

| RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit) | | | | | | DATE FEBRUARY 2007 | | | | |
|--|--------|------|--|--------|--------|-----------------------|--------|--------|------------------|------------|
| APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7 | | | R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160421BB Special Operations CV-22 Development/SF200 | | | | | | | |
| COST (Dollars in Millions) | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 | Cost to Complete | Total Cost |
| PE1160421BB | 28.860 | | 23.473 | 26.375 | 25.335 | 64.508 | 24.757 | 19.485 | Cont. | Cont. |
| SF200 CV-22 | 28.860 | | 23.473 | 26.375 | 25.335 | 64.508 | 24.757 | 19.485 | Cont. | Cont. |
| <p>A. Mission Description and Budget Item Justification: The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The CV-22 acquisition program delayed incorporation of some operational capabilities until the completion of a Block 10 CV-22 program. This strategy was agreed to by the Department of the Navy and USSOCOM.</p> <p>Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.</p> <p>Block 20: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements and correct deficiencies identified in previous testing. This block will provide more robust performance of the CV platform in navigation, maneuverability and mission deployment. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration (SDD).</p> <p>Block 30: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements to maintain performance against the evolving threat environment. This block will enhance survivability and performance against potential threats through reduction of electronic signature emissions and improved countermeasures. Initial risk reduction and trade studies will be pursued prior to starting SDD.</p> | | | | | | | | | | |

APPROPRIATION / BUDGET ACTIVITY
RDT&E, DEFENSE-WIDE / 7

R-1 ITEM NOMENCLATURE / PROJECT NO.
PE 1160421BB Special Operations CV-22 Development/SF200

B. Program Change Summary:

| | <u>FY2006</u> | <u>FY2007</u> | <u>FY2008</u> | <u>FY2009</u> |
|----------------------------------|---------------|---------------|---------------|---------------|
| Previous President's Budget | 29.526 | | 31.660 | 28.551 |
| Current President's Budget | 28.860 | | 23.473 | 26.375 |
| Total Adjustments | -0.666 | | -8.187 | -2.176 |
| Congressional Program Reductions | | | | |
| Congressional Rescissions | | | | |
| Congressional Increases | | | | |
| Congressional Transfer | | | | |
| Reprogrammings | | | | |
| Other Program Adjustments | | | -8.187 | -2.176 |
| SBIR Transfer | -0.666 | | | |

Funding:

FY06: Decrease is due to transfer to the Small Business Innovative Research (SBIR) account (-\$.0.666 million).

FY08: Decrease is due to realignments to fund higher Command priorities (-\$8.187 million).

FY09: Decrease is due to realignments to fund higher Command priorities (-\$2.176 million).

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification

Date: FEBRUARY 2007

| | |
|---|---------------------|
| Appropriation/Budget Activity RDT&E BA # 7 | CV-22/Project SF200 |
|---|---------------------|

| Cost (\$ in millions) | FY06 | FY07 | FY08 | FY09 | FY10 | FY11 | FY12 | FY13 |
|-------------------------|--------|------|--------|--------|--------|--------|--------|--------|
| CV-22 | 28.860 | | 23.473 | 26.375 | 25.335 | 64.508 | 24.757 | 19.485 |
| RDT&E Articles Quantity | | | | | | | | |

A. Mission Description and Budget Item Justification: The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide long range, high speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The CV-22 acquisition program delayed incorporation of some operational capabilities until the completion of a Block 10 CV-22 program. This strategy was agreed to by the Department of the Navy and the USSOCOM.

Block 10: Integrate and test Directional Infrared Countermeasures (DIRCM), a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration/exfiltration/resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements and correct deficiencies identified in previous testing. This block will provide more robust performance of the CV platform in navigation, maneuverability and mission deployment. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration.

Block 30: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements to maintain performance against the evolving threat environment. This block will enhance survivability and performance against potential threats through reduction of electronic signature emissions and improved countermeasures. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration.

Exhibit R-2a, RDT&E Project Justification

Date: FEBRUARY 2007

| | |
|---|---------------------|
| Appropriation/Budget Activity RDT&E BA # 7 | CV-22/Project SF200 |
|---|---------------------|

B. Accomplishments/Planned Program

| | FY06 | FY07 | FY08 | FY09 |
|----------|--------|------|------|------|
| Block 10 | 27.036 | | | |

RDT&E Articles Quantity

FY06 Continued development/integration/testing of Block 10 capabilities and engineering and logistics support.

| | FY06 | FY07 | FY08 | FY09 |
|----------|-------|------|--------|--------|
| Block 20 | 1.824 | | 23.743 | 26.375 |

RDT&E Articles Quantity

FY06 Conduct trade studies and begin system requirements definition for Block 20 capabilities, and provide engineering and logistics support.

FY08 Start design and development of Block 20.

FY09 Continue design and development of Block 20.

C. Other Program Funding Summary:

| | <u>FY06</u> | <u>FY07</u> | <u>FY08</u> | <u>FY09</u> | <u>FY10</u> | <u>FY11</u> | <u>FY12</u> | <u>FY13</u> | To <u>Complete</u> | Total <u>Cost</u> |
|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|----------------------|
| PROC, CV-22 SOF Osprey | 99.195 | 168.102 | 238.636 | 173.816 | 176.447 | 164.290 | 176.725 | 192.849 | Cont. | Cont. |

Exhibit R-2a, RDT&E Project Justification

Date: FEBRUARY 2007

Appropriation/Budget Activity
RDT&E BA # 7

CV-22/Project SF200

D. Acquisition Strategy.

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIR PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget. Block 10 RDT&E funding is sent from USSOCOM to PMA-275 to be placed on contract with the V-22 prime contractor. Block 10 capability is required for full compliance with the Joint Operational Requirements Document and associated Milestone III Capabilities Production Document (CPD). Future Block upgrades are planned to follow the same acquisition strategy, with PMA-275 ensuring the integration of SOF unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV-22.

| Exhibit R-3 RDT&E Project Cost Analysis | | | | | | DATE: FEBRUARY 2007 | | | | | |
|---|------------------------------|---|----------------------|--|-----------------------|------------------------|-----------------------|------------------------|-----------------------|----------------|------------------|
| APPROPRIATION / BUDGET ACTIVITY | | | | Special Operations CV-22 Development/PE1160421BB | | | | | | | |
| RDT&E DEFENSE-WIDE / 7 | | | | CV-22/SF200 | | | | | | | |
| Actual or Budget Value (\$ in millions) | | | | | | | | | | | |
| Cost Categories (Tailor to WBS, or System/ Item Requirements) | Contract Method & Type | Performing Activity & Location | Total PYs Cost | Budget Cost FY07 | Award Date FY07 | Budget Cost FY08 | Award Date FY08 | Budget Cost FY09 | Award Date FY09 | To Complete | Total Program |
| Primary Hardware (H/W) Dev | SS/CPAF | NAVAIR/PMA-275 & Bell-Boeing, Patuxent River, MD | 174.553 | | | | | | | Cont. | Cont. |
| Additional Test Aircraft (ATA) Modification | SS/CPAF/IF | NAVAIR/PMA-275 & Bell-Boeing, Patuxent River, MD | 62.187 | | | | | | | | 62.187 |
| Block 20 Trade Studies, Risk Reduction and Development | TBD | TBD | 1.469 | | | 17.574 | Mar-08 | 20.336 | Mar-09 | Cont. | Cont. |
| Award/Incentive Fees | | | | | | | | | | | |
| Primary H/W Dev | | | 13.132 | | | | | | | Cont. | Cont. |
| ATA | | | 6.350 | | | | | | | | 6.350 |
| Prior Year Completed Efforts | Various | Various | 100.521 | | | | | | | | |
| Subtotal Product Dev | | | 358.212 | 0.000 | | 17.574 | | 20.336 | | Cont. | Cont. |
| Remarks: | | | | | | | | | | | |
| Engineering, and Logistics Support | Various | Various | 39.692 | | | 5.899 | Dec-07 | 6.039 | Dec-08 | Cont. | Cont. |
| Subtotal Management | | | 39.692 | 0.000 | | 5.899 | | 6.039 | | Cont. | Cont. |
| Remarks: | | | | | | | | | | | |
| Total Cost | | | 397.904 | 0.000 | | 23.473 | | 26.375 | | Cont. | Cont. |
| Remarks: | | | | | | | | | | | |

| Exhibit R-4, RDT&E Program Schedule Profile | | | | | | | | | | Date: FEBRUARY 2007 | | | | | | | | | | | | | | | | | | | | | | |
|---|------|----|---|---|---|---|---|---|------|---------------------|---|---|------|---|--|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|
| Appropriation/Budget Activity RDT&E/7 | | | | | Program Element Number and Name PE1160421BB/Special Operations CV-22 Development | | | | | | | | | | Project Number and Name Project SF200/CV-22 | | | | | | | | | | | | | | | | | |
| Fiscal Year | 2006 | | | | 2007 | | | | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| CV-22 Block 10 Development | ▲ | | | ▲ | ▲ | | | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| Block 0/10 Flight Test | ▲ | | | ▲ | ▲ | | | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| CV-22 IOT&E * | | | | | | | | | △ | | | | | | | | | | | | | | | | | | | | | | | |
| CV-22 Block 20 Development/Test | | | ▲ | ▲ | ▲ | | | △ | | | △ | △ | | | △ | △ | | | △ | △ | | | △ | △ | | | △ | △ | | | △ | △ |
| CV-22 Block 30 Development | | | | | | | | | | | | | | | | | | | | | | | △ | △ | | | △ | △ | | | △ | △ |
| CV-22 Deliveries | ▲ | ▲▲ | | | ▲ | △ | △ | | | △ | △ | | | △ | △ | | | △ | △ | | | △ | △ | | | | | | | | | |
| CV-22 IOC | | | | | | | | | | | | | | △ | | | | | | | | | | | | | | | | | | |
| * Air Force Funded | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

