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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Air Force	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0401318F: CV-22
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	18.953	18.270	20.723	-	20.723	22.658	20.998	20.625	14.069	Continuing	Continuing
654103: CV-22	18.953	18.270	20.723	-	20.723	22.658	20.998	20.625	14.069	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Totals include funding for Program Resources Coollection Process (PRCP) Program Number 212, V-22 Osprey Joint Advance Vertical Lift Aircraft.

The CV-22 is a Special Operations Forces (SOF) variant of the 1st generation V-22 tilt-rotor, multi-mission aircraft. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and re-supply 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/infrared and defensive countermeasures, weapons, situational awareness improvements, and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes, but is not limited to improved communications, situational awareness, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. CV-22 RDT&E also provides for a baseline CV-22 flight test aircraft for validation/verification of Block 20 and various software and reliability and maintainability mods through 2016. The V-22 Joint Program Office is developing improved operational safety, suitability, and effectiveness capabilities in block increments. Ongoing planning and associated activities will take place to prevent diminishing manufacturing resources and obsolescence issues, as required. USSOCOM and USAF jointly fund correction of deficiencies and Block 20 development. USSOCOM funds the development, integration and testing of SOF unique mission capability, while USAF funds interoperability, basic air vehicle enhancements, integration of Air Force and Navy maintenance and information systems used with the V-22, support for operational testing, and CV-22 implementation and testing of MV-22 Block B and Block C changes. USSOCOM and USAF jointly fund development projects to meet operational safety, suitability, and effectiveness mission needs. This includes designing, prototyping, integrating, testing and fielding proposed solutions to emerging warfighter issues.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.282M in FY 2012.

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0401318F: CV-22
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<b>B. Program Change Summary (\$ in Millions)</b>	<b><u>FY 2010</u></b>	<b><u>FY 2011</u></b>	<b><u>FY 2012 Base</u></b>	<b><u>FY 2012 OCO</u></b>	<b><u>FY 2012 Total</u></b>
Previous President's Budget	19.640	18.270	21.983	-	21.983
Current President's Budget	18.953	18.270	20.723	-	20.723
Total Adjustments	-0.687	-	-1.260	-	-1.260
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.082	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.605	-			
• Other Adjustments	-	-	-1.260	-	-1.260

**Change Summary Explanation**

In FY 2012, in addition to the adjustment for efficiencies (-\$0.282M), the program was adjusted -\$0.909M for underexecution and -\$0.069M for inflation.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0401318F: CV-22				PROJECT 654103: CV-22			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
654103: CV-22	18.953	18.270	20.723	-	20.723	22.658	20.998	20.625	14.069	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Totals include funding for Program Resources Coollection Process (PRCP) Program Number 212, V-22 Osprey Joint Advance Vertical Lift Aircraft.											
The CV-22 is a Special Operations Forces (SOF) variant of the 1st generation V-22 tilt-rotor, multi-mission aircraft. CV-22 RDT&E provides development, integration, testing and enhancement of critical capability to insert, extract, and re-supply 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/infrared and defensive countermeasures, weapons, situational awareness improvements, and Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) to the V-22 Block B aircraft. Block 20 development includes, but is not limited to improved communications, situational awareness, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. CV-22 RDT&E also provides for a baseline CV-22 flight test aircraft for validation/verification of Block 20 and various software and reliability and maintainability mods through 2016. The V-22 Joint Program Office is developing improved operational safety, suitability, and effectiveness capabilities in block increments. Ongoing planning and associated activities will take place to prevent diminishing manufacturing resources and obsolescence issues, as required. USSOCOM and USAF jointly fund correction of deficiencies and Block 20 development. USSOCOM funds the development, integration and testing of SOF unique mission capability, while USAF funds interoperability, basic air vehicle enhancements, integration of Air Force and Navy maintenance and information systems used with the V-22, support for operational testing, and CV-22 implementation and testing of MV-22 Block B and Block C changes. USSOCOM and USAF jointly fund development projects to meet operational safety, suitability, and effectiveness mission needs. This includes designing, prototyping, integrating, testing and fielding proposed solutions to emerging warfighter issues.											
This program is in Budget Activity 5, System Development and Demonstration (SDD), because it passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.											
The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.282M in FY 2012.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: CV-22 Block 20 RDT&E							18.953	18.270	20.723	-	20.723
Description: Develop, test, and evaluate additional capabilities for the CV-22 aircraft. The V-22 Joint Program Office is developing improved operational safety, suitability, and effectiveness.											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force							DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0401318F: CV-22			PROJECT 654103: CV-22				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>FY 2010 Accomplishments:</b> RDT&E activities will continue on Block 20. Block 20 development includes, but is not limited to improved brakes, communications, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. Initiate Block 20 Increment 3 and continue Increment 1 & 2 efforts. Complete improved brakes System Requirements Review (SRR).											
<b>FY 2011 Plans:</b> RDT&E activities will continue on Block 20. Block 20 development includes, but is not limited to improved communications, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. Complete Line-of-sight communications Critical Design Review (CDR). Continue Increment 1, 2 & 3 efforts.											
<b>FY 2012 Base Plans:</b> RDT&E activities will continue on Block 20. Block 20 development includes, but is not limited to improved communications, software, and other requirements specified in the V-22 Block C/20 Capabilities Production Document. Complete line-of-sight communications proof of concept testing. Complete long-range communications System Requirements Review (SRR) and System Functional Review (SFR). Continue Increment 1, 2 & 3 efforts.											
<b>FY 2012 OCO Plans:</b>											
Accomplishments/Planned Programs Subtotals							18.953	18.270	20.723	-	20.723
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 1160421BB: CV-22 RDT&E, Defense-wide	12.214	14.406	10.775	0.000	10.775	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 1160421BB (1): CV-22 AP, Defense-wide	115.382	124.035	118.002	15.000	133.002	121.955	89.158	11.308	6.415	Continuing	Continuing
• PE 0401318F: CV-22 APAF	597.591	530.105	432.030	70.000	502.030	414.100	325.811	133.128	50.781	Continuing	Continuing
	78.866	46.070	84.477	0.000	84.477	64.982	36.685	51.603	53.043	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force										<b>DATE:</b> February 2011	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0401318F: CV-22				<b>PROJECT</b> 654103: CV-22			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<ul style="list-style-type: none"> <li>• PE 0604262N: V-22 RDT&amp;E, N BA 05</li> </ul>											
<b>D. Acquisition Strategy</b>											
<p>The V-22 Program Office (NAVAIR PMA-275) ensures that CV-22 changes are incorporated into the ongoing V-22 production line with minimal impact. The JPO is developing new capabilities for the V-22 in blocks. Block 0 and Block 10 have completed development, and Block 20 is currently underway.</p> <p>NAVAIRSYSCOM awarded a cost plus fixed fee contract with the prime contractor in Dec 2007 for Block 20 development and test. Future Block 20 increments are expected to use cost plus incentive fee (CPIF) arrangements. NAVAIRSYSCOM modified the Block 20 contract in Mar 2010 to add CPIF contract line item numbers (CLINs) for Block 20 increment 3 development and test.</p> <p>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.</p>											
<b>E. Performance Metrics</b>											
<p>Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.</p>											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT						
3600: Research, Development, Test & Evaluation, Air Force				PE 0401318F: CV-22				654103: CV-22						
BA 5: Development & Demonstration (SDD)														
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Development of 2 Production Representative Test Vehicles	SS/CPAF	Bell Boeing:Amarillo, TX	161.859	-		-		-		-	0.000	161.859	0.000	
Block 10 Development	SS/CPAF	Bell Boeing:Amarillo, TX	44.025	-		-		-		-	0.000	44.025	0.000	
Block 10 Development Technical Support	Various	Various:Various,	11.886	-		-		-		-	0.000	11.886	0.000	
Block 20 Development	SS/CPFF	Bell Boeing:Amarillo, TX	37.650	10.938	Dec 2010	15.263	Dec 2011	-		15.263	60.300	124.151	166.727	
Situational Awareness Hazard Avoidance Federated Terminal (SHAFT) Contractual Engineering Task (CET)	C/CPAF	Manufacturing Technology Inc:Fort Walton Beach, FL	5.000	-		-		-		-	0.000	5.000	0.000	
Subtotal			260.420	10.938		15.263		-		15.263	60.300	346.921	166.727	
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Interim Contractor Support	SS/CPAF	Bell Boeing:Amarillo, TX	26.889	-		-		-		-	0.000	26.889	0.000	
Contractor Logistics Support for Test Aircraft	Various	Various:Various,	7.817	3.958	Dec 2010	1.860	Dec 2011	-		1.860	10.700	24.335	0.000	
Subtotal			34.706	3.958		1.860		-		1.860	10.700	51.224	0.000	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Test & Evaluation	SS/CPFF	Bell Boeing:Amarillo, TX	22.831	3.374	Feb 2011	2.600	Feb 2012	-		2.600	10.700	39.505	0.000	
	MIPR	Various:Various,	4.678	-		1.000	Dec 2011	-		1.000	14.500	20.178	0.000	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Air Force											<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0401318F: CV-22				<b>PROJECT</b> 654103: CV-22					

  

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Test & Evaluation Technical Support													
<b>Subtotal</b>			27.509	3.374		3.600		-		3.600	25.200	59.683	0.000

  

<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Management Support	MIPR	Various:Various,	2.119	-		-		-		-	0.000	2.119	0.000
<b>Subtotal</b>			2.119	-		-		-		-	0.000	2.119	0.000

  

			<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			324.754	18.270		20.723		-		20.723	96.200	459.947	166.727

  

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0401318F: CV-22	PROJECT 654103: CV-22



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0401318F: CV-22	<b>PROJECT</b> 654103: CV-22	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 20 Increment 1 Development, Testing and Evaluation	1	2010	2	2013
Line-of-site Comm development and design reviews	1	2010	2	2012
Line-of-site Comm ground and flight tests	1	2012	1	2013
Block 20 Increment 2 Development, Testing and Evaluation	1	2010	2	2014
Situational awareness and avionics upgrades design reviews	1	2010	1	2012
Situational awareness/avionics upgrades ground & flight tests	1	2012	1	2014
Block 20 Increment 3 Development, Testing and Evaluation	2	2010	3	2015
Brake-by-wire System Requirements Review	2	2010	4	2010
Long range comm upgrades development and design reviews	3	2011	4	2013
Long range comm upgrades ground and flight tests	2	2013	3	2015

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