Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy											Date: February 2016	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305232M *I RQ-11 UAV*							
COST ($ in Millions)	**Prior Years**	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Cost To Complete**	**Total Cost**
Total Program Element	2.125	0.682	0.635	0.418	-	0.418	1.510	0.515	0.501	0.512	Continuing	Continuing
2292: *RQ-11 UAV*	2.125	0.682	0.635	0.418	-	0.418	1.510	0.515	0.501	0.512	Continuing	Continuing

Note

Prior to FY2010 RQ-11 Unmanned Aerial Vehicle (UAV) was funded in PE 0206313M, project C2273.

The FY 2017 funding request was reduced by $0.061 million to account for the availability of prior year execution balances.

A. Mission Description and Budget Item Justification

The Small Unit Remote Scouting System (SURSS) - The SURSS program procures an unmanned aircraft system (UAS) to provide the company/detachment level with scalable airborne reconnaissance and surveillance to aid in detecting, identifying, engaging, or avoiding enemy units. In December of 2013 the Approved Acquisition Objective (AAO) for the SURSS program was changed to include the RQ-12 Wasp, RQ-11 Raven, and RQ-20 Puma as the material solutions for the Block 0, Block 1, and Block 2 requirements of the SURSS requirement document.

RQ-12 Wasp (Block 0) - Wasp is a small UAS consisting of 2 air vehicles and a Ground Control Station (GCS). The air vehicle has an overall length of 40 inches with a weight of approximately 2.25 pounds. The payload consists of a gimbaled turret with Electro Optical/Infrared (EO/IR) sensor and uses an encrypted data link. It provides near real time reconnaissance required by the platoon and rifle squad which reduces the Intelligence, Surveillance, and Reconnaissance (ISR)request-to-response timeframe and eliminates delays or denials for coverage due to an imbalance of unmanned air systems to requests. Wasp is used for remote reconnaissance and surveillance, force protection, convoy security, target acquisition, and battle damage assessment. A Wasp system consists of two air vehicles, two GCSs, and one reconnaissance, surveillance, and target acquisition (RSTA) kit.

RQ-11 Raven (Block 1)- Raven is a five pound, hand launched, reusable vehicle with a span of 55 inches. The air vehicle flies at an altitude of 300-500 feet above ground level at a speed of approximately 35 knots and has a maximum duration of 90 minutes. Ravens interchangeable payloads, autopilot and propulsion system are commercial-off-the shelf (COTS) subsystems. The GCS uses a rugged hand controller connected to a communication control box. A Raven system consists of three air vehicles, two GCS, one RSTA kit and one field repair kit (FRK). The RSTA kit is used for mission planning, autonomous flight operations, and mission product archiving. The FRK contains consumable items used during operations and maintenance.

RQ-20 Puma (Block 2) - Puma is an all environment UAS system providing ISR to Route Clearance Platoons (RCP) and Combat Logistics Patrols (CLP). Puma allows RCPs and CLPs to scan an area prior to entry, in order to detect Improvised Explosive Devices (IEDs), IED material, IED emplacement teams, and after exiting, monitor for re-seeding. Puma is a hand launched UAS with a wing span of 9.2 feet, weighing 13lbs per air vehicle, and aerial observation ranges up to 28 kilometers. The payload consists of a gimbaled turret with an EO/IR sensor and used encrypted digital data link. Puma can be recovered in very tight areas using a vertical descent auto land. A Puma system consists of two air vehicles, two GCSs, and one RSTA kit. A SIGINT variant of the Puma is also available.

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy	Date: February 2016
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305232M *I RQ-11 UAV*

SURSS has transitioned from an eight channel to a Digital Data Link (DDL). SURSS is developing and procuring a Single Operator Man-Portable Ground Control System (SOMGCS), mobile ad-hoc network (MANET), laser marker, high endurance batteries, and rapid charging capability.

Prior years include funds associated with the RQ-21A system while it was funded as a separate project under the RQ-11 program. RQ-21A is currently funded under PE 0305239M and LI 4737.

B. Program Change Summary ($ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	0.718	0.635	0.484	-	0.484
Current President's Budget	0.682	0.635	0.418	-	0.418
Total Adjustments	-0.036	0.000	-0.066	-	-0.066
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.036	0.000			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-0.066	-	-0.066

Change Summary Explanation

The FY 2017 funding request was reduced by $0.061 million to account for the availability of prior year execution balances.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / *RQ-11 UAV*	Project (Number/Name) 2292 / *RQ-11 UAV*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
2292: *RQ-11 UAV*	2.125	0.682	0.635	0.418	-	0.418	1.510	0.515	0.501	0.512	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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RQ-12 Wasp (Block 0) - Wasp is a small UAS consisting of 2 air vehicles and a Ground Control Station (GCS). The air vehicle has an overall length of 40 inches with a weight of approximately 2.25 pounds. The payload consists of a gimbaled turret with Electro Optical/Infrared (EO/IR) sensor and uses an encrypted data link. It provides near real time reconnaissance required by the platoon and rifle squad which reduces the Intelligence, Surveillance, and Reconnaissance (ISR)request-to-response timeframe and eliminates delays or denials for coverage due to an imbalance of unmanned air systems to requests. Wasp is used for remote reconnaissance and surveillance, force protection, convoy security, target acquisition, and battle damage assessment. A Wasp system consists of two air vehicles, two GCSs, and one reconnaissance, surveillance, and target acquisition (RSTA) kit.

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SURSS has transitioned from an eight channel to a Digital Data Link (DDL). SURSS is developing and procuring a Single Operator Man-Portable Ground Control System (SOMGCS), mobile ad-hoc network (MANET), laser marker, high endurance batteries, and rapid charging capability.

Prior years include funds associated with the RQ-21A system while it was funded as a separate project under the RQ-11 program. RQ-21A is currently funded under PE 0305239M and LI 4737.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305232M / *RQ-11 UAV*	**Project (Number/Name)** 2292 / *RQ-11 UAV*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Product Development and Support	0.682	0.635	0.418	0.000	0.418
Articles:	-	-	-	-	-
FY 2015 Accomplishments: -Continued TSN2 effort and transitioned to Single Operator Man-Portable Ground Control Station (SOMGCS), conducted Reliability, Maintainability, and Availability Analysis on Electric Optical/Infrared gimbal payloads. -Completed field user evaluation of universal tactical controller dual screen configuration. -Initiated assessment of advanced payloads and technologies to include; high endurance batteries, tactical launchers, directional antennas, and SIGINT payloads. -Initiated Single Operator Man-portable Ground Control Station (SOMGCS) development.					
FY 2016 Plans: -Continue SOMGCS development. -Initiate development and integration of Meshed Area Networks (MANET). -Initiate and complete development and integration of electronic warfare capability. -Initiate assessment of laser marker. -Initiate assessment of rapid charging capabilities.					
FY 2017 Base Plans: -Continue development and integration of communication relay. -Complete SOMGCS development and transition to production. -Initiate field user assessment of laser marker.					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.682	0.635	0.418	0.000	0.418

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• PMC/4757: *RQ-11 UAV*	4.477	13.430	1.976	3.817	5.793	14.078	0.708	0.799	0.899	1.012	133.589

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305232M / *RQ-11 UAV*	**Project (Number/Name)** 2292 / *RQ-11 UAV*

D. Acquisition Strategy

The program office is pursuing a rapid acquisition approach to quickly field new technology and capabilities to the warfighter. The strategy is to use evolutionary acquisition with incremental developments to meet the final desired Small Unit Remote Scouting System (SURSS) requirements (Joint USMC/USA/SOCOM capabilities). The next increment will involve an evolution to a Group 1 (Family of System) individually capable of executing requirements for long, medium and short range missions in fulfillment of the SURSS requirement.

E. Performance Metrics

Fielded joint material solution.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy			Date: February 2016
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / *RQ-11 UAV*	Project (Number/Name) 2292 / *RQ-11 UAV*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	Various : Various	1.342	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
SOMGCS Development	MIPR	PM UAS : Huntsville, AL	0.000	0.232	May 2015	0.203	Jan 2016	0.100	Jan 2017	-		0.100	Continuing	Continuing	Continuing
MANET Development	WR	NAWCAD : Pax River, MD	0.000	0.220	Feb 2015	0.230	Jan 2016	0.158	Jan 2017	-		0.158	0.000	0.608	-
		Subtotal	1.342	0.452		0.433		0.258		-		0.258	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Analysis	WR	NAWCAD : Pax River, MD	0.783	0.230	Feb 2015	0.202	Nov 2015	0.160	Nov 2016	-		0.160	Continuing	Continuing	Continuing
		Subtotal	0.783	0.230		0.202		0.160		-		0.160	-	-	-

	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.125	0.682		0.635		0.418		-		0.418	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305232M / *RQ-11 UAV*	**Project (Number/Name)** 2292 / *RQ-11 UAV*

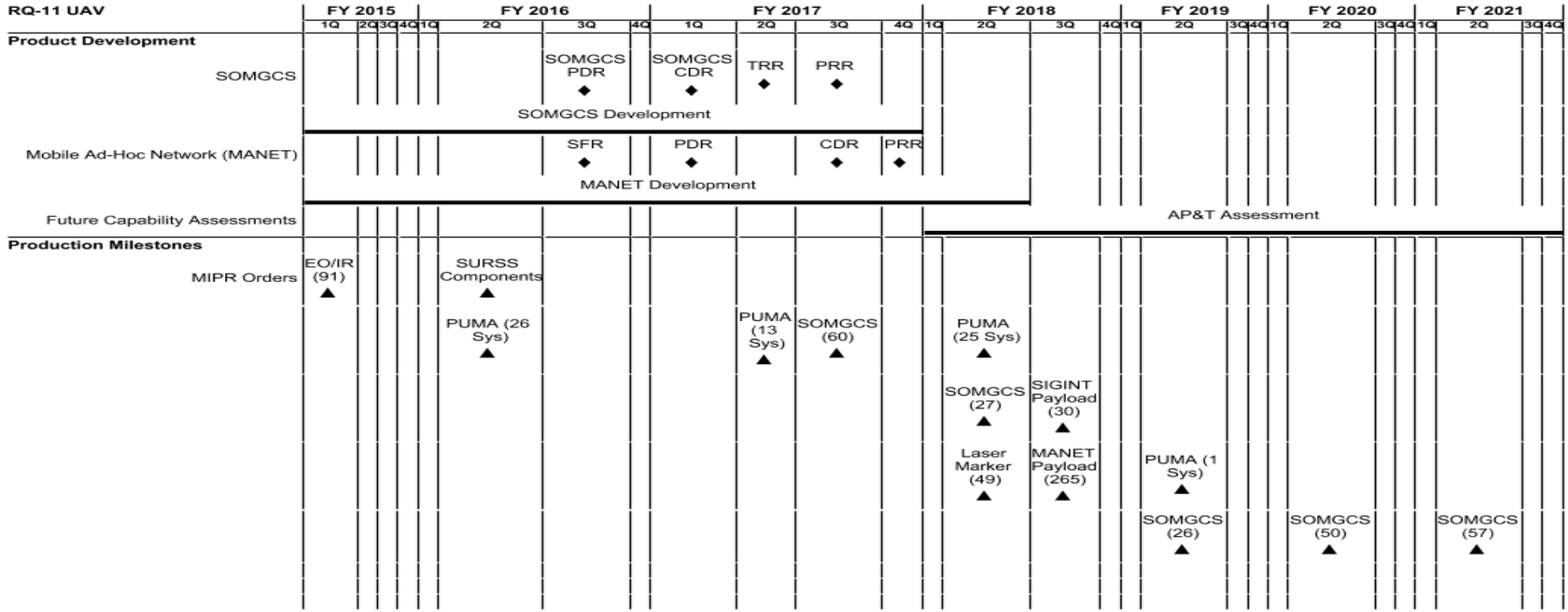

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305232M / *RQ-11 UAV*	**Project (Number/Name)** 2292 / *RQ-11 UAV*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
RQ-11 UAV				
Product Development: SOMGCS: Product Development Review	3	2016	3	2016
Product Development: SOMGCS: Component Developemnt Review	1	2017	1	2017
Product Development: SOMGCS: Technical Readiness Review	2	2017	2	2017
Product Development: SOMGCS: Production Readiness Review	3	2017	3	2017
Product Development: SOMGCS: SOMGCS Development (Formerly TSN2)	1	2015	4	2017
Product Development: Mobile Ad-Hoc Network (MANET): System Functional Review	3	2016	3	2016
Product Development: Mobile Ad-Hoc Network (MANET): Product Development Review	1	2017	1	2017
Product Development: Mobile Ad-Hoc Network (MANET): Component Development Review	3	2017	3	2017
Product Development: Mobile Ad-Hoc Network (MANET): Production Readiness Review	4	2017	4	2017
Product Development: Mobile Ad-Hoc Network (MANET): MANET Development	1	2015	2	2018
Product Development: Future Capability Assessments: Advanced Payload and Technology Assessment	1	2018	4	2021
Production Milestones: MIPR Orders: FY15 EO/IR	1	2015	1	2015
Production Milestones: MIPR Orders: FY16 SURSS Components	2	2016	2	2016
Production Milestones: MIPR Orders: FY16 PUMA	2	2016	2	2016
Production Milestones: MIPR Orders: FY17 PUMA	2	2017	2	2017
Production Milestones: MIPR Orders: FY17 SOMGCS	3	2017	3	2017
Production Milestones: MIPR Orders: FY18 PUMA	2	2018	2	2018
Production Milestones: MIPR Orders: FY18 SOMGCS	2	2018	2	2018
Production Milestones: MIPR Orders: FY18 SIGINT Payloads	3	2018	3	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305232M / *RQ-11 UAV*	**Project (Number/Name)** 2292 / *RQ-11 UAV*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: MIPR Orders: FY18 MANET Payloads	3	2018	3	2018
Production Milestones: MIPR Orders: FY18 Laser Designator	2	2018	2	2018
Production Milestones: MIPR Orders: FY19 PUMA	2	2019	2	2019
Production Milestones: MIPR Orders: FY19 SOMGCS	2	2019	2	2019
Production Milestones: MIPR Orders: FY20 SOMGCS	2	2020	2	2020
Production Milestones: MIPR Orders: FY21 SOMGCS	2	2021	2	2021

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