
		TECHNOLOGY BASE		349,570	88,596	388,752	420,801	448,099		
52	63101A	MATERIALS SCALE UP	2	950	500	1,235	2,382	4,502	U	275
53	63103A	FLUIDICS	2					500	U	278
54	63201A	AIRCRAFT POWER PLANTS AND PROPULSION	2	1,077	575	3,857	4,057	10,000	U	280
55	63205A	AIRCRAFT WEAPONS	2	4,309	1,100	1,717	940	4,501	U	288
56	63207A	AIRCRAFT AVIONICS EQUIPMENT	2	2,682	300	2,039	2,560	3,194	U	291
57	63209A	AIRCRAFT SURVIVABILITY	2	2,550	330	2,383	1,453	4,750	U	296
58	63233A	AIR MOBILITY SUPPORT	2	5,273	605	2,700	3,053	5,979	U	299
59	63211A	ADVANCED VTOL	2	5,282	1,935	6,328	2,808	6,000	U	303
60	63212A	TILT ROTOR RESEARCH AIRCRAFT	2	3,315	900	2,574	871	900	U	310
61	63213A	ROTOR SYSTEMS RESEARCH AIRCRAFT (M)	2	4,606					U	
62	63306A	TERMINAL HOMING SYSTEMS	2	3,385	22	3,000	4,841	10,500	U	314
63	63313A	MSL/ROCKET COMPONENTS	2	8,136	550	4,892	4,210	9,500	U	317
64	63314A	HI-ENERGY LASER COMPONENTS	2	26,000	8,200	21,000	13,749	20,979	U	325
65	63602A	ADVANCED LAND MOB SYSTEMS CONCEPTS	2			3,200	4,841	7,000	U	335
66	63604A	NUCLEAR MUNITIONS AND RADIAC	2							338
67	63605A	LANDMINE WARFARE	2	4,500	1,237	3,240	4,408	3,877	U	341
68	63607A	ARMY SMALL ARMS PROGRAM	2	4,968	2,441	2,718	695	3,452	U	344

Section 2 (Contd)

APPROPRIATION: 2040 - RESEARCH DEVELOPMENT TEST + EVAL, ARMY

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1TQ	FY 1977	FY 1978	FY 1979	S E C	DESCRIPTIVE SUMMARY PAGE NUMBER
69	633184	WEAPONS AND AMMUNITION	2			1,898	4,791	2,575	U	348
70	633134	ADVANCED FUZE DESIGN	2	1,760	450	2,267	862	1,409	U	351
71	633144	INCAPACITATING CHEMICAL MUN CONCEPTS	2	9		332		754	U	354
72	633154	LETHAL CHEMICAL MUNITIONS CONCEPTS	2	771	880	855	618	1,043	U	356
73	633164	COUNTERMINE AND BARRIERS	2	4,911	407	2,118	6,243	4,886	U	359
74	633174	VEHICLE ENGINE DEVELOPMENT	2	4,779	1,454	3,997	4,729	9,566	U	364
75	633264	MOBILITY	2					4,617	U	369
76	633724	ELECTRIC POWER SOURCES	2	3,418	1,190	3,944	3,310	6,838	U	371
77	633734	ADPE DEVELOPMENTS	2	1,270	455	1,703	4,631	5,984	U	379
78	633744	IFF DEVELOPMENTS	2	200	53	1,400	581	1,500	U	384
79	633104	NIGHT VISION ADVANCED DEVELOPMENT	2	12,000	2,600	13,430	12,951	16,289	U	387
80	633134	SPECIAL PURPOSE DETECTORS	2			1,500	1,355	1,400	U	390
81	633204	BIOLOGICAL DEFENSE MATERIEL CONCEPTS	2				457	1,678	U	392
82	633214	CHEMICAL DEFENSE MATERIEL CONCEPTS	2	3,840	720	5,060	5,652	9,953	U	394
83	633234	COMMAND AND CONTROL	2	8,363	2,030	7,397	6,437	10,500	U	399
84	633254	REMOTELY POWERED VEHICLES/DRONES	2	11,975	2,090	5,692	9,611	7,600	U	402
85	633314	MIL PERS PERFORMANCE DEVELOPMENT	2	2,336	759	3,531	2,624	5,500	U	408
86	633324	COMBAT MEDICAL MATERIAL (ADV)	2	81	20	88	94	106	U	414
87	633334	ENVIRONMENTAL QUALITY CNTRL EQ	2			200			U	
88	633394	NON-SYSTEM TRAINING DEVICES	2	1,939	25	2,888	5,160	4,500	U	416
89	633414	METEOROLOGICAL EQUIPMENT DEVELOPMENT	2			1,257	1,137	2,145	U	421
90	633424	ADVANCED ELECTRONIC DEVICES DVLPMT	2				1,227	2,000	U	424
91	633434	ING & UTILIZATION IN MIL SYSTEMS	2	4,169	987	5,504	8,420	9,951	U	428

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1976	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
92	63744A	ARMY CONTEMPORARY ISSUES DVLPMT	2	485	62	300	485	500	U	431
93	63747A	SOLDIER SUPPORT SURVIVABILITY	2	1,276	231	1,241	1,990	3,932	U	434
94	63748A	ADV TECH FOR AUTOMATIC TEST EQUIP	2	2,470	880	1,193	2,734	4,602	U	437
95	63753A	DEEP BASING TECHNOLOGY	2				3,389	7,000	U	440
96	65710A	JOINT CS CONTACT POINT AND TEST	2							442
		ADVANCED TECHNOLOGY DEVELOPMENT		145,607	34,771	131,517	142,543	226,383		
97	63304A	BMD ADVANCED TECHNOLOGY	3	97,000	25,158	102,734	107,297	121,519	U	445
98	63308A	BALLISTIC MSL DEF SYS TECH	3	100,000	24,900	100,072	107,688	122,000	U	450
99	63735A	WWMCCS ARCHITECTURE	3		50	450	556	916	U	453
		STRATEGIC PROGRAMS		197,000	50,108	203,256	215,541	244,435		
100	63203A	HEAVY LIFT HELICOPTER (M)	4	6,509					U	
101	63301A	ADVANCED FWD AREA AIR DEFENSE SYSTEM	4	3,055	525	200	24,206	50,836	U	562
102	63303A	SURF-TO-SURF MSL ROCKET SYS	4	1,000	280	5,000	30,113	24,000	U	568
103	63307A	AD SUPPRESSION MISSILE	4	1,359	335	499			U	
104	63311A	PERSHING II	4	19,000	6,000	36,300	29,645	54,186	U	571
105	63315A	HELLFIRE MSL GUIDANCE TECHNOLOGY	4				2,084	10,000	U	577
106	63317A	GRASS BLADE	4	4,000	2,000	9,490	13,459	11,610	U	580
107	63319A	ARMY-NAVY AREA SAM	4			1,500	3,232	4,600	U	581
108	63319A	CONVENTIONAL AIRFIELD ATTACK MISSILE	4				2,968	11,000	U	584
109	63611A	ADV AUTOMATIC CANNON (M)	4	2,900	200				U	
110	63612A	ADVANCED MULTI-PURPOSE MISSILE	4				1,936	22,200	U	587
111	63615A	TANK GUN COOPERATIVE DEVELOPMENT	4	540		1,200	11,232	23,400	U	590

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST & EVAL, ARMY DATE: 03 JAN 1977

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1976 TQ	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
112	63625A	ARMORED CAVALRY VEHICLE	4	1,541	301	3,970	174	2,081	U	594
113	63627A	COMBAT SUPPORT MUNITIONS	4	2,260	1,010	1,863	2,374	2,247	U	596
114	63628A	FIELD ARTILLERY WPNS & AMMO DEV	4	4,018	210	3,746	9,679	13,657	U	599
115	63704A	UNATTENDED GROUND SENSORS	4	3,800	1,400	3,050	5,891	4,831	U	606
116	63705A	PHYSICAL SECURITY	4	1,939			485	500	U	613
117	63707A	COMMUNICATIONS DEVELOPMENT	4	1,528	1,603	3,795	5,236	9,600	U	616
118	63711A	TACTICAL SELF PROTECTIVE EW EQUIP	4							623
119	63712A	MAPPING AND GEODESY	4	300	198	817	1,072	2,279	U	626
120	63713A	EW VULNERABILITY/SUSCEPTIBILITY	4							630
121	63722A	TACTICAL OPERATIONS SYSTEM (TOS)	4	4,300	706	3,483	6,777	11,939	U	640
122	63726A	COMBAT SUPPORT EQUIPMENT	4	4,817	1,512	3,540	3,464	10,429	U	646
123	63730A	TACTICAL SURVEILLANCE SYSTEM	4	5,550	1,850	7,014	11,274	11,162	U	651
124	63737A	ANTI-RADIATION MSL COUNTER MEASURES	4	1,200	205	2,500	3,401	5,042	U	654
125	63740A	DIVISIONAL AIR DEFENSE-CMD CONTR	4			500	485	500	U	657
126	63745A	TACTICAL ELECTRONIC WARFARE SYS	4							660
127	63746A	SINCGARS-V	4	1,240	440	3,950	11,328	14,592	U	683
128	64211A	AIRCRAFT AVIONICS	4	5,388	1,055	3,817	4,878	6,801	U	688
129	64212A	AIRCRAFT WEAPONS	4	4,765	2,665	3,925	15,766	10,723	U	695
130	64213A	AERIAL SCOUT	4	709	130				U	
131	64214A	AIR MOBILITY SUPPORT EQUIPMENT	4	3,738	1,475	6,482	7,515	6,928	U	704
132	64215A	UTIL TAC TRANS ACFT SYS (UTTAS)	4	93,672	18,638	75,456	34,837	2,985	U	711
133	64217A	ADVANCED ATTACK HELICOPTER	4	73,930	17,878	130,843	200,000	178,543	U	724
134	64218A	AIRCRAFT SURVIVABILITY EQUIPMENT	4	3,490	825	5,319	4,659	5,180	U	732

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST & EVAL, ARMY

THOUSANDS OF DOLLARS

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	FY 1976	FY 1976Q	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
135	642124	COBRA TOW	4	3,750	830	7,482	14,398	10,827	U	736
136	64213A	CH-47 MODERNIZATION	4	9,800	2,250	25,875	32,022	16,336	U	744
137	642144	INTERIM SCOUT HELICOPTER	4				18,300	14,800	U	751
138	643024	AIR DEFENSE CONTROL COORD SYSTEM	4	5,837	100	348			U	
139	64306A	STINGER	4	22,659	1,663	25,425	17,509	24,688	U	753
140	643074	PATRIOT (SAM-D)	4	130,000	40,000	180,248	214,558	210,027	U	760
141	643084	PRECISION LASER DESIGNATOR	4	7,700	2,200	6,350	5,326	3,993	U	768
142	64309A	ROLAND	4	54,965	11,510	85,026	64,003	19,149	U	775
143	643104	HELIBORNE MISSILE-HELLFIRE	4	4,000	800	17,818	50,482	67,714	U	781
144	64501A	INFANTRY SUPPORT WEAPONS	4	3,270	650	1,999	629	9,509	U	788
145	645024	WEAPONS & AMMUNITION	4	6,903	400	1,118	2,089	3,537	U	793
146	64603A	NUCLEAR MUNITIONS	4							798
147	646044	MOBILITY	4	170					U	
148	64605A	FIELD ARTILLERY WEAPONS & AMMO 105MM	4	7,539	1,885	6,878	1,617	1,892	U	811
149	646064	EXPLOSIVE DEMOLITIONS	4	352	200	459	35	1,563	U	818
150	64608A	ARMY SMALL ARMS PROGRAM	4	430		450	485	500	U	820
151	646094	COMBAT SUPPORT SYSTEMS	4	631	383	1,357	2,620	3,957	U	822
152	646104	LETHAL CHEMICAL MUNITIONS	4	3,503	1,448	2,978	2,771	2,175	U	825
153	646124	COUNTERMINE AND BARRIERS	4	2,335	730	5,298	6,202	13,925	U	828
154	646134	INCAPACITATING CHEMICAL MUNITIONS	4					1,514	U	837
155	646144	FIELD ARTILLERY WEAPONS & AMMO 155MM	4	3,858	450	5,326	5,105	5,119	U	839
156	646154	M6041 THERMAL SIGHT	4	5,713	2,000	8,223	2,451		U	849
157	646164	MECHANIZED INF CBT VEHICLE M723	4	18,915	3,038	30,066	25,251	15,523	U	852

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1976Q	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
158	64317A	VEH RAPID FIRE WPN SYSTEM-BUSHMASTER	4	10,000	3,631	20,169	12,237	6,111	U	858
159	64319A	LANDMINE WARFARE	4	14,831	5,239	8,459	9,251	17,200	U	864
160	64320A	TANK SYSTEMS	4	52,835	39,353	105,749	117,746	76,757	U	871
161	64321A	COPPERHEAD	4	14,000	3,000	36,119	36,028	363	U	877
162	64323A	VIPER	4	4,686	1,629	15,806	6,515	2,283	U	883
163	64326A	IMPROVED TOW VEHICLE	4	4,453	1,930	5,999	822		U	887
164	64327A	FIELD ARTILLERY WEAPONS & AMMO 8 IN	4	4,346	1,698	4,404	1,748	1,737	U	890
165	64701A	COMM ENGINEERING DEV	4	6,861	1,785	5,687	11,674	13,853	U	893
166	64704A	UNATTENDED GROUND SENSORS	4	2,548	600	7,200	7,109	11,958	U	905
167	64705A	RADIOLOGICAL DEFENSE EQUIPMENT	4	1,202	305	508	810	1,092	U	912
168	64709A	IFF EQUIPMENT	4	5,640	488	2,504	3,838	2,000	U	915
169	64710A	NIGHT VISION DEVICES	4	4,550	1,723	4,327	2,362	5,042	U	918
170	64711A	TACTICAL SELF PROTECTIVE EW SYSTEMS	4	5,426	976	5,274	3,903	2,559	U	922
171	64712A	JT ADV TAC DCMD/CNTRL/COMM PROG	4	2,782	672	3,452	1,150	5,349	U	925
172	64713A	COMBAT FEEDING, CLOTHING AND EQUIPMENT	4	4,524	790	7,855	8,192	5,314	U	930
173	64714A	TACTICAL ELECTRICAL POWER SOURCES	4	2,900	279	2,141	2,542	8,706	U	933
174	64715A	NON-SYSTEM TRAINING DEVICES-ENG	4	3,420	1,103	3,036	3,804	3,485	U	938
175	64716A	MAPPING AND GEODESY	4	446	250	774	1,109	10,106	U	943
176	64717A	GENERAL COMBAT SUPPORT	4	4,733	884	1,296	1,656	2,066	U	947
177	64718A	PHYSICAL SECURITY	4	3,954	810	3,011	3,761	5,500	U	950
178	64723A	SPECIAL PURPOSE DETECTORS	4	2,177	350	5,037	4,789	1,696	U	953
179	64724A	BIOLOGICAL DEFENSE MATERIEL						6,313	U	958
180	64725A	CHEMICAL DEFENSE MATERIEL								961

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1TQ	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
181	64725A	METEOROLOGICAL EQUIPMENT SYSTEMS	4	907	138	259	184	1,009	U	966
182	64727A	COMMAND AND CONTROL	4	2,634	1,930	6,497	8,608	6,772	U	969
183	64728A	FAMECE/UET (UNIVERSAL ENGR TRACTOR)	4	4,180	891	6,907	4,880	2,275	U	974
184	64729A	COUNTER MORTAR RADAR	4	8,820	1,425	5,817	4,270	4,381	U	979
185	64730A	REMOTELY PILOTED VEHICLES	4					8,500	U	982
186	64731A	COUNTER BATTERY RADAR	4	10,340	1,200	10,799	11,354	4,849	U	984
187	64740A	TACTICAL SURVEILLANCE SYSTEM	4				13,920	22,778	U	992
188	64745A	TACTICAL EW SYSTEMS	4							995
189	64746A	AUTOMATIC TEST SUPPORT SYSTEMS	4	1,866	426	1,695	13,052	11,165	U	1014
190	64747A	JOINT COMP AND INTEROP (GAMJ-EA)	4	1,750	1,012	1,745	7,822	10,550	U	1021
191	64748A	STANDOFF TARGET ACQUISITION SYSTEM	4	4,749	1,219	8,136	12,962	23,920	U	1024
192	65701A	COMM ELECTRONICS TESTING ACTYS	4	3,420	758	3,277	3,385	3,482	U	1030
193	237154	SHILLELAGH (LBR) MSL SYS	4	1,900	210	1,999			U	
194	237234	LAND CMBT SPT SYS (LCSS)	4	251	176				U	
195	237244	HV ANTI-TANK ASSAULT WPN SYS (TOW)	4	8,951	1,210	2,893	544	515	U	457
196	237254	TAC FIRE DIR SYS (TACFIRE)	4	4,613	360	5,409	828	747	U	465
197	237274	MED ANTI-TANK ASSAULT WPN (DRAGON)	4	2,545	365	4,004	2,836	1,208	U	473
198	237304	CHAPPARAL	4	4,890	1,710	6,011	5,229	600	U	482
199	237314	SAM HAWK/HAWK IMP PROG	4	14,922	3,117	19,561	12,538	18,445	U	492
200	237324	VULCAN	4	1,000		2,000	193	4,871	U	502
201	237334	LANCE (MNL) WARHEAD	4			1,100	5,218	5,921	U	507
202	237354	M60A1 TANK PRODUCT IMP PROG	4	3,053	865	4,366	4,556	4,813	U	516

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS FY 1976	FY 1976	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
203	28010A	JT TACTICAL COMM PROG (TRI-TAC)	4	59,909	9,957	37,328	58,876	48,980	U	524
204	33142A	SATCOM GROUND ENVIRONMENT	4	9,981	2,735	8,752	13,280	17,000	U	545
205	33145A	ELCOM C3 SYSTEMS	4	500	250	1,241	2,752	1,164	U	558
		TACTICAL PROGRAMS		935,025	244,599	1,188,724	1,431,164	1,459,276		
206	63403A	NAVSTAR GLOBAL POSITIONING SYS	5	6,400	1,550	7,518	1,937		U	1051
207	65802A	INTL COOPERATIVE RESEARCH AND DEV	5	425	100	456	581	600	U	1054
208	31022A	SCIENTIFIC AND TECH INTELLIGENCE	5							1034
209	32053A	NMCS WIDE SUPPORT COMMUNICATIONS	5				2,614	2,000	U	1037
210	33401A	COMSEC	5							1040
211	35164A	NAVSTAR GLOBAL POSITIONING SYSTEM	5				8,535	5,509	U	1047
		INTELLIGENCE AND COMMUNICATIONS		11,895	3,275	12,988	17,683	14,694		
212	63215A	JOINT SURVIVABILITY INVESTIGATIONS	6	600	150	500	581	600	U	1057
213	63315A	TARGET MISSILES	6	2,496	1,150	2,800	2,905	4,000	U	1060
214	65101A	STUDIES AND ANALYSES	6	5,000	1,500	3,800	3,971	5,400	U	1063
215	65102A	TRADOC STUDIES AND ANALYSES	6	3,030	800	2,425	3,389	4,000	U	1066
216	65301A	KWAJALEIN MISSILE RANGE	6	77,827	20,000	82,926	87,239	93,820	U	1070
217	65702A	SUPPORT OF DEVELOPMENT TESTING	6	24,819	7,136	22,563	23,524	28,473	U	1074
218	65706A	MATERIAL SYSTEMS ANALYSIS	6	10,682	2,458	9,274	9,224	10,122	U	1093
219	65707A	SUPPORT USER TEST - TRADOC	6	13,250	4,036	16,926	18,107	19,650	U	1099
220	65709A	THEATER NUCLEAR FORCE SURVIVABILITY	6	1,000	400	483	1,373	3,200	U	1111
221	65709A	EVALUATION OF FOREIGN COMPONENTS	6	1,285	255	2,013	3,389	3,500	U	1113
222	65712A	SUPPORT USER TEST - OTEA	6	4,105	735	7,390	7,501	7,455	U	1117

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

THOUSANDS OF DOLLARS

LINE NO	PROGRAM ELEMENT NUMBER	ITEM NOMENCLATURE	ACT	FY 1976	FY 1TQ	FY 1977	FY 1978	FY 1979	SEC	DESCRIPTIVE SUMMARY PAGE NUMBER
223	65713A	BATTLEFIELD SYSTEMS INTEGRATION	6			4,812	4,551	7,000	U	1122
224	65801A	PROGRAM-WIDE ACTIVITIES	6	53,322	13,168	60,978	70,131	72,176	U	1125
225	65803A	TECHNICAL INFO ACTIVITIES	6	3,101	974	3,873	3,426	4,559	U	1135
226	65804A	MAJOR RTE FACILITIES-DARCOM	6	130,815	35,227	159,117	158,657	173,785	U	1139
		PROGRAMWIDE MANAGEMENT AND SUPPORT		331,302	88,139	379,880	397,968	437,740		
TOTAL		RESEARCH DEVELOPMENT TEST + EVAL, ARMY		1,970,399	509,458	2,305,117	2,625,700	2,830,627		

Section 2 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
($ in Thousands)

Program Element Number	Title	Base Estimate	Civilian Pay Incr. Costs Supplemental	Adjusted Estimate
Technology Base				
6.11.01.A	In-House Laboratory Independent Research	14,502	135	14,637
6.11.02.A	Defense Research Sciences	82,240	1,007	83,247
6.21.05.A	Materials	10,126	400	10,526
6.21.11.A	Atmospheric Investigations	4,266	64	4,330
6.21.20.A	Fuze, Nuclear Weapons Effects, Fluidics	12,652	232	12,884
6.22.01.A	Aircraft Weapons Technology	1,798	44	1,842
6.22.02.A	Aircraft Avionics Technology	4,926	80	5,006
6.22.09.A	Aeronautical Technology	15,604	206	15,810
6.23.03.A	Missile Technology	28,634	306	28,940
6.26.01.A	Tank and Automotive Technology	7,034	129	7,163
6.26.03.A	Large Caliber and Nuclear Technology			
6.26.17.A	Small Caliber and Fire Control Technology	13,360	214	13,574
6.26.18.A	Ballistics Technology	17,453	258	17,711
6.26.22.A	Chemical Munitions and Chemical Combat Support	4,057	64	4,121
6.27.01.A	Communications Electronics	4,000	28	4,028
6.27.03.A	Combat Surveillance Target Acquisition and Identification	4,231	125	4,356
6.27.05.A	Electrical and Electronic Devices	11,050	161	11,211
6.27.06.A	Chemical Biological Defense and General Investigation	12,598	176	12,774
6.27.07.A	Mapping and Geodesy	3,100	88	3,188
6.27.09.A	Night Vision Investigations	5,085	64	5,149
6.27.15.A	Tactical Self Protective Electronic Warfare Technology			
6.27.16.A	Human Factors in Military Systems	3,831	32	3,863
6.27.19.A	Military Construction and Engineering Technology	2,631	181	2,812

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
($ in Thousands)

Program Element Number	Title	Base Estimate	Civilian Pay Incr. Costs Supplemental	Adjusted Estimate
Technology Base (Continued)				
6.27.20.A	Environmental Quality Technology	12,000	120	12,120
6.27.22.A	Army Training Technology	3,800	76	3,876
6.27.23.A	Clothing, Equipment, and Packaging Technology	2,346	60	2,406
6.27.24.A	Food Technology	9,564	161	9,725
6.27.30.A	Construction Operations Technology for Cold Regions	2,691	39	2,730
6.27.33.A	Mobility Equipment Technology	8,719	195	8,914
6.27.34.A	Medical Technology for Defense Against Chemical Agents	5,753	289	6,042
6.27.70.A	Military Infectious Disease Technology	14,001	92	14,093
6.27.71.A	Military Psychiatry and Microwave Injury	2,879	161	3,040
6.27.72.A	Recovery From Injury	7,213	92	7,305
6.27.76.A	Medical Defense Against Biological Agents	6,453	204	6,657
Subtotal - Technology Base		(382,718)	6,034	(388,752)
Advanced Technology Development				
6.32.01.A	Aircraft Power Plants and Propulsion	3,850	7	3,857
6.32.06.A	Aircraft Weapons	1,612	105	1,717
6.32.07.A	Aircraft Avionics Equipment	2,015	24	2,039
6.32.08.A	Aircraft Survivability	2,380	3	2,383
6.32.09.A	Air Mobility Support	2,676	24	2,700
6.32.11.A	Advanced Vertical Take Off Landing (VTOL)	6,300	28	6,328
6.32.12.A	Tilt Rotor Research Aircraft	2,560	14	2,574
6.33.13.A	Missile/Rocket Components	4,868	24	4,892
6.36.04.A	Nuclear Munitions and Radiacs			
6.36.06.A	Landmine Warfare	3,110	130	3,240
6.36.07.A	Army Small Arms Program	2,622	96	2,718
6.36.13.A	Advanced Fuze Design	2,260	7	2,267
6.36.15.A	Lethal Chemical Munitions Concepts	809	46	855
6.36.19.A	Countermine and Barriers	2,097	21	2,118
6.36.21.A	Vehicle Engine Development	3,972	25	3,997

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
($ in Thousands)

Program Element Number	Title	Base Estimate	Civilian Pay Incr. Costs Supplemental	Adjusted Estimate
Advanced Technology Development (Continued)				
6.37.02.A	Electric Power Sources	3,900	44	3,944
6.37.03.A	Automatic Data Processing Equipment Developments	1,685	18	1,703
6.37.10.A	Night Vision Advanced Development	13,338	92	13,430
6.37.21.A	Chemical Defense Materiel Concepts	5,007	53	5,060
6.37.23.A	Command and Control	7,373	24	7,397
6.37.25.A	Remotely Piloted Vehicles/Drones	5,678	14	5,692
6.37.31.A	Military Personnel Performance Development	3,475	56	3,531
6.37.48.A	Advanced Technology for Automatic Test Equipment	1,164	29	1,193
6.57.10.A	Joint Combat Contact Point and Test			
	Subtotal - Advanced Technology Development	(130,518)	999	(131,517)
Strategic Programs				
6.33.04.A	Ballistic Missile Defense Advanced Technology	102,664	70	102,734
6.33.08.A	Ballistic Missile Defense System Technology	100,000	72	100,072
	Subtotal - Strategic Programs	(203,114)	142	(203,256)
Tactical Programs				
6.36.28.A	Field Artillery Weapons and Ammunitions Development	3,536	210	3,746
6.37.07.A	Communications Development	3,771	24	3,795
6.37.11.A	Tactical Self Protective Electronic Warfare Equipment			-
6.37.12.A	Mapping and Geodesy	810	7	817
6.37.18.A	Electronic Warfare Vulnerability/Susceptibility			
6.37.22.A	Tactical Operations System (TOS)	3,472	11	3,483
6.37.26.A	Combat Support Equipment	3.501	39	3.540
6.37.45.A	Tactical Electronic Warfare Equipment			
6.42.01.A	Aircraft Avionics	3,773	44	3,817
6.42.02.A	Aircraft Weapons	3,901	24	3,925
6.42.04.A	Air Mobility Support Equipment	6,471	11	6,482

Section 2 (Contd)

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
($ in Thousands)

Program Element Number	Title	Base Estimate	Civilian Pay Incr. Costs Supplemental	Adjusted Estimate
Tactical Programs (Continued)				
6.42.07.A	Advanced Attack Helicopter	130,801	42	130,843
6.42.09.A	Aircraft Survivability Equipment	5,310	9	5,319
6.43.02.A	Air Defense Control Coordination System	339	9	348
6.43.06.A	STINGER	25,349	76	25,425
6.43.07.A	PATRIOT (SAM-D)	179,953	295	180,248
6.43.09.A	ROLAND	85,001	25	85,026
6.43.10.A	Heliborne Missile-HELLFIRE	17,774	44	17,818
6.46.03.A	Nuclear Munitions			
6.46.05.A	Field Artillery Weapons and Ammunition, 105mm	6,598	280	6,878
6.46.09.A	Combat Support Systems	1,929	28	1,957
6.46.10.A	Lethal Chemical Munitions	2,856	122	2,978
6.46.12.A	Countermine and Barriers	5,273	25	5,298
6.46.15.A	Tank Thermal Sight	8,199	24	8,223
6.46.16.A	Mechanized Infantry Combat Vehicle, XM723	29,897	169	30,066
6.46.17.A	Vehicle Rapid Fire Weapons System-BUSHMASTER	20,000	169	20,169
6.46.19.A	Landmine Warfare	8,258	201	8,459
6.46.20.A	Tank Systems	105,356	393	105,749
6.46.21.A	COPPERHEAD	36,081	38	36,119
6.47.01.A	Communications Engineering Development	5,651	36	5,687
6.47.06.A	Radiological Defense Equipment	505	3	508
6.47.10.A	Night Vision Devices	2,427	77	2,504
6.47.12.A	Joint Advanced Tactical Command, Control, and Communications Program	4,320	7	4,327
6.47.13.A	Combat Feeding, Clothing and Equipment	5,235	39	5,274
6.47.14.A	Tactical Electrical Power Sources	3,400	52	3,452
6.47.16.A	Mapping and Geodesy	2,125	16	2,141
6.47.17.A	General Combat Support	3,022	14	3,036
6.47.24.A	Biological Defense Material	3,000	11	3,011
6.47.25.A	Chemical Defense Material	4,985	52	5,037
6.47.26.A	Meteorological Equipment and Systems	250	9	259
6.47.27.A	Command and Control	6,472	25	6,497

DETAIL BY PROGRAM OF PROPOSED FY 1977 SUPPLEMENTAL ESTIMATES
($ in Thousands)

Program Element Number	Title	Base Estimate	Civilian Pay Incr. Costs Supplemental	Adjusted Estimate
Tactical Programs (Continued)				
6.47.28.A	Family of Military Engineering Construction Equipment/Universal Engineer Tractor (FAMECE/UET)	6,898	9	6,907
6.47.45.A	Tactical Electronic Warfare Equipment			
6.57.01.A	Communications Electronics Testing Activities	3,253	24	3,277
2.37.26.A	Tactical Fire Direction System (TACFIRE)	5,400	9	5,409
2.37.30.A	CHAPARRAL	5,000	11	5,011
2.37.31.A	SAM HAWK/HAWK Improvement Program	19,550	11	19,561
2.37.35.A	M60A1 Tank Product Improvement Program	4,063	3	4,066
2.80.10.A	Joint Tactical Communications Program (TRI-TAC)	37,263	65	37,328
3.31.42.A	Satellite Communications (SATCOM) Ground Environment	8,710	42	8,752
Subtotal - Tactical Programs		(1,185,653)	3,071	(1,188,724)
Intelligence and Communications		-	-	-
3.34.01.A	Communications Security (COMSEC) Equipment	-	-	-
Subtotal - Intelligence and Communications		(12,964)	24	(12,988)
Programwide Management and Support				
6.53.01.A	Kwajalein Missile Range	82,854	72	82,926
6.57.02.A	Support of Development Testing	22,440	123	22,563
6.57.06.A	Material Systems Analysis	9,100	174	9,274
6.57.07.A	Support User Test - TRADOC	16,803	123	16,926
6.57.09.A	Evaluation of Foreign Components	2,010	3	2,013
6.58.01.A	Programwide Activities	59,488	1,490	60,978
6.58.03.A	Technical Information Activities	3,841	32	3,873
6.58.04.A	Major Research and Development and Test Facilities - DARCOM	157,000	2,117	159,117
Subtotal - Programwide Management and Support		(375,746)	4,134	(379,880)
All Other Programs		398,750		398,750
TOTAL PROGRAM		2,290,713	14,404	2,305,117

Section 3

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
PERFORMER DISTRIBUTION
($ in Thousands)

Appropriation: Research, Development, Test, and Evaluation, Army

	Total Obligational Authority				
	FY 1976	FY 19TQ	FY 1977	FY 1978	FY 1979
1. For operation of installations of the reporting DOD Component Government operated	669,198	196,041	708,035	743,999	778,292
2. For operation of installations of the reporting DOD Component Contractor operated	49,089	13,185	53,060	55,681	62,151
3. For contracts directly in support of work actually performed at installations of the reporting DOD Component	34,309	9,631	41,683	42,637	43,970
4. For work assigned to other Department of Defense activities	212,941	54,687	230,241	270,344	286,798
5. For work assigned to activities of other Government agencies	38,107	5,788	21,647	18,482	19,918
6. For work performed by industrial contractors ("profit" organizations)	906,580	216,142	1,178,518	1,415,309	1,553,843
7. For work performed by educational institutions					
a. Designated Fed Contract Res Centers	10,110	2,595	10,670	11,097	11,763
b. Other Institutions	31,847	6,832	39,493	44,531	47,055
8. For work performed by other "non-profit" organizations					
a. Designated Fed Contract Res Centers	1,782	682	3,612	4,729	5,238
b. Other Institutions	16,436	3,875	18,158	18,891	21,599
9. Total Research, Development, Test, and Evaluation, Army Appropriation	1,970,399	509,458	2,305,117	2,625,700	2,830,627

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Section 4

This installation analysis indicates the resources of dollars and manpower utilized by Army installations in the accomplishment of the in-house research, development, test, and evaluation effort, including contractor operated installations, under the management control of the Army. Installations reported include both installations classified as research, development, or test installations and research, development, or test units located at multi-mission installations. Funds being reported cover both direct costs and indirect or support costs. These funds are a part of project costs shown in the budget for the various projects. The amounts reflected under the category "RDTE Funds" include funds received directly through command channels, and reimbursable RDTE effort performed for other Army activities and other Department of Defense agencies. "All Other Funds" reflect the in-house effort at multi-mission installations for other than Research, Development, Test, and Evaluation, Military Construction and Military Personnel costs. Military Personnel costs reflect those military personnel assigned to RDTE activities and other military personnel located at the installation in support of non-RDTE activities at multi-mission posts.

The personnel reflected are reported in terms of man years utilized as opposed to the number of personnel spaces. Spaces assigned to support Army RDTE effort are divided between spaces charged directly to the RDTE appropriation as reflected in the personnel summary (Page 8) and spaces assigned to the Army Industrial Fund and indirectly charged to the RDTE appropriation. Contractor personnel shown are engaged in direct support or operation of Army installations.

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

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Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Industrial Fund Installations																	
1.																	
Aberdeen	76	68,083	1,005	3,506	2,748	75,342	2,842	-	78,184	2,353	58	-	-	-	261	-	2,672
Proving	TQ	16,463	148	560	530	17,701	788	-	18,489	582	15	-	-	-	70	-	667
Ground, Aber-	77	73,063	745	2,020	1,159	76,987	4,200	-	81,187	2,252	23	-	-	-	370	-	2,645
deen, Maryland	78	71,880	600	2,195	2,146	76,821	3,800	-	80,621	2,252	23	-	-	-	338	-	2,613
	79	79,835	645	2,310	1,366	84,156	3,800	-	87,956	2,252	23	-	-	-	338	-	2,613
2.																	
Dugway Proving	76	9,902	-	-	-	9,902	1,808	305	12,015	631	24	-	-	-	166	28	849
Ground,	TQ	3,315	-	-	-	3,315	473	79	3,867	158	6	-	-	-	42	7	213
Dugway, Utah	77	11,096	-	-	-	11,096	2,077	318	13,491	561	30	-	-	-	183	28	802
	78	11,115	-	-	-	11,115	2,057	315	13,487	531	60	-	-	-	183	28	802
	79	11,621	-	-	-	11,621	2,057	315	13,993	546	45	-	-	-	183	28	802
3.																	
Edgewood Ar-	76	31,302	129	653	18,201	50,285	1,263	272	51,820	785	12	195	-	-	116	25	1,133
senal, Edge-	TQ	7,538	21	-	2,563	10,122	315	79	10,516	198	-	48	-	-	28	7	281
wood, Maryland	77	29,224	100	1,100	9,661	40,085	1,283	148	41,516	673	16	114	-	-	113	13	929
	78	31,457	100	900	12,811	45,268	1,270	146	46,684	674	13	117	-	-	113	13	930
	79	34,005	100	900	12,811	47,816	1,270	146	49,232	674	13	117	-	-	113	13	930
4.																	
Frankford Ar-	76	5,284	182	234	2,204	7,904	11	-	7,915	450	6	59	-	-	1	-	516
senal, Phila-	TQ	2,130	-	-	658	2,788	-	-	2,788	115	-	15	-	-	-	-	130
delphia,	77	3,943	200	300	1,115	5,558	-	-	5,558	427	13	50	-	-	-	-	490
Pennsylvania	78	Deactivated.															
	79																

1/ Exclusive of Military Personnel and Military Construction

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DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Industrial Fund Installations																	
5.																	
HarryDiamond	76	21,030	470	9,818	7,858	39,176	-	109	39,285	377	-	1,028	-	-	-	10	1,415
Laboratories,	TQ	6,522	50	2,650	726	9,948	-	34	9,982	82	-	269	-	-	-	3	354
Washington,DC	77	22,087	383	10,020	3,999	36,489	-	113	36,602	335	-	1,019	-	-	-	10	1,364
	78	20,228	-	7,092	2,759	30,079	-	112	30,191	409	-	945	-	-	-	10	1,364
	79	21,020	-	7,092	2,759	30,871	-	112	30,983	409	-	945	-	-	-	10	1,364
6.																	
Materials and	76	11,680	2,209	734	6,177	20,800	131	-	20,931	465	16	182	1	-	12	-	676
Mechanics	TQ	3,026	413	43	1,646	5,128	34	-	5,162	111	4	46	-	-	3	-	164
Research Cen-	77	10,810	2,800	400	5,631	19,641	182	-	19,823	419	14	184	1	-	16	-	634
ter,Watertown,	78	11,312	2,956	300	8,085	22,653	180	-	22,833	419	14	184	1	-	16	-	634
Massachusetts	79	12,790	3,620	380	8,500	25,290	180	-	25,470	419	14	184	1	-	16	-	634
7.																	
Missile R&D	76	51,923	1,509	822	210	54,464	1,230	-	55,694	1,422	17	4	-	-	113	-	1,556
Command, Red-	TQ	17,025	100	213	-	17,338	326	-	17,664	396	5	-	-	-	29	-	430
stone Arsenal,	77	59,166	955	940	-	61,061	1,453	-	62,514	1,560	20	-	-	-	128	-	1,708
Huntsville,	78	63,258	755	940	-	64,953	1,450	-	66,403	1,624	20	-	-	-	129	-	1,773
Alabama	79	61,269	755	940	-	62,964	1,450	-	64,414	1,531	20	-	-	-	127	-	1,678
8.																	
Picatinny Ar-	76	34,053	307	1,741	47,811	83,912	577	338	84,827	1,956	10	2,208	-	-	53	31	4,258
senal, Dover,	TQ	7,588	151	831	11,953	20,523	146	90	20,759	485	2	542	-	-	13	8	1,050
New Jersey	77	30,314	425	5,558	44,821	81,118	658	363	82,139	2,259	13	2,353	-	-	58	32	4,715
	78	37,528	200	4,419	46,354	88,501	776	371	89,648	2,642	27	2,565	-	-	69	33	5,336
	79	46,602	350	1,016	51,865	99,833	866	371	101,070	2,984	36	2,754	-	-	77	33	5,884

1/ Exclusive of Military Personnel and Military Construction

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Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Industrial Fund Installations																	
9.																	
Rodman Laboratory, Rock Island, Illinois	76	8,356	-	521	9,194	18,071	87	-	18,158	377	19	324	188	17	8	-	933
	TQ	1,218	-	-	1,826	3,044	22	-	3,066	76	-	64	-	2	2	-	144
	77	3,931	-	275	8,486	12,692	91	-	12,783	147	10	294	133	20	8	-	612
	78	3,606	-	266	5,476	9,348	-	-	9,348	142	9	189	99	24	-	-	463
	79	To be deactivated.															
10.																	
Watervliet Arsenal, Watervliet, New York	76	6,327	7	102	6,560	12,996	43	22	13,061	345	-	173	-	-	4	2	524
	TQ	1,085	-	-	572	1,657	11	-	1,668	55	-	20	-	-	1	-	76
	77	2,651	-	-	4,885	7,536	45	23	7,604	141	-	164	-	-	4	2	311
	78	3,007	-	-	4,885	7,892	45	22	7,959	158	-	164	-	-	4	2	328
	79	3,481	-	-	4,885	8,366	45	22	8,433	178	-	164	-	-	4	2	348
Subtotal Army Industrial Fund	76	247,940	5,818	18,131	100,963	372,852	7,992	1,046	381,890	9,161	162	4,173	189	17	734	96	14,532
	TQ	65,910	883	4,297	20,474	91,564	2,115	282	93,961	2,258	32	1,004	-	2	188	25	3,509
	77	246,285	5,608	20,613	79,757	352,263	9,989	965	363,217	8,774	139	4,178	134	20	880	85	14,210
	78	253,391	4,611	16,112	82,516	356,630	9,578	966	367,174	8,851	166	4,164	100	24	852	86	14,243
	79	270,623	5,470	12,638	82,186	370,917	9,668	966	381,551	8,993	151	4,164	1	-	858	86	14,253

1/ Exclusive of Military Personnel and Military Construction

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
11.																	
Aeromedical	76	2,090	-	-	213	2,303	686	-	2,989	57	-	-	-	-	63	-	120
Research Lab-	TQ	571	-	-	3	574	158	-	732	15	-	-	-	-	14	-	29
oratory, Ft	77	2,142	-	-	10	2,152	658	-	2,810	57	-	-	-	-	52	-	109
Rucker,	78	2,256	-	-	10	2,266	652	-	2,918	57	-	-	-	-	52	-	109
Alabama	79	2,383	-	-	10	2,393	652	-	3,045	57	-	-	-	-	52	-	109
12.																	
Air Defense	76	1,559	173	-	160	1,892	1,307	-	3,199	77	-	-	-	-	120	-	197
Board, Ft	TQ	776	75	-	381	1,232	338	-	1,570	22	-	-	-	-	30	-	52
Bliss, Texas	77	2,195	135	-	213	2,543	1,362	-	3,905	87	-	-	-	-	120	-	207
	78	2,264	184	-	212	2,660	1,349	-	4,009	87	-	-	-	-	120	-	207
	79	2,384	103	-	147	2,634	1,349	-	3,983	87	-	-	-	-	120	-	207
13.																	
Air Mobility	76	12,807	1,390	7	7	14,211	294	-	14,505	579	-	-	-	-	27	-	606
R&D Labora-	TQ	3,225	328	10	-	3,563	79	-	3,642	145	-	-	-	-	7	-	152
tory,Moffett	77	12,358	1,025	55	10	13,448	329	-	13,777	590	-	-	-	-	29	-	619
Field,	78	13,240	980	18	234	14,472	315	-	14,787	594	-	-	-	-	28	-	622
California	79	13,901	1,033	20	244	15,198	315	-	15,513	594	-	-	-	-	28	-	622
14.																	
Airborne Com-	76	1,360	-	-	140	1,500	1,655	-	3,155	45	-	-	-	-	156	-	201
munications &	TQ	364	-	-	22	386	338	-	724	12	-	-	-	-	30	-	42
Electronics	77	1,458	-	-	190	1,648	1,385	-	3,033	52	-	-	-	-	122	-	174
Board,FtBragg,	78	1,410	-	-	190	1,600	1,371	-	2,971	52	-	-	-	-	122	-	174
NorthCarolina	79	1,345	-	-	190	1,535	1,371	-	2,906	52	-	-	-	-	122	-	174

1/ Exclusive of Military Personnel and Military Construction

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DEPARTMENT OF DEFENSE, MILITARY
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Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
15. 2/																	
Aircraft Development &	76	6,385	-	-	1,296	7,681	2,820	-	10,501	126	-	-	221	-	259	-	606
Test Activity,	TQ	1,759	-	-	533	2,292	732	-	3,024	32	-	-	55	-	57	-	144
Ft Rucker,	77	6,343	-	-	1,753	8,096	2,600	-	10,696	93	-	-	158	-	225	-	476
Alabama	78	5,145	-	-	1,244	6,389	2,541	-	8,930	90	-	-	99	-	221	-	410
	79	5,194	-	-	1,244	6,438	2,293	-	8,731	90	-	-	99	-	200	-	389
16.																	
Arctic Test	76	3,209	-	6	-	3,215	2,613	-	5,828	21	-	-	-	15	240	-	276
Center, Fort	TQ	933	-	-	-	933	675	-	1,608	5	-	-	-	4	60	-	69
Greely,Alaska	77	3,351	-	-	-	3,351	3,054	-	6,405	22	-	-	-	15	262	-	299
	78	3,522	-	-	-	3,522	3,024	-	6,546	22	-	-	-	15	262	-	299
	79	3,696	-	-	-	3,696	3,024	-	6,720	22	-	-	-	15	262	-	299
17.																	
Armament Command	76	5,195	-	-	906	6,101	207	-	6,308	185	-	37	-	-	19	-	241
Headquarters, Rock	TQ	1,550	-	-	230	1,780	56	-	1,836	46	-	9	-	-	5	-	60
Island,	77	5,165	-	-	-	5,165	250	-	5,415	187	-	-	-	-	22	-	209
Illinois	78	5,366	-	-	-	5,366	247	-	5,613	187	-	-	-	-	22	-	209
	79	5,676	-	-	-	5,676	247	-	5,923	187	-	-	-	-	22	-	209
18.																	
Armor and	76	2,006	-	-	21	2,027	1,971	-	3,998	85	-	-	-	-	181	-	266
Engineer Board,	TQ	540	-	-	366	906	653	-	1,559	21	-	-	-	-	44	-	65
Ft Knox,	77	3,117	-	-	275	3,392	2,055	-	5,447	85	-	-	-	-	181	-	266
Kentucky	78	3,371	-	-	250	3,621	2,035	-	5,656	85	-	-	-	-	181	-	266
	79	3,067	-	-	250	3,317	2,035	-	5,352	85	-	-	-	-	181	-	266

1/ Exclusive of Military Personnel and Military Construction
2/ DARCOM activity; developmental testing only. See item number 29, Aviation Test Board, TRADOC.

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Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
19. Army Materiel Command, Headquarters, Project Managers	76	392	-	-	-	392	-	-	392	Civilian and military spaces are included in the activities where Project Managers are physically located.							
	TQ	100	-	-	-	100	-	-	100								
	77	400	-	-	-	400	-	-	400								
	78	400	-	-	-	400	-	-	400								
	79	400	-	-	-	400	-	-	400								
20. Army Materiel Development & Readiness Command, Headquarters, Alexandria, Virginia	76	8,285	-	-	-	8,285	338	-	8,623	294	-	-	-	-	31	-	325
	TQ	2,096	-	-	-	2,096	79	-	2,175	75	-	-	-	-	7	-	82
	77	5,585	-	-	-	5,585	488	-	6,073	96	-	-	-	-	38	-	134
	78	5,587	-	-	-	5,587	483	-	6,070	91	-	-	-	-	38	-	129
	79	5,287	-	-	-	5,287	483	-	5,770	85	-	-	-	-	38	-	123
21. Army Research Office, Research Triangle Park, North Carolina	76	2,305	-	-	-	2,305	163	-	2,468	85	-	-	-	-	15	-	100
	TQ	725	-	-	-	725	34	-	759	23	-	-	-	-	3	-	26
	77	2,538	-	-	-	2,538	136	-	2,674	85	-	-	-	-	12	-	97
	78	2,558	-	-	-	2,558	135	-	2,693	92	-	-	-	-	12	-	104
	79	2,558	-	-	-	2,558	135	-	2,693	92	-	-	-	-	12	-	104
22. Army Security Agency Analyses Application Facility, Warrenton, Virginia	76	110	-	-	-	110	-	-	110	19	-	-	-	-	-	-	19
	TQ	29	-	-	-	29	-	-	29	6	-	-	-	-	-	-	6
	77	148	-	-	-	148	23	-	171	23	-	-	-	-	2	-	25
	78	148	-	-	-	148	22	-	170	23	-	-	-	-	2	-	25
	79	148	-	-	-	148	22	-	170	23	-	-	-	-	2	-	25

1/ Exclusive of Military Personnel and Military Construction

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Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
23.																	
Army Security	76	1,889	-	352	-	2,241	294	-	2,535	53	25	-	-	-	27	-	105
Agency,Arling-	TQ	609	-	117	-	726	68	-	794	14	6	-	-	-	6	-	26
ton Hall Sta-	77	2,181	-	504	-	2,685	307	-	2,992	55	26	-	-	-	27	-	108
tion,Virginia	78	2,118	-	461	-	2,579	304	-	2,883	56	26	-	-	-	27	-	109
	79	2,220	-	461	-	2,681	304	-	2,985	56	26	-	-	-	27	-	109
24.																	
Army Security	76	1,560	-	-	-	1,560	1,057	-	2,617	40	-	-	-	-	97	-	137
Agency, Test &	TQ	477	-	-	-	477	259	-	736	11	-	-	-	-	17	-	28
Evaluation	77	1,920	-	-	-	1,920	783	-	2,703	46	-	-	-	-	66	-	112
Center,FtHua-	78	1,751	-	-	-	1,751	776	-	2,527	47	-	-	-	-	66	-	113
chuca,Arizona	79	1,890	-	-	-	1,890	776	-	2,666	47	-	-	-	-	66	-	113
25.																	
Army Training	76	1,218	-	-	-	1,218	185	-	1,403	18	-	-	-	-	17	-	35
DevicesAgency,	TQ	430	-	-	-	430	45	-	475	6	-	-	-	-	4	-	10
Orlando,	77	1,239	-	-	-	1,239	193	-	1,432	18	-	-	-	-	17	-	35
Florida	78	1,306	-	-	-	1,306	191	-	1,497	22	-	-	-	-	17	-	39
	79	1,323	-	-	-	1,323	191	-	1,514	22	-	-	-	-	17	-	39
26.																	
Atmospheric	76	7,789	66	320	103	8,278	5,259	-	13,537	226	3	1	45	-	483	-	758
Sciences Lab-	TQ	2,674	-	120	-	2,794	1,317	-	4,111	52	1	-	11	-	117	-	181
oratory,White	77	7,483	-	210	-	7,693	5,495	-	13,188	199	3	-	45	-	484	-	731
Sands Missile	78	9,323	-	250	-	9,573	5,497	-	15,070	199	3	-	45	-	489	-	736
Range, Las	79	9,790	-	210	-	10,000	5,497	-	15,497	199	3	-	45	-	489	-	736
Cruces, New Mexico																	

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
27.																	
Aviation Engineering Flight Activity, Edwards Air Force Base, California	76	2,868	-	-	-	2,868	621	-	3,489	138	-	-	-	-	57	-	195
	TQ	812	-	-	-	812	191	-	1,003	33	-	-	-	-	14	-	47
	77	3,213	-	-	-	3,213	851	-	4,064	143	-	-	-	-	70	-	213
	78	3,130	-	-	-	3,130	866	-	3,996	127	-	-	-	-	71	-	198
	79	3,130	-	-	-	3,130	843	-	3,973	126	-	-	-	-	70	-	196
28.																	
Aviation Systems Command Headquarters, St Louis, Missouri	76	17,837	94	-	-	17,931	436	-	18,367	375	-	-	-	-	40	-	415
	TQ	9,278	-	-	-	9,278	180	-	9,458	113	-	-	-	-	12	-	125
	77	23,356	-	-	-	23,356	704	-	24,060	376	-	-	-	-	60	-	436
	78	29,545	-	-	-	29,545	753	-	30,298	427	-	-	-	-	63	-	490
	79	29,553	-	-	-	29,553	630	-	30,183	427	-	-	-	-	56	-	483
29. 2/																	
Aviation Test Board, Fort Rucker, Alabama	76	5	-	-	-	5	-	-	5	-	-	-	-	-	-	-	-
	TQ	271	-	-	-	271	146	-	417	5	-	-	-	-	13	-	18
	77	1,299	-	-	-	1,299	590	-	1,889	36	-	-	-	-	52	-	88
	78	1,254	-	-	-	1,254	585	-	1,839	36	-	-	-	-	52	-	88
	79	1,169	-	-	-	1,169	585	-	1,754	36	-	-	-	-	52	-	88
30.																	
Ballistic Missile Defense Advanced Technology Center, Huntsville, Alabama	76	3,445	-	-	-	3,445	87	-	3,532	111	-	-	-	-	8	-	119
	TQ	867	-	-	-	867	23	-	890	28	-	-	-	-	2	-	30
	77	3,851	-	-	-	3,851	91	-	3,942	106	-	-	-	-	8	-	114
	78	3,851	-	-	-	3,851	90	-	3,941	98	-	-	-	-	8	-	106
	79	4,183	-	-	-	4,183	90	-	4,273	98	-	-	-	-	8	-	106

1/ Exclusive of Military Personnel and Military Construction
2/ TRADOC activity; formerly part of item number 15, Aircraft Development & Test Activity, DARCOM. Operational testing only.

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
31.																	
Ballistic Missile Defense	76	1,025	-	-	-	1,025	218	-	1,243	29	-	-	-	-	20	-	49
	TQ	408	-	-	-	408	56	-	464	11	-	-	-	-	5	-	16
ProgramOffice,	77	1,354	-	-	-	1,354	193	-	1,547	36	-	-	-	-	17	-	53
Arlington,	78	1,403	-	-	-	1,403	191	-	1,594	36	-	-	-	-	17	-	53
Virginia	79	1,403	-	-	-	1,403	191	-	1,594	36	-	-	-	-	17	-	53
32.																	
Ballistic Missile Defense	76	5,037	-	-	-	5,037	131	-	5,168	170	-	-	-	-	12	-	182
	TQ	1,539	-	-	-	1,539	45	-	1,584	36	-	-	-	-	4	-	40
SystemsCommand,	77	5,482	-	-	-	5,482	102	-	5,584	157	-	-	-	-	9	-	166
Huntsville,	78	5,828	-	-	-	5,828	101	-	5,929	157	-	-	-	-	9	-	166
Alabama	79	5,906	-	-	-	5,906	101	-	6,007	157	-	-	-	-	9	-	166
33.																	
Cold Regions	76	2,263	1,103	142	3,090	6,598	120	22	6,740	136	108	18	-	-	11	2	275
Research&Engineering	TQ	700	288	37	800	1,825	23	11	1,859	37	23	8	-	-	2	1	71
Laboratory,	77	3,250	1,118	144	3,104	7,616	125	23	7,764	152	82	35	-	-	11	2	282
Hanover,	78	3,050	1,365	175	3,790	8,380	124	22	8,526	150	82	45	-	-	11	2	290
New Hampshire	79	3,100	1,500	192	4,170	8,962	124	22	9,108	152	83	50	-	-	11	2	298
34.																	
Computer Systems Command,	76	1,404	-	-	45	1,449	54	-	1,503	17	-	-	-	-	5	-	22
	TQ	675	-	-	-	675	11	-	686	4	-	-	-	-	1	-	5
Ft Belvoir,	77	2,030	-	-	-	2,030	57	-	2,087	17	-	-	-	-	5	-	22
Virginia	78	2,468	-	-	-	2,468	56	-	2,524	17	-	-	-	-	5	-	22
	79	2,545	-	-	-	2,545	56	-	2,601	17	-	-	-	-	5	-	22

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
35.																	
Construction	76	5,733	2,706	502	-	8,941	33	-	8,974	187	10	-	-	-	3	-	200
EngineeringRes-	TQ	1,908	403	43	-	2,354	11	-	2,365	49	-	-	-	-	1	-	50
earchLaborato-	77	6,599	3,084	369	-	10,052	34	-	10,086	190	5	-	-	-	3	-	198
ries, Urbana,	78	6,929	3,530	418	-	10,877	34	-	10,911	182	7	-	-	-	3	-	192
Illinois	79	7,057	4,400	400	-	11,857	34	-	11,891	182	7	-	-	-	3	-	192
36.																	
Electronics	76	82,549	3,589	2,226	9,194	97,558	2,004	120	99,682	2,294	150	25	23	-	184	11	2,687
Command Head-	TQ	25,133	1,732	126	3,926	30,917	529	45	31,491	575	20	6	6	-	47	4	658
quarters, Ft	77	86,492	4,218	293	8,733	99,736	2,146	125	102,007	2,265	87	24	21	-	189	11	2,597
Monmouth, New	78	91,569	4,384	287	9,944	106,184	2,158	124	108,466	2,256	84	25	21	-	192	11	2,589
Jersey	79	96,444	4,549	325	8,955	110,273	2,147	124	112,544	2,208	84	25	18	-	191	11	2,537
37.																	
Electronics	76	6,133	1,452	1,794	18	9,397	2,592	501	12,490	139	33	32	-	-	238	46	488
ProvingGround,	TQ	2,561	360	265	-	3,186	675	124	3,985	34	8	8	-	-	60	11	121
Ft Huachuca,	77	5,055	952	1,067	-	7,074	3,235	602	10,911	133	34	33	-	-	265	53	518
Arizona	78	5,489	937	1,131	-	7,557	3,260	596	11,413	133	34	33	-	-	270	53	523
	79	5,898	1,013	1,189	-	8,100	3,260	596	11,956	133	34	33	-	-	270	53	523
38.																	
EngineerTopo-	76	3,350	1,659	2,137	734	7,880	174	-	8,054	123	125	32	-	-	16	-	296
graphic Labo-	TQ	976	343	533	241	2,093	45	-	2,138	40	22	8	-	-	4	-	74
ratories, Ft	77	3,724	1,247	2,115	470	7,556	182	-	7,738	140	109	32	-	-	16	-	297
Belvoir,	78	3,746	1,008	2,200	420	7,374	180	-	7,554	140	105	32	-	-	16	-	293
Virginia	79	3,896	1,078	2,200	420	7,594	180	-	7,774	140	105	32	-	-	16	-	293

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
39.																	
EngineerWaterways Experimental Center, Vicksburg, Mississippi	76	4,203	3,228	4,594	498	12,523	185	-	12,708	424	303	31	-	-	17	-	775
	TQ	1,024	1,076	1,341	195	3,636	45	-	3,681	108	74	8	-	-	4	-	194
	77	3,286	4,128	5,591	713	13,718	193	-	13,911	400	330	38	-	-	17	-	785
	78	3,314	4,110	5,935	763	14,122	191	-	14,313	405	316	35	-	-	17	-	773
	79	4,550	3,645	6,095	811	15,101	191	-	15,292	456	272	33	-	-	17	-	778
40.																	
Facilities Engineer Support Agency, Ft Belvoir, Virginia	76	336	371	-	155	862	22	-	884	7	-	-	-	-	2	-	9
	TQ	80	175	-	20	275	-	-	275	2	-	-	-	-	-	-	2
	77	300	380	-	345	1,025	11	-	1,036	8	-	-	-	-	1	-	9
	78	316	365	-	219	900	11	-	911	7	-	-	-	-	1	-	8
	79	425	375	-	300	1,100	11	-	1,111	7	-	-	-	-	1	-	8
41.																	
Field Artillery Board, Ft Sill, Oklahoma	76	770	-	-	7	777	1,503	-	2,280	33	-	-	-	-	138	-	171
	TQ	232	-	-	-	232	428	-	660	9	-	-	-	-	38	-	47
	77	1,090	-	-	-	1,090	1,726	-	2,816	35	-	-	-	-	152	-	187
	78	1,107	-	-	-	1,107	1,709	-	2,816	35	-	-	-	-	152	-	187
	79	1,147	-	-	-	1,147	1,709	-	2,856	35	-	-	-	-	152	-	187
42.																	
HumanResource Units, Various Locations	76	2,146	-	-	-	2,146	218	-	2,364	73	-	-	-	-	20	-	93
	TQ	646	-	-	-	646	45	-	691	23	-	-	-	-	4	-	27
	77	2,931	-	-	-	2,931	238	-	3,169	104	-	-	-	-	21	-	125
	78	3,090	-	-	-	3,090	303	-	3,393	104	-	-	-	-	27	-	131
	79	3,207	-	-	-	3,207	303	-	3,510	104	-	-	-	-	27	-	131

1/ Exclusive of Military Personnel and Military Construction

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DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
43.																	
InfantryBoard,	76	1,165	-	-	-	1,165	1,121	-	2,286	52	-	-	-	-	103	-	155
Ft Benning,	TQ	287	-	-	-	287	304	-	591	14	-	-	-	-	27	-	41
Georgia	77	1,212	-	-	42	1,254	1,237	-	2,491	56	-	-	-	-	109	-	165
	78	1,399	-	-	-	1,399	1,225	-	2,624	56	-	-	-	-	109	-	165
	79	1,419	-	-	-	1,419	1,225	-	2,644	56	-	-	-	-	109	-	165
44.																	
Institute of	76	1,635	-	-	-	1,635	1,514	-	3,149	74	-	-	-	-	139	-	213
Surgical Research, Ft Sam	TQ	407	-	-	-	407	383	-	790	19	-	-	-	-	34	-	53
	77	1,750	-	-	-	1,750	1,544	-	3,294	77	-	-	-	-	136	-	213
Houston,Texas	78	1,885	-	-	-	1,885	1,529	-	3,414	77	-	-	-	-	136	-	213
	79	1,962	-	-	-	1,962	1,529	-	3,491	77	-	-	-	-	136	-	213
45.																	
JeffersonProving Ground,	76	391	-	-	-	391	-	44	435	-	-	-	-	-	-	4	4
	TQ	140	-	-	-	140	-	11	151	-	-	-	-	-	-	1	1
Madison,	77	560	-	-	-	560	-	45	605	-	-	-	-	-	-	4	4
Indiana	78	618	-	-	-	618	-	45	663	-	-	-	-	-	-	4	4
	79	650	-	-	-	650	-	45	695	-	-	-	-	-	-	4	4
46.																	
Kwajalein	76	52,480	6,760	4,960	120	64,320	327	-	64,647	136	-	-	2,719	345	30	-	3,230
Missile Range,	TQ	14,595	1,250	785	-	16,630	90	-	16,720	33	-	-	700	79	8	-	820
Marshall	77	53,655	6,600	3,280	-	63,535	363	-	63,898	133	-	-	2,779	331	32	-	3,275
Islands	78	55,771	6,620	3,980	-	66,371	360	-	66,731	133	-	-	2,765	347	32	-	3,277
	79	55,825	6,710	3,630	-	66,165	360	-	66,525	133	-	-	2,766	346	32	-	3,277

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
47.																	
LettermanArmy	76	6,159	-	-	68	6,227	2,319	-	8,546	164	-	-	-	-	213	-	377
Institute of	TQ	1,525	-	-	15	1,540	732	-	2,272	40	-	-	-	-	65	-	105
Research, San	77	6,200	-	-	60	6,260	2,952	-	9,212	226	-	-	-	-	240	-	466
Francisco,	78	6,720	-	-	65	6,785	2,923	-	9,708	223	-	-	-	-	240	-	463
California	79	6,520	-	-	65	6,585	2,923	-	9,508	223	-	-	-	-	240	-	463
48.																	
Liaison Field	76	161	-	-	-	161	76	-	237	6	-	-	-	-	7	-	13
Offices,	TQ	37	-	-	-	37	11	-	48	2	-	-	-	-	1	-	3
Various	77	151	-	-	-	151	45	-	196	6	-	-	-	-	4	-	10
Locations	78	154	-	-	-	154	45	-	199	6	-	-	-	-	4	-	10
	79	155	-	-	-	155	45	-	200	6	-	-	-	-	4	-	10
49.																	
Medical Bio-	76	2,599	-	-	237	2,836	370	-	3,206	71	-	-	-	-	34	-	105
Engineering	TQ	747	-	-	60	807	79	-	886	20	-	-	-	-	7	-	27
R&DLaboratory,	77	2,614	-	-	218	2,832	307	-	3,139	81	-	-	-	-	27	-	108
Ft Detrick,	78	2,583	-	-	200	2,783	304	-	3,087	81	-	-	-	-	27	-	108
Maryland	79	2,551	-	-	200	2,751	304	-	3,055	81	-	-	-	-	27	-	108
50.																	
Medical R&D	76	1,831	-	-	-	1,831	610	-	2,441	99	-	-	-	-	56	-	155
Command,	TQ	738	-	-	-	738	169	-	907	27	-	-	-	-	15	-	42
Washington,DC	77	1,834	-	-	-	1,834	670	-	2,504	84	-	-	-	-	59	-	143
	78	1,756	-	-	-	1,756	663	-	2,419	63	-	-	-	-	59	-	122
	79	1,844	-	-	-	1,844	663	-	2,507	63	-	-	-	-	59	-	122

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
51.																	
Medical Research Institute of Infectious Diseases, Ft Detrick, Maryland	76	7,054	-	-	153	7,207	2,766	-	9,973	185	-	-	-	-	254	-	439
	TQ	1,757	-	-	38	1,795	889	-	2,684	50	-	-	-	-	79	-	129
	77	7,358	-	-	155	7,513	3,576	-	11,089	197	-	-	-	-	315	-	512
	78	7,443	-	-	175	7,618	3,541	-	11,159	197	-	-	-	-	315	-	512
	79	7,569	-	-	175	7,744	3,541	-	11,285	197	-	-	-	-	315	-	512
52.																	
MobilityEquipmentR&DCenter, Ft Belvoir, Virginia	76	17,136	1,007	422	10,048	28,613	708	-	29,321	906	11	421	-	-	65	-	1,403
	TQ	4,815	200	100	2,852	7,967	180	-	8,147	227	5	106	-	-	16	-	354
	77	18,423	1,600	500	10,226	30,749	1,113	-	31,862	900	14	425	-	-	98	-	1,437
	78	19,814	1,500	450	10,853	32,617	1,495	-	34,112	900	13	424	-	-	133	-	1,470
	79	20,934	1,600	600	11,524	34,658	1,439	-	36,097	900	13	425	-	-	128	-	1,466
53.																	
Natick Laboratories, Natick, Massachusetts	76	15,000	-	94	1,208	16,302	730	-	17,032	518	-	-	-	-	67	-	585
	TQ	4,559	-	2	211	4,772	191	-	4,963	129	-	-	-	-	17	-	146
	77	17,448	-	-	86	17,534	954	-	18,488	531	-	-	-	-	84	-	615
	78	17,832	-	-	86	17,918	1,023	-	18,941	531	-	-	-	-	91	-	622
	79	18,295	-	-	86	18,381	989	-	19,370	531	-	-	-	-	88	-	619
54.																	
Night Vision Laboratory, Ft Belvoir, Virginia	76	15,873	1,650	487	2,138	20,148	305	-	20,453	404	19	-	30	-	28	-	481
	TQ	5,091	91	101	127	5,410	79	-	5,489	101	5	-	7	-	7	-	120
	77	18,258	1,610	500	252	20,620	318	-	20,938	405	20	-	30	-	28	-	483
	78	18,201	1,500	500	594	20,795	270	-	21,065	405	20	-	40	-	24	-	489
	79	18,411	1,500	500	750	21,161	214	-	21,375	405	20	-	40	-	19	-	484

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Paid From RDTE	Paid From Other Funds	In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
55.																	
Office, Chief	76	462	226	-	-	688	-	-	688	11	-	-	-	-	-	-	11
of Engineers,	TQ	151	144	-	-	295	-	-	295	3	-	-	-	-	-	-	3
Washington,	77	490	347	-	-	837	-	-	837	12	-	-	-	-	-	-	12
DC	78	486	226	-	-	712	-	-	712	11	-	-	-	-	-	-	11
	79	480	222	-	-	702	-	-	702	11	-	-	-	-	-	-	11
56.																	
ResearchInsti-	76	6,506	5	-	8	6,519	174	-	6,693	200	-	-	-	-	16	-	216
tute for the	TQ	2,057	-	-	-	2,057	56	-	2,113	64	-	-	-	-	5	-	69
Behavioral &	77	8,569	30	-	64	8,663	170	-	8,833	243	-	-	-	-	15	-	258
SocialSciences,	78	9,075	-	-	-	9,075	236	-	9,311	243	-	-	-	-	21	-	264
Arlington,	79	9,839	-	-	-	9,839	236	-	10,075	243	-	-	-	-	21	-	264
Virginia																	
57.																	
ResearchInsti-	76	3,494	-	-	46	3,540	838	-	4,378	80	-	-	-	-	77	-	157
tute of Envir-	TQ	870	-	-	10	880	236	-	1,116	20	-	-	-	-	21	-	41
onmental Med-	77	3,521	-	-	25	3,546	931	-	4,477	79	-	-	-	-	82	-	161
icine, Natick,	78	3,693	-	-	25	3,718	922	-	4,640	79	-	-	-	-	82	-	161
Massachusetts	79	3,749	-	-	25	3,774	922	-	4,696	79	-	-	-	-	82	-	161
58.																	
Satellite Com-	76	3,133	-	-	-	3,133	501	142	3,776	90	-	91	-	-	46	13	240
munications	TQ	813	-	-	-	813	124	34	971	24	-	23	-	-	11	3	61
Agency, Ft	77	3,200	-	-	-	3,200	500	148	3,848	90	-	112	-	-	44	13	259
Monmouth,	78	3,260	-	-	-	3,260	495	146	3,901	90	-	112	-	-	44	13	259
New Jersey	79	3,410	-	-	-	3,410	495	146	4,051	90	-	112	-	-	44	13	259

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
59.																	
Standard-	76	16	-	-	-	16	22	-	38	-	-	-	-	-	2	-	2
ization Group,	TQ	4	-	-	-	4	11	-	15	-	-	-	-	-	1	-	1
Australia	77	16	-	-	-	16	22	-	38	-	-	-	-	-	2	-	2
	78	18	-	-	-	18	22	-	40	-	-	-	-	-	2	-	2
	79	18	-	-	-	18	22	-	40	-	-	-	-	-	2	-	2
60.																	
Standard-	76	18	-	-	-	18	22	-	40	4	-	-	-	-	2	-	6
ization Group,	TQ	4	-	-	-	4	11	-	15	1	-	-	-	-	1	-	2
Canada	77	18	-	-	-	18	22	-	40	4	-	-	-	-	2	-	6
	78	20	-	-	-	20	22	-	42	4	-	-	-	-	2	-	6
	79	20	-	-	-	20	22	-	42	4	-	-	-	-	2	-	6
61.																	
Standard-	76	558	-	-	-	558	65	-	623	17	-	-	-	-	6	-	23
ization Group,	TQ	171	-	-	-	171	23	-	194	5	-	-	-	-	2	-	7
United Kingdom	77	613	-	-	-	613	67	-	680	21	-	-	-	-	6	-	27
	78	613	-	-	-	613	67	-	680	21	-	-	-	-	6	-	27
	79	613	-	-	-	613	67	-	680	21	-	-	-	-	6	-	27
62.																	
TankAutomotive	76	16,347	303	264	10,200	27,114	719	-	27,833	496	9	300	-	-	66	-	871
Command, Warren,	TQ	5,169	134	133	1,600	7,036	191	-	7,227	137	3	68	-	-	17	-	225
Michigan	77	22,520	258	841	13,500	37,119	1,078	307	38,504	566	23	477	-	-	95	27	1,188
	78	22,135	325	1,265	13,500	37,225	1,135	304	38,664	545	36	477	-	-	101	27	1,186
	79	19,867	325	608	13,500	34,300	1,079	304	35,683	527	33	477	-	-	96	27	1,160

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	RDTE Funds Other Army	RDTE Funds Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Civil Service Paid From Other RDTE	Civil Service Paid From Other	Contractor Paid From RDTE	Contractor Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
63. Test & Evaluation Command Headquarters, Aberdeen, Maryland	76	10,115	-	-	-	10,115	719	-	10,834	323	-	-	-	-	66	-	389
	TQ	3,270	-	-	-	3,270	180	-	3,450	81	-	-	-	-	16	-	97
	77	11,086	-	-	-	11,086	749	-	11,835	323	-	-	-	-	66	-	389
	78	12,024	-	-	-	12,024	742	-	12,766	323	-	-	-	-	66	-	389
	79	12,309	-	-	-	12,309	742	-	13,051	323	-	-	-	-	66	-	389
64. 2/ TRADOC Combined Arms TestActivity (TCATA), Ft Hood, Texas	76	999	-	-	9,845	10,844	-	4,464	15,308	-	-	177	-	-	-	410	587
	TQ	231	-	-	3,196	3,427	-	1,148	4,575	-	-	42	-	-	-	102	144
	77	1,539	-	-	7,283	8,822	-	3,417	12,239	-	-	126	-	-	-	301	427
	78	635	-	-	8,254	8,889	-	3,384	12,273	-	-	126	-	-	-	301	427
	79	806	-	-	8,254	9,060	-	3,384	12,444	-	-	126	-	-	-	301	427
65. 3/ TRADOC Combined Arms TestActivity (TCATC) Support Office, Ft Hood, Texas	76	260	-	-	-	260	-	11	271	7	-	-	-	-	-	1	8
	TQ	65	-	-	-	65	-	-	65	2	-	-	-	-	-	-	2
	77	260	-	-	-	260	-	23	283	7	-	-	-	-	-	2	9
	78	260	-	-	-	260	-	22	282	7	-	-	-	-	-	2	9
	79	260	-	-	-	260	-	22	282	7	-	-	-	-	-	2	9

1/ Exclusive of Military Personnel and Military Construction
2/ TRADOC Activity
3/ DARCOM Activity

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
66. TRADOC Security Board, Ft Huachuca, Arizona	76 TQ 77	TRADOC R&D effort to be initiated in FY 1978															
	78	731	-	-	-	731	1,225	-	1,956	-	-	-	-	-	109	-	109
	79	731	-	-	-	731	1,225	-	1,956	-	-	-	-	-	109	-	109
67 Tri-Service Tactical Communications Systems (TRITAC), Ft Monmouth, New Jersey	76	3,549	450	1,203	-	5,202	501	142	5,845	90	-	91	-	-	46	13	240
	TQ	888	300	222	-	1,410	124	34	1,568	24	-	23	-	-	11	3	61
	77	3,733	1,951	668	-	6,352	500	148	7,000	95	-	112	-	-	44	13	264
	78	3,819	1,085	725	-	5,629	495	146	6,270	95	-	112	-	-	44	13	264
	79	3,819	1,085	725	-	5,629	495	146	6,270	95	-	112	-	-	44	13	264
68. Tropic Test Center, Panama, Canal Zone	76	2,113	-	-	-	2,113	871	-	2,984	69	-	-	-	-	80	-	149
	TQ	584	-	-	-	584	225	-	809	17	-	-	-	-	20	-	37
	77	2,137	-	-	-	2,137	931	-	3,068	62	-	-	-	-	82	-	144
	78	2,255	-	-	-	2,255	922	-	3,177	62	-	-	-	-	82	-	144
	79	2,255	-	-	-	2,255	922	-	3,177	62	-	-	-	-	82	-	144

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Other	Total
Army Non-Industrial Fund Installations																	
69.																	
Walter Reed	76	15,933	-	-	40	15,973	5,695	-	21,668	467	-	-	-	-	523	-	990
R&DActivities,	TQ	3,962	-	-	20	3,982	1,474	-	5,456	132	-	-	-	-	131	-	263
Washington,	77	15,900	-	-	240	16,140	5,971	-	22,111	500	-	-	-	-	526	-	1,026
DC	78	16,199	-	-	250	16,449	5,913	-	22,362	504	-	-	-	-	526	-	1,030
	79	16,476	-	-	250	16,726	5,913	-	22,639	504	-	-	-	-	526	-	1,030
70.																	
White Sands	76	62,853	9,542	4,053	5,600	82,048	10,137	11	92,196	2,874	-	21	799	141	931	1	4,767
Missile Range,	TQ	19,894	3,643	1,667	852	26,056	2,622	-	28,678	618	-	5	202	36	233	-	1,169
Las Cruces,	77	78,640	9,734	4,372	7,608	100,354	10,853	11	111,218	2,753	-	21	819	145	956	1	4,695
New Mexico	78	86,890	12,689	3,279	6,569	109,427	10,747	11	120,185	2,753	-	21	870	153	956	1	4,754
	79	88,998	22,500	3,500	7,000	121,998	10,747	11	132,75	2,753	-	21	854	151	956	1	4,736
71.																	
Yuma Proving	76	17,961	-	1,681	2,792	22,434	3,321	544	26,299	845	-	-	-	-	305	50	1,200
Ground, Yuma,	TQ	4,723	-	411	479	5,613	900	169	6,682	212	-	-	-	-	76	15	303
Arizona	77	19,828	-	914	3,174	23,916	3,939	692	28,547	850	-	-	-	-	347	61	1,258
	78	21,364	-	747	3,395	25,506	3,901	686	30,093	850	-	-	-	-	347	61	1,258
	79	22,022	-	772	4,374	27,168	3,901	686	31,755	850	-	-	-	-	347	61	1,258

1/ Exclusive of Military Personnel and Military Construction

Section 4 (Contd)

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA ($ in Thousands) RDTE Funds Mgmt. Bureau	Other Army	Other DOD	All Other Funds 1/	Subtotal	Mil. Pers. RDTE	Mil. Pers. Other	Total	PERSONNEL (Man Years) Civil Service Paid From Army RDTE	Paid From Other RDTE	Paid From Other	Contractor Paid From RDTE	Paid From Other Funds	Mil. Pers. In RDTE Work	Mil. Pers. Other	Total
Army Non-Industrial Fund Installations																	
Subtotal, Army Non-Industrial Fund Installations	76	463,064	35,774	25,244	59,090	583,172	61,678	6,001	650,851	14,354	796	1,277	3,837	501	5,668	551	26,984
	TQ	141,522	10,542	6,013	16,177	174,254	16,568	1,576	192,398	3,594	167	314	981	119	1,433	140	6,748
	77	512,468	38,417	21,423	58,749	631,057	68,408	5,541	705,006	14,294	733	1,435	3,852	491	5,954	488	27,247
	78	543,507	40,808	21,821	61,242	667,378	69,776	5,486	742,640	14,273	726	1,442	3,840	515	6,131	488	27,415
	79	556,682	51,638	21,427	62,944	692,691	69,169	5,486	767,346	14,253	680	1,446	3,822	512	6,083	488	27,284
TOTAL, IN-HOUSE	76	711,004	41,592	43,375	160,053	956,024	69,670	7,047	1,032,741	23,515	958	5,450	4,026	518	6,402	647	41,516
	TQ	207,432	11,425	10,310	36,651	265,818	18,683	1,858	286,359	5,852	199	1,318	981	121	1,621	165	10,257
	77	758,753	44,025	42,036	138,506	983,320	78,397	6,506	1,068,223	23,068	872	5,613	3,986	511	6,834	573	41,457
	78	796,898	45,419	37,933	143,758	1,024,008	79,354	6,452	1,109,814	23,124	892	5,606	3,940	539	6,983	574	41,658
	79	827,305	57,108	34,065	145,130	1,063,608	78,837	6,452	1,148,897	23,246	831	5,610	3,823	512	6,941	574	41,537

1/ Exclusive of Military Personnel and Military Construction

Section 5

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
ANALYSIS OF REIMBURSABLE PROGRAM
($ in Thousands)

	FY 1976 Actual	FY 19TQ Estimate	FY 1977 Estimate	FY 1978 Estimate
Customer				
Department of the Army	$185,125	$21,084	$177,900	$196,000
Other Department of Defense Components				
Department of the Navy	8,521	1,959	9,500	9,600
Department of the Air Force	22,478	2,865	20,000	18,000
US Marine Corps	2,285	866	4,300	3,700
Office, Secretary of Defense	2,300	795	3,200	3,200
Advanced Research Projects Agency	4,215	2,680	11,700	8,000
Defense Communications Agency	1,156	2,172	1,500	2,500
Defense Mapping Agency	5,769	993	5,500	5,500
Defense Nuclear Agency	12,003	2,900	12,500	13,500
National Security Agency	17,113	2,481	12,000	16,000
Other Defense Components	89	50	800	1,000
Subtotal	75,929	17,761	81,000	81,000
Activities Outside Department of Defense				
Consumer Product Safety Commission	400	490	400	400
Department of Transportation	582	1,255	700	700
Energy Research and Development Administration	2,001	2,399	2,800	3,100
Environmental Protection Agency	754	273	1,700	1,700
National Aeronautical and Space Administration	442	74	500	1,700
US Coast Guard	372	176	400	400
Department of Commerce	668	126	400	300
Trust Fund	13,326	4,404	9,897	10,000
Other	1,326	620	1,803	1,900
Nonfederal	1,105	672	2,500	2,800
Subtotal	20,976	10,489	21,100	23,000
TOTAL	$282,030	$49,334	$280,000	$300,000

Section 5 (Contd)

ANALYSIS OF REIMBURSABLE PROGRAM

DESCRIPTION OF REIMBURSABLE WORK

A large portion of the RDTE reimbursable program is for intra-Army work or services under the automatic reimbursement procedure. Orders are also received for Research, Development, Test, and Evaluation efforts from other bureaus or agencies of the Government on a reimbursable basis, such as:

a. Navy - Night Sights for Surveillance; Safer Flame Agents; Aircraft Survivability; Remotely Piloted Vehicle Engines; Laboratory Research Cooperative Program - Scientific Services; Joint Service Testing - TRI-TAC; Ordnance Detection Main Support; and Advance Transmission Control Components.

b. Air Force - Modular Kits and Alarms; AN/TTC 39 and Air Force Drone Program; Joint Service Testing - TRI-TAC; Structure Feasibility; Air Defense Targets; Aircraft Vulnerable Areas; Gun Systems Effectiveness Comparison; Seismic/Acoustic Analysis; Terrain Target Analysis; and Optimum Use of Energy in Military Facilities.

c. Marine Corps - Advanced Development of 105mm Encapsulated Flame Round; Water and Soil Analysis; and Cargo Handling.

d. Office, Secretary of Defense - Laser Guided Weapon Chemical Test.

e. Advanced Research Projects Agency - Warhead technology in-house support of various Defense Advanced Research Projects Agency projects.

f. Defense Communications Agency - TRI-Service Propagation Program and Electro-Magnetic Pulse effects.

g. Defense Mapping Agency - Purchase of Automatic Data Processing Systems; Photography, US Army Avionics Laboratory Terrain Model and support of: photogrammetric exploitation, cartographic exploitation, geodetic and geophysical support, data base/data bank and products and services.

h. Defense Nuclear Agency - DICE THROW; Ground Motion Studies; Materiel Modeling; Grout Development; Nuclear Weapons Effects Program; Ice Cap; Perimeter Barrier Penetration Test; and Direct Test Support Blast Effects.

i. National Security Agency - Joint Service Testing; Support of Electronic Warfare Testing; and Human Engineering Support.

j. Consumer Product Safety Commission - Analysis of consumer products.

k. Department of Transportation - Development of Math Model; Haul Road Study; Tank Car Study; and Flywheel Application Study.

l. Energy Research and Development Administration - Grout Studies; High Temperature Dust Control; Support Sandia Base; Airborne Particles; and Heat Energy Highway Systems.

m. Environmental Protection Agency - Oil Movement and Ice Fog Studies; Technical Support to Office of Noise Abatement and Control; Health Effects Associated with Spray Irrigation of Wastewater Effluents; New Microbial Indicators of Disinfection Efficiency; and Testing Biological Effects of Microwave.

n. National Aeronautical and Space Administration - Electrochemical Biocide Study and Support of Contract with Philco Ford Corporation on Electronic Research.

o. US Coast Guard - Low Cost Radiological Instrumentation; Radar Flight Test Program; Lifeboat Heat Test; Life Raft Test; Night Sights for Surveillance; and Wide Area Illumination.

p. Department of Commerce - Subsea Permafrost; Remote Sensing; and Shear Zone.

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
FEDERAL CONTRACT RESEARCH CENTERS

Section 6

Federal Contract Research Centers (FCRCs) are those organizations primarily engaged in providing specialized technical and scientific effort necessary to supplement that available in the Army. The centers listed are those sponsored by the Department of Defense which provide technical and management services in the management of the Army's programs. These centers provide independent, specialized, technical and scientific capabilities to supplement that available within the Department of the Army.

FCRCs have been established to permit more organizational flexibility, and greater availability of technical and scientific personnel. These research centers possess unique skills and capabilities resulting from the development of highly specialized professional staff intimately acquainted with the many facets of the Army's mission. This capability results from long association and practical experience with the Army. The in-depth background provides the Army with a research capability that cannot be immediately obtained elsewhere. Long association with the Department of Defense enables these centers to render quick response technical advisory service as well as to perform detailed research and analysis. This long association has tailored these research centers to be compatible with Army interests, procedures and operational requirements.

While the Army no longer sponsors an FCRC it will be necessary to continue research and development effort at FCRCs sponsored by the Department of Defense and the other services. These research and development contracts provide timely and innovative products and techniques appropriate to current and long-range Army missions and plans.

The requested FY 1978 and FY 1979 FCRC requirements reflect increases of $1.1 million comparing FY 1978 to FY 1977 and $1.3 million when comparing FY 1979 to FY 1978.

The following summary identifies the estimated work, excluding subcontract effort, to be placed with each Federal Contract Research Center (FCRC) from the Research, Development, Test, and Evaluation, Army appropriation and from the other Army appropriations.

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
AEROSPACE CORPORATION					
Research, Development, Test, and Evaluation, Army					
6.21.05.A Materials	52	-	-	-	-
6.27.07.A Mapping and Geodesy	50	10	-	24	27
6.33.04.A Ballistic Missile Defense Advanced Technology Program	120	62	150	225	250
6.33.08.A Ballistic Missile Defense Systems Technology	570 *	210 *	700 *	1,200 *	1,260 *
6.33.14.A High Energy Laser Components	-	10	50	50	56
6.37.30.A Tactical Surveillance System	443	100	250	320	355
6.37.45.A Tactical Electronic Warfare Equipment					
6.47.40.A Tactical Surveillance System					
Total RDTE, Army	665	182	850	944	1,048
Total RDTE, Army Included in Air Force Ceiling	570	210	700	1,200	1,260
Total Aerospace Corporation	1,235	392	1,550	2,144	2,308

* Program funded by Army but included in Air Force ceiling.

Remarks: The expertise and facilities of Aerospace Corporation are required to support the Army as follows:

1. Materials - The technical expertise of Aerospace Corporation is needed to support ongoing high urgency research efforts directed towards new Army aircraft and weapons systems. Without the technical expertise of Aerospace Corporation efforts relative to new sophisticated materials and systems will suffer serious time loss in the areas of gear materials, high density penetrators and metal matrix composites.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

AEROSPACE CORPORATION (Continued)

2. Mapping and Geodesy - Aerospace expertise is needed to develop specifications and requirements for hardware and software to interface a prototype system for processing of advanced sensor data. In addition, assistance is needed in development of data processing routines and algorisms. Aerospace is the only source of expertise in advanced data collection systems.

3. High Energy Laser Components - Aerospace Corporation is the leading laboratory in the field of investigating the fundamental processes in D_2-F_2 lasers for service-related programs. Development of models for these processes is a requirement for later hardware programs at contractor sites. No impact on the program is foreseen if alternative in-house capabilities or other contractual sources were to provide the support requested.

4. Tactical Electronic Warfare and Surveillance System - The Aerospace Corporation will provide level of effort support to the US Army Space Program Office (ASPO) in FY 1978. Effort is split into the following areas:

a. General System Support will be provided. Studies, both conceptual and hardware oriented, will be identified, scoped and performed according to established milestones. Aerospace will help develop a

Long-range planning and briefing support, both personnel and material will be provided.

b. General System Engineering/Technical Direction in support of simulation development and documentation and in support of other contractor efforts to be defined will be provided.

c. Aerospace will modify and exercise several

d. Aerospace will provide technical support and perform system studies in support of Army field evaluations.

e. Aerospace will provide

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

AEROSPACE CORPORATION (Continued)

5. Aerospace Corporation - The Aerospace Corporation provides interface and planning support for joint Army/Air Force research and development efforts mutually beneficial to the ballistic missile defense/strategic offense force missions. During FY 1978, this effort will address the interface between Ballistic Missile Defense missions and Air Force missions with the objective of providing a set of requirements mutually beneficial to both classes of missions. Support will also be provided to the Air Force Space and Missile System Organization in procurement and integration of secondary payloads. Similar support has been provided in the past for other Ballistic Missile Defense Advanced Technology Center programs including earlier Reentry Measurements Program phases and the Special Target Program Phase.

6. Ballistic Missile Defense Systems Technology Program (program funded by the Army but included in Air Force ceiling):

a. The Air Force will be the procuring agency for the Systems Technology Intercontinental Ballistic Missile (ICBM) targets. Target requirements are placed on the Air Force through formal channels and are funded by MIPR. The Air Force is required to procure targets for testing for all services as a matter of DOD policy.

b. The Air Force uses Aerospace Corporation for technical support. Justification and man year requirements are established by the Air Force based on projected Systems Technology target requirements. The technical support includes preparation of contractual documents, proposal evaluation, and providing technical direction to Air Force contractors. In addition to these tasks, Aerospace also supports the Air Force in the area of program planning and by performing in-house studies. In providing targets for Systems Technology, the Air Force will rely on Aerospace Members of the Technical Staff (MTS) to perform tasks similar to the above.

c. During the FY 1977, Aerospace will support the Air Force in the payload integration and missile preparation for two missions made up of SAFEGUARD surplus hardware to support Systems Technology program requirements. These missions will be launched in FY 1979. Initial payload to booster integration will be performed in preparation of two missions using updated MINUTEMAN-I Minuteman Instrumented Payload Delivery System (MIPDS) hardware.

d. In FY 1978 Aerospace will support the Air Force in scheduling range support, preparing for launch and launching two MINUTEMAN-I missions to meet Systems Technology program requirements. One mission using a MINUTEMAN-I MIPDS demonstration missile and a payload which meets Systems Technology program requirements will be prepared and launched. Also, mission design and payload to booster integration support will be provided for a MINUTEMAN-I MIPDS mission to be launched in FY 1979. Aerospace will support the Systems Technology contractor in the areas of mission planning and mission design.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY					
Research, Development, Test, and Evaluation, Army					
6.33.04.A Ballistic Missile Defense Advanced Technology Program . .	6,861	1,770	7,149	7,435	7,881
6.33.14.A High Energy Laser Components	-	-	350	368	390
6.53.01.A Kwajalein Missile Range (KMR)	3,249	825	3,171	3,294	3,492
Total RDTE, Army	10,110	2,595	10,670	11,097	11,763
Total Lincoln Laboratory, Massachusetts Institute of Technology	10,110	2,595	10,670	11,097	11,763
Subcontract effort excluded from this amount	11,898	2,681	10,159	10,912	11,467

Remarks: Work to be performed at the Lincoln Laboratories is as follows:

1. Ballistic Missile Defense Advanced Technology Program

a. Discrimination technology effort includes work in reentry discrimination, bulk filtering, bulk discrimination, exoatmospheric designation and discrimination engineering and radar data analysis and interpretation. A computer has been installed at the Lexington, Mass. laboratory and various designation and discrimination (D&D) algorithms have been tested in simulation. Kiernan Reentry Measurements Site (KREMS) data from future Reentry Measurements Program (RMP) missions and data from Air Force and Navy missions will be utilized in FY 1978 for evaluation of Discrimination Algorithms at the Lexington, Mass. laboratory.

b. Radar technology effort includes work in millimeter-wave components, laser components, large band-width signal processing, radar signal processing, antenna technology, surface wave technology, and array development.

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (Continued)

c. Optics technology effort includes laser measurements, passive optics measurements, and handover experiments. A laser measurement facility is being constructed and will be installed and checked out at Kwajalein Missile Range (KMR) in FY 1977. Operation of the Army Optical Station on Roi Namur will continue to expand the data base on targets of opportunity. Nonreal time optics/radar handover experiments will be completed and preparations will be made for real time handover experiments in FY 1978.

d. Distributed defense technology effort consists of modification of concepts developed during previous studies to incorporate the results of technology developments and data collection efforts. Nonnuclear requirements and capabilities of these concepts will be determined. Electronic countermeasures responses will be developed. Other requirements to be addressed include redundancy, data association, trilateration tracking, battle management and engagement logic.

2. High Energy Laser Components - (Task I) - Evaluate high energy repetively pulsed laser propagation and specifically the capabilities of special optics techniques as applied to pulsed lasers. Also, to assist in implementation and testing of a high power demonstration of optics system. Specific efforts will include range layout, measurement of beam quality, etc., and analysis of data. (Task II) - Assist the Army in defining requirements for a high energy laser system. General categories of requirements will have been identified already; this task will be for the purpose of determining specific items and capabilities which a tactical system must have. The effort will involve trade-off studies for different approaches, investigation of other service programs which bear on Army problems, and/or development of new ideas as necessary. Lincoln Laboratory has a unique capability to perform evaluations and design experiments in the areas of high energy laser (HEL) propagation and in pointing and tracking for HEL Systems. There exists at Lincoln Laboratory a wealth of expertise in these two areas and in related areas. Lincoln personnel have been intimately involved in all technical aspects of the overall DOD laser effort, and therefore, this group can make an immediate and telling impact on the Army's HEL program. In addition, Lincoln Laboratory does not compete with contractors and so can evaluate ideas and approaches without prejudice. No other group, in industry or in government, has the background and expertise which Lincoln Laboratory can bring to bear on the tasks outlined in this description.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (Continued)

3. Kwajalein Missile Range (KMR)

a. The Kiernan Reentry Measurements Site (KREMS) radars were developed by the Massachusetts Institute of Technology/ Lincoln Laboratory (MIT/LL) under Advanced Research Projects Agency (ARPA) sponsorship, and by direction of the Director, Defense Research and Engineering, transferred to the Kwajalein Missile Range Directorate (KMRD) of the Ballistic Missile Defense Systems Command (BMDSCOM) in 1968 to support the National Range mission.

b. MIT/LL serves as Scientific Director of KREMS at KMR, and they are considered predominant experts for this particular task. They provide the technical management of the overall KREMS instrumentation system which includes three very unique and complex radar sensors and their associated display, control, and recording equipments in support of mission operations. Additionally, MIT/LL performs the offsite mission test planning, radar systems engineering, and data reduction and reporting.

c. Their overall efforts are pursuant to the objective of providing an integrated operation with multiple sensors whose total spectrum of capabilities will allow the collection of data for both strategic offensive and defensive weapon system development and which will function as an extremely flexible test bed for experiments on Advanced Ballistic Missile system techniques. The instrumentation system at KREMS is a continually evolving one due to the emphasis on using, in real time, the capabilities of the individual sensors to maximize the total effectiveness for data collection.

d. KMR does not have the in-house capability to perform this effort. If the effort were sought from other contractual sources, the expertise gained at MIT/LL and nurtured during the last 12 years at government expense would be sacrificed and an unacceptable degradation in the quality and efficiency of support provided testing programs would occur.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
MITRE CORPORATION					
Research, Development, Test, and Evaluation, Army					
3.31.45.A USAREUR Command, Control and Information System (CCIS). .	-	-	-	450	-
6.37.04.A Unattended Ground Sensors	142	65	100	100	145
6.57.13.A Battlefield Systems Integration Office.	405	225	1,962	2,035	2,785
Total RDTE, Army.	547	290	2,062	2,585	2,930
Operations and Maintenance, Army					
395781 US Army Communications Command.	400	103	400	420	600
Total O&M, Army	400	103	400	420	600
Total MITRE Corporation.	947	393	2,462	3,005	3,530

Remarks: MITRE Corporation technical support to the Army is required as follows:

1. Unattended Ground Sensors - Funds are required during FY 1978 for continuation of support commenced by the MITRE Corporation in FY 1972. MITRE Corporation will continue to provide technical support of advanced development efforts to insure that design of evolutionary components and end items are responsible to system requirements in a cost effective manner and are compatible with configuration items in the basic system.

Due to familiarity with the Remotely Monitored Battlefield Sensor System (REMBASS) program over 6 years (FY 1972-1977), no alternative in-house or contractor capabilities can be substituted for MITRE Corporation technical support during FY 1978. Systems engineering support by the MITRE Corporation during this year will be particularly important in new technology to be applied to REMBASS.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

MITRE CORPORATION (Continued)

2. Battlefield Systems Integration Office US Army Materiel Development and Readiness Command (DARCOM) - The work programmed for the MITRE Corporation is to initiate in FY 1976 and carry forward in subsequent years the Army's Battle Systems integration effort. This program consists of creative, inter-disciplinary design work treating the Army in the field as a total and cohesive system, integrated so that combat subsystems such as ground forces, organic aerial units and appropriate components of the Tactical Air Command of the US Air Force work in a common framework, with each element configured to maximize total system capabilities. There are two complimentary thrusts of activity, carried on simultaneously. The first is the architecture or design of an overall battlefield systems concept. The basis for the design is the conviction that technology is now at hand to permit battlefield data collected by any sensor (e.g., forward observer, radar, infrared on remotely piloted vehicles) to be communicated in real time to command and control centers where it is instantaneously sorted, collated, displayed and transmitted digitally to maneuver or fire units who will act on it. Such a master design to guide the Army's R&D effort will optimize weapon, C^3 and sensor development. New developments that are only marginally effective when viewed in the context of an integrated battlefield system can be screened out. A synergistic effect will be achieved in the R&D effort by permitting new equipment to realize its full technological potential through interoperability with communications, command and control, target acquisition or other weapons operating in the system. An example of failing to exploit fully new technology by not integrating battlefield systems is the development of artillery pieces that extend achievable ranges from approximately 15 kilometers to 30 kilometers, but no coordinated development of target acquisition, communications, and tactical data systems has been conducted to present targets in real time out to those ranges.

The MITRE Corporation is considered to be uniquely qualified for the Army's pioneer systems architecture and design program for several reasons. MITRE has a widely accepted reputation for quality technical work in target acquisition, telecommunications and data processing. MITRE has extensive experience in comprehensive battlefield command and control systems, a level of technical sophistication and tactical application that has never been attempted in the Army before. MITRE's experience has been gained in such projects as Joint Tactical Information Distribution System, World-Wide Military Command and Control Systems, and extensive work for the Air Force in tactical command and control systems. Interoperability of tactical Army-Air Force systems is considered vital and MITRE will contribute synergistically. Finally, MITRE has on board the requisite scientific talent, both in terms of numbers and experience to undertake an Army Battlefield Systems Integration program without undue delay for recruiting or education in defense systems. It is anticipated that a plan for an all-encompassing tactical system can be conceived, analyzed, and trade off studies completed two years from initiation.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

MITRE CORPORATION (Continued)

A second line of effort focuses on near-term improvements to the Army's combat capability by optimizing tactical subsystems such as field artillery, night combat, air defense and aviation. Each of these functional subsystems have shortfalls that could be corrected by a searching battlefield systems analysis. By virtue of the intensive effort to design an all-encompassing tactical system, the ability of the in-house staff and contractual designers to identify subsystem shortcomings will be considerably sharpened. As high payoff areas for short term correction are positively identified, teams of 10 to 20 engineers and analysts will be assigned to these areas to develop fully documented program recommendations to give higher priority to certain lines, modify or terminate others, provide guidance for product improvements and input to research and technology development. It is anticipated that FY 1977 up to four functional areas will be undergoing detailed analysis, with a total contractual effort of 40-50 professionals.

In summary, MITRE will provide total systems design and architecture support plus command and control subsystems analysis building up to 32½ man years and $2.06 million RDTE in FY 1977. In-house scientific and management support will build up to $1.04 million in FY 1977. In FY 1976 major revisions to significant combat subsystems (e.g., artillery and fire support, night combat, aviation, or air defense), were developed, documented and be in the process of implementation. At the end of FY 1977 a total battlefield system implementation plan, which will optimize weapon, sensor and telecommunications development as well as establish common specifications to insure system compatibility and interoperability for future development will be complete. In subsequent years all development will be monitored for conformance, and additional subsystems optimization plans will be completed. The successful completion of these tasks is accorded the highest priority by Commander (US Army Materiel Development and Readiness Command, the Under Secretary of the Army, and in OSD). FY 1978 program will encompass the completion of a system architecture for the target acquisition, C^3, weapon engagement command and control and assessment subsystems. Implementation of the systems engineering phase will be initiated and the archtecture effort extended to air defense, air space coordination, aviation, etc., designed to integrate overall systems. The work will be verified by intensive subsystem studies and tactical testing/experimentation. The FY 1979 program should complete the architecture effort. Systems engineering to implement the master design will dominate the FY 1979 effort. Additional experimentation to evaluate the integration concept will be coordinated.

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

MITRE CORPORATION (Continuing)

Because of the scope and complexity of the systems architecture task, encompassing all tactical developments and including close interface with Air Force capabilities, an experienced in-house team could not be assembled to accomplish this task. There is no precedent in the Army for an undertaking of this magnitude. Other non-FCRC contractors would pose several difficulties. There are very few non-FCRC companies with experience in large command and control projects. Those that do possess this experience are fully committed in similar efforts (e.g., World-Wide Military Command and Control Systems) now. Choosing a company other than MITRE therefore entails considerable delay for negotiation and source selection, followed by several months while the contractor recruits and educates a staff. There is considerable risk that even after six months to a year's delay the resulting contractor will not have experienced management and technical people to carry out a large, complex battlefield systems integration project.

3. Technical Design of a USAREUR Command, Control and Information System (CCIS) - The long-term and some near-term concepts outlined in the USAREUR CCIS study must be translated into specific technical designs that will be the basis for subsequent implementation efforts. MITRE Corporation has been supporting the USAREUR CCIS Study since July 1976. Continuity of effort and efficiency are best achieved if the follow-on efforts are accomplished by MITRE personnel as opposed to an in-house effort or another contractor. The Man-Technical-Staff is projected to be 60 man-months in FY 1978.

4. Army Garrison Communications-Electronics Systems are not responsive to current requirements. The FY 1979-1985 needs for Communications-Electronics facilities to include audio, video, data, facsimile, messages, television and specialized signaling cannot be met. Garrison mission and installation support activities increasingly depend on multimedia communications. MITRE will provide systems engineering technology support to the Army for test bed implementation. The Army does not have the engineering capability to perform tasks involving advanced technology association with multimedia integrated communications-electronics. MITRE access to proprietary information and industry proposals is key to the solution of the best technology and hardware for this program.

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
($ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1976 ACTUAL	FY 19TQ ESTIMATE	FY 1977 ESTIMATE	FY 1978 ESTIMATE	FY 1979 ESTIMATE
TOTAL PROGRAM SUMMARY BY APPROPRIATION					
Research, Development, Test, and Evaluation	11,322	3,067	13,582	14,626	15,741
Operations and Maintenance	400	103	400	420	600
Total Federal Contract Research Center Requirement	11,722	3,170	13,982	15,046	16,341
Subcontract effort excluded from this amount	11,898	2,681	10,159	10,912	11,467

Section 7

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED
FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

PART 1. UTILIZATION OF SECTION 2353, TITLE 10 AUTHORITY

Specialized R&D facilities determined to be necessary for the performance of a contract for a Military Department for research and development, may be constructed by or furnished to the contractor and funded from appropriations available for research, development, test, and evaluation. The Congress enacted this legislation, now 10 USC 2353, in 1956. This policy is executed through DOD Directive 4275.5. Under this policy, construction of R&D projects for contractors up to $500,000 is normally approved by the Major Command concerned; the Service Secretary or such delegate as he may authorize approves projects up to $1,000,000; and the Director of Defense Research and Engineering approves projects over $1,000,000. The table below provides a summary listing of all such projects accomplished in FY 1976, FY 19TQ, and planned in FY 1977 and FY 1978:

Facility/Equipment	RDTE Project Number	Contractor	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78
SECTION I							
Projects Accomplished or Underway							
1. Projects Accomplished							
a. Supporting Facilities for PATRIOT Fire Control Group	1X364307D212	Raytheon Company	White Sands Missile Range, NM	448	-	-	-
b. Alteration & Construction Bldg 200C for Advanced Concepts Laboratory Contractor Use	1L662601AH91	Battelle Memorial Institute	Warren, MI	43	-	-	-

2. Supporting Narrative Statement on Projects of $300,000 or More

a. This project provided the facilities required for the installation of the PATRIOT Fire Control Group Equipment and Hardware at WSMR to support the Phase II Missile Firing Program. The facilities were provided through existing contracts with Raytheon and the PATRIOT Project Office. The prime facility is a frame structure of 1865 SF. This building will house the A/C equipment, provide access ways to the fire control equipment, and the operations control center. The site work includes

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Facility/Equipment	RDTE Project Number	Contractor	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78

2. Supporting Narrative Statement on Projects of $300,000 or More (Continued)

construction of an elevated fill area with base and paving. A retaining wall was constructed at the edge of the berm to prevent erosion. Utilities constructed are primary and secondary electrical distribution and a 725 KVA electrical substation. Work consisted of site preparation, foundation, and installation of two (2) forty foot test towers; a radar liquid cooling unit base, sound barrier and protective cover; and cable trenches using preformed concrete units. In addition, work was performed for the installation of a Radar Unit (RU), Digital Acquisition System (DAS) van, and RU maintenance shelters. This project is not within a known flood plain. DOD "U" factors will be met.

b. Major Items Included in Project Accomplished:

Severable:	None	-	-	-
Nonseverable:				
Operations Support Building	104.0	-	-	-
Air Conditioning System	31.1	-	-	-
Supporting Facilities:				
Site Improvements	19.0	-	-	-
Site and Facilities Utilities	86.9	-	-	-
Test Towers and Cable Trench	6.1	-	-	-
Data Acquisition Center	11.5	-	-	-
Fire Sprinkler	11.5	-	-	-
Comm & Comm Sec (TEMPEST)	30.0	-	-	-
Facilities & Instrumentation Design & Engineering	90.8	-	-	-
Miscellaneous (RU Base & CU PAD, etc)	56.7	-	-	-

c. The supporting facilities were required for the installation of the fire control group equipment to support the Phase II Missile Firing Program scheduled for September 1976. The supporting facilities provided an operations control center for the installation of the PATRIOT Fire Control Group. These facilities will be contractor-operated (Raytheon).

d. Contract number under which RDTE project was funded: DAAH01-72-0106.

Section 7 (Contd)

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Facility/Equipment	RDTE Project Number	Contractor	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78
SECTION II							
Projects Planned or Projected							
Negative							

PART 2. UTILIZATION OF RDTE APPROPRIATION FOR FACILITIES/EQUIPMENT AT GOVERNMENT-OWNED/GOVERNMENT-OPERATED INSTALLATIONS

Chapter 251 (which was approved by the GAO as DOD Instruction 7220.5) provides that RDTE appropriations may finance the development, design, purchase and installation (including directly related foundations, shielding, environmental control, weather protection, structural adjustments, utilities and access) of equipment or instrumentation required for research, development, test, and evaluation activities. The table below provides a summary listing of all such projects for the installation of equipment, where the cost of installation is $50,000 or more, accomplished in FY 1976, FY 19TQ, and planned in FY 1977 and FY 1978:

Facility/Equipment	RDTE Project Number	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78
SECTION I						
Projects Accomplished or Underway						
Negative						

Section 7 (Contd)

MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Facility/Equipment	RDTE Project Number	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78
SECTION II						
Projects Planned or Projected						
1. Projects Planned						
a. Design of installation for items being moved in conjunction with the Armament Command reorganization project supports DD1391, Picatinny Arsenal Proj #T28600.	1P865801MM88	Picatinny Arsenal, Dover, NJ	438	-	-	-
b. Install 3000 Ton Hydraulic Press	1P865801MM88	Picatinny Bldg 3150	-	-	200	-
c. Installation of cabling for 14 remote video display stations	1P865801MM88	Picatinny Bldg 12	-	-	151	-
d. Install Test Chamber Rain-sun	1P865801MM88	Picatinny Bldg 3100	-	-	153	-
e. Install Torsion Meter	1P865801MM88	Picatinny Bldg 351	-	-	80	-
f. New Computer Facility Site Preparation Building 328, Aberdeen Proving Ground, MD	1P865801MM88	Aberdeen Proving Ground, MD	100	-	210	-
g. Install Laser Laboratory	1P865801MM88	Ft. Belvoir, VA	-	-	371	-
h. Install Signals Warfare Laboratory Facilities	1P865801MM88	Vint Hill Farms Station, VA	-	-	127	-
i. Deinstall Signals Warfare and Laser Laboratories Equipment (ERADCOM)	1P865801MM88	Ft. Monmouth, NJ	-	-	243	-

Facility/Equipment	RDTE Project Number	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78

2. Supporting Narrative Statement on Projects of $300,000 or More

a. Picatinny Arsenal, Design for Installation of Equipment

(1) Funds for Architectural Engineer (AE) Design Contract for installation of approximately 6,000 major items of equipment in 13 existing and two new buildings at Picatinny Arsenal, Dover, NJ.

(2) No new major items of equipment or structures are requested under this project. All costs are non-severable costs.

(3) The project is required to provide architectural design to install the cited equipment as a part of an overall architectural contract to alter or construct the buildings. The purpose of this action is to support the first phase of a three year program to form the US Army Armament Research and Development Command and to consolidate most Armament Research and Development Activities at Picatinny Arsenal. This project is for design for equipment moving from Frankford, Rock Island, and Edgewood Arsenals and to reorganize with it, certain equipment already installed at Picatinny Arsenal. Funding has already been accomplished and contract is underway under NY District Engineer Contract DAC-651-76-C-0168.

(4) Contract number under which RDTE project was funded: Not applicable. Project supports all ongoing, in-house Armament, small arms, large calibre and small calibre ammunition, fire control systems, technical diagnostic equipment, mechanical time-fuse optics and tech base physical science research and development projects.

(5) Statement of protection of interest of the United States: Not applicable. All facilities and equipment are government owned.

b. Ft. Belvoir, VA, Laser Laboratory

(1) Alterations to existing laboratory and office space in Building 357, Ft. Belvoir, VA to accept installation of existing, government owned, laser laboratory equipment being moved from Ft. Monmouth, NJ and Adelphi, MD. Building 357 is a modern, permanent laboratory building of 48,000 square feet of which approximately 29,000 square feet will be devoted to laser laboratory purposes. Project also includes the cost of desinstallation, shipment and installation of this equipment and the secondary moves required to rearrange other equipment already in the building. Building modifications require minor movement and rearrangement of partitions and doors; provision for new utilities hook-up for power, water and air; laboratory hoods and venting equipment; laser door interlocks; electrical screen rooms and added humidity control in one area. No new major items of equipment are included in the project.

Facility/Equipment	RDTE Project Number	Location	Total Obligational Authority (Thousands of Dollars) FY 76	FY TQ	FY 77	FY 78

2. Supporting Narrative Statement on Projects of $300,000 or More (Continued)

(2) No new major items of equipment or additions to structure are requested under this project. All costs are non-severable costs.

(3) The facility is required to provide the minimum facilities necessary to house the proposed reorganization of laser research and development missions presently assigned to the Electronics Command at Ft. Monmouth, NJ and Harry Diamond Laboratories at Adelphi, MD. These missions are to be consolidated with similar functions already located at Ft. Belvoir and a part of a proposed reorganization which will achieve in excess of $7,200,000 in annual savings. This project provides for installation of laboratory facilities for research, development, experimentation, technical data recording, experimental fabrication and testing for all types of laser devices to be used for distance ranging, fire control, target designation, target signature and similar laser applications. Funding is requested in FY 77 to allow completion of project prior to move proposed for late FY 78.

(4) Contract number under which RDTE project was funded: Not applicable. Project supports all ongoing, in-house non-lethal laser technical base, research and developmental projects (except medical).

(5) Statement of protection of interest of the United States: Not applicable. All facilities and equipment are government owned.

PART 3. UTILIZATION OF RDTE APPROPRIATION FOR MINOR CONSTRUCTION

For in-house installations, construction projects in support of R&D for $75,000 or less are funded from RDTE appropriations. Such expenditures are authorized by 10 USC 2674 and the applicable provisions of the current DOD Appropriation Act. Under this procedure, project approval at this level is authorized by the Major Command concerned, or delegated to R&D installation commanders as appropriate. The table below provides a summary total of such minor construction accomplished in FY 1976 and FY 19TQ, and the estimated amounts planned for FY 1977 and FY 1978.

SUMMARY OF MINOR CONSTRUCTION FUNDED BY RDTE, ARMY

FY 1976	FY 19TQ	FY 1977	FY 1978
2,620	505	2,000	2,200

Section 8

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
PROJECT DATA FOR CONSTRUCTION AT GOVERNMENT-OWNED
FACILITIES FUNDED BY RDTE, ARMY APPROPRIATIONS

A DD Form 1391, Military Construction Project Data, will be included in this section for each budget year project for proposed construction, alteration, expansion or modernization of Government-owned facilities. A DD Form 1391 is not required to support the lump-sum estimate for minor construction included in Section 7. This estimate will continue to be a contingency estimate based on past experience as related to the budget year program.

Section 8 (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
18 May 1976	1976		ARMY	White Sands Missile Range

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE, COUNTRY
$ 447,700	P.L.	310-40		New Mexico

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE
$ N/A		RSA-12-76	Supporting Facilities for PATRIOT Fire Control Group

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION		18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY				
a. PERMANENT		a. NO. OF BLDGS	b. NO. OF STORIES	c. LENGTH Varies	d. WIDTH Varies	
b. SEMI-PERMANENT	X	e. DESIGN CAPACITY		f. GROSS AREA 1865		
c. TEMPORARY		g. COOLING	CAP 35 Ton	COST $888.6/Ton		
15. TYPE OF WORK		19. DESCRIPTION OF WORK TO BE DONE				
a. NEW FACILITY	X	URGENT RDTE CONSTRUCTION				
b. ADDITION		This project will provide the facilities required for the installation of the PATRIOT Fire Control Group Equipment and Hardware at WSMR to support the Phase II Missile Firing Program. The facilities will be provided through existing contracts with Raytheon and the PATRIOT Project Office. The prime facility is a frame structure of 1865 SF. This building will house the A/C equipment, provide access ways to the fire control equipment, and the operations control center. The site work includes construction of an elevated fill area with base and paving. A retaining wall will be constructed at the edge of the berm to prevent erosion.				
ALTERATION						
d. CONVERSION						
e. OTHER (Specify)						
16. REPLACEMENT						
17. TYPE OF DESIGN						
a. STANDARD DESIGN						
b. SPECIAL DESIGN	X					
c. DRAWING NO						

(CONT'D ON PAGE 2)

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST	COST ($000)
			$	$ 135.1
a. Operations Support Bldg	SF	1865	55.8	104.0
b. A/C System	Ton	35	888.6	31.1
c.				
d.				
21. SUPPORTING FACILITIES				$ 181.1
a. Site Improvements	LS			19.0
b. Site & Facilities Utilities	LS			86.9
c. Test Towers & Cable Trench	LS			6.1
d. New Mexico Tax	LS			10.3
e. Data Acquisition Center	LS			11.6
f. Fire Sprinkler				11.5
g. Comm & Comm Sec (TEMPEST)				30.0
h. RU Base & CU Pad				5.7
i. Contingency				40.7
j. Fac & Instrumentation Design & Eng				90.8
22. TOTAL PROJECT COST				$ 316.2
TOTAL PROJECT ESTIMATED COST				$ 447.7

SECTION C - BASIS OF REQUIREMENT

23. QUANTITATIVE DATA (U/M SF)		
a. TOTAL REQUIREMENT	1875	
b. EXISTING SUBSTANDARD	0	
c. EXISTING ADEQUATE	0	
d. FUNDED, NOT IN INVENTORY		
e. ADEQUATE ASSETS (c + d)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY ____ PROGRAM		
h. DEFICIENCY (a − e − f − g)		

24. RELATED PROJECTS

25. REQUIREMENT FOR PROJECT: This project has been determined to be an urgent requirement of the PATRIOT Project Office in support of the system development at WSMR. The PATRIOT Missile System is currently undergoing system development testing to meet the stated requirements and objectives of the program. The supporting facilities are required for the installation of the fire control group equipment, to support the Phase II Missile Firing Program scheduled for Sep 1976. The supporting facilities will provide an operations control center for the installation of the PATRIOT Fire Control Group. This includes a building, electrical service, site work and drainage to accommodate the equipment. The support facilities are required to meet PATRIOT Program schedule for Sep 1976. These requirements have been validated and indorsed by the PATRIOT Project Manager. Existing government owned facilities capable of meeting the specific requirements are not available. This is not a duplication of facilities. Radio frequency support is not required. Contracting or leasing facilities is not possible. If the support facilities are not provided, a severe program schedule impact will occur, causing a slip in the firing of the Phase II missiles and increasing the program cost as a result of the inefficient use of manpower and hardware. This delay may increase the technical risks of the program. This project conforms to the intent of PL 91-190, the Installation Master Plan at WSMR, AR 2115-24 & AR 415-35 for Urgent Construction RDTE funded. Facilities will be contractor-operated (Raytheon).

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Section 8 (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA (Continued)	3. DEPARTMENT	4. INSTALLATION
18 May 1976	1976		ARMY	White Sands Missile Range
5. PROJECT NUMBER		**6. PROJECT TITLE**		
RSA-12-76		Supporting Facilities for PATRIOT Fire Control Group		

ITEM 19 CONT'D

Utilities to be constructed are primary and secondary electrical distribution and a 725 KVA electrical substation. Work consists of site preparation, foundation, and installation of two (2) forty foot test towers; a radar liquid cooling unit base, sound barrier and protective cover; and cable trenches using preformed concrete units. In addition, work will be performed for the installation of a Radar Unit (RU), Digital Acquisition System (DAS) van, and RU maintenance shelters. This project is not within a known flood plain. DOD "U" factors will be met.

Section 8 (Contd)

MILITARY CONSTRUCTION PROJECT DATA

1. DATE	2. FISCAL YEAR	3. DEPARTMENT	4. INSTALLATION
November 1976	1977	Army	Picatinny Arsenal

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$ 200,000	P.L.	5500	6.58.01.A	New Jersey

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE	NM	CM	PM
$ 200,000	65801	1P865801MM21	Install Hydraulic Press Increment 1 - ARRADCOM	XX		

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION		15. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY				
a. PERMANENT	X	e. NO. OF BLDGS 1	b. NO. OF STORIES NA	c. LENGTH NA	d. WIDTH NA	
b. SEMI-PERMANENT		e. DESIGN CAPACITY RDT&E	f. GROSS AREA NA			
c. TEMPORARY		g. COOLING NA	CAP	COST ($)		
15. TYPE OF WORK		19. DESCRIPTION OF WORK TO BE DONE				
a. NEW FACILITY		Relocate 3000 Ton Press from Bethlehem Steel to Bldg. 3150, Picatinny Arsenal.				
b. ADDITION						
c. ALTERATION						
d. CONVERSION						
e. OTHER (Specify) Relocation						
16. REPLACEMENT						
17. TYPE OF DESIGN						
a. STANDARD DESIGN						
b. SPECIAL DESIGN	X					
c. DRAWING NO.						

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST ($)	COST ($000)
a. 3000 Ton Press (Unfunded)				1,000.0
b. (acquisition cost)				
c.				
d.				
21. SUPPORTING FACILITIES				$ 200.0
a. Installation				200.0
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j. Design (Unfunded) 15%				30.0
22. TOTAL PROJECT COST				$ 200.0

SECTION C - BASIS OF REQUIREMENT

23. QUANTITATIVE DATA (U/M N/A)		
a. TOTAL REQUIREMENT		
b. EXISTING SUBSTANDARD	( )	
c. EXISTING ADEQUATE		
d. FUNDED, NOT IN INVENTORY		
e. ADEQUATE ASSETS (c + d)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY ____ PROGRAM		
h. DEFICIENCY (b + e - f - g)		
24. RELATED PROJECTS		

25. REQUIREMENT FOR PROJECT

This item is urgently required to provide the minimum facilities immediately necessary to transfer the presently assigned armament mission from Frankford Arsenal to Picatinny Arsenal. This project provides facilities to support research, development, experimentation, technical data recording, experimental fabrication and testing associated with the current Frankford mission and, where economies dictate, the consolidation of other transfers into one project. This particular item replaces existing Frankford Arsenal equipment to support fabrication of large metal parts in Building 3150 as a part of the large caliber ammunitions prototyping capability. The closure of Frankford Arsenal and the establishment of the ADC will result in $37,000,000 annual savings. This reorganization will streamline the armament development activities for all weapon systems and ammunition so critical to national defense. This project complies with PL 91-190 and PL 90-480.

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Section B (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
Nov 1976	1977		Army	Picatinny Arsenal

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$151,000	P.L.	6.58.01.A		New Jersey

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE	NM	CM	AM
$151,000	65801	1P865801NM21	Install Video Cabling Increment 1, ARRADCOM	XX		

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION		15. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY				
a. PERMANENT	X	e. NO. OF BLDGS 1	b. NO. OF STORIES N/A	c. LENGTH N/A	d. WIDTH N/A	
b. SEMI-PERMANENT		e. DESIGN CAPACITY RDT&E		f. GROSS AREA N/A		
c. TEMPORARY		g. COOLING N/A	CAP N/A	COST ($ N/A)		
19. TYPE OF WORK		18. DESCRIPTION OF WORK TO BE DONE				
a. NEW FACILITY		Relocate Instrumentation Cabling for 14 Video Display Stations from Frankford Arsenal to Picatinny Arsenal.				
b. ADDITION						
c. ALTERATION						
d. CONVERSION						
e. OTHER (Specify) Relocation						
16. REPLACEMENT						
17. TYPE OF DESIGN						
a. STANDARD DESIGN						
b. SPECIAL DESIGN	X					
c. DRAWING NO.						

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST $	COST ($000) $
a. Inst Cabling (unfunded)		( )		( )
b. (acquisition cost)		( )		( )
c.		( )		( )
d.		( )		( )
21. SUPPORTING FACILITIES				$
a. Relocate Inst Cabling				( )
b.				( )
c.				( )
d.				( )
e.				( )
f.				( )
g.				( )
h.				( )
i.				( )
j. Design (Unfunded) 15%				( )
22. TOTAL PROJECT COST				$

SECTION C - BASIS OF REQUIREMENT

23. QUANTITATIVE DATA (U/M N/A)		
a. TOTAL REQUIREMENT		
b. EXISTING SUBSTANDARD	( )	
c. EXISTING ADEQUATE		
d. FUNDED, NOT IN INVENTORY		
e. ADEQUATE ASSETS (c + d)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY ____ PROGRAM		
h. DEFICIENCY (a - e - f - g)		
24. RELATED PROJECTS		

25. REQUIREMENT FOR PROJECT

This item is urgently required to provide the minimum facilities immediately necessary to transfer the presently assigned armament mission from Frankford Arsenal to Picatinny Arsenal. This project provides facilities for research, development, experimentation, technical data recording, experimental fabrication and testing associated with the current Frankford mission and, where economics dictate, the consolidation of other transfers into one project. This particular item supports the Technical Data Facility, Bldg 10 and provides for remote accessing of design data by engineering personnel. The closure of Frankford Arsenal and the establishment of the ADC will result in $37,000,000 annual savings. This reorganization will streamline the armament development activities for all weapons systems and ammunition so critical to national defense. This project complies with the intent of PL 91-190 and PL 90-480.

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Section 8 (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
NOV 1976	1977		ARMY	Picatinny Arsenal

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$ 152,500	P.L.	5500	6.58.01.A	New Jersey

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE	NM	CM	BM
$ 152,500	65801	1P865801MM21	Install Test Chamber Increment I, ARRADCOM	XX		

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION		15. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY			
a. PERMANENT	X	a. NO. OF BLDGS 1	b. NO. OF STORIES NA	c. LENGTH NA	d. WIDTH NA
b. SEMI-PERMANENT		e. DESIGN CAPACITY RDT&E	f. GROSS AREA NA		
c. TEMPORARY		g. COOLING NA	CAP. NA	COST ($ NA)	

16. TYPE OF WORK	
a. NEW FACILITY	
b. ADDITION	
c. ALTERATION	
d. CONVERSION	
e. OTHER (Specify) Relocation	
18. REPLACEMENT	
17. TYPE OF DESIGN	
a. STANDARD DESIGN	
b. SPECIAL DESIGN	X
c. DRAWING NO.	

19. DESCRIPTION OF WORK TO BE DONE

Relocate test chamber from Frankford Arsenal to bldg. 3100, Picatinny Arsenal.

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST ($)	COST ($000)
a. Test Chamber (UNFUNDED)		( )		(150.0)
b. (acquisition cost)		( )		( )
c.		( )		( )
d.		( )		( )
21. SUPPORTING FACILITIES				($ 52.5)
a. Relocate Test Chamber				(152.5)
b.				( )
c.				( )
d.				( )
e.				( )
f.				( )
g.				( )
h.				( )
i.				( )
j. Design (unfunded) 15%				(22.9)
22. TOTAL PROJECT COST				($ 52.5)

SECTION C - BASIS OF REQUIREMENT

23. QUANTITATIVE DATA (U/M N/A)		
a. TOTAL REQUIREMENT		
b. EXISTING SUBSTANDARD	( )	
c. EXISTING ADEQUATE		
d. FUNDED, NOT IN INVENTORY		
e. ADEQUATE ASSETS (c + d)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY ____ PROGRAM		
h. DEFICIENCY (a - e - f - g)		

24. RELATED PROJECTS

26. REQUIREMENT FOR PROJECT This item is urgently required to provide the minimum facilities immediately necessary to transfer the presently assigned armament mission from Frankford Arsenal to Picatinny Arsenal. This project provides facilities for research, development, experimentation, technical data recording, experimental fabrication & testing associated with the current Frankford mission and, where economies dictate, the consolidation of other transfers into one project. This particular item provides for installation of a simulated rain and sun capability in support of environmental testing of systems and components. The closure of Frankford Arsenal & the establishment of the ADC will result in $37,000,000 annual savings. This reorganization will streamline the armament development activities for all weapons systems and ammunition so critical to national defense. This project complies with the intent of PL 91-190 and PL 90-480.

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Section 8 (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
Nov 1976	1979		Army	Picatinny Arsenal

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$ 80,000	P.L.	5500	6.58.01.A	New Jersey

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE	NM	CM	SM
$ 80,000	05001	IP865801NM21	Install Torsion Meter Increment 2, ARRADCOM	XX		

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION		15. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY
a. PERMANENT	X	a. NO. OF BLDGS 1 b. NO. OF STORIES N/A c. LENGTH N/A d. WIDTH N/A
b. SEMI-PERMANENT		e. DESIGN CAPACITY RDT&E f. GROSS AREA N/A
c. TEMPORARY		g. COOLING N/A CAP. N/A COST ($ N/A)
15. TYPE OF WORK		16. DESCRIPTION OF WORK TO BE DONE
a. NEW FACILITY		Relocate Torsionometer from Rock Island Arsenal to Bldg 351, Picatinny Arsenal.
b. ADDITION		
c. ALTERATION		
d. CONVERSION		
e. OTHER (Specify) Relocation		
16. REPLACEMENT		
17. TYPE OF DESIGN		
a. STANDARD DESIGN		
b. SPECIAL DESIGN	X	
c. DRAWING NO.		

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST $	COST $
a. Torsionometer (Unfunded)	( )	( )	( )	(3.2)
b. (Acquisition Cost)	( )	( )	( )	( )
c.	( )	( )	( )	( )
d.	( )	( )	( )	( )
21. SUPPORTING FACILITIES				$
a. Installation				(22.8)
b.				( )
c.				( )
d.				( )
e.				( )
f.				( )
g.				( )
h.				( )
i.				( )
j. Design (Unfunded) 15%		1		(13.2)
22. TOTAL PROJECT COST				$

SECTION C - BASIS OF REQUIREMENT

23. QUANTITATIVE DATA (U/M N/A)		
a. TOTAL REQUIREMENT		
b. EXISTING SUBSTANDARD	( )	
c. EXISTING ADEQUATE		
d. FUNDED, NOT IN INVENTORY		
e. ADEQUATE ASSETS (c + d)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY ____ PROGRAM		
h. DEFICIENCY (b - e - f - g)		
24. RELATED PROJECTS		

25. REQUIREMENT FOR PROJECT This item is urgently required to provide the minimum facilities necessary to transfer the presently assigned armament mission from Rock Island Arsenal to Picatinny Arsenal. This project provides facilities for research, development, experimentation, technical data recording, experimental fabrication and testing associated with the current Rock Island mission and where economies dictate, the consolidation of other transfers into the project. This particular item provides for installation of torsion and ductility testing capabilities as part of the small and large caliber ammunition, prototyping capability and will be located in Bldg. 351 Mechanics Laboratory. The transfer of function and the establishment of the ADC will result in $37,000,000 annual savings. This reorganization will streamline the armament development activities for all weapons systems and ammunition so critical to national defense. This project complies with the intent of PL 91-190 and PL 90-480.

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1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
Dec 1976	1977		ARMY	Aberdeen Proving Ground

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$ 210,000	P.L.	310-34	6.58.01.A	Maryland

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE
$ 210,000	685801001	1P865801MM21	Equipment in Place for Computer Facility Basement, Bldg 328

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION	
a. PERMANENT	X
b. SEMI-PERMANENT	
c. TEMPORARY	

18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY

a. NO. OF BLDGS NA | b. NO. OF STORIES NA | c. LENGTH NA | d. WIDTH NA

e. DESIGN CAPACITY NA | f. GROSS AREA NA

g. COOLING NA CAP NA COST ($) NA

15. TYPE OF WORK	
a. NEW FACILITY	
b. ADDITION	
c. ALTERATION	X
d. CONVERSION	
e. OTHER (Specify)	
16. REPLACEMENT	
17. TYPE OF DESIGN	
a. STANDARD DESIGN	
b. SPECIAL DESIGN	X
c. DRAWING NO	

19. DESCRIPTION OF WORK TO BE DONE

Site preparation for installation of new computer and accompanying air conditioning and fire protection systems.

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST	COST ($000)
Alterations			$	$ 210.0
a.				
b.				
c.				
d.				
21. SUPPORTING FACILITIES				$
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
22. TOTAL PROJECT COST	(Funded)			$ 210.0
	Total Funded			210.0

SECTION C - BASIS OF REQUIREMENT

23. QUANTITATIVE DATA (U/M NA)		
a. TOTAL REQUIREMENT		
b. EXISTING SUBSTANDARD		
c. EXISTING ADEQUATE		
d. FUNDED, NOT IN INVENTORY		
e. ADEQUATE ASSETS (c + d)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY ____ PROGRAM		
h. DEFICIENCY (a - e - f - g)		

24. RELATED PROJECTS

25. REQUIREMENT FOR PROJECT

To provide a suitable site, in a basement wing of the US Army Ballistic Research Laboratories, for a new computer. New computer used for scientific and engineering computations in support of ballistics technology research and ballistics vulnerability, vulnerability reduction, human engineering and system analysis. Site preparation and equipment is a necessary preliminary step to installation of the new computer which is tentatively scheduled for delivery in the 4th quarter of FY 77. At present, the computational requirements of the above laboratories are being met by two obsolete batch processors operating 24 hours a day. If this project is not approved, acquisition of the computer would be delayed. Since the present and predicted workload of the BRL computers cannot be handled by present equipment or other existing facilities, this would only aggravate an already acute situation. This project meets the requirements prescribed in AR 415-35.

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Section 8 (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
Nov 76	1977		Army	Fort Belvoir

5. APPROPRIATION AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$ 371,000	P.L.	310		Virginia

10. APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE
$ 371,000	685801	ERADCOM T-1	Install Laser Laboratory (ERADCOM)

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION	15. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY
a. New Construction X	a. NO. OF FLOORS 1 b. NO. OF BASEMENTS 2 c. WIDTH 200 d. LENGTH 120
b. Addition	e. CONSTRUCTION NO. N/A f. GROSS AREA 48,000
c. Conversion	g. CLASS N/A h. CAP. i. COST ($)
d. Expansion	
e. Alteration X	
f. Relocation	
g. Activation	
h. Installation	
i. Inactivation	
j. Reactivation X	
k. Other (Specify)	

Equipment Installation

16. DESCRIPTION OF WORK TO BE DONE

Minor movement and rearrangement of existing flexible partitions and doors. Establish hook-ups from existing building utilities systems for power, water, and air. Provide for laboratory hoods and venting of equipment. Provide laser door interlocks, electrical screen rooms and added humidity control in one room. Install laser equipment from Fort Monmouth and Adelphi. Move and reinstall NVL laser equipment and rearrange building

SECTION B - COST ESTIMATES

17. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST	COST ($ in 000)
a. Partitions	LF	650	28.00	18
b.				18
c.				
d.				
18. SUPPORTING FACILITIES				353
a. Utilities Hook - ups/mods, Vents, Screen Rooms, and Door Interlocks	LS			154
b. Install Equipment and Secondary moves				199
c.				
d.				
e.				
f.				
g.				
19. TOTAL PROJECT COST				371

SECTION C - BASIS OF NEED

20. QUANTITATIVE DATA (Specify)		
a. TOTAL REQUIREMENT		
b. FACILITIES ON HAND	( )	
c. BALANCE		
d. PROGRAMMED NOT IN THIS AUTHORIZATION		
e. BALANCE REQUIRED		
	AUTHORIZED	FUNDED
f. CONSTRUCTED PRIOR TO THIS AUTHORIZATION		
g. REQUIRED NOW - P.L. [illegible]		
h. REQUIRED LATER		
i. NOT REQUIRED		

21. REQUIREMENT FOR PROJECT: This project is urgently required to provide the minimum laboratory facilities necessary at Fort Belvoir to house the reorganized laser research and development missions presently assigned to the Electronics Command at Fort Monmouth, NJ., and Harry Diamond Laboratories, Adelphi, MD. These missions are being transferred as a part of the Army's implementation of the AMARC study and consolidated with similar functional missions already located at Fort Belvoir. It is a part of the first phase of a three year program necessary to establish the new US Army Electronics Research and Development Command at a number of locations. This reorganization will achieve in excess of $7,200,000 annual savings. This project provides for installation of laboratory facilities for research, development, experimentation, technical data recording, experimental fabrication and testing for various type of laser devices to be utilized for distance ranging, fire control, target designation, target signature, and similar applications. If this project is not approved in this program it will delay the achievement of the dollar savings by delaying the consolidation of personnel and support facilities and will unfavorably effect the coordinated development of urgently needed battlefield laser systems. This project has been reviewed and complies with the intent of PL 91-190 and PL 190-48.

VICTOR S. UNDERHILL, Colonel, GS
Director of Facilities and Equipment, ERADCOM

Section 8 (Contd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	3. DEPARTMENT	4. INSTALLATION
Nov 76	1977		Army	Vint Hills Farm Station

5. PROPOSED AUTHORIZATION	6. PRIOR AUTHORIZATION	7. CATEGORY CODE NUMBER	8. PROGRAM ELEMENT NUMBER	9. STATE/COUNTRY
$ 127,000	P.L.	310		Virginia

10. PROPOSED APPROPRIATION	11. BUDGET ACCOUNT NUMBER	12. PROJECT NUMBER	13. PROJECT TITLE	NN	CM	PM
$ 127,000	685801	ERADCOM T-7	Install Signals Warfare Research Development Facilities			

SECTION A - DESCRIPTION OF PROJECT

14. TYPE OF CONSTRUCTION		16. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY				15. TYPE OF WORK		19. DESCRIPTION OF WORK TO BE DONE
a. PERMANENT	X	a. NO. OF BLDGS 1	b. NO. OF STORIES	c. LENGTH	d. WIDTH	a. NEW FACILITY		Installation of electronic laboratory equipment from Fort Monmouth, movement and reinstallation of USASA equipment and rearrange building.
b. SEMI-PERMANENT		e. DESIGN CAPACITY		f. GROSS AREA 74,000		b. ADDITION		
c. TEMPORARY		g. COOLING	CAP.	COST ($)		c. ALTERATION	X	
						d. CONVERSION		
						e. OTHER (Specify) Equipment Install		
						18. REPLACEMENT		
						17. TYPE OF DESIGN		
						a. STANDARD DESIGN		
						b. SPECIAL DESIGN	X	
						c. DRAWING NO.		

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST $	COST $
a.				
b.				
c.				
d.				
21. SUPPORTING FACILITIES				$ 127
e. Equipment installation and movement	LS			127
c.				
d.				
e.				
f.				
g.				
h.				
i.				
j.				
22. TOTAL PROJECT COST				$ 127

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)	

	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY _____ PROGRAM		
h. DEFICIENCY (a - e - f - g)		

24. RELATED PROJECTS

28. REQUIREMENT FOR PROJECT This project is urgently required to provide the minimum laboratory facilities necessary at Vint Hills to house the reorganized Signals Warfare research and development missions presently assigned to the Electronics Command at Fort Monmouth, NJ and the US Army Security Agency at Arlington Hall Station, VA. These missions are being transferred as a part of the Army's implementation of the AMARC study and consolidated with similar functional missions already located at Vint Hills. It is a part of the first phase of a three year program necessary to establish the new US Army Electronics Research and Development Command at a number of locations. This reorganization will achieve in excess of $7,200,000 annual savings. This project provides installation of laboratory facilities for research, development, experimentation, technical data recording, experimental fabrication and testing for various types of signal warfare and intelligence electronic devices. If this project is not approved in this program it will delay the achievement of the dollar savings by delaying the consolidation of personnel and support facilities and will unfavorably effect the coordinated development of urgently needed tactical and strategic systems. This project has been reviewed and complies with the intent of PL 91-190 and PL 190-48.

VICTOR S. UNDERHILL, Phone No. _____
COL, GS
Director of Facilities and Equipment, USA ERADCOM

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Section 5 (Cont'd)

1. DATE	2. FISCAL YEAR	MILITARY CONSTRUCTION PROJECT DATA	5. DEPARTMENT	6. INSTALLATION
Nov 76	1977		Army	Fort Monmouth

7. PROPOSED AUTHORIZATION	8. PRIOR AUTHORIZATION	9. CATEGORY CODE NUMBER	10. PROGRAM ELEMENT NUMBER	11. STATE/COUNTRY
$ 243,000	P.L.	310		New Jersey

12. PROPOSED APPROPRIATION	13. BUDGET ACCOUNT NUMBER	14. PROJECT NUMBER	15. PROJECT TITLE	NM	CM	BM
$ 243,000	685801	ERADCOM T-8	Deinstall ERADCOM Laser and Signals Warfare Labs Equipment			

SECTION A - DESCRIPTION OF PROJECT

16. TYPE OF CONSTRUCTION		18. PHYSICAL CHARACTERISTICS OF PRIMARY FACILITY			
a. PERMANENT	X	a. NO. OF BLDGS 14	b. NO. OF STORIES	c. LENGTH	d. WIDTH
b. SEMI-PERMANENT	X	e. DESIGN CAPACITY		f. GROSS AREA	
c. TEMPORARY	X	g. COOLING	CAP.	COST ($)	
17. TYPE OF WORK		19. DESCRIPTION OF WORK TO BE DONE			
a. NEW FACILITY		Deinstall, pack, crate, handle and shipment of laboratory and other equipment from Wood, Evans and Wayside areas of Fort Monmouth, NJ to Fort Belvoir and Vint Hill Farms Station, VA.			
b. ADDITION					
c. ALTERATION	X				
d. CONVERSION					
e. OTHER (Specify) Equipment					
18. REPLACEMENT					
19. TYPE OF DESIGN					
a. STANDARD DESIGN					
b. SPECIAL DESIGN					
c. DRAWING NO.					

SECTION B - COST ESTIMATES

20. PRIMARY FACILITY	U/M	QUANTITY	UNIT COST $	COST $
a.		( )		
b.		( )		
c.		( )		
d.		( )		
21. SUPPORTING FACILITIES				$ 243
a. Equipment deinstallation packing, crating handling and shipment to Fort Belvoir, VA	LS			60
b. Equipment deinstallation, packing, crating, handling and shipment to Vint Hills Farm Station, VA	LS			183
22. TOTAL PROJECT COST				$ 243

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)		
	AUTHORIZED	FUNDED
f. UNFUNDED PRIOR AUTHORIZATION		
g. INCLUDED IN FY _____ PROGRAM		
h. DEFICIENCY (a - e - f - g)		
24. RELATED PROJECTS		

25. REQUIREMENT FOR PROJECT This project is urgently requied to deinstall, pack and ship the minimum laboratory equipment necessary at Vint Hills and Fort Belvoir to house the reorganized Signals Warfare and Laser research and development missions presently assigned to the Electronics Command at Fort Monmouth, NJ and the US Army Security Agency at Arlington Hall Station, VA. These missions are being transferred as a part of the Army's implementation of the AMARC study and consolidated with similar functional missions already located at Vint Hills and Fort Belvoir. It is a part of first phase of a three year program necessary to establish the new US Army Electronics Research and Development Command at a number of locations. This reorganization will achieve in excess of $7,200,000 annual savings. This project compliments ERADCOM projects T-1 and T-7 (same budget submission) by providing the Fort Monmouth portion of the funding. If this project is not approved in this program it will delay the achievement of the dollar savings by delaying the consolidation of personnel and support facilities and will unfavorably effect the coordinated development of urgently needed tactical and strategic systems. This project has been reviewed and complies with the intent of PL 91-190 and PL 190-48.

VICTOR S. UNDERHILL, COL, GS
Director of Facilities and Equipment, ERADCOM

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Section 9

DEPARTMENT OF DEFENSE, MILITARY
RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, ARMY
FLIGHT SIMULATOR PROGRAMS
($ in Thousands)

Program Element/Project	FY 1976	FY 19TQ	FY 1977	FY 1978	FY 1979	Descriptive Summary Reference
6.32.09.A/DB39 - Flight Simulator Components	300	120	950	1,414	1,700	
6.42.04.A/D275 - Synthetic Flight Training System	2,876	1,100	5,391	6,156	5,100	708