

UNITED STATES DEPARTMENT OF DEFENSE FISCAL YEAR 2012 BUDGET REQUEST



# PROGRAM ACQUISITION COSTS BY WEAPON SYSTEM

February 2011

OFFICE OF THE UNDER SECRETARY OF DEFENSE (COMPTROLLER) / CFO

# Major Weapon Systems OVERVIEW

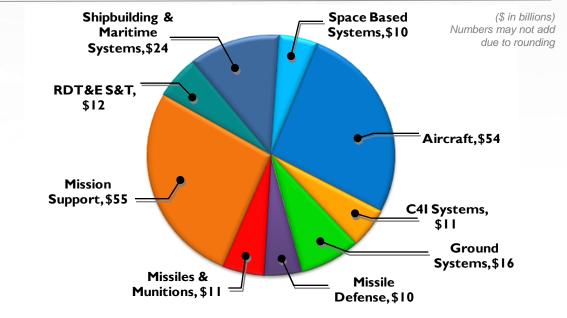
The combined capabilities and performance of U.S. weapons systems are unmatched throughout the world, ensuring that our military forces have the advantage over any adversary. The DoD (FY) 2012 request totals \$553.1 billion, of which \$203.8 billion is for Procurement, and Research, Development, Test and Evaluation (RDT&E) programs. The funding in FY 2012 includes both Base (\$188.4 billion) and Overseas Contingency Operations (OCO) (\$15.4 billion) funding. For RDT&E appropriations: \$75.7 billion (Base, \$75.3 billion; OCO, \$0.4 billion); for Procurement : \$128.1 billion (Base, \$113.1 billion; OCO, \$15.0 billion). Of this amount, \$85.3 billion is for programs that have been designated as Major Defense Acquisition Programs (MDAP). To simplify the display of the various weapon systems, this book is organized by mission area categories.

# **Funding Categories**

- Aircraft
- Command, Control, Communications, and Computer (C4) Systems
- Ground Programs
- Missile Defense

- Munitions and Missiles
- Shipbuilding and Maritime Systems
- Space Based and Related Systems
- Mission Support\*
- Science and Technology\*

# FY 2012 Modernization – Base and OCO: \$203.8 Billion



Source: FY 2012 PRCP – Investment Categorization

Preparation of this study/report cost the Department of Defense a total of approximately \$20,000 for the 2011 Fiscal Year. RefID: F-C8E6884

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**INTRODUCTION** 

|                                  |   |          |          |         | 2012  |                  |          |
|----------------------------------|---|----------|----------|---------|-------|------------------|----------|
| Major Weapon<br>(\$ in Millions) | Systems Summary   | FY 2010  | FY 2011  | Base    | осо   | Total<br>Request | Page     |
| Aircraft – Joint                 | Service   |          |          |         |       |                  |          |
| MQ-1/MQ-9                        | Predator and Reaper   | 1,598.6  | 2,708.7  | 2,516.7 | 10.8  | 2,527.5          | 1-2      |
| RQ-4                             | Global Hawk   | 1,679.1  | 1,900.3  | 1,635.4 | -     | 1,635.4          | 1-3      |
| RQ-7/RQ-11                       | Shadow and Raven  | 933.2    | 683.5    | 246.2   | 94.6  | 340.8            | 1-4      |
| C-130J                           | Hercules  | 1,192.4  | 1,450.3  | 1,257.7 | -     | 1,257.7          | I-5      |
| JCA                              | Joint Cargo Aircraft  | 327.1    | 377.6    | 598.8   | -     | 598.8            | ۱-6      |
| F–35                             | Joint Strike Fighter  | 11,104.5 | 11,790.0 | 9,732.8 | -     | 9,732.8          | ۱-7      |
| JPATS T–6A                       | Texan II  | 278.3    | 276.7    | 274.2   | -     | 274.2            | ۱-8      |
| V–22                             | Osprey  | 2,992.2  | 2,801.5  | 2,901.4 | 70.0  | 2,971.4          | 1-9      |
| Aircraft – US A                  | rmy (USA)   |          |          |         |       |                  |          |
| AH64                             | Apache Longbow Block 3  | 411.5    | 587.1    | 816.6   | -     | 816.6            | 1-10     |
| CH-47                            | Chinook   | I,058.8  | 1,180.0  | 1,409.2 | -     | 1,409.2          | 1-11     |
| LUH                              | Light Utility Helicopter  | 325.2    | 305.3    | 250.4   | -     | 250.4            | 1-12     |
| UH-60                            | Black Hawk  | 1,542.3  | 1,371.7  | 1,546.9 | 72.0  | 1,618.9          | 1-13     |
|                                  | ir Force (USAF)   |          |          |         |       | ·                |          |
| C–17                             | Globemaster   | 3,087.7  | 920.9    | 527.7   | 11.0  | 538.7            | - 4      |
| KC-X                             | New Tanker  | 14.9     | 863.9    | 877.1   | -     | 877.1            | <br> -15 |
| HH-60M                           | Pave Hawk   | 94.9     | 104.4    | 104.7   | 39.3  | 144.0            | I-16     |
| F-22                             | Raptor  | 838.5    | 1,238.5  | 1,063.6 |       | 1,063.6          | 1-17     |
|                                  | avy (USN)/US Marine Corps                                       |          |          | ,       |       | ,                |          |
| E-2/D                            | Advanced Hawkeye  | 1,126.0  | 1,132.6  | 1,222.5 | 163.5 | 1,386.0          | 1-18     |
| F/A-18E/F                        | Super Hornet  | 1,676.6  | 1,976.8  | 2,659.9 | 2.0   | 2,661.9          | 1-19     |
| EA-18G                           | Growler   | 1,716.8  | 1,117.1  | 1,124.6 | -     | 1,124.6          | 1-20     |
| H–I                              | Huey/Super Cobra  | 777.3    | 897.0    | 841.2   | 30.0  | 871.2            | 1-20     |
| MH–60R                           | Multi-Mission Helicopter  | 1,002.9  | 1,161.0  | 1,018.2 | -     | 1,018.2          | 1-22     |
| MH-60S                           | Fleet Combat Support<br>Helicopter                              | 519.4    | 588.8    | 513.5   | -     | 513.5            | 1-23     |
| P-8A                             | Poseidon  | 3,040.8  | 2,992.3  | 2,996.5 | -     | 2,996.5          | 1-24     |
| C4 Systems – Jo                  | int Service   |          |          |         |       |                  |          |
| JTRS                             | Joint Tactical Radio System                                     | 921.2    | 967.2    | 1,541.4 | .5    | 1,541.9          | 2-2      |
| C4 Systems – U                   | SA  |          |          |         |       |                  |          |
| E-IBCT                           | Early-Infantry Brigade<br>Combat Team (E-IBCT)<br>Modernization | 2,086.0  | 2,251.0  | 749.0   | -     | 749.0            | 2-3      |
| WIN-T                            | Warfighter Information<br>Network – Tactical                    | 774.6    | 612.7    | 1,272.2 | .5    | 1,272.7          | 2-4      |
| Ground Progra                    | ms – Joint Service  |          |          |         |       |                  |          |
| JTLV                             | Joint Light Tactical Vehicle                                    | 83.9     | 84.7     | 243.9   | -     | 243.9            | 3-2      |
| Ground Program                   | ms – USA  |          |          |         |       |                  |          |

|                      |   |         |          |          | 2012 |          |      |
|----------------------|---|---------|----------|----------|------|----------|------|
| •                    | Systems Summary   |         |          |          |      | Total    |      |
| (\$ in Millions)     |   | FY 2010 | FY 2011  | Base     | осо  | Request  | Page |
| FHTV                 | Family Of Heavy Tactical<br>Vehicles                                  | 1,410.7 | 741.9    | 632.8    | 47.2 | 680.0    | 3-3  |
| FMTV                 | Family Of Medium Tactical<br>Vehicles                                 | 1,349.8 | 1,438.2  | 436.9    | 11.1 | 448.0    | 3-4  |
| MI Upgrade           | Abrams Tank   | 278.8   | 290.5    | 191.0    | -    | 191.0    | 3-5  |
| Stryker              | Stryker Family of Armored<br>Vehicles                                 | 609. I  | 435.8    | 834.0    | -    | 834.0    | 3-6  |
| Missile Defense -    | - Joint Service   |         |          |          |      |          |      |
| BMD                  | Ballistic Missile Defense   |         |          |          |      |          | 4-2  |
| BMD                  | Ballistic Missile Defense   | 9449.6  | 10,219.9 | 10,671.6 | -    | 10,671.6 | 4-3  |
| AEGIS                | AEGIS Ballistic Missile<br>Defense                                    | 1,644.6 | 1,561.4  | 1,525.7  | -    | 1,525.7  | 4-4  |
| THAAD                | Terminal High Altitude<br>Area Defense                                | 1,109.1 | 1,295.4  | 1,174.7  | -    | 1,174.7  | 4-5  |
| Patriot/PAC-3        | Patriot, Army   | 362.7   | 498.7    | 713.2    | -    | 713.2    | 4-6  |
| Patriot/MEADS        | Patriot Medium Extended<br>Air Defense System                         | 571.0   | 467.1    | 406.6    | -    | 406.6    | 4-7  |
| PAC-3/MSE<br>Missile | PAC-3/MSE Missile   | -       | 62.5     | 163.9    | -    | 163.9    | 4-8  |
| GMD                  | Ground-Based Midcourse<br>Defense                                     | 1,022.0 | 1,346.2  | 1,161.0  | -    | 1,161.0  | 4-9  |
| JLENS                | Joint Land Attack Cruise<br>Missile Defense Elevated<br>Netted Sensor | 317.1   | 372.5    | 344.7    | -    | 344.7    | 4-10 |
| PAA                  | Phased Adaptive Approach  | 118.5   | 441.7    | 628.4    | -    | 628.4    | 4-11 |
| Munitions and M      | lissiles – Joint Service  |         |          |          |      |          |      |
| AMRAAM               | Advanced Medium Range<br>Air-Air Missile                              | 467.0   | 577.1    | 579.5    | -    | 579.5    | 5-2  |
| AIM-9X               | Air Intercept Missile - 9X  | 141.4   | 127.6    | 153.5    | -    | 153.5    | 5-3  |
| Chem–Demil           | Chemical Demilitarization   | 1,712.3 | 1,592.0  | 1,629.7  | -    | 1,629.7  | 5-4  |
| JAGM                 | Joint Air-to-Ground Missile   | 180.3   | 231.1    | 245.5    | -    | 245.5    | 5-5  |
| JASSM                | Joint Air-to-Surface Standoff<br>Missile                              | 81.0    | 235.8    | 242.0    | -    | 242.0    | 5-6  |
| JDAM                 | Joint Direct Attack<br>Munition                                       | 242.3   | 252.6    | 76.6     | 34.1 | 110.7    | 5-7  |
| JSOW                 | Joint Standoff Weapon   | 151.9   | 143.9    | 145.4    | -    | 145.4    | 5-8  |
| SDB                  | Small Diameter Bomb   | 309.3   | 332.5    | 188.0    | 12.3 | 200.3    | 5-9  |
| Munitions and M      | lissiles – USA  |         |          |          |      |          |      |
| Javelin              | Javelin Advanced Tank<br>Weapon                                       | 258.6   | 173.9    | 178.1    | -    | 178.1    | 5-10 |
| GMLRS                | Guided Multiple Launch<br>Rocket System (GMLRS)                       | 379.9   | 342.6    | 380.8    | 19.0 | 399.8    | 5-11 |

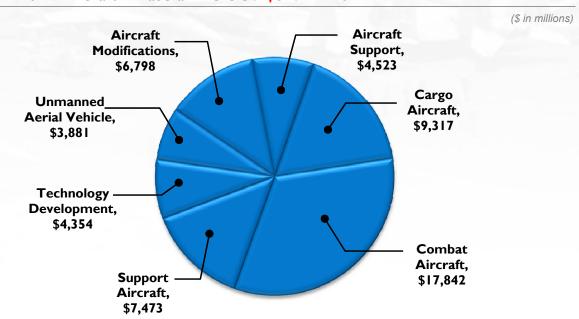
| Major Weapor<br>(\$ in Millions) | n Systems Summary                    | FY 2010 | FY 2011 | Base    | осо | Total<br>Request | Page |
|----------------------------------|--------------------------------------|---------|---------|---------|-----|------------------|------|
| Munitions and                    | Missiles – USN                       |         |         |         |     |                  |      |
| ESSM                             | Evolved Seasparrow Missile           | 51.2    | 48.2    | 48.5    | -   | 48.5             | 5-12 |
| RAM                              | Rolling Airframe Missile             | 69.7    | 75.0    | 66.2    | -   | 66.2             | 5-13 |
| Standard                         | Standard Family of Missiles          | 338.6   | 392.1   | 467.0   | -   | 467.0            | 5-14 |
| Tomahawk                         | Tactical Tomahawk Cruise<br>Missile  | 293.2   | 310.8   | 312.1   | -   | 312.1            | 5-15 |
| Trident II                       | Trident II Ballistic Missile         | 1,114.7 | 1,188.1 | 1,398.0 | -   | 1,398.0          | 5-16 |
| Shipbuilding a<br>Service        | nd Maritime Systems – Joint          |         |         |         |     |                  |      |
| JHS∨                             | Joint High Speed Vessel              | 391.1   | 209.6   | 416.0   | -   | 416.0            | 6-2  |
| Shipbuilding a                   | nd Maritime Systems USN              |         |         |         |     |                  |      |
| DDG 51                           | AEGIS Destroyer                      | 2,483.6 | 2,970.2 | 2,081.4 | -   | 2,081.4          | 6-3  |
| LCS                              | Littoral Combat Ship                 | ١,579.١ | 1,818.6 | 2,168.5 | -   | 2,168.5          | 6-4  |
| LPD 17                           | Amphibious Transport<br>Dock Ship    | 1,157.8 | 1.4     | 1,848.3 | -   | 1,848.3          | 6-5  |
| SSN 774                          | VIRGINA Class Submarine              | 4,234.4 | 5,420.2 | 4,954.9 | -   | 4,954.9          | 6-6  |
| LHA-7                            | LHA Replacement                      | 169.5   | 949.9   | 2,018.7 | -   | 2,018.7          | 6-7  |
| MLP                              | Mobile Landing Platform              | 120.0   | 380.0   | 425.9   | -   | 425.9            | 6-8  |
| Space Based a                    | nd Related Systems – USN             |         |         |         |     |                  |      |
| MUOS                             | Mobile User Objective<br>System      | 908.2   | 911.4   | 482.4   | -   | 482.4            | 7-2  |
| Space Based a                    | nd Related Systems – USAF            |         |         |         |     |                  |      |
| AEHF                             | Advanced Extremely High<br>Frequency | 2,292.2 | 598.4   | 974.5   | -   | 974.5            | 7-3  |
| EELV                             | Evolved Expendable Launch<br>Vehicle | 1,138.7 | 1,184.2 | 1,760.2 | -   | 1,760.2          | 7-4  |
| GPS                              | Global Positioning System            | 880.4   | 1,057.5 | 1,462.0 | -   | 1,462.0          | 7-5  |
| DWSS                             | Defense Weather Satellite<br>System  | 398.9   | 351.8   | 444.9   | -   | 444.9            | 7-6  |
| SBIRS                            | Space Based Infrared<br>System       | 987.4   | 1,525.5 | 995.2   | -   | 995.2            | 7-7  |
| WGS                              | Wideband Global SATCOM<br>System     | 279.6   | 611.8   | 481.5   | -   | 481.5            | 7-8  |

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# Aircraft

Aviation forces — including fighter/attack, bomber, mobility (cargo/tanker) and specialized support aircraft — provide a versatile striking force capable of rapid deployment worldwide. These forces can quickly gain and sustain air dominance over regional aggressors, permitting rapid air attacks on enemy targets while providing security to exploit the air for logistics, command and control, intelligence, and other functions. Fighter/attack aircraft operate from both land bases and aircraft carriers to combat enemy fighters and attack ground and ship targets. Bombers provide an intercontinental capability to rapidly strike surface targets. The specialized aircraft supporting conventional operations perform functions such as surveillance, airborne warning and control, air battle management, suppression of enemy air defenses, reconnaissance, and combat search and rescue. In addition to these forces, the U.S. military operates a variety of air mobility forces including cargo, aerial-refueling aircraft, helicopters, and support aircraft.

Aircraft funding has continued to increase to support the procurement of aircraft such as the F-35 Joint Strike Fighter, the V-22 Osprey, and the Navy's F/A-18 E/F Super Hornet and E/A-18G Growler.



# FY 2012 Aircraft – Base and OCO: \$54.2 Billion

Source: FY 2012 PRCP – Investment Categorization Numbers may not add due to rounding

# MQ-I Predator/MQ-9 Reaper

The Predator and Reaper Unmanned Aerial Systems (UASs) are comprised of an aircraft segment consisting of aircraft configured with an array of sensors to include day/night Full Motion Video (FMV), Signals Intelligence (SIGINT), and Synthetic Aperture Radar (SAR) sensor payloads, avionics, and data links; a ground control segment consisting of a Launch and Recovery

Element (LRE), and a Mission Control Element (MCE) with embedded Line-of-Sight (LOS) and Beyond-Line-of-Sight (BLOS) communications equipment; a support element; and trained personnel. The Army MQ-IC Gray Eagle has a 2.0L heavy fuel piston engine; where as the Air Force MQ-IB Predator has an aviation fuel piston engine and the Air Force MQ-9 Reaper has a turboprop engine.

**Mission:** A single-engine, remotely piloted armed reconnaissance aircraft designed to operate over-the-horizon at medium altitude for long endurance. The primary mission is reconnaissance with an embedded strike capability against critical, perishable targets. The Army MQ-IC Gray Eagle also has the unique mission of communications relay.

**FY 2012 Program:** Continues implementation of transformation towards development and fielding of UASs. Predator and Reaper aircraft support 50 Combat Air Patrols (CAP)/orbits by the end of year FY 2011 and 65 CAPs by the end of FY 2013.

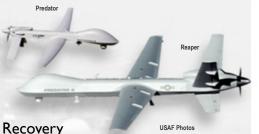
|         | MÇ  | 2–I Pred   | lator  | /MQ-9 F   | Reap   | er  |   |   |   |
|---------|---|--|--|---|--|---|---|---|---|
| FY 201  | 0*  | FY 201   | **   | FY 2012   |  |   |   |   |   |
| 11 201  | Ŭ   | 11 201   | •  | Base Budget   |  | OCO Bud   | get   | Total Request   |   |
| \$M     | Qty   | \$M  | Qty  | \$M   | Qty  | \$M   | Qty   | \$M   | Qty   |
|         |   |  |  |   |  |   |   |   |   |
| 23.7    | -   | 28.9   | -  | 14.1  | -  | -   | -   | 14.1  | -   |
| 104.2   | -   | 125.4  | -  | 146.8   | -  | -   | -   | 146.8   | -   |
| 84.9    | -   | 123.2  | -  | 137.0   | -  | -   | -   | 137.0   | -   |
| 212.8   | -   | 277.5  | -  | 297.9   | -  | -   | -   | 297.9   | -   |
|         |   |  |  |   |  |   |   | -   | -   |
| 190.8   | -   | 246  | -  | 158.4   | -  | -   | -   | 158.4   | -   |
| 573.9   | 24  | 1,392.6  | 48   | 1,069.3   | 48   | -   | -   | 1,069.3   | 48  |
| 530.7   | 24  | 625.1  | 26   | 795.0   | 36   | 10.8  | -   | 805.8   | 36  |
| 1,295.4 | 48  | 2,263.4  | -  | 2,022.7   | 84   | 10.8  | -   | 2,033.5   | 84  |
| 90.4    | -   | 167.8  | -  | 196.1   | -  | -   | -   | 196.1   | -   |
| 1,598.6 | 48  | 2,708.7  | -  | 2,516.7   | 84   | 10.8  | -   | 2,527.5   | 84  |
|         | \$M<br>23.7<br>104.2<br>84.9<br><b>212.8</b><br>190.8<br>573.9<br>530.7<br><b>1,295.4</b><br>90.4 | FY 2010*     \$M   Qty     23.7   -     104.2   -     84.9   -     212.8   -     190.8   -     573.9   24     530.7   24     1,295.4   48     90.4   - | FY 2010*   FY 201     \$M   Qty   \$M     23.7   -   28.9     104.2   -   125.4     84.9   -   123.2     212.8   -   277.5     190.8   -   246     573.9   24   1,392.6     530.7   24   625.1     1,295.4   48   2,263.4     90.4   -   167.8 | FY 2010*   FY 2011**     \$M   Qty   \$M   Qty     23.7   -   28.9   -     104.2   -   125.4   -     84.9   -   123.2   -     212.8   -   277.5   -     190.8   -   246   -     573.9   24   1,392.6   48     530.7   24   625.1   26     1,295.4   48   2,263.4   -     90.4   -   167.8   - | FY 2010*   FY 2011**   Base Budg     \$M   Qty   \$M   Qty   \$M     23.7   -   28.9   -   14.1     104.2   -   125.4   -   146.8     84.9   -   123.2   -   137.0     212.8   -   277.5   -   297.9     190.8   -   246   -   158.4     573.9   24   1,392.6   48   1,069.3     530.7   24   625.1   26   795.0     1,295.4   48   2,263.4   -   2,022.7     90.4   -   167.8   -   196.1 | FY 2010*   FY 2011**     Base Budget   Base Budget   SM   Qty   SM   Qty     \$M   Qty   \$M   Qty   \$M   Qty     23.7   -   28.9   -   14.1   -     104.2   -   125.4   -   146.8   -     84.9   -   123.2   -   137.0   -     212.8   -   277.5   -   297.9   -     190.8   -   246   -   158.4   -     573.9   24   1,392.6   48   1,069.3   48     530.7   24   625.1   26   795.0   36     1,295.4   48   2,263.4   -   2,022.7   84     90.4   -   167.8   -   196.1   - | FY 2010*FY 2011**Base BudgetOCO Budget $\$M$ Qty $\$M$ Qty $\$M$ Qty $\$M$ 23.7-28.9-14.1-104.2-125.4-146.8-84.9-123.2-137.0-212.8-277.5-297.9-190.8-246-158.4-573.9241,392.6481,069.348530.724625.126795.03610.81,295.4482,263.4-2,022.78490.4-167.8-196.1 | FY 2010*   FY 2011***   FY 2012     Base Budget   OCO Budget     \$M   Qty   \$M   Qty   \$M   Qty   \$M   Qty   \$M   Qty     23.7   -   28.9   -   14.1   -   -   -     104.2   -   125.4   -   146.8   -   -   -     84.9   -   123.2   -   137.0   -   -   -     190.8   -   217.5   -   297.9   -   -   -     190.8   -   246   -   158.4   -   -   -     190.8   -   246   -   158.4   -   -   -     530.7   24   1,392.6   48   1,069.3   48   -   -     1,295.4   48   2,263.4   -   2,022.7   84   10.8   -     90.4   -   167.8   -   196.1   -   -   - | FY 2010*   FY 2011**   FY 2012     Base Budget   0C0 Budget   Total Rec     \$M   Qty   Qty |

# Prime Contractor: General Atomics-Aeronautical Systems Inc., San Diego, CA

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

\*\* Reflects the FY 2011 President's Budget Request



DOD - JOINT

# **RQ-4 Global Hawk**

The RQ-4/MQ-4C unmanned aircraft supports both Air Force and Navy capabilities. The USAF RQ-4 Block 20 includes a communicationsrelay payload, the Block 30 includes a



DOD - JOINT

multi-intelligence suite for imagery and signals intelligence collection, and the Block 40 carries the Multi-Platform Radar Technology Insertion Program for imaging synthetic-aperture radar (SAR) and moving target detection. The USN MQ-4C Broad Area Maritime Surveillance (BAMS) UAS is a tactical asset including payloads for maritime SAR and Inverse SAR, Electrooptical/Infra-red (EO/IR)/Full Motion Video, Electronic Support Measures (ESM), Automatic Identification System (AIS), a basic communications relay capability and Link-16. Each variant features >24 hour endurance and autonomous flight capability. Remote operators control/monitor the aircraft and handle mission planning duties.

**Mission:** The Air Force RQ-4 performs high-altitude, near-real-time, high-resolution Intelligence, Surveillance, and Reconnaissance (ISR) collection while the Navy MQ-4C provides persistent maritime ISR to Joint, Combatant Commander (COCOM) and Navy numbered Fleet commanders from five orbits worldwide.

**FY 2012 Program**: Procures three USAF aircraft, payloads, integrated logistics support (to include initial spares, support equipment, technical data, etc.), other support requirements (training devices, etc.), testing, program management support, and related tasks. Also supports continued Navy System Development and Demonstration (SDD).

|                   |                    |            | RQ-4      | Glo | oal Hawl    | k   |            |         |                |         |
|-------------------|--------------------|------------|-----------|-----|-------------|-----|------------|---------|----------------|---------|
|                   | FY 201             | 0*         | FY 201    | **  |             |     | FY 20      | 12      |                |         |
|                   | 11201              | U          | 11201     | 1   | Base Budget |     | OCO Budget |         | Total Re       | quest   |
|                   | \$M                | Qty        | \$M       | Qty | \$M         | Qty | \$M        | Qty     | \$M            | Qty     |
| RDT&E             |                    |            |           |     |             |     |            |         |                |         |
| RQ-4, USAF        | 309.2              | -          | 251.3     | -   | 423.5       | -   | -          | -       | 423.5          | -       |
| RQ-4, USN         | 439.0              | 2          | 529.3     | -   | 548.5       | -   | -          | -       | 548.5          | -       |
| Subtotal          | 748.2              | 2          | 780.6     | -   | 972.0       | -   | -          | -       | 972.0          | -       |
| Procurement       |                    |            |           |     |             |     |            |         |                |         |
| RQ-4, USAF        | 800.1              | 4          | 859.2     | 4   | 484.6       | 3   | -          | -       | 484.6          | 3       |
| Subtotal          | 800.I              | 4          | 859.2     | 4   | 484.6       | 3   | -          | -       | 484.6          | 3       |
| Spares            | 130.8              | -          | 260.5     | -   | 178.8       | -   | -          | -       | 178.8          | -       |
| Total             | 1,679.1            | 6          | 1,900.3   | 4   | 1,635.4     | 3   | -          | -       | 1,635.4        | 3       |
| * FY 2010 & FY 20 | )   L include Base | e and $O($ | O funding |     |             |     | Numbers    | may not | t add due to r | nundinσ |

Prime Contractor: Northrop Grumman Corporation, Rancho Bernardo, CA and Bethpage, NY

 $\ast$  FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

\*\* Reflects the FY 2011 President's Budget Request

| RQ-7 Shadow/RQ-11 Raven   | DOD -                        | JOINT         |
|---|------------------------------|---------------|
| The RQ-7 and RQ-11 unmanned aircraft are<br>ground forces that provide tactical Intelligence<br>Surveillance, and Reconnaissance (ISR). |                              | USAF Photo    |
| <b>Mission:</b> The Shadow provides the tactical m<br>commander near-real-time reconnaissance, su<br>acquisition, and force protection  |                              |               |
| during day/night and limited<br>adverse weather<br>conditions. Raven is an  | 10                           | US Army Photo |
| "over the hill" rucksack-portable, day/night,<br>limited adverse weather, remotely-operated.  | multi-sensor system in suppo | rt of combat  |

limited adverse weather, remotely-operated, multi-sensor system in support of combat battalions and below as well as selected combat support units.

**FY 2012 Program:** Procures multiple variations of quantities for the small unmanned Raven-class aircraft, system hardware, contractor logistics support, and new training equipment for Tactical Common Data Link (TCDL). Additionally, air vehicle modifications and equipment to support Shadow Common Configuration; 16 Laser Designator payload retrofit kits; and 400 one system remote video terminals (OSRVTs).

|                    |              |             | RQ-7 Sh   | adow/ | 'RQ-II F | Raven   |         |          |              |            |  |
|--------------------|--------------|-------------|-----------|-------|----------|---------|---------|----------|--------------|------------|--|
|                    | FY 20        | )10*        | FY 201    | **    |          | FY 2012 |         |          |              |            |  |
|                    | 112          | 510         | 11 201    |       | Base Bud | lget    | OCO Bud | get      | Total Re     | equest     |  |
|                    | \$M          | Qty         | \$M       | Qty   | \$M      | Qty     | \$M     | Qty      | \$M          | Qty        |  |
| RDT&E              |              |             |           |       |          |         |         |          |              |            |  |
| Shadow USA         | 41.9         | -           | 7.8       | -     | 31.9     | -       | -       | -        | 31.9         | -          |  |
| Shadow USMC        | 3.1          | -           | 0.9       | -     | 0.9      | -       | -       | -        | 0.9          | -          |  |
| Raven USA          | 2.0          | -           | 1.6       | -     | 1.9      | -       | -       | -        | 1.9          | -          |  |
| Raven USMC         | 0.6          | -           | 0.5       | -     | 1.0      | -       | -       | -        | 1.0          | -          |  |
| Subtotal           | 47.6         | -           | 10.8      | -     | 35.7     | -       | -       | -        | 35.7         | -          |  |
| Procurement        |              |             |           |       |          |         |         |          |              |            |  |
| Shadow USA         | 649.9        | -           | 602.8     | -     | 126.2    | -       | 94.6    | -        | 220.8        | -          |  |
| Shadow USMC        | 109.9        | 4           | 26.1      | -     | 11.4     | -       | -       | -        | 11.4         | -          |  |
| Raven USA          | 84.3         | 876         | 37.6      | 312   | 70.8     | 1,272   |         |          | 70.8         | 1,272      |  |
| Raven USMC         | 41.5         | 513         | 6.2       | -     | 2.1      | -       | -       | -        | 2.1          | -          |  |
| Subtotal           | 885.6        | 1,393       | 672.7     | 312   | 210.5    | 1,272   | 94.6    | -        | 305. I       | 1,272      |  |
| Spares             | -            | -           |           | -     |          | -       | -       | -        | -            | -          |  |
| Total              | 933.2        | 1,393       | 683.5     | 312   | 246.2    | 1,272   | 94.6    | -        | 340.8        | 1,272      |  |
| * EV 2010 8. EV 20 | L Lindudo Ba | iso and OCI | 0 funding |       |          |         | Numbe   | re may n | ot add duo t | o rounding |  |

#### Prime Contractors: Shadow: AAI Corporation Hunt Valley, MD Raven: AeroVironment, Monrovia, CA

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

# C-130J Hercules

The C-I 30J Hercules is a tactical airlift aircraft

modernizing the U.S.tactical airlift capability. It is capable of performing a number of tactical airlift missions including deployment and redeployment of troops



DOD - JOINT

and/or supplies within/between command areas in a theater of operation, aeromedical evacuation, air logistic support and augmentation of strategic airlift forces.

**Mission:** The mission of the C–130J is the immediate and responsive air movement and delivery of combat troops and supplies directly into objective areas primarily through airlanding, extraction, and airdrop and the air logistic support of all theater forces.

**FY 2012 Program:** Continues the procurement of C-130J aircraft, by funding one C-130J and ten HC/MC-130s for the Air Force and one KC-130J for the Marine Corps in FY 2012.

|                  |                  |              | C-13      | 0J H | ercules  |     |            |         |                |         |
|------------------|------------------|--------------|-----------|------|----------|-----|------------|---------|----------------|---------|
|                  | FY 201           | I <b>∩</b> * | FY 201    | I ** |          |     | FY 20      | 12      |                |         |
|                  | FT 201           | 10.          | FT 201    | 1    | Base Bud | get | OCO Budget |         | Total Re       | quest   |
|                  | \$M              | Qty          | \$M       | Qty  | \$M      | Qty | \$M        | Qty     | \$M            | Qty     |
| RDT&E            |                  |              |           |      |          |     |            |         |                |         |
| HC/MC-130        | 20.5             |              | 15.5      |      | 27.1     |     |            |         | 27.1           | -       |
| C-130j           | 29.1             |              | 26.8      |      | 39.5     |     |            |         | 39.5           | -       |
| Subtotal         | 49.6             | -            | 42.3      | -    | 66.6     | -   | -          | -       | 66.6           | -       |
| Procurement      | USAF             |              |           |      |          |     |            |         |                |         |
| C-130j           | 464.4            | 4            | 511.3     | 8    | 72.9     | I   |            |         | 72.9           | 1       |
| HC/MC-130        | 511.0            | 2            | 896.7     | 9    | 1,023.8  | 10  |            |         | 1,023.8        | 10      |
| Subtotal         | 975.4            | 6            | 1,408.0   | 17   | 1,096.7  | П   | -          | -       | 1,096.7        | - 11 -  |
| Procurement      | USN              |              |           |      |          |     |            |         |                |         |
| HC-130J***       | 167.4            | 2            | -         | -    |          |     |            |         |                |         |
| KC-130J          | -                | -            | -         | -    | 87.3     | Ι   | -          | -       | 87.3           | I.      |
| Spares           | -                | -            | -         | -    | 7.1      | -   | -          | -       | 7.1            | -       |
| Total            | 1,192.4          | 6            | 1,450.3   | 17   | 1,257.7  | 12  | -          | -       | 1,257.7        | 12      |
| * FY 2010 & FY 2 | 011 include Base | and OC       | 0 funding |      |          |     | Numbers    | may not | t add due to r | ounding |

Prime Contractor: Lockheed Martin Corporation, Marietta, GA

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

\*\* Reflects the FY 2011 President's Budget Request

\*\*\* FY 2010 Navy funding includes 2 HC-130J aircraft replacements procured on behalf of the US Coast Guard

# C-27J Joint Cargo Aircraft

The C-27] Joint Cargo Aircraft (JCA) is an intra-theater light cargo fixed-wing airlift platform that will meet the

warfighter need for intra-theater airlift. The aircraft is a commercial derivative aircraft that meets the Army's

immediate requirements and provides the Air Force with an additional capability in

meeting intra-theater airlift missions. The mission to support direct delivery of Army time sensitive mission critical cargo and the aircraft were transferred from the Army to the Air Force.

Mission: The ICA will provide responsive, flexible, and tailored airlift for combat, humanitarian operations and homeland defense.

FY 2012 Program: Continues procurement of JCA for the Air Force with nine aircraft in FY 2012.

Prime Contractor: L-3 Communications, Greenville, TX

|                   |                    |          | Joint     | Carg    | o Aircra | ft          |         |         |              |         |  |
|-------------------|--------------------|----------|-----------|---------|----------|-------------|---------|---------|--------------|---------|--|
|                   | FY 201             | ∩*       | FY 201    | I **    | FY 2012  |             |         |         |              |         |  |
|                   | 11 201             | U        | 11 201    | 11 2011 |          | Base Budget |         | lget    | Total Re     | quest   |  |
|                   | \$M                | Qty      | \$M       | Qty     | \$M      | Qty         | \$M     | Qty     | \$M          | Qty     |  |
| RDT&E             |                    |          |           |         |          |             |         |         |              |         |  |
| USAF              | 9.0                |          | 26.4      |         | 27.1     |             |         |         | 27.1         | -       |  |
| Subtotal          | 9.0                | -        | 26.4      | -       | 27.1     | -           | -       | -       | 27.I         | -       |  |
| Procurement       |                    |          |           |         |          |             |         |         |              |         |  |
| USA               |                    |          |           |         |          |             |         |         | -            | -       |  |
| USAF              | 318.1              | 8        | 351.2     | 8       | 480.0    | 9           |         |         | 480.0        | 9       |  |
| Subtotal          | 318.1              | 8        | 351.2     | 8       | 480.0    | 9           | -       | -       | 480.0        | 9       |  |
| Spares            | -                  | -        | -         | -       | 91.7     | -           | -       | -       | 91.7         | -       |  |
| Total             | 327.1              | 8        | 377.6     | 8       | 598.8    | 9           | -       | -       | 598.8        | 9       |  |
| * FY 2010 & FY 20 | )     include Base | e and OC | O funding |         |          |             | Numbers | may not | add due to r | ounding |  |

\*\* Reflects the FY 2011 President's Budget Request

DOD - JOIN

Alenia North America F

# F-35 Joint Strike Fighter

The F–35 Joint Strike Fighter (JSF) is the next-generation strike fighter for the Navy, Marine Corps, Air Force, and U.S. Allies.

The JSF consists of three variants: Conventional Take-Off and Landing (CTOL), Short Take-Off and Vertical Landing (STOVL), and Carrier (CV).

**Mission:** The JSF will complement the Navy F/A-18E/F and the Air Force F-22 aircraft and will replace the Marine Corps AV-8B, F/A-18C/D and the Air Force A-10 and F-16 aircraft. The JSF will provide all-weather, precision, stealthy, air-to-air and ground strike capability, including direct attack on the most lethal surface-to-air missiles and air defenses.

**FY 2012 Program**: Restructures the Joint Strike Fighter program to stabilize schedule and cost, scaling back procurement of the Marine Corps' STOVL variant and increasing development to support additional developmental testing. The budget procures 7 CV for Navy, 6 STOVL for Marine Corps and 19 CTOL for Air Force in FY 2012, continuing concurrent aircraft development and production.

Prime Contractors: Lockheed Martin Corporation, Fort Worth, TX

Pratt & Whitney; General Electric/Rolls Royce Fighter Engine Team

DOD - JOINT

USAF Photo

|             |          |     |           |         |             |     | -       | _    |               |     |
|-------------|----------|-----|-----------|---------|-------------|-----|---------|------|---------------|-----|
|             |          |     | F-35 Join | it Stri | ike Fighter |     |         |      |               |     |
|             | FY 2010  | *   | FY 2011*  | k*      | FY 2012     |     |         |      |               |     |
|             | FT 2010  |     | FT ZUTT   |         |             |     | OCO Bud | lget | Total Request |     |
|             | \$M      | Qty | \$M       | Qty     | \$M         | Qty | \$M     | Qty  | \$M           | Qty |
| RDT&E       |          |     |           |         |             |     |         |      |               |     |
| USN         | 1,886.2  |     | 1,375.7   |         | 1,348.2     |     |         |      | 1,348.2       | -   |
| USAF        | 2,033.5  |     | 1,101.3   |         | 1,435.8     |     |         |      | 1,435.8       | -   |
| Subtotal    | 3,919.7  | -   | 2,477.0   | -       | 2,784.0     | -   | -       | -    | 2,784.0       | -   |
| Procurement |          |     |           |         |             |     |         |      |               |     |
| USN         | 4,449.3  | 20  | 4,463.1   | 20      | 2,979.9     | 13  |         |      | 2,979.9       | 13  |
| USAF        | 2,357.9  | 10  | 4,315.1   | 23      | 3,664.1     | 19  |         |      | 3,664.1       | 19  |
| Subtotal    | 6,807.3  | 30  | 8,778.2   | 43      | 6,644.0     | 32  | -       | -    | 6,644.0       | 32  |
| Spares      | 377.5    | 0   | 534.7     | 0       | 304.8       | 0   | 0       | 0    | 304.8         | 0   |
| Total       | 11,104.5 | 30  | ,790.0    | 43      | 9,732.8     | 32  | -       | -    | 9,732.8       | 32  |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request and includes \$204.9 million OCO funding

for 1 combat replacement aircraft for Air Force

# JPATS T-6B Texan II

The Joint Primary Aircraft Training System (JPATS) is a joint Navy/Air Force program that will use the T-6B Texan as a replacement for the Services' fleets of primary trainer aircraft (T-34 and T-37, respectively)



and associated Ground Based Training Systems. The T-6 Texan II is a tandem seat, turboprop aircraft derivative of the Pilatus PC-9 powered by a single Pratt & Whitney PT6A-68 engine.

Mission: Supports joint Navy and Air Force specialized undergraduate pilot training.

**FY 2012 Program:** Continues production of JPATS aircraft, supporting procurement of 36 aircraft and associated support for the Navy in FY 2012.

Prime Contractor: Hawker Beechcraft, Wichita, KS

|                   |                |          | JPATS <sup>-</sup> | T–6B | Texan I  |             |         |         |                |         |
|-------------------|----------------|----------|--------------------|------|----------|-------------|---------|---------|----------------|---------|
|                   | FY 201         | 0*       | FY 2011            |      |          | FY 20       | 12      |         |                |         |
|                   | 11201          | U        | 112011             |      | Base Bud | Base Budget |         | lget    | Total Re       | quest   |
|                   | \$M            | Qty      | \$M                | Qty  | \$M      | Qty         | \$M     | Qty     | \$M            | Qty     |
| RDT&E             |                |          |                    |      |          |             |         |         | -              | -       |
| Procurement       |                |          |                    |      |          |             |         |         |                |         |
| USN               | 255.4          | 37       | 266.1              | 38   | 266.9    | 36          |         |         | 266.9          | 36      |
| USAF              | 12.7           | -        | -                  | -    |          |             |         |         | -              | -       |
| Subtotal          | 268.1          | 37       | 266.1              | 38   | 266.9    | 36          | -       | -       | 266.9          | 36      |
| Spares            | 10.2           | -        | 10.6               | -    | 7.3      | -           | -       | -       | 7.3            | -       |
| Total             | 278.3          | 37       | 276.7              | 38   | 274.2    | 36          | -       | -       | 274.2          | 36      |
| * FY 2010 & FY 20 | L includo Basa | and $OC$ | ∩ funding          |      |          |             | Numbors | may not | t add due to r | ounding |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

# V-22 Osprey

The V-22 Osprey is a tilt-rotor, vertical takeoff and landing aircraft designed to meet the amphibious/vertical assault needs of the Marine Corps, the strike rescue needs of the Navy and long range special operations forces (SOF) missions for US Special Operations Command (USSOCOM).



DOD - JOINT

The aircraft is designed to fly 2,100 miles with one in-flight refueling, giving the services the advantage of a vertical and/or short takeoff and landing (V/STOL) aircraft that could rapidly self-deploy to any location in the world.

**Mission:** The V–22 mission includes airborne assault, vertical lift, combat search and rescue, and special operations.

**FY 2012 Program:** Supports procurement of 30 MV-22 aircraft for the Navy and 5 CV-22 aircraft for USSOCOM, and one additional Air Force aircraft in OCO to replace a combat loss. The procurement objective is 458 aircraft (408 MV-22 aircraft for the Navy/Marine Corps and 50 CV-22 aircraft for USSOCOM). The program is being executed under a 5-year multiyear procurement contract, which began in FY 2008.

|                    |                  |          | <b>V</b> - | 22 O | sprey     |     |        |          |                 |          |
|--------------------|------------------|----------|------------|------|-----------|-----|--------|----------|-----------------|----------|
| 1.00               | FY 2010          | )*       | FY 2011    | **   |           |     | FY 20  | 12       |                 |          |
|                    | ri 2010          | ,        | FT ZVII    |      | Base Budg | get | OCO Bu | dget     | Total Red       | quest    |
|                    | \$M              | Qty      | \$M        | Qty  | \$M       | Qty | \$M    | Qty      | \$M             | Qty      |
| RDT&E              |                  |          |            |      |           |     |        |          |                 |          |
| USN                | 79.9             | -        | 46.I       | -    | 84.5      | -   |        |          | 84.5            | -        |
| USAF               | 19.0             | -        | 18.3       | -    | 20.7      | -   |        |          | 20.7            | -        |
| Subtotal           | 98.9             | -        | 64.4       | -    | 105.2     | -   | -      | -        | 105.2           | -        |
| Procurement        |                  |          |            |      |           |     |        |          |                 |          |
| USN                | 2,284.9          | 30       | 2,202.9    | 30   | 2,308.8   | 30  |        |          | 2,308.8         | 30       |
| USAF               | 449.7            | 5        | 406.7      | 5    | 359.9     | 5   | 70.0   | I        | 429.9           | 6        |
| Subtotal           | 2,734.6          | 35       | 2,609.6    | 35   | 2,668.7   | 35  | 70.0   | I        | 2,738.7         | 36       |
| USN                | -                | -        | 18.9       | -    | -         | -   | -      |          | -               | -        |
| USAF               | 116.5            | -        | 108.6      | -    | 57.5      | -   | -      |          | 57.5            | -        |
| Spares             | 158.7            | -        | 127.5      | -    | 127.5     | -   | -      | -        | 127.5           | -        |
| USN Subtotal       | 2,364.8          | 30       | 2,267.9    | 30   | 2,393.3   | 30  | -      | -        | 2,393.3         | 30       |
| USAF Subtotal      | 585.2            | 5        | 533.6      | 5    | 438.I     | 5   | -      | -        | 438.I           | 5        |
| Total              | 2,992.2          | 35       | 2,801.5    | 35   | 2,901.4   | 35  | 70.0   | I        | 2,971.4         | 36       |
| * FY 2010 & FY 20  |                  |          | . 0        |      |           |     | Number | s may no | ot add due to i | rounding |
| ** Reflects the FY | 2011 President's | Budget R | lequest    |      |           |     |        |          |                 |          |

Prime Contractor: Bell Helicopter, Fort Worth, TX

# AH-64 Apache Block 3: New Build/ReManufacture

**Mission:** The AH–64 provides a fire-and-forget HELLFIRE air-to-ground missile capability, modernized target acquisition and night vision capabilities.

**FY 2012 Program:** Supports the remanufacture of 19 AH-64 aircraft to the AH-64 D (Longbow) Block 3 configuration. The AH-64 Block 3 program is comprised of both remanufactured and new build aircraft. The first new build aircraft will be funded in the FY 2013 program, with long lead funds included in the FY 2012 request.

Prime Contractors: Integration: Northrop Grumman Corporation, Baltimore, MD Lockheed Martin Corporation, Oswego, NY

|                    | AH-64 / | Apacl        | he Block 🛛 | 3: Nev | w Build/ | ReM | anufac  | ture |           |       |
|--------------------|---------|--------------|------------|--------|----------|-----|---------|------|-----------|-------|
|                    | FY 20   | I <b>೧</b> * | FY 201     | **     |          |     | FY 2012 | 2*** |           |       |
|                    | 1120    |              | 11201      | •      | Base Bud | get | OCO Buc | lget | Total Ree | quest |
| ReManufacture AB3A | \$M     | Qty          | \$M        | Qty    | \$M      | Qty | \$M     | Qty  | \$M       | Qty   |
| RDT&E              | 146.9   | -            | 93.3       | -      | 92.8     | -   |         |      | 92.8      | -     |
| Procurement        | 264.6   | 8            | 493.8      | 16     | 619.6    | 19  |         |      | 619.6     | 19    |
| Spares             | -       | -            | -          | -      | -        | -   | -       | -    | -         | -     |
| Total              | 411.5   | 8            | 587.1      | 16     | 712.4    | 19  | -       | -    | 712.4     | 19    |
|                    |         |              |            |        |          |     |         |      |           |       |
| New Build AB3B     | \$M     | Qty          | \$M        | Qty    | \$M      | Qty | \$M     | Qty  | \$M       | Qty   |
| RDT&E              | -       | -            | -          | -      | -        | -   |         |      | -         | -     |
| Procurement        | -       | -            | -          | -      | 104.2    | -   |         |      | 104.2     | -     |
| Spares             | -       | -            | -          | -      | -        | -   | -       | -    | -         | -     |
| Total              | -       | -            | -          | -      | 104.2    | -   | -       | -    | 104.2     | -     |
| Grand Totals       | 411.5   | 8            | 587.1      | 16     | 816.6    | 19  | -       | -    | 816.6     | 19    |

Apache: The Boeing Company, Mesa, AZ

\* FY 2010 & FY 2011 include Base and OCO funding

\* \* Reflects the FY 2011 President's Budget Request

\*\*\* FY 2012 OCO request excludes 1 Block-2 War Replacement Aircraft (\$35.5M)

AIRCRAFT

# CH–47 Chinook

The CH-47F program procures new and remanufactured/Service Life Extension Program CH-47F helicopters. The aircraft include an upgraded digital cockpit and modifications to the airframe to reduce vibration. The upgraded cockpit

includes a digital data bus that permits installation of enhanced communications and navigation equipment for improved situational awareness, mission performance, and survivability. The new aircraft uses more powerful T55-GA-714A engines that improve fuel efficiency and enhance lift performance.

**Mission:** To provide a system designed to transport ground forces, supplies, ammunition, and other battle-critical cargo in support of worldwide combat and contingency operations.

**FY 2012 Program:** Funds the acquisition of 47aircraft, of which 32 will be new build aircraft and 15 will be remanufactured/Service Life Extension Program aircraft.

Prime Contractor: The Boeing Company, Philadelphia PA

| FY 2010*   FY 2011**   FY 2012     FY 2012     Base Budget   OCO Budget   Total Request     \$M   Qty  |             |         |     | CH-4    | 7F C | hinook    |     |         |      |           |       |
|--|-------------|---------|-----|---------|------|-----------|-----|---------|------|-----------|-------|
| Spares     OCO     Base     Budget     OCO     Budget     Total     Request       \$M     Qty     \$M                |             | EX 201  | 0∗  | EY 201  | **   |           |     | FY 20   | 12   |           |       |
| RDT&E   21.5   -   21.0   -   48.9   -   48.9   -     Procurement   1,037.3   37   1,159.0   40   1,360.3   47   1,360.3   47     Spares   -   -   -   -   -   -   -   -   -   |             | 11 201  | 0.  | 11201   | 1    | Base Budg | get | OCO Bud | lget | Total Red | quest |
| Procurement     1,037.3     37     1,159.0     40     1,360.3     47     1,360.3     47       Spares     - <th></th> <th>\$M</th> <th>Qty</th> <th>\$M</th> <th>Qty</th> <th>\$M</th> <th>Qty</th> <th>\$M</th> <th>Qty</th> <th>\$M</th> <th>Qty</th> |             | \$M     | Qty | \$M     | Qty  | \$M       | Qty | \$M     | Qty  | \$M       | Qty   |
| Spares   | RDT&E       | 21.5    | -   | 21.0    | -    | 48.9      | -   |         |      | 48.9      | -     |
|  | Procurement | 1,037.3 | 37  | 1,159.0 | 40   | 1,360.3   | 47  |         |      | 1,360.3   | 47    |
| Total   058.8 37   180.0 40   409.7 47   409.7 47  | Spares      | -       | -   | -       | -    | -         | -   | -       | -    | -         | -     |
| iotai 1,0000 51 1,10000 40 1,407.2 47 1,407.2 47   | Total       | 1,058.8 | 37  | 1,180.0 | 40   | 1,409.2   | 47  | -       | -    | 1,409.2   | 47    |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request Numbers may not add due to rounding

USA

US Army Photo

# LUH Light Utility Helicopter

The Light Utility Helicopter (LUH) will be a utility helicopter replacing the UH-I and the OH-58 Kiowa Warrior. It will provide reliable and sustainable general and administrative support in permissive environments at reduced



acquisition and operating costs. There is no RDT&E funding required for this program. The LUH acquisition strategy is based on a competitive procurement of a commercial-off-the-shelf, non-developmental aircraft.

The UH-72A Lakota is a United States Army light utility helicopter that entered service in 2006. The Lakota is a militarized version of the Eurocopter EC145 modified to an LUH configuration. In June 2006, the US Army selected it as the winner of its LUH program with a 345 aircraft fleet planned.

**Mission:** The Light Utility Helicopter will provide organic general support at Corps and Division levels. The primary mission for the LUH is to provide aerial transport for logistical and administrative support.

FY 2012 Program: Supports the continued production of 39 aircraft.

Prime Contractor: EADS North America American Eurocopter, Columbus, MS

|             |       | L   | UH Light | Utilit | y Helico | opte | r       |      |          |       |
|-------------|-------|-----|----------|--------|----------|------|---------|------|----------|-------|
|             | FY 20 | 12  |          |        |          |      |         |      |          |       |
|             | FY 20 | 10  | FY 20    |        | Base Bud | get  | OCO Bud | lget | Total Re | quest |
|             | \$M   | Qty | \$M      | \$M    | Qty      | \$M  | Qty     | \$M  | Qty      |       |
| RDT&E       | -     | -   | -        | -      | -        | -    |         |      | -        | -     |
| Procurement | 325.2 | 54  | 305.3    | 50     | 250.4    | 39   |         |      | 250.4    | 39    |
| Spares      | -     | -   | -        | -      | -        | -    |         |      | -        | -     |
| Total       | 325.2 | 54  | 305.3    | 50     | 250.4    | 39   | -       | -    | 250.4    | 39    |
|             |       |     |          |        |          |      |         |      |          |       |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

# USA UH–60 Black Hawk The UH-60 BLACKHAWK is a four bladed, twin US Army Photo engine, single-rotor utility helicopter that is designed to carry a crew of four and a combat equipped squad of 11 or an equal cargo load. It is also capable of carrying external loads of up to 6,000 lbs. The UH-60 comes in many variants, and many different modifications. The Army variants can be fitted with the stub wings to carry additional fuel tanks or weapons. Variants may have different capabilities and equipment in order to fulfill different roles. The Black Hawk series of aircraft can perform a wide array of missions, including the tactical

transport of troops, electronic warfare, and aeromedical evacuation.

**Mission:** The BLACKHAWK provides a highly maneuverable, air transportable, troop carrying helicopter for all intensities of conflict, without regard to geographical location or environmental conditions. It moves troops, equipment and supplies into combat and performs aeromedical evacuation and multiple functions in support of the Army's air mobility doctrine for employment of ground forces.

**FY 2012 Program:** The request supports a follow-on 5-year multiyear procurement (MYP) contract for FYs 2012-2016. The program is currently on schedule and within budget. The FY 2012 budget request supports continued production of 75 aircraft; 71 in the base request and 4 in the OCO request to replace combat losses. Specific UH-60 variants funded include the Utility UH model and the Medical HH model.

|                      |                    |            | UH-60     |     | k Hawk    |     |         |        |                |         |  |
|----------------------|--------------------|------------|-----------|-----|-----------|-----|---------|--------|----------------|---------|--|
|                      | FY 201             | <b>0</b> * | FY 201    | **  |           |     | FY 20   | 12     |                |         |  |
|                      | 11201              | U          | 11 201    |     | Base Budg | get | OCO Bud | lget   | Total Request  |         |  |
|                      | \$M                | Qty        | \$M       | Qty | \$M       | Qty | \$M     | Qty    | \$M            | Qty     |  |
| RDT&E                | 59.1               | -          | 20.6      | -   | 21.5      | -   |         |        | 21.5           | -       |  |
| Procurement          | 1,483.2            | 81         | 1,351.1   | 72  | 1,525.4   | 71  | 72.0    | 4      | 1,597.4        | 75      |  |
| Spares               | -                  | -          | -         | -   | -         | -   |         |        | -              | -       |  |
| Total                | 1,542.3            | 81         | 1,371.7   | 72  | 1,546.9   | 71  | 72.0    | 4      | 1,618.9        | 75      |  |
| * FY 2010 & FY 20    | )     include Base | and OCC    | ) funding |     |           |     | Numbers | may no | t add due to r | ounding |  |
| ** Reflects the FY 2 | 2011 President's   | Budget R   | lequest   |     |           |     |         |        |                |         |  |

# Prime Contractor: Sikorsky Aircraft, Stratford, CT

# C-17 Globemaster

The C-17 Globemaster is a widebody aircraft capable of airlifting outsized and oversized payloads over intercontinental ranges, with or without in-flight refueling. Its capabilities include rapid direct delivery of forces by airland or airdrop into austere tactical environments with runways as short as 3 000 feet. The C-17 aircraft is capable of performing both inter-theater and

short as 3,000 feet. The C–17 aircraft is capable of performing both inter-theater and intra-theater airlift missions.

**Mission:** The C–17 aircraft provides outsize intra-theater airland/airdrop capability not available in the current airlift force. It provides rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area.

**FY 2012 Program:** Funds modifications to existing C-17 aircraft and continued development and testing of C-17 aircraft performance improvements/mandates and aeromedical evacuation equipment in support of OCO. Supports transition to sustainment in preparation for shutdown activities for production of new aircraft. The Department has determined that the C-17 aircraft already procured are sufficient to satisfy the Department's airlift requirement.

Prime Contractors: The Boeing Company, Long Beach, CA Pratt & Whitney Corporation, East Hartford, CT

| C-17 Globemaster  |                  |          |           |       |           |     |         |         |                |         |
|-------------------|------------------|----------|-----------|-------|-----------|-----|---------|---------|----------------|---------|
|                   |                  |          | C-17 (    | Globe | master    |     |         |         |                |         |
|                   | FY 201           | 0*       | FY 201    | **    |           |     | FY 20   | 12      |                |         |
|                   | 11201            | U        | 11201     |       | Base Budg | get | OCO Bud | lget    | Total Re       | quest   |
|                   | \$M              | Qty      | \$M       | Qty   | \$M       | Qty | \$M     | Qty     | \$M            | Qty     |
| RDT&E             | 156.2            |          | 177.2     |       | 128.2     |     |         |         | 128.2          | -       |
| Procurement       | 2,931.5          | 10       | 743.7     |       | 385.9     |     | 11.0    |         | 396.8          | -       |
| Spares            |                  |          |           |       | 13.7      |     |         |         | 13.7           | -       |
| Total             | 3,087.7          | 10       | 920.9     | -     | 527.7     | -   | 11.0    | -       | 538.7          | -       |
| * FY 2010 & FY 20 | 011 include Base | e and OC | 0 funding |       |           |     | Numbers | may not | t add due to r | ounding |

\*\* Reflects the FY 2011 President's Budget Request

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## KC-X New Tanker



Mission: The KC-X will meet the primary air refueling missions of Global Attack, Air Bridge, Theater Support, Deployment, and Special Operations Support. Air refueling forces perform these missions at the strategic, operational, and tactical level across the entire spectrum of military operations. Other missions include emergency air refueling, aero medical evacuation, and combat search and rescue.

FY 2012 Program: Continues support for development of the next generation aerial refueling tanker. Source selection for the development contract is pending.

Prime Contractor: To Be Determined.

|                   |                  |        | KC–X      | New | Tanker    |     |         |         |              |         |
|-------------------|------------------|--------|-----------|-----|-----------|-----|---------|---------|--------------|---------|
|                   | FY 201           | 0*     | FY 201    | **  |           |     | FY 20   | 12      |              |         |
|                   | 11201            | U      | 11201     |     | Base Budg | get | OCO Bud | lget    | Total Red    | quest   |
|                   | \$M              | Qty    | \$M       | Qty | \$M       | Qty | \$M     | Qty     | \$M          | Qty     |
| RDT&E             | 14.9             |        | 863.9     |     | 877.1     |     |         |         | 877.I        | -       |
| Procurement       |                  |        |           |     |           |     |         |         | -            | -       |
| Spares            |                  |        |           |     |           |     |         |         | -            | -       |
| Total             | 14.9             | -      | 863.9     | -   | 877.1     | -   | -       | -       | 877.1        | -       |
| * FY 2010 & FY 20 | 011 include Base | and OC | O funding |     |           |     | Numbers | may not | add due to r | ounding |

\*\* Reflects the FY 2011 President's Budget Request

AIRCRAFT

# HH-60M Pave Hawk

The HH-60M Pave Hawk is a search and Rescue version of the Army's UH-60M Blackhawk helicopter. The HH-60M is a four bladed, twin engine, single-rotor helicopter that is designed to carry a crew of four and a combat equipped squad of 11 or an equal cargo load. It is also capable of carrying external loads of up to 6,000 lbs. The HH-60M comes in many variants and many different modifications.



The Air Force variant can be fitted with the stub wings to carry additional fuel tanks or weapons. Variants may have different capabilities and equipment in order to fulfill different roles. The Pave Hawk series of aircraft can perform a wide array of missions, including the tactical transport of troops, electronic warfare, and aero medical evacuation. The HH-60M will replace the HH-60G.

**Mission:** The *HH-60* Pave Hawk is the US Air Force version of the UH-60 Black Hawk of the US Army, modified for aircrew *search* and *rescue* in all weather situations. The Pave Hawk perform special missions including search and rescue, combat support, and aero medical evacuation.

**FY 2012 Program:** Procures 4 aircraft; 3 in the base, and I additional aircraft in OCO to replace a combat loss. The budget request supports near term recapitalizing the HH-60G Combat Support and Rescue (CSAR) fleet due to delays in earlier CSAR replacement efforts. Platform configuration is dependent upon finalizing Air Force acquisition plans to acquire a long term replacement CSAR platform.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

|                   |                 |          | HH-6        | 50M | Pave H | lawk  |       |           |                 |         |
|-------------------|-----------------|----------|-------------|-----|--------|-------|-------|-----------|-----------------|---------|
|                   | FY 20           | 10*      | FY 201      | **  |        |       | FY 20 | 12        |                 |         |
|                   | 1120            |          | 11201       | •   | Base B | udget | 0C0 E | Budget    | Total Req       | uest    |
|                   | \$M             | Qty      | \$M         | Qty | \$M    | Qty   | \$M   | Qty       | \$M             | Qty     |
| RDT&E             | -               | -        | -           | -   | -      | -     |       |           | -               | -       |
| Procurement       | 94.9            | 4        | 104.4       | 3   | 104.7  | 3     | 39.3  | I.        | 144.0           | 4       |
| Spares            | -               | -        | -           | -   | -      | -     |       |           | -               | -       |
| Total             | 94.9            | 4        | 104.4       | 3   | 104.7  | 3     | 39.3  | I         | 144.0           | 4       |
| * FY 2010 & FY 20 | )     include B | lase and | OCO funding |     |        |       | Numbe | rs may no | ot add due to r | ounding |

\*\* Reflects the FY 2011 President's Budget Request

# F-22 Raptor

The F-22 Raptor program is producing the next generation air superiority fighter for the first part of the century. The F-22A will penetrate enemy airspace and achieve first-look, first-kill capability against multiple targets. It has unprecedented survivability and lethality, ensuring the Joint

Forces have freedom from attack, freedom to maneuver, and freedom to attack.

**Mission:** The F-22 will provide enhanced U.S. air superiority capability against the projected threat and will eventually replace the F-15 aircraft.

**FY 2012 Program:** Supports procurement of equipment associated with standing up operational locations and other support required to deliver new aircraft and funds shutdown activities, preserving assets for long-term F-22 fleet sustainment. Continues critical F-22 modernization through incremental capability upgrades and key reliability and maintainability efforts. Continues retrofit of Increment 3.1 into the combat-coded F-22 fleet. Increment 3.1 provides an initial ground attack kill chain capability via inclusion of emitter-based geo-location of threat systems, ground-looking synthetic aperture radar (SAR) modes, electronic attack capability, and initial integration of the Small Diameter Bomb (SDB-1), which expands the F-22's ground attack arsenal from one Joint Direct Attack Munition (JDAM) to four SDB-1s per payload. Continues development of Increment 3.2, providing AIM-120D and AIM-9X integration, radar electronic protection, enhanced speed and accuracy of target geo-location, Link-16 track fusion, Automatic Ground-Collision Avoidance System (AGCAS), and other enhancements to improve system safety and effectiveness.

Prime Contractors: Lockheed Martin, Marietta, GA and Fort Worth, TX;

Boeing, Seattle, WA;

Pratt & Whitney, West Palm Beach, FL

|                   |                  |            | F-2     | 22 Raj | ptor      |         |         |              |          |       |
|-------------------|------------------|------------|---------|--------|-----------|---------|---------|--------------|----------|-------|
|                   | FY 201           | <b>^</b> * | FY 2011 | **     |           |         | FY 20   | 12           |          |       |
|                   | 11201            | U          | 11 2011 |        | Base Budg | get     | OCO Bud | lget         | Total Re | quest |
|                   | \$M              | Qty        | \$M     | Qty    | \$M       | Qty     | \$M     | Qty          | \$M      | Qty   |
| RDT&E             | 559.5            |            | 576.3   |        | 718.4     |         |         |              | 718.4    | -     |
| Procurement       | 271.7            |            | 650.2   |        | 336.2     |         |         |              | 336.2    | -     |
| Spares            | 7.3              |            | 11.9    |        | 9.0       |         |         |              | 9.0      | -     |
| Total             | 838.5            | -          | 1,238.5 | -      | 1,063.6   | -       | -       | -            | 1,063.6  | -     |
| * FY 2010 & FY 20 | 011 include Base | O funding  |         |        |           | Numbers | may not | add due to r | ounding  |       |

\*\* Reflects the FY 2011 President's Budget Request

USAF

# E-2D Advanced Hawkeye

The E-2D Advanced Hawkeye (AHE) is an airborne early warning, all weather, twin-engine, carrier-based aircraft designed to extend task force defense perimeters. The Advanced Hawkeye provides improved battle space target detection and situational awareness, especially in the



littorals; supports the Theater Air and Missile Defense operations; and improves Operational Availability for the radar system.

# **Mission:** The E-2D AHE provides advance warning of approaching

enemy surface units and aircraft to vector interceptors or strike aircraft to attack. It provides area surveillance, intercept, strike/air traffic control, radar surveillance, search and rescue assistance, communication relay and automatic tactical data exchange. The E-2D Advanced Hawkeye provides a two-generational leap in radar technology, and will provide the long range air and surface picture; theater air and missile defense, and is a key component of Naval Integrated Fire Control-Counter Air (NIFC-CA).

FY 2012 Program: Funds 5 E-2D AHE Low Rate Initial Production (LRIP) aircraft, associated support, and funds advance procurement for 7 FY 2013 aircraft. Additionally, FY 2012 Overseas Contingency Operations funding for 1 E-2D is requested to replace an FY 2010 combat loss. Research and development funding supports developmental flight testing, pilot production verification and validation activities, trainers, and Mode 5/S nonrecurring engineering.

**Prime Contractors:** Airframe: Northrop Grumman Corporation, Bethpage, NY (Engineering) and St. Augustine, FL (Manufacturing) Engine: Rolls-Royce Corporation, Indianapolis, IN Radar: Lockheed Martin Corporation, Syracuse, NY

|                   |                 |            | E-2D Adv       | anceo  | d Hawke  | eye |         |         |              |         |  |
|-------------------|-----------------|------------|----------------|--------|----------|-----|---------|---------|--------------|---------|--|
|                   | FY 201          | <b>∩</b> * | FY 201         | I **   |          |     | FY 20   | 12      |              |         |  |
|                   | FT 201          | 0.         | FI 201         | 1.1.1. | Base Bud | get | OCO Buc | lget    | Total Red    | quest   |  |
|                   | \$M             | Qty        | \$M            | Qty    | \$M      | Qty | \$M     | Qty     |              |         |  |
| RDT&E             | 346.2           | -          | 171.1          | -      | 111.0    |     | -       |         | 111.0        | -       |  |
| Procurement       | 742.1           | 3          | 937.8          | 4      | 1,072.8  | 5   | 163.5   | I       | 1,236.3      | 6       |  |
| Spares            | 37.8            | -          | 23.6           | -      | 38.7     |     | -       |         | 38.7         | -       |  |
| Total             | 1,126.0         | 3          | 1,132.6        | 4      | 1,222.5  | 5   | 163.5   | I       | 1,386.0      | 6       |  |
| * FY 2010 & FY 20 | II include Base | and OC     | ,<br>O funding |        |          |     | Numbers | may not | add due to r | ounding |  |

\*\* Reflects the FY 2011 President's Budget Request

# F/A-18E/F Super Hornet

The F/A-18E/F Super Hornet is a carrier-based, twin-engine, high-performance, multimission, tactical fighter and attack aircraft. With its selected external equipment the aircraft can

be optimized to accomplish both fighter and attack missions. The F/A-18E/F provides a 40 percent increase in combat radius, 50 percent increase in endurance, 25 percent greater weapons payload, three times more ordnance, and is five times more survivable than the F/A-18A/C models. The planned spiral developments will allow the program to continue to pace the assessed threat beyond 2025.

US Navy Photo

Mission: The F/A-18E/F strike fighter performs traditional missions of fighter escort and fleet air defense, interdiction, and close air support, while still retaining excellent fighter and self-defense capabilities. The F/A-18E/F aircraft was designed to replace the F-14 fighter aircraft.

FY 2012 Program: Funds the continued multiyear procurement of 28 F/A-18E/F aircraft, associated spares, and provides the advance procurement resources for 28 FY 2013 aircraft. Continues the research, development, and testing of the planned spiral developments of the F/A-18E/F related systems. Common shared cost between the EA-18G and F/A-E/F programs are funded out of the F/A-E/F program.

Prime Contractors: Airframe: The Boeing Company, St. Louis, MO Engine: General Electric Aviation, Lynn, MA

|                   |                    |        | F/A-18E/       | 'F Sup | ber Horr  | net |         |           |               |          |
|-------------------|--------------------|--------|----------------|--------|-----------|-----|---------|-----------|---------------|----------|
|                   | FY 201             | 0*     | FY 201         | **     |           |     | FY 20   | 12        |               |          |
|                   | 11201              | U      | 11201          |        | Base Budg | get | OCO Bud | lget      | Total Re      | quest    |
|                   | \$M                | Qty    | \$M            | Qty    | \$M       | Qty | \$M     | Qty       | \$M           | Qty      |
| RDT&E             | 4.                 | -      | 148.4          | -      | 151.0     | -   | 2.0     | -         | 153.0         | -        |
| Procurement       | 1,551.1            | 18     | 1,787.2        | 22     | 2,431.7   | 28  | -       | -         | 2,431.7       | 28       |
| Spares            | 11.3               | -      | 41.2           | -      | 77.2      | -   | -       | -         | 77.2          | -        |
| Total             | 1,676.6            | 18     | 1,976.8        | 22     | 2,659.9   | 28  | 2.0     | -         | 2,661.9       | 28       |
| * FY 2010 & FY 20 | )     include Base | and OC | ,<br>O funding |        |           |     | Number  | rs may no | ot add due to | rounding |

\*\* Reflects the FY 2011 President's Budget Request

Does not include funding for the Service Life Assessment Program (SLAP)

Numbers may not add due to rounding

No modification funding included

# **EA-18G Growler**

The EA-18G Growler is a tandem two-seat, twin turbojet engine, carrier-based, electronic attack variant of the F/A-18F Super Hornet strike fighter.

**Mission:** The EA-18G Growler is the first electronic warfare aircraft produced in more than 35 years. The EA-18G provides one of the most flexible offensive Electronic Warfare (EW) capabilities available to the Joint warfighter across the spectrum of conflict from Irregular Warfare to Major Contingency Operations. The EA-18G supports naval, joint, and coalition strike aircraft, providing radar and communications jamming and kinetic effects to increase the survivability and lethality of all strike aircraft. The EA-18G can operate autonomously or as a major node in a network centric operation. The EA-18G's electronic suite can both detect, identify, and locate emitters; and suppress hostile emitters through jamming and kinetic effects. The EA-18G aircraft is built to replace the EA-6B Prowler aircraft.

**FY 2012 Program:** Funds 12 EA-18G aircraft, associated spares, and provides the advance procurement resources for 12 FY 2013 aircraft. Continues the research, development, and testing of electronic systems and techniques. The aircraft are required to recapitalize the four Navy expeditionary EA-6B squadrons that had been planned to disestablish by the end of FY 2012.

Prime Contractors: Airframe: The Boeing Company, St. Louis, MO Engine: General Electric Aviation, Lynn, MA

|                   |                    |        | EA-I      | rowler |          |     |         |        |               |          |
|-------------------|--------------------|--------|-----------|--------|----------|-----|---------|--------|---------------|----------|
|                   | FY 20              | ۱٥*    | FY 201    | **     |          |     | FY 20   | 12     |               |          |
|                   | 1120               |        | 11201     | 1      | Base Bud | get | OCO Bu  | dget   | Total Request |          |
|                   | \$M                | Qty    | \$M       | Qty    | \$M      | Qty | \$M     | Qty    | \$M           | Qty      |
|                   |                    |        |           |        |          |     |         |        |               |          |
| RDT&E             | 55.5               | -      | 22.0      | -      | 17.1     | -   | -       | -      | 17.1          | -        |
| Procurement       | 1,627.3            | 22     | 1,083.9   | 12     | 1,107.5  | 12  | -       | -      | 1,107.5       | 12       |
| Spares            | 34.0               | -      | 11.2      | -      | -        |     | -       | -      | -             | -        |
| Total             | 1,716.8            | 22     | 1,117.1   | 12     | 1,124.6  | 12  | -       | -      | 1,124.6       | 12       |
| * FY 2010 & FY 20 | )   L include Base | and OC | ) funding |        |          |     | Numbers | may no | ot add due to | rounding |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request Numbers may not add due to rounding

No modification funding included

# H-I Huey/Super Cobra

The H–I

Helicopter Upgrade program converts AH–IW and UH–IN helicopters to the AH–IZ and UH–IY, respectively.



The upgraded helicopters will have increased maneuverability, speed, and payload capability. The upgrade scope includes a new four-bladed rotor system, new transmissions, a new four-bladed tail rotor and drive system, and upgraded landing gear.

**Mission:** The H–I Upgrades provide offensive air support, utility support, armed escort, and airborne command and control during naval expeditionary operations or joint and combined operations.

**FY 2012 Program:** Provides for the production of 25 aircraft (18 UH-1Y new build aircraft, 2 AH-1Z remanufactured aircraft, and 5 new build AH-1Z aircraft). In addition, the request provides for one additional new build AH-1Z aircraft in OCO to replace a combat loss.

Prime Contractor: Bell Helicopter, Fort Worth, TX

|                    |                 | H-I      | Huey/Su   | per C       | obra Up   | grad | es      |         |            |          |
|--------------------|-----------------|----------|-----------|-------------|-----------|------|---------|---------|------------|----------|
|                    | FY 201          | 0*       | FY 201    | <b> </b> ** |           |      | FY 20   | 12      |            |          |
|                    | 11201           |          | 11 201    | 1           | Base Budg | get  | OCO Bud | lget    | Total R    | equest   |
|                    | \$M             | Qty      | \$M       | Qty         | \$M       | Qty  | \$M     | Qty     | \$M        | Qty      |
| RDT&E              | 31.3            | -        | 60.5      | -           | 72.6      |      |         |         | 72.6       | -        |
| Procurement        | 746.0           | 25       | 808.I     | 28          | 768.6     | 25   | 30.0    | I       | 798.6      | 26       |
| Spares             | -               | -        | 28.4      | -           |           |      |         |         | -          | -        |
| Total              | 777.3           | 25       | 897.0     | 28          | 841.2     | 25   | 30.0    | I       | 871.2      | 26       |
| * EV 2010 8. EV 20 | L Lincludo Basa | and $OC$ | ∩ funding |             |           |      | Numbers | nav not | add duo to | rounding |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

# MH-60R Multi-Mission Helicopter

The MH–60R Multi-Mission Helicopter Upgrade program provides battle group protection, and adds significant capability in coastal littorals



and regional conflicts. The upgrade includes new H-60 series airframes, significant avionics improvements, enhancements to the acoustic suite, new radars, and an improved electronics surveillance system.

**Mission:** The MH-60R will be the forward deployed fleet's primary Anti-Submarine and Anti- Surface Warfare platform.

**FY 2012 Program:** The FY 2012 budget request is for 24 helicopters as part of a follow-on 5 year multiyear procurement (MYP) for MH-60 airframes, from FYs 2012 to 2016. In addition, the request includes funds for a MYP of MH-60 cockpits and sensors for the same period. The Army serves as the executive agent to execute the UH-60 and MH-60 airframe MYP efforts.

Prime Contractors: Airframe: Sikorsky Aircraft, Stratford, CT Avionics: Lockheed Martin Corporation, Owego, NY

| MH–60R Multi-Mission Helicopter |          |     |           |     |             |     |            |     |               |     |  |  |
|---------------------------------|----------|-----|-----------|-----|-------------|-----|------------|-----|---------------|-----|--|--|
|                                 | FY 2010* |     | FY 2011** |     | FY 2012     |     |            |     |               |     |  |  |
|                                 | 11 201   | 0.  | FT ZUTT** |     | Base Budget |     | OCO Budget |     | Total Request |     |  |  |
|                                 | \$M      | Qty | \$M       | Qty | \$M         | Qty | \$M        | Qty | \$M           | Qty |  |  |
| RDT&E                           | 69.4     | -   | 55.8      | -   | 17.7        | -   |            |     | 17.7          | -   |  |  |
| Procurement                     | 931.7    | 24  | 1,059.9   | 24  | 1,000.5     | 24  |            |     | 1,000.5       | 24  |  |  |
| Spares                          | 1.8      | -   | 45.3      | -   | -           | -   |            |     | -             | -   |  |  |
| Total                           | 1,002.9  | 24  | 1,161.0   | 24  | 1,018.2     | 24  | -          | -   | 1,018.2       | 24  |  |  |

 $\ast$  FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

# **MH-60S Fleet Combat Support Helicopter**

The MH-60S is a versatile twin-engine helicopter used to maintain forward deployed fleet sustainability through

rapid airborne delivery of materials and personnel, to support amphibious operations through search and rescue coverage and to provide an organic airborne mine countermeasures capability.

**Mission:** The MH-60S will conduct vertical replenishment (VERTREP), day/night ship-toship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical onboard delivery; air operations; and day/night search and rescue. Organic Airborne Mine Countermeasures (OAMCM) has been added as a primary mission for the MH-60S. Five separate sensors will be integrated into the MH 60S helicopter and will provide Carrier Battle Groups and Amphibious Readiness Groups with an OAMCM capability.

FY 2012 Program: The FY 2012 budget request is for 18 helicopters as part of a follow-on 5 year multiyear procurement (MYP) for MH-60 airframes, from FYs 2012 to 2016. In addition, the request includes funds for a MYP of MH-60 cockpits and sensors for the same period. The Army serves as the executive agent to execute the UH-60 and MH-60 airframe MYP efforts.

Prime Contractor: Sikorsky Aircraft, Stratford, CT

| MH–60S Fleet Combat Support Helicopter |                  |     |           |     |             |                |            |     |           |       |  |  |
|--|------------------|-----|-----------|-----|-------------|----------------|------------|-----|-----------|-------|--|--|
|  | FY 2010*         |     | FY 2011** |     | FY 2012     |                |            |     |           |       |  |  |
|  |                  |     |           |     | Base Budget |                | OCO Budget |     | Total Ree | quest |  |  |
|  | \$M              | Qty | \$M       | Qty | \$M         | Qty            | \$M        | Qty | \$M       | Qty   |  |  |
| RDT&E                                  | 47.9             | -   | 38.9      | -   | 30.6        | -              |            |     | 30.6      | -     |  |  |
| Procurement                            | 471.5            | 18  | 548.7     | 18  | 482.9       | 18             |            |     | 482.9     | 18    |  |  |
| Spares                                 | -                | -   | 1.2       | -   | -           | -              |            |     | -         | -     |  |  |
| Total                                  | 519.4            | 18  | 588.8     | 18  | 513.5       | 8              | -          | -   | 513.5     | 18    |  |  |
| * FY 2010 & FY 20                      | I I include Base |     |           | Nun | bers may    | not add due to | o rounding |     |           |       |  |  |

\*\* Reflects the FY 2011 President's Budget Request

US Navy Phot

# P-8A Poseidon

The P–8A Poseidon is an all-weather, twin engine, commercial derivative of the Boeing 737 aircraft. This land-based, network enabled, maritime Patrol aircraft is designed to sustain and improve armed maritime and littoral Intelligence, Surveillance, and



Reconnaissance (ISR) capabilities in traditional, joint, and combined roles to counter changing and emerging threats.

**Mission:** The P-8A Poseidon recapitalizes the Maritime Patrol Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW), and armed Intelligence, Surveillance and Reconnaissance (ISR) in maritime and littoral areas above, on and below the surface of the ocean. Provides the Joint warfighter lethality on datum – the only Defense platform fielding this operationally agile, tactically responsive capability.

**FY 2012 Program:** Funds 11 P-8A aircraft, associated spares, and provides the advance procurement resources for 13 FY 2013 aircraft, and continues the research, development, and testing of the P-8A systems. The aircraft procurements are tightly coupled to the P-3 retirement rates.

Prime Contractors: Airframe: The Boeing Company, Kent, WA Engine: CFM International (General Electric Aviation and SNECMA), Cincinnati, OH

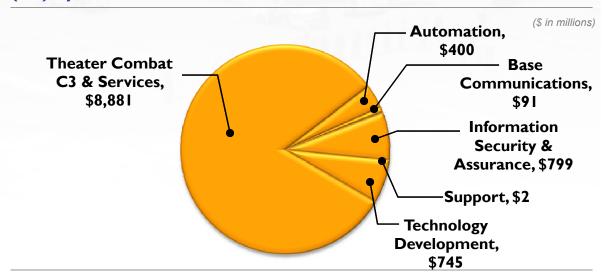
| P–8A Poseidon     |                  |     |         |         |             |               |            |     |              |     |  |  |
|-------------------|------------------|-----|---------|---------|-------------|---------------|------------|-----|--------------|-----|--|--|
|                   | FY 20            | ۱٥* | FY 201  | **      | FY 2012     |               |            |     |              |     |  |  |
|                   | 1120             |     | 112011  |         | Base Budget |               | OCO Budget |     | Total Reques |     |  |  |
|                   | \$M              | Qty | \$M     | Qty     | \$M         | Qty           | \$M        | Qty | \$M          | Qty |  |  |
|                   |                  |     |         |         |             |               |            |     |              |     |  |  |
| RDT&E             | 1,138.7          | -   | 929.2   | -       | 622.7       |               | -          |     | 622.7        | -   |  |  |
| Procurement       | 1,797.4          | 6   | 1,990.6 | 7       | 2,275.4     | П             | -          |     | 2,275.4      | Ш   |  |  |
| Spares            | 104.7            | -   | 72.4    | -       | 98.3        |               |            |     | 98.3         | -   |  |  |
|                   | 3,040.8          | 6   | 2,992.3 | 7       | 2,996.5     | П             | -          | -   | 2,996.5      | Ш   |  |  |
| * FY 2010 & FY 20 | )   include Base |     |         | Numbers | may no      | ot add due to | rounding   |     |              |     |  |  |

\*\* Reflects the FY 2011 President's Budget Request No modification funding included

# Command, Control, Communications, and Computer (C4) Systems

The Department is transforming and developing new concepts for the conduct of future joint military operations. The overarching goal is full spectrum dominance—defeat of any adversary or control of any situation across the full range of military operations—achieved through a broad array of capabilities enabled by an interconnected network of sensors, shooters, command, control, and intelligence. This network-based interconnectivity increases the operational effectiveness by assuring access to the best possible information by decision-makers at all levels, thus allowing dispersed forces to communicate, maneuver, share a common user-defined operating picture, and successfully complete assigned missions more efficiently. Netcentricity transforms the way that information is managed to accelerate decision making, improve joint warfighting, and create intelligence advantages. Hence, all information is visible, available, usable and trusted—when needed and where needed—to accelerate the decision cycles.

Net-centricity is a service-based architecture pattern for information sharing. It is being implemented by the Command, Control, Communications, Computer, and Intelligence (C4I) community via building joint architectures and roadmaps for integrating joint airborne networking capabilities with the evolving ground, maritime, and space networks. It encompasses the development of technologies like gateways, waveforms, network management, and information assurance.



# FY 2012 Command, Control, Communications, and Computers (C4) Systems – Base and OCO: \$10.9 Billion

Source: FY 2012 PRCP – Investment Categorization Numbers may not add due to rounding

# Joint Tactical Radio System

The Joint Tactical Radio System (JTRS) is a joint DoD effort to develop, produce, integrate, test, and field a family of software-defined, secure, multi-channel, digital radios that will be interoperable with existing radios and increase communication and networking capabilities





for mobile and fixed sites. The program encompasses ground, airborne, vehicular, maritime, and small form factor variants of the radio hardware, 17 Increment I waveforms for porting into the JTRS hardware, and network management applications. All JTRS products are being developed in a joint environment to ensure interoperability and the enhancement of hardware and software commonality and reusability.

**Mission:** The JTRS products will simultaneously receive, transmit, and relay voice, data, and video communications with hardware configurable, software programmable, multiband, and multi-mode network capable systems.

FY 2012 Program: Funds the design, development, and manufacture of JTRS engineering development models (EDMs) and low rate initial production (LRIP), to include hardware and software, as well as sustainment of fielded radios and certified waveforms.

| <b>Prime Contractors:</b> | The Boeing Company, Anaheim, CA                           |
|---------------------------|---|
|                           | Lockheed Martin Corporation, Manassas, VA                 |
|                           | ViaSat Incorporated, Carlsbad, CA                         |
|                           | BAE Systems/Rockwell Collins Data Link Solutions, L.L.C., |
|                           | Cedar Rapids, IA  |
|                           | General Dynamics Decision Systems, Inc. , Scottsdale, AZ  |
|                           | ITT Corporation, Fort Wayne, IN                           |

| Joint Tactical Radio System |                 |          |           |       |          |         |           |                |             |        |  |  |
|-----------------------------|-----------------|----------|-----------|-------|----------|---------|-----------|----------------|-------------|--------|--|--|
|                             | FY 2010*        |          | FY 2011** |       | FY 2012  |         |           |                |             |        |  |  |
|                             | 1120            | 10.      | 112011    |       | Base Buc | OCO Bud | lget      | Total Request  |             |        |  |  |
|                             | \$M             | Qty      | \$M       | Qty   | \$M      | Qty     | \$M       | Qty            | \$M         | Qty    |  |  |
| RDT&E                       | 857.5           |          | 687.7     |       | 688.I    |         | -         |                | 688.I       | -      |  |  |
| Procurement                 | 30.3            | 140      | 209.6     | 2,439 | 775.8    | 17,120  | 0.5       | 6              | 776.3       | 17,126 |  |  |
| 0&M                         | 33.4            |          | 69.9      |       | 77.5     |         | -         |                | 77.5        | -      |  |  |
| Spares                      | -               | -        | -         | -     | -        | -       | -         | -              | -           | -      |  |  |
| Total                       | 921.2           | 140      | 967.2     | 2,439 | 1,541.4  | 17,120  | 0.5       | 6              | 1,541.9     | 17,126 |  |  |
| * FY 2010 & FY 20           | I I include Bas | e and OC | 0 funding |       |          | N       | lumbers m | ay not add due | to rounding |        |  |  |

\*\* Reflects the FY 2011 President's Budget Request

# Early – Infantry Brigade Combat Team (E-IBCT) Modernization

The Army intends to transition the E-IBCT program of record (POR) to Capability Package based modernization. Following the acquisition of these LRIP quantities, the E-IBCT program will be completed and further SUGV acquisition delegated to the Army.

In place of place of E-IBCT program, the transition calls to continue development and sustainment of the right equipment in an incremental and iterative manner to ensure that Soldiers and units have the capabilities worthy of continuance will be successful across the full range of military operations today and into the future.

**FY 2012 Program:** Procure I additional brigade set of the Network Integration Kit (NIK) (quantity of 100) and two additional brigade sets of the Small Unmanned Ground Vehicle (SUGV) (an additional 78 units). The additional NIKs will include E-IBCT capable Ground Mobile Radios (GMR) radios as NIK subcomponents. The remaining elements of the E-IBCT program (Class IUAV, Tactical and Urban Unattended Ground Sensors (T/U-UGS)) are cancelled.

# Prime Contractors:

The Boeing Company, St. Louis, MO Science Applications International Corporation (SAIC), Torrance, CA

| Early - Infantry Brigade Combat Team (E-IBCT) Modernization |          |     |           |     |             |     |            |     |               |     |  |  |
|---|----------|-----|-----------|-----|-------------|-----|------------|-----|---------------|-----|--|--|
|   | FY 2010* |     | FY 2011** |     | FY 2012     |     |            |     |               |     |  |  |
|   |          |     |           |     | Base Budget |     | OCO Budget |     | Total Request |     |  |  |
|   | \$M      | Qty | \$M       | Qty | \$M         | Qty | \$M        | Qty | \$M           | Qty |  |  |
| RDT&E   | 1,875    |     | 1,568     |     | 506         |     |            |     | 506           | -   |  |  |
| Procurement   | 211      |     | 683       |     | 243         |     |            |     | 243           | -   |  |  |
| Spares  |          |     |           |     |             |     |            |     | -             | -   |  |  |
| Total   | 2,086    | -   | 2,251     | -   | 749         | -   | -          | -   | 749           | -   |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

\*\* Reflects the FY 2011 President's Budget Request

# Warfighter Information Network-Tactical

The Warfighter Information Network-Tactical (WIN-T) is the Army's on-the-move, high speed, high capability backbone communications network, linking Warfighters in the battlefield with the Global Information Grid (GIG). This network is intended to provide command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) support capabilities. The system is being developed as a network for reliable, secure and seamless video, data, imagery and voice



services for the Warfighters in the theater to enable decisive combat actions.

The WIN-T program consists of four increments. Increment I provides "networking at the halt" by upgrading the Joint Network Node (JNN) satellite capability to access the Ka-band defense Wideband Global Satellite (WGS). Increment 2 provides an initial networking on-the-move to the battlefield. Increment 3 provides full networking on-the-move via air tier. Increment 4 provides protected satellite communications on-the-move.

**Mission:** The WIN-T program provides the United States Army with a transformational modernized network. Using satellite, air, and ground layers, it delivers the fully mobile, flexible, dynamic networking capability needed to support a highly dispersed force over a noncontiguous area.

**FY 2012 Program:** Procures and continues to field WIN-T Inc I to the Army, with a Ka satellite upgrade. WIN-T Inc 2 is currently in Limited Rate Initial Production (LRIP) in anticipation of its Initial Operational Test in FY 2012, and WIN-T Inc 3 continues in its Engineering, Manufacturing, and Development (EMD) phase to deliver the full networking on the move, including the airborne tier.

Prime Contractor: General Dynamics Corporation, Taunton, MA

Sub Contractor: Lockheed Martin Corporation, Gaithersburg, MD

| Warfighter Information Network-Tactical |          |     |           |     |             |       |            |     |              |     |  |  |
|---|----------|-----|-----------|-----|-------------|-------|------------|-----|--------------|-----|--|--|
|   | FY 2010* |     | FY 2011** |     | FY 2012     |       |            |     |              |     |  |  |
|   | 11201    | U   | 112011    |     | Base Budget |       | OCO Budget |     | Total Reques |     |  |  |
|   | \$M      | Qty | \$M       | Qty | \$M         | Qty   | \$M        | Qty | \$M          | Qty |  |  |
| RDT&E                                   | 164.0    |     | 190.9     |     | 298.0       |       |            |     | 298.0        | -   |  |  |
| Procurement                             | 610.6    |     | 421.8     |     | 974.2       | 3,931 | 0.5        |     | 974.7        | -   |  |  |
| Spares                                  |          |     |           |     |             |       |            |     | -            | -   |  |  |
| Total                                   | 774.6    | -   | 612.7     | -   | 1,272.2     | 3,931 | 0.5        | -   | 1,272.7      | -   |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding

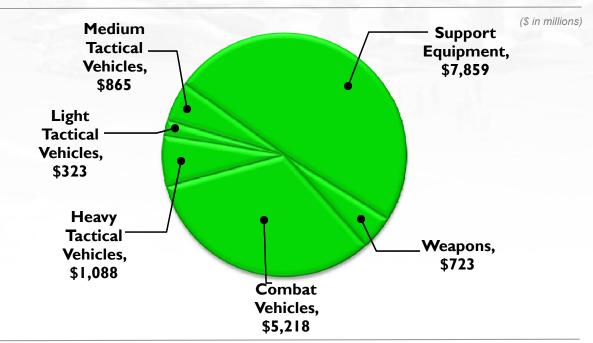
\*\* Reflects the FY 2011 President's Budget Request

## **Ground Programs**

The Department continues to modernize its ground force capabilities to ensure the United States remains a dominant force capable of operating in all environments across the full spectrum of conflict. The Army and Marine Corps equip each soldier and marine with the best equipment available to succeed in both today's and tomorrow's operations.

Modernization and upgrade of selected core systems is a continuous process. Some of the existing programs are targeted for upgrades to include howitzers, Stryker vehicles, MI Abrams, Bradley Fighting Vehicle, and the Light Armored Vehicle (LAV).

The Army is focused on developing a Ground Combat Vehicle (GCV) to provide a new infantry fighting vehicle to the war fighter. The GCV has the design growth to adapt to capabilities as the operational environment changes and technology matures to position soldiers for long-term success. The Marine Corps is developing the Marine Personnel Carrier (MPC), an advanced generation armored personnel carrier that would provide general support lift to the marine infantry in the ground combat element based maneuver task force.



### FY 2012 Ground Programs – Base and OCO: \$16.1Billion

Source: FY 2012 PRCP – Investment Categorization Numbers may not add due to rounding

#### Joint Light Tactical Vehicle

The Joint Light Tactical Vehicle (JLTV) is a joint program currently in development for the Army and Marine Corps. The JLTV is intended to replace the High Mobility Multipurpose Wheeled Vehicle (HMMVVV), which is the current light tactical vehicle. The JLTV concept is based on a family of vehicles focused on scalable armor protection and vehicle agility, and mobility required of the light tactical vehicle fleet. The JLTV will provide defensive measures to protect troops while in transport, increase payload capability, and achieve commonality of parts and components to reduce the overall life cycle cost of the vehicle.



DOD - JOINT

The JLTV project seeks to optimize performance, payload, and protection of the vehicle and crew while ensuring a design that is transportable by CH-47, CH-53, and C-130 aircraft.

**Mission:** As a light tactical vehicle, JLTV will be capable of performing multiple mission roles, and will be designed to provide protected, sustained, networked mobility for personnel and payloads across the full range of military operations. There are three mission role variants: General Purpose 3,500 lb; Infantry Carrier 4,500 lb; and Utility 5,100 lb.

**FY 2012 Program:** If approved in 4<sup>th</sup> quarter of FY 2011, the Army and Marine Corps will continue to develop the vehicle and an affordable manufacturing process.

Prime Contractor: Currently in Technology Development

|             |        | Jo  | int Ligh | t Tao | ctical Ve | hicl | е       |      |          |       |
|-------------|--------|-----|----------|-------|-----------|------|---------|------|----------|-------|
|             | FY 201 | 0*  | FY 201   | **    |           |      | FY 20   | 12   |          |       |
|             | 11201  | U   | 11201    | 1     | Base Budg | get  | OCO Bud | lget | Total Re | quest |
|             | \$M    | Qty | \$M      | Qty   | \$M       | Qty  | \$M     | Qty  | \$M      | Qty   |
| RDT&E USA   | 30.9   | -   | 52.9     | -     | 172.1     | -    | -       | -    | 172.1    | -     |
| RDT&E USMC  | 53.0   | -   | 31.8     | -     | 71.8      | -    | -       | -    | 71.8     | -     |
| Spares USA  |        |     |          |       |           |      |         |      | -        | -     |
| Spares USMC |        |     |          |       |           |      |         |      | -        | -     |
| Total       | 83.9   | -   | 84.7     | -     | 243.9     | -    | -       | -    | 243.9    | -     |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### Family of Heavy Tactical Vehicles

The Family of Heavy Tactical Vehicles (FHTV) consists of the Palletized Load System (PLS) and the Heavy Expanded Mobility Tactical Truck (HEMTT). The PLS entered service in 1993 and consists of a 16.5 ton, 10 wheel tactical



truck with self load/unload capability. The PLS carry payload on flat rack cargo bed, trailer, or International Standards Organization (ISO) containers. The HEMTT is a 10-ton, 8 wheel (8x8) truck that comes in several configurations: The Tanker to refuel tactical vehicles and helicopters, Tractor to tow the Patriot missile system and Multi-Launch Rocket System (MLRS), Wrecker to recover vehicles, and Cargo truck with a materiel handling crane. The HEMTT entered service in 1982.

**Mission:** Provides transportation of heavy cargo to supply and re-supply combat vehicles and weapons systems. The PLS is fielded to transportation units, ammunition units, and to forward support battalions with the capability to self-load and transport a 20 ft. ISO container. The HEMTT A4 is an important truck to transport logistics behind quickmoving forces such as the M-I Abrams and Stryker. The HEMTT is used in line haul, local haul, unit resupply, and other missions throughout the tactical environment to support modern and highly mobile combat units. The HEMTT trucks carry all types of cargo, especially ammunition and fuel.

**FY 2012 Program:** Procures various FHTV vehicles, trailers, and tracking systems to fill urgent theater requirements and modernize the Heavy Tactical Vehicle fleet for the Active, National Guard, and Reserve units.

Prime Contractor: Oshkosh Truck Corporation, Oshkosh, WI

|             |         | Family | y of He | avy Ta | actical | Vehic | les    |      |       |         |
|-------------|---------|--------|---------|--------|---------|-------|--------|------|-------|---------|
|             | FY 20   | )10*   | FY 20   | )  **  |         |       | FY 20  | 12   |       |         |
|             | 1120    | ,10    | 1120    | /      | Base B  | udget | OCO Bu | dget | Total | Request |
|             | \$M     | Qty    | \$M     | Qty    | \$M     | Qty   | \$M    | Qty  | \$M   | Qty     |
| RDT&E       | 8.1     | -      | 3.5     | -      | 5.5     | -     | -      | -    | 5.5   | -       |
| Procurement | 1,402.6 | 1,490  | 738.4   | 1,173  | 627.3   | 1,569 | 47.2   | 29   | 674.5 | 1,598   |
| Spares      |         |        |         |        |         |       |        |      | -     | -       |
| Total       | 1,410.7 | 3,162  | 741.9   | 1,173  | 632.8   | 1,569 | 47.2   | 29   | 680.0 | 1,598   |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

#### Family of Medium Tactical Vehicles

The Family of Medium Tactical Vehicles (FMTV) is a family of diesel powered trucks in the 2 1/2 ton and 5 ton payload class. The vehicle first went into service in 1996. It capitalizes on current state of the art automotive technology including a diesel engine, automatic transmission, and central tire inflation system (CTIS). The use of common chassis, engines, tires, and cabs are features over 80 percent commonality of

parts between models and weight classes, which significantly

reduces the logistics burden and operating costs. Numerous models perform a wide variety of missions including cargo transport (cargo model), vehicle recovery operations (wrecker), construction (dump), line haul (tractor), and airdrop missions, and civil disaster relief. The FMTV also serves as the platform for the High Mobility Artillery Rocket System (HIMARS) and support vehicle for the Patriot missile.

**Mission:** The FMTV provides unit mobility and resupply of equipment and personnel for rapidly deployable worldwide operations on primary and secondary roads, trails, cross-country terrain, and in all climatic conditions. It is strategically deployable in C-5, C-17, and C-130 aircraft. Experience in Iraq led to the development of an up-armored cab known as the Low Signature Armored Cab (LSAC) for installation on FMTV vehicles that adds ballistic and mine blast protection for the crew.

**FY 2012 Program:** Procures 2,390 Medium Tactical Vehicles in the baseline budget and 32 vehicles in the Overseas Contingency Operations budget to support the Army modular transformation effort to modernize the tactical wheeled vehicle fleet for medium size trucks.

|             |         | Fam   | nily of M | edium | Tactica | al Vehi | icles   |      |         |        |
|-------------|---------|-------|-----------|-------|---------|---------|---------|------|---------|--------|
|             | FY 20   | 10*   | FY 20     | **    |         |         | FY 20   | 12   |         |        |
|             | 1120    | 10    | 1120      | • •   | Base Bu | dget    | OCO Bud | lget | Total R | equest |
|             | \$M     | Qty   | \$M       | Qty   | \$M     | Qty     | \$M     | Qty  | \$M     | Qty    |
| RDT&E       | 5.5     | -     | 3.7       | -     | 4.0     | -       | -       | -    | 4.0     | -      |
| Procurement | 1,344.3 | 8,637 | 1,434.5   | 4,652 | 432.9   | 2,390   | 11.1    | 32   | 444.0   | 2,422  |
| Spares      | -       | -     | -         | -     | -       | -       | -       | -    | -       | -      |
| Total       | 1,349.8 | 8,637 | 1,438.2   | 4,652 | 436.9   | 2,390   | 11.1    | 32   | 448.0   | 2,422  |

Prime Contractor: Oshkosh Corporation

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

\*\* Reflects the FY 2011 President's Budget Request

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#### M-I Abrams Tank Upgrade

The MI Abrams is the Army's main battle tank, which first entered service in 1980. It was produced from 1978 until 1992. Since then, the Army has modernized it with a series of upgrades to improve its



capabilities. The current MI Abrams tank modernization effort supports two variants. The MIAI Situational Awareness (SA) and the MIA2 System Enhancement Program (SEP). The MIAI SA modernization includes steel encased depleted uranium for increased frontal and turret side armor protection, suspension improvements, an advanced computer system with embedded diagnostics, a second generation thermal sensor, and a laser rangefinder to designate targets from increased distances. The MIA2 SEP tank modernization includes a commander's independent thermal weapons station, position navigation equipment, improved fire control system, and an improved AGT1500 turbine engine.

**Mission:** The MIA2 Abrams is the Army's main battle tank that provides mobile and protected firepower for battlefield superiority against heavy armor forces.

**FY 2012 Program:** Upgrades and fields MIA2 SEP tanks to armor units including the 1st Armor Division.

Prime Contractor: General Dynamics Corporation, Sterling Heights, MI

|             |        | Μ   | -I Abran | ns Tai | nk Upgr  | ade |         |      |           |       |
|-------------|--------|-----|----------|--------|----------|-----|---------|------|-----------|-------|
|             | FY 201 | 0*  | FY 201   | **     |          |     | FY 20   | 12   |           |       |
|             | 11201  | U   | 11201    | 1      | Base Bud | get | OCO Buc | lget | Total Red | quest |
|             | \$M    | Qty | \$M      | Qty    | \$M      | Qty | \$M     | Qty  | \$M       | Qty   |
| RDT&E       | 93.8   | -   | 107.5    | -      | 9.7      | -   | -       | -    | 9.7       | -     |
| Procurement | 185.0  | 22  | 183.0    | 21     | 181.3    | 21  |         |      | 181.3     | 21    |
| Spares      |        |     |          |        |          |     |         |      | -         | -     |
| Total       | 278.8  | 22  | 290.5    | 21     | 191.0    | 21  | -       | -    | 191.0     | 21    |

 $\ast$  FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### Stryker Family of Armored Vehicles

Stryker is a 19-ton wheeled armored vehicle that will provide the Army a family of ten different vehicles. The Stryker can be deployed by C-130, C-17, and C-5 aircraft and be combat-capable upon arrival in any contingency area. It can reach speeds of 62 mph on the highway and has a maximum range of 312 miles.



There are two basic versions, which include the Infantry Carrier Vehicle (ICV) and the Mobile Gun System (MGS). There are eight different configurations, which include the Reconnaissance Vehicle (RV); Anti-Tank Guided Missile (ATGM); Nuclear, Biological, Chemical, and Radiological Vehicle (NBCRV); Medical Evacuation Vehicle (MEV) Commander's Vehicle (CV); Fire Support Vehicle (FSV); Mortar Carrier (MC); and Engineer Squad Vehicle (ESV).

**Mission:** The Stryker vehicle is designed to enable the Brigade Combat Team to maneuver more easily in close and urban terrain while providing protection in open terrain. It fills the Army's current transformation goal to equip a strategically deployable brigade using a C-17 or C-5 and operationally deployable brigade using a C-130 that is capable of rapid movement anywhere on the globe in a combat ready configuration.

FY 2012 Program: Procures 100 Stryker vehicles in FY 2012

Prime Contractor: General Dynamics Corporation, Sterling Heights, MI

|             |        | Stryk | er Family | y of A | rmored <b>\</b> | Vehi | cles    |      |          |       |
|-------------|--------|-------|-----------|--------|-----------------|------|---------|------|----------|-------|
|             | FY 201 | 0*    | FY 201    | **     |                 |      | FY 20   | 12   |          |       |
|             | 11201  | U     | 11 201    | •      | Base Budg       | get  | OCO Bud | lget | Total Re | quest |
|             | \$M    | Qty   | \$M       | Qty    | \$M             | Qty  | \$M     | Qty  | \$M      | Qty   |
| RDT&E       | 96.3   | -     | 136.3     | -      | 101.4           | -    |         |      | 101.4    | -     |
| Procurement | 512.8  | 93    | 299.5     | 83     | 633.0           | 100  |         |      | 633.0    | 100   |
| Spares      |        |       |           |        | 99.6            |      |         |      | 99.6     | -     |
| Total       | 609.1  | 93    | 435.8     | 83     | 834.0           | 100  | -       | -    | 834.0    | 100   |

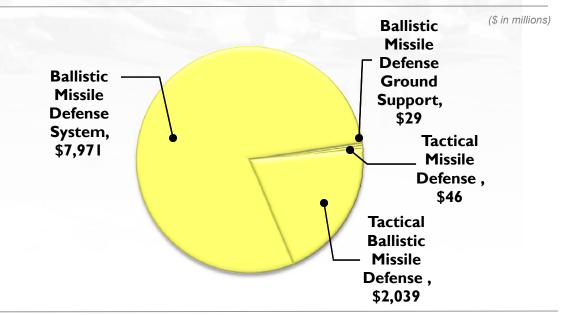
\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

## **Missile Defense**

Missile Defense is a general term for air and missile defense. This category includes cruise missile, air and ballistic missile defense systems program development. The Missile Defense Agency and the Army are the program developer's. Missile Defense includes all components designed to defeat hostile ballistic missiles of various ranges. A missile defense system includes interceptor missiles, as well as the associated sensors and command, control, battle management, and communications. Other significant investments include construction, targets and countermeasures, and research, development, testing, and evaluation activities. Encompassed in this category are all programs that are either critical to the functionality of missile defense or support missile defense as a primary mission.

The Department continues to invest and build inventories of air and missile defense capabilities, such as the Patriot Advanced Capability (PAC-3) missiles, Standard Missile-3 (SM-3) interceptors, Terminal High Altitude Area Defense interceptors (THAAD), and the Army Navy/Transportable Radar Surveillance – Model 2 (AN/TPY-2). The Department continues to seek expanded international efforts for missile defense with allies and friends to provide pragmatic and cost-effective missile defense capabilities.



#### FY 2012 Missile Defense – Base and OCO: \$10.1Billion

Source: FY 2012 PRCP – Investment Categorization

Numbers may not add due to rounding

Note: Total resource request of \$10.1 billion does not include the Missile Defense Agency's Science and Technology \$0.4 billion , the \$0.07 billion of Military Construction nor the \$0.02 billion of Operation and Maintenance, Defense Wide. Due to rounding these additives appropriations do not add to the Ballistic Missile Defense \$10.7 billion.

| Ballistic Miss                 | sile Def | fense | •          |        |           | D       | OD       |      | JOIN      | T    |
|--------------------------------|----------|-------|------------|--------|-----------|---------|----------|------|-----------|------|
|                                | Ballist  | ic Mi | ssile Defe | ense ( | Army and  | d Joint | t Staff) | )    |           |      |
|                                | FY 201   | 0*    | FY 201     | **     |           |         | FY 20    | 12   |           |      |
|                                | 11 201   | 0.    | 11201      |        | Base Budg | et      | OCO Bud  | lget | Total Req | uest |
|                                | \$M      | Qty   | \$M        | Qty    | \$M       | Qty     | \$M      | Qty  | \$M       | Qty  |
| RDT&E, Army                    |          |       |            |        |           |         |          |      |           |      |
| PATRIOT/PAC-3                  | 11.0     | -     | 11.5       | -      | 44.3      | -       | -        | -    | 44.3      | -    |
| PAC-3/MSE 2/3                  | -        | -     | 62.5       | -      | 89.0      | -       | -        | -    | 89.0      | -    |
| PATRIOT/MEADS <sup>4</sup>     | 571.0    | -     | 467.I      | -      | 406.6     | -       | -        | -    | 406.6     | -    |
| JLENS 5                        | 317.1    | -     | 372.5      | -      | 344.7     | -       | -        | -    | 344.7     | -    |
| AIAMD 6/7                      | 164.7    | -     | 251.1      | -      | 270.6     | -       | -        | -    | 270.6     | -    |
| Subtotal, RDT&E                | 1,064.3  | -     | 1,164.7    | -      | 1,155.2   | -       | •        | -    | 1,155.2   | -    |
| Procurement, Army <sup>8</sup> |          |       |            |        |           |         |          |      |           |      |
| Patriot/PAC-3                  | 396.4    | 59    | 544.2      | 78     | 735.8     | 88      | -        | -    | 735.8     | 88   |
| PAC-3/MSE 1/2                  | -        | -     |            | -      | 75.0      | -       | -        | -    | 75.0      | -    |
| Subtotal, Proc                 | 396.4    | 59    | 544.2      | 78     | 810.8     | 88      | -        | -    | 810.8     | 88   |
| RDT&E, DW                      |          |       |            |        |           |         |          |      |           |      |
| JIAMDO <sup>9</sup>            | 97.0     | -     | 94.6       | -      | 79.9      | -       | -        | -    | 79.9      | -    |
| Subtotal Non-MDA               | 1,557.7  | -     | 1,803.5    |        | 2,045.9   | -       | -        | -    | 2,045.9   | -    |
| Total Ballistic                |          |       |            |        |           |         |          |      |           |      |
| Missile Defense                | 9,449.6  | -     | 10,219.9   | -      | 10,671.6  | -       | -        | -    | 10,671.6  | -    |

<sup>1</sup> Patriot Advanced Capability-3 (PAC-3)

Numbers may not add due to rounding

<sup>2</sup> Patriot Advanced Capability-3 (PAC-3)/Missile Segment Enhancement (MSE)

<sup>3</sup> PAC-3/MSE was executed in Patriot/MEADS CAP in FY 2010

<sup>4</sup> Medium Extended Air Defense Systems (MEADS)

<sup>5</sup> Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)

<sup>6</sup> Army Integrated Air and Misile Defense (AIAMD)

<sup>7</sup> AIAMD was added to this papers content in President's Budget Request FY 2012

<sup>8</sup> Modifications and spares resources are included.

<sup>9</sup> Joint Integrated Air and Misile Defense Organization (JIAMDO)

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### **Ballistic Missile Defense**

## DOD - JOINT

The Ballistic Missile Defense (BMD) programs provide defense capabilities to the territory of the United States against ballistic missile threats from rogue nations and accidental or unauthorized launches. Additionally, ballistic missile defense will defend our U.S. deployed forces, Allies, and friends against regional threats. Ballistic missile defense is managed as an integrated layered system to include researching concepts, developing and fielding the earliest possible capability in sea, ground, space and air to intercept any range of threat in the boost, midcourse or terminal phases of flight trajectory. Major elements include Patriot Advanced Capability-3 (PAC-3), AEGIS BMD, Terminal High Altitude Area Defense (THAAD), Patriot Medium Extended Air Defense System (MEADS), PAC-3 Missile Segment Enhancement (MSE), Ground-based Midcourse Defense (GMD), and the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) components, all of which support the Phased Adaptive Approach; a Presidential initiative.

**Mission:** Develop, field, and sustain a missile defense capability to defend the United States, its Allies, and U.S. deployed forces against rogue nation attacks, to close gaps and improve this capability against future threats, and to further develop options to defeat near-term and emerging threats.

**FY 2012 Program:** Continues the research, development, testing, fielding and conversion and integration of AEGIS BMD capable ships, along with the sustainment of ballistic missile defense programs.

Prime Contractors: Boeing, Lockheed Martin, Northrop Grumman, Raytheon

|             |         |            | Ballistic | Mis | sile Defen | se  |         |      |           |      |
|-------------|---------|------------|-----------|-----|------------|-----|---------|------|-----------|------|
|             | FY 201  | <b>^</b> * | FY 201    | **  |            |     | FY 20   | 12   |           |      |
|             | 11201   | U          | 11201     |     | Base Budge | t   | OCO Buc | lget | Total Req | uest |
|             | \$M     | Qty        | \$M       | Qty | \$M        | Qty | \$M     | Qty  | \$M       | Qty  |
| RDT&E       | 8,032.1 | -          | 8,713.9   | -   | 7,812.1    | -   | -       | -    | 7,812.1   | -    |
| Procurement | 1,232.2 | -          | 1,497.3   | -   | 2,589.6    | -   | -       | -    | 2,589.6   | -    |
| MILCON      | 98.7    | -          | -         | -   | 67.2       | -   | -       | -    | 67.2      | -    |
| BRAC        | 86.6    | -          | 8.7       | -   | -          | -   | -       | -    | -         | -    |
| 0&M         | -       | -          | -         | -   | 202.7      | -   | -       | -    | 202.7     | -    |
| Spares      | -       | -          | -         | -   | -          | -   | -       | -    | -         | -    |
| Total       | 9,449.6 | -          | 10,219.9  | -   | 10,671.6   | -   | -       | -    | 10,671.6  | -    |

Note: Funding includes more than Investment resources.

Numbers may not add due to rounding

Includes the Missile Defense Agency's - Base Realignment and Closure, Military Construction, Science and Technology, and Oberation and Maintenance resources.

Includes the Army's modifications and spare resources.

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### Aegis Ballistic Missile Defense

## DOD - JOINT

The Aegis Ballistic Missile Defense System (BMDS), is a key sea-based element of the Missile Defense Agency's (MDA's) program, and is building upon the existing U.S. Navy Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures. Aegis provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy Short- Medium-, Intermediate-Range Ballistic Missile, and selected long-range class threats in the midcourse phase of flight. Spiral upgrades to both the Aegis BMD Weapon System (AWS) and the SM-3 configurations enables Aegis BMD to provide effective, supportable defensive capability against more difficult threats,



including Long-Range Ballistic Missiles, and expand the capability to counter limited engagements in the terminal phase of flight.

**Mission:** The Aegis BMD is delivering an enduring, operationally effective and supportable BMDS capability on Aegis cruisers and destroyers to defend the nation, deployed forces, friends, and allies and to incrementally increase this capability by delivering evolutionary incremental improvements as part of the BMDS upgrades.

**FY 2012 Program:** Continues procuring the Aegis Weapon System upgrades for five additional Aegis ships. Completes manufacturing of 30 SM-3 Block IB interceptors incrementally funded with RDT&E resources. Completes development of Aegis BMD 4.0.1 and SM-3 Block IB. Continues the development of the Aegis BMD 5.0 and 5.1. Provides for the initial production of 46 SM-3 Block IB missiles.

Prime Contractors: Aegis Weapon System: Lockheed Martin Corporation, Moorestown, NI

SM-3 Interceptor: Raytheon Company, Tucson, AZ

|             |         | AEC | GIS Balli | stic M | issile De | efens | e      |      |           |      |
|-------------|---------|-----|-----------|--------|-----------|-------|--------|------|-----------|------|
|             | FY 20   | ۱٥* | FY 201    | **     |           |       | FY 20  | 12   |           |      |
|             | 1120    | 10  | 11201     |        | Base Bud  | get   | OCO Bu | dget | Total Rec | uest |
|             | \$M     | Qty | \$M       | Qty    | \$M       | Qty   | \$M    | Qty  | \$M       | Qty  |
| RDT&E       | 1,419.0 | -   | 1,467.3   | -      | 960.3     | -     | -      | -    | 960.3     | -    |
| Procurement | 225.6   | 6   | 94.I      | 8      | 565.4     | 46    | -      | -    | 565.4     | 46   |
| Spares      | -       | -   | -         | -      | -         | -     | -      | -    | -         | -    |
| Total       | 1,644.6 | 6   | 1,561.4   | 8      | 1,525.7   | 46    | -      | -    | 1,525.7   | 46   |

<sup>1</sup> Quantity is associated with SM-3 interceptors

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### **THAAD Ballistic Missile Defense**

The Terminal High Altitude Area Defense (THAAD) is a Missile Defense Agency (MDA) Program and a key element of the Ballistic Missile Defense System (BMDS). The THAAD Tactical Groups will provide rapidly-transportable interceptors, using "Hit-To-Kill" technology to destroy ballistic missiles inside and outside the Atmosphere. A Battery consists of 6 truck-mounted launchers, 48 interceptors (8 per launcher), I AN/TPY-2 radar, and



I tactical fire control/communications (TFCC) component.

**Mission:** Provide any Combatant Commander with the rapidly deployable, ground-base missile defense components that deepen, extend and compliment the BMDS, which will defeat ballistic missiles of all types and ranges in all phases of flight.

**FY 2012 Program:** Continues the development, testing, integration, fielding and sustainment of the THAAD components. Completes the initial fielding to the Army of two Batteries at Fort Bliss, TX. Continues an extensive training program for the soldiers on the use and the maintenance of the components as an operational unit. Continues the planning, development, and analysis of THAAD Launch on Network, which would provide the ability to initiate a THAAD engagement based on information provided by ballistic missile defense sensors outside of the launching THAAD Battery. Continues the purchase of Batteries 3 and 4, and adds the purchase of Battery 5. Completes the manufacturing of 50 Interceptors incrementally funded with RDT&E resources. Increases THAAD missile manufacturing capability from 4 to 6 per month. Conducts flight testing at Kwajalein Atoll to allow engagement of longer range targets.

|             | Termir  | nal Hi | gh Altitu | de Ar | ea Defe  | nse | (THA    | AD)  |           |      |
|-------------|---------|--------|-----------|-------|----------|-----|---------|------|-----------|------|
|             | FY 201  | 0*     | FY 201    | 1 **  |          |     | FY 20   | 12   |           |      |
|             | 11 201  | 0      | 11 201    | 1     | Base Bud | get | OCO Buc | lget | Total Rec | uest |
|             | \$M     | Qty    | \$M       | Qty   | \$M      | Qty | \$M     | Qty  | \$M       | Qty  |
| RDT&E       | 690.1   | -      | 436.5     | -     | 290.5    | -   | -       | -    | 290.5     | -    |
| Procurement | 419.0   | 26     | 858.9     | 67    | 833.2    | 68  | -       | -    | 833.2     | 68   |
| 0&M         | -       | -      | -         | -     | 51.0     | -   | -       | -    | 51.0      | -    |
| Total       | 1,109.1 | 26.0   | 1,295.4   | 67    | 1,174.7  | 68  | -       | -    | 1,174.7   | 68   |

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

<sup>1</sup> Quantity is associated with THAAD Interceptors

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### Patriot/PAC-3

The Army's PATRIOT Advanced

Capability (PAC-3) missile is the latest improvement to the PATRIOT air and missile defense system. The PATRIOT is the only combat-proven system capable of defeating Tactical Ballistic Missiles (TBMs), cruise missiles, and air breathing threats worldwide. The combatant commanders demand additional PATRIOT capability to defeat growing threats to U.S. forces deployed in Overseas Contingency Operations. The Army will add two additional PATRIOT PAC-3 configuration battalions in FY 2011 and FY 2012 as part of the



DOD - JOINT

Grow-the-Army initiative. The Army and the Missile Defense Agency jointly continue to evolve the successful integration of PAC-3 capabilities into the Ballistic Missile Defense System (BMDS).

**Mission:** The PATRIOT system contributes to the BMDS overall situational awareness for short range terminal ballistic missile threats. It can cue other systems while protecting BMDS assets. The PATRIOT system is further enhanced by networked BMDS remote sensors supplying early warning data, thus, increasing the probability of successful threat engagement. The PAC-3 units are the combatant commanders most capable system to protect soldiers, Allies, and assets against these threats.

**FY 2012 Program:** Continues the procurement of 88 PAC-3 missiles and 36 Electronic Launcher Enhanced Systems (ELES) launchers capable of firing the PAC-3 missile. Provides for the testing and procurement of the latest PATRIOT system software upgrades, which will enhance PATRIOT capability against the current threat and continue to decrease fratricide risk.

|                          |       |     | PA     | TRIC | OT/PAC- | 3   |       |     |       |     |
|--------------------------|-------|-----|--------|------|---------|-----|-------|-----|-------|-----|
|                          | FY 20 | 10* | FY 201 | **   |         |     | FY 20 | 12  |       |     |
|                          | 11 20 |     | 11 201 | •    | Base    |     | 000   |     | Total |     |
|                          | \$M   | Qty | \$M    | Qty  | \$M     | Qty | \$M   | Qty | \$M   | Qty |
| RDT&E                    | 11.0  | -   | 11.5   | -    | 44.3    | -   | -     | -   | 44.3  | -   |
| Procurement <sup>2</sup> | 341.3 | 59  | 480.2  | 78   | 662.2   | 88  | -     | -   | 662.2 | 88  |
| Spares                   | 10.5  | -   | 7.0    | -    | 6.7     | -   | -     | -   | 6.7   | -   |
| Total                    | 362.7 | 59  | 498.7  | 78   | 713.2   | 88  | -     | -   | 713.2 | 88  |

Prime Contractor: Lockheed Martin Missiles and Fire Control, Dallas, TX

<sup>1</sup> Quantity is associated with PAC-3 Missiles

<sup>2</sup> No modification funding included

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### PATRIOT/MEADS

## DOD - JOINT

The Medium Extended Air Defense System (MEADS) is a cooperative effort among the United States, Germany, and Italy to develop a ground based air and tactical ballistic missile defense capability system as a replacement for



PATRIOT (U.S. and Germany), Hawk (Germany), and Nike Hercules (Italy). The MEADS will be a highly mobile, tactically deployable system providing defense to critical assets from ballistic missiles, cruise missiles, and other air breathing threats. Mounted on wheeled vehicles, the system will include launchers carrying several interceptors along with advanced radars that will provide 360-degree coverage on the battlefield. Interceptors will use the latest hit-to-kill technology (directly hitting the target to destroy it). The cooperative effort will help promote interoperability within North Atlantic Treaty Organization forces and will help bridge the gap between short-range maneuver air and missile defense systems and the long-range Ballistic Missile Defense System elements. The Missile Segment Enhancement (MSE) is the primary missile for the system, which performs at an extended range beyond the PATRIOT Advanced Capability-3 missile.

**Mission:** The MEADS provides joint and coalition forces with critical assets to defend area protection against multiple and simultaneous attacks and with the capability to counter, defeat, or destroy the missiles or aerial vehicles. Further, MEADS will provide significant improvements in strategic deployability, transportability, mobility, and maneuverability.

**FY 2012 Program:** Continues the cooperative MEADS Memorandum of Understanding with Germany and Italy for the System Development and Demonstration (SDD) phase of the program by continuing the design and development of the system.

Prime Contractor: MEADS International, Orlando, FL

|             |        |     | PATR   | IOT/N | 1EADS    |     |         |      |          |       |
|-------------|--------|-----|--------|-------|----------|-----|---------|------|----------|-------|
|             | FY 201 | ∩∗  | FY 201 | **    |          |     | FY 20   | 12   |          |       |
|             | 11 201 | 0   | 11 201 | 1     | Base Bud | get | OCO Buc | lget | Total Re | quest |
|             | \$M    | Qty | \$M    | Qty   | \$M      | Qty | \$M     | Qty  | \$M      | Qty   |
| RDT&E       | 571.0  | -   | 467.I  | -     | 406.6    | -   | -       | -    | 406.6    | -     |
| Procurement |        | -   | -      | -     |          | -   |         | -    | -        | -     |
| Total       | 571.0  | -   | 467.I  | -     | 406.6    | -   | -       | -    | 406.6    | -     |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### PAC-3/MSE Missile

## DOD - JOINT

The Missile Segment Enhancement (MSE) missile evolves from the existing PATRIOT Advanced Capability (PAC-3) missile. It is a

substantial performance improvement to

the PAC-3. The MSE upgrade enhances the current PAC-3 missile design and improves it with a higher performance envelope, a dual pulse, 11-inch diameter Solid Rocket Motor (SRM) design, improved lethality, thermally hardened front-end, upgraded batteries, enlarged fixed fins, more responsive control surfaces, and upgraded guidance software. These improvements result in a more agile, lethal interceptor missile with enhanced Insensitive Munitions (IM) compliance. The MSE will meet U. S. operational requirements to include firing from the PATRIOT system, and is the internationally accepted missile for the Medium Extended Air Defense System (MEADS).

**Mission:** The MSE missile is a hit-to-kill, surface-to-air missile. Like the PAC-3, the missile provides the range, accuracy, and lethality to be effectively used against Tactical Ballistic Missiles (TBMs) that have chemical, biological, radiological, nuclear and conventional high explosive warheads. The MSE is capable of intercepting Tactical Ballistic Missiles, Cruise Missiles, and Air-Breathing threats. The MSE's expanded engagement envelope, dual pulse motor, and other upgrades mean it has a range extended beyond the existing PAC-3 missile, filling a critical performance gap. The MSE's higher probability of kill results in greater protection for the U.S. warfighters, coalition forces, and critical assets.

**FY 2012 Program:** Continues the development, testing and integration of the MSE into the PATRIOT system, along with limited development and testing for ongoing Patriot ground equipment upgrades.

Prime Contractor: Lockheed Martin Missiles and Fire Control, Dallas, TX

|             |       |     | PA     | \C-3/N | 1SE       |     |         |      |          |       |
|-------------|-------|-----|--------|--------|-----------|-----|---------|------|----------|-------|
|             | FY 20 | ۱٥* | FY 201 | **     |           |     | FY 20   | 12   |          |       |
|             | 1120  |     | 11 201 | 1      | Base Budg | get | OCO Bud | lget | Total Re | quest |
|             | \$M   | Qty | \$M    | Qty    | \$M       | Qty | \$M     | Qty  | \$M      | Qty   |
| RDT&E       | -     | -   | 62.5   | -      | 89.0      | -   | -       | -    | 89.0     | -     |
| Procurement | -     | -   | -      | -      | 75.0      | -   | -       | -    | 75.0     | -     |
| Total       | -     | -   | 62.5   | -      | 163.9     | -   | -       | -    | 163.9    | -     |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### Ground-based Midcourse Defense

## DOD - JOINT

The Ground-based Midcourse Defense (GMD) element is a Missile Defense Agency program and a key component of the Ballistic Missile Defense System (BMDS), providing Combatant Commanders capability to engage ballistic missiles in the midcourse phase of flight. This phase, compared to boost or terminal, allows significant time for sensor viewing from multiple platforms and, thus, provides multiple engagement opportunities for hit-to-kill interceptors. The Ground-Based Interceptor (GBI) is made up of a three-stage, solid fuel booster and an exo-atmospheric kill vehicle. When launched, the booster missile carries the kill vehicle toward the target's predicted location in space. Once released from the booster, the 152 pound kill vehicle uses data received in-flight from ground-based radars and its own on-board sensors to hit directly the incoming missile by ramming the warhead with a closing speed of approximately 15,000 miles per hour. Interceptors are currently emplaced at Fort Greely, AK and Vandenberg AFB, CA. The GMD fire control centers have been established in Colorado and Alaska.



**Mission:** The GMD provides the Combatant Commanders capability to defend the United States, including Hawaii and Alaska, against long range ballistic missiles during the midcourse phase of flight.

**FY 2012 Program:** Continues the development and sustainment of the GMD weapon system, which includes the deployment of 26 GBIs at Fort Greely, AK, and 4 GBIs at Vandenberg AFB, CA. Provides for the continued use of the flight test rotation plan. Where older fielded Ground Based Interceptors will be configured for flight testing to support the Integrated Master Test Plan (IMTP) requirements. Continues the Stockpile Reliability Program (SRP) and component aging testing in order to understand the health of the deployed assets. Completes Missile Field 2 in a 14-silo configurations by the end of 2011.

|             | Ground-based Midcourse Defense |        |         |           |             |     |       |                     |         |     |  |  |  |
|-------------|--------------------------------|--------|---------|-----------|-------------|-----|-------|---------------------|---------|-----|--|--|--|
|             | FY 201                         | 0*     | FY 201  | **        |             |     | FY 20 | 12                  |         |     |  |  |  |
|             | 11201                          | U      | 11201   | Base Budg | Base Budget |     | lget  | t <b>Total Requ</b> |         |     |  |  |  |
|             | \$M                            | Qty    | \$M     | \$M Qty   |             | Qty | \$M   | Qty                 | \$M     | Qty |  |  |  |
| RDT&E       | 1,022.0                        | -      | 1,346.2 | -         | 1,161.0     | -   | -     | -                   | 1,161.0 | -   |  |  |  |
| Procurement | -                              | ,022.0 |         | -         | -           | -   | -     | -                   | -       | -   |  |  |  |
| Total       | 1,022.0                        | -      | 1,346.2 | -         | 1,161.0     | -   | -     | -                   | 1,161.0 | -   |  |  |  |

#### Prime Contractor: Boeing Defense and Space (BDS), St. Louis, MO

 $\ast$  FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### JLENS

DOD - JOINT

The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a critical part of the Army's future Integrated Air and Missile Defense (IAMD) architecture and Is a Joint Service interest program. A JLENS Orbit is comprised of two systems: a Fire Control Radar system and a Surveillance Radar system. Each system is comprised of a 74-meter tethered aerostat, a Mobile Mooring Station (MMS), a Communications and

Processing Group (CPG), and associated Ground Support Equipment (GSE). The JLENS can stay aloft up to 30 days providing 24-hour radar coverage of the assigned area enabling the only elevated, persistent, long-range surveillance and fire control sensor capability. The JLENS first flight demonstration was successfully conducted on August 25, 2009.

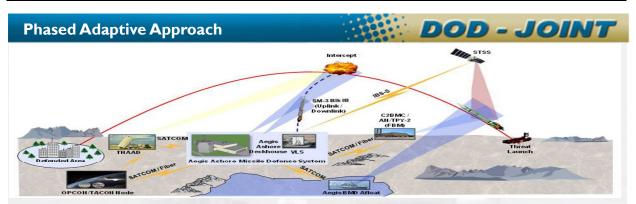
**Mission:** The JLENS provides elevated, persistent, Over-The-Horizon (OTH) surveillance using its advanced sensor and networking technologies to provide 360-degree wide-area surveillance. The sectored precision tracking provides enabling protection of the U. S. forces, allies, and coalition forces, as well as critical geo-political assets primarily from cruise missiles, aircraft, and Unmanned Aerial Vehicles; secondarily from Tactical Ballistic Missiles and Large Caliber Rockets in the boost-phase; and tertiary situational awareness of Surface Moving Targets.

**FY 2012 Program:** Provides for the continued development, testing and integration of the JLENS program. Conducts the integration and testing of the JLENS Engineering, Manufacturing and Development (EMD) Orbit to meet the next key decision point in the fourth quarter of FY 2012. This will enable the first EMD Orbit to equip the first unit in the fourth quarter of FY 2013. The Army programmed 5 Orbits (1 EMD and 4 Procurement) between FY 2013-2017.

| Joint Land Attack Cruise Missile Defense Elevated Netted System |        |     |        |      |           |     |         |      |          |       |  |  |
|---|--------|-----|--------|------|-----------|-----|---------|------|----------|-------|--|--|
|   | FY 201 | 0*  | FY 201 | 1 ** | FY 2012   |     |         |      |          |       |  |  |
|   | 11201  |     | 11201  |      | Base Budg | get | OCO Buc | lget | Total Re | quest |  |  |
|   | \$M    | Qty | \$M    | Qty  | \$M       | Qty | \$M     | Qty  | \$M      | Qty   |  |  |
| RDT&E   | 317.1  | -   | 372.5  | -    | 344.7     | -   | -       | -    | 344.7    | -     |  |  |
| Procurement   | -      | -   | -      | -    | -         | -   | -       | -    | -        | -     |  |  |
| Total   | 317.1  | -   | 372.5  | -    | 344.7     | -   | -       | -    | 344.7    | -     |  |  |

Prime Contractor: Raytheon, Andover, MA

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request



The Phased Adaptive Approach (PAA) is a response to the increased development and proliferation of short and medium range ballistic missiles in Iran and Around the world. The initial application of this approach addresses the threat posed to U.S. Allies and partners, as well as to U.S. deployed personnel in the Middle East and in Europe. By leveraging recent advances in sensor and missile technologies, the United States will aggressively counter this growing Regional threat with a more flexible and agile systems approach.

**Mission:** Starting in Europe, the United States is pursuing a four phased approach which will provide a more effective missile defense capability for defense of NATO territories and enhance U.S. homeland defense. The PAA will be complementary and interoperable with those being developed by NATO. Also, the PAA is applicable in other theaters around the world, and will be more adaptable and flexible to counter threat advances and provide increased defended areas over time. Aegis Ashore can adapt to the threat and be deployed/redeployed to areas needed to provide persistent coverage for the Geographic Combatant Commander.

FY 2012 Program: Continues the development and integration of the Aegis Ashore Missile Defense System. MDA will begin to install the Aegis Ashore Missile Defense Test Complex (AAMDTC) at Pacific Missile Range Facility (PMRF) on Kauai, Hawaii to provide proof of concept, system verification and validation of the first shore-based operation, support deployment decisions and upgrades of future incremental capabilities. Begins to procure long lead material for Host Nation (HN) #1.

#### **Prime Contractor:**

Aegis Weapon System: Lockheed Martin Corporation, Moorestown, NJ SM-3 Interceptor: Raytheon Company, Tucson, AZ

| Phased Adaptive Approach (PAA) |                    |         |         |     |       |             |         |         |               |         |  |  |
|--------------------------------|--------------------|---------|---------|-----|-------|-------------|---------|---------|---------------|---------|--|--|
|                                | FY 201             | 0*      | FY 201  | **  |       |             | FY 20   | 12      |               |         |  |  |
|                                | 11201              | Ŭ       | 11201   |     |       | Base Budget |         | lget    | Total Request |         |  |  |
|                                | \$M                | Qty     | \$M     | Qty | \$M   | Qty         | \$M     | Qty     | \$M           | Qty     |  |  |
| RDT&E                          | 50.0               | -       | 441.7   | -   | 358.7 | -           | -       | -       | 358.7         | -       |  |  |
| Procurement                    | -                  | -       | -       | -   | 261.4 | -           | -       | -       | 261.4         | -       |  |  |
| MILCON                         | 68.5               | -       | -       | -   | 8.4   | -           | -       | -       | 8.4           | -       |  |  |
| Total                          | 118.5              | -       | 441.7   | -   | 628.4 | -           | -       | -       | 628.4         | -       |  |  |
| * FY 2010 & FY 20              | )     include Base | and OCO | funding |     |       |             | Numbers | may not | add due to r  | ounding |  |  |

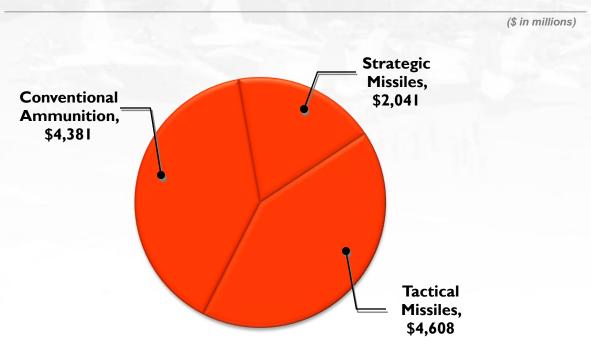
\* Reflects the FY 2011 President's Budget Request

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## **Munitions and Missiles**

Munitions is a general term for ammunition and missiles including conventional ammunition, bombs, missiles, warheads, and mines. This category includes conventional and nuclear weapons and weapons used for both tactical and strategic purposes. Many of the missiles and munitions are precision guided with the technical sophistication to allow guidance corrections during flight-to-target. Some programs include non-explosive articles that enhance the performance of other munitions. For example, the Joint Direct Attack Munitions (JDAM) adds guidance capability when attached to a gravity bomb, making it a "smart" bomb. Note: Interceptor missiles supporting the missile defense mission are included in the Missile Defense section.

The Department continues to build inventories of standoff weaponry, such as the Joint Air-to-Surface Standoff Missile, the Joint Standoff Weapon, and the Small Diameter Bomb.



#### FY 2012 Munitions and Missiles – Base and OCO: \$11.0 Billion

Source: FY 2012 PRCP – Investment Categorization Numbers may not add due to rounding



The Advanced Medium Range Air-to-Air Missile (AMRAAM) is an all-weather, allenvironment radar guided missile developed to improve capabilities against very lowaltitude and high-altitude, high-speed targets in an electronic countermeasures environment. The AMRAAM is a joint Navy/Air Force program led by the Air Force.

**Mission:** The mission of the AMRAAM is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment. AMRAAM is a fire-andforget air-to-air missile, and has replaced the AIM-7 Sparrow as the U.S. military's standard BVR (Beyond Visual Range) intercept missile. The missile has undergone various service life improvements. The current generation AIM-120D, has a two-way data link, GPS-enhanced IMU, an expanded no-escape envelope, improved High-Angle Off-Boresight capability, and a 50% increase in range

**FY 2012 Program:** Continues full rate production as well as product improvements such as fuzing, guidance, and kinematics.

|             | Α     | dvano | ced Med | l. Ran | ige Air-to | o-Air∣      | Missile | e    |          |       |  |  |
|-------------|-------|-------|---------|--------|------------|-------------|---------|------|----------|-------|--|--|
| -           | FY 20 | 10*   | FY 201  | I **   | FY 2012    |             |         |      |          |       |  |  |
|             | 1120  | 10    | 11 201  | 1      | Base Bud   | Base Budget |         | lget | Total Re | quest |  |  |
|             | \$M   | Qty   | \$M Qty |        | \$M        | Qty         | \$M     | Qty  | \$M      | Qty   |  |  |
| RDT&E       |       |       | -       |        |            |             |         |      |          |       |  |  |
| Air Force   | 49.8  | -     | 62.9    | -      | 77.8       | -           | -       | -    | 77.8     | 0     |  |  |
| Navy        | 3.6   | -     | 2.6     | -      | 2.9        | -           | -       | -    | 2.9      | 0     |  |  |
| Subtotal    | 53.4  | -     | 65.5    | -      | 80.7       | -           | -       | -    | 80.7     | 0     |  |  |
| Procurement |       |       |         |        |            |             |         |      | -        | 0     |  |  |
| Air Force   | 272.7 | 170   | 355.4   | 246    | 309.6      | 218         | -       | -    | 309.6    | 218   |  |  |
| Navy        | 138.1 | 71    | 155.6   | 101    | 188.5      | 161         | -       | -    | 188.5    | 161   |  |  |
| Subtotal    | 410.8 | 241   | 511.0   | 347    | 498.I      | 379         | -       | -    | 498.I    | 379   |  |  |
| Spares      | 2.8   | -     | 0.6     | -      | 0.7        | -           | -       | -    | 0.7      | -     |  |  |
| Total       | 467.0 | 241   | 577.1   | 347    | 579.5      | 379         | -       | -    | 579.5    | 379   |  |  |

Prime Contractor: Raytheon Company, Tucson, AZ

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request



The Air Intercept Missile-9X (AIM-9X), also known as SIDEWINDER, is a short range airto-air missile that provides a launch-and-leave air combat missile, which uses passive infrared energy for acquisition and tracking of enemy aircraft. The AIM-9X retains several components from the previous Sidewinder generation, the AIM-9M (primarily the motor and warhead), but incorporates a new airframe with much smaller fins and canards, and relies in a jet-vane steering system for significantly enhanced agility. The new guidance unit incorporates an advance Imaging Infrared (IIR) seeker. The AIM-9X is a joint Navy/Air Force program led by the Navy.

**Mission:** The mission of the AIM-9X is to destroy low and high altitude, high-speed enemy targets in an electronic countermeasures environment.

**FY 2012 Program:** Continues full rate production as well as product improvements, such as data link capabilities, and battery and safety improvements.

|                   |                |            | Air Intei | cept | Missile  | – 9X |            |        |               |          |
|-------------------|----------------|------------|-----------|------|----------|------|------------|--------|---------------|----------|
|                   | FY 20          | ۱٥*        | FY 201    | **   |          |      | FY 20      | 12     |               |          |
|                   | 1120           | 10         | 11 201    | 1    | Base Bud | get  | OCO Budget |        | Total Request |          |
|                   | \$M            | Qty        | \$M       | Qty  | \$M      | Qty  | \$M        | Qty    | \$M           | Qty      |
| RDT&E             |                |            |           |      |          |      |            |        |               |          |
| Air Force         | 5.9            | -          | 6.0       | -    | 8.0      | -    | -          | -      | 8.0           | -        |
| Navy              | 2.2            | -          | 1.0       | -    | 8.8      | -    | -          | -      | 8.8           | -        |
| Subtotal          | 8.1            | -          | 7.0       | -    | 16.8     | -    | -          | -      | 16.8          | -        |
| Procurement       |                |            |           |      |          |      |            |        | -             | -        |
| Air Force         | 78.5           | 219        | 64.5      | 178  | 88.8     | 240  | -          | -      | 88.8          | 240      |
| Navy              | 53.7           | 161        | 55.2      | 155  | 47.1     | 132  | -          | -      | 47.I          | 132      |
| Subtotal          | 132.2          | 380        | 119.7     | 333  | 135.9    | 372  | -          | -      | 135.9         | 372      |
| Spares            | 1.1            | -          | 0.9       | -    | 0.8      | -    | -          | -      | 0.8           | -        |
| Total             | 141.4          | 380        | 127.6     | 333  | 153.5    | 372  | -          | -      | 153.5         | 372      |
| * FY 2010 & FY 20 | I Linclude Bas | e and $OC$ | Ω funding |      |          |      | Number     | may no | t add due to  | rounding |

Prime Contractor: Raytheon Company, Tucson, AZ

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

#### Chemical Demilitarization

The Chemical Demilitarization Program is composed of two Major Defense Acquisition Programs, which are the U.S. Army Chemical Weapons Agency (CMA) and the Assembled Chemical Weapons Alternatives (ACWA) Program, with the goal of destroying a variety of chemical agents and weapons, including the destruction of former chemical weapon production facilities. This program is designed to eliminate the existing chemical weapons stockpile in compliance with the Chemical Weapons Convention (CWC) signed in 1997 – while ensuring the safety and security of the workers,

US Army Photo

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the public, and the environment. Under the CWC, the United States has an obligation to destroy the chemical weapons stockpile by April 29, 2012.

Mission: There are five mission areas within the Chemical Demilitarization Program:

- I. Destroy chemical agents and weapons stockpile using incineration technology;
- 2. Destroy bulk container chemical agents stockpiles using neutralization technology;
- 3. Destroy chemical agents and weapons stockpiles using neutralization technologies;
- 4. Destroy Chemical Warfare Material (CWM) apart from the stockpile including: disposal of binary chemical weapons, former production facilities, and recovered chemical weapons; and
- 5. Chemical stockpile emergency preparedness.

**FY 2012 Program:** Continues safe and secure destruction operations at the three CMA operating sites (Toole, UT, Anniston, AL, and Umatilla, OR) with a goal of 90 percent destruction of the U.S. chemical weapons by 2012; continues closure activities at one site (Pine Bluff, AR); and begins closure activities at the three remaining CMA sites (Toole, UT, Anniston, AL, and Umatilla, OR). Funds ongoing construction efforts at the ACWA Program sites (Pueblo, CO and Blue Grass, KY) to accelerate completing destruction of the remaining 10 percent of the U.S. chemical stockpile as close to 2017 as possible, in accordance with the National Defense Authorization Act (NDAA) for FY 2008.

| Prime Contractors: | URS Corporation, Arlington, VA; Bechtel National Incorporated, |
|--------------------|--|
|                    | Pueblo, CO; Bechtel Parsons, Richmond, KY                      |
|                    |  |

|                    | Chemical Demilitarization                          |          |            |         |          |     |         |         |                |         |  |  |  |  |
|--------------------|--|----------|------------|---------|----------|-----|---------|---------|----------------|---------|--|--|--|--|
|                    | FY 20  | 0*       | FY 201     | **      |          |     | FY 20   | 12      |                |         |  |  |  |  |
|                    | 11 201   | U        | 11 201     |         | Base Bud | get | OCO Bud | lget    | Total Re       | quest   |  |  |  |  |
|                    | \$M  | Qty      | \$M        | \$M Qty |          | Qty | \$M     | Qty     | \$M            | Qty     |  |  |  |  |
| Chemical           |  |          |            |         |          |     |         |         |                |         |  |  |  |  |
| Agents and         |  |          | 1 4/7 3    |         |          |     |         |         |                |         |  |  |  |  |
| Munitions          | 1,560.8  |          | 1,467.3    |         | 1,554.4  |     |         |         | 1,554.4        | -       |  |  |  |  |
| Destruction        |  |          |            |         |          |     |         |         |                |         |  |  |  |  |
| MILCON             | 151.5  |          | 124.7      |         | 75.3     |     |         |         | 75.3           | -       |  |  |  |  |
| Total              | 1,712.3  | -        | 1,592.0    | -       | 1,629.7  | -   | -       | -       | 1,629.7        | -       |  |  |  |  |
| * FY 2010 & FY 2   | 011 include Bas                                    | e and OC | CO funding |         |          |     | Numbers | may not | t add due to r | ounding |  |  |  |  |
| ** Reflects the FY | ** Reflects the FY 2011 President's Budget Request |          |            |         |          |     |         |         |                |         |  |  |  |  |

MUNITIONS AND MISSILES

#### Joint Air-to-Ground Missile

## DOD - JOINT

The Joint Air-To-Ground Missile (JAGM) is a joint Army and Navy program led by the Army to provide a conventional, precision-guided, air-to-ground weapon that can be delivered from both fixed and rotary wing aircraft. The JAGM is intended to replace the aging inventory of Hellfire and Maverick missiles. The concept of JAGM is to employ a multi-mode seeker to attack fixed and moving targets alike.

**Mission:** The mission of IAGM is to provide close air support with the ability to attack fixed and moving targets.

FY 2012 Program: Continues system development.

Prime Contractor: Currently in Source Selection

|                   | Joint Air-to-Ground Missile |          |           |         |          |       |         |         |               |         |  |  |  |
|-------------------|-----------------------------|----------|-----------|---------|----------|-------|---------|---------|---------------|---------|--|--|--|
|                   |                             | <u> </u> | int Air-t | .0-GI   | round M  | ISSIL |         |         |               |         |  |  |  |
|                   | FY 201                      | 0∗       | FY 201    | **      | FY 2012  |       |         |         |               |         |  |  |  |
|                   | 11201                       | U        | 11201     | 1       | Base Bud | get   | OCO Bud | lget    | Total Request |         |  |  |  |
|                   | \$M                         | Qty      | \$M       | \$M Qty |          | Qty   | \$M     | Qty     | \$M           | Qty     |  |  |  |
| RDT&E             |                             |          |           |         |          |       |         |         |               |         |  |  |  |
| Army              | 118.5                       | -        | 130.3     | -       | 127.1    | -     | -       | -       | 127.1         | -       |  |  |  |
| Navy              | 61.8                        | -        | 100.8     | -       | 118.4    | -     | -       | -       | 118.4         | -       |  |  |  |
| Subtotal          | 180.3                       | -        | 231.1     | -       | 245.5    | -     | -       | -       | 245.5         | -       |  |  |  |
| Procurement       | -                           | -        | -         | -       | -        | -     | -       | -       | -             | -       |  |  |  |
| Spares            | -                           | -        | -         | -       | -        | -     | -       | -       | -             | -       |  |  |  |
| Total             | 180.3                       | -        | 231.1     | 245.5   | -        | -     | -       | 245.5   | -             |         |  |  |  |
| * FY 2010 & FY 20 | I I include Base            | and OC   | 0 funding |         |          |       | Numbers | may not | add due to r  | ounding |  |  |  |

\*\* Reflects the FY 2011 President's Budget Request



The Joint Air-to-Surface Standoff Missile (JASSM) is a joint Air Force and Navy program led by the Air Force to provide a conventional precision guided, long range standoff cruise missile that can be delivered from both fighters and bombers. The JASSM is procured in a baseline variant as well as an extended range (JASSM-ER) variant. Only the Air Force is currently buying this weapon.

**Mission:** The mission of the JASSM is to destroy targets from a long-range standoff position deliverable by fighter and bomber aircraft.

**FY 2012 Program:** Continues full rate production that was resumed in FY 2011. The JASSM program had a production pause in FY 2010 due to technical issues. Given successful testing since of both baseline and ER variants, JASSM will resume production in FY 2011, and continue in FY 2012.

Prime Contractor: Lockheed Martin Corporation, Troy, AL

| Joint Air to Surface Standoff Missile |       |              |        |     |          |     |               |     |       |     |  |  |  |
|---------------------------------------|-------|--------------|--------|-----|----------|-----|---------------|-----|-------|-----|--|--|--|
|                                       | FY 20 | ۱ <b>೧</b> * | FY 201 | **  |          |     | FY 20         | 12  |       |     |  |  |  |
|                                       | 1120  |              | 11201  | 1   | Base Bud | get | Total Request |     |       |     |  |  |  |
|                                       | \$M   | Qty          | \$M    | Qty | \$M      | Qty | \$M           | Qty | \$M   | Qty |  |  |  |
| RDT&E                                 | 28.5  | -            | 20.0   | -   | 5.8      | -   | -             | -   | 5.8   | -   |  |  |  |
| Procurement                           | 52.5  | -            | 215.8  | 171 | 236.2    | 142 | -             | -   | 236.2 | 142 |  |  |  |
| Spares                                | -     | -            | -      | -   | -        | -   | -             | -   | -     | -   |  |  |  |
| Total                                 | 81.0  | -            | 235.8  | 171 | 242.0    | 142 | -             | -   | 242.0 | 142 |  |  |  |

 $\ast$  FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request



The Joint Direct Attack Munition (JDAM) is a joint Air Force and Navy program led by the Air Force. The JDAM improves the existing inventory of general purpose gravity bombs by integrating a Global Positioning System (GPS)/inertial navigation guidance capability that improves accuracy and adverse weather capability.

Mission: This program enhances DoD conventional strike system capabilities by providing the ability to precisely attack time-critical, high value fixed or maritime targets under adverse environmental conditions and from all altitudes.

FY 2012 Program: Continues production of the system at low rate, given acceptable inventory levels of JDAM.

Prime Contractor: The Boeing Company, St. Charles, MO

| Joint Direct Attack Munition |                    |                       |        |       |         |             |      |              |               |            |  |  |  |
|------------------------------|--------------------|-----------------------|--------|-------|---------|-------------|------|--------------|---------------|------------|--|--|--|
|                              | FY 20              | <b>\</b>   <b>∩</b> * | FY 20  | 11**  | FY 2012 |             |      |              |               |            |  |  |  |
|                              | FT ZU              | 10.                   | FT 20  | 11    | Base Bu | Base Budget |      | udget        | Total R       | equest     |  |  |  |
|                              | \$M                | Qty                   | \$M    | Qty   | \$M     | Qty         | \$M  | Qty          | \$M           | Qty        |  |  |  |
| RDT&E                        | 50.0               | -                     | -      | -     | -       | -           | -    | -            | -             | -          |  |  |  |
| Procurement                  |                    |                       |        |       |         |             |      |              |               |            |  |  |  |
| Air Force                    | 190.4              | 7,517                 | 252.6  | 9,331 | 76.6    | 3,250       | 34.1 | 1,338        | 110.7         | 4,588      |  |  |  |
| Navy                         | 1.9                | -                     | -      | -     | -       | -           | -    | -            | -             | -          |  |  |  |
| Subtotal                     | 192.3              | 7,517                 | 252.6  | 9,331 | 76.6    | 3,250       | 34.I | 1,338        | 110.7         | 4,588      |  |  |  |
| Spares                       | -                  | -                     | -      | -     | -       | -           | -    | -            | -             | -          |  |  |  |
| Total                        | 242.3              | 7,517                 | 252.6  | 9,331 | 76.6    | 3,250       | 34.1 | 1,338        | 110.7         | 4,588      |  |  |  |
| * FY 2010 & FY 20            | )     include Base | e and OCO f           | unding |       |         |             | Nı   | imbers may r | not add due t | o rounding |  |  |  |

\*\* Reflects the FY 2011 President's Budget Request



The Joint Standoff Weapon (JSOW - AGM-154) program is a joint Navy and Air Force program led by the Navy. The JSOW provides day, night, and adverse weather environment munition capability, and consists of three variants. The JSOW baseline (BLU-97) provides a day/night all-weather environment submunition for soft and area targets. The JSOW anti-armor variant (BLU-108) contains precision-guided anti-armor submunition warheads. The JSOW Unitary incorporates the dual-stage Broach penetrating warhead with terminal accuracy via Automatic Target Acquisition Seeker Technology.

**Mission:** The JSOW is a primary standoff precision guided munition. The day/night, adverse weather capability provides continuous munitions operations from a survivable standoff range. The Air Force stopped production of JSOW in FY 2005, favoring other weapons to meet the requirement.

**FY 2012 Program:** Continues production and product improvements of JSOW Unitary for the Navy only.

Prime Contractor: Raytheon Company, Tucson, AZ

| Joint Standoff Weapon |       |     |        |     |          |     |      |               |       |     |  |  |  |
|-----------------------|-------|-----|--------|-----|----------|-----|------|---------------|-------|-----|--|--|--|
|                       | FY 20 | 10* | FY 201 | **  | FY 2012  |     |      |               |       |     |  |  |  |
|                       | 1120  | 10  | 11201  | 1   | Base Bud | get | lget | Total Request |       |     |  |  |  |
|                       | \$M   | Qty | \$M    | Qty | \$M      | Qty | \$M  | Qty           | \$M   | Qty |  |  |  |
| RDT&E                 | 9.7   | -   | 12.6   | -   | 7.5      | -   | -    | -             | 7.5   | -   |  |  |  |
| Procurement           | 142.0 | 313 | 131.1  | 333 | 137.7    | 266 | -    | -             | 137.7 | 266 |  |  |  |
| Spares                | 0.2   | -   | 0.2    | -   | 0.2      | -   | -    | -             | 0.2   | -   |  |  |  |
| Total                 | 151.9 | 3 3 | 143.9  | 333 | 145.4    | 266 | -    | -             | 145.4 | 266 |  |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### **Small Diameter Bomb**

The Small Diameter Bomb (SDB) is a joint Air Force and Navy program led by the Air Force to provide a conventional small sized, precision guided, standoff air-to-ground weapon that can be delivered from both fighters and bombers. The SDB-I was a fixed-target attack weapon, whereas the SDB-II incorporates a seeker and data link for use against fixed targets.

**USAF** Image

DOD - JOINT

**Mission:** The mission of the SDB is to destroy targets from a medium-range

standoff position deliverable by both fighters

and bombers, with higher loadout and less collateral damage compared to other weapons.

**FY 2012 Program:** Procures only a Focused Lethality Munition variant of SDB, similar to SDB-I, but a variant that increases the near field blast while decreasing collateral damage further. Beginning the following year (FY 2013), the planned procurement will be SDB-II.

Prime Contractor: Raytheon Missile Systems, Tucson, AZ (SDB-I) Boeing St. Charles, MO (SDB-II & FLM)

|                   |               |             | Smal      | l Diam | eter Bor    | nb  |            |            |                |          |  |  |
|-------------------|---------------|-------------|-----------|--------|-------------|-----|------------|------------|----------------|----------|--|--|
|                   | EY 2          | 010*        | FY 20     | **     | FY 2012     |     |            |            |                |          |  |  |
|                   | 112           | 010         | 1120      |        | Base Budget |     | OCO Budget |            | Total Request  |          |  |  |
|                   | \$M           | Qty         | \$M Qty   |        | \$M         | Qty | \$M        | Qty        | \$M            | Qty      |  |  |
| RDT&E             |               |             |           |        |             |     |            |            |                |          |  |  |
| Air Force         | 150.1         | -           | 153.5     | -      | 132.9       | -   | -          | -          | 132.9          | -        |  |  |
| Navy              | 17.5          | -           | 44.I      | -      | 47.6        | -   | -          | -          | 47.6           | -        |  |  |
| Subtotal          | 167.6         | -           | 197.6     | -      | 180.5       | -   | -          | -          | 180.5          | -        |  |  |
| Procurement       |               |             |           |        |             |     |            |            | -              | -        |  |  |
| Air Force         | 141.7         | 2,694       | 134.9     | 2,985  | 7.5         | -   | 12.3       | 100        | 19.8           | 100      |  |  |
| Spares            | -             | -           | -         | -      | -           | -   | -          | -          | -              | -        |  |  |
| Total             | 309.3         | 2,694       | 332.5     | 2,985  | 188.0       | -   | 12.3       | 100        | 200.3          | 100      |  |  |
| * FY 2010 & FY 20 | I I include B | ase and OCC | ) funding |        |             |     | Numl       | bers may i | not add due ta | rounding |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

#### Javelin Advanced Anti-Tank Weapon

The Javelin Advanced Anti-tank Weapon System-Medium is a man-portable fire-andforget weapon system used against tanks with conventional and reactive armor. Special features of Javelin are the choice of top attack or direct fire mode, integrated day/night sight, soft launch permitting fire from enclosures, and imaging infrared seeker.

**Mission:** To defeat armored targets with a man-portable weapon.

**FY 2012 Program:** Continues full rate production of missiles, Command Launch Units (CLU), and training devices.

**Prime Contractor:** Raytheon/Lockheed Martin Javelin Joint Venture, Tucson, AZ and Orlando, FL

| Javelin Advanced Anti-Tank Weapon |                                 |  |  |   |   |  |  |   |  |  |  |  |
|-----------------------------------|---------------------------------|--|--|---|---|--|--|---|--|--|--|--|
| EY 20                             | 10*                             | EX 201                                     | 1**  | FY 2012   |   |  |  |   |  |  |  |  |
| 1120                              |                                 | 112011                                     |  | Base Budget   |   | OCO Budget   |  | Total Request   |  |  |  |  |
| \$M                               | Qty                             | \$M  | Qty  | \$M   | Qty   | \$M  | Qty  | \$M   | Qty  |  |  |  |
| -                                 | -                               | 10.0                                       | -  | 17.3  | -   | -  | -  | 17.3  | -  |  |  |  |
| 258.6                             | 1,334                           | 163.9                                      | 715  | 160.8   | 710   | -  | -  | 160.8   | 710  |  |  |  |
| -                                 | -                               | -  | -  | -   | -   | -  | -  | -   | -  |  |  |  |
| 258.6                             | 1,334                           | 173.9                                      | 715  | 78.   | 710   | -  | -  | 178.1   | 710  |  |  |  |
|                                   | FY 20<br>\$M<br>-<br>258.6<br>- | FY 2010*<br>\$M Qty<br><br>258.6 1,334<br> | FY 2010* FY 201   \$M Qty \$M   - - 10.0   258.6 1,334 163.9   - - - | FY 2010*   FY 2011**     \$M   Qty   \$M   Qty     -   -   10.0   -     258.6   1,334   163.9   715     -   -   -   - | FY 2010*     FY 2011**     Base Bud       \$M     Qty     \$M     Qty     \$M       -     -     10.0     -     17.3       258.6     1,334     163.9     715     160.8       -     -     -     -     - | FY 2010*     FY 2011**     Base Budget       \$M     Qty     \$M     Qty     \$M     Qty       -     -     10.0     -     17.3     -       258.6     1,334     163.9     715     160.8     710       -     -     -     -     -     -     - | FY 2010*     FY 2011**     FY 2011**     FY 20       \$M     Qty     \$M | FY 2010*     FY 2011**     FY 2012       \$M     Qty     \$M     Qty     Base Budget     0C0 Budget       \$M     Qty     \$M     Qty     \$M     Qty     \$M     Qty       -     -     10.0     -     17.3     -     -     -       258.6     1,334     163.9     715     160.8     710     -     -       -     -     -     -     -     -     -     - | FY 2010*   FY 2011**   FY 2012     Base Budget   OCO Budget   Total Re     \$M   Qty   SM   Qty   SM <th< th=""></th<> |  |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request Numbers may not add due to rounding

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**USMC** Photo

#### **Guided Multiple Launch Rocket System**

The Guided Multiple Launch Rocket System (GMLRS) consists of a C-130 transportable, wheeled, indirect fire, rocket/missile system capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) family of munitions.



**Mission:** The mission of GMLRS is to neutralize or suppress enemy field artillery and air defense systems and supplement cannon artillery fires.

**FY 2012 Program:** Continues full rate production as well as product improvements such as insensitive munition and alternative warhead development for the Army.

Prime Contractor: Lockheed Martin Corporation, Dallas, TX

| Guided Multiple Launch Rocket System |                |              |       |       |         |       |        |       |              |        |  |  |
|--------------------------------------|----------------|--------------|-------|-------|---------|-------|--------|-------|--------------|--------|--|--|
|                                      | FY 20          | 010*         | FY 20 | **    | FY 2012 |       |        |       |              |        |  |  |
|                                      |                |              |       |       | Base Bu | ıdget | 0C0 Bi | ıdget | Total R      | equest |  |  |
|                                      | \$M            | Qty          | \$M   | Qty   | \$M     | Qty   | \$M    | Qty   | \$M          | Qty    |  |  |
| RDT&E                                | 26.6           | -            | 51.6  | -     | 66.6    | -     | -      | -     | 66.6         | -      |  |  |
| Procurement                          | 353.3          | 3,228        | 291.0 | 2,592 | 314.2   | 2,784 | 19.0   | 210   | 333.2        | 2,994  |  |  |
| Spares                               | -              | -            | -     | -     | -       | -     | -      | -     | -            | -      |  |  |
| Total                                | 379.9          | 3,228        | 342.6 | 2,592 | 380.8   | 2,784 | 19.0   | 210   | 399.8        | 2,994  |  |  |
| * EV 2010 0 EV 201                   | Lindudo Dano a | nd OCO fundi | -     |       |         |       | Nlunah |       | t add duo to |        |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request



The Evolved Seasparrow Missile (ESSM) is an improved version of the NATO Seasparrow missile, designed for ship self-defense.

**Mission:** The mission of the ESSM is to provide to the Navy a missile with performance to defeat current and projected threats that possess low altitude, high velocity, and maneuver characteristics beyond the engagement capabilities of other ship self-defense systems.

FY 2012 Program: Continues full rate production.

Prime Contractor: Raytheon Company, Tucson, AZ

|                   | Evolved Seasparrow Missile |     |        |     |             |     |            |     |               |     |  |  |
|-------------------|----------------------------|-----|--------|-----|-------------|-----|------------|-----|---------------|-----|--|--|
|                   | FY 201                     | 0*  | FY 201 | **  | FY 2012     |     |            |     |               |     |  |  |
|                   | FT 2010 <sup>1</sup>       |     | 112011 |     | Base Budget |     | OCO Budget |     | Total Request |     |  |  |
|                   | \$M                        | Qty | \$M    | Qty | \$M         | Qty | \$M        | Qty | \$M           | Qty |  |  |
| Procurement       | 51.2                       | 43  | 48.2   | 33  | 48.5        | 35  | -          | -   | 48.5          | 35  |  |  |
| Spares            | -                          | -   | -      | -   | -           | -   | -          | -   | -             | -   |  |  |
| Total             | 51.2                       | 43  | 48.2   | 33  | 48.5        | 35  | -          | -   | 48.5          | 35  |  |  |
| * 54 2010 0 54 24 |                            | 100 |        |     |             |     | N. 1       |     |               | 1.  |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

#### **Rolling Airframe Missile**

The Rolling Airframe Missile (RAM) is a high firepower, Lightweight complementary self-defense system to engage anti-ship cruise missiles.

**Mission:** The mission of the RAM is to provide high firepower close-in defense of combatant and auxiliary ships by utilizing a dual mode, passive radio frequency/infrared missile in a compact 21 missile launcher.



FY 2012 Program: Continues production of missiles and alterations

Prime Contractor: Raytheon Company, Tucson, AZ

| Rolling Airframe Missile |       |                     |        |     |          |             |     |      |               |     |  |  |
|--------------------------|-------|---------------------|--------|-----|----------|-------------|-----|------|---------------|-----|--|--|
|                          | FY 20 | Y 2010* FY 2011** — |        |     |          | FY 2012     |     |      |               |     |  |  |
|                          | 1120  |                     | 112011 |     | Base Bud | Base Budget |     | lget | Total Request |     |  |  |
|                          | \$M   | Qty                 | \$M    | Qty | \$M      | Qty         | \$M | Qty  | \$M           | Qty |  |  |
| Procurement              | 69.7  | 90                  | 75.0   | 90  | 66.2     | 61          | -   | -    | 66.2          | 61  |  |  |
| Spares                   | -     | -                   | -      | -   | -        | -           | -   | -    | -             | -   |  |  |
| Total                    | 69.7  | 90                  | 75.0   | 90  | 66.2     | 61          | -   | -    | 66.2          | 61  |  |  |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request



The STANDARD missile family consists of various air defense missiles including supersonic, medium, and extended range; surface-to-air; and surface-to-surface missiles. The Standard Missile-6 is a surface Navy Anti-Air Warfare (AAW) missile that provides area and ship self defense. The missile is intended to project power and contribute to raid annihilation by destroying manned fixed and rotary wing aircraft, Unmanned Aerial Vehicles (UAV), Land Attack Cruise Missiles (LACM), and Anti-Ship Cruise Missiles (ASCM) in flight. It was designed to fulfill the need for a vertically launched, extended range missile compatible with the Aegis Weapon System (AWS) to be used against extended range threats at-sea, near land, and overland. SM-6 combines the tested legacy of STANDARD Missile -2 (SM-2) propulsion and ordnance with an active Radio Frequency (RF) seeker modified from the AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM), allowing for over-the-horizon engagements, enhanced capability at extended ranges and increased firepower.

**Mission:** The mission of the STANDARD missile family is to provide all-weather, antiaircraft and surface-to-surface armament for cruisers, destroyers, and guided missile frigates. The most recent variant of Standard Missile is SM-6, which incorporated an AMRAAM seeker for increased performance, including overland capability.

FY 2012 Program: Continues production of the SM-6 variant.

| Standard Family of Missiles |        |     |        |     |             |     |            |     |              |     |  |  |
|-----------------------------|--------|-----|--------|-----|-------------|-----|------------|-----|--------------|-----|--|--|
|                             | FY 201 | 0*  | FY 201 | **  | FY 2012     |     |            |     |              |     |  |  |
|                             | 11201  | U   | 112011 |     | Base Budget |     | OCO Budget |     | Total Reques |     |  |  |
|                             | \$M    | Qty | \$M    | Qty | \$M         | Qty | \$M        | Qty | \$M          | Qty |  |  |
| RDT&E                       | 150.1  | -   | 96.2   | -   | 46.7        | -   | -          | -   | 46.7         | -   |  |  |
| Procurement                 | 188.5  | 45  | 295.9  | 67  | 420.3       | 89  | -          | -   | 420.3        | 89  |  |  |
| Spares                      | -      | -   | -      | -   | -           | -   | -          | -   | -            | -   |  |  |
| Total                       | 338.6  | 45  | 392.1  | 67  | 467.0       | 89  | -          | -   | 467.0        | 89  |  |  |
| * 54 2010 0 54 20           |        | 100 |        |     |             |     | NI I       |     |              | 1.  |  |  |

Prime Contractor: Raytheon Company, Tucson, AZ

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

\*\* Reflects the FY 2011 President's Budget Request



The Tactical Tomahawk is a Navy cruise missile weapon system with a long-range conventional warhead system, which is sized to fit torpedo tubes and capable of being deployed from a variety of surface ship and submarine platforms. The Tactical Tomahawk, also referred to as Block IV, incorporates an active electronically scanned array, millimeter-wave seeker, which provides target acquisition and homing; and a passive electronic surveillance system is for long-range acquisition and identification. The missile carries a 1,000-lb. warhead, and is normally launched from a SSNs equipped with the vertical launch systems. The Block IV missiles also provides new capability enhancements, to include increased flexibility utilizing two-way satellite communications to reprogram the missile in-flight, and increased responsiveness with faster launch timelines.

**Mission:** The mission of the TOMAHAWK is to provide a long-range cruise missile launched from a variety of platforms against land and sea targets.

FY 2012 Program: Continues production at a minimum sustaining rate.

Prime Contractor: Raytheon Company, Tucson, AZ

| Tactical Tomahawk Cruise Missile |        |     |           |     |             |     |            |     |               |     |  |
|----------------------------------|--------|-----|-----------|-----|-------------|-----|------------|-----|---------------|-----|--|
|                                  | FY 20  | 10* | FY 2011** |     | FY 2012     |     |            |     |               |     |  |
|                                  | 112010 |     | 112011    |     | Base Budget |     | OCO Budget |     | Total Request |     |  |
|                                  | \$M    | Qty | \$M       | Qty | \$M         | Qty | \$M        | Qty | \$M           | Qty |  |
| RDT&E                            | 16.7   | -   | 10.6      | -   | 8.8         | -   | -          | -   | 8.8           | -   |  |
| Procurement                      | 276.5  | 196 | 300.2     | 196 | 303.3       | 196 | -          | -   | 303.3         | 196 |  |
| Spares                           | -      | -   | -         | -   | -           | -   | -          | -   | -             | -   |  |
| Total                            | 293.2  | 196 | 310.8     | 196 | 312.1       | 196 | -          | -   | 312.1         | 196 |  |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

#### Trident II Ballistic Missile Modifications

The Trident II (D5) is a submarine launched ballistic missile with greater range, payload capability, and accuracy than the Trident I (C4) missile.

**Mission:** The mission of the Trident II (D5) ballistic missile is to deter nuclear war by means of assured retaliation in response to a major attack on the United States or its Allies, and to enhance nuclear stability by providing no incentive for enemy first strike. The Trident II (D5) missile has the ability to precisely attack time-critical, high value, fixed targets. The importance of this program as a key component to the sea-based leg of the nuclear triad was confirmed by the President and Congress in the New START Treaty ratification.

**FY 2012 Program:** Funds the D5 Missile Life Extension Program replacing missile motors and other critical components, and production support (including flight test instrumentation and additional re-entry system hardware).

**US Navy Photo** 

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Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

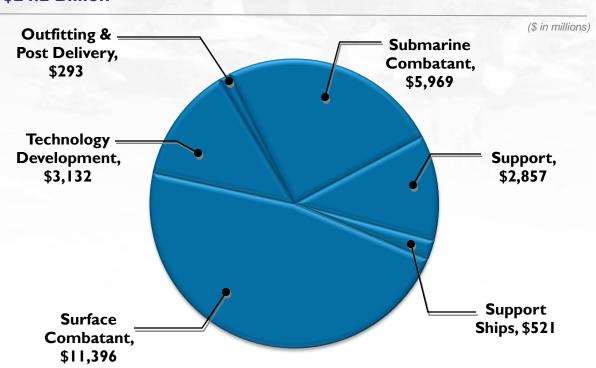
| FY 2010* FY 2011** FY 2012   Base Budget OCO Budget Total R                      | quest |
|--|-------|
| Base Budget OCO Budget Total R   | quest |
|  |       |
| \$M Qty \$M Qty \$M Qty \$M Qty <b>\$</b> M                                      | Qty   |
| RDT&E 68.0 81.2 88.9 88.9  |       |
| Procurement     1,046.7     24     1,106.9     24     1,309.1     24     1,309.1 | 24    |
| Spares -   | -     |
| Total 1,114.7 24 1,188.1 24 1,398.0 24 1,398.0                                   | 24    |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

## **Shipbuilding and Maritime Systems**

A central principle to the U.S. Maritime Strategy is forward presence. Forward presence promotes conflict deterrence by ensuring forces are in a position to expeditiously respond to conflict. Therefore, sea services must buy, build, and maintain maritime systems in accordance with mission need.

The Shipbuilding Portfolio details programs that ensure the accomplishment of the overall maritime mission. The Shipbuilding Portfolio consists of bought, built, and maintained systems, subsystems, and components. The 313-ship fleet will allow the U.S. to maintain maritime superiority well into the 21st century. The mobilization of the 313-ship fleet will ensure mission accomplishment. The following highlights the FY 2012 Shipbuilding Portfolio budget request:



## FY 2012 Shipbuilding and Maritime Systems – Base and OCO: \$24.2 Billion

Source: FY 2012 PRCP – Investment Categorization Support ship subcategory includes MLP ship in the National Defense Sealift Fund (NDSF) Numbers may not add due to rounding

#### Joint High Speed Vessel

The Joint High Speed Vessel (JHSV) is a cooperative Army and Navy effort for a high speed shallow draft vessel designed for rapid intra-theater transport.

**Mission:** The JHSVs provide combatant commanders with high-speed, intra-theater sealift mobility, inherent cargo handling capacity, and the agility to achieve positional advantage over operational distances. Delivery of the first JHSV is scheduled for the first quarter of FY 2013.

**FY 2012 Program:** Funds two JHSV ships, one each for Army and Navy, which are predominantly commercially designed vessels that will cost approximately \$204.5 million each.

Prime Contractor: Austal USA, Mobile, AL

|                   |                  |       | Joint Hi  | σh Sr | peed Ve     | ssel |            |         |              |         |
|-------------------|------------------|-------|-----------|-------|-------------|------|------------|---------|--------------|---------|
|                   | EV 201           |       |           |       |             |      | FY 20      | 12      |              |         |
| 1                 | FY 2010*         |       | FY 2011** |       | Base Budget |      | OCO Budget |         | Total Reques |         |
|                   | \$M              | Qty   | \$M       | Qty   | \$M         | Qty  | \$M        | Qty     | \$M          | Qty     |
| RDT&E             |                  |       |           |       |             |      |            |         |              |         |
| Navy              | 8.2              | -     | 3.6       | -     | 4.1         | -    | -          | -       | 4.1          | -       |
| Army              | 3.0              | -     | 3.2       | -     | 3.0         | -    | -          | -       | 3.0          | -       |
| Subtotal          | 11.2             | -     | 6.8       | -     | 7.1         | -    | -          | -       | 7.1          | -       |
| Procurement       |                  |       |           |       |             |      |            |         | -            | -       |
| Navy              | 177.4            | I     | 180.7     | Ι     | 185.1       | Т    | -          | -       | 185.1        | I       |
| Army              | 202.5            | I.    | 202.8     | Ι     | 223.8       | I.   | -          | -       | 223.8        | I       |
| Subtotal          | 379.9            | 2     | 202.8     | 2     | 408.9       | 2    | -          | -       | 408.9        | 2       |
| Spares            | -                | -     | -         | -     | -           | -    | -          | -       | -            | -       |
| Total             | 391.1            | 2     | 209.6     | 2     | 416.0       | 2    | -          | -       | 416.0        | 2       |
| * FY 2010 & FY 20 | I I reflect Base | No OC | Ω funding |       |             |      | Numbers    | may not | add due to r | ounding |

\* FY 2010 & FY 2011 reflect Base, No OCO funding

Numbers may not add due to rounding

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US Navy Image

\*\* Reflects the FY 2011 President's Budget Request

## DDG 51 AEGIS Destroyer Class ships operate defensively and offensively as units of Carrier Strike Groups and Surface Action Groups, in support of Underway Replenishment Groups and the Marine Amphibious Task Forces in multi-threat environments, which include air, surface, and subsurface threats. The DDG 51 ship is armed with a vertical launching system, which accommodates 96 missiles and a 5 inch gun that provides Naval Surface Fire Support to forces ashore and anti-ship gunnery capability.

**Mission:** The DDG 51 AEGIS Destroyer ship provides air and maritime dominance and land attack capability with its Aegis Anti-Submarine and Tomahawk Weapon Systems. The DDG 51 Flight III will meet ballistic missile defense and open ocean anti-submarine warfare (ASW) requirements.

FY 2012 Program: Funds one DDG 51 AEGIS Destroyer.

Prime Contractors: General Dynamics Corporation, Bath, ME Northrop Grumman Corporation, Pascagoula, MS

|                   |                    | D     |           | AFG | IS Destr  | OVE  | r       |        |                |         |
|-------------------|--------------------|-------|-----------|-----|-----------|------|---------|--------|----------------|---------|
|                   |                    |       |           |     |           | oyei |         |        |                |         |
|                   | FY 201             | 0*    | FY 201    | **  |           |      | FY 20   | 12     |                |         |
|                   |                    | •     |           | •   | Base Budg | get  | OCO Buc | lget   | Total Re       | quest   |
|                   | \$M                | Qty   | \$M       | Qty | \$M       | Qty  | \$M     | Qty    | \$M            | Qty     |
| RDT&E             | -                  | -     | -         | -   | -         | -    | -       | -      | -              | -       |
| Procurement       | 2,483.6            | I     | 2,970.2   | 2   | 2,081.4   | I    |         |        | 2,081.4        | I       |
| Spares            |                    |       |           |     |           |      |         |        | -              | -       |
| Total             | 2,483.6            | I     | 2,970.2   | 2   | 2,081.4   | I    | -       | -      | 2,081.4        | I       |
| * FY 2010 & FY 20 | )     reflect Base | No OC | Ω funding |     |           |      | Numbers | may no | t add due to r | ounding |

\* FY 2010 & FY 2011 reflect Base, No OCO funding

Numbers may not add due to rounding

### **Littoral Combat Ship**



The LCS seaframe acquisition strategy procures two seaframe designs. The LCS seaframe and mission modules are two separate and distinct acquisition programs that will be synchronized to ensure combined capability.

Mission: The LCS defeats asymmetric threats, and assures naval and joint forces access into contested littoral regions by prosecuting small boats, mines countermeasures, and littoral anti-submarine warfare.

FY 2012 Program: Funds four LCS seaframes at \$1.9 billion and two mission modules (Mine Countermeasures and Surface Warfare) at \$79.6 million.

Prime Contractors: Lockheed Martin, Marinette, WI and Austal USA, Mobile, AL

|                          |                   |              | Littoral | Com | bat Ship  | )   |         |        |                |         |
|--------------------------|-------------------|--------------|----------|-----|-----------|-----|---------|--------|----------------|---------|
|                          | FY 20             | I <b>∩</b> * | FY 201   | **  |           |     | FY 20   | 12     |                |         |
|                          | 1120              |              | 11201    | 1   | Base Budg | get | OCO Bud | lget   | Total Re       | quest   |
|                          | \$M               | Qty          | \$M      | Qty | \$M       | Qty | \$M     | Qty    | \$M            | Qty     |
| RDT&E                    | 422.0             | -            | 226.3    | -   | 286.8     | -   | -       | -      | 286.8          | -       |
| Procurement***           | 1,157.1           | 2            | 1,592.3  | 2   | 1,881.7   | 4   | -       | -      | 1,881.7        | 4       |
| Spares                   | -                 | -            | -        | -   | -         | -   | -       | -      | -              | -       |
| Total                    | 1,579.1           | 2            | 1,818.6  | 2   | 2,168.5   | 4   | -       | -      | 2,168.5        | 4       |
| * FY 2010 & FY 2011 refl | lect Base, No OCO | funding      |          |     |           |     | Numbers | may no | t add due to i | ounding |

\* FY 2010 & FY 2011 reflect Base, No OCO funding

\*\* Reflects the FY 2011 President's Budget Request

\*\*\*Includes other procurement for mission modules

### LPD 17 Amphibious Transport Dock Ship

The San Antonio Class Amphibious Transport Dock ships (LPD 17) are functional replacements for 41 ships of 4 classes of amphibious ships. The LPD 17 design includes systems configurations that reduce operating and support costs, and other operational performance improvements. System engineering



and integration efforts have developed further reductions in life-cycle costs and integrated performance upgrades in a rapid, affordable manner.

**Mission:** The LPD 17 San Antonio Class Amphibious Transport Dock ships embark, transport, and land Marines in amphibious assault by helicopters, landing crafts, and amphibious vehicles.

FY 2012 Program: Funds the final 11<sup>th</sup> ship and line shutdown cost.

Prime Contractors: Northrop Grumman, Pascagoula, MS and New Orleans, LA

|             | LPD     | 17 <i>4</i> | Amphibi | ous <sup>-</sup> | Transpor  | rt De | ock Sh  | nip  |          |       |
|-------------|---------|-------------|---------|------------------|-----------|-------|---------|------|----------|-------|
|             | FY 201  | 0∗          | FY 201  | **               |           |       | FY 20   | 12   |          |       |
|             | 11201   | U           | 11201   | 1                | Base Budg | get   | OCO Buc | lget | Total Re | quest |
|             | \$M     | Qty         | \$M     | Qty              | \$M       | Qty   | \$M     | Qty  | \$M      | Qty   |
| RDT&E       | 5.1     | -           | 1.4     | -                | 0.9       | -     | -       | -    | 0.9      | -     |
| Procurement | 1,152.7 | -           | -       | -                | 1,847.4   | I.    | -       | -    | 1,847.4  | 1     |
| Spares      | -       | -           | -       | -                | -         | -     | -       | -    | -        | -     |
| Total       | 1,157.8 | -           | 1.4     | -                | 1,848.3   | I     | -       | -    | 1,848.3  | I     |

\* FY 2010 & FY 2011 reflect Base, No OCO funding

\*\* Reflects the FY 2011 President's Budget Request

SHIPBUILDING AND MARITIME SYSTEMS

### SSN 774 Virginia Class Submarine

The Virginia Class Submarine is an attack submarine that provides the Navy with the capabilities to maintain undersea supremacy in the 21st century. The Virginia Class Submarine is

**US Navy Photo** 

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nuclear-powered and is intended to replace

the fleet of 688 class submarines. It is characterized by state-of-the-art stealth and enhanced features for Special Operations Forces. Virginia Class Submarines are able to attack targets ashore with Tomahawk cruise missiles and to conduct covert long-term surveillance of land areas, littoral waters, and other sea-based forces.

**Mission:** The Virginia Class Submarines seek and destroy enemy ships across a wide spectrum of scenarios, working independently and in consort with a battle group and other ships, providing joint commanders with early, accurate knowledge of the battlefield.

**FY 2012 Program:** Funds two ships at \$3.2 billion as part of an existing multiyear procurement contract and advance procurement of \$1.5 billion for two ships in FY 2013 and two ships in FY 2014.

Prime Contractors: General Dynamics Corporation, Groton, CT Northrop Grumman Corporation, Newport News, VA

|                        | S               | SN 7       | 74 Virgi | nia ( | Class Sul | bma | rine    |        |                |         |
|------------------------|-----------------|------------|----------|-------|-----------|-----|---------|--------|----------------|---------|
|                        | FY 201          | <b>^</b> * | FY 201   | I **  |           |     | FY 20   | 12     |                |         |
|                        | FT 201          | 0.         | FT 201   | 1     | Base Bud  | get | OCO Bud | lget   | Total Re       | quest   |
|                        | \$M             | Qty        | \$M      | Qty   | \$M       | Qty | \$M     | Qty    | \$M            | Qty     |
| RDT&E                  | 177.0           | -          | 155.5    | -     | 97.2      | -   | -       | -      | 97.2           | -       |
| Procurement***         | 4,057.4         | I          | 5,264.7  | 2     | 4,857.7   | 2   | -       | -      | 4,857.7        | 2       |
|                        |                 |            |          |       |           |     |         |        |                |         |
| Spares                 | -               | -          | -        | -     | -         | -   | -       | -      | -              | -       |
| Total                  | 4,234.4         | I          | 5,420.2  | 2     | 4,954.9   | 2   | -       | -      | 4,954.9        | 2       |
| * FY 2010 & FY 2011    | reflect Base, N | lo OCO f   | unding   |       |           |     | Numbers | may no | t add due to r | ounding |
| ** Reflects the FY 201 | I President's B | udget Re   | quest    |       |           |     |         |        |                |         |

\*\*\* Includes other procurement for support equipment

### LHA Replacement

The Landing Helicopter Assault Replacement (LHA-R) amphibious assault ship is the largest of all amphibious warfare ships. The LHA-R enhances the aviation capability of the decommissioning TARAVVA Class LHA that reaches the end of its extended service life by 2015. The LHA-R resembles a small aircraft carrier and will be compatible with the future Marine Aviation Combat Element.

**Mission:** The LHA-R provides short take-off vertical landing and vertical take-off landing capability for Marine aviation in the Expeditionary Strike Group (ESG).

**FY 2012 Program:** Funds second increment of LHA-7. **Prime Contractor:** Northrop Grumman Ship Systems, Pascagoula, MS

|                   |                    |     | LHA       | Repl | acemen    | t   |         |         |                |         |
|-------------------|--------------------|-----|-----------|------|-----------|-----|---------|---------|----------------|---------|
|                   | FY 201             | 0*  | FY 201    | **   |           |     | FY 20   | 12      |                |         |
|                   | 11201              |     | 11201     | 1    | Base Budg | get | OCO Buc | lget    | Total Re       | quest   |
|                   | \$M                | Qty | \$M       | Qty  | \$M       | Qty | \$M     | Qty     | \$M            | Qty     |
| RDT&E             | -                  | -   | -         | -    | -         | -   | -       | -       | -              | -       |
| Procurement       | 169.5              | -   | 949.9     | I    | 2,018.7   | -   | -       | -       | 2,018.7        | -       |
| Spares            |                    |     |           |      |           |     |         |         | -              | -       |
| Total             | 169.5              | -   | 949.9     | I    | 2,018.7   | -   | -       | -       | 2,018.7        | -       |
| * FY 2010 & FY 20 | )     reflects Bas |     | Ω funding |      |           |     | Numbers | may not | t add due to r | ounding |

\* FY 2010 & FY 2011 reflects Base, No OCO funding

Numbers may not add due to rounding

USN

**US Navy Image** 

### **Mobile Landing Platform** USN The Mobile Landing US Navy Image Platform (MLP) interfaces with other ships at sea and surface connectors to transfer vehicles, personnel, and equipment for deployment ashore from the sea base. It is part of the Maritime Prepositioning Force (MPF) and serves as the principle interface of the organic surface connectors for the MPF squadron. Mission: The MLP will provide enhanced at sea and surface connector vehicle, personnel, and equipment transfer capability for humanitarian and counter insurgency missions. It will also provide support to the Marine Expeditionary Brigade. FY 2012 Program: Funds one MLP. Prime Contractor: General Dynamics National Steel and Shipbuilding Company, San Diego, CA

|                   |        |       | MLP    | Repl | acemen    | t   |         |      |          |       |
|-------------------|--------|-------|--------|------|-----------|-----|---------|------|----------|-------|
|                   | FY 201 | 0*    | FY 201 | **   |           |     | FY 20   | 12   |          |       |
|                   | 11201  | 10    | 11 201 | 1    | Base Budg | get | OCO Bud | lget | Total Re | quest |
|                   | \$M    | Qty   | \$M    | Qty  | \$M       | Qty | \$M     | Qty  | \$M      | Qty   |
| RDT&E             | -      | -     | -      | -    | -         | -   | -       | -    | -        | -     |
| Procurement       | 120.0  | -     | 380.0  | Ι    | 425.9     | I   | -       | -    | 425.9    | I     |
| Spares            | -      | -     | -      | -    | -         | -   | -       | -    | -        | -     |
| Total             | 120.0  | -     | 380.0  | I    | 425.9     | Ι   | -       | -    | 425.9    | I     |
| * 54 2010 0 54 24 |        | NI 00 |        |      |           |     | NI I    |      |          | 1.    |

 $\ast$  FY 2010 & FY 2011 reflect Base, No OCO funding

\*\* Reflects the FY 2011 President's Budget Request

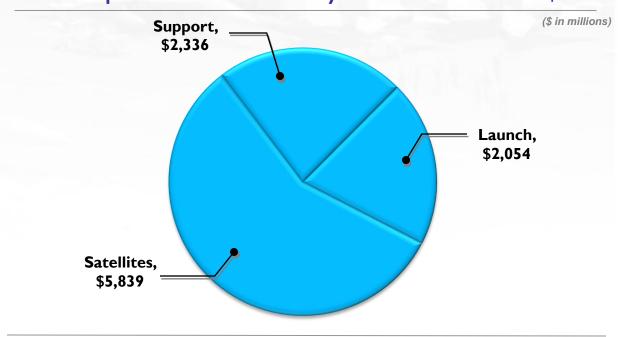
SHIPBUILDING AND MARITIME SYSTEMS

## **Space Based and Related Systems**

Space assets support deployed United States forces by providing communications services, navigation capabilities, and information collected by remote sensors such as weather satellites and intelligence collection systems. Space forces contribute to the overall effectiveness of U.S. military forces by acting as a force multiplier that enhances combat power. The capability to control space contributes to achieving information superiority and battle space dominance.

Procurement of satellites and launch services are typically funded two years prior to launch. Generally speaking, the first two satellites of a new system are purchased with Research, Development, Test & Evaluation funding and the remainder of the satellites are purchased with procurement funding. The Air Force is implementing approaches to maximize efficient satellite acquisitions. These approaches include buying blocks of satellites, using fixed-price contracting to stabilize requirements, promoting a stable research and development investment for evolutionary growth, and modifying the annual funding approach for industrial base efficiency.

The FY 2012 overall space program request is higher this year at 10.2 billion than for FY 2011 (+3%), driven by an increased launch vehicle and satellite procurement tempo.



### FY 2012 Space Based and Related Systems – Base and OCO: \$10.2B

Source: FY 2012 PRCP – Investment Categorization Numbers may not add due to rounding

### Mobile User Objective System

The Mobile User Objective System (MUOS) is the next generation DoD advanced narrow band Ultra High Frequency (UHF) communications satellite constellation. It consists of four satellites in geosynchronous orbit with one on-orbit spare and a fiber optic terrestrial network connecting four ground stations. The MUOS satellite includes the new networked payload and a separate legacy payload. The MUOS will replace the existing UHF Follow-On (UFO) constellation and provide a much higher data rate capability for mobile users.

- There will be 16 beams per satellite with data rates of 64 kbps "on the move"
- The DoD Teleport will be the portal to the Defense Information System Network (DSN, SIPRNET and NIPRNET)
- The on-orbit capability for MUOS is planned for the first quarter of FY 2012

**Mission:** The MUOS will provide the mobile warfighter with point-to-point and netted communications services with a secure, "communications-on-the-move" capability on a 24 hours a day, 7 days a week basis.

FY 2012 Program: Funds procurement of the launch vehicle for satellite #4.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

|                  |                | Mol     | bile Use    | r Ot | ojective | Syst | tem     |        |              |          |
|------------------|----------------|---------|-------------|------|----------|------|---------|--------|--------------|----------|
|                  | FY 20          | ۱٥*     | FY 201      | **   |          |      | FY 20   | 12     |              |          |
|                  | 1120           |         | 11201       | 1    | Base Bud | get  | OCO Bu  | dget   | Total Re     | quest    |
|                  | \$M            | Qty     | \$M         | Qty  | \$M      | Qty  | \$M     | Qty    | \$M          | Qty      |
| RDT&E            | 398.3          |         | 405.7       |      | 244.2    |      |         |        | 244.2        | -        |
| Procurement      | 509.9          | I.      | 505.7       | Ι    | 238.2    |      |         |        | 238.2        | -        |
| Spares           |                |         |             |      |          |      |         |        | -            | -        |
| Total            | 908.2          | I       | 911.4       | I    | 482.4    | -    | -       | -      | 482.4        | -        |
| * FY 2010 & FY 2 | 011 include Bo | ise and | 000 funding |      |          |      | Numbers | may no | t add due to | rounding |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request Numbers may not add due to rounding

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### Advanced Extremely High Frequency

The Advanced Extremely High Frequency (AEHF) satellite will be a constellation of communications satellites in geosynchronous orbit that will replenish the existing EHF system MILSTAR satellite at a much higher capacity and data rate capability.

- 24-hour low, medium, and high data rate satellite connectivity from 65 N to 65 S latitude worldwide
- 8 full time spot beam antennas @ 75 bps to 8.192 Mbps data rate
- 24 time shared spot beam antennas @ 75 bps to 2.048 Mbps data rate
- 2 crosslink antennas per satellite (10 Mbps)
- Up to 160 cellular coverages (75 bps to 8.192 Mbps)
- X-band frequency data rate capable

The AEHF is a collaborative program that also includes resources for Canada, the United Kingdom, and the Netherlands.

**Mission:** The AEHF constellation will provide survivable, anti-jam, worldwide secure communications for strategic and tactical users.

**FY 2012 Program:** Funds SV-1 on-orbit tests and operations, SV-2 launch and onorbit/operations support, Mission Control Segment (MCS) development. Propose the use of the Evolutionary Acquisition for Space Efficiency (EASE) approach to initiate the procurement of the SV 5-6 Block Buy, address obsolescence issues as well as implement a Capability and Affordability Improvement Program (CAIP) for future vehicles.

|             | Ad      | lvano | ced Extr | eme | ely High | Fre | quenc  | у    |          |       |
|-------------|---------|-------|----------|-----|----------|-----|--------|------|----------|-------|
|             | FY 20   | 10*   | FY 201   | **  |          |     | FY 20  | 12   |          |       |
|             | 1120    |       | 11201    | •   | Base Bud | get | OCO Bu | lget | Total Re | quest |
|             | \$M     | Qty   | \$M      | Qty | \$M      | Qty | \$M    | Qty  | \$M      | Qty   |
| RDT&E       | 456.2   | -     | 351.8    | -   | 421.7    | -   | -      | -    | 421.7    | -     |
| Procurement | 1,836.7 | I     | 246.6    | -   | 552.8    | 2   | -      | -    | 552.8    | 2     |
| Spares      | -       | -     | -        | -   | -        | -   | -      | -    | -        | -     |
| Total       | 2,292.9 | I     | 598.4    | -   | 974.5    | 2   | -      | -    | 974.5    | 2     |

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request

Numbers may not add due to rounding

Courtesy of Lockheed Martin

# **Evolved Expendable Launch Vehicle**

The Evolved Expendable Launch Vehicle (EELV) replaced the heritage Delta, Atlas, and Titan launch vehicle families. The EELV provides the DoD, the National Reconnaissance Office (NRO), and other government and commercial purchasers launch services for medium to heavy lift class satellites. As of December 2006, the United Launch Alliance joint venture is the sole provider of EELV launch services.

**Mission:** The EELV program provides launch vehicles and services for medium and heavy class satellites.

**FY 2012 Program:** Funds the procurement of 4 launch vehicles and associated launch services and support activities. The figures below do not include EELVs for the Navy or NRO. Those launch vehicles are funded in the specific satellite program budgets.

Prime Contractor: United Launch Alliance, Decatur, AL

|                   | E               | volve  | ed Exper  | ndab | le Launc  | h Ve | ehicle  |           |              |            |
|-------------------|-----------------|--------|-----------|------|-----------|------|---------|-----------|--------------|------------|
|                   | FY 201          | 0*     | FY 201    | **   |           |      | FY 20   | 12        |              |            |
|                   | 11201           | U      | 11201     | •    | Base Budg | get  | OCO Bud | lget      | Total Re     | quest      |
|                   | \$M             | Qty    | \$M       | Qty  | \$M       | Qty  | \$M     | Qty       | \$M          | Qty        |
| RDT&E             | 43.9            | -      | 30.2      | -    | 20.0      | -    | -       | -         | 20.0         | -          |
| Procurement       | 1,094.8         | 3      | 1,154.0   | 3    | 1,740.2   | 4    | -       | -         | 1,740.2      | 4          |
| Spares            | -               | -      | -         | -    | -         | -    | -       | -         | -            | -          |
| Total             | 1,138.7         | 3      | 1,184.2   | 3    | 1,760.2   | 4    | -       | -         | 1,760.2      | 4          |
| * EV 2010 0 EV 20 | OIL include Pas | and OC | O funding |      |           |      | Numbero | no au not | add dua ta r | o un din a |

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

USAF

Delta IV

Photos courtesy

Of ULA

Atlas V

### **Global Positioning System**

Image Courtesy of Lockheed Martin

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The Global Positioning System (GPS) provides a global, three-dimensional positioning, navigation, and timing information system for aircraft, artillery, ships, tanks and other weapons delivery systems. The fully operational GPS constellation consists of at least 24 satellites on-orbit at all times. The GPS IIIA space vehicles will deliver significant enhancements, including a new LIC (civil) Galileo-compatible signal, enhanced M-code earth coverage power, and a growth path to full warfighter capabilities. Initial launch is planned for 2014.

**Mission:** The GPS constellation provides worldwide positioning, navigation, and precise time to military and civilian users.

**FY 2012 Program:** Funds sustain the GPS constellation with the assembly and launch of replenishment satellites. Continues the development and production of the GPS IIIA system, the next generation GPS satellite, as well as development of the ground control system.

**Prime Contractors:** GPS IIIA: Lockheed Martin Corporation, King of Prussia, PA GPS OCX Phase A: Raytheon Company, Aurora, CO

|             |        | G   | ilobal Po | ositic | oning Sys | stem |         |      |           |       |
|-------------|--------|-----|-----------|--------|-----------|------|---------|------|-----------|-------|
|             | FY 201 | 0*  | FY 201    | **     |           |      | FY 20   | 12   |           |       |
|             | 11201  | U   | 11201     |        | Base Budg | get  | OCO Bud | lget | Total Red | quest |
|             | \$M    | Qty | \$M       | Qty    | \$M       | Qty  | \$M     | Qty  | \$M       | Qty   |
| RDT&E       | 749.4  | -   | 862.7     | -      | 872.0     |      | -       | -    | 872.0     | -     |
| Procurement | 131.0  | -   | 194.8     | -      | 590.0     | 2    | -       | -    | 590.0     | 2     |
| Spares      | -      | -   | -         | -      | -         | -    | -       | -    | -         | -     |
| Total       | 880.4  | -   | 1,057.5   | -      | 1,462.0   | 2    | -       | -    | 1,462.0   | 2     |

\* FY 2010 & FY 2011 include Base and OCO funding

\*\* Reflects the FY 2011 President's Budget Request

Numbers may not add due to rounding

### **Defense Weather Satellite System**

Defense Weather Satellite System (DWSS) is the DoD component of the restructured NPOESS program. DWSS will satisfy DoD's environmental monitoring requirements in the early morning orbit by developing and launching

two satellites, each with a Visible Infrared Imager Radiometer Suite (VIIRS), Space Environment Monitor (SEM-N), and Microwave Imager/Sounder (MIS) with an initial launch capability no earlier than 2018.

**Mission:** The DWSS will collect worldwide environmental data to support weather and oceanographic forecasting for military operational planning and protection of civilian life and property.

**FY 2012 Program:** Begins redesign of NPOESS spacecraft bus to a smaller and lighter version for DWSS. Continues development of VIIRS and MIS sensors, spacecraft and sensor subsystems and materials, algorithms, and DoD-specific elements of the common ground system. Starting in FY12 all procurement funds have been moved to Research Development Test & Evaluation due to the NPOESS restructure. NPOESS funds will transfer to the DWSS program element starting in the FY11 year of execution.

Prime Contractor: Northrop Grumman Corporation, Redondo Beach, CA

|                  | C      | )efei | nse Wea | ther | Satellit | e Sy | vstem  |      |          |       |
|------------------|--------|-------|---------|------|----------|------|--------|------|----------|-------|
|                  | FY 201 | 0*    | FY 201  | **   |          |      | FY 20  | 12   |          |       |
|                  | 11201  | Ū     | 11201   | 1    | Base Bud | get  | OCO Bu | dget | Total Re | quest |
|                  | \$M    | Qty   | \$M     | Qty  | \$M      | Qty  | \$M    | Qty  | \$M      | Qty   |
| RDT&E            | 395.0  | -     | 325.5   | -    | 444.9    | -    | -      | -    | 444.9    | -     |
| Procurement      | 3.9    | -     | 26.3    | -    | -        | -    | -      | -    | -        | -     |
| Spares           | -      | -     | -       | -    | -        | -    | -      | -    | -        | -     |
| Total            | 398.9  | -     | 351.8   | -    | 444.9    | -    | -      | -    | 444.9    | -     |
| * 54 2010 0 54 2 |        |       |         |      |          |      |        |      |          |       |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request Numbers may not add due to rounding

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SPACE BASED AND RELATED SYSTEMS

### Space Based Infrared System

Space Based Infrared System (SBIRS) will field a constellation of satellites in Geosynchronous Earth Orbit (GEO) and hosted payloads in Highly Elliptical Orbit (HEO) with an integrated centralized ground station serving all SBIRS space elements. The SBIRS is the follow-on system to the Defense Support Program (DSP).

The infrared (IR) payload consists of:

- Scanning IR sensor two times the revisit rate and three times the sensitivity of DSP
- Staring IR sensor provides a higher fidelity and persistent coverage for areas of interest

The first HEO payload was operational December 2008. The initial launch capability for GEO-I is on track for launch third quarter of FY 2011.

Mission: The SBIRS provides initial warning of ballistic missile launches.

**FY 2012 Program:** Funds the fabrication of GEO-3/4 and HEO-3/4 satellites, final integration, test, and launch of GEO-2, advance procurement of GEO-5/6, and continues ground segment fixed and mobile development.

Prime Contractor: Lockheed Martin Corporation, Sunnyvale, CA

|             |       | Spa | ace Base | ed Ir | nfrared S | Syste | em      |      |          |       |
|-------------|-------|-----|----------|-------|-----------|-------|---------|------|----------|-------|
|             | FY 20 | 0*  | FY 201   | **    |           |       | FY 20   | 12   |          |       |
|             | 1120  |     | 11201    | •     | Base Bud  | get   | OCO Bud | lget | Total Re | quest |
|             | \$M   | Qty | \$M      | Qty   | \$M       | Qty   | \$M     | Qty  | \$M      | Qty   |
| RDT&E       | 521.5 | -   | 530.0    | -     | 621.6     | -     | -       | -    | 621.6    | -     |
| Procurement | 465.9 | I   | 995.5    | I     | 373.6     | -     | -       | -    | 373.6    | -     |
| Spares      | -     | -   | -        | -     | -         | -     | -       | -    | -        | -     |
| Total       | 987.4 | I   | 1,525.5  | Ι     | 995.2     | -     | -       | -    | 995.2    | -     |

\* FY 2010 & FY 2011 include Base and OCO funding \*\* Reflects the FY 2011 President's Budget Request Numbers may not add due to rounding

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mage Courtesy of Lockheed Martin

### Wideband Global SATCOM System

The Wideband Global Satellite (WGS) system is a constellation of satellites in geosynchronous orbit providing worldwide communication coverage for tactical and fixed users. Dual-frequency WGS satellites augment, then replace the Defense Satellite Communications System (DSCS) X-band frequency service and augments the one-way Global Broadcast Service (GBS) Ka-band frequency capabilities. Additionally,WGS provides a new high capacity two-way Ka-band frequency service. The WGS constellation will consist of eight total satellites and seven U.S. funded, one Australian funded.

**Eight satellites** 

- X-band: 8 spot-beam transmit/receive via steerable phased-array antennas
- Ka-band: 10 gimbaled dish antennas
- 35 x 125 MHz channels

The fourth WGS satellite is scheduled to launch in December 2011.

**Mission:** The WGS constellation will provide wideband communications and point-topoint service on Ka-band and X-band frequencies.

**FY 2012 Program:** Provides full funding for the eighth satellite. The sixth satellite is funded by Australia.

Prime Contractor: The Boeing Company, El Segundo, CA

| Wideband Global SATCOM System |          |     |           |     |             |     |            |     |               |     |
|-------------------------------|----------|-----|-----------|-----|-------------|-----|------------|-----|---------------|-----|
|                               | FY 2010* |     | FY 2011** |     | FY 2012     |     |            |     |               |     |
|                               |          |     |           |     | Base Budget |     | OCO Budget |     | Total Request |     |
|                               | \$M      | Qty | \$M       | Qty | \$M         | Qty | \$M        | Qty | \$M           | Qty |
| RDT&E                         | 67.2     | -   | 36.I      | -   | 12.8        | -   | -          | -   | 12.8          | -   |
| Procurement                   | 212.4    | -   | 575.7     | Ι   | 468.7       | I   | -          | -   | 468.7         | I   |
| Spares                        | -        | -   | -         | -   | -           | -   | -          | -   | -             | -   |
| Total                         | 279.6    | -   | 611.8     |     | 481.5       | Ι   | -          | -   | 481.5         | Ι   |

\* FY 2010 & FY 2011 include Base and OCO funding

Numbers may not add due to rounding

age courtesy of Boeing