

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)					DATE MAY 2009					
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)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	Cost to Complete	Total Cost
PE1160421BB	22.739	40.120	12.687						Cont.	Cont.
SF200 CV-22	22.739	40.120	12.687						Cont.	Cont.

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 V-22 Joint Program Office is developing improved capabilities in block increments. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment was completed in FY 2007, and the Block 20 increment started in FY 2008.

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.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, more robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Design and Development started in FY 2008.

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>FY08</u>	<u>FY09</u>	<u>FY10</u>
Previous President's Budget	22.872	38.229	27.140
Current President's Budget	22.739	40.120	12.687
Total Adjustments	-0.133	1.891	-14.453
Congressional Reductions		-0.109	
Congressional Increases		2.000	
Reprogrammings			
Other Program Adjustments			-14.453
SBIR Transfers	-0.133		

**Funding:**

FY08: Decrease -\$0.133 million is due to an adjustment to the Small Business Innovative Research account.

FY09: Net increase of \$1.891 million includes a Congressional increase for Helmet Mounted Display (\$2.000 million) and a Congressional reduction for Section 8101 (-\$0.109 million).

FY10: Decrease -\$14.453 million reflects a restructure of the Block 20 program due to higher command priorities (-\$14.277 million), and economic assumptions (-\$0.176 million).

Schedule: None.

Technical: None.

**Exhibit R-2a, RDT&E Project Justification**

Date: MAY 2009

Appropriation/Budget Activity RDT&E BA # 7	CV-22/Project SF200
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Cost (\$ in millions)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
CV-22	22.739	40.120	12.687					
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 V-22 Joint Program Office is developing improved capabilities in block increments supported with rapid prototyping. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment completed in FY 2007, and the Block 20 increment started in FY 2008.

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.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Development and Demonstration started in FY 2008.

**Exhibit R-2a, RDT&E Project Justification**

Date: MAY 2009

Appropriation/Budget Activity  
RDT&E BA # 7

CV-22/Project SF200

**B. Accomplishments/Planned Program**

	FY08	FY09	FY10	FY11
CV-22 Block 20	22.739	38.175	12.687	
RDT&E Articles Quantity				

FY08 Continued flight test support and started design and development of Block 20.

FY09 Continue flight test support and design and development of Block 20.

FY10 Continues flight test support and design and development of Block 20.

	FY08	FY09	FY10	FY11
CV-22 Helmet Mounted Display		1.945		
RDT&E Articles Quantity				

FY09 This initiative is a Congressional add for Helmet Mounted Display.

**C. Other Program Funding Summary:**

	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>	<u>FY13</u>	<u>FY14</u>	<u>FY15</u>	To Complete Cont.	Total Cost Cont.
PROC, CV-22 SOF MOD	357.719	162.490	114.553							

**D. Acquisition Strategy.**

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIRSYSCOM 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 Research, Development, Testing, and Evaluation funding was sent from USSOCOM to NAVAIRSYSCOM to be placed on contract with the V-22 prime contractor. Block 10 capability is required for compliance with the Joint Operational Requirements Document and associated Milestone III Capabilities Production Document. Block 20 and subsequent block upgrades are planned to follow the same acquisition strategy, with NAVAIRSYSCOM 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: MAY 2009					
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 FY09	Award Date FY09	Budget Cost FY10	Award Date FY10	Budget Cost FY11	Award Date FY11	To Complete	Total Program
Product Development											
Prior Year Completed Efforts	Various	Various	385.207								385.207
Integration, Assembly, Test, and Checkout (Helmet Mounted Display)	SS, CPAF	Bell-Boeing, Amarillo, TX		1.945	TBD						1.945
Integration, Assembly, Test, and Checkout (Block 20)	SS, CPAF	Bell-Boeing, Amarillo, TX	15.037	31.524	Various					Cont.	Cont.
Systems Engineering	SS, CPAF	Raytheon, Indianapolis, IN	3.549	2.333	Dec-08	4.762	Dec-09			Cont.	Cont.
Subtotal Product Dev			403.793	35.802		4.762				Cont.	Cont.
Remarks:											
Test and Evaluation											
Prior Year Completed Efforts	Various	Various	43.653								43.653
Systems Test and Evaluation (Block 20)	MIPR	413FLTS, Hurlburt Field, FL	1.065	1.185	Nov-08	3.786	Nov-09			Cont.	Cont.
System Test and Evaluation (ATA)	Various	Bell-Boeing, Amarillo, TX and DynCorp, Fort Worth, TX	3.088	3.133	Dec-08	4.139	Dec-09			Cont.	Cont.
Subtotal Test Eval			47.806	4.318		7.925				Cont.	Cont.
Remarks:											
Total Cost			451.599	40.120		12.687				Cont.	Cont.
Remarks:											



