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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305219F I MQ-1 Predator A UAV							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	0.760	-	0.716	-	0.716	-	-	-	-	-	1.476
675143: Predator	-	0.760	-	0.716	-	0.716	-	-	-	-	-	1.476
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. This funding supports development and enhancements to the Predator weapon system to include: aircraft and Ground Control Stations (GCS) and associated software, sensors, communication equipment, training systems and support elements. The system is designed to be modular and open-ended. Mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called Unmanned Aircraft Vehicle, UAV) designed to operate over-the-horizon for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack capability to aggressively prosecute Time Sensitive Targets (TSTs). The aircraft is configured to carry Hellfire laser-guided missiles. The MQ-1 operates primarily at medium altitudes, integrating with joint aerospace, ground, and maritime forces as well as coalition and Allied forces, to execute combatant commander (COCOM) priority missions. The aircraft carries a Multi-spectral Targeting System (MTS) (a sensor turret that incorporates Electro-Optical (EO), Infra-Red (IR), laser designator, and IR illuminator) capable of transmitting real-time Full Motion Video (FMV) imagery throughout the operational theater.

The GCS, common with the MQ-9 Reaper, functions as the aircraft cockpit and can control the aircraft either within Line-of-Sight (LOS) or Beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual control; allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display a common operational picture; and provide support functions. Additionally, GCS allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS.

This program will address interoperability among developed systems through common standards and tools. It will continue to address reliability and maintainability, safety of flight, and warfighter needs as they arise.

The FY2016 funding request was reduced by \$0.198 million to account for the availability of prior execution balances.

In FY2016 0305219F Predator will be completed.

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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.					
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	0.760	1.378	0.919	-	0.919
Current President's Budget	0.760	-	0.716	-	0.716
Total Adjustments	-	-1.378	-0.203	-	-0.203
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.378			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.203	-	-0.203
Change Summary Explanation					
Reduction of \$1.378 million in FY15 due to FY15 Appropriation Act with comment, "Improving Funds Management: Air Force Divesting MQ-1 Fleet."					
The FY2016 funding request was reduced by \$0.198 million to account for the availability of prior execution balances.					
C. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: OGC	0.233	-	0.172	-	0.172
Description: Other Government Costs (OGC)					
FY 2014 Accomplishments: Continued OGC					
FY 2015 Plans: N/A					
FY 2016 Base Plans: Will continue OGC					
FY 2016 OCO Plans: N/A					
Title: ST&E	0.060	-	-	-	-

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Description: Systems Test & Evaluation (ST&E)  FY 2014 Accomplishments: Continued ST&E  FY 2015 Plans: N/A  FY 2016 Base Plans: N/A  FY 2016 OCO Plans: N/A						
Title: PMATS  Description: Predator Mission Aircrew Training System (PMATS)  FY 2014 Accomplishments: Completed PMATS development to keep the training system current with other MQ-1 CCI development activities  FY 2015 Plans: N/A  FY 2016 Base Plans: N/A  FY 2016 OCO Plans: N/A		0.197	-	-	-	-
Title: CCI  Description: Critical Capabilities Integration (CCI) is an overarching MQ-1 modernization activity that will integrate Hellfire R Software and Airborne Cueing and Exploitation System Hyperspectral Sensor (ACES HY).  FY 2014 Accomplishments: Continued CCI Hellfire R activities  FY 2015 Plans:		0.270	-	0.544	-	0.544

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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>											
					<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>		
N/A											
<b>FY 2016 Base Plans:</b> Will complete CCI efforts, including integrating latestest version of Hellfire (Hellfire R) software and Airborne Cueing and Exploitation System Hyperspectral Sensor (ACES HY)											
<b>FY 2016 OCO Plans:</b> N/A											
<b>Accomplishments/Planned Programs Subtotals</b>					0.760	-	0.716	-	0.716		
<b>D. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• APAF: BA05: Line Item # PRDT01: MQ-1 MODS	6.526	4.755	3.173	-	3.173	-	-	-	-	-	43.689
• APAF: BA06: Line Item # PRDT01: INITIAL SPARES	1.420	1.821	1.469	-	1.469	0.957	0.058	-	-	-	10.932
<b>Remarks</b>											
<b>E. Acquisition Strategy</b> The MQ-1 Predator system will be acquired via sole-source acquisition strategies with General Atomics-ASI and Raytheon as the prime contractors.											
<b>F. Performance Metrics</b> 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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305219F / MQ-1 Predator A UAV				Project (Number/Name) 675143 / Predator					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMATS	Various	L3 Comm : Binghamton, NY	-	0.188	Feb 2014	-		-		-		-	-	0.188	30.273
CCI	SS/CPIF	General Atomics - ASI : Poway, CA	-	0.252	Sep 2014	-		0.544	Jan 2016	-		0.544	-	0.796	19.446
Prior Year Completed Projects	Various	Not specified. : ,	-	-		-		-		-		-	-	-	288.238
Subtotal			-	0.440		-		0.544		-		0.544	-	0.984	337.957
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various : Various,	-	0.060	Aug 2014	-		-		-		-	-	0.060	9.696
Subtotal			-	0.060		-		-		-		-	-	0.060	9.696
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Government Costs and PMA	Various	Various : Various,	-	0.260	Dec 2013	-		0.172	Dec 2015	-		0.172	-	0.432	6.320
Subtotal			-	0.260		-		0.172		-		0.172	-	0.432	6.320

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	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.760		-		0.716		-		0.716	-	1.476	353.973

Remarks

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2016 Air Force	<b>Date:</b> February 2015
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<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305219F / MQ-1 Predator A UAV	<b>Project (Number/Name)</b> 675143 / Predator
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
OGC, Urgent Services																												
ST&E																												
Predator Mission Aircrew Training System (PMATS)																												
Critical Capabilities Integration (CCI)																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Air Force			<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305219F / MQ-1 Predator A UAV	<b>Project (Number/Name)</b> 675143 / Predator	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
OGC, Urgent Services	1	2014	4	2016
ST&E	1	2014	2	2016
Predator Mission Aircrew Training System (PMATS)	1	2014	4	2014
Critical Capabilities Integration (CCI)	1	2014	2	2016