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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305219A I MQ-1 Gray Eagle UAV							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	13.470	9.574	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	23.044
MQ1: MQ-1 Gray Eagle - Army UAV (MIP)	-	13.470	9.574	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	23.044

A. Mission Description and Budget Item Justification

The MQ-1C Gray Eagle provides the Army with an extended range, multi-purpose (ERMP) unmanned aircraft system (UAS); capable of executing reconnaissance, security, attack, and intelligence collection missions in the range of military operations (ROMO). Sensors/payloads include an Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Signals Intelligence (SIGINT), and HELLFIRE missiles; providing a near all-weather mission capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	30.970	9.574	0.000	-	0.000
Current President's Budget	13.470	9.574	0.000	-	0.000
Total Adjustments	-17.500	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• FY17 Amendment not appropriated	-17.500	-	-	-	-

Change Summary Explanation

The Fiscal Year (FY) 2017 increase requests MQ-1C Gray Eagle funding of \$17.500 million to support development of Cyber Threat assessment activities and design and integration efforts.

The Fiscal Year (FY) 2018 MQ-1C Gray Eagle funding of \$9.574 million will support Test and Evaluation efforts associated with the MQ-1C Gray Eagle Extended Range Engineering Change Proposal (ECP). The test effort will evaluate the changes to materiel (Extended Range Gray Eagle). The types of effort required include Environmental Testing, Electromagnetic Environmental Effects (E3) testing, transport/mobility testing, logistics demonstration, and Follow-On Operational Test and Evaluation (FOTE II).

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV				Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
MQ1: MQ-1 Gray Eagle - Army UAV (MIP)	-	13.470	9.574	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	23.044
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The MQ-1C Gray Eagle provides the Army with an extended range, multi-purpose (ERMP) unmanned aircraft system (UAS); capable of executing reconnaissance, security, attack, and intelligence collection missions in the range of military operations (ROMO). Sensors/payloads include an Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Signals Intelligence (SIGINT), and HELLFIRE missiles; providing a near all-weather mission capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities.

The Fiscal Year (FY) 2018 MQ-1 Gray Eagle funding of \$9.574 million will support Test and Evaluation efforts associated with the MQ-1C Gray Eagle Extended Range Engineering Change Proposal (ECP). The test effort will evaluate overall system level performance to ensure it meets developmental and operational requirements. The types of effort required include Environmental Testing, Electromagnetic Environmental Effects (E3) testing, transport/mobility testing, logistics demonstration, and Follow-On Operational Test and Evaluation (FOTE II).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: MQ-1C Gray Eagle Extended Range - Testing	13.470	9.574	-	-	-
Description: MQ-1C ER Testing					
FY 2018 Plans: The FY2018 efforts will complete trans/mobility for Gray Eagle along with testing and evaluation of MQ1C Gray Eagle Extended Range system hardware.					
FY 2018 to FY 2019 Increase/Decrease Statement: MQ-1C Extended Range testing completed.					
Accomplishments/Planned Programs Subtotals	13.470	9.574	-	-	-

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

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• A00005: A00005	55.388	30.206	0.000	-	0.000	-	-	-	-	0.000	85.594
• AA6601: AA6601	-	74.291	98.640	92.000	190.640	34.030	15.970	-	2.263	Continuing	Continuing

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Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV			Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2019</u>	<u>FY 2019</u>	<u>FY 2019</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Complete</u>	<u>Total Cost</u>
• EB6: 273744 EB6	-	39.362	17.896	-	17.896	6.764	4.321	0.223	0.165	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
<p>An Extended Range Multi-Purpose (ERMP) Operational Requirement Document (ORD) was approved by the Joint Requirement Oversight Council (JROC) 6 Apr 2005. Milestone B occurred on 20 Apr 2005, and the System Development and Demonstration contract was awarded 8 Aug 2005, as a result of a competitive solicitation which included a vendor system capabilities demonstration. A Capabilities Production Document (CPD), version 8.7 was approved on 17 Jul 15. MQ-1C Gray Eagle completed FOTE 12 Jun 2015. On 14 Jul 2015, the trigger Configuration Steering Board (CSB) concurred with the Course of Action (COA) to validate the revised requirement for the Echelons Above Division (EAD) Gray Eagle and grant authorities through a new Acquisition Decision memorandum (ADM) to pursue the extended range capable Gray Eagle configuration. ER is an enhanced derivative of the MQ-1C Gray Eagle UAS and closes the capability gap by delivering extended surveillance coverage which supports Army RSTA missions in excess of 34 hours. ER's extended range provides the capacity for multi-intelligence payloads, precision strike capability, and reconnaissance in support of Special Operations Forces (SOF), Mission command from Aerial Intelligence Brigade (AIB) and U.S. Army Special Operations Command (USASOC). The Gray Eagle Research, Development, Test, and Evaluation (RDTE) acquisition strategy emphasis will be to complete Developmental test events (Environmental, E3, Transportability, & Performance Tests) to define and address system risks, followed by a FOTE II for the IGE.</p>											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV				Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Program Management	MIPR	PM UAS : Redstone Arsenal, AL	9.066	-		-		-		-		-	0.000	9.066	-
Subtotal			9.066	-		-		-		-		-	0.000	9.066	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Development Engineering	C/CPIF	General Atomics / ASI : San Diego, CA	165.070	-		-		-		-		-	0.000	165.070	-
Prototype Manufacturing	Various	General Atomics / ASI : San Diego, CA	213.776	-		-		-		-		-	0.000	213.776	-
Ground Support Equipment	C/CPIF	Various : Various	9.075	-		-		-		-		-	0.000	9.075	-
Ground Base Sense & Avoid (GBSAA)	SS/CPFF	Various : Various	16.445	-		-		-		-		-	0.000	16.445	-
Software / Hardware Development	SS/CPIF	General Atomics : San Diego, CA	95.179	-		-		-		-		-	0.000	95.179	-
Common System Integration (CSI) Obsolescence	SS/CPFF	General Dynamics Mission Systems/ Various : Various	19.985	-		-		-		-		-	0.000	19.985	-
MQ-1C Gray Eagle Extended Range - Longbow Integration	SS/CPFF	GA-ASI : Poway, CA	2.300	-		-		-		-		-	0.000	2.300	-
Subtotal			521.830	-		-		-		-		-	0.000	521.830	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Contractor Engineering Support	MIPR	Ft. Huachuca : Ft. Huachuca	24.501	-		-		-		-		-	0.000	24.501	-

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Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Training and Training Equipment	MIPR	Ft. Huachuca : Ft. Huachuca	43.892	-		-		-		-		-	0.000	43.892	-
Government Engineering Support	C/FFP	Various : Various	18.859	-		-		-		-		-	0.000	18.859	-
Subtotal			87.252	-		-		-		-		-	0.000	87.252	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 and Evaluation	MIPR	Various Government Agencies : Various Government Agencies	81.768	-		-		-		-		-	0.000	81.768	-
MQ-1C Gray Eagle Extended Range Development Testing and Software Testing	MIPR	Various Test Agencies : Various Test Agencies	-	13.470	Jan 2017	9.574		-		-		-	0.000	23.044	-
Subtotal			81.768	13.470		9.574		-		-		-	0.000	104.812	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			699.916	13.470		9.574		-		-		-	0.000	722.960	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV		Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
Electromagnetic Environmental Effects (E3) Qual Test																												
Operational Test Readiness Review I																												
Electromagnetic Environmental Effects (E3) Qual Test II																												
Environmental Qual Testing																												
Operational Test Readiness Review II																												
First Article Test																												
Operational Test Readiness Review III																												
Logistics Demonstration																												
Follow-on Operational Test and Evaluation II																												
Transport / Mobility Qual Test																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV	Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering and Manufacturing Development	3	2005	4	2013
Critical Design Review	2	2006	2	2006
Operational Assessment	3	2009	3	2010
Milestone C	2	2011	2	2011
Initial Operational Test and Evaluation (IOT&E)	4	2012	4	2012
Engineering Software / Hardware Development	1	2013	1	2014
Electromagnetic Environmental Effects (E3) Qual Test	2	2017	3	2017
Operational Test Readiness Review I	3	2017	3	2017
Electromagnetic Environmental Effects (E3) Qual Test II	3	2017	3	2017
Environmental Qual Testing	3	2017	4	2017
Operational Test Readiness Review II	4	2017	4	2017
First Article Test	4	2017	1	2018
Operational Test Readiness Review III	1	2018	1	2018
Logistics Demonstration	1	2018	2	2018
Follow-on Operational Test and Evaluation II	3	2018	3	2018
Transport / Mobility Qual Test	3	2018	4	2018