

## TITLE IV

### RESEARCH, DEVELOPMENT, TEST AND EVALUATION

The fiscal year 2015 Department of Defense research, development, test and evaluation budget request totals \$63,533,947,000. The Committee recommendation provides \$63,362,890,000 for the research, development, test and evaluation accounts. The table below summarizes the Committee recommendations:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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RECAPITULATION			
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY.....	6,593,898	6,720,000	+126,102
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY.....	16,266,335	15,877,770	-388,565
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE...	23,739,892	23,438,982	-300,910
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE.....	16,766,084	17,077,900	+311,816
OPERATIONAL TEST AND EVALUATION, DEFENSE.....	167,738	248,238	+80,500
GRAND TOTAL, RDT&E.....	63,533,947	63,362,890	-171,057
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## SPECIAL INTEREST ITEMS

Items for which additional funds have been provided or items for which funding has been reduced as shown in the project level tables or in paragraphs using the phrase “only for” or “only to” in the Committee report are congressional interest items for the purpose of the Base for Reprogramming (DD Form 1414). Each of these items must be carried on the DD Form 1414 at the stated amount specifically addressed in the Committee report. Below threshold reprogrammings may not be used to either restore or reduce funding from congressional interest items as identified on the DD Form 1414. 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 Secretary of Defense to continue to follow the reprogramming guidance as specified in the report accompanying the House version of the fiscal year 2008 Department of Defense Appropriations Act (House Report 110-279). 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 Secretary 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 from the base for reprogramming value as modified by any adjustments. Therefore, if the combined value of transfers into or out of a procurement (P-1) or research, development, test and evaluation (R-1) line exceeds the identified threshold, the Secretary of Defense must submit a prior approval reprogramming 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 Form 1416 reports for Service and defense-wide accounts in titles III and IV of this Act as required in the explanatory statement accompanying the Department of Defense Appropriations Act for fiscal year 2006.

## FUNDING INCREASES

The Committee directs that the funding increases outlined in these tables shall be provided only for the specific purposes indicated in the tables.

## CLASSIFIED ANNEX

Adjustments to the classified programs are addressed in a classified annex accompanying this report.

## LITHIUM-ION BATTERIES

The Committee supports the Department's investments in power generation and energy storage. In particular, the development and deployment of lithium-ion batteries is important to current and future Department platforms. The Committee understands that recent technology issues and concerns have slowed this development. Due to the capability increase lithium-ion batteries could potentially provide, the Committee encourages the Secretary of Defense to dedicate resources to further the development of these batteries.

## HYBRID AIRSHIP DEVELOPMENT

The Secretary of Defense, in cooperation with the Secretary of the Air Force and the Commander of the United States Transportation Command, should work to solicit competitive bids for proof-of-concept demonstrations of hybrid airships with global reach capabilities. Such efforts should be developed with a view to rapidly transition to full scale production hybrid airships for heavy lift. The Committee is aware that such airships can operate in areas without significant ground infrastructure, allowing the delivery of cargo directly to where it is needed, including areas far removed from air and sea ports and areas where infrastructure has been destroyed by natural disaster or conflict.

## ANTI-CORROSION EFFORTS

The Committee understands that the Department of Defense continues to pursue an anti-corrosion program that is practical, affordable, and cost effective. The Department spends substantial amounts of money every year to prevent and mitigate corrosion on various platforms, equipment, and facilities. The Committee is aware that suppliers to the oil and gas industry use several different corrosion prevention materials to meet their anti-corrosion requirements. Additionally, other government agencies have made great strides in metallic coatings that may offer anti-corrosion properties and extend the service life of equipment and infrastructure. The Committee encourages the Secretary of Defense to investigate these anti-corrosion activities and adapt them in the Department of Defense where possible.

## EXPLOSIVE ORDNANCE DISPOSAL

Accidental detonation of unexploded ordnance has claimed the lives of a significant number of servicemembers. The Committee strongly supports efforts to develop, demonstrate, and field solutions and techniques to protect warfighters from accidental detonation of unexploded ordnance. Further, the Committee believes there is a need to develop environmentally sustainable, near 100 percent efficient Explosive Ordnance Disposal (EOD) technologies and techniques for unexploded ordnance containing highly insensitive energetic materials, while at the same time minimizing the amount of energetic material required for successful EOD operations. Alternate EOD technologies and techniques will reduce the risk of increased range contamination with energetic materials and will potentially reduce the cost of restoring training ranges. Alternative technologies will also increase EOD safety on the battlefield by re-

ducing the time required to address unexploded ordnance and promoting efficiency by decreasing the logistical burden of transporting and handling demolition explosives.

#### MULTISPECTRAL SIGNATURE MANAGEMENT

The Committee is aware of the emerging threat posed by short-wave infrared detection systems that are increasingly available in the civilian marketplace and may be deployed by adversaries. In many cases, the passive signature management systems currently deployed by the Department of Defense do not provide adequate protection against these advanced sensors. In order to mitigate this increased vulnerability, the Committee recommends the development and procurement of passive multispectral protection, and encourages the Secretary of Defense to pursue domestically-produced, cost effective solutions that provide visual, near-infrared, thermal infrared, and broad-band radar threat mitigation capabilities. The Committee urges the Secretary of Defense to develop solutions that address the Department's demonstrated need for urban and aviation signature management systems, as well as to identify a suitable replacement for outdated arctic signature management systems.

#### RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

Fiscal year 2014 appropriation .....	\$7,126,318,000
Fiscal year 2015 budget request .....	6,593,898,000
Committee recommendation .....	6,720,000,000
Change from budget request .....	+126,102,000

The Committee recommends an appropriation of \$6,720,000,000 for Research, Development, Test and Evaluation, Army. The total amount recommended in the bill will provide the following program in fiscal year 2015:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST	
RESEARCH, DEVELOPMENT, TEST & EVAL., ARMY				
BASIC RESEARCH				
1	IN-HOUSE LABORATORY INDEPENDENT RESEARCH.....	13,464	13,464	---
2	DEFENSE RESEARCH SCIENCES.....	238,167	238,167	---
3	UNIVERSITY RESEARCH INITIATIVES.....	69,808	69,808	---
4	UNIVERSITY AND INDUSTRY RESEARCH CENTERS.....	102,737	102,737	---
	TOTAL, BASIC RESEARCH.....	424,176	424,176	---
APPLIED RESEARCH				
5	MATERIALS TECHNOLOGY.....	28,006	28,006	---
6	SENSORS AND ELECTRONIC SURVIVABILITY.....	33,515	33,515	---
7	TRACTOR HIP.....	16,358	16,358	---
8	AVIATION TECHNOLOGY.....	63,433	63,433	---
9	ELECTRONIC WARFARE TECHNOLOGY.....	18,502	18,502	---
10	MISSILE TECHNOLOGY.....	46,194	56,194	+10,000
11	ADVANCED WEAPONS TECHNOLOGY.....	28,528	28,528	---
12	ADVANCED CONCEPTS AND SIMULATION.....	27,435	27,435	---
13	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY.....	72,883	72,883	---
14	BALLISTICS TECHNOLOGY.....	85,597	85,597	---
15	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY.....	3,971	3,971	---
16	JOINT SERVICE SMALL ARMS PROGRAM.....	6,853	6,853	---
17	WEAPONS AND MUNITIONS TECHNOLOGY.....	38,069	63,069	+25,000
18	ELECTRONICS AND ELECTRONIC DEVICES.....	56,435	56,435	---
19	NIGHT VISION TECHNOLOGY.....	38,445	38,445	---
20	COUNTERMINE SYSTEMS.....	25,939	25,939	---
21	HUMAN FACTORS ENGINEERING TECHNOLOGY.....	23,783	23,783	---
22	ENVIRONMENTAL QUALITY TECHNOLOGY.....	15,659	15,659	---
23	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY.....	33,817	33,817	---
24	COMPUTER AND SOFTWARE TECHNOLOGY.....	10,764	10,764	---
25	MILITARY ENGINEERING TECHNOLOGY.....	63,311	63,311	---
26	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY.....	23,295	23,295	---
27	WARFIGHTER TECHNOLOGY.....	25,751	32,051	+6,300
28	MEDICAL TECHNOLOGY.....	76,068	76,068	---
	TOTAL, APPLIED RESEARCH.....	862,611	903,911	+41,300

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST	
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29	ADVANCED TECHNOLOGY DEVELOPMENT WARFIGHTER ADVANCED TECHNOLOGY.....	65,139	66,139	+1,000
30	MEDICAL ADVANCED TECHNOLOGY.....	67,291	98,291	+31,000
31	AVIATION ADVANCED TECHNOLOGY.....	88,990	88,990	---
32	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY.....	57,931	72,931	+15,000
33	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY.....	110,031	110,031	---
34	COMMAND, CONTROL, COMMUNICATIONS ADVANCED TECHNOLOGY....	6,883	6,883	---
35	HANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY....	13,580	13,580	---
36	ELECTRONIC WARFARE ADVANCED TECHNOLOGY.....	44,871	44,871	---
37	TRACTOR HIKE.....	7,492	7,492	---
38	NEXT GENERATION TRAINING & SIMULATION SYSTEMS.....	16,749	16,749	---
39	TRACTOR ROSE.....	14,483	14,483	---
41	COMBATING TERRORISM, TECHNOLOGY DEVELOPMENT.....	24,270	24,270	---
42	TRACTOR NAIL.....	3,440	3,440	---
43	TRACTOR EGGS.....	2,406	2,406	---
44	ELECTRONIC WARFARE TECHNOLOGY.....	26,057	26,057	---
45	MISSILE AND ROCKET ADVANCED TECHNOLOGY.....	44,957	44,957	---
46	TRACTOR CAGE.....	11,105	11,105	---
47	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM.....	181,609	181,609	---
48	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY.....	13,074	13,074	---
49	JOINT SERVICE SMALL ARMS PROGRAM.....	7,321	7,321	---
50	NIGHT VISION ADVANCED TECHNOLOGY.....	44,138	44,138	---
51	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS.....	9,197	9,197	---
52	MILITARY ENGINEERING ADVANCED TECHNOLOGY.....	17,613	17,613	---
53	ADVANCED TACTICAL COMPUTER SCIENCE & SENSOR TECHNOLOGY..	39,164	39,164	---
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	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	917,791	964,791	+47,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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54 DEMONSTRATION & VALIDATION			
ARMY MISSILE DEFENSE SYSTEMS INTEGRATION.....	12,797	12,797	---
55 ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (SPACE).....	13,999	13,999	---
58 TANK AND MEDIUM CALIBER AMMUNITION.....	29,334	29,334	---
60 SOLDIER SUPPORT AND SURVIVABILITY.....	9,602	11,002	+1,400
61 TACTICAL ELECTRONIC SURVEILLANCE SYSTEM - AD.....	8,953	8,953	---
62 NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT.....	3,052	3,052	---
63 ENVIRONMENTAL QUALITY TECHNOLOGY.....	7,830	7,830	---
65 NATO RESEARCH AND DEVELOPMENT.....	2,954	2,954	---
67 LOGISTICS AND ENGINEER EQUIPMENT - ADV DEV.....	13,386	13,386	---
69 MEDICAL SYSTEMS - ADV DEV.....	23,659	23,659	---
70 SOLDIER SYSTEMS - ADVANCED DEVELOPMENT.....	6,830	9,830	+3,000
72 ANALYSIS OF ALTERNATIVES.....	9,913	9,913	---
73 TECHNOLOGY MATURATION INITIATIVES.....	74,740	74,740	---
74 ASSURED POSITIONING, NAVIGATION AND TIMING (PNT).....	9,930	9,930	---
76 INDIRECT FIRE PROTECTION CAPABILITY INCREMENT 2-INTERC..	96,177	71,177	-25,000
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TOTAL, DEMONSTRATION & VALIDATION.....	323,156	302,556	-20,600

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
ENGINEERING & MANUFACTURING DEVELOPMENT			
79 AIRCRAFT AVIONICS.....	37,246	57,246	+20,000
81 ELECTRONIC WARFARE DEVELOPMENT.....	6,002	6,002	---
82 JOINT TACTICAL RADIO.....	9,832	9,832	---
83 MID-TIER NETWORKING VEHICULAR RADIO.....	9,730	9,730	---
84 ALL SOURCE ANALYSIS SYSTEM.....	5,532	5,532	---
85 TRACTOR CAGE.....	19,929	19,929	---
86 INFANTRY SUPPORT WEAPONS.....	27,884	34,586	+6,702
87 MEDIUM TACTICAL VEHICLES.....	210	210	---
88 JAVELIN.....	4,166	4,166	---
89 FAMILY OF HEAVY TACTICAL VEHICLES.....	12,913	12,913	---
90 AIR TRAFFIC CONTROL.....	16,764	16,764	---
91 TACTICAL UNMANNED GROUND VEHICLE.....	6,770	6,770	---
92 NIGHT VISION SYSTEMS - SDD.....	65,333	65,333	---
93 COMBAT FEEDING, CLOTHING, AND EQUIPMENT.....	1,335	3,035	+1,700
94 NON-SYSTEM TRAINING DEVICES - SDD.....	8,945	8,945	---
96 AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE -SDD.....	15,906	15,906	---
97 CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT.....	4,394	4,394	---
98 AUTOMATIC TEST EQUIPMENT DEVELOPMENT.....	11,084	11,084	---
99 DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS) - SDD.....	10,027	10,027	---
100 COMBINED ARMS TACTICAL TRAINER (CATT) CORE.....	42,430	42,430	---
101 BRIGADE ANALYSIS, INTEGRATION AND EVALUATION.....	105,279	105,279	---
102 WEAPONS AND MUNITIONS - SDD.....	15,006	15,006	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
103 LOGISTICS AND ENGINEER EQUIPMENT - SDD.....	24,581	24,581	---
104 COMMAND, CONTROL, COMMUNICATIONS SYSTEMS - SDD.....	4,433	4,433	---
105 MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT...	30,397	30,397	---
106 LANDMINE WARFARE/BARRIER - SDD.....	57,705	57,705	---
108 ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE.....	29,683	29,683	---
109 RADAR DEVELOPMENT.....	5,224	5,224	---
111 FIREFINDER.....	37,492	37,492	---
112 SOLDIER SYSTEMS - WARRIOR DEM/VAL.....	6,157	6,157	---
113 ARTILLERY SYSTEMS.....	1,912	1,912	---
116 INFORMATION TECHNOLOGY DEVELOPMENT.....	69,761	69,761	---
117 ARMY INTEGRATED MILITARY HUMAN RESOURCES SYSTEM (A-IMH..	138,465	138,465	---
118 ARMORED MULTI-PURPOSE VEHICLE.....	92,353	92,353	---
119 JOINT TACTICAL NETWORK CENTER (JTNC).....	8,440	8,440	---
120 JOINT TACTICAL NETWORK (JTN).....	17,999	17,999	---
121 COMMON INFRARED COUNTERMEASURES (CIRCM).....	145,409	145,409	---
122 WIN-T INCREMENT 3 - FULL NETWORKING.....	113,210	113,210	---
123 AMF JOINT TACTICAL RADIO SYSTEM.....	6,882	6,882	---
124 JOINT AIR-TO-GROUND MISSILE (JAGM).....	83,838	83,838	---
125 PAC-2/MSE MISSILE.....	35,009	35,009	---
126 ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD).....	142,584	152,584	+10,000
127 MANNED GROUND VEHICLE.....	49,160	49,160	---
128 AERIAL COMMON SENSOR.....	17,748	17,748	---
129 NATIONAL CAPABILITIES INTEGRATION.....	15,212	15,212	---
130 JOINT LIGHT TACTICAL VEHICLE ENG AND MANUFACTURING.....	45,718	45,718	---
131 AVIATION GROUND SUPPORT EQUIPMENT.....	10,041	10,041	---
132 PALADIN INTEGRATED MANAGEMENT (PIM).....	83,300	83,300	---
133 TROJAN - RH12.....	983	983	---
134 ELECTRONIC WARFARE DEVELOPMENT.....	8,961	8,961	---
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	1,719,374	1,757,776	+38,402

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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RDT&E MANAGEMENT SUPPORT			
135 THREAT SIMULATOR DEVELOPMENT.....	18,062	18,062	---
136 TARGET SYSTEMS DEVELOPMENT.....	10,040	10,040	---
137 MAJOR T&E INVESTMENT.....	60,317	60,317	---
138 RAND ARROYO CENTER.....	20,612	20,612	---
139 ARMY KWAJALEIN ATOLL.....	176,041	176,041	---
140 CONCEPTS EXPERIMENTATION PROGRAM.....	19,439	19,439	---
142 ARMY TEST RANGES AND FACILITIES.....	275,025	275,025	---
143 ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS.....	45,596	45,596	---
144 SURVIVABILITY/LETHALITY ANALYSIS.....	33,295	33,295	---
145 AIRCRAFT CERTIFICATION.....	4,700	4,700	---
146 METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES.....	6,413	6,413	---
147 MATERIEL SYSTEMS ANALYSIS.....	20,746	20,746	---
148 EXPLOITATION OF FOREIGN ITEMS.....	7,015	7,015	---
149 SUPPORT OF OPERATIONAL TESTING.....	49,221	49,221	---
150 ARMY EVALUATION CENTER.....	55,039	55,039	---
151 SIMULATION & MODELING FOR ACQ, RQTS, & TNG (SMART).....	1,125	1,125	---
152 PROGRAMWIDE ACTIVITIES.....	64,169	64,169	---
153 TECHNICAL INFORMATION ACTIVITIES.....	32,319	32,319	---
154 MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY.....	49,052	64,052	+15,000
155 ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT.....	2,612	2,612	---
156 MANAGEMENT HEADQUARTERS (RESEARCH AND DEVELOPMENT).....	49,592	49,592	---
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TOTAL, RDT&E MANAGEMENT SUPPORT.....	1,000,430	1,015,430	+15,000
OPERATIONAL SYSTEMS DEVELOPMENT			
158 MLRS PRODUCE IMPROVEMENT PROGRAM.....	17,112	17,112	---
159 LOGISTICS AUTOMATION.....	3,654	3,654	---
160 BIOMETRIC ENABLING CAPABILITY (BEC).....	1,332	1,332	---
161 PATRIOT PRODUCT IMPROVEMENT.....	152,991	152,991	---
162 AEROSTAT JOINT PROJECT OFFICE.....	54,076	29,076	-25,000
163 ADV FIELD ARTILLERY TACTICAL DATA SYSTEM.....	22,374	22,374	---
164 JOINT AUTOMATED DEEP OPERATION COORDINATION SYSTEM.....	24,371	24,371	---
165 COMBAT VEHICLE IMPROVEMENT PROGRAMS.....	295,177	320,177	+25,000
166 MANEUVER CONTROL SYSTEM.....	45,092	45,092	---
167 AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAMS.....	264,887	274,887	+10,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
168 AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM.....	381	381	---
169 DIGITIZATION.....	10,912	10,912	---
170 MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM.....	5,115	5,115	---
171 OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS.....	49,848	44,848	-5,000
172 TRACTOR CARD.....	22,691	22,691	---
173 INTEGRATED BASE DEFENSE - OPERATIONAL SYSTEM DEV.....	4,364	4,364	---
174 MATERIALS HANDLING EQUIPMENT.....	834	834	---
175 ENVIRONMENTAL QUALITY TECHNOLOGY - OPERATIONAL.....	280	280	---
176 LOWER TIER AIR AND MISSILE DEFENSE (AMD) SYSTEM.....	78,758	78,758	---
177 GUIDED MULTIPLE-LAUNCH ROCKET SYSTEM (GMLRS).....	45,377	45,377	---
178 JOINT TACTICAL GROUND SYSTEM.....	10,209	10,209	---
181 SECURITY AND INTELLIGENCE ACTIVITIES.....	12,525	12,525	---
182 INFORMATION SYSTEMS SECURITY PROGRAM.....	14,175	14,175	---
183 GLOBAL COMBAT SUPPORT SYSTEM.....	4,527	4,527	---
184 SATCOM GROUND ENVIRONMENT (SPACE).....	11,011	11,011	---
185 WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM.....	2,151	2,151	---
187 TACTICAL UNMANNED AERIAL VEHICLES.....	22,870	22,870	---
188 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	20,155	20,155	---
189 MQ-1 SKY WARRIOR A UAV (MQ-1C GRAY EAGLE UAS).....	46,472	46,472	---
191 VERTICAL UAS.....	16,389	16,389	---
192 BIOMETRICS ENABLED INTELLIGENCE.....	1,974	1,974	---
193 WIN-T INCREMENT 2 - INITIAL NETWORKING.....	3,249	3,249	---
194 END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES.....	76,225	76,225	---
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	1,341,558	1,346,558	+5,000
CLASSIFIED PROGRAMS.....	4,802	4,802	---
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY.....	6,593,898	6,720,000	+126,102

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS  
[in thousands of dollars]

R-1	Budget Request	Committee Recommended	Change from Request
10 MISSILE TECHNOLOGY Program increase	46,194	56,194 10,000	10,000
17 WEAPONS AND MUNITIONS TECHNOLOGY Program increase	38,069	63,069 25,000	25,000
27 WARFIGHTER TECHNOLOGY Program increase	25,751	32,051 6,300	6,300
29 WARFIGHTER ADVANCED TECHNOLOGY Program increase	65,139	66,139 1,000	1,000
30 MEDICAL ADVANCED TECHNOLOGY Peer-reviewed neurotoxin exposure treatment Parkinson's research Peer-reviewed neurofibromatosis research	67,291	98,291 16,000 15,000	31,000
32 WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY Program increase	57,931	72,931 15,000	15,000
60 SOLDIER SUPPORT AND SURVIVABILITY Program increase	9,602	11,002 1,400	1,400
70 SOLDIER SYSTEMS - ADVANCED DEVELOPMENT Army requested transfer from WTCV, line 19 Army requested transfer from WTCV line 31	6,830	9,830 2,048 952	3,000
INDIRECT FIRE PROTECTION CAPABILITY INCREMENT 2 Funding ahead of need	96,177	71,177 -25,000	-25,000
79 AIRCRAFT AVIONICS Degraded Visual Environment UH-60L demonstration	37,246	57,246 20,000	20,000
86 INFANTRY SUPPORT WEAPONS Army requested transfer from WTCV line 19	27,884	34,586 6,702	6,702
93 COMBAT FEEDING, CLOTHING, AND EQUIPMENT Program increase	1,335	3,035 1,700	1,700
126 ARMY INTEGRATED AIR AND MISSILE DEFENSE Counter cyber vulnerabilities	142,584	152,584 10,000	10,000
MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY Program increase	49,052	64,052 15,000	15,000
162 AEROSTAT JOINT PROJECT OFFICE Funding ahead of need	54,076	29,076 -25,000	-25,000

R-1	Budget Request	Committee Recommended	Change from Request
165 COMBAT VEHICLE IMPROVEMENT PROGRAMS	295,177	320,177	25,000
Program increase - Stryker engineering changes		25,000	
AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT			
167 PROGRAMS	264,887	274,887	10,000
Program increase - Improved turbine engine program		10,000	
171 OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS	49,848	44,848	-5,000
Funding ahead of need		-5,000	

## ARMORED MULTI-PURPOSE VEHICLE

The congressional defense committees have encouraged the Army to adopt or develop a replacement vehicle for the M113 series armored personnel carriers of Vietnam War vintage. The challenge is to replace the M113 series with a vehicle or vehicles capable of filling the M113 mission roles across the breadth and depth of the formations. Since any vehicles procured by the Army are likely to remain in service for 40 or more years, the Committee expects the Army to make choices based on merit and fiscal responsibility. When selecting a replacement, the Army must also consider the five missions performed by the M113 variants: general purpose, mortar carrier, mission command, medical evacuation, and medical treatment. Additionally, the Army should consider the full spectrum of evolving missions. The Committee notes that the Army has fielded a wheeled medical evacuation vehicle based on a wheeled combat vehicle and that it has served in combat as a component of the armored brigade combat teams. The Committee is aware that the Army is focusing on first replacing the 2,897 M113 series vehicles that are located in the brigade combat teams. The Committee encourages the Secretary of the Army to respond promptly to provide reports and briefings directed by the congressional defense committees, while advancing the program within funding limitations. The Committee recommendation provides \$92,353,000, fully funding this effort in fiscal year 2015.

In addition, the Committee directs the Director of Cost Assessment and Program Evaluation to provide a report to the congressional defense committees not later than 90 days after the enactment of this Act on existing wheeled and tracked combat vehicles that are used for medical purposes. The report should assess the speed, agility, mobility, survivability, patient comfort, and suitability of these vehicles for use by field medical personnel as well as the procurement and operation and support costs for these vehicles to determine their suitability as the medical evacuation variant of the Armored Multi-purpose Vehicle (AMPV) within the armored brigade combat team. This report shall compare the results of the assessment cited above to the current Army plans to develop, procure, and operate a new medical evacuation vehicle as part of the current AMPV program of record. In addition, this report shall include a separate section providing the independent views of the Army Surgeon General on the criteria outlined above and any other criteria deemed relevant by the Army Surgeon General.

## NETWORK INTEGRATION EVALUATION

The Committee notes that the Army's Network Integration Evaluation (NIE) program has made substantial progress in enhancing its ability to assist in the delivery of successful network technologies. The Committee is aware that the Army NIE program has tested or evaluated secure tactical nodal software which is intended to provide a more efficient way to integrate tactical capabilities within the network. The Committee understands that the technology that is being incorporated into the Army's network operations has successfully completed the NIE process. The Committee urges the Secretary of the Army to continue to incorporate tech-

nologies from small businesses in upcoming Army Network Integration Evaluations.

#### DEGRADED VISUAL ENVIRONMENT

The Committee is aware that many of the accidents involving Army helicopters that result in the loss of aircraft and personnel are attributable to flight operations in a degraded visual environment. Additionally, despite the improvements in pilot assist devices that are available on newer aircraft, a significant part of the helicopter fleet is older and does not have the upgrades to assist with the effects of a degraded visual environment. A 2009 Department of Defense study, updated in 2012, noted that 70 percent of fatalities and 80 percent of aircraft losses resulted from serious accidents that were not the result of hostile fire, but rather wire strikes, engine failures, and brownouts. The Committee understands that the Army has prepared to conduct operational field testing on various products to assist flight crews during situations of degraded visual environment. The Committee recommendation includes an additional \$20,000,000 to support the Army's operational testing of counter degraded visual environment equipment. The Committee directs the Secretary of the Army to provide a report to the congressional defense committees not later than 120 days after the enactment of this Act on the Army's expenditure plan of the funds provided to assist the Army with the degraded visual environment challenge.

#### POLYMER RESEARCH IMPROVEMENTS

Polymers are becoming more easily manufactured, less expensive to manufacture, and increasingly lightweight. State-of-the-art polymer materials can also result in improved ballistic performance. Accordingly, the Committee encourages the Secretary of the Army to consider the application of polymers in the context of conducting ballistic research.

#### ADVANCED CONCEPTS AND SIMULATION

The Committee recognizes the importance of maintaining and improving the military decision making process. Proven skill in the decision making process has a large effect on performance in battle. Gaming, modeling, and simulation establish a reality factor which assists military leaders in preparation for all functions on the battlefield, including logistics. The Committee encourages the Secretary of the Army to focus research and development investments with institutions of higher education developing cognitive map-based modeling and simulation tools to advance battlefield readiness of military planning for both tacticians and logisticians.

#### TESTING OF VIRTUAL TRAINING SYSTEMS

Live, virtual gaming has become a valuable component of the Army's training curriculum. Due to its adaptability, virtual gaming may provide potential cost savings, improved training experience, and enhanced readiness. However, the Committee is concerned that these virtual training systems lack consistent testing and evaluation. The Committee encourages the Secretary of the Army to es-

establish standards and testing to ensure that these systems provide the warfighter with the best training experience possible.

#### ARMY NET ZERO POLICY

The Army's net zero energy, water, and waste policy requires installations to produce as much energy as they consume, limits freshwater consumption, restores the watersheds surrounding installations, and attempts to reduce, reuse, or recover waste streams to convert the waste to resources. The Committee supports the Army's net zero policy and strongly encourages the Secretary of the Army to develop and demonstrate technologies to advance the policy and enhance the sustainable operation of its industrial munitions base.

#### LIGHTWEIGHT ADVANCED PERSONNEL PROTECTION

The Committee is aware of progress being made at the Natick Soldier Research, Development and Engineering Center to design and test lightweight advanced armor to better protect the warfighter, specifically the face and eyes. The Committee encourages the Secretary of the Army to explore the use of novel, high-performance, lightweight, transparent ballistic protection materials to continue the progress being made to better protect the warfighter.

#### AMMUNITION MANAGEMENT

The Army is the single manager for conventional ammunition (SMCA) for the entire Department of Defense. In this capacity, the Army ensures effective life cycle management of conventional ammunition, a role becoming more challenging as a result of declining resources and force structure reductions. The Committee believes the management of conventional ammunition could be assisted by the establishment of new generation munitions material and manufacturing technologies in the national technical industrial base. Further, the Committee believes that automated and streamlined munitions manufacturing and new ammunition technologies play a critical role to the Department of Defense as they will provide a sustaining, cost saving, flexible manufacturing capability for the nation's munitions well into the future. The Committee encourages the Secretary of the Army, as the SMCA, to equip the national technical industrial base with these new and emerging smart manufacturing and ammunition technologies.

#### BATTLEFIELD MAPPING AND CHARTING

The BuckEye and Joint Airborne Lidar Bathymetry Technical Center of Expertise (JALBTCX) provide valuable engineering, mapping, and charting information to support planning, training, and operations to maintain maritime navigation. BuckEye provides imagery intelligence, geospatial intelligence, and geospatial foundation data for battlefield intelligence from manned and unmanned platforms over a range of altitudes, while JALBTCX provides coastal and underwater high resolution elevations and imagery which provides data fusion products required to help manage navigable waters of the United States. The Committee recognizes the military value these programs provide to combatant commanders and coali-

tion and host nation forces, and expects that the President's budget request for Overseas Contingency Operations will request full funding for these important programs.

**RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY**

Fiscal year 2014 appropriation .....	\$14,949,919,000
Fiscal year 2015 budget request .....	16,266,335,000
Committee recommendation .....	15,877,770,000
Change from budget request .....	-388,565,000

The Committee recommends an appropriation of \$15,877,770,000 for Research, Development, Test and Evaluation, Navy. The total amount recommended in the bill will provide the following program in fiscal year 2015:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST	
RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY				
BASIC RESEARCH				
1	UNIVERSITY RESEARCH INITIATIVES.....	113,908	113,908	---
2	IN-HOUSE LABORATORY INDEPENDENT RESEARCH.....	18,734	18,734	---
3	DEFENSE RESEARCH SCIENCES.....	443,697	443,697	---
	TOTAL, BASIC RESEARCH.....	576,339	576,339	---
APPLIED RESEARCH				
4	POWER PROJECTION APPLIED RESEARCH.....	95,753	95,753	---
5	FORCE PROTECTION APPLIED RESEARCH.....	139,496	139,496	---
6	MARINE CORPS LANDING FORCE TECHNOLOGY.....	45,831	45,831	---
7	COMMON PICTURE APPLIED RESEARCH.....	43,541	43,541	---
8	WARFIGHTER SUSTAINMENT APPLIED RESEARCH.....	46,923	46,923	---
9	ELECTROMAGNETIC SYSTEMS APPLIED RESEARCH.....	107,872	107,872	---
10	OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH.....	45,388	65,388	+20,000
11	JOINT NON-LETHAL WEAPONS APPLIED RESEARCH.....	5,887	5,887	---
12	UNDERSEA WARFARE APPLIED RESEARCH.....	86,880	86,880	---
13	FUTURE NAVAL CAPABILITIES ADVANCED TECHNOLOGY DEV.....	170,786	176,086	+5,300
14	MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH.....	32,526	32,526	---
	TOTAL, APPLIED RESEARCH.....	820,883	846,183	+25,300
ADVANCED TECHNOLOGY DEVELOPMENT				
15	POWER PROJECTION ADVANCED TECHNOLOGY.....	37,734	37,734	---
16	FORCE PROTECTION ADVANCED TECHNOLOGY.....	25,831	25,831	---
17	ELECTROMAGNETIC SYSTEMS ADVANCED TECHNOLOGY.....	64,623	64,623	---
18	MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION (ATD)....	128,397	128,397	---
19	JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT.....	11,506	11,506	---
20	FUTURE NAVAL CAPABILITIES ADVANCED TECHNOLOGY DEV.....	256,144	261,144	+5,000
21	WARFIGHTER PROTECTION ADVANCED TECHNOLOGY.....	4,838	40,538	+35,700
22	UNDERSEA WARFARE ADVANCED TECHNOLOGY.....	9,985	9,985	---
23	NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS.....	53,956	53,956	---
24	MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY.....	2,000	2,000	---
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	595,014	635,714	+40,700

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
DEMONSTRATION & VALIDATION			
25 AIR/OCEAN TACTICAL APPLICATIONS.....	40,429	40,429	---
26 AVIATION SURVIVABILITY.....	4,325	4,325	---
27 DEPLOYABLE JOINT COMMAND AND CONTROL.....	2,991	2,991	---
28 AIRCRAFT SYSTEMS.....	12,651	12,651	---
29 ASW SYSTEMS DEVELOPMENT.....	7,782	7,782	---
30 TACTICAL AIRBORNE RECONNAISSANCE.....	5,275	5,275	---
31 ADVANCED COMBAT SYSTEMS TECHNOLOGY.....	1,646	1,646	---
32 SURFACE AND SHALLOW WATER MINE COUNTERMEASURES.....	100,349	83,158	-17,191
33 SURFACE SHIP TORPEDO DEFENSE.....	52,781	48,481	-4,300
34 CARRIER SYSTEMS DEVELOPMENT.....	5,959	5,959	---
35 PILOT FISH.....	148,865	138,865	-10,000
36 RETRACT LARCH.....	25,365	25,365	---
37 RETRACT JUNIPER.....	80,477	72,477	-8,000
38 RADIOLOGICAL CONTROL.....	669	669	---
39 SURFACE ASW.....	1,060	1,060	---
40 ADVANCED SUBMARINE SYSTEM DEVELOPMENT.....	70,551	67,551	-3,000
41 SUBMARINE TACTICAL WARFARE SYSTEMS.....	8,044	8,044	---
42 SHIP CONCEPT ADVANCED DESIGN.....	17,864	17,864	---
43 SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES.....	23,716	17,736	-5,980
44 ADVANCED NUCLEAR POWER SYSTEMS.....	499,961	499,961	---
45 ADVANCED SURFACE MACHINERY SYSTEMS.....	21,026	21,026	---
46 CHALK EAGLE.....	542,700	542,700	---
47 LITTORAL COMBAT SHIP (LCS).....	88,734	86,734	-2,000
48 COMBAT SYSTEM INTEGRATION.....	20,881	20,881	---
49 OHIO REPLACEMENT PROGRAM.....	849,277	849,277	---
50 LITTORAL COMBAT SHIP (LCS) MISSION PACKAGES.....	196,948	168,648	-28,300
51 AUTOMATIC TEST AND RE-TEST.....	8,115	8,115	---
52 CONVENTIONAL MUNITIONS.....	7,603	7,603	---
53 MARINE CORPS ASSAULT VEHICLES.....	105,749	105,749	---
54 MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM.....	1,342	1,342	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
55 JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT.....	21,399	21,399	---
56 COOPERATIVE ENGAGEMENT.....	43,578	39,310	-4,268
57 OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT.....	7,764	6,264	-1,500
58 ENVIRONMENTAL PROTECTION.....	13,200	13,200	---
59 NAVY ENERGY PROGRAM.....	69,415	55,393	-14,022
60 FACILITIES IMPROVEMENT.....	2,588	2,588	---
61 CHALK CORAL.....	176,301	176,301	---
62 NAVY LOGISTIC PRODUCTIVITY.....	3,873	3,873	---
63 RETRACT MAPLE.....	376,028	376,028	---
64 LINK PLUMERIA.....	272,096	252,496	-19,600
65 RETRACT ELM.....	42,233	42,233	---
66 LINK EVERGREEN.....	46,504	46,504	---
67 SPECIAL PROCESSES.....	25,109	25,109	---
68 NATO RESEARCH AND DEVELOPMENT.....	9,659	9,659	---
69 LAND ATTACK TECHNOLOGY.....	318	318	---
70 NONLETHAL WEAPONS.....	40,912	35,627	-5,285
71 JOINT PRECISION APPROACH AND LANDING SYSTEMS.....	54,896	41,896	-13,000
73 DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS.....	58,696	52,696	-6,000
74 GERALD R. FORD CLASS NUCLEAR AIRCRAFT CARRIER.....	43,613	43,613	---
75 REMOTE MINEHUNTING SYSTEM (RMS).....	21,110	21,110	---
76 TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES.....	5,657	5,657	---
77 ASE SELF-PROTECTION OPTIMIZATION.....	8,033	4,033	-4,000
78 LX (R).....	36,859	30,859	-6,000
79 JOINT COUNTER RADIO CONTROLLED IED ELECTRONIC WARFARE...	15,227	15,227	---
81 SPACE & ELECTRONIC WARFARE (SEW) ARCHITECTURE/ENGINE...	22,393	22,393	---
82 OFFENSIVE ANTI-SURFACE WARFARE WEAPON DEVELOPMENT.....	202,939	161,939	-41,000
83 JOINT LIGHT TACTICAL VEHICLE ENGINEERING/MANUFACTURING..	11,450	9,450	-2,000
84 ASW SYSTEMS DEVELOPMENT - MIP.....	6,495	6,495	---
85 ELECTRONIC WARFARE DEVELOPMENT - MIP.....	332	332	---
TOTAL, DEMONSTRATION & VALIDATION.....	4,591,812	4,396,366	-195,446

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
ENGINEERING & MANUFACTURING DEVELOPMENT			
86 TRAINING SYSTEM AIRCRAFT.....	25,153	25,153	---
87 OTHER HELO DEVELOPMENT.....	46,154	32,035	-14,119
88 AV-8B AIRCRAFT - ENG DEV.....	25,372	25,372	---
89 STANDARDS DEVELOPMENT.....	53,712	53,712	---
90 MULTI-MISSION HELICOPTER UPGRADE DEVELOPMENT.....	11,434	11,434	---
91 AIR/OCEAN EQUIPMENT ENGINEERING.....	2,164	2,164	---
92 P-3 MODERNIZATION PROGRAM.....	1,710	1,710	---
93 WARFARE SUPPORT SYSTEM.....	9,094	9,094	---
94 TACTICAL COMMAND SYSTEM.....	70,248	62,140	-8,108
95 ADVANCED HAWKEYE.....	193,200	146,200	-47,000
96 H-1 UPGRADES.....	44,115	44,115	---
97 ACOUSTIC SEARCH SENSORS.....	23,227	23,227	---
98 V-22A.....	61,249	54,249	-7,000
99 AIR CREW SYSTEMS DEVELOPMENT.....	15,014	15,014	---
100 EA-18.....	18,730	18,730	---
101 ELECTRONIC WARFARE DEVELOPMENT.....	28,742	28,742	---
102 VH-71A EXECUTIVE HELO DEVELOPMENT.....	388,086	388,086	---
103 NEXT GENERATION JAMMER (NGJ).....	246,856	230,733	-16,123
104 JOINT TACTICAL RADIO SYSTEM - NAVY (JTRS-NAVY).....	7,106	7,106	---
105 SURFACE COMBATANT COMBAT SYSTEM ENGINEERING.....	189,112	179,112	-10,000
106 LPD-17 CLASS SYSTEMS INTEGRATION.....	376	376	---
107 SMALL DIAMETER BOMB (SDB).....	71,849	61,849	-10,000
108 STANDARD MISSILE IMPROVEMENTS.....	53,198	53,198	---
109 AIRBORNE MCM.....	38,941	38,941	---
110 MARINE AIR GROUND TASK FORCE ELECTRONIC WARFARE.....	7,832	7,832	---
111 NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR SYSTEMS ENG... ..	15,263	15,263	---
112 FUTURE UNMANNED CARRIER-BASED STRIKE SYSTEM.....	403,017	403,017	---
113 ADVANCED ABOVE WATER SENSORS.....	20,409	20,409	---
114 SSN-688 AND TRIDENT MODERNIZATION.....	71,565	71,565	---
115 AIR CONTROL.....	29,037	29,037	---
116 SHIPBOARD AVIATION SYSTEMS.....	122,083	122,083	---
118 ADVANCED MISSILE DEFENSE RADAR (AMDR) SYSTEM.....	144,706	127,567	-17,139
119 NEW DESIGN SSN.....	72,695	87,695	+15,000

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
120 SUBMARINE TACTICAL WARFARE SYSTEM.....	38,985	38,985	---
121 SHIP CONTRACT DESIGN/LIVE FIRE T&E.....	48,470	48,470	---
122 NAVY TACTICAL COMPUTER RESOURCES.....	3,935	3,935	---
123 VIRGINIA PAYLOAD MODULE (VPM).....	132,602	132,602	---
124 MINE DEVELOPMENT.....	19,067	14,067	-5,000
125 LIGHTWEIGHT TORPEDO DEVELOPMENT.....	25,280	35,280	+10,000
126 JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT.....	8,985	8,985	---
127 PERSONNEL, TRAINING, SIMULATION, AND HUMAN FACTORS.....	7,669	7,669	---
128 JOINT STANDOFF WEAPON SYSTEMS.....	4,400	4,400	---
129 SHIP SELF DEFENSE (DETECT & CONTROL).....	56,889	56,889	---
130 SHIP SELF DEFENSE (ENGAGE: HARD KILL).....	96,937	81,937	-15,000
131 SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW).....	134,564	121,339	-13,225
132 INTELLIGENCE ENGINEERING.....	200	200	---
133 MEDICAL DEVELOPMENT.....	8,287	27,287	+19,000
134 NAVIGATION/ID SYSTEM.....	29,504	29,504	---
135 JOINT STRIKE FIGHTER (JSF) - EMD.....	513,021	513,021	---
136 JOINT STRIKE FIGHTER (JSF).....	516,456	516,456	---
137 INFORMATION TECHNOLOGY DEVELOPMENT.....	2,887	2,887	---
138 INFORMATION TECHNOLOGY DEVELOPMENT.....	66,317	66,317	---
139 CH-53K.....	573,187	573,187	---
140 SHIP TO SHORE CONNECTOR (SSC).....	67,815	55,026	-12,789
141 JOINT AIR-TO-GROUND MISSILE (JAGM).....	6,300	6,300	---
142 MULTI-MISSION MARITIME AIRCRAFT (MMA).....	308,037	319,037	+11,000
143 DDG-1000.....	202,522	202,522	---
144 TACTICAL COMMAND SYSTEM - MIP.....	1,011	1,011	---
145 TACTICAL CRYPTOLOGIC SYSTEMS.....	10,357	10,357	---
146 SPECIAL APPLICATIONS PROGRAM.....	23,975	23,975	---
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	5,419,108	5,298,605	-120,503

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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147 RDT&E MANAGEMENT SUPPORT THREAT SIMULATOR DEVELOPMENT.....	45,272	45,272	---
148 TARGET SYSTEMS DEVELOPMENT.....	79,718	66,718	-13,000
149 MAJOR T&E INVESTMENT.....	123,993	123,993	---
150 JOINT THEATER AIR AND MISSILE DEFENSE ORGANIZATION.....	4,960	4,960	---
151 STUDIES AND ANALYSIS SUPPORT - NAVY.....	8,296	8,296	---
152 CENTER FOR NAVAL ANALYSES.....	45,752	45,752	---
154 TECHNICAL INFORMATION SERVICES.....	876	876	---
155 MANAGEMENT, TECHNICAL & INTERNATIONAL SUPPORT.....	72,070	72,070	---
156 STRATEGIC TECHNICAL SUPPORT.....	3,237	3,237	---
157 RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT.....	73,033	73,033	---
158 RDT&E SHIP AND AIRCRAFT SUPPORT.....	138,304	138,304	---
159 TEST AND EVALUATION SUPPORT.....	336,286	336,286	---
160 OPERATIONAL TEST AND EVALUATION CAPABILITY.....	16,658	16,658	---
161 NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT.....	2,505	2,505	---
162 SEW SURVEILLANCE/RECONNAISSANCE SUPPORT.....	8,325	8,325	---
163 MARINE CORPS PROGRAM WIDE SUPPORT.....	17,866	17,866	---
-----			
TOTAL, RDT&E MANAGEMENT SUPPORT.....	977,151	964,151	-13,000
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OPERATIONAL SYSTEMS DEVELOPMENT			
168 UNMANNED COMBAT AIR VEHICLE (UCAV) ADVANCED COMPONENT...	35,949	35,949	---
169 MARINE CORPS DATA SYSTEMS.....	215	215	---
170 CARRIER ONBOARD DELIVERY FOLLOW ON.....	8,873	8,873	---
172 STRATEGIC SUB & WEAPONS SYSTEM SUPPORT.....	96,943	94,525	-2,418
173 SSBN SECURITY TECHNOLOGY PROGRAM.....	30,057	30,057	---
174 SUBMARINE ACOUSTIC WARFARE DEVELOPMENT.....	4,509	4,509	---
175 NAVY STRATEGIC COMMUNICATIONS.....	13,676	13,676	---
176 RAPID TECHNOLOGY TRANSITION (RTT).....	12,480	9,480	-3,000
177 F/A-18 SQUADRONS.....	76,216	86,216	+10,000
179 FLEET TELECOMMUNICATIONS (TACTICAL).....	27,281	27,281	---
180 SURFACE SUPPORT.....	2,878	2,878	---
181 TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER (TMPC)....	32,385	27,685	-4,700
182 INTEGRATED SURVEILLANCE SYSTEM.....	39,371	29,471	-9,900
183 AMPHIBIOUS TACTICAL SUPPORT UNITS.....	4,609	4,609	---
184 GROUND/AIR TASK ORIENTED RADAR.....	99,106	99,106	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
185 CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT.....	39,922	39,922	---
186 CRYPTOLOGIC DIRECT SUPPORT.....	1,157	1,157	---
187 ELECTRONIC WARFARE (EW) READINESS SUPPORT.....	22,067	16,567	-5,500
188 HARM IMPROVEMENT.....	17,420	17,420	---
189 TACTICAL DATA LINKS.....	151,208	133,594	-17,614
190 SURFACE ASW COMBAT SYSTEM INTEGRATION.....	26,366	26,366	---
191 MK-48 ADCAP.....	25,952	25,952	---
192 AVIATION IMPROVEMENTS.....	106,936	75,037	-31,899
194 OPERATIONAL NUCLEAR POWER SYSTEMS.....	104,023	104,023	---
195 MARINE CORPS COMMUNICATIONS SYSTEMS.....	77,398	74,258	-3,140
196 COMMON AVIATION COMMAND AND CONTROL SYSTEM.....	32,495	32,495	---
197 MARINE CORPS GROUND COMBAT/SUPPORTING ARMS SYSTEMS.....	156,626	142,076	-14,550
198 MARINE CORPS COMBAT SERVICES SUPPORT.....	20,999	20,999	---
199 USMC INTELLIGENCE/ELECTRONIC WARFARE SYSTEMS (MIP).....	14,179	14,179	---
200 TACTICAL AIM MISSILES.....	47,258	47,258	---
201 ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM).....	10,210	10,210	---
206 SATELLITE COMMUNICATIONS (SPACE).....	41,829	41,829	---
207 CONSOLIDATED AFLOAT NETWORK ENTERPRISE SERVICES.....	22,780	22,780	---
208 INFORMATION SYSTEMS SECURITY PROGRAM.....	23,053	23,053	---
209 WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM.....	296	296	---
212 NAVY METEOROLOGICAL AND OCEAN SENSORS-SPACE (METOC).....	359	359	---
213 JOINT MILITARY INTELLIGENCE PROGRAMS.....	6,166	6,166	---
214 TACTICAL UNMANNED AERIAL VEHICLES.....	8,505	8,505	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
216 DISTRIBUTED COMMON GROUND SYSTEMS/SURFACE SYSTEMS.....	11,613	11,613	---
217 DISTRIBUTED COMMON GROUND SYSTEMS/SURFACE SYSTEMS.....	18,146	18,146	---
218 RQ-4 UAV.....	498,003	463,003	-35,000
219 MQ-8 UAV.....	47,294	43,294	-4,000
220 RQ-11 UAV.....	718	718	---
221 RQ-7 UAV.....	851	851	---
222 SMALL (LEVEL 0) TACTICAL UAS (STUASLO).....	4,813	4,813	---
223 RQ-21A.....	8,192	8,192	---
224 MULTI-INTELLIGENCE SENSOR DEVELOPMENT.....	22,559	18,664	-3,895
225 UNMANNED AERIAL SYSTEMS (UAS) PAYLOADS (MIP).....	2,000	2,000	---
226 MODELING AND SIMULATION SUPPORT.....	4,719	4,719	---
227 DEPOT MAINTENANCE (NON-IF).....	21,168	21,168	---
228 INDUSTRIAL PREPAREDNESS.....	37,169	37,169	---
229 MARITIME TECHNOLOGY (MARITECH).....	4,347	4,347	---
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	2,123,344	1,997,728	-125,616
CLASSIFIED PROGRAMS.....	1,162,684	1,162,684	---
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY.....	16,266,335	15,877,770	-388,565

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS  
[In thousands of dollars]

R-1		Budget Request	Committee Recommended	Change from Request
	<b>OCEAN WARFIGHTING ENVIRONMENT APPLIED</b>			
10	<b>RESEARCH</b>	45,388	65,388	20,000
	Program increase - AGOR mid-life refit		20,000	
	<b>FUTURE NAVAL CAPABILITIES ADVANCED</b>			
13	<b>TECHNOLOGY DEVELOPMENT</b>	170,786	176,086	5,300
	Program increase - automated critical care system		5,300	
	<b>FUTURE NAVAL CAPABILITIES ADVANCED</b>			
20	<b>TECHNOLOGY DEVELOPMENT</b>	256,144	261,144	5,000
	Program increase - ASW research		5,000	
	<b>WARFIGHTER PROTECTION ADVANCED TECHNOLOGY</b>			
21	<b>WARFIGHTER PROTECTION ADVANCED TECHNOLOGY</b>	4,838	40,538	35,700
	Program increase - bone marrow registry program		31,500	
	Tactical athlete program - transfer from OM,DW		4,200	
	<b>SURFACE AND SHALLOW WATER MINE</b>			
32	<b>COUNTERMEASURES</b>	100,349	83,158	-17,191
	SSQ-94 trainer program growth		-1,500	
	Unmanned surface vehicle development program delay		-3,600	
	Unmanned surface vehicle support program growth		-1,000	
	Unmanned surface vehicle flight 2 ahead of need		-7,891	
	Large diameter unmanned underwater vehicle support program growth		-3,200	
	<b>SURFACE SHIP TORPEDO DEFENSE</b>			
33	<b>SURFACE SHIP TORPEDO DEFENSE</b>	52,781	48,481	-4,300
	Program execution		-4,300	
	<b>PILOT FISH</b>			
35	<b>PILOT FISH</b>	148,865	138,865	-10,000
	Classified adjustment		-10,000	
	<b>RETRACT JUNIPER</b>			
37	<b>RETRACT JUNIPER</b>	80,477	72,477	-8,000
	Classified adjustment		-8,000	
	<b>ADVANCED SUBMARINE SYSTEM DEVELOPMENT</b>			
40	<b>ADVANCED SUBMARINE SYSTEM DEVELOPMENT</b>	70,551	67,551	-3,000
	Stealth funding carryover		-3,000	
	<b>SHIP PRELIMINARY DESIGN &amp; FEASIBILITY STUDIES</b>			
43	<b>SHIP PRELIMINARY DESIGN &amp; FEASIBILITY STUDIES</b>	23,716	17,736	-5,980
	Program execution		-5,980	
	<b>LITTORAL COMBAT SHIP</b>			
47	<b>LITTORAL COMBAT SHIP</b>	88,734	86,734	-2,000
	Support funding growth		-2,000	
	<b>LITTORAL COMBAT SHIP MISSION PACKAGES</b>			
50	<b>LITTORAL COMBAT SHIP MISSION PACKAGES</b>	196,948	168,648	-28,300
	Management funding growth		-3,000	
	Program execution		-25,300	
	<b>COOPERATIVE ENGAGEMENT</b>			
56	<b>COOPERATIVE ENGAGEMENT</b>	43,578	39,310	-4,268
	Program execution		-3,268	
	Common array block antenna program growth		-1,000	
	<b>OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT</b>			
57	<b>OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT</b>	7,764	6,264	-1,500
	Submarine rescue system program delay		-1,500	

R-1		Budget Request	Committee Recommended	Change from Request
59	<b>NAVY ENERGY PROGRAM</b>	69,415	55,393	-14,022
	Program execution		-5,611	
	Tactical fuels program growth		-1,700	
	Directed energy program growth		-2,711	
	Aircraft energy conservation program growth		-4,000	
64	<b>LINK PLUMERIA</b>	272,096	252,496	-19,600
	Classified adjustment		-19,600	
70	<b>NONLETHAL WEAPONS</b>	40,912	35,627	-5,285
	Program execution		-5,285	
71	<b>JOINT PRECISION APPROACH AND LANDING SYSTEMS</b>	54,896	41,896	-13,000
	Program execution		-13,000	
73	<b>DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS</b>	58,696	52,696	-6,000
	Railgun development excess support		-6,000	
77	<b>ASE SELF-PROTECTION OPTIMIZATION</b>	8,033	4,033	-4,000
	Program growth		-4,000	
78	<b>LX (R)</b>	36,859	30,859	-6,000
	LX (R) development program growth		-6,000	
	<b>OFFENSIVE ANTI-SURFACE WARFARE WEAPON DEVELOPMENT</b>			
82	<b>DEVELOPMENT</b>	202,939	161,939	-41,000
	Support cost growth		-10,000	
	Program delay		-30,000	
	Increment II ahead of need		-1,000	
	<b>JOINT LIGHT TACTICAL VEHICLE ENGINEERING/MANUFACTURING</b>			
83	<b>ENGINEERING/MANUFACTURING</b>	11,450	9,450	-2,000
	Program management excess to requirement		-2,000	
87	<b>OTHER HELO DEVELOPMENT</b>	46,154	32,035	-14,119
	H-60 development- program delay		-3,064	
	Executive helicopter support program growth		-5,000	
	MH-XX ahead of need		-6,055	
94	<b>TACTICAL COMMAND SYSTEM</b>	70,248	62,140	-8,108
	Program execution		-5,108	
	64-bit architecture phasing		-3,000	
95	<b>ADVANCED HAWKEYE</b>	193,200	146,200	-47,000
	In-flight refueling program restructure		-27,000	
	Tactical targeting technology program growth		-5,000	
	Support funding growth		-15,000	
98	<b>V-22A</b>	61,249	54,249	-7,000
	Program growth		-7,000	
103	<b>NEXT GENERATION JAMMER</b>	246,856	230,733	-16,123
	Program execution		-16,123	
	<b>SURFACE COMBATANT COMBAT SYSTEM ENGINEERING</b>			
105	<b>ENGINEERING</b>	189,112	179,112	-10,000
	Surface combatant development and integration support program growth		-10,000	

R-1		Budget Request	Committee Recommended	Change from Request
107	<b>SMALL DIAMETER BOMB (SDB)</b> Small diameter bomb II integration program growth	71,849	61,849 -10,000	-10,000
118	<b>ADVANCED MISSILE DEFENSE RADAR SYSTEM</b> Program execution	144,706	127,567 -17,139	-17,139
119	<b>NEW DESIGN SSN</b> Program increase - small business technology insertion	72,695	87,695 15,000	15,000
124	<b>MINE DEVELOPMENT</b> Mine Development program growth	19,067	14,067 -5,000	-5,000
125	<b>LIGHTWEIGHT TORPEDO DEVELOPMENT</b> Program increase - small business technology insertion	25,280	35,280 10,000	10,000
130	<b>SHIP SELF DEFENSE (ENGAGE: HARD KILL)</b> ESSM block II risk reduction	96,937	81,937 -15,000	-15,000
131	<b>SHIP SELF DEFENSE (ENGAGE: SOFT KILL/EW)</b> SEWIP block 3 preliminary design contract delay	134,564	121,339 -13,225	-13,225
133	<b>MEDICAL DEVELOPMENT</b> Program increase - wound care research Program increase - dental research	8,287	27,287 13,000 6,000	19,000
140	<b>SHIP TO SHORE CONNECTOR</b> Program execution	67,815	55,026 -12,789	-12,789
142	<b>MULTI-MISSION MARITIME AIRCRAFT</b> Spiral 2 government systems engineering program growth Program increase - small business technology insertion	308,037	319,037 -4,000 15,000	11,000
148	<b>TARGET SYSTEMS DEVELOPMENT</b> GQM-173A program delay BQM-177A program restructure	79,718	66,718 -10,000 -3,000	-13,000
172	<b>STRATEGIC SUB &amp; WEAPONS SYSTEM SUPPORT</b> Program execution Program increase - missile component development	96,943	94,525 -12,418 10,000	-2,418
176	<b>RAPID TECHNOLOGY TRANSITION (RTT)</b> TIPS program growth	12,480	9,480 -3,000	-3,000
177	<b>F/A-18 SQUADRONS</b> Program increase - dual mode Brimstone integration	76,216	86,216 10,000	10,000
181	<b>TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER</b> Tactical tomahawk AUR program growth	32,385	27,685 -4,700	-4,700
182	<b>INTEGRATED SURVEILLANCE SYSTEM</b> Classified adjustment	39,371	29,471 -9,900	-9,900
187	<b>ELECTRONIC WARFARE READINESS SUPPORT</b> EW/IO countermeasure capability program growth	22,067	16,567 -5,500	-5,500
189	<b>TACTICAL DATA LINKS</b> Program execution	151,208	133,594 -17,614	-17,614

R-1	Budget Request	Committee Recommended	Change from Request
<b>192 AVIATION IMPROVEMENTS</b>	<b>106,936</b>	<b>75,037</b>	<b>-31,899</b>
F-135 improvements ahead of need		-31,899	
<b>195 MARINE CORPS COMMUNICATIONS SYSTEMS</b>	<b>77,398</b>	<b>74,258</b>	<b>-3,140</b>
AFATDS software development schedule slip		-1,340	
AN/TPS-59 support unjustified growth		-1,800	
<b>MARINE CORPS GROUND COMBAT/SUPPORTING ARMS</b>			
<b>197 SYSTEMS</b>	<b>156,626</b>	<b>142,076</b>	<b>-14,550</b>
AAV support unjustified growth		-14,550	
<b>218 RQ-4 UAV</b>	<b>498,003</b>	<b>463,003</b>	<b>-35,000</b>
Milestone C delay		-35,000	
<b>219 MQ-8 UAV</b>	<b>47,294</b>	<b>43,294</b>	<b>-4,000</b>
Engineering and technical services program growth		-4,000	
<b>224 MULTI-INTELLIGENCE SENSOR DEVELOPMENT</b>	<b>22,559</b>	<b>18,664</b>	<b>-3,895</b>
Program execution		-3,895	

## AMPHIBIOUS COMBAT VEHICLE

The Committee is supportive of the Marine Corps' Amphibious Combat Vehicle (ACV) program, which is being developed to replace the rapidly aging Amphibious Assault Vehicle. However, the Committee is aware that the strategy for the ACV program is currently being revised due to a re-evaluation of requirements, estimated costs, and schedule, and that a contract award is unlikely to occur in fiscal year 2015. Therefore, the Committee recommends a rescission of \$78,800,000 from the total \$122,967,000 appropriated in the Consolidated Appropriations Act for fiscal year 2014, but recommends fully funding the fiscal year 2015 request of \$105,749,000. This will allow the Marine Corps to immediately implement the ACV acquisition strategy once the path forward has been finalized, without unnecessarily reserving resources that could be used for higher priority items. The Committee will continue to support the ACV program as the strategy is refined in future budget submissions and looks forward to continuing discussions with the Marine Corps regarding the ACV program progress.

## AUTOMATED TEST AND RE-TEST

The Committee recommends fully funding the Navy's request for \$8,115,000 for the Automated Test and Re-test effort. According to a recent Navy report, funding for this program will continue throughout the future years defense plan. The Committee understands that this program will provide significant savings to many of the software intensive programs currently in use, as well as those in development, and looks forward to tracking the progress of this effort in future years as the Navy provides additional funding.

## LITTORAL COMBAT SHIP TRAINING

Due to the small crew size and operational concept of the Littoral Combat Ship (LCS), the LCS Total System Training Architecture is a vital component to the success or failure of the LCS program. Limited at sea training opportunities will exist for the crews of the LCS so they need to maximize their shore based training to the greatest extent possible. As the training architecture is such an important component of the LCS program, the Committee is puzzled as to why the Navy has reduced the funding for this effort from the appropriated levels over the last several years. The budget justification material shows that nearly \$100,000,000 has been removed from the LCS training system budget over the last three years. This large reduction could very possibly jeopardize the readiness of the LCS crews as they man ships and begin to take them to sea. Therefore, the Committee directs the Secretary of the Navy to ensure the entire fiscal year 2015 appropriated amount of \$19,547,000 is allocated towards the LCS Total System Training Architecture.

## ARCTIC CENTER OF EXCELLENCE

The Navy's most recent Arctic Roadmap provides direction and recommendations to enhance the Navy's ability to operate in the arctic region. The roadmap recommended the establishment of an

Arctic Center of Excellence and the development of an arctic engagement plan focused on partnerships with other stakeholders in the arctic region, both public and private. The Committee believes that these recommendations go hand in hand since the Arctic Center of Excellence would support these partnerships. The Committee encourages the Secretary of the Navy to establish the Arctic Center of Excellence to support arctic-related training, operations, and scientific research. Further, the Secretary of the Navy is encouraged to consider locations for the Center that could bring together elements from public and private communities, including academia, who can contribute to advancing the nation's interests in the arctic region.

#### WOUND CARE RESEARCH PROGRAM

The Committee recommends \$13,000,000 for the wound care research program. The Committee is aware of the continued need to develop wound care technology to improve treatment for combat wounded servicemembers. The Committee is also aware of the challenges associated with treating wounds, particularly in combat environments, and the risk of developing bacteria, biofilms, and other infections. The Committee encourages the Secretary of the Navy to research technologies that can prevent biofilm formulation, bacteria, and infections in combat wounds.

#### AUTOMATED CRITICAL CARE SYSTEM

Trauma care for Marines and sailors deployed in remote locations or on ships poses a serious challenge to Navy caregivers. The Committee is extremely concerned with the potential deterioration of these injured servicemembers while being stabilized, evacuated, or transported to a facility possessing high-level medical care. Coordinating and providing care while safely transporting injured patients with life threatening conditions strains medical personnel and other mission resources. Incorporation of state-of-the-art medical device technologies with automated decision controls may well mean the difference between life and death and will have a significant impact in medical care for both the military and civilian communities. The automated critical care system (ACCS) being developed by the Navy has the potential to be such an innovative medical device. The Committee fully supports the ACCS and provides an additional \$5,300,000 to accelerate the development effort.

#### P-8A OPEN ARCHITECTURE

There are numerous benefits to utilizing open architecture in today's software intensive weapon systems. It enables low cost capability insertion, allows numerous capabilities to be supported by a common hardware set, and allows the sharing of information across different platforms. The Committee is aware of the Navy's ongoing effort to develop an open architecture system for the P-8A Poseidon multi-mission maritime aircraft. The Committee strongly encourages the Secretary of the Navy to continue this development effort and to incorporate open architecture into the P-8A as soon as possible.

AIRCRAFT SYSTEMS MODERNIZATION

The Committee provides \$10,000,000 as requested for aircraft systems modernization. The Committee is aware that a major modernization effort is the development of technology needed to support the transition of highly integrated photonics into naval aircraft systems. This funding will support requirements study, technology maturation, and system design and demonstration of general-purpose avionics networks. The Committee understands that this work will have a positive impact on life cycle costs associated with maintaining and upgrading networks aboard Navy aircraft. Accordingly, the Committee expects that this effort will continue to receive full funding in fiscal year 2016 and over the future years defense plan.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE

Fiscal year 2014 appropriation .....	\$23,585,292,000
Fiscal year 2015 budget request .....	23,739,892,000
Committee recommendation .....	23,438,982,000
Change from budget request .....	-300,910,000

The Committee recommends an appropriation of \$23,438,982,000 for Research, Development, Test and Evaluation, Air Force. The total amount recommended in the bill will provide the following program in fiscal year 2015:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST	
RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE				
BASIC RESEARCH				
1	DEFENSE RESEARCH SCIENCES.....	314,482	314,482	---
2	UNIVERSITY RESEARCH INITIATIVES.....	127,079	127,079	---
3	HIGH ENERGY LASER RESEARCH INITIATIVES.....	12,929	12,929	---
	TOTAL, BASIC RESEARCH.....	454,490	454,490	---
APPLIED RESEARCH				
4	MATERIALS.....	105,680	110,680	+5,000
5	AEROSPACE VEHICLE TECHNOLOGIES.....	105,747	105,747	---
6	HUMAN EFFECTIVENESS APPLIED RESEARCH.....	81,957	96,957	+15,000
7	AEROSPACE PROPULSION.....	172,550	172,550	---
8	AEROSPACE SENSORS.....	118,343	118,343	---
9	SPACE TECHNOLOGY.....	98,229	91,229	-7,000
10	CONVENTIONAL MUNITIONS.....	87,387	87,387	---
11	DIRECTED ENERGY TECHNOLOGY.....	125,955	125,955	---
12	DOMINANT INFORMATION SCIENCES AND METHODS.....	147,789	147,789	---
13	HIGH ENERGY LASER RESEARCH.....	37,496	37,496	---
	TOTAL, APPLIED RESEARCH.....	1,081,133	1,094,133	+13,000
ADVANCED TECHNOLOGY DEVELOPMENT				
14	ADVANCED MATERIALS FOR WEAPON SYSTEMS.....	32,177	39,677	+7,500
15	SUSTAINMENT SCIENCE AND TECHNOLOGY (S&T).....	15,800	15,800	---
16	ADVANCED AEROSPACE SENSORS.....	34,420	34,420	---
17	AEROSPACE TECHNOLOGY DEV/DEMO.....	91,062	91,062	---
18	AEROSPACE PROPULSION AND POWER TECHNOLOGY.....	124,236	124,236	---
19	ELECTRONIC COMBAT TECHNOLOGY.....	47,602	47,602	---
20	ADVANCED SPACECRAFT TECHNOLOGY.....	69,026	63,026	-6,000
21	MAUI SPACE SURVEILLANCE SYSTEM (MSSS).....	14,031	14,031	---
22	HUMAN EFFECTIVENESS ADVANCED TECHNOLOGY DEVELOPMENT.....	21,788	21,788	---
23	CONVENTIONAL WEAPONS TECHNOLOGY.....	42,046	42,046	---
24	ADVANCED WEAPONS TECHNOLOGY.....	23,542	23,542	---
25	MANUFACTURING TECHNOLOGY PROGRAM.....	42,772	52,772	+10,000
26	BATTLESPACE KNOWLEDGE DEVELOPMENT & DEMONSTRATION.....	35,315	35,315	---
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	593,817	605,317	+11,500

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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ADVANCED COMPONENT DEVELOPMENT			
27 INTELLIGENCE ADVANCED DEVELOPMENT.....	5,408	5,408	---
31 SPACE CONTROL TECHNOLOGY.....	6,075	6,075	---
32 COMBAT IDENTIFICATION TECHNOLOGY.....	10,980	10,980	---
33 NATO RESEARCH AND DEVELOPMENT.....	2,392	2,392	---
34 INTERNATIONAL SPACE COOPERATIVE R&D.....	833	833	---
35 SPACE PROTECTION PROGRAM (SPP).....	32,313	30,955	-1,358
37 INTERCONTINENTAL BALLISTIC MISSILE.....	30,885	30,885	---
39 POLLUTION PREVENTION (DEM/VAL).....	1,798	1,798	---
40 LONG RANGE STRIKE.....	913,728	913,728	---
42 TECHNOLOGY TRANSFER.....	2,669	12,669	+10,000
45 WEATHER SATELLITE FOLLOW-ON.....	39,901	39,901	---
49 F-35 - EMD.....	4,976	---	-4,976
51 TECH TRANSITION PROGRAM.....	59,004	59,004	---
54 NEXT GENERATION AIR DOMINANCE.....	15,722	15,722	---
55 THREE DIMENSIONAL LONG-RANGE RADAR.....	88,825	88,825	---
56 NAVSTAR GLOBAL POSITIONING SYSTEM (USER EQUIPMENT).....	156,659	156,659	---
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TOTAL, ADVANCED COMPONENT DEVELOPMENT.....	1,372,168	1,375,834	+3,666

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST	
59	ENGINEERING & MANUFACTURING DEVELOPMENT SPECIALIZED UNDERGRADUATE FLIGHT TRAINING .....	13,324	13,324	---
60	ELECTRONIC WARFARE DEVELOPMENT .....	1,965	1,965	---
61	TACTICAL DATA NETWORKS ENTERPRISE .....	39,110	39,110	---
62	PHYSICAL SECURITY EQUIPMENT .....	3,926	3,926	---
63	SMALL DIAMETER BOMB (SDB) .....	68,759	68,759	---
64	COUNTERSPACE SYSTEMS .....	23,746	23,476	-270
65	SPACE SITUATION AWARENESS SYSTEMS .....	9,462	9,462	---
66	SPACE FENCE .....	214,131	200,131	-14,000
67	AIRBORNE ELECTRONIC ATTACK .....	30,687	30,687	---
68	SPACE BASED INFRARED SYSTEM (SBIRS) HIGH EMD .....	319,501	309,501	-10,000
69	ARMAMENT/ORDNANCE DEVELOPMENT .....	31,112	31,112	---
70	SUBMUNITIONS .....	2,543	2,543	---
71	AGILE COMBAT SUPPORT .....	46,340	46,340	---
72	LIFE SUPPORT SYSTEMS .....	8,854	8,854	---
73	COMBAT TRAINING RANGES .....	10,129	10,129	---
74	ROCKET ENGINE DEVELOPMENT (SPACE) .....	---	220,000	+220,000
75	F-35 - EMD .....	563,037	563,037	---
78	LONG RANGE STANDOFF WEAPON .....	4,938	3,438	-1,500
79	ICBM FUZE MODERNIZATION .....	59,826	29,826	-30,000
80	JOINT TACTICAL NETWORK CENTER (JTNC) .....	78	78	---
81	F-22 MODERNIZATION INCREMENT 3.2B .....	173,647	173,647	---
82	GROUND ATTACK WEAPONS FUZE DEVELOPMENT .....	5,332	5,332	---
83	NEXT GENERATION AERIAL REFUELING AIRCRAFT KC-46 .....	776,937	766,937	-10,000
84	ADVANCED PILOT TRAINING .....	8,201	8,201	---
85	CSAR HH-60 RECAPITALIZATION .....	---	100,000	+100,000
86	HC/MC-130 RECAP RDT&E .....	7,497	7,497	---
87	ADVANCED EHF MILSATCOM (SPACE) .....	314,378	296,038	-18,340
88	POLAR MILSATCOM (SPACE) .....	103,552	103,552	---
89	WIDEBAND GLOBAL SATCOM (SPACE) .....	31,425	23,925	-7,500
90	AIR AND SPACE OPS CENTER 10.2 .....	85,938	85,938	---
91	B-2 DEFENSIVE MANAGEMENT SYSTEM .....	98,768	98,768	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
92 NUCLEAR WEAPONS MODERNIZATION.....	198,357	193,357	-5,000
94 FULL COMBAT MISSION TRAINING.....	8,831	8,831	---
95 NEXTGEN JSTARS.....	73,088	73,088	---
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	3,337,419	3,560,809	+223,390
RDT&E MANAGEMENT SUPPORT			
97 THREAT SIMULATOR DEVELOPMENT.....	24,418	24,418	---
98 MAJOR T&E INVESTMENT.....	47,232	47,232	---
99 RAND PROJECT AIR FORCE.....	30,443	30,443	---
101 INITIAL OPERATIONAL TEST & EVALUATION.....	12,266	12,266	---
102 TEST AND EVALUATION SUPPORT.....	689,509	689,509	---
103 ROCKET SYSTEMS LAUNCH PROGRAM (SPACE).....	34,364	34,364	---
104 SPACE TEST PROGRAM (STP).....	21,161	21,161	---
105 FACILITIES RESTORATION & MODERNIZATION - TEST & EVAL....	46,955	46,955	---
106 FACILITIES SUSTAINMENT - TEST AND EVALUATION SUPPORT....	32,965	32,965	---
107 REQUIREMENTS ANALYSIS AND MATURATION.....	13,850	13,850	---
108 SPACE TEST AND TRAINING RANGE DEVELOPMENT.....	19,512	19,512	---
110 SPACE AND MISSILE CENTER (SMC) CIVILIAN WORKFORCE.....	181,727	177,800	-3,927
111 ENTERPRISE INFORMATION SERVICES (EIS).....	4,938	4,938	---
112 ACQUISITION AND MANAGEMENT SUPPORT.....	18,644	18,644	---
113 ELECTRONIC ACQUISITION SERVICES ENVIRONMENT.....	1,425	1,425	---
114 GENERAL SKILL TRAINING.....	3,790	3,790	---
TOTAL, RDT&E MANAGEMENT SUPPORT.....	1,183,199	1,179,272	-3,927

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
OPERATIONAL SYSTEMS DEVELOPMENT			
115 GPS III - OPERATIONAL CONTROL SEGMENT.....	299,760	299,760	---
117 WIDE AREA SURVEILLANCE.....	---	2,000	+2,000
118 JOINT DIRECT ATTACK MUNITION.....	2,469	2,469	---
119 AIR FORCE INTEGRATED MILITARY HUMAN RESOURCES SYSTEM....	90,218	90,218	---
120 ANTI-TAMPER TECHNOLOGY EXECUTIVE AGENCY.....	34,815	34,815	---
122 B-52 SQUADRONS.....	55,457	55,457	---
123 AIR-LAUNCHED CRUISE MISSILE (ALCM).....	450	450	---
124 B-1B SQUADRONS.....	5,353	4,353	-1,000
125 B-2 SQUADRONS.....	131,580	105,680	-25,900
126 MINUTEMAN SQUADRONS.....	139,109	139,109	---
127 STRAT WAR PLANNING SYSTEM - USSTRATCOM.....	35,603	35,603	---
128 NIGHT FIST - USSTRATCOM.....	32	32	---
130 REGION/SECTOR OPERATION CONTROL CENTER MODERNIZATION....	1,522	1,522	---
131 SERVICE SUPPORT TO STRATCOM - SPACE ACTIVITIES.....	3,134	3,134	---
133 MQ-9 UAV.....	170,396	170,396	---
136 F-16 SQUADRONS.....	133,105	133,105	---
137 F-15E SQUADRONS.....	261,969	251,969	-10,000
138 MANNED DESTRUCTIVE SUPPRESSION.....	14,831	14,831	---
139 F-22 SQUADRONS.....	156,962	151,362	-5,600
140 F-35 SQUADRONS.....	43,666	43,666	---
141 TACTICAL AIM MISSILES.....	29,739	29,739	---
142 ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM).....	82,195	82,195	---
144 F-15 EPAWSS.....	68,944	68,944	---
145 COMBAT RESCUE AND RECOVERY.....	5,095	5,095	---
146 COMBAT RESCUE - PARARESCUE.....	883	883	---
147 AF TENCAP.....	5,812	5,812	---
148 PRECISION ATTACK SYSTEMS PROCUREMENT.....	1,081	1,081	---
149 COMPASS CALL.....	14,411	14,411	---
150 AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM.....	109,664	94,177	-15,487

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
151 JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM) .....	15,897	15,897	---
152 AIR AND SPACE OPERATIONS CENTER (AOC) .....	41,066	41,066	---
153 CONTROL AND REPORTING CENTER (CRC) .....	552	552	---
154 AIRBORNE WARNING AND CONTROL SYSTEM (AWACS) .....	180,804	180,804	---
155 TACTICAL AIRBORNE CONTROL SYSTEMS .....	3,754	3,754	---
157 COMBAT AIR INTELLIGENCE SYSTEM ACTIVITIES .....	7,891	7,891	---
158 TACTICAL AIR CONTROL PARTY--MOD .....	5,891	5,891	---
159 C2ISR TACTICAL DATA LINK .....	1,782	1,782	---
161 DCAPEs .....	821	821	---
163 SEEK EAGLE .....	23,844	23,844	---
164 USAF MODELING AND SIMULATION .....	16,723	16,723	---
165 WARGAMING AND SIMULATION CENTERS .....	5,956	5,956	---
166 DISTRIBUTED TRAINING AND EXERCISES .....	4,457	4,457	---
167 MISSION PLANNING SYSTEMS .....	60,679	60,679	---
169 CYBER COMMAND ACTIVITIES .....	67,057	67,057	---
170 AF OFFENSIVE CYBERSPACE OPERATIONS .....	13,355	13,355	---
171 AF DEFENSIVE CYBERSPACE OPERATIONS .....	5,576	5,576	---
179 SPACE SUPERIORITY INTELLIGENCE .....	12,218	10,697	-1,521
180 E-4B NATIONAL AIRBORNE OPERATIONS CENTER (NAOC) .....	28,778	1,700	-27,078
181 MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK .....	81,035	81,035	---
182 INFORMATION SYSTEMS SECURITY PROGRAM .....	70,497	70,497	---
183 GLOBAL COMBAT SUPPORT SYSTEM .....	692	692	---
185 MILSATCOM TERMINALS .....	55,208	49,950	-5,258
187 AIRBORNE SIGINT ENTERPRISE .....	106,786	106,786	---
190 GLOBAL AIR TRAFFIC MANAGEMENT (GATH) .....	4,157	4,157	---
193 SATELLITE CONTROL NETWORK (SPACE) .....	20,806	20,806	---
194 WEATHER SERVICE .....	25,102	25,102	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
195 AIR TRAFFIC CONTROL, APPROACH, & LANDING SYSTEM (ATC)...	23,516	23,516	---
196 AERIAL TARGETS.....	8,639	8,639	---
199 SECURITY AND INVESTIGATIVE ACTIVITIES.....	498	498	---
200 ARMS CONTROL IMPLEMENTATION.....	13,222	13,222	---
201 DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES.....	360	360	---
206 SPACE AND MISSILE TEST AND EVALUATION CENTER.....	3,674	3,326	-348
207 SPACE WARFARE CENTER.....	2,480	2,071	-409
208 INTEGRATED BROADCAST SERVICE.....	8,592	6,954	-1,638
209 SPACELIFT RANGE SYSTEM (SPACE).....	13,462	13,462	---
210 DRAGON U-2.....	5,511	5,511	---
212 AIRBORNE RECONNAISSANCE SYSTEMS.....	28,113	38,113	+10,000
213 MANNED RECONNAISSANCE SYSTEMS.....	13,516	13,516	---
214 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	27,265	27,265	---
215 PREDATOR UAV (JMIP).....	1,378	1,378	---
216 RQ-4 UAV.....	244,514	244,514	---
217 NETWORK-CENTRIC COLLABORATIVE TARGET (TIARA).....	11,096	11,096	---
218 COMMON DATA LINK (CDL).....	36,137	36,137	---
219 NATO AGS.....	232,851	232,851	---
220 SUPPORT TO DCGS ENTERPRISE.....	20,218	20,218	---
221 GPS III SPACE SEGMENT.....	212,571	212,571	---
222 JSPOC MISSION SYSTEM.....	73,779	73,779	---
223 RAPID CYBER ACQUISITION.....	4,102	4,102	---
225 NUDET DETECTION SYSTEM (SPACE).....	20,468	20,468	---
226 SPACE SITUATION AWARENESS OPERATIONS.....	11,596	11,596	---
227 CYBER OPERATIONS TECHNOLOGY DEVELOPMENT.....	4,938	4,938	---
228 SHARED EARLY WARNING (SEW).....	1,212	1,212	---
230 C-5 AIRLIFT SQUADRONS.....	38,773	38,773	---
231 C-17 AIRCRAFT.....	83,773	83,773	---
232 C-130J PROGRAM.....	26,715	26,715	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
233 LARGE AIRCRAFT IR COUNTERMEASURES (LAIRCM).....	5,172	5,172	---
234 KC-10S.....	2,714	2,714	---
235 OPERATIONAL SUPPORT AIRLIFT.....	27,784	27,784	---
236 CV-22.....	38,719	38,719	---
237 PRESIDENTIAL AIRCRAFT REPLACEMENT (PAR).....	11,006	11,006	---
238 SPECIAL TACTICS / COMBAT CONTROL.....	8,405	8,405	---
239 DEPOT MAINTENANCE (NON-IF).....	1,407	1,407	---
241 LOGISTICS INFORMATION TECHNOLOGY (LOGIT).....	109,685	109,685	---
242 SUPPORT SYSTEMS DEVELOPMENT.....	16,209	16,209	---
243 OTHER FLIGHT TRAINING.....	987	987	---
244 OTHER PERSONNEL ACTIVITIES.....	126	126	---
245 JOINT PERSONNEL RECOVERY AGENCY.....	2,603	2,603	---
246 CIVILIAN COMPENSATION PROGRAM.....	1,589	1,589	---
247 PERSONNEL ADMINISTRATION.....	5,026	5,026	---
248 AIR FORCE STUDIES AND ANALYSIS AGENCY.....	1,394	1,394	---
249 FACILITIES OPERATION--ADMINISTRATION.....	3,798	3,798	---
250 FINANCIAL MANAGEMENT INFORMATION SYSTEMS DEVELOPMENT....	107,314	87,314	-20,000
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	4,276,546	4,174,307	-102,239
CLASSIFIED PROGRAMS.....	11,441,120	10,994,820	-446,300
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE..	23,739,892	23,438,982	-300,910

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS  
[in thousands of dollars]

R-1	Budget Request	Committee Recommended	Change from Request
<b>4 MATERIALS</b>	<b>105,680</b>	<b>110,680</b>	<b>5,000</b>
Program increase		5,000	
<b>6 HUMAN EFFECTIVENESS APPLIED RESEARCH</b>	<b>81,957</b>	<b>96,957</b>	<b>15,000</b>
Program increase		15,000	
<b>9 SPACE TECHNOLOGY</b>	<b>98,229</b>	<b>91,229</b>	<b>-7,000</b>
Excess to need		-7,000	
<b>14 ADVANCED MATERIALS FOR WEAPON SYSTEMS</b>	<b>32,177</b>	<b>39,677</b>	<b>7,500</b>
Program increase		7,500	
<b>20 ADVANCED SPACECRAFT TECHNOLOGY</b>	<b>69,026</b>	<b>63,026</b>	<b>-6,000</b>
Excess to need		-6,000	
<b>25 MANUFACTURING TECHNOLOGY PROGRAM</b>	<b>42,772</b>	<b>52,772</b>	<b>10,000</b>
Program increase		10,000	
<b>35 SPACE PROTECTION PROGRAM (SPP)</b>	<b>32,313</b>	<b>30,955</b>	<b>-1,358</b>
Excess to need		-1,358	
<b>42 TECHNOLOGY TRANSFER</b>	<b>2,669</b>	<b>12,669</b>	<b>10,000</b>
Program increase		10,000	
<b>49 F-35 - EMD</b>	<b>4,976</b>	<b>0</b>	<b>-4,976</b>
Duplicate funding		-4,976	
<b>64 COUNTERSPACE SYSTEMS</b>	<b>23,746</b>	<b>23,476</b>	<b>-270</b>
Maintain fiscal year 2014 level		-270	
<b>66 SPACE FENCE</b>	<b>214,131</b>	<b>200,131</b>	<b>-14,000</b>
Program delay		-14,000	
<b>68 SPACE BASED INFRARED SYSTEM (SBIRS) HIGH EMD</b>	<b>319,501</b>	<b>309,501</b>	<b>-10,000</b>
Wide field of view test beds		-10,000	
<b>74 LIQUID ROCKET ENGINE DEVELOPMENT (SPACE)</b>	<b>0</b>	<b>220,000</b>	<b>220,000</b>
Develop capacity		220,000	
<b>78 LONG RANGE STANDOFF WEAPON</b>	<b>4,938</b>	<b>3,438</b>	<b>-1,500</b>
Execution adjustment		-1,500	
<b>79 ICBM FUZE MODERNIZATION</b>	<b>59,826</b>	<b>29,826</b>	<b>-30,000</b>
Execution adjustment		-30,000	
<b>83 KC-46</b>	<b>776,937</b>	<b>766,937</b>	<b>-10,000</b>
Program decrease		-10,000	
<b>85 COMBAT RESCUE HELICOPTER</b>	<b>0</b>	<b>100,000</b>	<b>100,000</b>
Program increase only for Combat Rescue Helicopter		100,000	
<b>87 ADVANCED EHF MILSATCOM (SPACE)</b>	<b>314,378</b>	<b>296,038</b>	<b>-18,340</b>
SMI excess growth		-18,340	

R-1		Budget Request	Committee Recommended	Change from Request
89	WIDEBAND GLOBAL SATCOM (SPACE) Resiliency funding excess to need	31,425	23,925 -7,500	-7,500
92	NUCLEAR WEAPONS MODERNIZATION B61-12 tailkit EMD phase 1 favorable cost variances	198,357	193,357 -5,000	-5,000
	SPACE AND MISSILE CENTER (SMC) CIVILIAN			
110	WORKFORCE Personnel costs excess to need	181,727	177,800 -3,927	-3,927
117	WIDE AREA SURVEILLANCE Program increase	0	2,000 2,000	2,000
124	B-1B SQUADRONS Execution adjustment	5,353	4,353 -1,000	-1,000
125	B-2 SQUADRONS Flexible strike execution delays Ejection seat safety/sustainability improvement program	131,580	105,680 -29,400 3,500	-25,900
137	F-15E SQUADRONS Execution adjustment	261,969	251,969 -10,000	-10,000
139	F-22 SQUADRONS Execution adjustment	156,962	151,362 -5,600	-5,600
	AIRCRAFT ENGINE COMPONENT IMPROVEMENT			
150	PROGRAM F135 engine program	109,664	94,177 -15,487	-15,487
179	SPACE SUPERIORITY INTELLIGENCE Maintain fiscal year 2014 level	12,218	10,697 -1,521	-1,521
	E-4B NATIONAL AIRBORNE OPERATIONS CENTER			
180	(NAOC) Low Frequency Transmit System cost and schedule growth	28,778	1,700 -27,078	-27,078
185	MILSATCOM TERMINALS Excess to need - FAB-T downselect delay	55,208	49,950 -5,258	-5,258
206	SPACE AND MISSILE TEST AND EVALUATION CENTER Maintain fiscal year 2014 level	3,674	3,326 -348	-348
207	SPACE WARFARE CENTER Maintain fiscal year 2014 level	2,480	2,071 -409	-409
208	INTEGRATED BROADCAST SERVICE Maintain fiscal year 2014 level	8,592	6,954 -1,638	-1,638
212	AIRBORNE RECONNAISSANCE SYSTEMS Wide Area Motion Imagery program shortfall	28,113	38,113 10,000	10,000
	FINANCIAL MANAGEMENT INFORMATION SYSTEMS			
250	DEVELOPMENT Execution adjustment	107,314	87,314 -20,000	-20,000
999	CLASSIFIED PROGRAMS Classified adjustment	11,441,120	10,994,820 -446,300	-446,300

## GLOBAL HAWK, U-2, AND HIGH ALTITUDE ISR

The Air Force's fiscal year 2015 budget request proposes to retain the RQ-4 Global Hawk Block 30 fleet while preparing for the divestment of the U-2 fleet in fiscal year 2016. This proposal constitutes a reversal of the Air Force's previous position on the two platforms. The Air Force has explained that its reversal primarily is based on declining operation and sustainment costs for the Global Hawk, making it a more prudent long-term investment. The Committee views the U-2 and the Global Hawk Block 30 as complementary, rather than rival, systems for high altitude intelligence, surveillance, and reconnaissance; at the same time, the Committee acknowledges that budget constraints in current law have driven the Air Force to choose between the two platforms.

The Committee is concerned, however, by the Air Force's present plan to initiate and complete a precipitous drawdown of the U-2 fleet in fiscal year 2016. The U-2 possesses flight performance, sensor, and other capabilities that the Global Hawk Block 30 does not presently have. Among these U-2 capabilities is carriage of the Optical Bar Camera (OBC), which provides vital imagery enabling American support of the Israel-Egypt peace treaty. The Air Force to date has not proposed a mitigating solution for the loss of the OBC capability after 2016. The Committee understands the Air Force is reviewing alternate options for divestment, including the option of a temporary mixed fleet of Global Hawks and U-2s beyond fiscal year 2016, in order to address these concerns.

The Consolidated Appropriations Act for fiscal year 2014 provided the Air Force with an additional \$10,000,000 to conduct a study of the feasibility of adapting U-2 sensors or similar alternatives to the Block 30. The Committee believes that a favorable solution to improving the electro-optical/infrared capability of the Block 30 would involve a sensor that provides imagery intelligence comparable to or better than that provided by the SYERS-2 on the U-2, including National Image Interpretability Rating Scale score, range, field of regard, and area coverage; preserves the ability for simultaneous carriage of the synthetic aperture radar on the Block 30; does not unduly compromise the availability of SYERS-2 units for U-2 missions in the event that the Air Force opts for a mixed fleet; minimizes the integration work necessary for adaptation to the Block 30 using the Sensor Interface Module; and can be developed and procured at a cost not exceeding the "parity" option identified as meeting Air Combat Command sensor attributes in the report of April 2013. The Committee understands that the ultimate solution will involve reasonable trade-offs between these parameters.

In addition, the Committee believes that it is critical to invest in upgrades that will provide Block 30 with necessary weather avoidance and anti-icing capabilities; improved sensor capabilities are of less consequence if inclement weather remains a significant limiting factor on Block 30 operations, especially in the Pacific Command area of responsibility.

To date, the Air Force has not presented the Committee with a requirements-driven, accountably resourced, and realistically scheduled plan for improving capabilities on the Global Hawk

Block 30 and mitigating the loss of U-2 capabilities such as the OBC after fiscal year 2016. The Committee directs the Secretary of the Air Force to present such a plan to the congressional defense committees prior to taking any action to divest the U-2 fleet. The Committee will review the progress of actions by the Air Force in this regard when the fiscal year 2016 budget request is submitted, and intends to take intervening action against full and immediate divestment of the U-2 fleet if such plans are not satisfactory. The Committee also notes that the House version of the National Defense Authorization Act for fiscal year 2014 requires the Air Force to produce a transition plan and prohibits the Air Force from taking any steps toward retirement of the U-2. The Committee urges the Secretary of the Air Force to use previously appropriated funds to continue critical sustainment programs for the U-2 until divestment of the fleet is authorized by Congress.

#### COMBAT RESCUE HELICOPTER

The Committee fully supports the Air Force's decision to proceed with an acquisition program for a new Combat Rescue Helicopter (CRH) despite budget constraints. The CRH will replace the Air Force's rapidly aging fleet of HH-60 helicopters for the combat search and rescue mission. While the fiscal year 2015 request includes no additional funds for CRH, the Air Force has indicated to the Committee that the \$333,558,000 provided in the Consolidated Appropriations Act for fiscal year 2014 is sufficient to fund the program through fiscal year 2015 given the adjustments the Air Force has made to extend the program schedule. The Committee is aware that the Air Force will need to rectify a \$436,000,000 shortfall in the current future years defense plan to fully fund CRH development, but believes that this cost must be weighed against the considerable costs that likely would be incurred to extend the life of the HH-60 fleet should CRH be terminated. The Committee's recommendation includes \$100,000,000 for CRH to partially address this shortfall and designates these funds as a congressional special interest item. The Committee directs the Secretary of the Air Force to keep the Committee informed of the progress of the CRH program, including rates of obligation and expenditure.

#### NEXT GENERATION JSTARS

The Committee fully funds the Air Force request for \$73,088,000 to develop a next generation platform for the moving target indicator and battle management command and control (BMC2) missions currently performed by the E-8C JSTARS fleet. The Committee notes that while the program justification submitted with the fiscal year 2015 request appears to assume that the BMC2 system, sensor systems, communications systems, and air vehicle will be separately competed with the government as the lead system integrator, the Air Force presently is considering alternative acquisition strategies for the new system. Due to the reduction in capability that will result from the retirement of five operational JSTARS aircraft in fiscal year 2015, the Committee encourages the Secretary of the Air Force to adopt an acquisition strategy for a business jet-based integrated solution with mature technologies that is consistent with the completed analysis of alternatives, will

minimize development cost and schedule, field new aircraft ahead of first planned delivery date in fiscal year 2019, and provide an open system architecture to allow for competitively procured future upgrades. The Committee directs the Secretary of the Air Force to brief the congressional defense committees on its selected approach not later than 30 days following the approval of the acquisition strategy for the Next Generation JSTARS.

#### CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR SURVIVABILITY

The Committee understands that the Joint Program Office (JPO) for the Joint Strike Fighter (JSF) intends to conduct a live fire test and evaluation on a chemical, biological, radiological, and nuclear decontamination system for the JSF in fiscal year 2016. The Committee regards this test as critical for ensuring that the JSF will meet the operational requirements document and be able to conduct missions in denied, high-threat environments. The Committee recommends that the JPO take appropriate steps, utilizing funds made available in this and previous appropriations for development of all three JSF variants, to accelerate this testing into fiscal year 2015 and sustain the industrial base for the development and production of such decontamination systems.

#### AIRBORNE ELECTRONIC ATTACK

The Committee fully funds the Air Force request of \$25,000,000 to fund analysis of alternatives (AoA) efforts within the Airborne Electronic Attack program, including \$5,000,000 for the Non-Kinetic Counter-Electronics (NKCE) AoA. The Committee supports the Air Force's decision to incorporate the results of the Counter-Electronics High Power Microwave Missile Project joint capability technology demonstration and correlated operational utility assessment into the NKCE AoA. The Committee encourages the Secretary of the Air Force to begin its NKCE AoA effort as soon as possible, and directs the Secretary of the Air Force to report the results of the NKCE AoA, as well as the Next Generation Electronic Attack AoA and Counter-Integrated Air Defense System AoA, to the congressional defense committees not later than 30 days after the approval of the respective reports.

#### ENDURANCE UNMANNED AERIAL VEHICLES

The Committee understands that the size of the United States Africa Command (AFRICOM) area of responsibility, when coupled with the paucity of base access and supporting infrastructure, places a premium on long range, long endurance intelligence, surveillance, and reconnaissance assets. The Committee is aware that the Air Force is currently flight testing a medium altitude, long endurance unmanned aerial vehicle with flexible multi-intelligence sensor and communications relay capabilities. The Committee encourages the Secretary of the Air Force to adopt a plan for these assets that would preserve their ability to be deployed if AFRICOM or any other combatant command that identifies an operational need for such capabilities.

## KC-46A

The Committee directs the Secretary of the Air Force to continue to submit quarterly reports on any KC-46A contract modifications with a cost greater than or equal to \$5,000,000, as directed by the explanatory statement accompanying the Consolidated Appropriations Act for fiscal year 2012.

## BEYOND LINE OF SIGHT COMMAND AND CONTROL

In 2011, the Air Force requested additional funds to develop the beyond line of sight command and control architecture in response to a United States Central Command requirement, and the Committee supported this request. A portion of these funds was used to develop Tactical Airborne Communications Pods (TACPods) for use on unmanned aerial vehicles. The Air Force informed the Committee that the TACPods would be used to support the bi-directional movement of full motion video across common data link radios including thousands of ROVER terminals used by ground forces, and that the capability would be fielded within twelve months of receipt of funds. The Committee is concerned that the Air Force has not fielded this capability as planned, but instead has placed TACPods into storage while pursuing a possibly redundant program to provide a similar capability. The Committee directs the Secretary of the Air Force, in coordination with the Secretary of the Navy and the Under Secretary of Defense for Acquisition, Technology, and Logistics, to provide a briefing to the Committee not later than November 1, 2014 on the existing and planned activities in support of beyond line of sight command and control for intelligence, surveillance, and reconnaissance systems.

## HIGH PERFORMANCE COMPUTING

The Department of Defense High Performance Computing (HPC) modernization program supports solutions to the complex challenges faced by Department acquisition programs. The HPC program has invested considerable resources to develop and deploy engineering software applications to improve outcomes for weapon system acquisitions. The HPC program includes the Computational Research for Engineering Acquisition Tools and Environments (CREATE) initiative, a program with the potential to substantially reduce costs, shorten schedules, increase design and program flexibility, and improve overall acquisition program performance by speeding up systems integration while identifying and correcting design flaws prior to production. The Committee encourages the Secretary of Defense to institutionalize advances made by HPC pilot projects within the acquisition system by establishing through the Air Force Life Cycle Management Center a systems engineering capability for weapon system virtual prototyping-based HPC applications, including CREATE software.

## HUMAN PERFORMANCE MONITORING

The Committee recognizes and supports Air Force Research Laboratory (AFRL) research in human performance monitoring, which is a key element of human-machine interface technology. Human monitoring is as important as equipment monitoring as the two

must perform in tandem at optimum levels for successful mission completion and personnel safety. The Committee encourages the Director of the AFRL to continue to research nano-bio manufacturing of materials and sensor devices that are capable of detecting biomarkers and other substances correlating to human body conditions such as stress, fatigue, and organ damage.

#### LIQUID ROCKET ENGINE DEVELOPMENT PROGRAM

The Committee believes that the United States should rely on domestically manufactured launch vehicles as the foundation for access to space and is concerned about the reliance of some national security space launches on rocket engines produced in Russia. Therefore, the Committee recommendation includes \$220,000,000 to begin risk reduction and development of a next-generation liquid rocket engine that is manufactured in the United States, meets the requirements of the national security space community, and is ready for launch not later than fiscal year 2022 using full and open competition. The Committee directs the Secretary of Defense, in coordination with the Administrator of the National Aeronautics and Space Administration as practicable, to submit a report to the congressional defense and intelligence committees not later than 180 days after the enactment of this Act that includes a risk reduction and development plan for a next-generation liquid rocket engine program. The report must analyze national security and civil space rocket engine development requirements, examine the costs and benefits of public-private partnerships for development of the engine, and estimate costs for development, procurement, and operations and maintenance for the life of the program.

#### SPACE BASED INFRARED SYSTEM HIGH

The Committee supports the Air Force decision to review the overhead persistent infrared mission to lower costs, increase resilience, and achieve better mission performance. The Committee understands that the Department of Defense is conducting an Analysis of Alternatives to mitigate obsolescence and ensure resilient options beyond the current program of record. The Committee encourages quick completion of this review to ensure adequate time to start operational demonstrations as appropriate and directs the Secretary of the Air Force to brief the findings of the review to the congressional defense committees immediately upon completion.

#### AIR FORCE TECHNOLOGY TRANSFER PROGRAM

The Committee recommends \$10,000,000 above the request for a regionally focused technology transfer innovation pilot program. The Committee directs the Assistant Secretary of Defense for Research and Engineering to conduct a pilot program on public-private technology transfer ventures between Department of Defense research and development centers and regionally focused technology incubators, with the goal of increasing the commercialization of intellectual property developed in the Department's research and development enterprise in support of critical cross-service technological needs such as energetics, unmanned systems, and rapid

prototyping. Technology incubator partners should be selected through full and open competition emphasizing strong business plans, demonstrated expertise in mentorship and commercialization, and strong regional partnerships.

#### GLOBAL POSITIONING SYSTEM SPACE MODERNIZATION INITIATIVE

The budget request includes \$32,900,000 for the Global Positioning System (GPS) III Space Modernization Initiative (SMI) to address issues related to design, systems, engineering, program management, obsolescence, and efficiencies for GPS satellites. The Committee recommendation includes full funding for the GPS III SMI but directs the Secretary of the Air Force to allocate \$20,000,000 to study technological maturation, including the use of an alternative digital GPS payload, and risk reduction consistent with the GPS enterprise analysis of alternatives.

#### GLOBAL POSITIONING SYSTEM USER EQUIPMENT

The Military GPS User Equipment (MGUE) program provides M-code GPS receivers with improved capability to counter emerging threats and interference with positioning, navigation, and timing capabilities. The Department of Defense will field MGUE receivers across a broad range of Army, Air Force, Navy, and Marine Corps platforms. The Committee understands that the Department is accelerating the implementation of M-code and supports those efforts. The Committee recommends \$156,659,000, which fully funds the fiscal year 2015 request for MGUE, including technology development, platform integration, and system engineering and integration activities. The Committee supports the Air Force strategy of implementing a proactive, collaborative MGUE platform integration activity to mitigate risk, and encourages the Service Secretaries to procure MGUE receivers in fiscal year 2016.

#### EJECTION SEAT SAFETY/SUSTAINABILITY IMPROVEMENT PROGRAM

The Committee is concerned by Air Force data that indicate safety concerns with legacy ejection seat technology for aircrews using helmet mounted displays. The Committee recommendation includes \$6,000,000 for improvements or replacement of legacy aircraft ejection seats that address documented safety concerns and requirements. In implementing this program, the Secretary of the Air Force should consider all technology used or approved in current Department of Defense programs to ensure that these ejection seat improvements or replacements are achieved through a full and open acquisition process.

#### COST SHARING OF FORWARD-DEPLOYED NUCLEAR WEAPONS

The United States currently provides the vast majority of the funding necessary to sustain forward-deployed nuclear weapons in Europe. In light of the growing costs of this mission, the Committee directs the Secretary of Defense to submit a report to the congressional defense committees outlining the proportional contributions of NATO members to the cost of sustaining forward-deployed nuclear weapons. This report should include the effects of NATO proportional cost-sharing on the Department's five year costs of main-

taining forward-deployed nuclear weapons and shall be submitted not later than 180 days after the enactment of this Act.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION,  
DEFENSE-WIDE

Fiscal year 2014 appropriation .....	\$17,086,412,000
Fiscal year 2015 budget request .....	16,766,084,000
Committee recommendation .....	17,077,900,000
Change from budget request .....	+311,816,000

The Committee recommends an appropriation of \$17,077,900,000 for Research, Development, Test and Evaluation, Defense-Wide. The total amount recommended in the bill will provide the following program in fiscal year 2015:

(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.....	37,778	37,778	---
2	DEFENSE RESEARCH SCIENCES.....	312,146	312,146	---
3	BASIC RESEARCH INITIATIVES.....	44,564	34,564	-10,000
4	BASIC OPERATIONAL MEDICAL RESEARCH SCIENCE.....	49,848	49,848	---
5	NATIONAL DEFENSE EDUCATION PROGRAM.....	45,488	55,488	+10,000
6	HISTORICALLY BLACK COLLEGES & UNIV (HBCU).....	24,412	34,412	+10,000
7	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	48,261	48,261	---
	TOTAL, BASIC RESEARCH.....	562,497	572,497	+10,000
APPLIED RESEARCH				
8	JOINT MUNITIONS TECHNOLOGY.....	20,065	20,065	---
9	BIOMEDICAL TECHNOLOGY.....	112,242	114,790	+2,548
11	LINCOLN LABORATORY RESEARCH PROGRAM.....	51,875	47,875	-4,000
12	APPLIED RESEARCH FOR ADVANCEMENT S&T PRIORITIES.....	41,965	41,965	---
13	INFORMATION AND COMMUNICATIONS TECHNOLOGY.....	334,407	334,407	---
15	BIOLOGICAL WARFARE DEFENSE.....	44,825	44,825	---
16	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	226,317	226,317	---
18	CYBER SECURITY RESEARCH.....	15,000	15,000	---
20	TACTICAL TECHNOLOGY.....	305,484	305,484	---
21	MATERIALS AND BIOLOGICAL TECHNOLOGY.....	160,389	160,389	---
22	ELECTRONICS TECHNOLOGY.....	179,203	179,203	---
23	WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES.....	151,737	151,737	---
24	SOFTWARE ENGINEERING INSTITUTE.....	9,156	9,156	---
25	SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT.....	39,750	34,750	-5,000
	TOTAL, APPLIED RESEARCH.....	1,692,415	1,685,963	-6,452

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST	
26	ADVANCED TECHNOLOGY DEVELOPMENT JOINT MUNITIONS ADVANCED TECH INSENSITIVE MUNITIONS AD..	26,688	26,688	---
27	SO/LIC ADVANCED DEVELOPMENT.....	8,682	8,682	---
28	COMBATING TERRORISM TECHNOLOGY SUPPORT.....	69,675	79,675	+10,000
29	FOREIGN COMPARATIVE TESTING.....	30,000	24,000	-6,000
30	COUNTERPROLIFERATION INITIATIVES--PROLIF PREV & DEFEAT..	283,694	291,694	+8,000
32	ADVANCED CONCEPTS AND PERFORMANCE ASSESSMENT.....	8,470	8,470	---
33	DISCRIMINATION SENSOR TECHNOLOGY.....	45,110	43,110	-2,000
34	WEAPONS TECHNOLOGY.....	14,068	34,068	+20,000
35	ADVANCED C4ISR.....	15,329	13,284	-2,045
36	ADVANCED RESEARCH.....	16,584	16,584	---
37	JOINT DOD-DOE MUNITIONS TECHNOLOGY DEVELOPMENT.....	19,335	19,335	---
38	AGILE TRANSPO FOR THE 21ST CENTURY (AT21) - THEATER CA..	2,544	2,544	---
39	SPECIAL PROGRAM--MDA TECHNOLOGY.....	51,033	40,433	-10,600
40	ADVANCED AEROSPACE SYSTEMS.....	129,723	129,723	---
41	SPACE PROGRAMS AND TECHNOLOGY.....	179,883	179,883	---
42	ANALYTIC ASSESSMENTS.....	12,000	12,000	---
43	ADVANCED INNOVATIVE ANALYSIS AND CONCEPTS.....	60,000	50,000	-10,000
44	COMMON KILL VEHICLE TECHNOLOGY.....	25,639	22,639	-3,000
45	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM - ADVANCED DEV..	132,674	132,674	---
46	JOINT ELECTRONIC ADVANCED TECHNOLOGY.....	10,965	10,965	---
47	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS.....	131,960	121,960	-10,000
52	DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROG..	91,095	91,095	---
53	EMERGING CAPABILITIES TECHNOLOGY DEVELOPMENT.....	33,706	33,706	---
54	GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS.....	16,836	16,836	---
55	DEPLOYMENT AND DISTRIBUTION ENTERPRISE TECHNOLOGY.....	29,683	29,683	---
56	STRATEGIC ENVIRONMENTAL RESEARCH PROGRAM.....	57,796	57,796	---
57	MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT.....	72,144	82,700	+10,556
58	JOINT WARFIGHTING PROGRAM.....	7,405	5,405	-2,000
59	ADVANCED ELECTRONICS TECHNOLOGIES.....	92,246	92,246	---
60	COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS.....	243,265	243,265	---
60XX	DEFENSE RAPID INNOVATION PROGRAM.....	---	250,000	+250,000
62	NETWORK-CENTRIC WARFARE TECHNOLOGY.....	386,926	386,926	---
63	SENSOR TECHNOLOGY.....	312,821	312,821	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
64 DISTRIBUTED LEARNING ADVANCED TECHNOLOGY DEVELOPMENT.....	10,692	10,692	---
65 SOFTWARE ENGINEERING INSTITUTE.....	15,776	15,776	---
66 QUICK REACTION SPECIAL PROJECTS.....	69,319	64,319	-5,000
68 MODELING AND SIMULATION MANAGEMENT OFFICE.....	3,000	3,000	---
71 TEST & EVALUATION SCIENCE & TECHNOLOGY.....	81,148	81,148	---
72 OPERATIONAL ENERGY CAPABILITY IMPROVEMENT.....	31,800	31,800	---
73 CWMD SYSTEMS.....	46,066	46,066	---
74 SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT.....	57,622	49,622	-8,000
TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT.....	2,933,402	3,173,313	+239,911
DEMONSTRATION & VALIDATION			
77 NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT....	41,072	41,072	---
79 WALKOFF.....	90,558	90,558	---
80 ADVANCE SENSOR APPLICATIONS PROGRAM.....	15,518	15,518	---
81 ENVIRONMENTAL SECURITY TECHNICAL CERTIFICATION PROGRAM..	51,462	51,462	---
82 BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT.....	299,598	292,798	-6,800
83 BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT.....	1,003,768	1,047,168	+43,400
84 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	179,236	179,236	---
85 BALLISTIC MISSILE DEFENSE SENSORS.....	392,893	392,893	---
86 BALLISTIC MISSILE DEFENSE ENABLING PROGRAMS.....	410,863	398,249	-12,614
87 SPECIAL PROGRAMS - MDA.....	310,261	295,261	-15,000
88 AEGIS BMD.....	929,208	880,708	-48,500
89 SPACE SURVEILLANCE & TRACKING SYSTEM.....	31,346	31,346	---
90 BALLISTIC MISSILE DEFENSE SYSTEM SPACE PROGRAMS.....	6,389	6,389	---
91 BALLISTIC MISSILE DEFENSE C2BMC.....	443,484	431,484	-12,000
92 BALLISTIC MISSILE DEFENSE JOINT WARFIGHTER SUPPORT.....	46,387	46,387	---
BALLISTIC MISSILE DEFENSE INTERGRATION AND OPERATIONS 93 CENTER (MDIOC).....	58,530	58,530	---
94 REGARDING TRENCH.....	16,199	16,199	---
95 SEA BASED X-BAND RADAR (SBX).....	64,409	64,409	---
96 ISRAELI COOPERATIVE PROGRAMS.....	96,803	268,842	+172,039
97 BALLISTIC MISSILE DEFENSE TEST.....	386,482	350,582	-35,900
98 BALLISTIC MISSILE DEFENSE TARGETS.....	485,294	446,794	-38,500
99 HUMANITARIAN DEMINING.....	10,194	10,194	---
100 COALITION WARFARE.....	10,139	10,139	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
101 DEPARTMENT OF DEFENSE CORROSION PROGRAM.....	2,907	2,907	---
102 ADVANCED INNOVATIVE TECHNOLOGIES.....	190,000	170,000	-20,000
103 DOD UNMANNED AIRCRAFT SYSTEM (UAS) COMMON DEVELOPMENT...	3,702	3,702	---
104 WIDE AREA SURVEILLANCE.....	53,000	53,000	---
107 JOINT SYSTEMS INTEGRATION.....	7,002	7,002	---
108 JOINT FIRES INTEGRATION & INTEROPERABILITY TEAM.....	7,102	7,102	---
109 LAND-BASED SM-3 (LBSM3).....	123,444	123,444	---
110 AEGIS SM-3 BLOCK IIA CO-DEVELOPMENT.....	263,695	263,695	---
113 SUPPORT TO NETWORKS AND INFORMATION INTEGRATION.....	12,500	12,500	---
114 JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM.....	2,656	2,656	---
115 CYBER SECURITY INITIATIVE.....	961	961	---
116 NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT ...	7,936	7,936	---
117 PROMPT GLOBAL STRIKE CAPABILITY DEVELOPMENT.....	70,762	90,762	+20,000
TOTAL, DEMONSTRATION & VALIDATION.....	6,125,760	6,171,885	+46,125
ENGINEERING & MANUFACTURING DEVELOPMENT			
118 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	345,883	345,883	---
119 ADVANCED IT SERVICES JOINT PROGRAM OFFICE (AITS-JPO)....	25,459	25,459	---
120 JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS)..	17,562	17,562	---
121 WEAPONS OF MASS DESTRUCTION DEFEAT CAPABILITIES.....	6,887	6,887	---
122 INFORMATION TECHNOLOGY DEVELOPMENT.....	12,530	12,530	---
123 HOMELAND PERSONNEL SECURITY INITIATIVE.....	286	286	---
124 DEFENSE EXPORTABILITY PROGRAM.....	3,244	3,244	---
125 OUSD(C) IT DEVELOPMENT INITIATIVES.....	6,500	6,500	---
126 DOD ENTERPRISE SYSTEMS DEVELOPMENT AND DEMONSTRATION...	15,326	15,326	---
127 DCMO POLICY AND INTEGRATION.....	19,351	19,351	---
128 DEFENSE AGENCY INITIATIVES FINANCIAL SYSTEM.....	41,465	41,465	---
129 DEFENSE RETIRED AND ANNUITANT PAY SYSTEM (DRAS).....	10,135	10,135	---
130 DEFENSE-WIDE ELECTRONIC PROCUREMENT CAPABILITY.....	9,546	9,546	---
131 GLOBAL COMBAT SUPPORT SYSTEM.....	14,241	14,241	---
132 DOD ENTERPRISE ENERGY INFORMATION MANAGEMENT (EEIM)....	3,660	3,660	---
TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT.....	532,075	532,075	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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RDT&E MANAGEMENT SUPPORT			
133 DEFENSE READINESS REPORTING SYSTEM (DRRS).....	5,616	5,616	---
134 JOINT SYSTEMS ARCHITECTURE DEVELOPMENT.....	3,092	3,092	---
135 CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT.....	254,503	159,003	-95,500
136 ASSESSMENTS AND EVALUATIONS.....	21,661	21,661	---
138 JOINT MISSION ENVIRONMENT TEST CAPABILITY (JMETC).....	27,162	27,162	---
139 TECHNICAL STUDIES, SUPPORT AND ANALYSIS.....	24,501	24,501	---
142 JOINT THEATER AIR AND MISSILE DEFENSE ORGANIZATION.....	43,176	43,176	---
CLASSIFIED PROGRAM USD(P).....	---	100,000	+100,000
145 SYSTEMS ENGINEERING.....	44,246	44,746	+500
146 STUDIES AND ANALYSIS SUPPORT.....	2,665	2,665	---
147 NUCLEAR MATTERS - PHYSICAL SECURITY.....	4,366	4,366	---
148 SUPPORT TO NETWORKS AND INFORMATION INTEGRATION.....	27,901	27,901	---
149 GENERAL SUPPORT TO USD (INTELLIGENCE).....	2,855	2,855	---
150 CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM.....	105,944	105,944	---
156 SMALL BUSINESS INNOVATION RESEARCH.....	400	400	---
159 SMALL BUSINESS INNOVATION RESEARCH/TECHNOLOGY TRANSFER..	1,634	1,634	---
160 DEFENSE TECHNOLOGY ANALYSIS.....	12,105	12,105	---
161 DEFENSE TECHNICAL INFORMATION CENTER (DTIC).....	50,389	50,389	---
162 R&D IN SUPPORT OF DOD ENLISTMENT, TESTING & EVALUATION..	8,452	8,452	---
163 DEVELOPMENT TEST AND EVALUATION.....	15,187	19,187	+4,000
164 MANAGEMENT HEADQUARTERS (RESEARCH & DEVELOPMENT).....	71,362	71,362	---
165 BUDGET AND PROGRAM ASSESSMENTS.....	4,100	4,100	---
166 OPERATIONS SECURITY (OPSEC).....	1,956	1,956	---
167 JOINT STAFF ANALYTICAL SUPPORT.....	10,321	10,321	---
170 SUPPORT TO INFORMATION OPERATIONS (IO) CAPABILITIES.....	11,552	11,552	---
172 CYBER INTELLIGENCE.....	6,748	6,748	---
174 COCOM EXERCISE ENGAGEMENT AND TRAINING TRANSFORMATION...	44,005	39,005	-5,000
175 MANAGEMENT HEADQUARTERS - MDA.....	36,998	---	-36,998
176 MANAGEMENT HEADQUARTERS - WHS.....	612	612	---
CLASSIFIED PROGRAMS.....	44,367	44,367	---
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TOTAL, RDT&E MANAGEMENT SUPPORT.....	887,876	854,878	-32,998

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
178 OPERATIONAL SYSTEMS DEVELOPMENT ENTERPRISE SECURITY SYSTEM (ESS).....	3,988	3,988	---
179 REGIONAL INTERNATIONAL OUTREACH & PARTNERSHIP FOR PEAC...	1,750	1,750	---
180 OVERSEAS HUMANITARIAN ASSISTANCE SHARED INFORMATION SY...	286	286	---
181 INDUSTRIAL BASE ANALYSIS AND SUSTAINMENT SUPPORT.....	14,778	14,778	---
182 OPERATIONAL SYSTEMS DEVELOPMENT.....	2,953	2,953	---
183 GLOBAL THEATER SECURITY COOPERATION MANAGEMENT.....	10,350	10,350	---
184 CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS D...	28,496	28,496	---
185 JOINT INTEGRATION AND INTEROPERABILITY.....	11,968	11,968	---
186 PLANNING AND DECISION AID SYSTEM.....	1,842	1,842	---
187 C4I INTEROPERABILITY.....	63,558	63,558	---
189 JOINT/ALLIED COALITION INFORMATION SHARING.....	3,931	3,931	---
193 NATIONAL MILITARY COMMAND SYSTEM-WIDE SUPPORT.....	924	924	---
194 DEFENSE INFO INFRASTRUCTURE ENGINEERING & INTEGRATION...	9,657	9,657	---
195 LONG HAUL COMMUNICATIONS (DCS).....	25,355	25,355	---
196 MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK.....	12,671	12,671	---
197 PUBLIC KEY INFRASTRUCTURE (PKI).....	222	222	---
198 KEY MANAGEMENT INFRASTRUCTURE (KMI).....	32,698	32,698	---
199 INFORMATION SYSTEMS SECURITY PROGRAM.....	11,304	11,304	---
200 INFORMATION SYSTEMS SECURITY PROGRAM.....	125,854	145,854	+20,000
202 GLOBAL COMMAND AND CONTROL SYSTEM.....	33,793	33,793	---
203 JOINT SPECTRUM CENTER.....	13,423	13,423	---
204 NET-CENTRIC ENTERPRISE SERVICES (NCES).....	3,774	3,774	---
205 JOINT MILITARY DECEPTION INITIATIVE.....	951	951	---
206 TELEPORT PROGRAM.....	2,697	2,697	---
208 SPECIAL APPLICATIONS FOR CONTINGENCIES.....	19,294	15,794	-3,500
212 CYBER SECURITY INITIATIVE.....	3,234	3,234	---
213 CRITICAL INFRASTRUCTURE PROTECTION (CIP).....	8,846	8,846	---
217 POLICY R&D PROGRAMS.....	7,065	7,065	---

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
218 NET CENTRICITY.....	23,984	23,984	---
221 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	5,286	5,286	---
224 DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS.....	3,400	3,400	---
229 INSIDER THREAT.....	8,670	8,670	---
230 HOMELAND DEFENSE TECHNOLOGY TRANSFER PROGRAM.....	2,110	2,110	---
239 INDUSTRIAL PREPAREDNESS.....	22,366	22,366	---
240 LOGISTICS SUPPORT ACTIVITIES.....	1,574	1,574	---
241 MANAGEMENT HEADQUARTERS (JCS).....	4,409	4,409	---
242 MQ-9 UAV.....	9,702	1,314	-8,388
243 RQ-11 UAV.....	259	---	-259
245 SPECIAL OPERATIONS AVIATION SYSTEMS ADVANCED DEV.....	164,233	154,821	-9,412
247 SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT.....	9,490	9,490	---
248 SOF OPERATIONAL ENHANCEMENTS.....	75,253	70,089	-5,164
252 WARRIOR SYSTEMS.....	24,661	20,573	-4,088
253 SPECIAL PROGRAMS.....	20,908	20,908	---
259 SOF TACTICAL VEHICLES.....	3,672	3,672	---
262 SOF MARITIME SYSTEMS.....	57,905	55,046	-2,859
264 SOF GLOBAL VIDEO SURVEILLANCE ACTIVITIES.....	3,788	3,788	---
265 SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE.....	16,225	15,225	-1,000
TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT.....	913,557	898,887	-14,670
999 CLASSIFIED PROGRAMS.....	3,118,502	3,257,402	+138,900
DARPA UNDISTRIBUTED REDUCTION.....	---	-69,000	-69,000
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, DEF-WIDE...	16,766,084	17,077,900	+311,816

EXPLANATION OF PROJECT LEVEL ADJUSTMENTS  
[In thousands of dollars]

R-1	Budget Request	Committee Recommended	Change from Request
<b>3 BASIC RESEARCH INITIATIVES</b>	<b>44,564</b>	<b>34,564</b>	<b>-10,000</b>
Program decrease		-10,000	
<b>5 NATIONAL DEFENSE EDUCATION PROGRAM</b>	<b>45,488</b>	<b>55,488</b>	<b>10,000</b>
Program increase		10,000	
<b>HISTORICALLY BLACK COLLEGES &amp; UNIVERSITIES (HBCU)</b>	<b>24,412</b>	<b>34,412</b>	<b>10,000</b>
Program increase		10,000	
<b>9 BIOMEDICAL TECHNOLOGY</b>	<b>112,242</b>	<b>114,790</b>	<b>2,548</b>
Program increase		2,548	
<b>11 LINCOLN LABORATORY RESEARCH PROGRAM</b>	<b>51,875</b>	<b>47,875</b>	<b>-4,000</b>
Program decrease		-4,000	
<b>25 SOF TECHNOLOGY DEVELOPMENT</b>	<b>39,750</b>	<b>34,750</b>	<b>-5,000</b>
SOF technology development - excess growth		-5,000	
<b>28 COMBATING TERRORISM TECHNOLOGY SUPPORT</b>	<b>69,675</b>	<b>79,675</b>	<b>10,000</b>
Program increase		10,000	
<b>29 FOREIGN COMPARATIVE TESTING</b>	<b>30,000</b>	<b>24,000</b>	<b>-6,000</b>
Program decrease		-6,000	
<b>COUNTERPROLIFERATION INITIATIVES-- PROLIFERATION PREVENTION &amp; DEFEAT</b>	<b>283,694</b>	<b>291,694</b>	<b>8,000</b>
Program increase		8,000	
<b>33 DISCRIMINATION SENSOR TECHNOLOGY</b>	<b>45,110</b>	<b>43,110</b>	<b>-2,000</b>
Unjustified growth		-2,000	
<b>34 WEAPONS TECHNOLOGY</b>	<b>14,068</b>	<b>34,068</b>	<b>20,000</b>
Program increase - interceptor technology		20,000	
<b>35 ADVANCED C4ISR</b>	<b>15,329</b>	<b>13,284</b>	<b>-2,045</b>
Unjustified growth		-2,045	
<b>39 SPECIAL PROGRAM - MDA TECHNOLOGY</b>	<b>51,033</b>	<b>40,433</b>	<b>-10,600</b>
Unjustified growth		-10,600	
<b>43 ADVANCED INNOVATIVE ANALYSIS AND CONCEPTS</b>	<b>60,000</b>	<b>50,000</b>	<b>-10,000</b>
Program decrease		-10,000	
<b>44 COMMON KILL VEHICLE TECHNOLOGY</b>	<b>25,639</b>	<b>22,639</b>	<b>-3,000</b>
Program operations - unjustified request		-3,000	
<b>47 JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS</b>	<b>131,960</b>	<b>121,960</b>	<b>-10,000</b>
Program decrease		-10,000	
<b>57 MICROELECTRONIC TECHNOLOGY DEVELOPMENT</b>	<b>72,144</b>	<b>82,700</b>	<b>10,556</b>
Program increase		10,556	
<b>58 JOINT WARFIGHTING PROGRAM</b>	<b>7,405</b>	<b>5,405</b>	<b>-2,000</b>
Program decrease		-2,000	

R-1	Budget Request	Committee Recommended	Change from Request
<b>60XX DEFENSE RAPID INNOVATION FUND</b>	<b>0</b>	<b>250,000</b>	<b>250,000</b>
Program increase		250,000	
<b>66 QUICK REACTION SPECIAL PROJECTS</b>	<b>69,319</b>	<b>64,319</b>	<b>-5,000</b>
Program decrease		-5,000	
<b>SPECIAL OPERATIONS ADVANCED TECHNOLOGY DEVELOPMENT</b>	<b>57,622</b>	<b>49,622</b>	<b>-8,000</b>
Engineering analysis - unjustified growth		-8,000	
<b>82 BALLISTIC MISSILE DEFENSE TERMINAL DEFENSE SEGMENT</b>	<b>299,598</b>	<b>292,798</b>	<b>-6,800</b>
THAAD development program support - unjustified growth		-6,800	
<b>83 BALLISTIC MISSILE DEFENSE MIDCOURSE DEFENSE SEGMENT</b>	<b>1,003,768</b>	<b>1,047,168</b>	<b>43,400</b>
Program management - unjustified growth		-6,600	
Program increase - CE-II upgrades		43,000	
Program increase - stockpile reliability program		4,000	
Program increase - command launch equipment and fire control upgrades		3,000	
<b>86 BALLISTIC MISSILE DEFENSE ENABLING PROGRAMS</b>	<b>410,863</b>	<b>398,249</b>	<b>-12,614</b>
System engineering and integration - unjustified growth		-3,914	
Enabling test - transfer not properly accounted		-3,700	
Intelligence and security - unjustified growth		-3,100	
BMD information management systems - unjustified growth		-1,900	
<b>87 SPECIAL PROGRAMS - MDA</b>	<b>310,261</b>	<b>295,261</b>	<b>-15,000</b>
Unjustified growth		-15,000	
<b>88 AEGIS BMD</b>	<b>929,208</b>	<b>880,708</b>	<b>-48,500</b>
Aegis BMD 5.1 development - cost growth		-37,000	
Aegis testing restructure - excess to requirement		-7,800	
System engineering and integration - unjustified growth		-3,700	
<b>91 BALLISTIC MISSILE DEFENSE C2BMC</b>	<b>443,484</b>	<b>431,484</b>	<b>-12,000</b>
Spiral 8.2-3 - unjustified growth without baseline		-12,000	
<b>96 ISRAELI COOPERATIVE PROGRAMS</b>	<b>96,803</b>	<b>268,842</b>	<b>172,039</b>
Israeli Upper tier		20,339	
Israeli Arrow program		45,500	
Short range ballistic missile defense		106,200	
<b>97 BMD Tests</b>	<b>386,482</b>	<b>350,582</b>	<b>-35,900</b>
Flight test delays		-35,900	
<b>98 BMD Targets</b>	<b>485,294</b>	<b>446,794</b>	<b>-38,500</b>
MRBM Type 3 test hardware - lack of justification and schedule delays		-28,500	
MRBM Type 1/2 test hardware - early to need		-10,000	
<b>102 ADVANCED INNOVATIVE TECHNOLOGIES</b>	<b>190,000</b>	<b>170,000</b>	<b>-20,000</b>
Program decrease		-20,000	

R-1		Budget Request	Committee Recommended	Change from Request
117	PROMPT GLOBAL STRIKE CAPABILITY DEVELOPMENT Additional test for AHW	70,762	90,762 20,000	20,000
135	CENTRAL TEST & EVAL INVESTMENT DEVELOPMENT Program decrease Electronic warfare test capability - transfer to OTE line 3	254,503	159,003 -15,000 -80,500	-95,500
143	CLASSIFIED PROGRAM USD(P) Classified adjustment	0	100,000 100,000	100,000
145	SYSTEMS ENGINEERING Program increase	44,246	44,746 500	500
163	DEVELOPMENT TEST AND EVALUATION Program increase	15,187	19,187 4,000	4,000
	COCOM EXERCISE ENGAGEMENT AND TRAINING			
174	TRANSFORMATION Program decrease	44,005	39,005 -5,000	-5,000
175	MANAGEMENT HEADQUARTERS - MDA Transfer to OM,DW	36,998	0 -36,998	-36,998
200	INFORMATION SYSTEMS SECURITY PROGRAM Program increase	125,854	145,854 20,000	20,000
208	SPECIAL APPLICATIONS FOR CONTINGENCIES Unjustified growth	19,294	15,794 -3,500	-3,500
242	MQ-9 UAV Underexecution	9,702	1,314 -8,388	-8,388
243	RQ-11 UAV Unjustified new start	259	0 -259	-259
	SPECIAL OPERATIONS AVIATION SYSTEMS			
245	ADVANCED DEVELOPMENT Commando Solo - new start Mission Training and Prep Systems - unjustified growth C-130 TF radar - underexecution	164,233	154,821 -2,912 -2,500 -4,000	-9,412
248	SOF OPERATIONAL ENHANCEMENTS Classified adjustment	75,253	70,089 -5,164	-5,164
252	WARRIOR SYSTEMS Long Range MISO - excess growth	24,661	20,573 -4,088	-4,088
262	SOF MARITIME SYSTEMS Next Generation Surface System - excess growth	57,905	55,046 -2,859	-2,859
265	SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE Classified adjustment	16,225	15,225 -1,000	-1,000
	CLASSIFIED PROGRAMS Classified adjustment	3,118,502	3,257,402 138,900	138,900
	DARPA UNDISTRIBUTED REDUCTION DARPA undistributed reduction		-69,000 -69,000	

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES AND MINORITY  
INSTITUTIONS

The Committee includes additional funding for the Historically Black Colleges and Universities and Minority Institutions program (HBCU/MI). The HBCU/MI program provides access to scientific and technical information products and services to faculty, staff, and students of Historically Black Colleges and Universities, American Indian Tribally Controlled Colleges and Universities, Native American-Serving Nontribal Institutions, and other minority serving institutions.

ADVANCED INNOVATIVE TECHNOLOGIES

The Strategic Capabilities Office (SCO) was created to identify, analyze, and accelerate capabilities to counter strategic adversaries and improve the posture for engaging future threats. As part of its mission, the SCO examines alternative strategies, explores multi-domain solutions, builds partnerships across national security divides, analyzes cost effectiveness, risk and performance, develops prototypes to accelerate capabilities, and increases the operational options available to senior leadership. The Committee is aware that one of the capabilities the SCO is exploring is the early fielding of a smaller tactical electromagnetic railgun system for both land-based and ship-based railgun systems, and encourages this advancement.

Additionally, a reduction to the Advanced Innovative Technologies demonstration and validation program element should be taken from programs other than ship-based guns and land-based guns for base defense.

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

Within its Biomedical Technology line, the Director of the Defense Advanced Research Projects Agency (DARPA) is encouraged to make resources available for the development of restorative products and technologies which may serve as an alternative to amputation.

Additionally, the Committee supports the leadership initiatives at DARPA to better manage the execution of funds. DARPA's efficiency, financial execution, and ability to obligate funds have greatly improved. Therefore, as DARPA's efficiencies continue to improve, a non-prejudicial reduction of \$69,000,000 will be determined, by program, at the discretion of the Director of DARPA.

LASER-DRIVEN X-RAY TECHNOLOGY

The Committee continues to place a high priority on research to address the threats of nuclear proliferation and nuclear terrorism. Therefore, the Committee encourages the Secretary of Defense to maintain the fiscal year 2014 funding level in fiscal year 2015 to conduct research to speed development of laser-driven x-ray technologies that will bring this technology closer to the ultimate goal of a field demonstration of stand-off detection of shielded nuclear materials and other weapons of mass destruction.

## MODELING AND SIMULATION

The Committee recognizes the important contributions of the modeling and simulation industry in many sectors of the American economy, and in particular its applications in training warfighters. Modeling and simulation is effective in providing platforms to prepare warfighters and small unit leaders for rapid decision making in asymmetric and irregular combat. The Committee recognizes that modeling and simulation will continue to serve as a valuable and cost effective training method for every warfare specialty and maintenance area. The Committee believes that the Department of Defense should further harness the entrepreneurial and innovative spirit of industry, academia, and the government to facilitate the progress in state-of-the-art training by making greater use of modeling and simulation. The Committee encourages persistent and augmented use of modeling and simulation technology in scenario-based training, aggressive simulation technology research and development efforts, and active endeavors to substitute simulation for more expensive forms of training.

## CYBERSECURITY

The Committee recognizes the importance of sustaining a robust cybersecurity research program within the Department of Defense, particularly as it relates to the interdisciplinary nature of cyber systems and the role of human behavior. The interdisciplinary cybersecurity research model can contribute to the development of novel approaches for risk assessment, which incorporate components of risk beyond computer science such as understanding risk-related fundamental properties of dynamic cyber threats; developing recognition capabilities for new cyber threats; and increasing resilience against attacks. Accordingly, the Committee encourages the Secretary of Defense to leverage information assurance and cyber defense research done through defense agencies, including the National Security Agency, as the Department plans and conducts interdisciplinary research to identify and close cybersecurity gaps.

## HUMAN AND ROBOT COLLABORATION

The Committee recognizes the need to enhance manufacturing by flexibly assigning work to the human or machine most capable of performing a given task, and thereby reducing the need to invest in fixed heavy manufacturing equipment. Accordingly, the Committee urges the Secretary of Defense to increase resources available for the defense-wide manufacturing science and technology program to support formation of industry-university partnerships on a competitive basis to develop technologies and processes that utilize human and robot collaboration for large scale manufacturing.

## MISSILE DEFENSE AGENCY

The Committee is pleased that in both the fiscal year 2014 and 2015 budget requests the Missile Defense Agency (MDA) has re-focused its efforts from far-term, conceptual programs to near-term programs that are necessary to defend the United States and its

allies from missile threats. The Committee believes that the discrimination of threats is paramount to improving the threat assessment and reliability of the ballistic missile defense system and supports programs designed to improve the discrimination capability of the ballistic missile defense system.

The Committee supports the budget request for the development of the Long Range Discrimination Radar (LRDR); however, the Committee is concerned by the lack of details provided in the budget request submission. Therefore, the Committee directs the Director of the MDA to provide a report to the congressional defense committees not later than 90 days after the enactment of this Act detailing the strategy for developing and procuring the LRDR. The report shall include the program's objectives and key parameters, a detailed schedule through full operational capability, and a cost estimate by fiscal year.

The Committee also supports the budget request of \$99,500,000 for the re-designed exo-atmospheric kill vehicle (EKV) for the ground-based interceptor as part of the ground-based midcourse defense program. However, the budget request submission lacks details necessary for continued oversight of the program. Therefore, the Committee directs the Director of the MDA to provide a report to the congressional defense committees not later than 90 days after the enactment of this Act detailing the strategy for developing, procuring, and fielding the re-designed EKV. The report shall include the program's objectives and key parameters, a detailed schedule, and a cost estimate by fiscal year. The report shall also include any necessary legislative provisions that the Director of the MDA may require to fully implement the acquisition strategy for the EKV.

#### MISSILE DEFENSE AGENCY—IRON DOME

The Committee recommends \$350,972,000 for the Iron Dome short-range rocket defense system, an increase of \$175,000,000 above the budget request.

Since fiscal year 2011, the Committee has supported the government of Israel by providing more than \$720,000,000 for the Iron Dome system. With the fiscal year 2015 recommendation, that total will increase to more than \$1,070,000,000.

The Committee understands that there is a signed agreement between the Israeli and United States governments concerning the procurement of the Iron Dome system and the necessity for producing various components of the system in the United States. The Committee is also aware that the Missile Defense Agency (MDA) and the Israeli Missile Defense Organization (IMDO) formerly agreed to the United States providing \$680 million between fiscal years 2012 and 2015 for the Iron Dome program. The Committee is concerned that the agreement does not cover the full amount that is recommended for fiscal year 2015. Given the significant American investment in this system, the Committee believes that co-production of parts and components should be accomplished in a way that will maximize American industry participation in interceptor and battery deliveries for Israel's defense needs.

Therefore, the Committee directs that the Director of the MDA may not obligate or expend \$175,000,000 of the amount rec-

ommended in fiscal year 2015 until the Government of Israel submits a sufficiently detailed cost and schedule justification to the Director of the MDA and the Director approves it. The detailed cost and schedule justification must include a detailed timeline for obligation and expenditure of program funds received above the budget request for each fiscal year for which funds were appropriated; copies of signed and ratified contracts, sub-contracts, and teaming arrangements between Israeli and American industry for all Iron Dome co-production efforts; delivery to MDA of all technical data packages as accepted by American industry suppliers for co-production; and a common cost model of Iron Dome components, to be jointly developed and agreed upon by MDA and IMDO that includes recurring and non-recurring engineering costs, estimates for future buys, and actual costs beginning with fiscal year 2013, the required quantities for all components through fiscal year 2019, and component lead-times and delivery schedules.

Additionally, the Committee expects that the Director of the MDA will ensure that Iron Dome operational data has been provided per previous commitments; that this additional funding be applied to the work share percentage for fiscal year 2015 funding between American and Israeli industry as proscribed under the recently signed Iron Dome procurement agreement; and, that the additional funds are required to meet Israeli defense needs. Any funds found to be in excess of Israel's justified and documented needs during fiscal year 2015 may be transferred to appropriations available for the procurement of weapons and equipment according to priority needs.

The Committee also believes that if there is a request for Iron Dome funding for fiscal year 2016, the Director of the MDA must establish for the Committee how those funds will resolve details and agreements needed for American-based co-production of all-up rounds and cover the export of Iron Dome technology to American and Israeli allies, including co-production of parts, components, and all-up rounds of those exports.

The Committee directs the Director of the MDA, in coordination with the Under Secretary of Defense for Acquisition, Technology, and Logistics, to provide a report to the congressional defense committees not later than October 1, 2014, on the information provided in the required detailed cost and schedule justification, including the views of the Director and the Under Secretary on its sufficiency.

#### MISSILE DEFENSE AGENCY—COOPERATION WITH UNIVERSITIES

The Committee commends the Director of the Missile Defense Agency (MDA) for working with universities to best leverage innovative breakthrough research and technologies for next generation ballistic missile defense capabilities. The Committee encourages the Director of the MDA to continue cooperating with universities and to establish a university affiliated research center. Such a center would consolidate core research and development capabilities in areas such as advanced interceptor propulsion systems and high fidelity modeling and simulation and would potentially enhance the ability of the MDA to improve the ground-based midcourse defense

program, augment command and control systems, and increase overall mission assurance.

#### DISABLING AND NEUTRALIZING WEAPONS OF MASS DESTRUCTION

The budget request includes \$283,694,000 for Counterproliferation Initiatives—Proliferation Prevention and Defeat. The Committee recommendation provides \$291,694,000, an increase of \$8,000,000 above the budget request, to support the demonstration of technology solutions applicable to the Army and related Department of Defense organizations in addressing operations in subterranean environments. The Committee notes that the increased program funding will support a dedicated effort to mature prototypes and demonstrate capabilities in support of the Army to disable and neutralize weapons of mass destruction.

#### ADDITIVE MANUFACTURING

The Committee is aware that additive manufacturing techniques and capabilities have the potential to lower the cost of maintaining aging weapon platforms. Currently, the Department of Defense uses additive manufacturing for design iteration, prototyping, tooling and fixtures, and for some noncritical parts. However, the Department eventually wants to use additive manufacturing to build aerospace parts. The Committee believes that the Department of Defense can utilize additive manufacturing improvements to save money in upfront manufacturing costs, improve fleet readiness by creating on-demand alternatives to the current parts supply chain, reduce parts certification and transition costs, and reduce costs with improved weapon systems parts. The Committee encourages the Secretary of Defense to research creative applications for additive manufacturing technology.

#### SYSTEMS ENGINEERING RESEARCH CENTER

The budget request includes \$44,246,000 for Systems Engineering. The Committee recommendation provides \$44,746,000, an increase of \$500,000 above the budget request to support the Systems Engineering Research Center, a systems-oriented study to assess the current state of the Army's lethality capability and to provide actionable recommendations to transform it at the enterprise level. These recommendations should address multiple dimensions, including technologies, development and acquisition processes, personnel requirements, doctrine, structure and governance, and infrastructure. The intent of these recommendations should have the cumulative intent to transform the Army's lethality capability.

#### CONVENTIONAL PROMPT GLOBAL STRIKE

The Committee remains interested in the Department's development efforts for a conventional prompt global strike capability. Therefore, the Committee directs the Secretary of the Defense to submit a report to the congressional defense committees not later than 120 days after the enactment of this Act, on the Department's ability, or likelihood thereof, to field a conventional prompt global strike capability by fiscal year 2019. The report should incorporate findings from the recently completed conventional prompt global

strike land-based study. The report may include a classified annex if necessary.

**OPERATIONAL TEST AND EVALUATION, DEFENSE**

Fiscal year 2014 appropriation .....	\$246,800,000
Fiscal year 2015 budget request .....	167,738,000
Committee recommendation .....	248,238,000
Change from budget request .....	+80,500,000

The Committee recommends an appropriation of \$248,238,000 for Operational Test and Evaluation, Defense. The total amount recommended in the bill will provide the following program in fiscal year 2015:

(DOLLARS IN THOUSANDS)

	BUDGET REQUEST	COMMITTEE RECOMMENDED	CHANGE FROM REQUEST
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OPERATIONAL TEST AND EVALUATION, DEFENSE			
1			
	RDT&E MANAGEMENT SUPPORT		
	OPERATIONAL TEST AND EVALUATION.....		
	74,583	74,583	---
2	LIVE FIRE TESTING.....		
	45,142	45,142	---
3	OPERATIONAL TEST ACTIVITIES AND ANALYSES.....		
	48,013	128,513	+80,500
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	TOTAL, RDT&E MANAGEMENT SUPPORT.....		
	167,738	248,238	+80,500
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	TOTAL, OPERATIONAL TEST AND EVALUATION, DEFENSE.....		
	167,738	248,238	+80,500
	=====	=====	=====

## EXPLANATION OF PROJECT LEVEL ADJUSTMENTS

[In thousands of dollars]

	Budget request	Committee recommended	Change from request
OPERATIONAL TEST ACTIVITIES AND ANALYSIS .....	48,013	128,513	80,500
Electronic Warfare Test Capability—transfer from RDTE,DW line 137 .....	--	80,500	--