

## UNCLASSIFIED

PE NUMBER: 0401318F

PE TITLE: CV-22

Exhibit R-2, RDT&E Budget Item Justification									DATE February 2007		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0401318F CV-22						
Cost (\$ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost		33.672	26.501	16.688	18.717	42.177	39.640	33.457	24.336	Continuing	TBD
4103	CV-22	33.672	26.501	16.688	18.717	42.177	39.640	33.457	24.336	Continuing	TBD
(U) <b><u>A. Mission Description and Budget Item Justification</u></b>											
The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and resupply special operation forces into politically or militarily denied areas. The CV-22 Block 10 configuration adds terrain following radar, additional fuel tanks, additional radios, flare/chaff dispensers, RF warning receiver and jammer, infrared countermeasures and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes critical capabilities such as radio frequency and infrared countermeasures improvements, co-site communications interference, electro-optical navigational sensor, tactical data link, intelligence broadcast receiver functionality, improved aero performance, anti-skid brakes, civil GPS, improved desert environment suitability, TF/TA radar improvements, voice/data recorder and other requirements specified in the V-22 Block C/20 Capabilities Development Document.											
USSOCOM and USAF jointly fund Block 10 enhancements, correction of deficiencies, and Block 20 development. USSOCOM funds the development, integration and testing of SOF mission capability, while USAF funds interoperability, basic air vehicle enhancements, integration of Air Force and Navy maintenance information systems used with the V-22, contractor logistics support for operational testing, and CV-22 unique implementation and testing of MV-22 Block B and Block C changes.											
USSOCOM and USAF jointly fund emerging requirements to design, integrate, and test CV-22's ability to accelerate delivery of capabilities to meet the SOF mission as well as comply with OSD/service interoperability requirements and specifications.											
(U) <b><u>B. Program Change Summary (\$ in Millions)</u></b>											
					<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>			
(U) Previous President's Budget					39.532	26.601	56.972	58.315			
(U) Current PBR/President's Budget					33.672	26.501	16.688	18.717			
(U) Total Adjustments					-5.860						
(U) Congressional Program Reductions					0.000	-0.100					
Congressional Rescissions					-0.566						
Congressional Increases					1.000						
Reprogrammings					-5.199						
SBIR/STTR Transfer					-1.095						
(U) <b><u>Significant Program Changes:</u></b>											
FY06 defense appropriation added \$1M to research nanocrystalline diamond coatings for radome anti-icing and surface erosion protection. USAF transferred these funds											

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<p>(via technical adjustment) to the appropriate materials R&amp;D PE (0603112F). In addition \$5.2M was reprogrammed (BTR) to other USAF priorities.</p> <p>FY08 PB reduces FY08 &amp; FY09 RDT&amp;E to fund mod/retrofit of Lot 8 and 9 CV-22s to Lot 10 configuration and increased production and operations &amp; maintenance (O&amp;M) requirements. The CV-22 unit cost increased due to a reduction of MV-22 aircraft buys and direction to budget to the Service estimate. The FY07 PB production budget was based on a lower OSD cost estimate.</p>		
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## Exhibit R-2a, RDT&amp;E Project Justification

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## BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

## PE NUMBER AND TITLE

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## PROJECT NUMBER AND TITLE

4103 CV-22

Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4103 CV-22	33.672	26.501	16.688	18.717	42.177	39.640	33.457	24.336	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **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. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and resupply special operation forces into politically or militarily denied areas. The CV-22 Block 10 configuration adds terrain following radar, additional fuel tanks, additional radios, flare/chaff dispensers, RF warning receiver and jammer, infrared countermeasures and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes critical capabilities such as radio frequency and infrared countermeasures improvements, co-site communications interference, electro-optical navigational sensor, tactical data link, intelligence broadcast receiver functionality, improved aero performance, anti-skid brakes, civil GPS, improved desert environment suitability, TF/TA radar improvements, voice/data recorder and other requirements specified in the V-22 Block C/20 Capabilities Development Document.

USSOCOM and USAF jointly fund Block 10 enhancements, correction of deficiencies, and Block 20 development. USSOCOM funds the development, integration and testing of SOF mission capability, while USAF funds interoperability, basic air vehicle enhancements, integration of Air Force and Navy maintenance information systems used with the V-22, contractor logistics support for operational testing, and CV-22 unique implementation and testing of MV-22 Block B and Block C changes.

USSOCOM and USAF jointly fund emerging requirements to design, integrate, and test CV-22's ability to accelerate delivery of capabilities to meet the SOF mission as well as comply with OSD/service interoperability requirements and specifications.

(U) **B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Block 10 Development	10.402	7.920	1.820	1.510
(U) Block 10 Test &Evaluation	21.406	15.081	5.799	3.510
(U) Block 20 Development	1.864	3.500	9.069	10.197
(U) Block 20 Test &Evaluation				3.500
(U) Total Cost	33.672	26.501	16.688	18.717

(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2006</u> <u>Actual</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>FY 2012</u> <u>Estimate</u>	<u>FY 2013</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) 3010 BP10/11/16/AP, PE 0401318F	266.166	270.830	593.237	499.108	507.803	440.920	459.296	469.305	636.557	4,143.222

Total Cost number does not include \$745M procurement funding prior to FY06.

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(U) **D. Acquisition Strategy**

Development activities for the V-22 program are performed by the prime contractor selected on a sole-source basis. Bell-Boeing is a strategic partnership between Bell Helicopter and Boeing Integrated Defense Systems.

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## Exhibit R-3, RDT&amp;E Project Cost Analysis

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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &amp;</u> <u>Type</u>	<u>Performing</u> <u>Activity &amp;</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>FY 2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Award</u> <u>Date</u>	<u>FY 2009</u> <u>Cost</u>	<u>FY 2009</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u>														
Weapon System Development	SS, CPAF	Bell-Boeing											0.000	
Block 10 Development	SS, CPAF	Bell-Boeing		8.271	Jun-06	4.320	Mar-07	1.820	Mar-08	1.510	Mar-09	Continuing	TBD	
Block 10 Development	Multiple	Multiple		1.131	Aug-06	2.600	Dec-06					Continuing	TBD	
Block 20 Development	SS, CPAF	Bell-Boeing		1.864		3.500	Jun-07	8.069	Dec-07	9.197	Dec-08	Continuing	TBD	
Block 20 Development	Multiple	Multiple										Continuing	TBD	
Subtotal Product Development			0.000	11.266		10.420		9.889		10.707		Continuing	TBD	0.000
Remarks:														
(U) <u>Support</u>														
Interim Contractor Support	SS, CPAF	Bell-Boeing, Dyn-Corp		19.306	Feb-06	10.200	Dec-06	2.965	Dec-07			Continuing	TBD	
Subtotal Support			0.000	19.306		10.200		2.965		0.000		Continuing	TBD	0.000
Remarks:														
(U) <u>Test &amp; Evaluation</u>														
Weapon System Testing	SS, CPAF	Bell-Boeing											0.000	
Block 10 Testing & Integration	SS, CPAF	Bell-Boeing		2.100	Sep-06	4.881	Jul-07	2.834	Feb-08	3.510	Feb-09	Continuing	TBD	
Block 20 Testing & Integration	SS, CPAF	Bell-Boeing								3.500	May-09	Continuing	TBD	
Subtotal Test & Evaluation			0.000	2.100		4.881		2.834		7.010		Continuing	TBD	0.000
Remarks:														
(U) <u>Management</u>														
Leadership Team	MIPR	Multiple		1.000	Apr-06	1.000	Dec-06	1.000	Dec-07	1.000	Dec-08	Continuing	TBD	
Subtotal Management			0.000	1.000		1.000		1.000		1.000		Continuing	TBD	0.000
Remarks:														
(U) Total Cost			0.000	33.672		26.501		16.688		18.717		Continuing	TBD	0.000

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## Exhibit R-4, RDT&amp;E Schedule Profile

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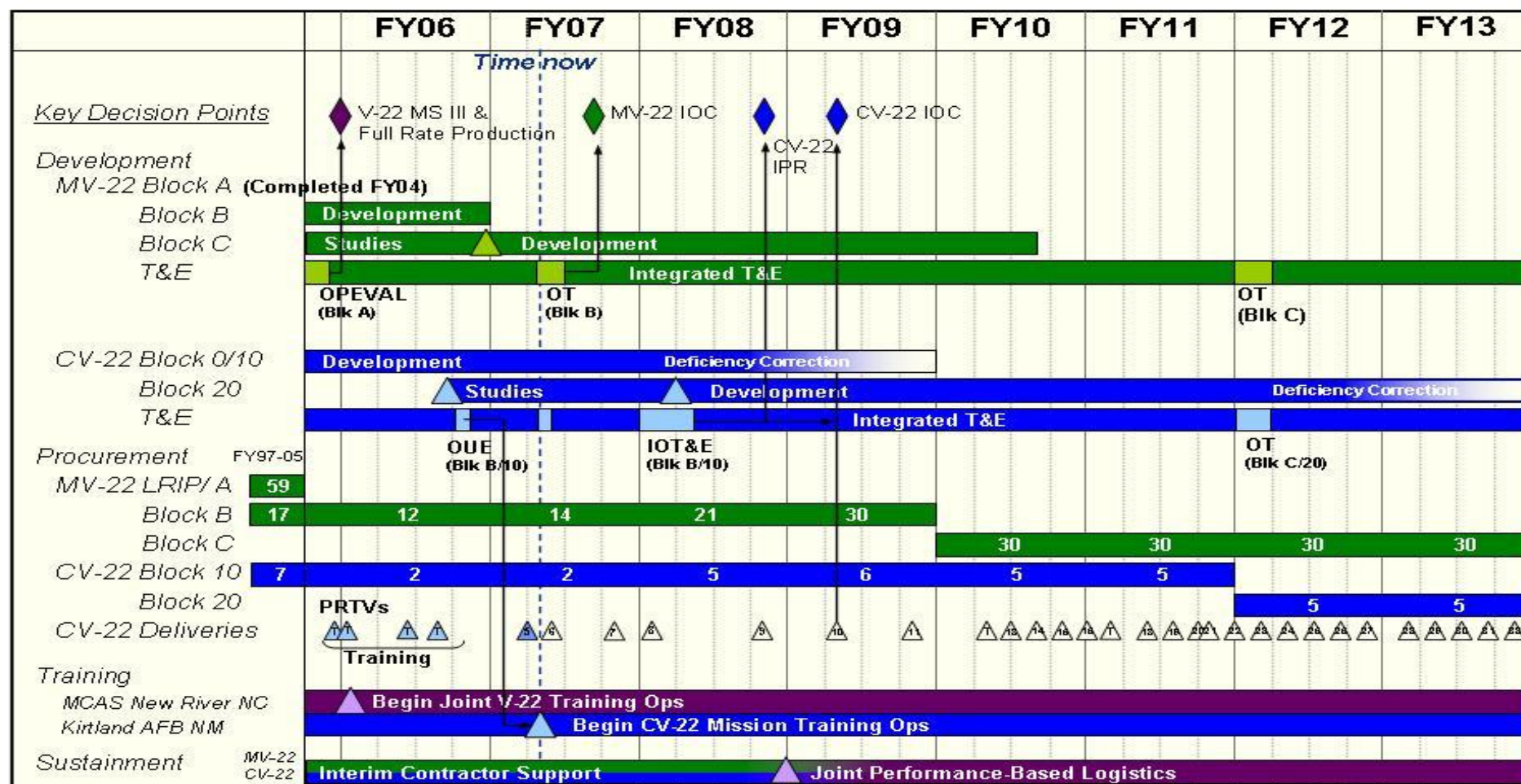
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## Exhibit R-4a, RDT&amp;E Schedule Detail

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(U) Schedule ProfileFY 2006FY 2007FY 2008FY 2009

(U) Block 10 Development/Correction of Deficiencies

1-4Q

1-4Q

1-4Q

1-4Q

(U) Block 0/10 Flight Test

1-4Q

1-4Q

1-4Q

1-4Q

(U) Operational Test &amp; Evaluation

3-4Q

2Q

1-3Q

(U) Block 20 Studies/Development/Test

3-4Q

1-4Q

1-4Q

1-4Q

(U) Aircraft Deliveries

1-4Q

1-4Q

1-4Q

1-4Q

(U) CV-22 IOC

2Q

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