111TH CONGRESS
1ST SESSION

H. R. 3326

AN ACT

Making appropriations for the Department of Defense for the fiscal year ending September 30, 2010, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SEC. 8006. (a) With regard to the list of specific programs, projects, and activities (and the dollar amounts and adjustments to budget activities corresponding to such programs, projects, and activities) contained in the tables titled ''Explanation of Project Level Adjustments'' in the report of the Committee on Appropriations of the House of Representatives accompanying this Act, the obligation and expenditure of amounts appropriated or otherwise made available in this Act for those programs, projects, and activities for which the amounts appropriated exceed the amounts requested are hereby required by law to be carried out in the manner provided by such tables to the same extent as if the tables were included in the text of this Act.

(b) Amounts specified in the referenced tables described in subsection (a) shall not be treated as subdivisions of appropriations for purposes of section 8005 of this Act: *Provided*, That section 8005 shall apply when transfers of the amounts described in subsection (a) occur between appropriation accounts.

SEC. 8007. (a) Not later than 60 days after enactment of this Act, the Department of Defense shall submit a report to the congressional defense committees to establish the baseline for application of reprogramming and

111TH CONGRESS
1st Session

HOUSE OF REPRESENTATIVES

REPORT
111–230

DEPARTMENT OF DEFENSE APPROPRIATIONS BILL, 2010

R E P O R T

OF THE

COMMITTEE ON APPROPRIATIONS

[TO ACCOMPANY H.R. 3326]

JULY 24, 2009.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

TITLE IV

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

The fiscal year 2010 Department of Defense Research, Development, Test and Evaluation budget request totals $78,634,289,000. The table below summarizes the budget estimate and the Committee's recommendations.

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
RECAPITULATION			
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY.....	10,438,218	11,151,884	+713,666
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY.....	19,270,932	20,197,300	+926,368
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE.	27,992,827	27,976,278	-16,549
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE.....	20,741,542	20,721,723	-19,819
OPERATIONAL TEST AND EVALUATION, DEFENSE.....	190,770	190,770	---
GRAND TOTAL, RDT&E.....	78,634,289	80,237,955	+1,603,666

SMALL BUSINESS TECHNOLOGY INSERTION

The Committee is well aware of the multitude of development problems experienced by numerous acquisition programs over the past several years. Although these problems have been caused by a variety of factors, the Committee believes that one significant factor is the rapid pace at which technology has been changing. The pace is so fast that the Department's acquisition programs have been unable to remain current. Therefore, the Committee is extremely supportive of initiatives that transform how weapons systems are developed and fielded. A good example of a transformational effort is the incorporation of open architecture technologies. Developing weapons systems with open architecture technologies allows these systems to keep pace with changing technologies and ultimately reduces the overall weapons system cost. Two years ago, the Committee began an initiative to tap into the innovative and creative processes that typify small business. The Navy in particular has been very aggressive in pursuing the benefits of small business innovation in the arena of open architecture. Since this initiative has been so successful, the recommendation provides an additional $80,000,000 for small business technology insertion, placed in various Army, Navy, and Defense-Wide research and development programs.

JOINT STRIKE FIGHTER ALTERNATE ENGINE

The F–35 Lightning II Joint Strike Fighter program truly represents the Nation's future with respect to tactical aviation. The Navy, Marine Corps and Air Force plan to procure over 2,500 of these fifth generation stealthy aircraft and will fly them well into the future. The Department's original plan for the F–35 propulsion engine was to have two engine variants. Cost growth in other areas of the development program resulted in the Department abandoning the alternate engine program. Currently, all three variants of the F–35 aircraft will be powered by the same propulsion engine. Although this will make the logistics for the aircraft less complex, this practice presents problems. The Committee is extremely concerned that in the near future when the F–35 will comprise the majority of the Nation's tactical aircraft inventory any technical problems with the engine could theoretically ground the entire fleet of aircraft. If this situation were to arise in a time of crisis, the Commander-in-Chief's flexibility would be severely limited.

Another area of concern for the Committee is the lack of competition for the Joint Strike Fighter engine program. With over 2,500 aircraft envisioned for this program, the potential for cost savings through an engine competition is enormous. The Committee is aware that the Department conducted a business case analysis that compared the cost of the program of record (sole source engine provider) to a program using a dual source strategy for the engine program. The business case concluded that the costs of the two programs were essentially the same. Since the Congress has put several hundred million dollars into the development of an alternate engine program since this business case was published, the Committee is puzzled by the Department's decision to not fund the alternate engine. With the majority of the upfront development cost

having been sunk into the program, it seems clear that from this point forward the dual source strategy is the most cost effective method to acquire the propulsion engine for the Joint Strike Fighter. Therefore, the recommendation provides an additional $430,000,000 for the continued development of the alternate engine and $130,000,000 for alternate engine production costs for a total of $560,000,000 above the request for the alternate engine program. Further, since a dual source engine strategy is the most cost effective method for acquiring engines from this point forward, the Secretary of Defense is directed to include funding for the alternate engine program in future budget requests.

EXECUTIVE AGENCY FOR ENERGETICS

The Committee is aware that executive agents can add bureaucracy and, in the absence of carefully considered responsibilities and authorities, detract from the efficiency of the Department of Defense. The Committee is also aware that the Services of the Department of Defense are well coordinated, through the Office of the Secretary of Defense, with the Department of Energy which has led to tremendous progress in the last decade advancing the state of energetics and revitalizing the energetics research and development workforce. Accordingly, the Committee directs that no funds be expended for the creation of a new Executive Agent or Executive Director for Advanced Energetics. The Committee recommends that the Department of Defense capitalize on existing best practices within the individual Services to advance the state of the energetics field to better meet the needs of the joint warfighter.

SPECIAL INTEREST ITEMS

Items for which additional funds have been provided as shown in the project level tables or in paragraphs using the phrase "only for" or "only to" in this report are congressional interest items for the purpose of the Base for Reprogramming (DD 1414). Each of these items must be carried on the DD Form 1414 at the stated amount, specifically addressed in the conference report. These items remain special interest items whether or not they are repeated in a subsequent conference report.

REPROGRAMMING GUIDANCE FOR ACQUISITION ACCOUNTS

The Committee directs the Department of Defense to continue to follow the reprogramming guidance specified in the report accompanying the House version of the fiscal year 2006 Department of Defense Appropriations Bill (H.R.109–110). Specifically, the dollar threshold for reprogramming funds will remain at $20,000,000 for procurement, and $10,000,000 for research, development, test and evaluation. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative. Therefore, if the combined value of transfers into or out of a procurement (P–1) or research, development, test and evaluation (R–1) line exceed the identified threshold, the Department of Defense must submit a prior approval re-

programming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this report.

REPROGRAMMING REPORTING REQUIREMENTS

The Committee directs the Under Secretary of Defense, Comptroller, to continue to provide the congressional defense committees quarterly, spreadsheet-based DD 1416 reports for service and defense-wide accounts in titles III and IV of this Act as required in the statement of the managers accompanying the Conference report on the Department of Defense Appropriations Act, 2006.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

Fiscal year 2009 appropriation	$12,060,111,000
Fiscal year 2010 budget request	10,438,218,000
Committee recommendation	11,151,884,000
Change from budget request	713,666,000

This appropriation finances the research, development, test and evaluation activities of the Department of the Army. The total amount recommended in the bill will provide the following program in fiscal year 2010:

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY			
	BASIC RESEARCH			
1	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	19,671	19,671	---
2	DEFENSE RESEARCH SCIENCES	173,024	196,074	+23,050
3	UNIVERSITY RESEARCH INITIATIVES	88,421	110,421	+22,000
4	UNIVERSITY AND INDUSTRY RESEARCH CENTERS	96,144	114,844	+18,700
	TOTAL, BASIC RESEARCH	377,260	441,010	+63,750
	APPLIED RESEARCH			
5	MATERIALS TECHNOLOGY	27,206	68,256	+41,050
6	SENSORS AND ELECTRONIC SURVIVABILITY	50,641	67,641	+17,000
7	TRACTOR HIP	14,324	14,324	---
8	AVIATION TECHNOLOGY	41,332	50,832	+9,500
9	ELECTRONIC WARFARE TECHNOLOGY	16,119	24,119	+8,000
10	MISSILE TECHNOLOGY	50,716	64,816	+14,100
11	ADVANCED WEAPONS TECHNOLOGY	19,678	22,678	+3,000
12	ADVANCED CONCEPTS AND SIMULATION	17,473	26,973	+9,500
13	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY	55,937	74,437	+18,500
14	BALLISTICS TECHNOLOGY	61,843	79,843	+18,000
15	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY	5,293	13,293	+8,000
16	JOINT SERVICE SMALL ARMS PROGRAM	7,674	7,674	---
17	WEAPONS AND MUNITIONS TECHNOLOGY	41,085	124,585	+83,500
18	ELECTRONICS AND ELECTRONIC DEVICES	61,404	115,454	+54,050
19	NIGHT VISION TECHNOLOGY	26,893	48,893	+22,000
20	COUNTERMINE SYSTEMS	18,945	20,945	+2,000
21	HUMAN FACTORS ENGINEERING TECHNOLOGY	18,605	33,605	+15,000
22	ENVIRONMENTAL QUALITY TECHNOLOGY	15,902	19,402	+3,500
23	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY	24,833	31,533	+6,700
24	COMPUTER AND SOFTWARE TECHNOLOGY	5,639	5,639	---
25	MILITARY ENGINEERING TECHNOLOGY	54,818	61,918	+7,100
26	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY	18,701	18,701	---
27	WARFIGHTER TECHNOLOGY	27,109	31,909	+4,800
28	MEDICAL TECHNOLOGY	99,027	195,942	+96,915
	TOTAL, APPLIED RESEARCH	781,197	1,223,412	+442,215

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	ADVANCED TECHNOLOGY DEVELOPMENT			
29	WARFIGHTER ADVANCED TECHNOLOGY	37,574	54,524	+16,950
30	MEDICAL ADVANCED TECHNOLOGY	72,940	301,866	+228,926
31	AVIATION ADVANCED TECHNOLOGY	60,097	87,097	+27,000
32	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY	66,410	89,910	+23,500
33	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY	89,586	162,186	+72,600
34	COMMAND, CONTROL, COMMUNICATIONS ADVANCED TECHNOLOGY	8,667	13,667	+5,000
35	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY	7,410	7,410	---
36	ELECTRONIC WARFARE ADVANCED TECHNOLOGY	50,458	57,258	+6,800
37	TRACTOR HIKE	11,328	11,328	---
38	NEXT GENERATION TRAINING & SIMULATION SYSTEMS	19,415	23,915	+4,500
39	TRACTOR ROSE	14,569	14,569	---
40	EXPLOSIVES DEMILITARIZATION TECHNOLOGY	---	3,500	+3,500
41	MILITARY HIV RESEARCH	6,657	29,657	+23,000
42	COMBATING TERRORISM, TECHNOLOGY DEVELOPMENT	11,989	11,989	---
43	ELECTRONIC WARFARE TECHNOLOGY	19,192	22,692	+3,500
44	MISSILE AND ROCKET ADVANCED TECHNOLOGY	63,951	75,751	+11,800
45	TRACTOR CAGE	12,154	12,154	---
46	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY	30,317	30,317	---
47	JOINT SERVICE SMALL ARMS PROGRAM	8,996	8,996	---
48	NIGHT VISION ADVANCED TECHNOLOGY	40,329	64,829	+24,500
49	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS	15,706	15,706	---
50	MILITARY ENGINEERING ADVANCED TECHNOLOGY	5,911	45,461	+39,550
51	ADVANCED TACTICAL COMPUTER SCIENCE & SENSOR TECHNOLOGY	41,561	60,061	+18,500
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	695,217	1,204,843	+509,626

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	DEMONSTRATION & VALIDATION			
52	UNIQUE ITEM IDENTIFICATION (UID)	---	2,500	+2,500
53	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION	14,683	31,683	+17,000
54	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (SPACE)	117,471	120,471	+3,000
55	AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING	209,531	110,531	-99,000
57	LANDMINE WARFARE AND BARRIER - ADV DEV	17,536	17,536	---
58	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-ADV DEV	4,920	4,920	---
59	TANK AND MEDIUM CALIBER AMMUNITION	33,934	33,934	---
60	ADVANCED TANK ARMAMENT SYSTEM (ATAS)	90,299	90,299	---
61	SOLDIER SUPPORT AND SURVIVABILITY	31,752	31,752	---
62	TACTICAL ELECTRONIC SURVEILLANCE SYSTEM - AD	18,228	18,228	---
64	ENVIRONMENTAL QUALITY TECHNOLOGY	4,770	19,770	+15,000
65	WARFIGHTER INFORMATION NETWORK-TACTICAL	180,673	165,673	-15,000
66	NATO RESEARCH AND DEVELOPMENT	5,048	5,048	---
67	AVIATION - ADV DEV	8,537	8,537	---
68	LOGISTICS AND ENGINEER EQUIPMENT - ADV DEV	56,373	57,373	+1,000
69	COMBAT SERVICE SUPPORT CONTROL SYSTEM EVALUATION	9,868	9,868	---
70	MEDICAL SYSTEMS - ADV DEV	31,275	37,275	+6,000
71	SOLDIER SYSTEMS - ADVANCED DEVELOPMENT	71,832	71,007	-825
72	INTEGRATED BROADCAST SERVICE	1,476	1,476	---
	TOTAL, DEMONSTRATION & VALIDATION	908,206	837,881	-70,325
	ENGINEERING & MANUFACTURING DEVELOPMENT			
73	AIRCRAFT AVIONICS	92,977	88,977	-4,000
74	ARMED, DEPLOYABLE OH-58D	65,515	70,515	+5,000
75	ELECTRONIC WARFARE DEVELOPMENT	248,463	248,463	---
76	ALL SOURCE ANALYSIS SYSTEM	13,107	13,107	---
77	TRACTOR CAGE	16,286	16,286	---
78	INFANTRY SUPPORT WEAPONS	74,814	76,814	+2,000
79	MEDIUM TACTICAL VEHICLES	5,683	5,683	---
80	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-SDD	978	978	---
81	FAMILY OF HEAVY TACTICAL VEHICLES	7,477	10,477	+3,000
82	AIR TRAFFIC CONTROL	7,578	7,578	---
83	NON-LIGHT OF SIGHT LAUNCH SYSTEM	88,660	88,660	---
84	NON-LINE OF SIGHT CANNON	58,216	31,216	-27,000
85	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE	368,557	184,557	-184,000

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
86	FCS SYSTEMS OF SYSTEMS ENGR & PROGRAM MGMT	1,067,191	1,067,191	---
87	FCS RECONNAISSANCE (UAV) PLATFORMS	68,701	68,701	---
88	FCS UNMANNED GROUND VEHICLES	125,616	125,616	---
89	FCS UNATTENDED GROUND SENSORS	26,919	26,919	---
90	FCS SUSTAINMENT & TRAINING R&D	749,182	749,182	---
92	NIGHT VISION SYSTEMS - SDD	55,410	57,910	+2,500
93	COMBAT FEEDING, CLOTHING, AND EQUIPMENT	2,092	2,092	---
94	NON-SYSTEM TRAINING DEVICES - SDD	30,209	30,209	---
95	AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE -SDD	28,936	28,936	---
96	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	33,213	33,213	---
97	AUTOMATIC TEST EQUIPMENT DEVELOPMENT	15,320	15,320	---
98	DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS) - SDD	15,727	15,727	---
99	POSITIONING SYSTEMS DEVELOPMENT (SPACE)	9,446	9,446	---
100	COMBINED ARMS TACTICAL TRAINER (CATT) CORE	26,243	26,243	---
102	WEAPONS AND MUNITIONS - SDD	34,878	44,378	+9,500
103	LOGISTICS AND ENGINEER EQUIPMENT - SDD	36,018	37,518	+1,500
104	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS - SDD	88,995	88,995	---
105	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT	33,893	40,293	+6,400
106	LANDMINE WARFARE/BARRIER - SDD	82,260	60,960	-21,300
107	ARTILLERY MUNITIONS	42,452	42,452	---
108	COMBAT IDENTIFICATION	20,070	20,070	---
109	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE	90,864	85,364	-5,500
111	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)	6,002	6,002	---
112	FIREFINDER	20,333	20,333	---
113	SOLDIER SYSTEMS - WARRIOR DEM/VAL	19,786	19,786	---
114	ARTILLERY SYSTEMS	23,318	34,318	+11,000
115	PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	569,182	569,182	---
116	NUCLEAR ARMS CONTROL MONITORING SENSOR NETWORK	7,140	7,140	---
117	INFORMATION TECHNOLOGY DEVELOPMENT	35,309	35,309	---
118	JOINT AIR-TO-GROUND MISSILE (JAGM)	127,439	127,439	---
119	MANNED GROUND VEHICLE	100,000	50,000	-50,000
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	4,640,455	4,389,555	-250,900

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	RDT&E MANAGEMENT SUPPORT			
120	THREAT SIMULATOR DEVELOPMENT	22,222	30,222	+8,000
121	TARGET SYSTEMS DEVELOPMENT	13,615	13,615	---
122	MAJOR T&E INVESTMENT	51,846	51,846	---
123	RAND ARROYO CENTER	16,305	16,305	---
124	ARMY KWAJALEIN ATOLL	163,514	163,514	---
125	CONCEPTS EXPERIMENTATION PROGRAM	23,445	23,445	---
127	ARMY TEST RANGES AND FACILITIES	354,693	354,693	---
128	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS	72,911	75,111	+2,200
129	SURVIVABILITY/LETHALITY ANALYSIS	45,016	45,016	---
130	DOD HIGH ENERGY LASER TEST FACILITY	2,891	2,891	---
131	AIRCRAFT CERTIFICATION	3,766	3,766	---
132	METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES	8,391	8,391	---
133	MATERIEL SYSTEMS ANALYSIS	19,969	19,969	---
134	EXPLOITATION OF FOREIGN ITEMS	5,432	5,432	---
135	SUPPORT OF OPERATIONAL TESTING	77,877	77,877	---
136	ARMY EVALUATION CENTER	66,309	68,309	+2,000
137	SIMULATION & MODELING FOR ACQ, RQTS, & TNG (SMART)	5,357	5,357	---
138	PROGRAMWIDE ACTIVITIES	77,823	77,823	---
139	TECHNICAL INFORMATION ACTIVITIES	51,620	51,620	---
140	MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY	45,053	70,653	+25,600
141	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT	5,191	5,191	---
142	MANAGEMENT HEADQUARTERS (RESEARCH AND DEVELOPMENT)	15,866	15,866	---
	TOTAL, RDT&E MANAGEMENT SUPPORT	1,149,112	1,186,912	+37,800
	OPERATIONAL SYSTEMS DEVELOPMENT			
144	MLRS PRODUCT IMPROVEMENT PROGRAM	27,693	27,693	---
146	AEROSTAT JOINT PROJECT OFFICE	360,076	288,076	-72,000
147	ADV FIELD ARTILLERY TACTICAL DATA SYSTEM	23,727	30,727	+7,000
148	COMBAT VEHICLE IMPROVEMENT PROGRAMS	190,301	192,301	+2,000
149	MANEUVER CONTROL SYSTEM	21,394	21,394	---
150	AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAMS	209,401	209,401	---
151	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	792	792	---
152	DIGITIZATION	10,692	10,692	---
154	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM	39,273	39,273	---
155	OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS	---	5,000	+5,000

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
156	TRACTOR CARD	20,035	20,035	---
158	JOINT TACTICAL GROUND SYSTEM	13,258	13,258	---
159	JOINT HIGH SPEED VESSEL (JHSV)	3,082	3,082	---
161	SECURITY AND INTELLIGENCE ACTIVITIES	2,144	2,144	---
162	INFORMATION SYSTEMS SECURITY PROGRAM	74,355	74,355	---
163	GLOBAL COMBAT SUPPORT SYSTEM	144,733	144,733	---
164	SATCOM GROUND ENVIRONMENT (SPACE)	40,097	40,097	---
165	WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM	12,034	12,034	---
166	JOINT COMMAND AND CONTROL PROGRAM (JC2)	20,365	20,365	---
167	TACTICAL UNMANNED AERIAL VEHICLES	202,521	172,521	-30,000
168	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	188,414	188,414	---
170	AERIAL COMMON SENSOR (ACS)	210,035	210,035	---
172	END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES	68,466	94,466	+26,000
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	1,882,888	1,820,888	-62,000
999	CLASSIFIED PROGRAMS	3,883	47,383	+43,500
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY	10,438,218	11,151,884	+713,666

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
2	**DEFENSE RESEARCH SCIENCES**	**173,024**	**196,074**	**23,050**
	Cyber Threat Analytics		3,000	
	Organic Semiconductor Modeling and Simulation		1,100	
	Perpetually Available and Secure Information Systems		4,000	
	Maine Center for Toxicology and Environmental Health, Toxic Particles Research and Equipment		2,000	
	Nanocrystal Source Display		950	
	Secure Open Source Initiative		3,000	
	Sustainable Alternative Energy		2,000	
	Lightweight Polymer Designs for Soldier Combat Optics		1,000	
	Combat Mental Health Initiative		2,000	
	Vision Integrating Strategies in Ophthalmology and Neurochemistry		4,000	
3	**UNIVERSITY RESEARCH INITIATIVES**	**88,421**	**110,421**	**22,000**
	Antennas for Unmanned Aerial Vehicles		1,000	
	Collaboration Skills Training for Time-Critical Teams, Squads and Workgroups		2,000	
	Construct Training Program		1,500	
	Cooperative Developmental Energy Program		2,000	
	Laboratory for Engineered Human Protection		2,000	
	Manufacturing Lab for Next Generation Engineers		2,000	
	Military Family Coping Patterns		500	
	National Biodefense Training Center		5,000	
	Molecular Electronics for Flash Memory Production		2,000	
	Science, Technology, Engineering, Mathematics (STEM) at Coppin University		1,000	
	Battlefield Exercise and Combat Related Spinal Cord Injury Research		3,000	
4	**UNIVERSITY AND INDUSTRY RESEARCH CENTERS**	**96,144**	**114,844**	**18,700**
	Advanced Polymer Systems for Defense Application - Power Generation, Protection and Sensing		3,000	
	Center for Hetero-Functional Materials		1,000	
	Center for Nanoscale Bio-Sensors as a Defense against Biological Threats		3,000	
	Development of Enabling Chemical Technologies for Power from Green Sources		1,500	
	High Performance Computing in Biomedical Engineering and Health Sciences		1,500	
	Intelligent Network-Centric Sensor Development Program		1,500	
	Ink-based Desktop Electronic Material Technology		2,000	
	Manufacturing and Industrial Technology Center		500	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	Materials Processing and Applications Development Center of Excellence for Industry		1,500	
	DoD Diabetes Research and Development Initiative (DRDI)		3,200	
5	**MATERIALS TECHNOLOGY**	**27,206**	**68,256**	**41,050**
	Advanced Composite Research for Vehicles		5,000	
	Advanced Conductivity Program		1,000	
	Advanced Nanocomposite Materials for Lightweight Integrated Armor Systems		2,000	
	Aluminum Armor Project		1,050	
	Ballistic Armor Research		1,000	
	Capabilities Expansion of Spinel Transparent Armor Manufacturing		2,000	
	Composite Applied Research and Technology for FCS and Tactical Vehicle Survivability		1,500	
	Development of Improved Lighter-Weight IED/EFP Armor Solutions		2,000	
	Distributed, Networked, Unmanned Ground Systems		2,000	
	Dual Stage Variable Energy Absorber.		3,000	
	Fused Silica for Large-Format Transparent Armor		4,000	
	High Strength Glass Production and Qualification for Armor Applications		2,000	
	Large-Scale Manufacturing of Revolutionary Nanostructured Materials		1,500	
	Lightweight Metal Alloy Foam for Armor		4,000	
	Modeling and Testing of Next Generation Body Armor		1,500	
	Multi-Utility Materials for Future Combat Systems		1,000	
	Nanomanufacturing of Multifunctional Sensors		2,000	
	One-Step JP-8 Bio-Diesel Fuel		2,000	
	Reactive Materials		1,500	
	Ultra Light Metallic Armor		1,000	
6	**SENSORS AND ELECTRONIC SURVIVABILITY**	**50,641**	**67,641**	**17,000**
	Advanced Bonded Diamond for Optical Applications		2,500	
	Advanced Communications for Mobile Networks		4,000	
	Advanced Composite Nickel-Manganese-Cobalt Lithium Ion Battery		3,000	
	Advanced Detection of Explosives		2,000	
	Advanced Tactical Laser Flashlight		1,000	
	Next Generation Wearable Video Capture System		1,000	
	Surveillance Augmentation Vehicle		1,500	
	Terahertz Sensing and Imaging Technology		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
8	**AVIATION TECHNOLOGY**	**41,332**	**50,832**	**9,500**
	Composite Small Main Rotor Blades		3,000	
	Intensive Quenching for Advanced Weapon Systems		1,500	
	OMNI Active Vibration Control System		3,000	
	Technologies for Military Equipment Replenishment		2,000	
9	**ELECTRONIC WARFARE TECHNOLOGY**	**16,119**	**24,119**	**8,000**
	Hostile Fire Indicator for Aircraft		2,000	
	Integrated Information Technology Policy Analysis Research and Technology Commercialization and Management Network		4,000	
	Silver Fox and Manta Unmanned Aerial Systems		2,000	
10	**MISSILE TECHNOLOGY**	**50,716**	**64,816**	**14,100**
	Electrically Charged Mesh Defense Net Troop Protection System		7,500	
	Mariah Hypersonic Wind Tunnel Development Program		4,000	
	Portable Sensor for Toxic Gas Detection		2,600	
11	**ADVANCED WEAPONS TECHNOLOGY**	**19,678**	**22,678**	**3,000**
	Integrated Family of Test Equipment V6 Product Improvement Program		3,000	
12	**ADVANCED CONCEPTS AND SIMULATION**	**17,473**	**26,973**	**9,500**
	Advanced Live, Virtual, and Constructive Training Systems		3,500	
	Cognitive Based Modeling and Simulation for Tactical Decision Support		2,000	
	Compact Biothreat Rapid Analysis Concept		3,000	
	Protective Gear Development through Man-In-Stimulant-Test Chamber		1,000	
13	**COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY**	**55,937**	**74,437**	**18,500**
	Advanced Composite Materials Research for Land, Marine, and Air Vehicles		3,500	
	Automotive Technology Tactical Metal Fabrication System		2,500	
	Automotive Tribology Center		2,000	
	Nanofluid Coolants		500	
	Smart Oil Sensor		3,000	
	Tactical Metal Fabrication System (TacFab)		1,000	
	Turbo Fuel Cell Engine		4,000	
	Ultra Light Weight Transmissions		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
14	**BALLISTICS TECHNOLOGY**	**61,843**	**79,843**	**18,000**
	Advanced Composite Armor for Force Protection		2,000	
	Beneficial Infrastructure for Rotorcraft Risk Reduction		1,000	
	Direct Carbon Fuel Cell		3,500	
	Enabling Optimization of Reactive Armor		3,000	
	Eye-Safe Standoff Fusion Detection of CBE Threats		2,500	
	Flexible Solar Cell for Man-portable Power Generator		1,000	
	SHARK Precision Guided Artillery Round - 105mm		5,000	
15	**CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY**	**5,293**	**13,293**	**8,000**
	Highlander Electro-Optical Sensors		2,000	
	Locating and Tracking Explosive Threats with Wireless Sensors and Networks		6,000	
17	**WEAPONS AND MUNITIONS TECHNOLOGY**	**41,085**	**124,585**	**83,500**
	Advanced Rarefaction Weapon Engineered System		4,000	
	Advanced Technology, Energy Manufacturing Sciences		7,000	
	Air Drop Mortar Guided Munition for the Tactical UAV		3,000	
	Armament System Engineering and Integration Initiative		2,000	
	Armaments Academy		3,000	
	Army Center of Excellence in Acoustics, National Center for Physical Acoustics		4,000	
	Defense Support for Civil Authorities for Key Resource Protection		1,000	
	Developmental Mission Integration		7,000	
	Effects Based Operations Decision Support Services		2,000	
	Green Armament and RangeSafe Technology Initiatives		2,000	
	Highly Integrated Lethality Systems Development		4,000	
	Highly Integrated Production for Expediting Reset		2,500	
	Mortar Anti-Personnel/Anti-Materiel Technology		4,000	
	Project National Shield Integration Center		1,500	
	Rare Earth Mining Separation and Metal Production		3,000	
	Rapid Response Force Projection Systems		2,000	
	Reliability and Affordability Enhancement for Precision Guided Munition Systems		6,000	
	Scaleable Efficient Power for Armament Systems and Vehicles Dual Use		5,000	
	Specialized Compact Automated Mechanical Clearance Platform		4,000	
	Tamper Proof Organic Packaging as Applied to Remote Armament Systems		6,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	Technology Development at the Quad Cities Manufacturing Laboratory		2,000	
	Threat Detection and Neutralization		4,000	
	Tungsten Heavy Alloy Penetrator and Warhead Development		1,500	
	Unmanned Hybrid Projectiles		3,000	
18	**ELECTRONICS AND ELECTRONIC DEVICES**	**61,404**	**115,454**	**54,050**
	Advanced Flexible Solar Photovoltaic Technologies		3,000	
	Advanced Power Generation Unit for Military Applications		650	
	Advanced Power Source for Future Soldiers		1,500	
	Bio Battery		1,000	
	Program Increase - SOF Technology Insertion		10,000	
	Portable Fuel Cell Power Source		3,000	
	High-Volume Manufacturing Development for Thin-film Lithium Stack Battery Technologies		1,000	
	Integrated Lightweight Tracker System		2,000	
	Intelligent Energy Control Systems		3,000	
	Internal Base Facility Energy Independence		3,200	
	Large Format Li-Ion Battery		600	
	Market Viable, Dual-Use, Advanced Energy Storage Solutions Development		5,000	
	Micromachined Switches in Support of Transformational Communications Architecture		3,000	
	Mid-Infrared Super Continuum Laser		1,000	
	Military Fuel Cell Genset Technology Demonstration		2,500	
	Multi-Campus Base Facility Energy Independence		4,000	
	Novel Zinc Air Power Sources for Military Applications		2,500	
	ONAMI Miniaturized Tactical Energy Systems Development		2,500	
	Printed and Conformal Electronics for Military Applications		2,000	
	Soldier Situational Awareness Wristband		1,400	
	Solid Oxide Fuel Cell Powered Tactical Charger		1,200	
	Tactical Cogeneration System		1,000	
	Unmanned System Algorithm Development		4,000	
	Unjustified program growth		-5,000	
19	**NIGHT VISION TECHNOLOGY**	**26,893**	**48,893**	**22,000**
	IR-Vascular Facial Fingerprinting		3,000	
	Next Generation Communications System		1,000	
	Personal Miniature Thermal Viewer		1,000	
	Program increase		11,000	
	Standoff Improvised Explosive Detection Program		6,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
20	**COUNTERMINE SYSTEMS**	**18,945**	**20,945**	**2,000**
	Spectroscopic Materials Identification Center		2,000	
21	**HUMAN FACTORS ENGINEERING TECHNOLOGY**	**18,605**	**33,605**	**15,000**
	Leonard Wood Institute		15,000	
22	**ENVIRONMENTAL QUALITY TECHNOLOGY**	**15,902**	**19,402**	**3,500**
	Biowaste-to-Bioenergy Center		2,500	
	Rocket Motor Contained System		1,000	
23	**COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY**	**24,833**	**31,533**	**6,700**
	Command, Control, Communications Technology		2,000	
	Lightweight 10-meter Antenna Mast		2,500	
	Mobile Mesh Network Node		2,200	
25	**MILITARY ENGINEERING TECHNOLOGY**	**54,818**	**61,918**	**7,100**
	Cellulose Nanocomposites Panels for Ballistic Protection		2,000	
	Environmentally Intelligent Moisture and Corrosion Control for Concrete		2,100	
	Geosciences/Atmospheric Research		3,000	
27	**WARFIGHTER TECHNOLOGY**	**27,109**	**31,909**	**4,800**
	Improved Thermal Resistant Nylon for Enhanced Durability and Thermal Protection in Combat Uniforms		1,500	
	Injection Molded Ceramic Body Armor		1,000	
	Joint Precision AirDrop Systems-Wind Profiling Portable Radar		2,300	
28	**MEDICAL TECHNOLOGY**	**99,027**	**195,942**	**96,915**
	Advanced Bio-Engineering for Enhancement of Soldier Survivability		3,000	
	Advanced Functional Nanomaterials for Biological Processes		2,500	
	Aliginate Oligomers to Treat Infectious Microbial Biofilms		2,000	
	Battlefield Research Accelerating Virtual Environments for Military Individual Neuro Disorders (BRAVEMIND)		1,000	
	Protein Hydrogel for Surgical Repair of Battlefield Injuries		1,000	
	Cancer Prevention through Remote Biological Sensing		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1	Budget Request	Committee Recommended	Change from Request
Carbide Derived Carbon for Treatment of Combat Related Sepsis		1,000	
Center for Bone Repair and Military Readiness		1,500	
Center for Injury Biomechanics		4,000	
Womens Cancer Genomics Center		3,000	
Clinical Trial to Investigate Efficacy of Human Skin Substitute		1,000	
Control of Vector-Borne Diseases		3,000	
Diabetes Care in the Military		2,000	
Flu Vaccine Technology Program		1,500	
Epigenetic Disease Research		2,000	
Evaluation of Integrative Approaches to Resilience		2,000	
Extended Duration Silver Wound Dressing - Phase II		1,000	
Eye Trauma and Visual Restoration		1,000	
Florida Trauma Rehabilitation Institute for Returning Military Personnel		3,000	
Framework for Electronic Health Record-Linked Predictive Models		3,000	
Human Organ and Tissue Preservation Technology		2,000	
Improving Soldier Recovery from Catastrophic Bone Injuries		4,000	
Jackson Health System Military Trauma Training Enhancement Initiative		2,500	
Lifestyle Modifications to Reduce Chronic Disease in Military Personnel		1,500	
Lightweight, Battery Driven, and Battlefield Deployment Ready NG Feeding Tube Cleaner		500	
Myositis Association-exposure to environmental toxins		1,250	
Nanofiber Based Synthetic Bone Repair Device for Limb Salvage		1,000	
Nano-Imaging Agents for Early Disease Detection		1,000	
National Eye Evaluation and Research Network		3,000	
Neuro-Performance Research		2,000	
Neuroscience Research Consortium to Study Spinal Cord Injury		1,500	
New York Medical College Bioterorism Research		165	
Non-Leaching Antimicrobial Surface for Orthopedic Devices		1,500	
Operating Room of the Future		2,500	
Portable Low-Volume Therapy for Severe Blood Loss		2,000	
Positron Capture and Storage		1,500	
Rapid Wound Healing Cell Technology		2,500	
Regenerative Medicine Research		2,000	
Research to Develop Strategies to Improve Prognosis of Soldiers Suffering Abdominal Trauma		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	Research to Treat Cancerous Brain Tumors using Neural Stem Cells		2,000	
	School of Nursing Advancement		2,000	
	Self Powered Prosthetic Limb Technology		2,000	
	Synchrotron-Based Scanning Research Neuroscience and Proton Institute		6,000	
	Technology Solutions for Brain Cancer Detection and Treatment		1,500	
	Understanding Blast Induced Brain Injury		3,000	
	University of Miami Ryder Trauma Center/ William Lehman Injury Research Center		4,000	
	Westchester County Medical Center Health Imaging Upgrades		1,500	
29	**WARFIGHTER ADVANCED TECHNOLOGY**	**37,574**	**54,524**	**16,950**
	Advanced Packaging Materials for Combat Rations		1,000	
	Compostable and Recyclable Fiberboard Material for Secondary Packaging		2,500	
	Multi-layer Co-extrusion for High Performance Packaging		2,000	
	Next Generation Precision Airdrop System		2,500	
	Precision Guided Airdropped Equipment		1,500	
	Predictive Casting Process Modeling for Rapid Production of Critical Defense Components		2,000	
	Reducing First Responder Casualties with Physiological Monitoring		1,500	
	Remote Environmental Monitoring and Diagnostics in the Perishables Supply Chain		2,750	
	Soldier Personal Cooling System		1,200	
30	**MEDICAL ADVANCED TECHNOLOGY**	**72,940**	**301,866**	**228,926**
	Advanced Cancer Genome Institute		2,500	
	Advanced Diagnostic and Therapeutic Digital Technologies		2,000	
	Advanced Military Wound Healing Research and Treatment		1,000	
	Alliance for Nanohealth		5,000	
	ALS Therapy Development Institute -Gulf War Illness Research Project		2,000	
	Anti-Microbial Bone Graft Product		2,000	
	Antioxidant Micronutrient Therapeutic Countermeasures		1,000	
	Automated Portable Field System for Rapid Detection and Diagnosis of Endemic Diseases and Other Pathogens		2,000	
	Battlefield Nursing		2,000	
	Battlefield Related Injury Translational Research Strategies		2,250	
	Bio-Printing of Skin for Battlefield Burn Repairs		1,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1	Budget Request	Committee Recommended	Change from Request
Blood and Bone Marrow Collection Fellowship		2,500	
Blood Safety and Decontamination Technology		3,000	
Brain Interventional Surgical Hybrid Initiative		3,000	
Brain Safety Net		3,000	
Breast Cancer Medical Information Network Decision Support		1,000	
Cellular Therapy for Battlefield Wounds		3,500	
Center for Cancer Immunology Research		2,000	
Center for Genetic Origins of Cancer		2,500	
Center for Integration of Medicine and Innovative Technology		9,000	
Center for Ophthalmic Innovation		3,000	
Center of Excellence in Infectious Diseases and Human Microbiome		3,000	
Center for Virtual Reality Medical Simulation Training		1,500	
Clinical Technology Integration for Military Health		2,000	
Chronic Tinnitus Treatment Program		1,000	
Collagen-Based Wound Dressing		1,000	
Combat Wound Initiative		3,000	
Customized Nursing Programs for Fort Benning		2,000	
Enhancing Military Ophthalmic Education and Overcoming Urban Healthcare Disparities with Telemedicine		3,000	
Enhancing Wound Healing, Tissue Regeneration, and Biomarker Discovery		2,500	
Exceptional Family Transitional Training Program for US Military Soldiers, Sailors, Marines and Airmen		800	
Hadron Particle Therapy		2,000	
Human Genomics, Molecular Epidemiology, and Clinical Diagnostics for Infectious Diseases		1,500	
Health Disparities in Troop Readiness		8,000	
Imaging and Cognitive Evaluation of Soldiers		800	
Infection Prevention Program for Battlefield Wounds		2,000	
Infectious and Airborne Pathogen Reduction		2,800	
Institute for Simulation and Interprofessional Studies		5,800	
Advancement of Bloodless Medicine		1,866	
Intelligent Orthopedic Fracture Implant Program		1,000	
Integrated Patient Electronic Record System		2,000	
Joint Medical Simulation Technology Center		1,600	
Linear Accelerator Cancer Research Project		1,000	
Maine Institute for Human Genetics and Health		2,000	
Malaria Vaccine Development		2,000	
Marty Driesler Lung Cancer Project		2,000	
Mass Casualty First Responders Disaster Surge Technology Program		3,000	
Medical Biosurveillance and Efficiency Program		2,000	
Medical Errors Reduction Initiative		2,500	
Microencapsulation and Vaccine Delivery Research		1,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1	Budget Request	Committee Recommended	Change from Request
Midwest Traumatic Injury Rehabilitation Center		1,460	
Military Burn Trauma Research Program		2,000	
Military Low Vision Research		3,000	
Military Drug Management System		3,000	
Military Mental Health Initiative		750	
Military Pediatric Training and Support		5,000	
Mission Hospital Computerized Physician Order Entry		1,000	
Mobile Integrated Diagnostic and data Analysis		2,000	
Montefiore Critical Looking Glass		1,500	
Multiplexed Human Fungal Infection Diagnostic		2,000	
Musculoskeletal Interdisciplinary Research Initiative		2,000	
National Functional Genomics Center		6,000	
National Oncogenomics and Molecular Imaging Center		5,950	
Northern Illinois Proton Treatment and Research Center		3,500	
NAU-Tgen North Dangerous Pathogens DNA Forensics Center Upgrades		2,000	
Near Infrared Spectroscopy Military Personnel Assessment		1,000	
Neural Control of External Devices		1,000	
Neuroimaging and Neuropsychiatric Trauma in US Warfighters		6,250	
Nursing Teaching and Leadership Program		1,000	
Nicholson Center for Surgical Advancement Medical Robotics and Simulation		5,250	
Personal Status Monitor		1,000	
Nurse Education Center of Excellence for Remote and Medically Underserved Populations		2,000	
Operation Re-Entry NC		3,000	
Parsons Institute for Information Mapping		1,500	
Pediatric Cancer Research and Clinical Trials		2,000	
Plant-Based Vaccine Research		2,500	
Plug-In Architecture for DOD Medical Imaging		1,500	
Power Efficient Microdisplay Development for US Army Night Vision		3,000	
Prader Willi Syndrome Research		2,000	
Pride Center for America's Wounded Veterans		2,000	
Remote Bio-Medical Detector		3,500	
Rural Health Center of Excellence for Remote and Medically Underserved Populations		2,000	
Sensor Tape Physiological Monitoring		2,500	
Smart Wound Dressing for MRSA Infected Battlefield Wounds		1,000	
Spinal Cord Restoration Therapies		1,000	
Spinal Muscular Atrophy Research Program		3,000	
Stress Disorders Research Initiative at Fort Hood		3,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	Dermal Matrix Research		2,000	
	Techniques to Manage Noncompressible Hemorrhage Following Combat Injury		2,500	
	Telepharmacy Robotic Medicine Device Unit		1,000	
	Testing of Microneedle Device for Multiple Applications		1,200	
	Translational Research for Muscular Dystrophy		2,000	
	Transportable Renal Replacement Therapy for Battlefield Applications		1,000	
	Treatment of Battlefield Spinal Cord and Burn Injuries		450	
	VTOL Man-Rated UAV and UGV for Medical Multi-Missions and CASEVAC		1,000	
	Vanadium Safety Readiness		4,200	
	Wounded Servicemember Bioelectrics Research		1,500	
31	**AVIATION ADVANCED TECHNOLOGY**	**60,097**	**87,097**	**27,000**
	Advanced Affordable Turbine Engine Program		4,000	
	Crewmember Alert Display Development Program		2,000	
	Drive System Composite Structural Component Risk Reduction Program		3,000	
	Fighting Combat-related Fatigue Syndrome		1,000	
	Inter Turbine Burner for Turbo Shaft Engines		3,000	
	Next Generation Green, Economical and Automated Production of Composite Structures for Aerospace		1,000	
	Qualification and Insertion of New High Temperature Domestic Sourced PES for Military Aircraft		3,000	
	Heavy Fuel Engine Family for Unmanned Systems		4,000	
	UH-60 Transmission/Gearbox Galvanic Corrosion Reduction		1,500	
	Wireless HUMS for Condition Based Maintenance of Army Helicopters		2,000	
	Universal Control		2,500	
32	**TECHNOLOGY**	**66,410**	**89,910**	**23,500**
	Advanced Lightweight Gunner Protection Kit for Lightweight MRAP Vehicle		1,000	
	Lens-Less Dual-Mode Micro Seeker for Medium-Caliber Guided Projectiles		2,500	
	Lightweight Munitions and Surveillance System for Unmanned Air and Ground Vehicles		4,800	
	Micro Inertial Navigation Unit Technology		1,500	
	Nanotechnology Fuze		2,000	
	Next Generation Machining Technology and Equipment		2,000	
	Rapid Insertion of Developmental Technologies into Fielded Systems		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	Recovery, Recycle, and Reuse of DOE Metals for DoD Applications		2,400	
	Soldier Protection through Unmanned Ground Vehicles		1,500	
	Titanium Powder Advanced Forged Parts Program		3,800	
33	**COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY**	**89,586**	**162,186**	**72,600**
	Advanced Battery Materials and Manufacturing		5,000	
	Advanced Carbon Hybrid Battery for Hybrid Electic Vehicles		1,000	
	Advanced Composites for Light Weight, Low Cost Transportation Systems using a 3+ Ring Extruder		3,000	
	Advanced Digital Hydraulic Drive System		2,500	
	Advanced Lightweight Multifunctional Multi-Threat Composite Armor Material Technology		3,000	
	Advanced Lithium Ion Phosphate Battery System for Army Combat Hybrid HMMWV and Other Army Vehicle Platforms		2,000	
	Advanced Technology for Energy Storage		2,000	
	Advanced Thermal Management System		3,000	
	All Composite Bus Program		2,500	
	Ceramic and MMC Armor Development using Ring Extruder Technology		1,000	
	Army Vehicle Condition Based Maintenance		5,000	
	Electric All Terrain Ultra Light Vehicle for the Minnesota National Guard		2,000	
	Fire Shield		4,000	
	Friction Stir Welding Program		3,000	
	Fuel System Component Technology Research		2,000	
	Fully Burdened Cost of Fuel and Alternative Energy Methodology and Conceptual Model		3,500	
	Hybrid Electric Drive All Terrain Vehicle		2,000	
	Hybrid Electric Heavy Truck Vehicle		2,000	
	Integrated Defense Technical Information		2,000	
	Logistical Fuel Processors Development		1,500	
	Networked Reliability and Safety Early Evaluation System		2,000	
	Protective 3-D Armor Structure to Safeguard Military Vehicles and Troops		2,000	
	Smart Plug-In Hybrid Vehicle Program		4,100	
	Silent Watch, IB NPS 1160 Lithium-Ion Advanced Battery		1,000	
	Superlattice Semiconductors for Mobile SS Lighting and Solar Power Applications		3,500	
	Unmanned Robotic System Utilizing a Hydrocarbon Fueled Solid Oxide Fuel Cell System		3,000	
	Program increase		5,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	COMMAND, CONTROL, COMMUNICATIONS			
34	**ADVANCED TECHNOLOGY**	**8,667**	**13,667**	**5,000**
	Program increase		5,000	
36	**ELECTRONIC WARFARE ADVANCED TECHNOLOGY**	**50,458**	**57,258**	**6,800**
	Applied Communication and Information Networking		3,800	
	Portable Mobile Emergency Broadband Systems		3,000	
	NEXT GENERATION TRAINING AND SIMULATION			
38	**SYSTEMS**	**19,415**	**23,915**	**4,500**
	Combat Medic Trainer		2,000	
	Joint Fires and Effects Trainer System Enhancements		2,500	
40	**EXPLOSIVES DEMILITARIZATION TECHNOLOGY**	**0**	**3,500**	**3,500**
	Advanced Reactive Armor Systems		2,000	
	Zumwalt National Program for Countermeasures to Biological and Chemical Threats		1,500	
41	**MILITARY HIV RESEARCH**	**6,657**	**29,657**	**23,000**
	HIV Prevention and Reducing Risk to US Military Personnel		3,000	
	Program Increase		20,000	
43	**ELECTRONIC WARFARE TECHNOLOGY**	**19,192**	**22,692**	**3,500**
	Advanced Ground EW and Signals Intelligence System		2,500	
	AN/ALQ 211 Networked EW Controller		1,000	
44	**MISSILE AND ROCKET ADVANCED TECHNOLOGY**	**63,951**	**75,751**	**11,800**
	Anti-Tamper Research and Development		3,800	
	Captive Carry Sensor Test-Bed		3,000	
	Foil Bearing Suppported UAV Engine		1,000	
	Waterside Wide Area Tactical Coverage and Homing		4,000	
48	**NIGHT VISION ADVANCED TECHNOLOGY**	**40,329**	**64,829**	**24,500**
	Brownout Situational Awareness Sensor		3,000	
	Buster/Blacklight UAV Development		1,000	
	Enhanced Driver Situational Awareness		1,000	
	Hyper Spectral Sensor for Improved Force Protection		2,000	
	Program Increase		15,000	
	Night Vision and Electronic Sensors Directorate		2,500	
50	**MILITARY ENGINEERING ADVANCED TECHNOLOGY**	**5,911**	**45,461**	**39,550**
	Conversion of Municipal Solid Waste to Renewable Diesel Fuel		3,150	
	Defense Support to Civil Authorities Automated Support System		2,000	
	Demonstration of Thin Film Solar Modules as a Renewable Energy Source		1,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	Distributed Power from Wastewater		2,500	
	Enhancing the Commercial Joint Mapping Toolkit to Support Tactical Military Operations		4,000	
	Field Deployable Hologram Production System		4,800	
	Gas Engine Driven Air Conditioning		3,000	
	Hybrid Energy Systems Design and Testing		2,000	
	Lightweight Protective Roofing		1,500	
	Nanotechnology for Potable Water and Waste Treatment		2,000	
	Optimization of the US Army Topographic Data Management Enterprise		2,600	
	Pacific Command Renewable Energy Security Systems		3,000	
	Ruggedized Military Laptop Fuel Cell Power Supply-Project Phase 3		4,000	
	University Center for Disaster Preparedness and Emergency Response		1,500	
	Zinc-Flow Electrical Energy Storage		2,500	
51	**ADVANCED TACTICAL COMPUTER SCIENCE AND SENSOR TECHNOLOGY**	**41,561**	**60,061**	**18,500**
	Advanced Radar Transceiver IC Development		1,000	
	CERDEC Integrated Tool Control System		2,000	
	Foliage Penetrating, Reconnaissance, Surveillance, Tracking, and Engagement Radar (FORESTER) Phase II		2,000	
	Intelligence, Surveillance and Reconnaissance (ISR) Simulation Integration Laboratory		2,000	
	Optimizing Natural Language Processing of Open Source Intelligence		1,500	
	Reduced Manning Situational Awareness		5,000	
	Shared Vision		3,000	
	Video Compression Technology		2,000	
52	**UNIQUE ITEM IDENTIFICATION (UID)**	**0**	**2,500**	**2,500**
	IUID Data Platform		2,500	
53	**ARMY MISSILE DEFENSE SYSTEMS INTEGRATION**	**14,683**	**31,683**	**17,000**
	Advanced Fuel Cell Research Program		4,000	
	Alternative Power Technology for Missile Defense		1,000	
	Biological Air Filtering System Technology		3,000	
	Compact Pulsed Power Initiative		4,000	
	Geospatial Airship Research Platform		4,000	
	Remote Explosive Analysis and Detection System		1,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
54	**ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (SPACE)**	**117,471**	**120,471**	**3,000**
	Advanced Power Technologies for Nano-Satellites		2,000	
	Tactical Overwatch High Altitude System		1,000	
55	**AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING**	**209,531**	**110,531**	**-99,000**
	Center for Defense Systems Research		1,000	
	Excessive Project Cost Growth and Large Unobligated Balances		-100,000	
64	**ENVIRONMENTAL QUALITY TECHNOLOGY**	**4,770**	**19,770**	**15,000**
	Cadmium Emissions Reduction - Letterkenny Army Depot		1,000	
	Program increase		10,000	
	Renewable Energy Testing Center		1,000	
	Vanadium Technology Program		3,000	
65	**WARFIGHTER INFORMATION NETWORK-TACTICAL**	**180,673**	**165,673**	**-15,000**
	Program adjustment for FCS termination		-15,000	
68	**LOGISTICS AND ENGINEER EQUIPMENT - ADVANCED DEVELOPMENT**	**56,373**	**57,373**	**1,000**
	In-Theater Evaluation of Ballistic Protection		1,000	
70	**MEDICAL SYSTEMS - ADVANCED DEVELOPMENT**	**31,275**	**37,275**	**6,000**
	Execution of a Quality Systems Program for FDA Regulation Activities		1,500	
	Model for Green Laboratories and Clean Rooms		1,500	
	Wireless Medical Monitoring System		3,000	
71	**SOLDIER SYSTEMS - ADVANCED DEVELOPMENT**	**71,832**	**71,007**	**-825**
	Unexecutable growth		-5,000	
	Acid Alkaline Direct Methanol Fuel Cell		2,000	
	Fire Suppression System		1,425	
	Improved HELLHOUND 40mm Low Velocity High Explosive Ammunition		750	
73	**AIRCRAFT AVIONICS**	**92,977**	**88,977**	**-4,000**
	Unjustified program growth		-4,000	
74	**ARMED, DEPLOYABLE OH-58D**	**65,515**	**70,515**	**5,000**
	Advanced Composite Ammunition Magazine/Mount System		2,000	
	LW25 Gun System and Demonstration		3,000	
78	**INFANTRY SUPPORT WEAPONS**	**74,814**	**76,814**	**2,000**
	Headborne Energy Analysis and Diagnostic System		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
81	**FAMILY OF HEAVY TACTICAL VEHICLES**	**7,477**	**10,477**	**3,000**
	Mobile Power 30 kW System Power Control Unit Development Project		1,000	
	RDT&E for the Family of Heavy Tactical Vehicles (FHTV)		2,000	
84	**NON-LINE OF SIGHT CANNON**	**58,216**	**31,216**	**-27,000**
	Unjustified termination costs		-27,000	
85	**FCS MANNED GROUND VEHICLES AND COMMON GROUND VEHICLE**	**368,557**	**184,557**	**-184,000**
	Unjustified termination costs		-184,000	
92	**NIGHT VISION SYSTEMS - SDD**	**55,410**	**57,910**	**2,500**
	Standard Ground Station - Enhancement Program		2,500	
102	**WEAPONS AND MUNITIONS - SDD**	**34,878**	**44,378**	**9,500**
	Lightweight Packaging System for Enhancing Combat Munitions Logistics		2,000	
	Precision Guidance Kit Technology Development		7,500	
103	**LOGISTICS AND ENGINEER EQUIPMENT - SDD**	**36,018**	**37,518**	**1,500**
	Autonomous Sustainment Caargo Container		1,500	
105	**MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT**	**33,893**	**40,293**	**6,400**
	Army Portable Oxygen Concentration System		1,500	
	Nanophotonic Biosensor Detection of Bioagents and Pathogens		1,900	
	Plasma Sterilizer		3,000	
106	**LANDMINE WARFARE/BARRIER - SDD**	**82,260**	**60,960**	**-21,300**
	Program adjustment for FCS termination		-21,300	
109	**ARMY TACTICAL COMMAND AND CONTROL HARDWARE AND SOFTWARE**	**90,864**	**85,364**	**-5,500**
	Unjustified program growth		-5,500	
114	**ARTILLERY SYSTEMS**	**23,318**	**34,318**	**11,000**
	M109A6 Paladin		2,000	
	Program Increase		9,000	
119	**MANNED GROUND VEHICLE**	**100,000**	**50,000**	**-50,000**
	Unjustified program growth		-50,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
120	**THREAT SIMULATOR DEVELOPMENT**	**22,222**	**30,222**	**8,000**
	Electronic Combat and Counter Terrorism Threat Developments to Support Joint Forces		3,000	
	Joint Threat Emitters		5,000	
128	**ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS**	**72,911**	**75,111**	**2,200**
	Define Renewable Energy Sources for Base Energy Independence		1,000	
	MOTS All Sky Imager		1,200	
136	**ARMY EVALUATION CENTER**	**66,309**	**68,309**	**2,000**
	Tire to Track Transformer System for Light Vehicles		2,000	
140	**MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY**	**45,053**	**70,653**	**25,600**
	Defense Metals Technology Center		2,500	
	Atomized Magnesium Domestic Production Design and Development		2,000	
	Domestic Production of Nanodiamond for Military Applications		2,000	
	Improved Thermal Batteries for Guided Munitions		3,000	
	Joint Munitions and Lethality Mission Integration		2,000	
	Medium Caliber Metal Parts Upgrade		3,100	
	Nano Advanced Cluster Energetics		2,000	
	Nanotechnology-Enabled Self-Healing Anti-Corrosion Coating Products		2,000	
	Program Increase - Protective Armor Systems		5,000	
	Self-Powered Sensor System for Munition Guidance and Health Monitoring		2,000	
146	**AEROSTAT JOINT PROJECT OFFICE**	**360,076**	**288,076**	**-72,000**
	Funding ahead of need		-72,000	
147	**ADV FIELD ARTILLERY TACTICAL DATA SYSTEM**	**23,727**	**30,727**	**7,000**
	Advanced Field Artillery Tactical Data System		4,500	
	Voice Recognition and Cross Platform Speech Interface System		2,500	
148	**COMBAT VEHICLE IMPROVEMENT PROGRAMS**	**190,301**	**192,301**	**2,000**
	Current Force Common Active Protection System Radar		2,000	
155	**OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS**	**0**	**5,000**	**5,000**
	Javelin Warhead Improvement Program		5,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
167	**TACTICAL UNMANNED AERIAL VEHICLES**	**202,521**	**172,521**	**-30,000**
	Unjustified program growth		-30,000	
172	**END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES**	**68,466**	**94,466**	**26,000**
	Achieving Lightweight Casting Solutions		2,000	
	ARL 3D Model-Based Inspection and Scanning		3,000	
	De-Weighting Military Vehicles through Advanced Composites Manufacturing Technology		2,000	
	High Performance Alloy Materials and Advanced Manufacturing of Steel Castings for New Light Weight and Robotic Weapon Systems		3,000	
	Lightweight Magnesium Parts For Military Applications		2,000	
	National Center for Defense Manufacturing and Machining		2,000	
	Network Centric Prototype Manufacturing		4,000	
	Polymeric Web Run-Flat Tire Inserts for Convoy Protection		3,500	
	Smart Machine Platform Initiative		3,000	
	Solid State Processing of Titanium Alloys for Advanced Materiel Armaments		1,500	
999	**CLASSIFIED PROGRAMS**	**3,883**	**47,383**	**43,500**
	Asymmetric Threat Response and Analysis Project		2,500	
	Army/Joint STARS Surveillance and Control Data Link Technology Refresh		1,000	
	Classified adjustment		40,000	

FUTURE COMBAT SYSTEMS

On April 6, 2009 the Secretary of Defense announced a restructure of the Army Future Combat Systems (FCS). The restructured program will expand the spin out of technology enhancements for all Army combat brigades and cancel the manned ground vehicle component of the program. On June 23, 2009, the Under Secretary of Defense (Acquisition, Technology and Logistics) directed that due to the directive language found in Section 8085 of the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 pertaining to the independent development and fielding of the Non-Line of Sight Cannon component, work on the cannon component would be stopped but not terminated. However, the Committee has not retained this language in this bill, relieving the Army from the management and production requirements related to the Non-Line of Sight Cannon. Also, on June 23, 2009, the Under Secretary of Defense published a Future Combat Systems (FCS) Brigade Combat Team (BCT) Acquisition Decision Memorandum which cancels the FCS Brigade Combat Team acquisition program; holds the Non-Line of Sight Cannon component in a stop work status; and transitions to integrated acquisition programs that will spin out equipment sets to seven brigades; proceed with a brigade modernization effort to develop, produce and field unmanned systems, sensors and the communications network; and explore development of new ground combat vehicles.

The Committee supports the Army's efforts to promptly field proven advances in technology to all combat brigades while refocusing efforts to modernize the equipment in brigade combat teams. The Committee supports Army efforts to harvest technology from the current manned ground vehicle program, and work with the Marine Corps to identify capability gaps and lessons learned from recent combat operations. The budget request proposes $2,553,042,000 for FCS research, development, test and evaluation and $327,921,000 in procurement funding; in all $2,880,963,000. The Committee recommends $2,669,963,000, as requested for FCS lines with the exception of the Non-Line of Sight Cannon and Manned Ground Vehicles, as discussed below.

NON-LINE OF SIGHT CANNON

The budget request proposed $58,216,000 for termination of the Future Combat Systems (FCS) Non-Line of Sight Cannon program. The Committee is aware that as of the end of April 2009 the program had approximately $236,500,000 in unexecuted fiscal year 2009 procurement and research, development, test and evaluation funding. Additionally, the Committee understands that the basis for the request for termination funding was uncertain and preliminary. Therefore, the Committee recommends funding of $31,216,000 for termination costs, a reduction of $27,000,000 below the budget request.

The Committee bill has not retained the directive language found in Section 8085 of The Consolidated Security, Disaster Assistance, and continuing Appropriations Act, 2009 pertaining to the independent development and fielding of the Non-Line of Sight Cannon component.

FUTURE COMBAT SYSTEMS MANNED GROUND VEHICLES

The budget request proposed $368,557,000 for termination of the Future Combat Systems Manned Ground Vehicle component. However, the Committee is aware that as of the end of April 2009 the program had approximately $740,000,000 in unexecuted fiscal year 2009 funds available. The Committee believes that a significant portion of termination requirements should be funded with available funding. The Committee recommends $184,557,000 for termination costs, a reduction of $184,000,000 below the budget request.

MANNED GROUND VEHICLE

The budget request proposed $100,000,000 for a new Manned Ground Vehicle Program which is intended to capture the design effort and technological advances from the Future Combat Systems Manned Ground Vehicle component for leverage in a follow on program. The Committee is aware of the Army's desire to proceed quickly with the new Manned Ground Vehicle program; however, the Committee believes the estimate of funding required to initiate the effort is uncertain and accordingly, the Committee recommends funding of $50,000,000, a reduction of $50,000,000 below the request.

AEROSTAT JOINT PROGRAM OFFICE

The budget request proposed $360,076,000 for the Aerostat Joint Program Office. However, the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System Development and Demonstration (SDD) program has been delayed 12 months, extending the SDD effort into fiscal year 2011. The Committee recommends funding of $288,076,000, a reduction of $72,000,000 below the request.

TACTICAL UNMANNED AERIAL SYSTEMS

The budget request proposed $202,521,000 for Tactical Unmanned Aerial Systems research, development, test and evaluation. The Committee notes the ever increasing demand for Intelligence, Surveillance, and Reconnaissance products provided by unmanned aerial vehicles, including the Shadow and Predator series aircraft. In recognition of this requirement, the Congress in the Supplemental Appropriations Act, 2009 fully funded the requested amount for procurement of Tactical Unmanned Aerial Systems and provided $80,000,000 in additional funding to enhance and accelerate capabilities. The Committee strongly supports advances in Intelligence, Surveillance, and Reconnaissance capability, but the Committee is concerned that the program growth proposed for fiscal year 2010 above the fiscal year 2009 appropriated amount of $104,276,000 is unjustified and recommends funding of $172,521,000, a reduction of $30,000,000.

ARMY RESEARCH LABORATORY SMALL BUSINESS SPECIAL OPERATIONS FORCES TECHNOLOGY INSERTION

The Committee recommends $10,000,000 only for the Army Research Laboratory to establish a small business technology insertion program, using the Navy's very successful SBIR technology in-

sertion contracting approach, to identify technologies developed under the Army Research Laboratory SBIR program for Army Special Operations Forces and insert them into Army programs of record to reduce acquisition and operating costs. The program should identify advanced SBIR technologies developed in small numbers for the Special Operations Forces that can either be accelerated and/or broadened for use in the Army's weapon system development programs for active and reserve forces.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

Fiscal year 2009 appropriation	$19,764,276,000
Fiscal year 2010 budget request	19,270,932,000
Committee recommendation	20,197,300,000
Change from budget request	926,368,000

This appropriation provides funds for the research, development, test and evaluation activities of the Department of the Navy, which includes the Marine Corps. The total amount recommended in the bill will provide the following program in fiscal year 2010:

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY			
	BASIC RESEARCH			
1	UNIVERSITY RESEARCH INITIATIVES	99,472	103,472	+4,000
2	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	18,076	18,076	---
3	DEFENSE RESEARCH SCIENCES	413,743	426,143	+12,400
	TOTAL, BASIC RESEARCH	531,291	547,691	+16,400
	APPLIED RESEARCH			
4	POWER PROJECTION APPLIED RESEARCH	59,787	68,787	+9,000
5	FORCE PROTECTION APPLIED RESEARCH	91,400	124,900	+33,500
6	MARINE CORPS LANDING FORCE TECHNOLOGY	39,308	39,308	---
7	MATERIALS, ELECTRONICS AND COMPUTER TECHNOLOGY	---	3,500	+3,500
8	COMMON PICTURE APPLIED RESEARCH	83,163	85,963	+2,800
9	WARFIGHTER SUSTAINMENT APPLIED RESEARCH	104,169	104,169	---
10	RF SYSTEMS APPLIED RESEARCH	64,816	68,316	+3,500
11	OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH	48,750	53,750	+5,000
12	JOINT NON-LETHAL WEAPONS APPLIED RESEARCH	6,008	6,008	---
13	UNDERSEA WARFARE APPLIED RESEARCH	55,694	60,194	+4,500
14	MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH	40,880	40,880	---
	TOTAL, APPLIED RESEARCH	593,975	655,775	+61,800
	ADVANCED TECHNOLOGY DEVELOPMENT			
15	POWER PROJECTION ADVANCED TECHNOLOGY	107,969	125,869	+17,900
16	FORCE PROTECTION ADVANCED TECHNOLOGY	66,035	91,935	+25,900
17	COMMON PICTURE ADVANCED TECHNOLOGY	108,394	49,284	-59,110
18	WARFIGHTER SUSTAINMENT ADVANCED TECHNOLOGY	86,239	95,039	+8,800
19	ELECTROMAGNETIC SYSTEMS ADVANCED TECHNOLOGY	65,827	65,827	---
20	MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION (ATD)	107,363	114,863	+7,500
21	JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT	10,998	11,998	+1,000
22	WARFIGHTER PROTECTION ADVANCED TECHNOLOGY	18,609	52,609	+34,000
23	UNDERSEA WARFARE ADVANCED TECHNOLOGY	68,037	76,037	+8,000
24	NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS	52,643	52,643	---
25	MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY	28,782	30,782	+2,000
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	720,896	766,886	+45,990

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	DEMONSTRATION & VALIDATION			
26	AIR/OCEAN TACTICAL APPLICATIONS	116,082	117,982	+1,900
27	AVIATION SURVIVABILITY	6,505	19,505	+13,000
28	DEPLOYABLE JOINT COMMAND AND CONTROL	6,032	9,832	+3,800
29	ASW SYSTEMS DEVELOPMENT	16,585	26,455	+9,870
30	TACTICAL AIRBORNE RECONNAISSANCE	7,713	10,213	+2,500
31	ADVANCED COMBAT SYSTEMS TECHNOLOGY	1,677	4,177	+2,500
32	SURFACE AND SHALLOW WATER MINE COUNTERMEASURES	76,739	86,739	+10,000
33	SURFACE SHIP TORPEDO DEFENSE	57,538	70,038	+12,500
34	CARRIER SYSTEMS DEVELOPMENT	173,594	173,594	---
35	SHIPBOARD SYSTEM COMPONENT DEVELOPMENT	1,691	13,791	+12,100
36	PILOT FISH	79,194	79,194	---
37	RETRACT LARCH	99,757	99,757	---
38	RETRACT JUNIPER	120,752	120,752	---
39	RADIOLOGICAL CONTROL	1,372	1,372	---
40	SURFACE ASW	21,995	23,995	+2,000
41	ADVANCED SUBMARINE SYSTEM DEVELOPMENT	551,836	554,836	+3,000
42	SUBMARINE TACTICAL WARFARE SYSTEMS	10,172	11,172	+1,000
43	SHIP CONCEPT ADVANCED DESIGN	22,541	22,541	---
44	SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES	28,135	40,935	+12,800
45	ADVANCED NUCLEAR POWER SYSTEMS	259,887	259,887	---
46	ADVANCED SURFACE MACHINERY SYSTEMS	5,599	13,199	+7,600
47	CHALK EAGLE	443,555	443,555	---
48	LITTORAL COMBAT SHIP (LCS)	360,518	366,918	+6,400
49	COMBAT SYSTEM INTEGRATION	22,558	22,558	---
50	CONVENTIONAL MUNITIONS	3,458	4,458	+1,000
51	MARINE CORPS ASSAULT VEHICLES	293,466	243,466	-50,000
53	MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM	73,798	73,798	---
54	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	21,054	21,054	---
55	COOPERATIVE ENGAGEMENT	56,586	61,586	+5,000
56	OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT	17,328	17,328	---
57	ENVIRONMENTAL PROTECTION	20,661	20,661	---
58	NAVY ENERGY PROGRAM	8,476	13,476	+5,000
59	FACILITIES IMPROVEMENT	4,002	9,202	+5,200
60	CHALK CORAL	70,772	70,772	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
61	NAVY LOGISTIC PRODUCTIVITY	4,301	7,101	+2,800
62	RETRACT MAPLE	210,237	210,237	---
63	LINK PLUMERIA	69,313	69,313	---
64	RETRACT ELM	152,151	152,151	---
65	SHIP SELF DEFENSE	6,960	6,960	---
66	LINK EVERGREEN	123,660	123,660	---
67	SPECIAL PROCESSES	54,115	54,115	---
68	NATO RESEARCH AND DEVELOPMENT	10,194	10,194	---
69	LAND ATTACK TECHNOLOGY	1,238	8,238	+7,000
70	NONLETHAL WEAPONS	46,971	49,871	+2,900
71	JOINT PRECISION APPROACH AND LANDING SYSTEMS	150,304	150,304	---
72	SINGLE INTEGRATED AIR PICTURE (SIAP) SYSTEM ENGINEER	52,716	52,716	---
74	DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS	5,003	22,003	+17,000
75	TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES	63,702	63,702	---
77	JOINT COUNTER RADIO CONTROLLED IED ELECTRONIC WARFARE	67,843	67,843	---
78	PRECISION STRIKE WEAPONS DEVELOPMENT PROGRAM	40,926	40,926	---
79	SPACE & ELECTRONIC WARFARE (SEW) ARCHITECTURE/ENGINE	42,533	42,533	---
	TOTAL, DEMONSTRATION & VALIDATION	4,163,795	4,260,665	+96,870
	ENGINEERING & MANUFACTURING DEVELOPMENT			
80	OTHER HELO DEVELOPMENT	54,092	54,092	---
81	AV-8B AIRCRAFT - ENG DEV	20,886	20,886	---
82	STANDARDS DEVELOPMENT	53,540	59,340	+5,800
83	MULTI-MISSION HELICOPTER UPGRADE DEVELOPMENT	81,953	81,953	---
84	AIR/OCEAN EQUIPMENT ENGINEERING	7,485	7,485	---
85	P-3 MODERNIZATION PROGRAM	3,659	3,659	---
86	WARFARE SUPPORT SYSTEM	6,307	6,307	---
87	TACTICAL COMMAND SYSTEM	86,462	95,462	+9,000
88	ADVANCED HAWKEYE	364,557	362,557	-2,000
89	H-1 UPGRADES	32,830	25,830	-7,000
90	ACOUSTIC SEARCH SENSORS	56,369	56,369	---
91	V-22A	89,512	89,512	---
92	AIR CREW SYSTEMS DEVELOPMENT	14,265	12,565	-1,700
93	EA-18	55,446	57,446	+2,000
94	ELECTRONIC WARFARE DEVELOPMENT	97,635	101,635	+4,000

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
95	VHXX EXECUTIVE HELO DEVELOPMENT	85,240	485,240	+400,000
96	NEXT GENERATION JAMMER (NGJ)	127,970	117,970	-10,000
97	JOINT TACTICAL RADIO SYSTEM - NAVY (JTRS-NAVY)	876,374	880,874	+4,500
98	SC-21 TOTAL SHIP SYSTEM ENGINEERING	---	5,000	+5,000
99	SURFACE COMBATANT COMBAT SYSTEM ENGINEERING	178,459	185,459	+7,000
100	LPD-17 CLASS SYSTEMS INTEGRATION	5,304	5,304	---
101	SMALL DIAMETER BOMB (SDB)	43,902	43,902	---
102	STANDARD MISSILE IMPROVEMENTS	182,197	168,197	-14,000
103	AIRBORNE MCM	48,712	51,712	+3,000
104	NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR SYSTEMS ENG.	11,727	11,727	---
105	ADVANCED ABOVE WATER SENSORS	236,078	259,078	+23,000
106	SSN-688 AND TRIDENT MODERNIZATION	122,733	122,733	---
107	AIR CONTROL	6,533	6,533	---
108	SHIPBOARD AVIATION SYSTEMS	80,623	82,123	+1,500
109	COMBAT INFORMATION CENTER CONVERSION	13,305	13,305	---
110	NEW DESIGN SSN	154,756	195,256	+40,500
112	SUBMARINE TACTICAL WARFARE SYSTEM	59,703	62,203	+2,500
113	SHIP CONTRACT DESIGN/ LIVE FIRE T&E	89,988	92,488	+2,500
114	NAVY TACTICAL COMPUTER RESOURCES	4,620	4,620	---
115	MINE DEVELOPMENT	2,249	2,249	---
116	LIGHTWEIGHT TORPEDO DEVELOPMENT	21,105	21,105	---
117	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	10,327	10,327	---
118	PERSONNEL, TRAINING, SIMULATION, AND HUMAN FACTORS	5,898	6,898	+1,000
119	JOINT STANDOFF WEAPON SYSTEMS	10,022	10,022	---
120	SHIP SELF DEFENSE (DETECT & CONTROL)	35,459	37,459	+2,000
121	SHIP SELF DEFENSE (ENGAGE: HARD KILL)	34,236	35,736	+1,500
122	SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW)	88,895	88,895	---
123	INTELLIGENCE ENGINEERING	14,438	14,438	---
124	MEDICAL DEVELOPMENT	9,888	33,788	+23,900
125	NAVIGATION/ID SYSTEM	63,184	63,184	---
127	JOINT STRIKE FIGHTER (JSF)	1,741,296	1,956,296	+215,000
128	INFORMATION TECHNOLOGY DEVELOPMENT	9,868	9,868	---
129	INFORMATION TECHNOLOGY DEVELOPMENT	69,026	75,826	+6,800

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
130	CH-53K	554,827	524,443	-30,384
132	JOINT AIR-TO-GROUND MISSILE (JAGM)	81,434	77,734	-3,700
133	MULTI-MISSION MARITIME AIRCRAFT (MMA)	1,162,417	1,182,417	+20,000
134	CG(X)	150,022	110,022	-40,000
135	DDG-1000	539,053	539,053	---
136	TACTICAL CRYPTOLOGIC SYSTEMS	19,016	20,516	+1,500
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	7,975,882	8,649,098	+673,216
	RDT&E MANAGEMENT SUPPORT			
137	THREAT SIMULATOR DEVELOPMENT	25,534	27,534	+2,000
138	TARGET SYSTEMS DEVELOPMENT	79,603	79,603	---
139	MAJOR T&E INVESTMENT	44,844	51,544	+6,700
140	STUDIES AND ANALYSIS SUPPORT - NAVY	11,422	12,422	+1,000
141	CENTER FOR NAVAL ANALYSES	49,821	49,821	---
142	SMALL BUSINESS INNOVATIVE RESEARCH	---	---	---
143	TECHNICAL INFORMATION SERVICES	735	4,735	+4,000
144	MANAGEMENT, TECHNICAL & INTERNATIONAL SUPPORT	60,590	60,590	---
145	STRATEGIC TECHNICAL SUPPORT	3,633	3,633	---
146	RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT	70,942	70,942	---
148	RDT&E SHIP AND AIRCRAFT SUPPORT	193,353	193,353	---
149	TEST AND EVALUATION SUPPORT	380,733	380,733	---
150	OPERATIONAL TEST AND EVALUATION CAPABILITY	12,010	12,010	---
151	NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT	2,703	2,703	---
152	SEW SURVEILLANCE/RECONNAISSANCE SUPPORT	20,921	20,921	---
153	MARINE CORPS PROGRAM WIDE SUPPORT	19,004	20,004	+1,000
154	TACTICAL CRYPTOLOGIC ACTIVITIES	2,464	2,464	---
155	SERVICE SUPPORT TO JFCOM, JNTC	4,197	4,197	---
	TOTAL, RDT&E MANAGEMENT SUPPORT	982,509	997,209	+14,700
	OPERATIONAL SYSTEMS DEVELOPMENT			
159	UNMANNED COMBAT AIR VEHICLE (UCAV) ADVANCED COMPONENT	311,204	306,204	-5,000
160	STRATEGIC SUB & WEAPONS SYSTEM SUPPORT	74,939	76,139	+1,200
161	SSBN SECURITY TECHNOLOGY PROGRAM	34,479	34,479	---
162	SUBMARINE ACOUSTIC WARFARE DEVELOPMENT	7,211	7,211	---
163	NAVY STRATEGIC COMMUNICATIONS	43,982	23,982	-20,000
164	RAPID TECHNOLOGY TRANSITION (RTT)	39,125	39,125	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
165	F/A-18 SQUADRONS	127,733	127,733	---
166	E-2 SQUADRONS	63,058	63,058	---
167	FLEET TELECOMMUNICATIONS (TACTICAL)	37,431	37,431	---
168	TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER (TMPC)	13,238	14,038	+800
169	INTEGRATED SURVEILLANCE SYSTEM	24,835	26,835	+2,000
170	AMPHIBIOUS TACTICAL SUPPORT UNITS	2,324	2,324	---
171	CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT	49,293	52,293	+3,000
172	CRYPTOLOGIC DIRECT SUPPORT	1,609	1,609	---
173	ELECTRONIC WARFARE (EW) READINESS SUPPORT	37,524	37,524	---
174	HARM IMPROVEMENT	30,045	30,045	---
175	TACTICAL DATA LINKS	25,003	25,003	---
176	SURFACE ASW COMBAT SYSTEM INTEGRATION	41,803	41,803	---
177	MK-48 ADCAP	28,438	38,438	+10,000
178	AVIATION IMPROVEMENTS	135,840	127,349	-8,491
179	NAVY SCIENCE ASSISTANCE PROGRAM	3,716	3,716	---
180	OPERATIONAL NUCLEAR POWER SYSTEMS	72,031	72,031	---
181	MARINE CORPS COMMUNICATIONS SYSTEMS	287,348	291,848	+4,500
182	MARINE CORPS GROUND COMBAT/SUPPORTING ARMS SYSTEMS	120,379	124,179	+3,800
183	MARINE CORPS COMBAT SERVICES SUPPORT	17,057	17,057	---
184	USMC INTELLIGENCE/ELECTRONIC WARFARE SYSTEMS (MIP)	30,167	29,900	-267
185	TACTICAL AIM MISSILES	2,298	2,298	---
186	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)	3,604	3,604	---
187	JOINT HIGH SPEED VESSEL (JHSV)	8,431	8,431	---
192	SATELLITE COMMUNICATIONS (SPACE)	474,009	474,009	---
193	CONSOLIDATED AFLOAT NETWORK ENTERPRISE SERVICES	45,513	45,513	---
194	INFORMATION SYSTEMS SECURITY PROGRAM	24,226	24,226	---
195	JOINT COMMAND AND CONTROL PROGRAM (JC2)	2,453	2,453	---
196	JOINT COMMAND AND CONTROL PROGRAM (JC2)	4,139	4,139	---
197	COBRA JUDY	62,061	62,061	---
198	NAVY METEOROLOGICAL AND OCEAN SENSORS-SPACE (METOC)	28,094	29,094	+1,000
199	JOINT MILITARY INTELLIGENCE PROGRAMS	4,600	7,000	+2,400
200	TACTICAL UNMANNED AERIAL VEHICLES	8,971	8,971	---
202	AIRBORNE RECONNAISSANCE SYSTEMS	46,208	52,458	+6,250
203	MANNED RECONNAISSANCE SYSTEMS	22,599	19,899	-2,700
204	DISTRIBUTED COMMON GROUND SYSTEMS	18,079	12,379	-5,700

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
205	RQ-4 UAV	465,839	380,839	-85,000
206	MQ-8 UAV	25,639	25,639	---
207	RQ-11 UAV	553	553	---
208	RQ-7 UAV	986	986	---
209	SMALL (LEVEL 0) TACTICAL UAS (STUASLO)	18,763	18,763	---
210	SMALL (LEVEL 0) TACTICAL UAS (STUASLO)	23,594	23,594	---
212	EP-3E REPLACEMENT (EPX)	11,976	11,976	---
213	MODELING AND SIMULATION SUPPORT	8,028	8,028	---
214	DEPOT MAINTENANCE (NON-IF)	14,675	14,675	---
215	AVIONICS COMPONENT IMPROVEMENT PROGRAM	2,725	3,725	+1,000
216	INDUSTRIAL PREPAREDNESS	56,691	69,191	+12,500
	MARITIME TECHNOLOGY (MARITECH)	---	1,000	+1,000
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	3,044,566	2,966,858	-77,708
999	CLASSIFIED PROGRAMS	1,258,018	1,353,118	+95,100
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY	19,270,932	20,197,300	+926,368

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
1	**UNIVERSITY RESEARCH INITIATIVES**	**99,472**	**103,472**	**4,000**
	Center for Assured Critical Application and Infrastructure Security		1,500	
	Ship Model Testing		2,500	
3	**DEFENSE RESEARCH SCIENCES**	**413,743**	**426,143**	**12,400**
	Characterization and Exploitation of Magnetic and Electric Fields in the Coastal Ocean Environment		2,500	
	Energetics S&T Workforce Development		3,500	
	Next Generation Manufacturing Processes and Systems		1,500	
	ONAMI Nanoelectronics, Nanometrology and Nanobiotechnology Initiative		2,500	
	Shock and Vibration Modeling of Marine Composites		2,400	
4	**POWER PROJECTION APPLIED RESEARCH**	**59,787**	**68,787**	**9,000**
	Aging Military Aircraft Fleet Support		2,000	
	Electronic Motion Actuation Systems		1,000	
	Multifunctional Materials, Devices, and Applications		2,000	
	Strike Weapon Propulsion		4,000	
5	**FORCE PROTECTION APPLIED RESEARCH**	**91,400**	**124,900**	**33,500**
	Advanced Battery System for Military Avionics Power Systems		2,000	
	Advanced Energetics Initiative		4,000	
	Advanced Simulation Tools for Composite Aircraft Structures		2,000	
	Energetic Nano-Materials Agent Defeat Initiative		2,000	
	Center for Autonomous Solar Power - Supercapacitors for Integrated Power Storage		5,000	
	Advanced Composite Manufacturing for Composite High-Speed Boat Design		2,000	
	Non Traditional Ballistic Fiber and Fabric Weaving Application for Force Protection		2,500	
	Integration of Electro-Kinetic Weapons into Next Generation Navy Ships		5,000	
	Lithium Ion Storage Advancement for Aircraft Applications		2,500	
	Multi-Mission Unmanned Surface Vessel		2,500	
	Program Increase - Hybrid Power Systems		4,000	
7	**MATERIALS, ELECTRONICS AND COMPUTER TECHNOLOGY**	**0**	**3,500**	**3,500**
	Infrared Materials Laboratory		3,500	
8	**COMMON PICTURE APPLIED RESEARCH**	**83,163**	**85,963**	**2,800**
	Cognitive Radio Institute		1,000	
	Sensor Integration Framework		1,800	
10	**RF SYSTEMS APPLIED RESEARCH**	**64,816**	**68,316**	**3,500**
	Gallium Nitride (GaN) Power Technology		2,000	
	Silicon Carbide Wafer Production - Process Development for Low Defect Power Electronics		1,500	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
11	**OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH**	**48,750**	**53,750**	**5,000**
	Autonomous Marine Sensors and Networks for Rapid Littoral Assessment		3,000	
	Underwater Imaging and Communications Using Lasers		2,000	
13	**UNDERSEA WARFARE APPLIED RESEARCH**	**55,694**	**60,194**	**4,500**
	Autonomous UUV Delivery and Communication System Integration		4,500	
15	**POWER PROJECTION ADVANCED TECHNOLOGY**	**107,969**	**125,869**	**17,900**
	AARGM Counter Air Defense Future Capabilities		2,500	
	Countermine LIDAR UAV-Based Systems		2,000	
	Flow Path Analysis Tool		2,000	
	Moving Target Indicator Scout Radar		1,000	
	Quiet Drive Advanced Rotary Actuator		2,000	
	Smart Instrument Development for the Magdalena Ridge Observatory		2,000	
	Tactical High Speed Anti-Radiation Missile Propulsion Demonstration		1,900	
	X-49A Envelope Expansion Modifications		4,500	
16	**FORCE PROTECTION ADVANCED TECHNOLOGY**	**66,035**	**91,935**	**25,900**
	Accelerating Fuel Cells Manufacturability		2,000	
	Advanced Logistics Fuel Reformer for Fuel Cells (Phase II)		3,000	
	Agile Port and High Speed Ship Technology		2,000	
	HBCU Applied Research Incubator		1,000	
	High Power Density Motor Drive		3,600	
	High-Temperature Radar Dome Materials		2,000	
	High Temperature Superconductor Trap Field Magnet Motor		1,000	
	Multi-Element Structured Filter Arrays for Naval Platforms		4,300	
	NAVAIR Project for Land/Sea-Based Air Systems Maintenance and Air Worthiness		2,000	
	Pure Hydrogen Supply from Logistic Fuels		3,000	
	Wide Area Sensor Force Protection Targeting		2,000	
17	**COMMON PICTURE ADVANCED TECHNOLOGY**	**108,394**	**49,284**	**-59,110**
	High Integrity Global Positioning System		-59,110	
18	**WARFIGHTER SUSTAINMENT ADVANCED TECHNOLOGY**	**86,239**	**95,039**	**8,800**
	Intelligent Retrieval of Imagery		2,500	
	Marine Corps Cultural and Language Training Platform		800	
	Nanofluidic Lubricants for Increased Fuel Efficiency in Heavy Duty Vehicles		1,500	
	Environmentally Sealed, Ruggedized Avionics Displays		4,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
20	**MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION (ATD)**	**107,363**	**114,863**	**7,500**
	California Central Coast Partnership Research		3,500	
	Enhanced Small Arms Protective Insert		2,000	
	Near Infrared Optical Augmentation System		2,000	
21	**JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT**	**10,998**	**11,998**	**1,000**
	Dynamic Eye-Save Imaging Laser		1,000	
22	**WARFIGHTER PROTECTION ADVANCED TECHNOLOGY**	**18,609**	**52,609**	**34,000**
	Navy Special Warfare Performance and Injury Prevention Program for Special Boat Team 22		2,500	
	C.W Bill Young Bone Marrow Donor Recruitment and Research Program		31,500	
23	**UNDERSEA WARFARE ADVANCED TECHNOLOGY**	**68,037**	**76,037**	**8,000**
	Underwater Explosives and Warhead Research		3,000	
	Program Increase - ASW Research		5,000	
25	**MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY**	**28,782**	**30,782**	**2,000**
	Joint Explosive Ordnance Disposal Diver Situational Awareness System		2,000	
26	**AIR/OCEAN TACTICAL APPLICATIONS**	**116,082**	**117,982**	**1,900**
	Non-Gasoline Burning Outboard Engine		1,900	
27	**AVIATION SURVIVABILITY**	**6,505**	**19,505**	**13,000**
	Common Safety System Controller		3,000	
	Improved Capabilities for Irregular Warfare Platforms		4,000	
	Lighter-than-Air Stratospheric Unmanned Aerial Vehicle for Persistent Communications Relay and Surveillance		3,000	
	Military Upset Recovery Training		1,000	
	Modular Advanced Vision System		2,000	
28	**DEPLOYABLE JOINT COMMAND AND CONTROL**	**6,032**	**9,832**	**3,800**
	Deployable Command and Control Vehicle		3,800	
29	**ASW SYSTEMS DEVELOPMENT**	**16,585**	**26,455**	**9,870**
	Air Readiness/Effectiveness Measurement Program		2,000	
	Marine Mammal Awareness, Alert and Response Systems		3,000	
	Marine Mammal Detection System		2,000	
	Marine Species Mitigation		2,870	
30	**TACTICAL AIRBORNE RECONNAISSANCE**	**7,713**	**10,213**	**2,500**
	Precision Engagement Technologies for Unmanned Systems		2,500	
31	**ADVANCED COMBAT SYSTEMS TECHNOLOGY**	**1,677**	**4,177**	**2,500**
	Maintenance Free Operating Period		2,500	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
32	**SURFACE AND SHALLOW WATER MINE COUNTERMEASURES**	**76,739**	**86,739**	**10,000**
	Persistent Autonomous Maritime Surveillance		5,000	
	Program Increase - Minehunting Sonar		5,000	
33	**SURFACE SHIP TORPEDO DEFENSE**	**57,538**	**70,038**	**12,500**
	AN/SLQ-25D Integration		8,000	
	Continuous Active Sonar for Torpedo DCL Systems		4,500	
35	**SHIPBOARD SYSTEM COMPONENT DEVELOPMENT**	**1,691**	**13,791**	**12,100**
	Advanced Fuel Filtration System		1,500	
	High-Shock 100 Amp Current Limiting Circuit Breaker		600	
	Integrated Condition Assessment and Reliability Engineering		1,000	
	Integrated Power System Power Dense Harmonic Filter Design		2,000	
	IP Over Power Line Carrier Network Integration with ICAS		2,000	
	Landing Craft Composite Lift Fan		1,500	
	Shipboard Wireless Maintenance Assistant		1,500	
	Integrated Power System Converter		2,000	
40	**SURFACE ASW**	**21,995**	**23,995**	**2,000**
	Low Frequency Active Towed Sonar System Organic ASW Capability		2,000	
41	**ADVANCED SUBMARINE SYSTEM DEVELOPMENT**	**551,836**	**554,836**	**3,000**
	Program delay		-4,000	
	SSBN(X) Systems Development		2,500	
	Submarine Fatline Vector Sensor Towed Array		2,000	
	Underwater Explosion Modeling and Simulation for Ohio Class Replacement Composite Non-Pressure Hull Fairing		2,500	
42	**SUBMARINE TACTICAL WARFARE SYSTEMS**	**10,172**	**11,172**	**1,000**
	Submarine Panoramic Awareness System		1,000	
44	**SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES**	**28,135**	**40,935**	**12,800**
	Bow Lifting Body Project		4,000	
	Low Signature Defensive Weapon System for Surface Combatant Craft		4,800	
	Naval Ship Hydrodynamic Test Facilities		4,000	
46	**ADVANCED SURFACE MACHINERY SYSTEMS**	**5,599**	**13,199**	**7,600**
	High Density Power Conversion and Distribution Equipment		1,500	
	Hybrid Propulsion/Power Generation for Increased Fuel Efficiency for Surface Combatants		2,000	
	Integrated Advanced Ship Control		1,500	
	Micro-Drive for Future HVAC Systems		600	
	Next Generation Shipboard Integrated Power Fuel Efficiency and Advanced Capability Enhancer		2,000	
48	**LITTORAL COMBAT SHIP (LCS)**	**360,518**	**366,918**	**6,400**
	Program Increase - Mine Warfare Modules		6,400	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
50	**CONVENTIONAL MUNITIONS**	**3,458**	**4,458**	**1,000**
	Improved Kinetic Energy Cargo Round		1,000	
51	**MARINE CORPS ASSAULT VEHICLES**	**293,466**	**243,466**	**-50,000**
	Program delay		-50,000	
55	**COOPERATIVE ENGAGEMENT**	**56,586**	**61,586**	**5,000**
	Cooperative Engagement Capability		5,000	
58	**NAVY ENERGY PROGRAM**	**8,476**	**13,476**	**5,000**
	Program Increase - Alternative and Renewable Energy Sources		5,000	
59	**FACILITIES IMPROVEMENT**	**4,002**	**9,202**	**5,200**
	Kinetic Hydropower System Turbine		2,000	
	Photovoltaic Rooftop Systems for Military Housing		1,500	
	Regenertative Fuel Cell Back-up Power		1,700	
61	**NAVY LOGISTIC PRODUCTIVITY**	**4,301**	**7,101**	**2,800**
	Highly Integrated Siloxane Optical Interconnect for Military Avionics		1,000	
	NSWC Corona Item Unique Identification Center		1,800	
69	**LAND ATTACK TECHNOLOGY**	**1,238**	**8,238**	**7,000**
	76mm Swarmbuster Capability		2,000	
	Hybrid Propellant for Medium and Large Caliber Ammunition		5,000	
70	**NONLETHAL WEAPONS**	**46,971**	**49,871**	**2,900**
	Non-Lethal Defense Technologies		2,900	
74	**DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS**	**5,003**	**22,003**	**17,000**
	Joint Technology Insertion and Accelerated System Integration Capability for Electronic Warfare		2,000	
	Program Increase - Directed Energy Weapons		15,000	
82	**STANDARDS DEVELOPMENT**	**53,540**	**59,340**	**5,800**
	Measurement Standards Research and Development		5,800	
87	**TACTICAL COMMAND SYSTEM**	**86,462**	**95,462**	**9,000**
	Shipboard Wireless Network		3,000	
	Program Increase - ISR Enhancements		6,000	
88	**ADVANCED HAWKEYE**	**364,557**	**362,557**	**-2,000**
	Engineering support growth		-2,000	
89	**H-1 UPGRADES**	**32,830**	**25,830**	**-7,000**
	Excessive program growth		-7,000	
92	**AIR CREW SYSTEMS DEVELOPMENT**	**14,265**	**12,565**	**-1,700**
	Common Mobile Aircrew Restraint System contract delay		-1,700	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
93	**EA-18**	**55,446**	**57,446**	**2,000**
	Next Generation Electronic Warfare Simulator		2,000	
94	**ELECTRONIC WARFARE DEVELOPMENT**	**97,635**	**101,635**	**4,000**
	NAWCWD Point Mugu Electronic Warfare Laboratory Upgrade		4,000	
95	**VHXX EXECUTIVE HELO DEVELOPMENT**	**85,240**	**485,240**	**400,000**
	Continue Increment One Development		400,000	
96	**NEXT GENERATION JAMMER (NGJ)**	**127,970**	**117,970**	**-10,000**
	Program growth		-10,000	
97	**JOINT TACTICAL RADIO SYSTEM - NAVY (JTRS-NAVY)**	**876,374**	**880,874**	**4,500**
	Joint Tactical Radio System Handheld Manpack Small Form Factor Radio System		4,500	
98	**SC-21 TOTAL SHIP SYSTEM ENGINEERING**	**0**	**5,000**	**5,000**
	Floating Area Network Littoral Sensor Grid		5,000	
99	**SURFACE COMBATANT COMBAT SYSTEM ENGINEERING**	**178,459**	**185,459**	**7,000**
	Advanced Capability Build 12 and 14		2,000	
	Aegis Research and Development		5,000	
102	**STANDARD MISSILE IMPROVEMENTS**	**182,197**	**168,197**	**-14,000**
	SM-6 program execution		-15,000	
	Automated Missile Tracking		1,000	
103	**AIRBORNE MCM**	**48,712**	**51,712**	**3,000**
	Common Air Mine Countermeasures Tow Cable		3,000	
105	**ADVANCED ABOVE WATER SENSORS**	**236,078**	**259,078**	**23,000**
	Common Digital Sensor Architecture		3,000	
	Submarine Navigation Decision Aids		5,000	
	Program Increase - Advanced Sensor Development		15,000	
108	**SHIPBOARD AVIATION SYSTEMS**	**80,623**	**82,123**	**1,500**
	Voyage Repair Team Tool Management		1,500	
110	**NEW DESIGN SSN**	**154,756**	**195,256**	**40,500**
	Advanced Manufacturing for Submarine Bow Domes and Rubber Boots		2,000	
	Common Command and Control System Module		4,000	
	Mold-in-Place Coating Development for the US Submarine Fleet		2,000	
	Submarine Automated Test and Re-Test		2,500	
	Small Business Technology Insertion		30,000	
112	**SUBMARINE TACTICAL WARFARE SYSTEM**	**59,703**	**62,203**	**2,500**
	Submarine System Biometrics Access Control		2,500	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
113	**SHIP CONTRACT DESIGN/ LIVE FIRE T&E**	**89,988**	**92,488**	**2,500**
	Automated Fiber Optic Manufacturing Initiative for Navy Ships		2,500	
118	**PERSONNEL, TRAINING, SIMULATION, AND HUMAN FACTORS**	**5,898**	**6,898**	**1,000**
	Workforce Requirements Planning - Team Enhancement		1,000	
120	**SHIP SELF DEFENSE (DETECT & CONTROL)**	**35,459**	**37,459**	**2,000**
	Persistent Surveillance Wave Powerbuoy System		2,000	
121	**SHIP SELF DEFENSE (ENGAGE: HARD KILL)**	**34,236**	**35,736**	**1,500**
	Laser Phalanx		1,500	
124	**MEDICAL DEVELOPMENT**	**9,888**	**33,788**	**23,900**
	Advanced Molecular Medicine Initiative		1,000	
	Hampton University Proton Cancer Treatment Initiative		5,000	
	Deployment Health and Chronic Disease Surveillance		1,000	
	Integrated Psycho-Social Health Care Demonstration Program		1,000	
	Management of Lung Injury by Micronutrients		1,500	
	Mobile Oxygen, Ventilation, and External Suction (MOVES) System		3,400	
	National Functional Genomics Center Collaborating Site		4,000	
	On-Demand Custon Body Implants/Prosthesis for Injured Personnel		2,000	
	U.S. Navy Pandemic Influenza Vaccine Program		2,000	
	U.S. Navy Cancer Vaccine Program		3,000	
127	**JOINT STRIKE FIGHTER (JSF)**	**1,741,296**	**1,956,296**	**215,000**
	Alternate Engine Development		215,000	
129	**INFORMATION TECHNOLOGY DEVELOPMENT**	**69,026**	**75,826**	**6,800**
	Instrumented Underwater Training Systems		2,800	
	Integrated Manufacturing Systems 3D Simulation and Modeling Project		2,500	
	Maintenance Planning and Assessment Technology Insertion		1,500	
130	**CH-53K**	**554,827**	**524,443**	**-30,384**
	Poor execution		-30,384	
132	**JOINT AIR-TO-GROUND MISSILE (JAGM)**	**81,434**	**77,734**	**-3,700**
	Program delay		-3,700	
133	**MULTI-MISSION MARITIME AIRCRAFT (MMA)**	**1,162,417**	**1,182,417**	**20,000**
	Small Business Technology Insertion		20,000	
134	**CG(X)**	**150,022**	**110,022**	**-40,000**
	Program delay		-40,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
136	**TACTICAL CRYPTOLOGIC SYSTEMS**	**19,016**	**20,516**	**1,500**
	Engineering support growth		-1,500	
	Paragon (Frequency Extension)		3,000	
137	**THREAT SIMULATOR DEVELOPMENT**	**25,534**	**27,534**	**2,000**
	Navy Advanced Threat Simulator		2,000	
139	**MAJOR T&E INVESTMENT**	**44,844**	**51,544**	**6,700**
	Joint Mission Battle-Space to Support Net-Ready Key Performance Parameters		2,000	
	National Aviation Enterprise Interoperability with Carrier Strike and Expeditionary Group Forces		4,700	
140	**STUDIES AND ANALYSIS SUPPORT - NAVY**	**11,422**	**12,422**	**1,000**
	Joint Heavy-Lift Rotocraft Research		1,000	
143	**TECHNICAL INFORMATION SERVICES**	**735**	**4,735**	**4,000**
	Center for Commercialization of Advanced Technology		2,500	
	Technology Transfer Office		1,500	
153	**MARINE CORPS PROGRAM WIDE SUPPORT**	**19,004**	**20,004**	**1,000**
	Global Supply Chain Management		1,000	
159	**UNMANNED COMBAT AIR VEHICLE (UCAV) ADVANCED COMPONENT**	**311,204**	**306,204**	**-5,000**
	Engineering support growth		-5,000	
160	**STRATEGIC SUB & WEAPONS SYSTEM SUPPORT**	**74,939**	**76,139**	**1,200**
	Advanced Linear Accelerator Facility		1,200	
163	**NAVY STRATEGIC COMMUNICATIONS**	**43,982**	**23,982**	**-20,000**
	Block 1A contract delay		-20,000	
168	**TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER (TMPC)**	**13,238**	**14,038**	**800**
	Image-Based Navigation and Precision Targeting		800	
169	**INTEGRATED SURVEILLANCE SYSTEM**	**24,835**	**26,835**	**2,000**
	Autonomous Anti-Submarine Warfare Vertical Beam Array Sonar		2,000	
171	**CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT**	**49,293**	**52,293**	**3,000**
	NAVAIR High Fidelity Oceanographic Library		3,000	
177	**MK-48 ADCAP**	**28,438**	**38,438**	**10,000**
	Small Business Technology Insertion		10,000	
178	**AVIATION IMPROVEMENTS**	**135,840**	**127,349**	**-8,491**
	F-135 engine funding ahead of need		-12,491	
	Arc Fault Circuit Breaker with Arc Location		1,000	
	Lightweight Composite Structure Development for Aerospace Vehicles		3,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
181	**MARINE CORPS COMMUNICATIONS SYSTEMS**	**287,348**	**291,848**	**4,500**
	Battlefield Sensor Netting		3,000	
	Media Exploitation Tool Integration with Intelligence C2 Systems		1,500	
182	**MARINE CORPS GROUND COMBAT/SUPPORTING ARMS SYSTEMS**	**120,379**	**124,179**	**3,800**
	Remote Aiming and Sighting Optical Retrofit		3,800	
184	**USMC INTELLIGENCE/ELECTRONIC WARFARE SYSTEMS (MIP)**	**30,167**	**29,900**	**-267**
	Angelfire program cancellation		-267	
198	**NAVY METEOROLOGICAL AND OCEAN SENSORS-SPACE (METOC)**	**28,094**	**29,094**	**1,000**
	Integration of Advanced Wide Field of View Sensor with Reusable, Reconfigurable Payload Processing Testbed System		1,000	
199	**JOINT MILITARY INTELLIGENCE PROGRAMS**	**4,600**	**7,000**	**2,400**
	Open Source Naval and Missile Database Reporting System		2,400	
202	**AIRBORNE RECONNAISSANCE SYSTEMS**	**46,208**	**52,458**	**6,250**
	EP-3E Requirements Capability Migration Systems Integration Lab		6,250	
203	**MANNED RECONNAISSANCE SYSTEMS**	**22,599**	**19,899**	**-2,700**
	RF research growth		-2,700	
204	**DISTRIBUTED COMMON GROUND SYSTEMS**	**18,079**	**12,379**	**-5,700**
	Program delay		-5,700	
205	**RQ-4 UAV**	**465,839**	**380,839**	**-85,000**
	Program execution		-85,000	
215	**AVIONICS COMPONENT IMPROVEMENT PROGRAM**	**2,725**	**3,725**	**1,000**
	Avionics Life Extension		1,000	
216	**INDUSTRIAL PREPAREDNESS**	**56,691**	**69,191**	**12,500**
	Laser Optimization Remote Lighting System		2,500	
	Manufacturing S&T for Next-Generation Energetics		5,000	
	Next Generation Scalable Lean Manufacturing Initiative - Phase Two		3,000	
	Out of Autoclave Composite Processing		2,000	
217	**MARITIME TECHNOLOGY (MARITECH)**	**0**	**1,000**	**1,000**
	Passive RFID Development		1,000	
999	**CLASSIFIED PROGRAMS**	**1,258,018**	**1,353,118**	**95,100**
	Classified adjustment		95,100	

BONE MARROW REGISTRY

The Committee has included $31,500,000 for the Department of the Navy, to be administered by the C.W. Bill Young Marrow Donor Recruitment and Research Program, also known as and referred to within the Naval Medical Research Center as the Bone Marrow Registry. Funds appropriated for the C.W. Bill Young Marrow Donor Recruitment and Research Program shall remain available only for the purposes for which they were appropriated and may only be obligated for the C.W. Bill Young Marrow Program. This Department of Defense donor center has recruited more than 525,000 Department of Defense volunteers, and provides more marrow donors per week than any other donor center in the Nation. More than 3,360 servicemembers and other Department volunteers from this donor center have provided marrow to save the lives of patients. The success of this national and international life-saving program for military and civilian patients, which now includes more than 7,500,000 potential volunteer donors is admirable. Further, the agencies involved in contingency planning are encouraged to continue to include the C.W. Bill Young Marrow Donor Recruitment and Research Program in the development and testing of their contingency plans. The Department of Defense form (DD Form 1414) shall show this as a congressional interest item. The Department is further directed to release all the funds appropriated for this purpose to the C.W. Bill Young Marrow Donor Recruitment and Research Program within 60 days of the enactment of this Act.

VH–71 PRESIDENTIAL HELICOPTER

The Committee has included $400,000,000 above the President's request to make the five Increment I VH–71 Presidential helicopters operational. Although the Navy would not respond to the Committee regarding costs to operationalize the previously purchased five aircraft, the Future Year's Defense Plan for fiscal year 2009 proposed $328,000,000 for fiscal year 2010 and $140,000,000 in fiscal year 2011 to complete testing and outfitting to make the aircraft operational.

The Navy has invested over $3,200,000,000 in the VH–71 Presidential helicopter program. On April 6, 2009, the Secretary of Defense announced the cancellation of the program. To date, the Navy has provided no plan for the disposition of the five aircraft that were intended to provide interim service in the Presidential helicopter fleet due to the age of the current fleet. If these aircraft are not made operational, the previously appropriated funds will have been wasted.

The Committee directs the Secretary of Defense to submit a report on progress toward making the five Increment I VH–71 Presidential helicopters operational. The report shall be submitted to the congressional defense committees no later than 30 days after the enactment of this Act.

EXPEDITIONARY FIGHTING VEHICLE

The budget request proposed $293,466,000 for the continued development of the Marine Corps' Expeditionary Fighting Vehicle

(EFV). The Committee notes that the Secretary of Defense statement regarding program cancellations reiterated that the "department . . . must stop programs that significantly exceed their budget" and "modernization goals should be tied to the actual and prospective capabilities of known future adversaries—not by what might be technologically feasible for a potential adversary given unlimited time and resources." Research and development cost estimates for the EFV increased from $1,500,000,000 in 2000 to $3,600,000,000 in 2009, according to the Government Accountability Office, and per-vehicle costs have increased from $8,000,000 to $23,000,000, while the number of vehicles to be procured was reduced by one-half.

The Expeditionary Fighting Vehicle has experienced cost growth, schedule slips and technical issues throughout its development cycle. Given the nearly 15 years and billions of dollars invested in the EFV program, the Committee has serious reservations whether the program will ever meet a standard for completion, with initial operational capability now projected at 2015, and full operational capability now projected at 2025. Therefore, the recommendation reduces the request by $50,000,000.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE

Fiscal year 2009 appropriation	$27,084,340,000
Fiscal year 2010 budget request	27,992,827,000
Committee recommendation	27,976,278,000
Change from budget request	−16,549,000

This appropriation finances the research, development, test and evaluation activities of the Department of the Air Force. The total amount recommended in the bill will provide the following program in fiscal year 2010:

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE			
	BASIC RESEARCH			
1	DEFENSE RESEARCH SCIENCES	321,028	323,528	+2,500
2	UNIVERSITY RESEARCH INITIATIVES	132,249	140,449	+8,200
3	HIGH ENERGY LASER RESEARCH INITIATIVES	12,834	12,834	---
	TOTAL, BASIC RESEARCH	466,111	476,811	+10,700
	APPLIED RESEARCH			
7	MATERIALS	127,957	155,707	+27,750
8	AEROSPACE VEHICLE TECHNOLOGIES	127,129	129,129	+2,000
9	HUMAN EFFECTIVENESS APPLIED RESEARCH	85,122	85,122	---
10	AEROSPACE PROPULSION	196,529	226,669	+30,140
11	AEROSPACE SENSORS	121,768	129,768	+8,000
12	SPACE TECHNOLOGY	104,148	116,248	+12,100
13	CONVENTIONAL MUNITIONS	58,289	58,289	---
14	DIRECTED ENERGY TECHNOLOGY	105,677	106,677	+1,000
15	COMMAND CONTROL AND COMMUNICATIONS	---	2,500	+2,500
16	DOMINANT INFORMATION SCIENCES AND METHODS	115,278	115,278	---
17	HIGH ENERGY LASER RESEARCH	52,754	61,254	+8,500
	TOTAL, APPLIED RESEARCH	1,094,651	1,186,641	+91,990
	ADVANCED TECHNOLOGY DEVELOPMENT			
18	ADVANCED MATERIALS FOR WEAPON SYSTEMS	37,901	56,301	+18,400
19	SUSTAINMENT SCIENCE AND TECHNOLOGY (S&T)	2,955	2,955	---
20	ADVANCED AEROSPACE SENSORS	51,482	53,482	+2,000
21	AEROSPACE TECHNOLOGY DEV/DEMO	76,844	91,844	+15,000
22	AEROSPACE PROPULSION AND POWER TECHNOLOGY	175,676	191,176	+15,500
24	ELECTRONIC COMBAT TECHNOLOGY	31,021	32,521	+1,500
25	ADVANCED SPACECRAFT TECHNOLOGY	83,909	98,609	+14,700
26	MAUI SPACE SURVEILLANCE SYSTEM (MSSS)	5,813	5,813	---
27	HUMAN EFFECTIVENESS ADVANCED TECHNOLOGY DEVELOPMENT	24,565	24,565	---
28	CONVENTIONAL WEAPONS TECHNOLOGY	14,356	16,556	+2,200
29	ADVANCED WEAPONS TECHNOLOGY	30,056	30,056	---
30	MANUFACTURING TECHNOLOGY PROGRAM	39,913	41,913	+2,000
31	BATTLESPACE KNOWLEDGE DEVELOPMENT & DEMONSTRATION	39,708	39,708	---
32	C3I ADVANCED DEVELOPMENT	---	4,000	+4,000

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
33	HIGH ENERGY LASER ADVANCED TECHNOLOGY PROGRAM	3,831	3,831	---
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	618,030	693,330	+75,300
	DEMONSTRATION & VALIDATION			
34	INTELLIGENCE ADVANCED DEVELOPMENT	5,009	6,009	+1,000
35	PHYSICAL SECURITY EQUIPMENT	3,623	3,623	---
38	ADVANCED EHF MILSATCOM (SPACE)	464,335	464,335	---
39	POLAR MILSATCOM (SPACE)	253,150	253,150	---
40	SPACE CONTROL TECHNOLOGY	97,701	97,701	---
41	COMBAT IDENTIFICATION TECHNOLOGY	27,252	27,252	---
42	NATO RESEARCH AND DEVELOPMENT	4,351	4,351	---
43	INTERNATIONAL SPACE COOPERATIVE R&D	632	632	---
45	INTEGRATED BROADCAST SERVICE	20,739	20,739	---
46	INTERCONTINENTAL BALLISTIC MISSILE	66,079	69,079	+3,000
47	WIDEBAND GAPFILLER SYSTEM RDT&E (SPACE)	70,956	70,956	---
48	POLLUTION PREVENTION (DEM/VAL)	2,896	12,896	+10,000
49	JOINT PRECISION APPROACH AND LANDING SYSTEMS	23,174	23,174	---
51	BATTLE MGMT COM & CTRL SENSOR DEVELOPMENT	22,612	---	-22,612
52	HARD AND DEEPLY BURIED TARGET DEFEAT SYSTEM	20,891	20,891	---
53	JOINT DUAL ROLE AIR DOMINANCE MISSILE	6,882	6,882	---
54	REQUIREMENTS ANALYSIS AND MATURATION	35,533	35,533	---
55	GROUND ATTACK WEAPONS FUZE DEVELOPMENT	18,778	18,778	---
56	ALTERNATIVE FUELS	89,020	94,020	+5,000
57	AUTOMATED AIR-TO-AIR REFUELING	43,158	43,158	---
59	OPERATIONALLY RESPONSIVE SPACE	112,861	114,361	+1,500
60	TECH TRANSITION PROGRAM	9,611	9,611	---
61	NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SAT	396,641	396,641	---
	TOTAL, DEMONSTRATION & VALIDATION	1,795,884	1,793,772	-2,112
	ENGINEERING & MANUFACTURING DEVELOPMENT			
62	GLOBAL BROADCAST SERVICE (GBS)	31,124	31,124	---
63	NUCLEAR WEAPONS SUPPORT	37,860	42,860	+5,000
65	SPECIALIZED UNDERGRADUATE FLIGHT TRAINING	6,227	10,862	+4,635
68	ELECTRONIC WARFARE DEVELOPMENT	97,275	97,275	---
69	Tactical Data Networks Enterprise	88,444	88,444	---
70	PHYSICAL SECURITY EQUIPMENT	50	50	---
71	SMALL DIAMETER BOMB (SDB)	153,815	155,815	+2,000

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
72	COUNTERSPACE SYSTEMS	64,248	64,248	---
73	SPACE SITUATION AWARENESS SYSTEMS	308,134	207,834	-100,300
74	AIRBORNE ELECTRONIC ATTACK	11,107	11,107	---
75	SPACE BASED INFRARED SYSTEM (SBIRS) HIGH EMD	512,642	526,442	+13,800
76	THIRD GENERATION INFRARED SURVEILLANCE (3GIRS)	143,169	39,169	-104,000
77	ARMAMENT/ORDNANCE DEVELOPMENT	18,671	18,671	---
78	SUBMUNITIONS	1,784	1,784	---
79	AGILE COMBAT SUPPORT	11,261	11,261	---
80	LIFE SUPPORT SYSTEMS	10,711	11,911	+1,200
81	COMBAT TRAINING RANGES	29,718	29,718	---
82	INTEGRATED COMMAND & CONTROL APPLICATIONS (IC2A)	10	9,010	+9,000
83	INTELLIGENCE EQUIPMENT	1,495	1,495	---
84	JOINT STRIKE FIGHTER (JSF)	1,858,055	2,073,055	+215,000
85	INTERCONTINENTAL BALLISTIC MISSILE	60,010	60,010	---
86	EVOLVED EXPENDABLE LAUNCH VEHICLE PROGRAM (SPACE)	26,545	51,545	+25,000
88	NEXT GENERATION AERIAL REFUELING AIRCRAFT	439,615	---	-439,615
89	CSAR-X RDT&E	89,975	9,975	-80,000
90	HC/MC-130 RECAP RDT&E	20,582	20,582	---
91	Joint SIAP Executive Program Office	34,877	34,877	---
94	SINGLE INTEGRATED AIR PICTURE (SIAP)	13,466	13,466	---
95	FULL COMBAT MISSION TRAINING	99,807	99,807	---
97	JOINT CARGO AIRCRAFT (JCA)	9,353	9,353	---
98	CV-22	19,640	19,640	---
99	AIRBORNE SENIOR LEADER C3 (SLC3S)	20,056	20,056	---
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	4,219,726	3,771,446	-448,280

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	RDT&E MANAGEMENT SUPPORT			
100	THREAT SIMULATOR DEVELOPMENT	27,789	27,789	---
101	MAJOR T&E INVESTMENT	60,824	63,324	+2,500
102	RAND PROJECT AIR FORCE	27,501	27,501	---
104	INITIAL OPERATIONAL TEST & EVALUATION	25,833	25,833	---
105	TEST AND EVALUATION SUPPORT	736,488	736,488	---
106	ROCKET SYSTEMS LAUNCH PROGRAM (SPACE)	14,637	14,637	---
107	SPACE TEST PROGRAM (STP)	47,215	47,215	---
108	FACILITIES RESTORATION & MODERNIZATION - TEST & EVAL	52,409	60,409	+8,000
109	FACILITIES SUSTAINMENT - TEST AND EVALUATION SUPPORT	29,683	29,683	---
110	ACQUISITION AND MANAGEMENT SUPPORT	18,947	18,947	---
111	GENERAL SKILL TRAINING	1,450	1,450	---
113	INTERNATIONAL ACTIVITIES	3,748	3,748	---
	TOTAL, RDT&E MANAGEMENT SUPPORT	1,046,524	1,057,024	+10,500
	OPERATIONAL SYSTEMS DEVELOPMENT			
114	COMMON VERTICAL LIFT SUPPORT PLATFORM	9,513	2,000	-7,513
115	ANTI-TAMPER TECHNOLOGY EXECUTIVE AGENCY	47,276	47,276	---
117	B-52 SQUADRONS	93,930	102,930	+9,000
118	AIR-LAUNCHED CRUISE MISSILE (ALCM)	3,652	3,652	---
119	B-1B SQUADRONS	148,025	178,025	+30,000
120	B-2 SQUADRONS	415,414	436,714	+21,300
121	STRAT WAR PLANNING SYSTEM - USSTRATCOM	33,836	33,836	---
122	NIGHT FIST - USSTRATCOM	5,328	5,328	---
124	ATMOSPHERIC EARLY WARNING SYSTEM	9,832	9,832	---
125	REGION/SECTOR OPERATION CONTROL CENTER MODERNIZATION	25,734	25,734	---
126	STRATEGIC AEROSPACE INTELLIGENCE SYSTEM ACTIVITIES	18	18	---
127	WARFIGHTER RAPID ACQUISITION PROCESS (WRAP) RAPID TRAN	11,996	11,996	---
128	MQ-9 UAV	39,245	109,245	+70,000
129	Multi-Platform Electronic Warfare Equipment	14,747	14,747	---
130	A-10 SQUADRONS	9,697	9,697	---
131	F-16 SQUADRONS	141,020	141,020	---
132	F-15E SQUADRONS	311,167	320,167	+9,000
133	MANNED DESTRUCTIVE SUPPRESSION	10,748	10,748	---
134	F-22 SQUADRONS	569,345	569,345	---
135	TACTICAL AIM MISSILES	5,915	5,915	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
136	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)	49,971	49,971	---
137	JOINT HELMET MOUNTED CUEING SYSTEM (JHMCS)	2,529	2,529	---
138	COMBAT RESCUE - PARARESCUE	2,950	2,950	---
139	AF TENCAP	11,643	11,643	---
140	PRECISION ATTACK SYSTEMS PROCUREMENT	2,950	2,950	---
141	COMPASS CALL	13,019	13,019	---
142	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	166,563	157,563	-9,000
143	CSAF INNOVATION PROGRAM	4,621	4,621	---
144	JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)	29,494	29,494	---
145	AIR AND SPACE OPERATIONS CENTER (AOC)	99,405	101,405	+2,000
146	CONTROL AND REPORTING CENTER (CRC)	52,508	52,508	---
147	AIRBORNE WARNING AND CONTROL SYSTEM (AWACS)	176,040	176,040	---
149	ADVANCED COMMUNICATIONS SYSTEMS	63,782	63,782	---
151	COMBAT AIR INTELLIGENCE SYSTEM ACTIVITIES	1,475	1,475	---
152	THEATER BATTLE MANAGEMENT (TBM) C4I	19,067	19,067	---
153	FIGHTER TACTICAL DATA LINK	72,106	72,106	---
155	C2ISR TACTICAL DATA LINK	1,667	1,667	---
156	COMMAND AND CONTROL (C2) CONSTELLATION	26,792	31,792	+5,000
157	JOINT SURVEILLANCE AND TARGET ATTACK RADAR SYSTEM	140,670	140,670	---
158	SEEK EAGLE	22,071	22,071	---
159	USAF MODELING AND SIMULATION	27,245	27,245	---
160	WARGAMING AND SIMULATION CENTERS	7,018	7,018	---
161	DISTRIBUTED TRAINING AND EXERCISES	6,740	6,740	---
162	MISSION PLANNING SYSTEMS	91,995	91,995	---
163	INFORMATION WARFARE SUPPORT	12,271	14,271	+2,000
170	E-4B NATIONAL AIRBORNE OPERATIONS CENTER (NAOC)	26,107	26,107	---
172	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK	72,694	72,694	---
173	INFORMATION SYSTEMS SECURITY PROGRAM	196,621	196,621	---
174	GLOBAL COMBAT SUPPORT SYSTEM	3,375	3,375	---
175	GLOBAL COMMAND AND CONTROL SYSTEM	3,149	7,149	+4,000
176	JOINT COMMAND AND CONTROL PROGRAM (JC2)	3,087	3,087	---
177	MILSATCOM TERMINALS	257,693	257,693	---
179	AIRBORNE SIGINT ENTERPRISE	176,989	176,989	---
182	GLOBAL AIR TRAFFIC MANAGEMENT (GATM)	6,028	6,028	---
183	CYBER SECURITY INITIATIVE	2,065	2,065	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
184	SATELLITE CONTROL NETWORK (SPACE)	20,991	20,991	---
185	WEATHER SERVICE	33,531	33,531	---
186	AIR TRAFFIC CONTROL, APPROACH, & LANDING SYSTEM (ATC)	9,006	9,006	---
187	AERIAL TARGETS	54,807	54,807	---
190	SECURITY AND INVESTIGATIVE ACTIVITIES	742	742	---
192	DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES	39	39	---
194	NAVSTAR GLOBAL POSITIONING SYSTEM (USER EQUIPMENT)	137,692	137,692	---
195	NAVSTAR GLOBAL POSITIONING SYSTEM (SPACE AND CONTROL)	52,039	52,039	---
197	SPACE AND MISSILE TEST AND EVALUATION CENTER	3,599	3,599	---
198	SPACE WARFARE CENTER	3,009	3,009	---
199	SPACELIFT RANGE SYSTEM (SPACE)	9,957	9,957	---
200	INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS	1,240	2,240	+1,000
202	ENDURANCE UNMANNED AERIAL VEHICLES	73,736	73,736	---
203	AIRBORNE RECONNAISSANCE SYSTEMS	143,892	145,892	+2,000
204	MANNED RECONNAISSANCE SYSTEMS	12,846	15,346	+2,500
205	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	82,765	82,765	---
206	PREDATOR UAV (JMIP)	18,101	24,301	+6,200
207	RQ-4 UAV	317,316	317,316	---
208	NETWORK-CENTRIC COLLABORATIVE TARGET (TIARA)	8,160	8,160	---
209	GPS III SPACE SEGMENT	815,095	717,695	-97,400
210	JSPOC MISSION SYSTEM	131,271	131,271	---
211	INTELLIGENCE SUPPORT TO INFORMATION WARFARE	5,267	5,267	---
213	NUDET DETECTION SYSTEM (SPACE)	84,021	84,021	---
214	NATIONAL SECURITY SPACE OFFICE	10,634	---	-10,634
215	SPACE SITUATION AWARENESS OPERATIONS	54,648	54,648	---
216	NASS, IO TECHNOLOGY INTEGRATION & TOOL DEV	30,076	30,076	---
217	SHARED EARLY WARNING (SEW)	3,082	3,082	---
218	C-130 AIRLIFT SQUADRON	201,250	201,250	---
219	C-5 AIRLIFT SQUADRONS	95,266	95,266	---
220	C-17 AIRCRAFT	161,855	161,855	---
221	C-130J PROGRAM	30,019	30,019	---
222	LARGE AIRCRAFT IR COUNTERMEASURES (LAIRCM)	31,784	31,784	---
223	KC-135S	10,297	10,297	---
224	KC-10S	35,586	35,586	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
226	OPERATIONAL SUPPORT AIRLIFT	4,916	4,916	---
228	SPECIAL TACTICS / COMBAT CONTROL	8,222	10,222	+2,000
229	DEPOT MAINTENANCE (NON-IF)	1,508	1,508	---
231	INDUSTRIAL PREPAREDNESS	---	4,000	+4,000
232	LOGISTICS INFORMATION TECHNOLOGY (LOGIT)	246,483	246,483	---
233	SUPPORT SYSTEMS DEVELOPMENT	6,288	12,788	+6,500
234	OTHER FLIGHT TRAINING	805	805	---
235	JOINT NATIONAL TRAINING CENTER	3,220	3,220	---
236	TRAINING DEVELOPMENTS	1,769	1,769	---
237	OTHER PERSONNEL ACTIVITIES	116	116	---
238	JOINT PERSONNEL RECOVERY AGENCY	6,376	6,376	---
239	SERVICE-WIDE SUPPORT (NOT OTHERWISE ACCOUNTED FOR)	---	---	---
240	CIVILIAN COMPENSATION PROGRAM	8,174	8,174	---
241	PERSONNEL ADMINISTRATION	10,492	10,492	---
242	FINANCIAL MANAGEMENT INFORMATION SYSTEMS DEVELOPMENT	55,991	55,991	---
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	6,796,817	6,848,770	+51,953
999	CLASSIFIED PROGRAMS	11,955,084	12,148,484	+193,400
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE	27,992,827	27,976,278	-16,549

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
1	**DEFENSE RESEARCH SCIENCES**	**321,028**	**323,528**	**2,500**
	Process Integrated Mechanism for Human-Computer Collaboration and Coordination		1,000	
	Safeguarding End-User Military Software		1,500	
2	**UNIVERSITY RESEARCH INITIATIVES**	**132,249**	**140,449**	**8,200**
	Cyber Security Research Program		1,500	
	Unmanned Aerial Systems Mission Planning and Operation Center		3,500	
	Energy and Sensor Informatics Research and Translation		1,000	
	Frank R. Seaver Science and Engineering Initiative		2,200	
7	**MATERIALS**	**127,957**	**155,707**	**27,750**
	Accelerated Insertion of Advanced Materials and Certification for Military Aircraft Structure Material Substitution and Repair		2,500	
	Advanced Aerospace Heat Exchangers		750	
	Aerospace Laser Micro Engineering Station		1,000	
	Fine Water Mist Fire Suppression Technology to Replace Halon		2,500	
	Gallium Nitride (GaN) Microelectronics and Materials		2,000	
	Institute for Science and Engineering Simulation		4,500	
	Large Area, APVT Materials Development for High Power Devices		2,000	
	Low-Defect Density Gallium Nitride Materials for High-Performance Electronic Devices		3,500	
	ONAMI Safer Nanomaterials and Nanomanufacturing		2,000	
	Partnership for Energy and Automation Technologies		2,000	
	Pennsylvania NanoMaterials Commercialization Center		1,000	
	Ultra-High Temperature Materials for Hypersonic Aerospace Vehicles		3,000	
	Carbon Nano-Materials for Advanced Aerospace Applications		1,000	
8	**AEROSPACE VEHICLE TECHNOLOGIES**	**127,129**	**129,129**	**2,000**
	Unmanned Sense, Track, and Avoid Radar		2,000	
10	**AEROSPACE PROPULSION**	**196,529**	**226,669**	**30,140**
	Advanced Lithium Battery Scale-up and Manufacturing		2,000	
	Advanced Vehicle Propulsion Center		3,000	
	Aerospace Lab Equipment Upgrade		1,500	
	AFRL Edwards Rocket Test Stand 2-A Technical Improvements		1,500	
	Development and Testing of Advanced Hybrid Rockets for Space Applications		3,500	
	High Energy Li-Ion Technology for Aviation Batteries		1,500	
	Integrated Engine Starter/Generator		2,000	
	Integrated Propulsion Analysis and Spacecraft Engineering Tools (IPAT/ISET)		6,000	
	Multi-Mode Propulsion Phase IIA: High Performance Green Propellant		2,000	
	National Test Facility for Aerospace Fuels Propulsion		1,640	
	Thermal and Energy Management for Aerospace		4,000	

R-1		Budget Request	Committee Recommended	Change from Request
	Wavelength Agile Spectral Harmonic Oxygen Sensor and Cell-Level Battery Controller		1,500	
11	**AEROSPACE SENSORS**	**121,768**	**129,768**	**8,000**
	Advanced Electronic Components for Sensor Arrays		3,000	
	Net-Centric Sensor Grids		3,000	
	Watchkeeper		2,000	
12	**SPACE TECHNOLOGY**	**104,148**	**116,248**	**12,100**
	Advanced Modular Avionics for Operationally Responsive Satellite Use		3,100	
	Center for Solar Electricity and Hydrogen		5,000	
	Center for Space Entrepreneurship		2,000	
	Mission Design and Analysis Tool		2,000	
14	**DIRECTED ENERGY TECHNOLOGY**	**105,677**	**106,677**	**1,000**
	Hybrid Nanoparticle-based Coolant Technology Development and Manufacturing		1,000	
15	**COMMAND CONTROL AND COMMUNICATIONS**	**0**	**2,500**	**2,500**
	Efficient Utilization of Transmission Hyperspace		2,500	
17	**HIGH ENERGY LASER RESEARCH**	**52,754**	**61,254**	**8,500**
	Advanced Deformable Mirrors for High Energy Laser Weapons		2,000	
	High Bandwidth, High Energy Storage, Exawatt Laser Glass Development		3,500	
	Planar Lightwave Circuit Development for High Power Military Laser Applications		3,000	
18	**ADVANCED MATERIALS FOR WEAPON SYSTEMS**	**37,901**	**56,301**	**18,400**
	EMI Grid Fabrication Technology		3,000	
	Hawaii Microalgae Biofuel Project		4,400	
	Hybrid Bearings		1,000	
	Program Increase - Metals Research		10,000	
20	**ADVANCED AEROSPACE SENSORS**	**51,482**	**53,482**	**2,000**
	Reconfigurable Secure Computing		2,000	
21	**AEROSPACE TECHNOLOGY DEV/DEMO**	**76,844**	**91,844**	**15,000**
	3D Bias Woven Perform Development		3,000	
	Big Antennas Small Structures Efficient Tactical UAV		2,000	
	Long-Loiter, Load Bearing Antenna Platform for Pervasive Airborne Intelligence		5,000	
	Program Increase		5,000	
22	**AEROSPACE PROPULSION AND POWER TECHNOLOGY**	**175,676**	**191,176**	**15,500**
	Algal-Derived Jet Fuel for Air Force Applications		3,000	
	Bio-JP8 Fuel Development		5,000	
	Renewable Hydrocarbon Fuels for Military Applications		2,500	
	Small Turbofan Versatile Affordable Advanced Turbine Engine Program		4,000	
	Texas Research Institute for Environmental Studies		1,000	
24	**ELECTRONIC COMBAT TECHNOLOGY**	**31,021**	**32,521**	**1,500**
	Advanced Electromagnetic Location of IEDs Defeat System		1,500	

R-1		Budget Request	Committee Recommended	Change from Request
25	**ADVANCED SPACECRAFT TECHNOLOGY**	**83,909**	**98,609**	**14,700**
	Ballistic Missile Technology		2,000	
	Domestic Manufacturing of 45nm Electronics		2,000	
	Florida National Guard Total Force Integration		3,000	
	Integrated Passive Electronic Components		1,700	
	Micromachined Switches for Next Generation Modular Satellites		3,000	
	Small Responsive Spacecraft at Low-Cost		3,000	
28	**CONVENTIONAL WEAPONS TECHNOLOGY**	**14,356**	**16,556**	**2,200**
	Body Armor Improved Ballistic Protection, Research and Development		2,200	
30	**MANUFACTURING TECHNOLOGY PROGRAM**	**39,913**	**41,913**	**2,000**
	Production of Nanocomposites for Aerospace Applications		2,000	
32	**C3I ADVANCED DEVELOPMENT**	**0**	**4,000**	**4,000**
	Cyber Attack and Security Environment		4,000	
34	**INTELLIGENCE ADVANCED DEVELOPMENT**	**5,009**	**6,009**	**1,000**
	Multilingual Text Mining Platform for Intelligence Analysts		1,000	
46	**INTERCONTINENTAL BALLISTIC MISSILE**	**66,079**	**69,079**	**3,000**
	Minuteman III Advanced Third Stage Domestic Fiber Motor Case Development		3,000	
48	**POLLUTION PREVENTION (DEM/VAL)**	**2,896**	**12,896**	**10,000**
	Program Increase		10,000	
51	**BATTLE MGMT COM & CTRL SENSOR DEVELOPMENT**	**22,612**	**0**	**-22,612**
	Early to need		-22,612	
56	**ALTERNATIVE FUELS**	**89,020**	**94,020**	**5,000**
	Synthetic Liquid Fuels		3,000	
	Advance Propulsion Non-Tactical Vehicle		2,000	
59	**OPERATIONALLY RESPONSIVE SPACE**	**112,861**	**114,361**	**1,500**
	Micro-Satellite Serial Manufacturing to Include Academic Outreach Educational Program		1,500	
63	**NUCLEAR WEAPONS SUPPORT**	**37,860**	**42,860**	**5,000**
	Nuclear Enterprise Surety Tracking		5,000	
65	**SPECIALIZED UNDERGRADUATE FLIGHT TRAINING**	**6,227**	**10,862**	**4,635**
	Improved Brake System Program Termination		-2,365	
	AT-6B Demonstration for ANG		7,000	
71	**SMALL DIAMETER BOMB (SDB)**	**153,815**	**155,815**	**2,000**
	High Pressure Pure Air Generator System		2,000	
73	**SPACE SITUATION AWARENESS SYSTEMS**	**308,134**	**207,834**	**-100,300**
	Space Fence Program Reduction		-45,200	
	Space Based Space Surveillance Follow-on		-55,100	
75	**SPACE BASED INFRARED SYSTEM (SBIRS) HIGH EMD**	**512,642**	**526,442**	**13,800**
	Ground Development transferred from RDTE, AF Line 76		13,800	

R-1		Budget Request	Committee Recommended	Change from Request
76	**THIRD GENERATION INFRARED SURVEILLANCE (3GIRS)**	**143,169**	**39,169**	**-104,000**
	Third Generation Infrared System		-90,200	
	Ground Development Transfer to RDTE, AF Line 75		-13,800	
80	**LIFE SUPPORT SYSTEMS**	**10,711**	**11,911**	**1,200**
	Program Increase - Bomber Crew Safety Study		1,200	
82	**INTEGRATED COMMAND & CONTROL APPLICATIONS (IC2A)**	**10**	**9,010**	**9,000**
	Distributed Mission Interoperability Toolkit (DMIT)		4,000	
	Program Increase		5,000	
84	**JOINT STRIKE FIGHTER (JSF)**	**1,858,055**	**2,073,055**	**215,000**
	Alternate Engine Development		215,000	
86	**EVOLVED EXPENDABLE LAUNCH VEHICLE PROGRAM (SPACE)**	**26,545**	**51,545**	**25,000**
	Program increase		25,000	
88	**NEXT GENERATION AERIAL REFUELING AIRCRAFT**	**439,615**	**0**	**-439,615**
	Transferred to Title VIII		-439,615	
89	**CSAR-X RDT&E**	**89,975**	**9,975**	**-80,000**
	Program terminated		-80,000	
101	**MAJOR T&E INVESTMENT**	**60,824**	**63,324**	**2,500**
	Eglin AFB Range Operations Control Center		2,500	
108	**FACILITIES RESTORATION & MODERNIZATION - TEST & EVAL**	**52,409**	**60,409**	**8,000**
	Base Facility Energy Independence, Stewart Air National Guard Base		5,000	
	Inter-Base Facility Energy Independence		3,000	
114	**COMMON VERTICAL LIFT SUPPORT PLATFORM**	**9,513**	**2,000**	**-7,513**
	Unjustified program		-7,513	
117	**B-52 SQUADRONS**	**93,930**	**102,930**	**9,000**
	B-52 Tactical Data Link Capability		6,000	
	Reconstitution of B-52 Nuclear Capability Study		3,000	
119	**B-1B SQUADRONS**	**148,025**	**178,025**	**30,000**
	Transferred from AP,AF Line 28		29,000	
	B-1 AESA Radar Operational Utility Evaluation		1,000	
120	**B-2 SQUADRONS**	**415,414**	**436,714**	**21,300**
	Program Increase		15,300	
	B-2 Advanced Tactical Data Link		6,000	
128	**MQ-9 UAV**	**39,245**	**109,245**	**70,000**
	Program Increase		70,000	
132	**F-15E SQUADRONS**	**311,167**	**320,167**	**9,000**
	Corrosion Detection and Visualization Program		1,000	
	Program Increase - Advanced Radar Development		8,000	

R-1		Budget Request	Committee Recommended	Change from Request
142	**AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM**	**166,563**	**157,563**	**-9,000**
	F-135 Engine - Early to need		-12,000	
	Senior Scout Communications Intelligence (COMINT) Capability Upgrade		3,000	
145	**AIR AND SPACE OPERATIONS CENTER (AOC)**	**99,405**	**101,405**	**2,000**
	COTS Technology for Space Command and Control		2,000	
156	**COMMAND AND CONTROL (C2) CONSTELLATION**	**26,792**	**31,792**	**5,000**
	GAPS/AWS Horizontal Integration		5,000	
163	**INFORMATION WARFARE SUPPORT**	**12,271**	**14,271**	**2,000**
	Electromagnetic Battlespace Management		2,000	
175	**GLOBAL COMMAND AND CONTROL SYSTEM**	**3,149**	**7,149**	**4,000**
	Command and Control Service Level Management (C2SLM) Program		4,000	
200	**INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS**	**1,240**	**2,240**	**1,000**
	Open Source Research Centers		1,000	
203	**AIRBORNE RECONNAISSANCE SYSTEMS**	**143,892**	**145,892**	**2,000**
	Multiple UAS Cooperative Concentrated Observation and Engagement Against a Common Ground Objective		2,000	
204	**MANNED RECONNAISSANCE SYSTEMS**	**12,846**	**15,346**	**2,500**
	Rivet Joint Services Oriented Architecture		2,500	
206	**PREDATOR UAV (JMIP)**	**18,101**	**24,301**	**6,200**
	Predator C		1,500	
	Center for UAS Research, Education and Training Infrastructure		3,000	
	Program increase		1,700	
209	**GPS III SPACE SEGMENT**	**815,095**	**717,695**	**-97,400**
	GPS Control Segment (OCX)		-97,400	
214	**NATIONAL SECURITY SPACE OFFICE**	**10,634**	**0**	**-10,634**
	Program Reduction		-10,634	
228	**SPECIAL TACTICS / COMBAT CONTROL**	**8,222**	**10,222**	**2,000**
	BATMAV Program Miniature Digital Data Link		2,000	
231	**INDUSTRIAL PREPAREDNESS**	**0**	**4,000**	**4,000**
	Laser Peening for Friction Stir Welded Aerospace Structures		2,000	
	Wire Integrity Technology		2,000	
233	**SUPPORT SYSTEMS DEVELOPMENT**	**6,288**	**12,788**	**6,500**
	Accelerator-Driven Non-Destructive Testing		2,000	
	ALC Logistics Integration Environment		1,000	
	Demonstration and Validation of Renewable Energy Technology		1,000	
	Technical Order Modernization Environment		1,500	
	Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing		1,000	

R-1		Budget Request	Committee Recommended	Change from Request
999	**CLASSIFIED PROGRAMS**	**11,955,084**	**12,148,484**	**193,400**
	Classified adjustment		-27,800	
	Carbon Nanotube Enhanced Power Sources for Space		2,000	
	Remote Language-Independent Suspect Identification		3,200	
	Close Proximity Space Situational Awareness		1,000	
	Classified Program		215,000	

AERIAL REFUELING TANKER REPLACEMENT PROGRAM

The Committee firmly believes that the Department must act promptly to recapitalize the aging Air Force aerial refueling fleet. The Department's current program has been beset with countless setbacks, from allegations of corruption to a protest of the previous source selection decision. In the meantime, our nation's aerial refueling tankers continue to age, with the average age of a KC–135 being almost 50 years old today. The aerial refueling replacement program (KC–X, KC–Y and KC–Z) plans to procure between 12 and 15 aircraft per year to eventually replace the current fleet of 513 aircraft. This method of recapitalization will take decades to complete, with the current fleet of Eisenhower-era tankers being 80 years old by the time the last legacy aircraft is retired. During this period, the Air Force will invest billions of taxpayer dollars in maintenance of an ever aging and increasingly unreliable fleet. Based on studies conducted by the Department of Defense, total fleet costs are anticipated to increase from $2.1 billion per year to $3 billion per year by 2040 due to increasing depot maintenance and forecasted modernization programs in avionics and aircraft systems. Additionally, the Department anticipates depot maintenance costs increasing from $320,000,000 to $1,100,000,000 in 2040 due to aging aircraft related maintenance. Never in the history of our Nation has the military purposely planned to maintain aircraft past 50 years, much less 80 years of operation so even these estimates may understate the actual cost. In addition to the cost of maintaining the aging tanker fleet, the cost per flying hour of a new tanker is almost half the cost of the existing fleet. The lower cost per flying hour alone will save the taxpayer $1,795,500,000 per year for a fleet of 513 aircraft (current total aircraft inventory) or $3,500,000 per plane per year replaced.

To address these concerns, the Committee recommendation includes a general provision providing $439,615,000 and the option for choosing one vendor or dual sourcing for the aerial refueling Tanker replacement program. Along with this authority, the Committee believes that it is in the best interest of the taxpayer to pursue recapitalization at a rate of 36 aircraft per year vice 12 or 15 aircraft. This quantity will allow for recapitalization in one-third the time and thus allow for a rapid retirement of the current KC–135 aircraft. This plan will result in avoiding a large sustainment and modernization cost of the legacy KC–135 fleet by allowing them to retire earlier than is currently programmed. Additionally, having more than one aircraft provider will allow for competition to help control the procurement cost, promote cost reduction measures, and allow for a faster aircraft replacement rate.

Further, the Committee directs the Secretary of Defense to, prior to the release of a draft or final request for proposal soliciting bids for an aerial tanker replacement aircraft, submit a report to the congressional defense committees that includes a description of key mission requirement and performance parameters that will be used as the basis for determining the key selection criteria in the source selection process; a full and complete characterization and definition of "best value"; a description of the process that the Department of Defense intends to use to ensure open, balanced and trans-

parent communications with potential offerors; and a full description of the corrections made to the source selection process that addresses the issues raised by the Government Accountability Office in its "Statement Regarding the Bid Protest Decision Resolving the Aerial Refueling Tanker Protest by the Boeing Company, B311344 et. al, June 18, 2008".

COMMON VERTICAL LIFT SUPPORT PROGRAM

The request includes $9,513,000 for the Common Vertical Lift Support Program to address vertical lift support for nuclear weapon convoy escort, emergency security response and other missions. This program was initiated as a new start in fiscal year 2009 to study the recapitalization of the Air Force H–1 Helicopter fleet with plans for a commercial-off-the-shelf platform with initial operational capability in fiscal year 2013. Estimates provided by the Air Force indicate that the average procurement unit cost will be approximately $60,000,000. This estimate is far greater than the costs for platforms similar to H–1 helicopters currently in production with the Army, Navy and Marine Corps. The Committee recommends $2,000,000 for program management support for the Common Vertical Lift Support Program and urges the Air Force to pursue programs currently in production with other Services to address their requirements instead of pursuing a costly new development program.

BOMBER CREW SAFETY STUDY

The Committee has provided an additional $1,200,000 for the Air Force to conduct a B–52H seat re-engineering study to improve the capabilities of the current seat. The study should provide a plan for improving existing seats or equipping the aircraft with the newest technology resulting in significant performance and safety improvements and commonality with other aircraft in the Air Force fleet such as the T–38, T–6 and the F–35.

JOINT STARS DEMONSTRATION

The Committee has directed the permanent transfer of a SYERS–3 sensor to the Air Force for completion of the SYERS Demonstration Program initiated in the Defense Appropriations Act, 2008. The Committee directs that the Air Force notify the congressional defense committees upon formal receipt of the sensor and expects that this transfer of ownership will expedite completion of the demonstration program. In addition, the Committee directs that the Air Force submit a written report to the congressional defense committees on the results of the demonstration program, and any proposed future use of the SYERS–3 sensor in any Air Force program, not later than 30 days after completion of the demonstration.

EVOLVED EXPENDABLE LAUNCH VEHICLE SUSTAINMENT PLANS

The Committee directs the Secretary of the Air Force, in consultation with the Director of the National Reconnaissance Office, to submit an Evolved Expendable Launch Vehicle (EELV) sustainment plan to the congressional defense committees by Janu-

ary 4, 2010. This plan should include time-phased actions necessary to sustain the EELV program until 2030. It should also include the actions to insure that EELV launch capabilities and industrial base are maintained. In addition, the plan should include a roadmap for the infusion of new technology as well as increased reliability, maintainability and producibility of Pre-Planned Product Improvement efforts.

In particular, the state of the liquid rocket propulsion industrial base should be addressed in the plan. The report should identify the minimum level of investments and areas of technology development required to ensure the United States has a robust and viable liquid rocket engine industrial base beyond 2015 with focus on upper stage engine development. The report should identify technology development areas and annual funding requirements to support these technology areas.

In addition to the EELV sustainment plan, the Committee directs the Department of Defense's Cost Assessment and Program Evaluation group to perform a follow-up assessment of the United Launch Alliance merger and assess the status of the projected cost savings suggested at the time of the merger.

30-YEAR SPACE SYSTEM INVESTMENT STRATEGY

The Committee is concerned that there is no clear path for space system investment. The Committee strongly believes that an annual long-range plan for space system investment will provide a necessary roadmap for future government and industrial base investments. The Committee envisions this long-range plan be structured like the Annual Long-Range Plan for Construction of Naval Vessels. Similarly, this plan should contain information on the research, development, test and evaluation, as well as, the procurement, including schedule and funding profiles, for all Department of Defense and Intelligence Community National Security Space Systems, including ground systems for the next 30 years.

The Committee also expects the plan to include individual acquisition plans that provide descriptions of the programs and how these systems will meet the national security needs described in the most recent Quadrennial Defense Review and Space Posture Review. The report should also include the estimated levels of annual funding necessary to carry out the programs as well as a discussion of the acquisition strategies on which such estimated levels of annual funding are based to include both military and national intelligence funding.

Because the long-range space investment strategy is dependent on the state of the space industrial base, the Committee recommends the Department of Defense Cost Assessment and Program Evaluation (CAPE) office continue with the current studies and projects on the Space Industrial Base and begin other industrial base analysis efforts such as shipbuilding.

The Committee directs the Secretary of the Air Force and the Director of the National Reconnaissance Office, in coordination with the Secretary of Defense and the Director of National Intelligence, to deliver the 30-year Space System Investment Strategy to the congressional defense and intelligence committees by March 1, 2010. As necessary, the report should contain a classified appendix.

Finally, the Committee also recognizes that good planning requires good budgeting and oversight mechanisms. For the past two years, the Committee has directed the Secretary of Defense to create a major force program category for space. The Committee expects that the space major force program will be implemented by the submission of the fiscal year 2011 budget.

OPERATIONALLY RESPONSIVE SPACE FULL COST AND PERFORMANCE ACCOUNTING

Operationally Responsive Space (ORS) proposals are currently not evaluated using Department of Defense oversight mechanisms for assessing cost, schedule and performance as it relates to requirements and investment strategies. The Committee directs that all current and future ORS projects be independently assessed as it pertains to performance against validated Joint Requirements Oversight Council or Mission Requirements Board requirements to assess the proposed capabilities in relation to current acquisitions, existing material solutions, laboratory initiatives, and tactics, techniques and procedures. In addition, these proposals should also be independently assessed by the Department's Cost Assessment and Program Evaluation group for cost and schedule reliability.

NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM

The Committee remains concerned that the memorandum of agreement (MOA) signed December 18, 2008 is not being adhered to by the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Executive Committee participants. Therefore, the Committee directs that none of the funds made available to the Department of Defense for the NPOESS program shall be obligated or expended until the Undersecretary of Defense for Acquisition, Technology, and Logistics certifies in writing to the congressional defense committees that the NPOESS program is being managed in compliance with the Department of Defense 5000-series acquisition guidelines and that the participants are complying with the MOA signed on December 18, 2008. The Committee also expects the Department's Cost Analysis and Program Evaluation group to perform an updated independent review of the program cost estimate and schedule profile.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

Fiscal year 2009 appropriation	$21,423,338,000
Fiscal year 2010 budget request	20,741,542,000
Committee recommendation	20,721,723,000
Change from budget request	−19,819,000

The appropriation provides funds for the research, development, test and evaluation activities of the Department of the Defense for defense-wide activities. The total amount recommended in the bill will provide the following program in fiscal year 2010:

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	RESEARCH, DEVELOPMENT, TEST & EVAL, DEFENSE-WIDE			
	BASIC RESEARCH			
1	DTRA UNIVERSITY STRATEGIC PARTNERSHIP BASIC RESEARCH..	48,544	48,544	---
2	DEFENSE RESEARCH SCIENCES	226,125	242,825	+16,700
3	GOVT/INDUSTRY COSPONSORSHIP OF UNIVERSITY RESEARCH....	---	5,000	+5,000
5	NATIONAL DEFENSE EDUCATION PROGRAM	89,980	89,980	---
6	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	58,974	79,474	+20,500
	TOTAL, BASIC RESEARCH	423,623	465,823	+42,200
	APPLIED RESEARCH			
7	INSENSITIVE MUNITIONS--EXPLORATORY DEVELOPMENT	22,669	18,961	-3,708
9	HISTORICALLY BLACK COLLEGES & UNIV (HBCU) SCIENCE	15,164	65,521	+50,357
10	LINCOLN LABORATORY RESEARCH PROGRAM	34,034	34,034	---
11	INFORMATION AND COMMUNICATIONS TECHNOLOGY	282,749	285,749	+3,000
12	COGNITIVE COMPUTING SYSTEMS	142,840	144,840	+2,000
13	BIOLOGICAL WARFARE DEFENSE	40,587	40,587	---
14	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	209,072	226,572	+17,500
15	JOINT DATA MANAGEMENT ADVANCED DEVELOPMENT	4,940	4,940	---
16	HUMAN, SOCIAL AND CULTURE BEHAVIOR MODELING (HSCB) APP	9,446	9,446	---
17	TACTICAL TECHNOLOGY	276,075	278,075	+2,000
18	MATERIALS AND BIOLOGICAL TECHNOLOGY	268,859	268,959	+100
19	ELECTRONICS TECHNOLOGY	223,841	225,841	+2,000
20	WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES	219,130	220,630	+1,500
21	SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT	27,384	33,884	+6,500
22	SOF MEDICAL TECHNOLOGY DEVELOPMENT	---	3,000	+3,000
	TOTAL, APPLIED RESEARCH	1,776,790	1,861,039	+84,249

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	ADVANCED TECHNOLOGY DEVELOPMENT			
23	JOINT MUNITIONS ADVANCED TECH INSENSITIVE MUNITIONS AD	23,538	16,754	-6,784
24	SO/LIC ADVANCED DEVELOPMENT	43,808	43,808	---
25	COMBATING TERRORISM TECHNOLOGY SUPPORT	81,868	102,368	+20,500
26	COUNTERPROLIFERATION INITIATIVES--PROLIF PREV & DEFEAT	233,203	241,203	+8,000
27	BALLISTIC MISSILE DEFENSE TECHNOLOGY	109,760	109,760	---
28	JOINT ADVANCED CONCEPTS	7,817	3,909	-3,908
29	JOINT DOD-DOE MUNITIONS TECHNOLOGY DEVELOPMENT	23,276	23,276	---
30	ADVANCED AEROSPACE SYSTEMS	338,360	338,360	---
31	SPACE PROGRAMS AND TECHNOLOGY	200,612	202,612	+2,000
32	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM - ADVANCED DEV	282,235	297,735	+15,500
33	JOINT ELECTRONIC ADVANCED TECHNOLOGY	10,838	10,838	---
34	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS	198,352	202,352	+4,000
35	NETWORKED COMMUNICATIONS CAPABILITIES	28,212	28,212	---
36	JOINT DATA MANAGEMENT RESEARCH	4,935	4,935	---
37	BIOMETRICS SCIENCE AND TECHNOLOGY	10,993	10,993	---
38	HUMAN, SOCIAL AND CULTURE BEHAVIOR MODELING (HSCB) ADV	11,480	11,480	---
39	DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROG	14,638	16,638	+2,000
40	JOINT ROBOTICS PROGRAM/AUTONOMOUS SYSTEMS	9,110	11,610	+2,500
41	GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS	19,043	34,043	+15,000
42	DEPLOYMENT AND DISTRIBUTION ENTERPRISE TECHNOLOGY	29,356	29,356	---
43	STRATEGIC ENVIRONMENTAL RESEARCH PROGRAM	69,175	69,175	---
44	MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT	26,310	51,810	+25,500
45	JOINT WARFIGHTING PROGRAM	11,135	11,135	---
46	ADVANCED ELECTRONICS TECHNOLOGIES	205,912	207,912	+2,000
47	SYNTHETIC APERTURE RADAR (SAR) COHERENT CHANGE DETECT.	4,864	4,864	---
49	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM	221,286	221,286	---
50	COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS	293,476	293,476	---
52	CLASSIFIED DARPA PROGRAMS	186,526	186,526	---
53	NETWORK-CENTRIC WARFARE TECHNOLOGY	135,941	135,941	---
54	SENSOR TECHNOLOGY	243,056	243,056	---
55	GUIDANCE TECHNOLOGY	37,040	37,040	---
56	DISTRIBUTED LEARNING ADVANCED TECHNOLOGY DEVELOPMENT	13,822	13,822	---
57	SOFTWARE ENGINEERING INSTITUTE	31,298	31,298	---
59	QUICK REACTION SPECIAL PROJECTS	107,984	92,984	-15,000

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
60	JOINT EXPERIMENTATION	124,480	107,380	-17,100
61	JOINT WARGAMING SIMULATION MANAGEMENT OFFICE	38,505	38,505	---
62	TEST & EVALUATION SCIENCE & TECHNOLOGY	95,734	95,734	---
63	TECHNOLOGY TRANSFER	2,219	12,219	+10,000
65	SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT	31,675	57,175	+25,500
66	SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT	3,544	3,544	---
67	SOF INFORMATION & BROADCAST SYSTEMS ADVANCED TECHNOLOG	4,988	4,988	---
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT	3,570,404	3,660,112	+89,708
	DEMONSTRATION & VALIDATION			
68	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT	36,019	39,019	+3,000
70	RETRACT LARCH	21,718	21,718	---
71	JOINT ROBOTICS PROGRAM	11,803	15,803	+4,000
72	ADVANCE SENSOR APPLICATIONS PROGRAM	17,771	17,771	---
73	ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM	31,613	36,613	+5,000
74	BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT	719,465	719,465	---
75	BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT	982,922	982,922	---
76	BALLISTIC MISSILE DEFENSE BOOST DEFENSE SEGMENT	186,697	186,697	---
77	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	205,952	210,952	+5,000
78	BALLISTIC MISSILE DEFENSE SENSORS	636,856	636,856	---
79	BALLISTIC MISSILE DEFENSE SYSTEM INTERCEPTOR	---	80,000	+80,000
80	BALLISTIC MISSILE DEFENSE TEST & TARGETS	966,752	940,752	-26,000
81	BALLISTIC MISSILE DEFENSE SYSTEMS CORE	369,145	358,645	-10,500
82	SPECIAL PROGRAMS - MDA	301,566	286,566	-15,000
83	AEGIS BMD	1,690,758	1,670,758	-20,000
84	SPACE SURVEILLANCE & TRACKING SYSTEM	180,000	160,000	-20,000
86	BALLISTIC MISSILE DEFENSE SYSTEM SPACE PROGRAMS	12,549	12,549	---
87	BALLISTIC MISSILE DEFENSE C2BMC	340,014	340,014	---
88	BALLISTIC MISSILE DEFENSE HERCULES	48,186	48,186	---
89	BALLISTIC MISSILE DEFENSE JOINT WARFIGHTER SUPPORT	60,921	61,421	+500
90	BALLISTIC MISSILE DEFENSE JOINT NATIONAL INTERGRATION	86,949	86,949	---
91	REGARDING TRENCH	6,164	6,164	---
92	SEA BASED X-BAND RADAR (SBX)	174,576	161,576	-13,000
95	BMD EUROPEAN CAPABILITY	50,504	50,504	---
97	ISRAELI COOPERATIVE PROGRAMS	119,634	202,434	+82,800
98	HUMANITARIAN DEMINING	14,687	14,687	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
99	COALITION WARFARE	13,885	13,885	---
100	DEPARTMENT OF DEFENSE CORROSION PROGRAM	4,887	6,387	+1,500
101	DOD UNMANNED AIRCRAFT SYSTEM (UAS) COMMON DEVELOPMENT	55,289	65,289	+10,000
102	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS	18,577	3,577	-15,000
103	HUMAN, SOCIAL AND CULTURE BEHAVIOR MODELING (HSCB) RES	7,006	7,006	---
104	JOINT SYSTEMS INTEGRATION COMMAND (JSIC)	19,744	19,744	---
105	JOINT FIRES INTEGRATION & INTEROPERABILITY TEAM	16,972	16,972	---
106	REDUCTION OF TOTAL OWNERSHIP COST	24,647	24,647	---
107	JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM	3,949	6,949	+3,000
108	DEFENSE ACQUISITION CHALLENGE PROGRAM (DACP)	28,862	28,862	---
109	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT	7,628	7,628	---
110	PROMPT GLOBAL STRIKE CAPABILITY DEVELOPMENT	166,913	166,913	---
	TOTAL, DEMONSTRATION & VALIDATION	7,641,580	7,716,880	+75,300
	ENGINEERING & MANUFACTURING DEVELOPMENT			
111	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	332,895	339,895	+7,000
112	JOINT ROBOTICS PROGRAM	5,127	5,127	---
113	ADVANCED IT SERVICES JOINT PROGRAM OFFICE (AITS-JPO)	39,911	39,911	---
114	JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)	20,633	20,633	---
115	WEAPONS OF MASS DESTRUCTION DEFEAT CAPABILITIES	8,735	8,735	---
116	INFORMATION TECHNOLOGY DEVELOPMENT	11,705	15,205	+3,500
117	DEFENSE INTEGRATED MILITARY HUMAN RESOURCES SYSTEM	70,000	70,000	---
118	BUSINESS TRANSFORMATION AGENCY R&D ACTIVITIES	197,008	197,008	---
119	HOMELAND PERSONNEL SECURITY INITIATIVE	395	395	---
120	OUSD(C) IT DEVELOPMENT INITIATIVES	5,000	5,000	---
121	TRUSTED FOUNDRY	41,223	41,223	---
122	DEFENSE ACQUISITION EXECUTIVE (DAE) PILOT PROGRAM	4,267	4,267	---
123	GLOBAL COMBAT SUPPORT SYSTEM	18,431	18,431	---
124	JOINT COMMAND AND CONTROL PROGRAM (JC2)	49,047	49,047	---
125	WOUNDED ILL AND INJURED SENIOR OVERSIGHT COMMITTEE OFF	1,609	1,609	---
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	805,986	816,486	+10,500
	RDT&E MANAGEMENT SUPPORT			
126	GENERIC LOGISTICS TECHNOLOGY DEMONSTRATIONS	---	2,000	+2,000
127	DEFENSE READINESS REPORTING SYSTEM (DRRS)	13,121	16,121	+3,000
128	JOINT SYSTEMS ARCHITECTURE DEVELOPMENT	15,247	15,247	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
129	CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT	145,052	152,552	+7,500
130	THERMAL VICAR	9,045	12,045	+3,000
131	JOINT MISSION ENVIRONMENT TEST CAPABILITY (JMETC)	9,455	9,455	---
132	TECHNICAL STUDIES, SUPPORT AND ANALYSIS	44,760	44,760	---
133	USD(A&T)--CRITICAL TECHNOLOGY SUPPORT	4,914	4,914	---
134	FOREIGN MATERIAL ACQUISITION AND EXPLOITATION	94,921	94,921	---
135	JOINT THEATER AIR AND MISSILE DEFENSE ORGANIZATION	96,909	96,909	---
136	CLASSIFIED PROGRAM USD(P)	---	95,637	+95,637
137	FOREIGN COMPARATIVE TESTING	35,054	35,054	---
138	NUCLEAR MATTERS - PHYSICAL SECURITY	6,474	6,474	---
139	SUPPORT TO NETWORKS AND INFORMATION INTEGRATION	14,916	14,916	---
140	GENERAL SUPPORT TO USD (INTELLIGENCE)	5,888	5,888	---
141	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	106,477	106,477	---
147	SMALL BUSINESS INNOVATION RESEARCH/CHALLENGE ADMINISTR	2,163	3,163	+1,000
148	DEFENSE TECHNOLOGY ANALYSIS	11,005	11,805	+800
150	FORCE TRANSFORMATION DIRECTORATE	19,981	24,981	+5,000
151	DEFENSE TECHNICAL INFORMATION CENTER (DTIC)	54,411	49,411	-5,000
152	R&D IN SUPPORT OF DOD ENLISTMENT, TESTING & EVALUATION	19,554	19,554	---
153	DEVELOPMENT TEST AND EVALUATION	23,512	23,512	---
154	DARPA AGENCY RELOCATION	45,000	45,000	---
155	MANAGEMENT HEADQUARTERS (RESEARCH & DEVELOPMENT)	51,055	51,055	---
156	BUDGET AND PROGRAM ASSESSMENTS	5,929	5,929	---
157	AVIATION SAFETY TECHNOLOGIES	8,000	8,000	---
158	JOINT STAFF ANALYTICAL SUPPORT	1,250	1,250	---
161	SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES	30,604	25,904	-4,700
162	INFORMATION TECHNOLOGY RAPID ACQUISITION	4,667	4,667	---
163	CYBER SECURITY INITIATIVE	50,000	50,000	---
164	INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS (IO)	20,648	22,648	+2,000
166	WARFIGHTING AND INTELLIGENCE-RELATED SUPPORT	829	829	---
167	COCOM EXERCISE ENGAGEMENT AND TRAINING TRANSFORMATION	34,306	34,306	---
168	PENTAGON RESERVATION	19,709	---	-19,709
169	MANAGEMENT HEADQUARTERS - MDA	57,403	52,403	-5,000
170	IT SOFTWARE DEV INITIATIVES	980	980	---
	TOTAL, RDT&E MANAGEMENT SUPPORT	1,063,239	1,148,767	+85,528

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	OPERATIONAL SYSTEMS DEVELOPMENT			
171	DEFENSE INFORMATION SYSTEM FOR SECURITY (DISS)	1,384	1,384	---
172	REGIONAL INTERNATIONAL OUTREACH & PARTNERSHIP FOR PEAC	2,001	2,001	---
173	OVERSEAS HUMANITARIAN ASSISTANCE SHARED INFORMATION SY	292	292	---
174	CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS D	6,198	6,198	---
175	JOINT INTEGRATION AND INTEROPERABILITY	46,214	46,214	---
177	CLASSIFIED PROGRAMS	2,179	2,179	---
178	C4I INTEROPERABILITY	74,786	74,786	---
180	JOINT/ALLIED COALITION INFORMATION SHARING	10,767	10,767	---
187	NATIONAL MILITARY COMMAND SYSTEM-WIDE SUPPORT	548	548	---
188	DEFENSE INFO INFRASTRUCTURE ENGINEERING AND INTEGRATIO	17,655	17,655	---
189	LONG HAUL COMMUNICATIONS (DCS)	9,406	9,406	---
190	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK	9,830	9,830	---
191	PUBLIC KEY INFRASTRUCTURE (PKI)	8,116	8,116	---
192	KEY MANAGEMENT INFRASTRUCTURE (KMI)	41,002	41,002	---
193	INFORMATION SYSTEMS SECURITY PROGRAM	13,477	13,477	---
194	INFORMATION SYSTEMS SECURITY PROGRAM	408,316	408,316	---
196	DISA MISSION SUPPORT OPERATIONS	1,205	1,205	---
197	C4I FOR THE WARRIOR	4,098	4,098	---
198	GLOBAL COMMAND AND CONTROL SYSTEM	23,761	23,761	---
199	JOINT SPECTRUM CENTER	18,944	18,944	---
200	NET-CENTRIC ENTERPRISE SERVICES (NCES)	1,782	1,782	---
201	JOINT MILITARY DECEPTION INITIATIVE	942	942	---
202	TELEPORT PROGRAM	5,239	5,239	---
203	SPECIAL APPLICATIONS FOR CONTINGENCIES	16,381	30,381	+14,000
206	CYBER SECURITY INITIATIVE	993	993	---
208	CYBER SECURITY INITIATIVE	10,080	10,080	---
209	CRITICAL INFRASTRUCTURE PROTECTION (CIP)	12,725	12,725	---
215	POLICY R&D PROGRAMS	6,948	6,948	---
217	NET CENTRICITY	1,479	1,479	---
221	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	1,407	9,407	+8,000
224	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	3,158	3,158	---
226	MQ-1 PREDATOR A UAV	2,067	2,067	---
228	HOMELAND DEFENSE TECHNOLOGY TRANSFER PROGRAM	2,963	2,963	---
229	INT'L INTELLIGENCE TECHNOLOGY ASSESSMENT, ADVANCEMENT.	1,389	1,389	---

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
238	INDUSTRIAL PREPAREDNESS	20,514	28,014	+7,500
239	LOGISTICS SUPPORT ACTIVITIES	2,798	2,798	---
240	MANAGEMENT HEADQUARTERS (JCS)	8,303	8,303	---
241	NATO AGS	74,485	74,485	---
242	MQ-9 UAV	4,380	4,380	---
245	SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT	82,621	74,121	-8,500
246	SPECIAL OPERATIONS TACTICAL SYSTEMS DEVELOPMENT	6,182	2,594	-3,588
247	SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT	21,273	21,780	+507
248	SOF OPERATIONAL ENHANCEMENTS	60,310	64,310	+4,000
249	SPECIAL OPERATIONS CV-22 DEVELOPMENT	12,687	12,687	---
250	JOINT MULTI-MISSION SUBMERSIBLE	43,412	23,412	-20,000
252	OPS ADVANCED SEAL DELIVERY SYSTEM (ASDS) DEVELOPMENT	1,321	3,500	+2,179
253	MISSION TRAINING AND PREPARATION SYSTEMS (MTPS)	3,192	3,192	---
254	UNMANNED VEHICLES (UV)	---	1,000	+1,000
255	MC130J SOF TANKER RECAPITALIZATION	5,957	5,957	---
256	SOF COMMUNICATIONS EQUIPMENT AND ELECTRONICS SYSTEMS	733	733	---
257	SOF TACTICAL RADIO SYSTEMS	2,368	2,368	---
258	SOF WEAPONS SYSTEMS	1,081	1,081	---
259	SOF SOLDIER PROTECTION AND SURVIVAL SYSTEMS	597	597	---
260	SOF VISUAL AUGMENTATION, LASERS & SENSOR SYSTEMS	3,369	6,869	+3,500
261	SOF TACTICAL VEHICLES	1,973	1,973	---
262	SOF ROTARY WING AVIATION	18,863	18,863	---
263	SOF UNDERWATER SYSTEMS	3,452	13,000	+9,548
264	SOF SURFACE CRAFT	12,250	10,000	-2,250
265	SOF PSYOP	9,887	9,887	---
266	SOF GLOBAL VIDEO SURVEILLANCE ACTIVITIES	4,944	4,944	---
267	SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE	11,547	11,547	---
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT	1,186,231	1,202,127	+15,896
999	CLASSIFIED PROGRAMS	4,273,689	4,050,489	-223,200
	DARPA UNDISTRIBUTED REDUCTION	---	-200,000	-200,000
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, DEF-WIDE	20,741,542	20,721,723	-19,819

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
2	**DEFENSE RESEARCH SCIENCES**	**226,125**	**242,825**	**16,700**
	Laboratory for Advanced Photonic Composites Research		1,600	
	Hydrogen Fuel Cell Research		4,000	
	Institute for Collaborative Sciences Research		2,600	
	Science, Technology, Engineering and Mathematics Initiative		2,000	
	Solid Oxide Fuel Technology		1,000	
	American Museum of Natural History Infectious Disease Research		1,500	
	Countermeasures to Combat Protozoan Parasites (Toxoplasmosis and Malaria)		2,000	
	UAV Systems and Operations Validation Program		2,000	
3	**GOVERNMENT/INDUSTRY COSPONSORSHIP OF UNIVERSITY RESEARCH**	**0**	**5,000**	**5,000**
	High Efficiency Solar Energy Generation and Storage		1,000	
	Integrated Cryo-cooled High Power Density Systems		4,000	
	Center for Research on Minority Health Prostate Cancer Outreach Project		1,000	
6	**CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM**	**58,974**	**79,474**	**20,500**
	Joint Services Aircrew Mask Don/Doff Inflight		1,500	
	Advanced Development of Antiviral Prophylactics and Therapeutics		3,000	
	Countermeasures to Chemical and Biological Controls-Rapid Response		3,500	
	MEMS Sensors for Real-Time Sensing of Weaponized Pathogens		2,500	
	Mismatch Repair Drived Antibody Medicines to Treat Staphylococcus-derived Bioweapons		1,000	
	Portable Rapid Bacterial Warfare Detection Unit		4,000	
	Potent Human Monoclonal Antibodies Against BoNT A, B and E Suited for Mass Production and Treatment of Large Populations		1,000	
	Synchrotron Beamline Experimental Station		4,000	
7	**INSENSITIVE MUNITIONS--EXPLORATORY DEVELOPMENT**	**22,669**	**18,961**	**-3,708**
	Partial Program Growth Reduction		-3,708	
9	**HISTORICALLY BLACK COLLEGES & UNIVERSITIES (HBCU) SCIENCE**	**15,164**	**65,521**	**50,357**
	Reappropriation of FY08 account level		34,457	
	National Program add		9,400	
	Active Duty Training and Education Program		2,000	
	Morehouse College, John H. Hopps Defense Research Scholars Program		3,000	
	Thurgood Marshall College Fund Defense Leadership and Technology Initiative		1,500	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
11	**INFORMATION AND COMMUNICATIONS TECHNOLOGY**	**282,749**	**285,749**	**3,000**
	High Speed Optical Interconnects for Next Generation Supercomputing		1,500	
	Intelligent Remote Sensing for Urban Warfare Operations II		1,500	
12	**COGNITIVE COMPUTING SYSTEMS**	**142,840**	**144,840**	**2,000**
	BioButanol Production Research		2,000	
14	**CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM**	**209,072**	**226,572**	**17,500**
	Self-decontaminating Polymer System for Chemical and Biological Warfare Agents		3,500	
	Botulinum Neurotoxin Research		2,500	
	Botulinum Toxin Treatment Therapy		1,000	
	Chemical and Biological Agent Fate Appropriate Response Operational Tool		2,000	
	Chemical and Biological Resistant Clothing		2,000	
	HyperAcute Vaccine Development		4,500	
	Miniaturized Chemical Detector for Chemical Warfare Protection		2,000	
17	**TACTICAL TECHNOLOGY**	**276,075**	**278,075**	**2,000**
	Sea Catcher UAS Launch and Recovery System		2,000	
18	**MATERIALS AND BIOLOGICAL TECHNOLOGY**	**268,859**	**268,959**	**100**
	Moldable Fabric Armor		2,800	
	Photovoltaic Ribbon Solar Cell Technology Project		3,600	
	Center for Nonproliferation Studies, Monterey Institute for International Affairs		2,000	
	Bioinspired Sensors - excessive program growth		-5,000	
	Biological Interfaces - excessive program growth		-3,300	
19	**ELECTRONICS TECHNOLOGY**	**223,841**	**225,841**	**2,000**
	3-D Technology for Advanced Sensor Systems		2,000	
20	**WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES**	**219,130**	**220,630**	**1,500**
	National Center for Blast Mitigation		1,500	
21	**SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT**	**27,384**	**33,884**	**6,500**
	Flashlight Soldier-to-Soldier Combat Identification System		4,500	
	United States Special Operations Command - USSOCOM / STAR-TEC Partnership Program		2,000	
22	**SOF MEDICAL TECHNOLOGY DEVELOPMENT**	**0**	**3,000**	**3,000**
	Personalized Medicine Initiative		3,000	
23	**JOINT MUNITIONS ADVANCED TECHNOLOGY, INSENSITIVE MUNITIONS - ADVANCED**	**23,538**	**16,754**	**-6,784**
	Partial Program Growth Reduction		-6,784	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
25	**COMBATING TERRORISM TECHNOLOGY SUPPORT**	**81,868**	**102,368**	**20,500**
	Affordable Robust Mid-Sized Unmanned Ground Vehicle		2,000	
	Comprehensive and Integrated Procedures for Risk Assessment and Resource Allocation		2,500	
	Facility Security Using Tactical Surveys		4,500	
	Integrated Rugged Checkpoint Container		2,500	
	Low Cost Stabilized Turret		1,000	
	Military/Law Enforcement Counterterrorism Test Bed		3,000	
	Radio Inter-Operability System		2,000	
	Ultra Low Profile EARS Gunshot Localization System		1,500	
	Remote VBIED Detection and Defeat System		1,500	
26	**COUNTERPROLIFERATION INITIATIVES--PROLIFERATION PREVENTION & DEFEAT**	**233,203**	**241,203**	**8,000**
	AELED IED/WMD Electronic Signature Detection		6,000	
	New Drug Targets in Multi-Drug Resistant Bacteria		2,000	
27	**BALLISTIC MISSILE DEFENSE TECHNOLOGY**	**109,760**	**109,760**	**0**
	General Reduction		-5,000	
	Advanced Battery Technology		2,000	
	Missile Activity and Characteristics - Releasable		3,000	
28	**JOINT ADVANCED CONCEPTS**	**7,817**	**3,909**	**-3,908**
	Excessive Program Growth		-3,908	
31	**SPACE PROGRAMS AND TECHNOLOGY**	**200,612**	**202,612**	**2,000**
	Mosaic Camera Technology Transition		2,000	
32	**CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM - ADVANCED DEVELOPMENT**	**282,235**	**295,735**	**13,500**
	Multi-target Shipping Container Interrogation System Mobile Continuous Air Monitor		2,000	
	Hand-Held Apparatus for Mobile Mapping and Expedited Reporting		3,500	
	Regenerative Filtration System for CBRN Defense		3,000	
	Total Perimeter Surveillance		2,000	
	Unified Management Infrastructure System		1,000	
	Advanced Development of Mobile Rapid Response Prototypes		2,000	
	Chemical and Biological Defense Program - Advanced Development		2,000	
34	**JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS**	**198,352**	**202,352**	**4,000**
	Distributed Network Switching and Security		2,000	
	High Accuracy Network Determination System - Intelligent Optical Networks		2,000	
39	**DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROGRAM**	**14,638**	**16,638**	**2,000**
	California Enhanced Defense Small Manufacturing Suppliers Program		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
40	JOINT ROBOTICS PROGRAM/AUTONOMOUS SYSTEMS	9,110	11,610	2,500
	Autonomous Control and Video Sensing for Robots		1,000	
	Battle-Proven Packbot		1,500	
41	GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS	19,043	34,043	15,000
	Aging Systems Sustainment and Enabling Technologies		3,000	
	Progressive Research for Sustainable Manufacturing		1,500	
	Reduced Cost Supply Readiness		1,500	
	Alternative Energy from Organic Sources		6,000	
	Cellulosic-Dervied Biofuels Research		3,000	
44	MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT	26,310	51,810	25,500
	3-D Electronics and Power		6,000	
	AESA Technology Insertion Program		3,000	
	Carbon Nanotube Thin Film Near Infrared Detector		2,000	
	End to End Semi Fab Alpha Tool		2,000	
	Feature Size Yield Enhancement Advanced Reconfigurable Manufacturing for Semiconductors Foundry		3,000	
	Heterogeneous Gallium Nitride/Silicon Microcircuit Technology		2,000	
	Spintronics Memory Storage Technology		3,500	
	Superconducting Quantum Information Technology		1,000	
	X-Band/W-Band Solid State Power Amplifier		1,000	
	Semiconductor Photomask Technology Infrastructure Initiative		2,000	
46	ADVANCED ELECTRONICS TECHNOLOGIES	205,912	207,912	2,000
	Hybrid Power Generating System		2,000	
59	QUICK REACTION SPECIAL PROJECTS	107,984	92,984	-15,000
	Reduction from Technology Transition Initiative		-15,000	
60	JOINT EXPERIMENTATION	124,480	107,380	-17,100
	Reduction for National Center for Small Unit Excellence		-20,000	
	Tidewater Full Scale Exercise		2,900	
63	TECHNOLOGY TRANSFER	2,219	12,219	10,000
	National Radio Frequency Research, Development and Technology Transfer		5,000	
	Radio Frequency Identification Technologies		1,000	
	FirstLink Technology Transfer Program		3,000	
	Program Increase		1,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
65	**SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT**	**31,675**	**57,175**	**25,500**
	Affordable Miniature FOPEN Radar for Special Operations Craft - Riverine		3,500	
	Optical Surveillance Equipment		2,000	
	Field Experiment Program for Special Operations		2,000	
	CBRN Detection Unmanned Aircraft		2,000	
	Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture		2,000	
	Partnership for Defense Innovation Wi-Fi Laboratory Testing and Assessment Center		1,500	
	Program Increase-Innovative Technologies for SOF		12,500	
68	**NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT**	**36,019**	**39,019**	**3,000**
	Under-Vehicle Inspection System		3,000	
71	**JOINT ROBOTICS PROGRAM**	**11,803**	**15,803**	**4,000**
	Autonomous Machine Vision for Mapping and Investigation of Remote Sites		2,000	
	Joint Robotics Training Program		2,000	
73	**ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM**	**31,613**	**36,613**	**5,000**
	Environmentally Friendly Nanometal Electroplating Processes for Cadmium and Chromium Replacement		3,000	
	Wellhead Treatment of Perchlorate Contaminated Wells		2,000	
77	**CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM**	**205,952**	**210,952**	**5,000**
	Automated Sample Preparation for Biological Detection		1,000	
	Broad Spectrum Therapeutic Countermeasures to OP Nerve Agents		2,000	
	Tactical, Cargo, and Rotary Wing Aircraft Decon		2,000	
79	**BALLISTIC MISSILE DEFENSE SYSTEM INTERCEPTOR**	**0**	**80,000**	**80,000**
	Program Increase - Kinetic Energy Interceptor		80,000	
80	**BALLISTIC MISSILE DEFENSE TEST & TARGETS**	**966,752**	**940,752**	**-26,000**
	Target Synchronization with Test Schedule		-26,000	
81	**BALLISTIC MISSILE DEFENSE SYSTEMS CORE**	**369,145**	**358,645**	**-10,500**
	General Reduction		-25,000	
	Next Generation Sensor Producability-Flight 2		10,000	
	Advanced Decision Support System		2,500	
	Miniature Divert and Altitude Controls System Thruster		2,000	
82	**SPECIAL PROGRAMS - MDA**	**301,566**	**286,566**	**-15,000**
	Program Decrease due to excessive growth		-15,000	
83	**AEGIS BMD**	**1,690,758**	**1,670,758**	**-20,000**
	New Operational Configuration for 6 additional Aegis Crusiers and New Missile Type for Blcok 5.2 not determined		-50,000	
	Ballistic Signal Processor/Open Architecture		30,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
84	**SPACE SURVEILLANCE & TRACKING SYSTEM**	**180,000**	**160,000**	**-20,000**
	Demonstration Satellites		-20,000	
89	**BALLISTIC MISSILE DEFENSE JOINT WARFIGHTER SUPPORT**	**60,921**	**61,421**	**500**
	Independent Advisory Group to Review Ballistic Missile Defense Training Needs		500	
92	**SEA BASED X-BAND RADAR (SBX)**	**174,576**	**161,576**	**-13,000**
	General Reduction		-13,000	
97	**ISRAELI COOPERATIVE PROGRAMS**	**119,634**	**202,434**	**82,800**
	Arrow 3		12,500	
	Arrow 2 Development		26,000	
	Arrow 2 Co-Production		10,000	
	David's Sling		34,300	
100	**DEPARTMENT OF DEFENSE CORROSION PROGRAM**	**4,887**	**6,387**	**1,500**
	Corrosion Training Simulation Program		1,500	
101	**DOD UNMANNED AIRCRAFT SYSTEM (UAS) COMMON DEVELOPMENT**	**55,289**	**65,289**	**10,000**
	Small Business Technology Insertion		10,000	
102	**JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS**	**18,577**	**3,577**	**-15,000**
	Reduction due to obligation and expenditure		-15,000	
107	**JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM**	**3,949**	**6,949**	**3,000**
	Lifetime Power for Wireless Control Sensors		1,000	
	Secure, Miniaturized, Hybrid, Free Space, Optical Communications		2,000	
111	**CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM**	**332,895**	**339,895**	**7,000**
	Chemical and Biological Threat Reduction Coating		3,000	
	Detection and Remediation of Bio/Chemical Weapons Programs		2,000	
	Protective Self-Decontaminating Surfaces		2,000	
116	**INFORMATION TECHNOLOGY DEVELOPMENT**	**11,705**	**15,205**	**3,500**
	National Terrorism Preparedness Institute, Anti-Terrorism/Counter-Terrorism Technology Development and Training		3,500	
126	**GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS**	**0**	**2,000**	**2,000**
	Integrated Analysis Environment		2,000	
127	**DEFENSE READINESS REPORTING SYSTEM (DRRS)**	**13,121**	**16,121**	**3,000**
	Program Increase		3,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
129	**CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT**	**145,052**	**152,552**	**7,500**
	Gulf Range Mobile Instrumentation Capability		3,000	
	Savannah CRTC Training Enabled Maneuver Instrumentation (STEM)		4,500	
130	**THERMAL VICAR**	**9,045**	**12,045**	**3,000**
	Joint Gulf Range Complex Test and Training		3,000	
136	**CLASSIFIED PROGRAM USD(P)**	**0**	**95,637**	**95,637**
	Classified Program USD(P)		95,637	
147	**SMALL BUSINESS INNOVATION RESEARCH/CHALLENGE ADMINISTRATION**	**2,163**	**3,163**	**1,000**
	UAV Directed Energy Weapons Systems Payloads		1,000	
148	**DEFENSE TECHNOLOGY ANALYSIS**	**11,005**	**11,805**	**800**
	Modeling and Simulation Standards Study		800	
150	**FORCE TRANSFORMATION DIRECTORATE**	**19,981**	**24,981**	**5,000**
	Rigid Aeroshell Variable Buoyancy Air Vehicle		5,000	
151	**DEFENSE TECHNICAL INFORMATION CENTER (DTIC)**	**54,411**	**49,411**	**-5,000**
	General Reduction		-5,000	
161	**SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES**	**30,604**	**25,904**	**-4,700**
	Excess Funding		-4,700	
164	**INTELLIGENCE SUPPORT TO INFORMATION OPERATIONS (IO)**	**20,648**	**22,648**	**2,000**
	Biological and Chemical Warfare Online Repository of Technical Holdings		2,000	
168	**PENTAGON RESERVATION**	**19,709**	**0**	**-19,709**
	Duplicative Maintenance and Facilities Support Costs for FOB 2		-19,709	
169	**MANAGEMENT HEADQUARTERS - MDA**	**57,403**	**52,403**	**-5,000**
	General Reduction		-5,000	
203	**SPECIAL APPLICATIONS FOR CONTINGENCIES**	**16,381**	**30,381**	**14,000**
	Advanced Technologies Sensors and Payloads/Unattended SIGINT Node		6,000	
	Comprehensive Maritime Domain Awareness		4,000	
	GMTI Radar for Class II UAVs		1,000	
	UAV/UAS Test Facility		3,000	
221	**DISTRIBUTED COMMON GROUND/SURFACE**	**1,407**	**9,407**	**8,000**
	Program Increase - DCGS Capabilities Modernization		8,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
238	**INDUSTRIAL PREPAREDNESS**	**20,514**	**28,014**	**7,500**
	Copper-base Casting Technology Applications		2,000	
	Corrosion Resistant Ultrahigh-Strength Steel for Landing Gear		2,000	
	DLA VetBiz Initiative for National Sustainment		1,000	
	Northwest Manufacturing Initiative		2,500	
245	**SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT**	**82,621**	**74,121**	**-8,500**
	Avionics Modernization Program		-10,000	
	Helicopter Cable Warning and Obstacle Avoidance		1,500	
246	**SPECIAL OPERATIONS TACTICAL SYSTEMS DEVELOPMENT**	**6,182**	**2,594**	**-3,588**
	SOF Resource Business Information System		-4,588	
	Covert Waveform for Software Defined Radios		1,000	
247	**SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT**	**21,273**	**21,780**	**507**
	Counterproliferation Analysis and Planning System Program Review		-14,993	
	Advanced, Long Endurance Unattended Ground Sensor Technologies		2,000	
	Biometric Optical Surveillance System		5,000	
	Counterproliferation Analysis and Planning System		5,000	
	United States Special Operations Command SOCRATES High Assurance Platform Program		1,000	
	University Multi-Spectral Laboratories		2,500	
248	**SOF OPERATIONAL ENHANCEMENTS**	**60,310**	**64,310**	**4,000**
	USSOCOM Medical Research		4,000	
250	**JOINT MULTI-MISSION SUBMERSIBLE**	**43,412**	**23,412**	**-20,000**
	New Start Execution		-20,000	
252	**OPS ADVANCED SEAL DELIVERY SYSTEM (ASDS) DEVELOPMENT**	**1,321**	**3,500**	**2,179**
	SECDEF Program Review		-1,321	
	Lithium-ion Battery Safety Detection and Control of Impending Failures		1,500	
	Material, Design and Fabrication Solutions for Advanced SEAL Delivery System External Structural Components		2,000	
254	**UNMANNED VEHICLES (UV)**	**0**	**1,000**	**1,000**
	Hand-held, Lethal Small Unmanned Aircraft System		1,000	
260	**SOF VISUAL AUGMENTATION, LASERS & SENSOR SYSTEMS**	**3,369**	**6,869**	**3,500**
	Miniature Day Night Sight for Crew Served Weapons		1,500	
	Thermal Pointer/Illuminator for Force Protection		2,000	

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
263	**SOF UNDERWATER SYSTEMS**	**3,452**	**13,000**	**9,548**
	New Start Execution		-1,452	
	Alternative SOF Submersible Concept Design Study		1,000	
	Non-Gasoline Burning Outboard Engine		1,900	
	Technology for Shallow Water Special Operation Forces Mobility		3,600	
	Transformer Technology for Combat Submersibles		4,500	
264	**SOF SURFACE CRAFT**	**12,250**	**10,000**	**-2,250**
	New Start Execution		-2,250	
999	**CLASSIFIED PROGRAMS**	**4,273,689**	**4,050,489**	**-223,200**
	Classified Adjustments		-251,500	
	Laser Ablation Resonance Ionization Mass Spectrometer		3,000	
	Portable Device for Latent Fingerprint Identification		1,800	
	Advanced Scientific Missile Intelligence Preparation of the Battlespace		2,500	
	Security for Critical Communication Networks		7,000	
	Cybersecurity and Operational Identity Management		2,000	
	Improving Support to the Warfighter		7,000	
	MS GIS Educational and Research Program		1,000	
	Enhancement of Geo-location Systems		4,000	
	DARPA Undistributed Reduction		**-200,000**	**-200,000**

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES AND MINORITY INSTITUTIONS

The budget request proposed $15,164,000 for Historically Black Colleges and Universities and Minority Institutions (HBCU/MI). On February 6, 2009, a Federal Court of Appeals decision ruled that the HBCU account was unconstitutional. The "Rothe" decision on 10 USC 2323 ended the program when it ruled that 2323 was unconstitutional in its entirety. The program is contingent upon an appeal by the Department of Justice and the Department of Defense or the enactment of new legislation that allows the Department of Defense HBCU/MI program to continue.

In the absence of a final decision on the appeal, the Committee rescinds $34,457,000, the amount remaining from the fiscal year 2009 appropriation, and appropriates $49,621,000, an amount equal to the amount rescinded, plus the amount proposed in the budget request, plus an additional $9,400,000 recommended by the Committee. In total, the Committee recommendation for HBCU/MI is $65,521,000.

VOICE ANALYSIS FOR TRUTH VERIFICATION AND DETECTION OF DECEIT

The Secretary of Defense shall provide a report to the congressional defense committees on memos, letters, and After Action Field Reports supporting the use of security level technologies designed for truth verification and detection of deceit through voice analysis. The report shall be submitted not later than 90 days after enactment of this Act.

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

The Committee has included $3,048,054,000 for the Defense Advanced Research Projects Agency (DARPA), which is a decrease of $200,000,000 from the fiscal year 2010 request and a decrease of $81,970,000 from the amount appropriated in fiscal year 2009. Based on historic under execution in several program elements, the Committee has reduced this funding level.

MISSILE DEFENSE AGENCY REPORTING REQUIREMENTS AND JUSTIFICATION MATERIALS

The budget justification provided by the Missile Defense Agency (MDA) continues to be insufficient to conduct proper oversight of MDA's programs. However, the Committee commends the Agency for establishing the two new procurement lines that were created in Public Law 110–369 and anticipates additional adjustments to budget documentation to include an operation and maintenance account in fiscal year 2011 and beyond. MDA programs have historically changed significantly from the time the budget is submitted to the time funding is appropriated, making it extremely difficult to understand what is actually in the budget on an annual basis. The justification materials must provide more detailed schedules, quantities, and break-outs of funding for each activity. MDA is directed to report according to the existing acquisition laws to improve accountability and transparency of the programs.

BALLISTIC MISSILE DEFENSE TEST AND TARGETS

In December 2008, the Director of the Missile Defense Agency initiated a review of the entire Ballistic Missile Defense test program. The Integrated Master Test Plan's primary purpose is to establish and document the executable test baseline program for fiscal years 2010 through 2015 including testing beyond fiscal year 2015 to satisfy critical engagement conditions and empirical measurement events data collection requirements. To date the Integrated Master Test Plan has neither been approved by the Missile Defense Agency, Joint Interoperability Test Command, Joint Functional Component Command-Integrated Missile Defense, nor the Army, Navy or Air Force Operational Test and Evaluation Centers. The Committee is aware and concerned that a test scheduled for fiscal year 2010 has already slipped to the first quarter of fiscal year 2011 and that target synchronization with the test schedule remains an open issue. Therefore, the Committee has reduced the budget request by $26,000,000 for a total of $940,752,000 available in fiscal year 2010. Finally, of the funding provided, $470,376,000 shall not be available for obligation until the Director of the Missile Defense Agency provides notification of its intent to obligate any additional funding above $470,376,000 and receives prior approval of the congressional defense committees.

ISRAELI MISSILE DEFENSE COOPERATIVE PROGRAMS

The Committee has provided an additional $82,800,000 for a total of $202,434,000 for Israeli Missile Defense Cooperative Programs and supports efforts to develop an upper-tier follow-on to the Arrow Weapons System. After numerous changes to the requirements of the program, the United States and Israel continue to move forward in the development of the Arrow–3 Interceptor. The Committee understands that the Department is currently discussing the project agreement with the Israeli Ministry of Defense to make certain that the agreement will contain clear knowledge points and a schedule that will outline the development of the program. Once an agreement has been reached, the Committee directs the Department to submit a report to the congressional defense committees not later than January 29, 2010, that outlines the agreed knowledge points, schedule and an assessment of whether the program is currently meeting the outlined milestones.

AEGIS BALLISTIC MISSILE DEFENSE

The Aegis Ballistic Missile Defense (BMD) system is the first mobile, global, deployable and proven capability that can destroy missiles both above and within the atmosphere as well as providing a forward-deployed surveillance capability in support of homeland defense. However, the Committee is concerned that there are large unobligated and unexpended balances and that two tests planned, FTM–16 and FTX–08, have the potential to slip into the first quarter of fiscal year 2011. Additionally, within the budget request six additional ships are to be upgraded for BMD operations. However the configuration for the upgrades has yet to be determined, and the Block 5.2 Aegis BMD will incorporate a new missile type which

still needs to be determined. Therefore, the Committee reduces the budget request by $50,000,000.

SPACE TRACKING AND SURVEILLANCE SYSTEM (STSS)

It is premature for the Missile Defense Agency (MDA) to move forward with a follow-on STSS constellation until after a successful launch and thorough analysis of the STSS demonstrator data. Therefore, the Committee reduces the fiscal year 2010 request by $20,000,000 and directs MDA to provide a detailed report to the congressional defense committees not later than 30 days after a successful launch of both satellites has been completed.

KINETIC ENERGY INTERCEPTOR

The Committee is aware that the Kinetic Energy Interceptor (KEI) has completed research and development of certain technologies and that the Missile Defense Agency (MDA) is determining how to make the best use of the current technologies and their technical worth as well as the possible benefits of integrating these developments with other MDA programs. Therefore, the Committee has provided $80,000,000 to enable the continuation of the program and the leveraging of KEI products and expertise for early intercept capability and other missile defense applications.

SEA-BASED X-BAND RADAR

The mission of the Sensors Program is to efficiently develop, acquire, test, field and operate an integrated sensor enterprise. However, the Committee is concerned that there are large unobligated and unexpended balances after fiscal year 2009, the first year of execution for the program element. The Committee is also concerned that GTD–04 has already slipped to the first quarter of fiscal year 2011. Therefore, the Committee has reduced the Sea-Based X-Band Radar request by $13,000,000.

GROUND BASED MID-COURSE DEFENSE

The Committee is concerned with the uncertainty of the Missile Defense Agency's (MDA) plans regarding Ground Based Mid-Course Defense (GMD). MDA currently plans to maintain a 30 missile fleet instead of a 44 missile fleet as indicated in previous budget submissions. MDA estimates that emplacement of the 30 Ground Based Interceptors, plus testing and refurbishment, would actually require a total of 54 interceptors. With only 44 missiles currently under contract, the Committee is concerned that, without knowledge of the Department's position on GMD in fiscal year 2011 and beyond, this could cause a break in the production line which would increase any funding requirements in future budget submissions.

The Committee is concerned that MDA has not sufficiently addressed future requirements for GMD and therefore directs MDA to provide an unclassified report within 30 days of enactment of this Act that specifies what is needed in order to continue the industrial base. The report should include recommendations from the prime contractor and a discussion of MDA's Analysis of Alter-

natives based on U.S. Northern Command's ballistic missile defense study provided to MDA in October 2008.

OPERATIONAL TEST AND EVALUATION, DEFENSE

Fiscal year 2009 appropriation	$188,772,000
Fiscal year 2010 budget request	190,770,000
Committee recommendation	190,770,000
Change from budget request	– – –

The appropriation provides funds for the research, development, test and evaluation activities of the Department of the Defense for defense-wide activities. The total amount recommended in the bill will provide the following program in fiscal year 2010:

(DOLLARS IN THOUSANDS)

		BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
	OPERATIONAL TEST & EVAL, DEFENSE			
	RDT&E MANAGEMENT SUPPORT			
1	OPERATIONAL TEST AND EVALUATION	58,647	58,647	---
2	LIVE FIRE TESTING	12,285	12,285	---
3	OPERATIONAL TEST ACTIVITIES AND ANALYSES	119,838	119,838	---
	TOTAL, RDT&E MANAGEMENT SUPPORT	190,770	190,770	---
	TOTAL, OPERATIONAL TEST & EVAL, DEFENSE	190,770	190,770	---