| Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army | | | | | | | | | | | Date: May 2017 | |

| Appropriation/Budget Activity
2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development* | | | | | | R-1 Program Element (Number/Name)
PE 0607143A *I Unmanned Aircraft System Universal Products* | | | | | | |

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	38.463	-	38.463	25.794	6.794	5.651	6.271	Continuing	Continuing
EX1: *Unmanned Aircraft Systems Universal Products*	-	0.000	0.000	38.463	-	38.463	25.794	6.794	5.651	6.271	Continuing	Continuing

A. Mission Description and Budget Item Justification

Note:
The Universal product program was previously funded under 0203744A Gray Eagle Modifications and 0305233A Shadow Modifications.

The Universal Products consist of the Universal Ground Control Station (UGCS), the Universal Ground Data Terminal (UGDT) and the Universal Mission Simulator (UMS). The Universal Products will be capable of flight and payload control of multiple unmanned aircraft systems. Protected in a climate-controlled, standard S-280 or S-788 U.S. Army shelter and mounted on either a standard Army FMTV or HMMWV, the UGCS receives and disseminates battlefield video and situational awareness data through state-of-the-art operator consoles. Consoles can be used to provide aircraft command and control, payload control and weapons launch.

The UGDT provides a Line of Sight (LOS) capability for transmit and receipt of UAS command and control, and UAS payload product. The UGDT is the common datalink system for U. S. Army UAS.

The Universal Mission Simulator (UMS) consists of the hardware and software required to fully train UAS operators to full Readiness Level (RL) 1. The UMS will be capable of training and simulating flight and payload control of multiple unmanned aircraft systems and features Directorate of Simulation (DOS) accredited Shadow software and Gray Eagle software.

Justification: FY2018 Universal Product Base funding of $38.867 will be used for starting the development of modifications needed to address UGCS obsolescence, maintain interoperability, increase commonality (including a controller to support weapons), and continue development of training devices in support of Trainer System Engineering, Software/System Sustainment, Currency, and Field Support.

Exhibit R-2, **RDT&E Budget Item Justification:** FY 2018 Army			**Date:** May 2017		
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development*			**R-1 Program Element (Number/Name)** PE 0607143A *I Unmanned Aircraft System Universal Products*		

B. Program Change Summary ($ in Millions)	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	38.463	-	38.463
Total Adjustments	0.000	0.000	38.463	-	38.463
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	0.000	0.000	0.001	-	0.001
• New APE - Initial Funding	0.000	0.000	38.462	-	38.462

Change Summary Explanation

New Funding APE, thus no funding in previous President's Budget.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army											Date: May 2017	

| Appropriation/Budget Activity 2040 I 7 | | | | R-1 Program Element (Number/Name) PE 0607143A I Unmanned Aircraft System Universal Products | | | | Project (Number/Name) EX1 I Unmanned Aircraft Systems Universal Products | | | | |

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
EX1: *Unmanned Aircraft Systems Universal Products*	-	0.000	0.000	38.463	-	38.463	25.794	6.794	5.651	6.271	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Note
The Universal product program was previously funded under 0203744A Gray Eagle Modifications MQ-1 and 0305233A Shadow Modifications RQ 7.

The Universal Products consist of the Universal Ground Control Station (UGCS), the Universal Ground Data Terminal (UGDT) and the Universal Mission Simulator (UMS). The Universal Products will be capable of flight and payload control of multiple unmanned aircraft systems. Protected in a climate-controlled, standard S-280 or S-788 U.S. Army shelter and mounted on either a standard Army FMTV or HMMWV, the UGCS receives and disseminates battlefield video and situational awareness data through state-of-the-art operator consoles. Consoles can be used to provide aircraft command and control, payload control and weapons launch.

The UGDT provides a Line of Sight (LOS) capability for transmit and receipt of UAS command and control, and UAS payload product. The UGDT is the common datalink system for U. S. Army UAS.

The Universal Mission Simulator (UMS) consists of the hardware and software required to fully train UAS operators to full Readiness Level (RL) 1. The UMS will be capable of training and simulating flight and payload control of multiple unmanned aircraft systems and features Directorate of Simulation (DOS) accredited Shadow software and Gray Eagle software.

Justification: FY2018 Universal Product Base funding of $38.463 will be used for starting the development of modifications needed to address UGCS obsolescence, maintain interoperability, increase commonality (including a controller to support weapons), and continue development of training devices in support of Trainer System Engineering, Software/System Sustainment, Currency, and Field Support.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: Universal Products (UGCS and UGDT) Improvements	-	-	33.009
Description: Funding is provided for the following Universal Product improvements			
FY 2018 Plans:			

Exhibit R-2A, **RDT&E Project Justification:** FY 2018 Army		**Date:** May 2017
Appropriation/Budget Activity 2040 *I* 7	**R-1 Program Element (Number/Name)** PE 0607143A *I Unmanned Aircraft System Universal Products*	**Project (Number/Name)** EX1 *I Unmanned Aircraft Systems Universal Products*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2016**	**FY 2017**	**FY 2018**
Development of Universal Products Improvements - Funding supports starting development of Hardware, Software and documentation to ensure a supportable UGCS and UGDT that is interoperable and increases commonality. The UGCS and UGDT will be used across Army UAS.			
Title: Training Device Improvements **Description:** Funding is provided for the following training device improvements **FY 2018 Plans:** Funding supports starting development and integration of hardware, software and documentation to support updated training capabilities utilizing the UMS and UGCS.	-	-	5.454
Accomplishments/Planned Programs Subtotals	-	-	38.463

C. Other Program Funding Summary ($ in Millions)
 N/A
Remarks

D. Acquisition Strategy
 The Universal Products began full rate production as a part of the MQ-1C and RQ-7 programs of record (both ACAT 1C) after Milestone III/C decisions were reached for both programs. Continued development of the Universal Products will be accomplished through a series of modifications and retrofits. Individual development/ integration efforts will be based on competitive awards. Expected to award in May 2018 timeframe and will result in a Cost Plus Fixed Fee contracts.

E. Performance Metrics
 N/A

Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Army													Date: May 2017		

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607143A / Unmanned Aircraft System Universal Products	Project (Number/Name) EX1 / Unmanned Aircraft Systems Universal Products

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Universal Products (UGCS and UGDT) Improvements	C/CPFF	TBD : TBD	0.000	-		-		33.009	May 2018	-		33.009	0.000	33.009	0.000
Training Device Improvements	C/CPFF	TBD : TBD	0.000	-		-		5.454	May 2018	-		5.454	0.000	5.454	0.000
Subtotal			0.000	-		-		38.463		-		38.463	0.000	38.463	0.000

	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	0.000	38.463	-	38.463	0.000	38.463	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: FY 2018 Army			Date: May 2017
Appropriation/Budget Activity 2040 *I* 7	**R-1 Program Element (Number/Name)** PE 0607143A *I Unmanned Aircraft System Universal Products*	**Project (Number/Name)** EX1 *I Unmanned Aircraft Systems Universal Products*	

Event Name	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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
Universal Products (UGCS and UGDT) Improvements																												
Training Device Improvements																												

UGCS/UGDT Improve

Trng Dev Imporve

Exhibit R-4A, RDT&E Schedule Details: FY 2018 Army				**Date:** May 2017	
Appropriation/Budget Activity 2040 *I* 7		**R-1 Program Element (Number/Name)** PE 0607143A *I Unmanned Aircraft System Universal Products*		**Project (Number/Name)** EX1 *I Unmanned Aircraft Systems Universal Products*	

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Universal Products (UGCS and UGDT) Improvements	3	2018	4	2022
Training Device Improvements	3	2018	4	2022