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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0401130F: <i>C-17 Aircraft</i>							
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	156.232	177.212	128.169	-	128.169	98.494	117.246	112.975	74.943	Continuing	Continuing
672569: <i>C-17 Aircraft</i>	156.232	177.212	128.169	-	128.169	98.494	117.246	112.975	74.943	Continuing	Continuing

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 200, C-17A.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$22.045M in FY12.

Mission Description: The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national security strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century.

Budget Item Justification: RDT&E efforts support aircraft performance improvements and airspace access mandates. In addition, funding may be used to develop solutions to emergency obsolescence and safety of flight issues that impact the mission capability or continued support of the C-17 weapon system.

- FY 2010: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Instrument Landing System (ILS) Identification and Flight Control Computer (FCC) Updates, Replacement Core Integrated Processor (RCIP), Formation Flying System, Identification Friend or Foe (IFF) Mode 5, Advanced Situational Awareness Countermeasures (ASACM) and Airdrop.

- FY 2011: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/Air Traffic Management (ATM) System - Phase 1 Surveillance, ILS Identification and FCC Updates, Replacement Heads-Up Display (RHUD), RCIP Obsolescence, IFF Mode 5, and Airdrop.

- FY 2012: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, and IFF Mode 5.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	161.855	177.212	183.745	-	183.745
Current President's Budget	156.232	177.212	128.169	-	128.169
Total Adjustments	-5.623	-	-55.576	-	-55.576
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.675	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.516	-			
• SBIR/STTR Transfer	-4.432	-			
• Other Adjustments	-	-	-55.576	-	-55.576

Change Summary Explanation

- FY2012 reduction due to higher Air Force priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>
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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
672569: <i>C-17 Aircraft</i>	156.232	177.212	128.169	-	128.169	98.494	117.246	112.975	74.943	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 Collection Process (PRCP) Program Number 200, C-17A.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$22.045M in FY12.

Mission Description: The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national security strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century.

Budget Item Justification: RDT&E efforts support aircraft performance improvements and airspace access mandates. In addition, funding may be used to develop solutions to emergency obsolescence and safety of flight issues that impact the mission capability or continued support of the C-17 weapon system.

- FY 2010: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Instrument Landing System (ILS) Identification and Flight Control Computer (FCC) Updates, Replacement Core Integrated Processor (RCIP), Formation Flying System, Identification Friend or Foe (IFF) Mode 5, Advanced Situational Awareness Countermeasures (ASACM) and Airdrop.

- FY 2011: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/Air Traffic Management (ATM) System - Phase 1 Surveillance, ILS Identification and FCC Updates, Replacement Heads-Up Display (RHUD), RCIP Obsolescence, IFF Mode 5, and Airdrop.

- FY 2012: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, and IFF Mode 5.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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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 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0401130F: C-17 Aircraft	PROJECT 672569: C-17 Aircraft				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Performance Improvement Development and Testing Description: Continued development of C-17 aircraft performance improvements for its avionics, aircraft and mission systems and the development of solutions to emergent obsolescence and safety of flight issues and airspace access mandates. FY 2010 Accomplishments: Continued development of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Instrument Landing System (ILS) Identification and Flight Control Computer (FCC) Updates, Replacement Heads-Up Display (RHUD), Replacement Core Integrated Processor (RCIP), Formation Flying System, Identification Friend or Foe (IFF) Mode 5, Advanced Situational Awareness Countermeasures (ASACM) and Airdrop. FY 2011 Plans: Continued development of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, IFF Mode 5, and Airdrop. FY 2012 Base Plans: Continued development of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, and IFF Mode 5. FY 2012 OCO Plans:		79.347	122.412	70.170	-	70.170
Title: Systems Engineering/ Program Managment Description: Systems Engineering/Program Management FY 2010 Accomplishments: Systems Engineering/Program Management FY 2011 Plans: Systems Engineering/Program Management FY 2012 Base Plans:		43.887	28.000	30.000	-	30.000

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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 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0401130F: C-17 Aircraft	PROJECT 672569: C-17 Aircraft				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Systems Engineering/Program Management						
FY 2012 OCO Plans:						
Title: Producibility Enhancement/Performance Improvement (PE/PI) Contractor Flight Test		23.198	16.800	18.000	-	18.000
Description: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.						
FY 2010 Accomplishments: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.						
FY 2011 Plans: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.						
FY 2012 Base Plans: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.						
FY 2012 OCO Plans:						
Title: Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test		9.800	10.000	9.999	-	9.999
Description: Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations.						
FY 2010 Accomplishments: Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations.						
FY 2011 Plans:						

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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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0401130F: C-17 Aircraft				PROJECT 672569: C-17 Aircraft				
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations. FY 2012 Base Plans: Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations. FY 2012 OCO Plans:												
Accomplishments/Planned Programs Subtotals								156.232	177.212	128.169	-	128.169
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 0401130F: C-17 APAF BA 02 BP 10	2,598.525	128.683	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
• PE 0401130F (1): C-17 APAF BA 05 BP 11	321.969	576.064	202.179	0.000	202.179	329.867	334.844	357.017	349.739	Continuing	Continuing	
• PE 0401130F (2): C-17 APAF BA 07 BP 13	11.000	38.947	183.696	10.970	194.666	192.072	225.078	130.242	148.522	Continuing	Continuing	
• PE 0401130F (3): Initial Spares APAF BA 06 BP 16	0.000	0.000	13.692	0.000	13.692	8.192	13.022	28.024	12.584	Continuing	Continuing	
• PE 0401130F (4): Organic Depot APAF BA 07 BP 19	26.522	21.198	6.458	0.000	6.458	2.588	0.000	0.000	0.000	Continuing	Continuing	
D. Acquisition Strategy												
The C-17 Acquisition Strategy is based on several separate contracts to support the entire scope of the C-17 weapon system. These contracts are: 1) Indefinite Delivery Indefinite Quantity (IDIQ) contracts for the procurement of C-17s and engines beyond 180, including 43 aircraft included in the FY07 – FY10 Defense Appropriation Acts, and foreign orders that may materialize; 2) a Producibility Enhancement and Performance Improvement (PE/PI) contract to develop cost reduction changes, capability enhancements/airspace access mandates and design fixes to service-revealed problems – (RDT&E, APAF); 3) a Globemaster III Integrated Sustainment Program (field support) contract to support the current and future fielded aircraft – (O&M, TWCF); 4) an engine contract for Government Furnished Equipment (GFE) engines – (APAF); 5) an Aircrew Training Systems (ATS) contract - (O&M, TWCF); 6) a Maintenance Training Systems (MTS) contract - (O&M, TWCF); 7) a Weapon System Trainers (WST) contract - (APAF); and 8) a Training System contract for instruction, contractor logistic support (CLS), and change												

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<p>management of the ATS and MTS to include Foreign Military Sales (FMS) customers. The CLS contract was awarded Nov 10 and merged tasks from both the ATS and MTS contracts into one overarching C-17 Training System follow-on services contract - (O&M, TWCF).</p> <p>FY10 Congressional action funded an additional 10 aircraft. The current acquisition USAF program of record is 223 aircraft (note: 1 of the 223 aircraft became the United States contribution to the Strategic Airlift Capability (SAC consortium)).</p> <p><u>E. Performance Metrics</u></p> <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 BA 7: Operational Systems Development				PE 0401130F: C-17 Aircraft				672569: C-17 Aircraft						
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	
Aircraft Performance Improvements	Various	Boeing:Long Beach, CA	7,328.677	161.825	Oct 2010	113.353	Oct 2011	-		113.353	354.346	7,958.201	0.000	
Subtotal			7,328.677	161.825		113.353		-		113.353	354.346	7,958.201	0.000	
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	
Mission Support OGC	Various	Wright-Patterson AFB:WPAFB, OH	125.736	5.387	Oct 2010	4.817	Oct 2011	-		4.817	19.324	155.264	0.000	
Subtotal			125.736	5.387		4.817		-		4.817	19.324	155.264	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	
Combined Test Force	PO	AFFTC:Edwards AFB, CA	384.276	10.000	Oct 2010	9.999	Oct 2011	-		9.999	29.988	434.263	0.000	
Joint Precision Airdrop System (JPADS)	MIPR	Various:Various,	4.350	-		-		-		-	0.000	4.350	0.000	
Semi-Prepared Runway Operations (SPRO)	MIPR	Various:Various,	11.060	-		-		-		-	0.000	11.060	0.000	
AFRL	PO	Wright-Patterson AFB:WPAFB, OH	0.265	-		-		-		-	0.000	0.265	0.000	
Subtotal			399.951	10.000		9.999		-		9.999	29.988	449.938	0.000	
Management Services (\$ 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	
Subtotal			-	-		-		-		-	0.000	0.000	0.000	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force								DATE: February 2011						
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0401130F: C-17 Aircraft				PROJECT 672569: C-17 Aircraft						
				Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals				7,854.364	177.212		128.169		-		128.169	403.658	8,563.403	0.000

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 & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Airdrop Improvements Flight Test #2	2	2012	3	2012
Mode 5 Flight Test	2	2012	1	2013
Instrument Landing System Identification & Flight Control Computer Update Flight Test	2	2012	3	2012
Software Enhancements Flight Test	2	2012	3	2012
Replacement HUD (RHUD) PDR	3	2012	3	2012
CNS/ATM - Phase 1 - Surveillance PDR	3	2012	3	2012
Replacement HUD (RHUD) CDR	1	2013	1	2013

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