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 0305242M *I (U)Unmanned Aerial Systems (UAS) Payloads*							
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	0.000	1.900	9.246	11.181	-	11.181	11.412	7.022	3.758	3.841	Continuing	Continuing
2298: *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	0.000	1.900	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.900
5501: *Signals Intelligence (SIGINT)*	0.000	0.000	5.564	6.062	-	6.062	5.588	3.876	2.742	2.802	Continuing	Continuing
5502: *Synthetic Aperture Radar/ Motion Target Indicator (SAR/ MTI)*	0.000	0.000	3.682	5.119	-	5.119	5.824	3.146	1.016	1.039	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Unmanned Aerial Systems (UAS) Payloads integration program will alleviate Marine Corps Intelligence, Surveillance and Reconnaissance (ISR) capability gaps caused by rapidly changing missions, threats and technologies. It will provide responsive capability to integrate and support rapid fielding of ISR payloads for all UAS within the Marine Corps. Sensor payloads will increase the effectiveness and versatility of the Marine Corps UAS currently planned to have the Electro-Optic(EO) / Infrared (IR) collection, communications relay, and automatic identification capabilities. Upgrades include, but are not limited to, Signals Intelligence (SIGINT)/ Electronic Warfare Support (ES), Synthetic Aperture Radar (SAR) / Motion Target Indicator (MTI), Wide Area and Hyperspectral Imagery collection.

These payloads provide the Marine Expeditionary Unit (MEU) organic capabilities that facilitate the six functions of Marine Corps Aviation and the Marine Corps Intelligence Surveillance, and Reconnaissance Enterprise across the range of military operations.

The payload development process will follow a Hybrid Acquisition Model of Incremental/Spiral approach while leveraging upon work conducted by various government laboratories such as the Office of Naval Research (ONR), Defense Advanced Research Projects Agency (DARPA), Air Force Research Lab (AFRL), Joint Improvised Threat Defeat Agency (JIDA), the National Security Agency (NSA), and the National Geospatial Agency (NGA). Both SIGINT and SAR payloads will follow similar acquisition paths but on independent time schedules. These acquisition paths will be defined by three (3) phases and each marked by a decision gate. Phase I establishes the preliminary integration design concept and conduct of technology demonstration with validation of a Technology Readiness Level (TRL) 5/6 as the decision gate for Phase II. Phase II establishes full payload-to-Unmanned Aircraft System (UAS) integration during which time all necessary program management, engineering, fabrication, test, and evaluations activities are conducted to achieve Test Article Fabrication, System Test and Evaluation, Integrated Logistics Support (ILS) and Training Concept development, and Data Management and Documentation. Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of TRL 7 or higher constitute the decision gate for Phase III. Phase III is program of record transition which supports a production decision based on the exit criteria from Phase II.

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 0305242M *I (U)Unmanned Aerial Systems (UAS) Payloads*		
B. Program Change Summary ($ in Millions)	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**
Previous President's Budget	2.000	9.246	11.942	-	11.942
Current President's Budget	1.900	9.246	11.181	-	11.181
Total Adjustments	-0.100	0.000	-0.761	-	-0.761
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.100	0.000			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-0.761	-	-0.761

Change Summary Explanation

The funding increase of $1.935M from FY16 to FY17 supports development and integration of payloads such as Signals Intelligence (SIGINT)/ Electronic Warfare Support (ES), and Synthetic Aperture Radar (SAR)/ Motion Target Indicator (MTI) in support of the Marine Corps UAS.

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	

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
2298: *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	0.000	1.900	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.900
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

UAS Payloads was initially established in FY15 under Program Element 0305242M, Project 2298. Project 2298 was also used for Program Element 0305239M, RQ-21A Small Tactical UAS. In order to provide greater detail on payload development, each payload was assigned an individual project number starting in FY16.

In FY15, the UAS Payloads program will continue development of a Signals Intelligence (SIGINT)/ Electronic Warfare Support (ES), and Synthetic Aperture Radar (SAR)/Motion Target Indicator (MTI) payload leveraging existing payloads developed by the U.S. Air Force and U.S. Army, ultimately creating a payload that fits within form and fit dimensions of Marine Corps small tactical unmanned aerial systems. FY15 efforts include technology maturation primarily of SIGINT/ES and secondarily of SAR/MTI technologies including efforts to reduce size, weight, and power requirements in preparation for full scale development efforts commencing in FY16.

SIGINT and SAR/MTI capabilities are vital to the Marine Expeditionary Unit (MEU), the six functions of Marine Corps Aviation and the Marine Corps Intelligence Surveillance, and Reconnaissance Enterprise across the range of military operations. Funding for these efforts are represented in Program Element 0305242M Projects 5501 and 5502 for FY16 and beyond.

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	1.880	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments: - Initiated SIGINT/ES and SAR/MTI technology development and component miniaturization. - Initiated and completed fabrication and bench testing of prototype components for SIGINT/ES payload. - Procured a Group I UAV test system to support cost effective testing of SIGINT payload and payload components.					
FY 2016 Plans: N/A					
FY 2017 Base Plans: N/A					
FY 2017 OCO Plans:					

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
Title: Management Services	0.020	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments: - Initiated development of an Integrated Master Schedule. - Initiated development of Acquisition Strategy, Acquisition Program Baseline and Systems Engineering Plan.					
FY 2016 Plans: N/A					
FY 2017 Base Plans: N/A					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	1.900	0.000	0.000	0.000	0.000

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/4787: *UAS Payloads*	0.000	0.000	2.971	-	2.971	7.057	4.072	0.000	0.000	0.000	14.100

Remarks

D. Acquisition Strategy

The UAS Payload program utilizes a Hybrid Acquisition Model of Incremental/Spiral approach that leverages upon work conducted by various government laboratories in order to field capabilities that meet threshold requirements, and facilitates the six functions of Marine Corps Aviation and the Marine Corps Intelligence Surveillance, and Reconnaissance Enterprise across the range of military operations.

E. Performance Metrics

Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of a technology readiness level of TRL 7 or higher for Program of Record Transition. Successful development of a SIGINT payload, completion of DT/OT, and integration onboard a Marine Corps small tactical UAV.

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*	

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
Systems Engineering	MIPR	DLA : Philadelphia, PA	0.000	0.380	Feb 2015	0.000		0.000		-		0.000	0.000	0.380	-
Government Engineering	WR	NAWCAD : Patuxent River, MD	0.000	1.500	Feb 2015	0.000		0.000		-		0.000	0.000	1.500	-
		Subtotal	0.000	1.880		0.000		0.000		-		0.000	0.000	1.880	-

Remarks

Changes in funding activities and amounts for FY15 in PB16 budget to PB17 are due to the utilization of other customer funds from the Joint IED Defeat Organization (JIEDDO). Prior to the establishment of this PE and funding during PB15 JIEDDO seeded the development effort for both the SIGINT and SAR/MTI payloads. This prior funding was sufficient to continue the required development at the Navy and Air Force Research labs, allowing the shifting of funding to Naval Air Warfare Center Aircraft Division in support of component testing and miniaturization. A Group I UAS was procured to support SIGINT testing due to insufficient test assets available for testing.

Management Services ($ 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
Travel	WR	Various : Various	0.000	0.020	Feb 2015	0.000		0.000		-		0.000	0.000	0.020	-
		Subtotal	0.000	0.020		0.000		0.000		-		0.000	0.000	0.020	-

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.900		0.000		0.000		-		0.000	0.000	1.900	-

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

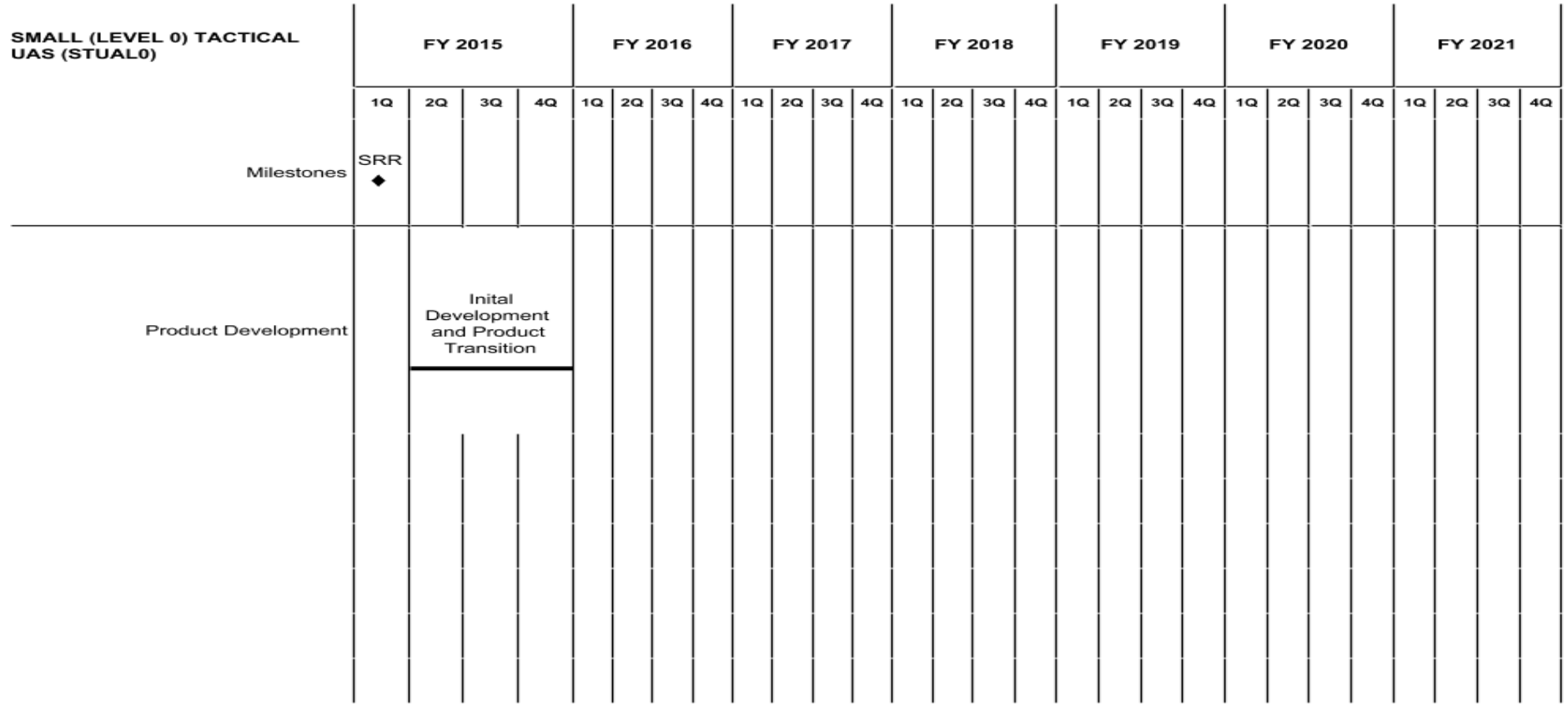

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 2298 / *SMALL (LEVEL 0) TACTICAL UAS (STUAL0)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SMALL (LEVEL 0) TACTICAL UAS (STUAL0)				
Milestones: System Requirements Review	1	2015	1	2015
Product Development: Component Development and Transition to Specific Payloads	2	2015	4	2015

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 5501 / *Signals Intelligence (SIGINT)*	

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
5501: *Signals Intelligence (SIGINT)*	0.000	0.000	5.564	6.062	-	6.062	5.588	3.876	2.742	2.802	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

The FY 2017 funding request was reduced by $0.630 million to account for the availability of prior year execution balances.

A. Mission Description and Budget Item Justification

The UAS Payloads program will develop and integrate a Signals Intelligence (SIGINT)/ Electronic Warfare Support (ES), payload for Marine Corps small tactical UASs. The SIGINT/ES payload will fill current capability gaps for the Marine Corps Intelligence, Surveillance and Reconnaissance (ISR) mission and is required as part of the Marine Corps mission to locate and target adversary Signals of Interest (SOI). The SIGINT/ES payload will leverage payloads previously developed by other Services and/or DoD laboratories to reduce cost and minimize schedule. This project continues efforts started in Program Element 0305242M Project 2298.

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	0.000	2.914	4.062	0.000	4.062
Articles:	-	1	-	-	-
FY 2015 Accomplishments: N/A					
FY 2016 Plans: - Complete SIGINT/ES payload component development. - Complete engineering and experimental tests in preparation for FY17 testing. - Initiate SIGINT/ES payload development. - Initiate construction of a prototype SIGINT/ES system that can receive and process a minimum of four signals of interest (SOI).					
FY 2017 Base Plans: - Complete SIGINT/ES payload development. - Complete construction of a prototype SIGINT/ES system that can receive and process a minimum of four signals of interest (SOI). - Complete developmental tests.					
FY 2017 OCO Plans:					

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5501 / *Signals Intelligence (SIGINT)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
Title: Support ***Articles:*** ***FY 2015 Accomplishments:*** N/A ***FY 2016 Plans:*** - Initiate development of SIGINT/ES payload software to include frequency agile airborne receiver software. ***FY 2017 Base Plans:*** - Complete development of SIGINT/ES payload software to include frequency agile airborne receiver software. ***FY 2017 OCO Plans:*** N/A	0.000 -	0.900 -	1.100 -	0.000 -	1.100 -
Title: Management Services ***Articles:*** ***FY 2015 Accomplishments:*** N/A ***FY 2016 Plans:*** - Complete refinement and documentation of acquisition strategy. - Initiate engineering required for flight clearances. ***FY 2017 Base Plans:*** - Complete required engineering for flight clearances - Initiate Integrated Logistics Support (ILS), Training Concept development and Data Management/ Documentation ***FY 2017 OCO Plans:*** N/A	0.000 -	0.250 -	0.250 -	0.000 -	0.250 -
Title: Test and Evaluation ***Articles:*** ***FY 2015 Accomplishments:***	0.000 -	1.500 -	0.650 -	0.000 -	0.650 -

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5501 / *Signals Intelligence (SIGINT)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A ***FY 2016 Plans:*** - Initiate the establishment of a flight test aircraft support asset and configure flight test aircraft for SIGINT/ES payload flight test activity ***FY 2017 Base Plans:*** - Initiate experimental tests using flight test aircraft configured for SIGINT/ES payload flight test activity ***FY 2017 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	0.000	5.564	6.062	0.000	6.062

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/4787: *UAS Payloads*	0.000	0.000	2.971	-	2.971	7.057	4.072	0.000	0.000	0.000	14.100

Remarks

D. Acquisition Strategy

The UAS Payload program utilizes a Hybrid Acquisition Model of Incremental/Spiral approach that leverages upon work conducted by various government laboratories in order to field capability that meets threshold requirements, facilitates the six functions of Marine Corps Aviation and the Marine Corps Intelligence Surveillance, and Reconnaissance Enterprise across the range of military operations.

E. Performance Metrics

Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of a TRL 7 or higher for Program of Record transition. Successful development of a SIGINT payload, completion of DT/OT, and integration onboard Marine Corps small tactical UAVs.

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 5501 / *Signals Intelligence (SIGINT)*	

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
Systems Engineering	MIPR	AFRL : Dayton, OH	0.000	0.000		2.324	Feb 2016	3.472	Feb 2017	-		3.472	Continuing	Continuing	Continuing
Government Engineering	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.450	Nov 2015	0.450	Nov 2016	-		0.450	Continuing	Continuing	Continuing
Government Logistics	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.140	Nov 2015	0.140	Nov 2016	-		0.140	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		2.914		4.062		-		4.062	-	-	-

Remarks

Funding increases from FY16 to FY17 support the experimental tests using flight test aircraft.

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
Software Engineering Support	MIPR	AFRL : Dayton, OH	0.000	0.000		0.650	Feb 2016	0.850	Feb 2017	-		0.850	Continuing	Continuing	Continuing
Contractor Engineering Support	Various	Various : Patuxent River, MD	0.000	0.000		0.250	Feb 2016	0.250	Feb 2017	-		0.250	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.900		1.100		-		1.100	-	-	-

Test and Evaluation ($ 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
Test Engineering Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		1.500	Nov 2015	0.650	Nov 2016	-		0.650	0.000	2.150	-
		Subtotal	0.000	0.000		1.500		0.650		-		0.650	0.000	2.150	-

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 5501 / *Signals Intelligence (SIGINT)*	

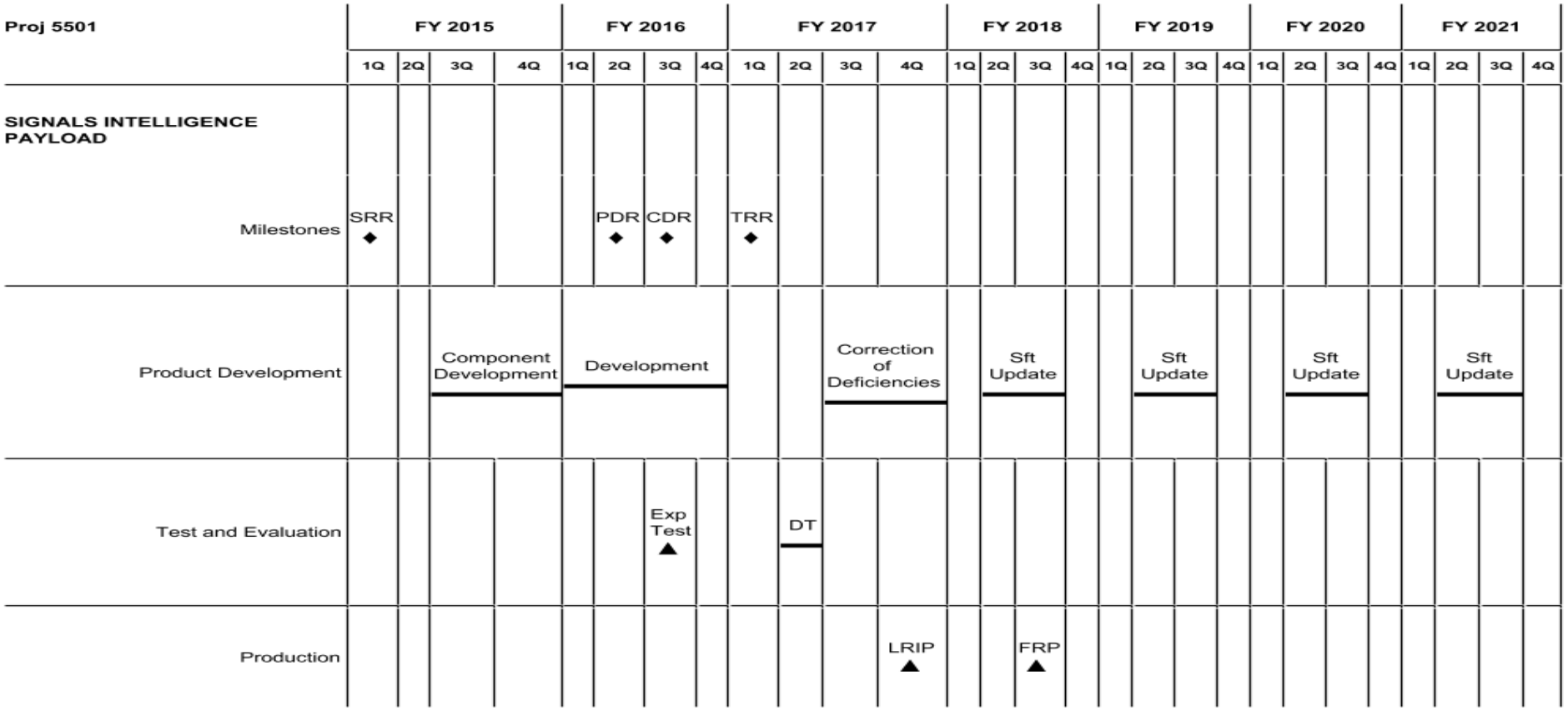
Management Services ($ in Millions)

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
Program Management Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.225	Feb 2016	0.225	Feb 2017	-		0.225	Continuing	Continuing	Continuing
Travel	Various	Various : Various	0.000	0.000		0.025	Nov 2015	0.025	Nov 2016	-		0.025	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.250		0.250		-		0.250	-	-	-

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		5.564		6.062		-		6.062	-	-	-

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5501 / *Signals Intelligence (SIGINT)*



2017PB - 0305242M - 5501

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5501 / *Signals Intelligence (SIGINT)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 5501				
SIGNALS INTELLIGENCE PAYLOAD: Milestones: System Requirements Review	1	2015	1	2015
SIGNALS INTELLIGENCE PAYLOAD: Milestones: Test Readiness Review	1	2017	1	2017
SIGNALS INTELLIGENCE PAYLOAD: Milestones: Product Design Review	2	2016	2	2016
SIGNALS INTELLIGENCE PAYLOAD: Milestones: Critical Design Review	3	2016	3	2016
Product Development: Component Development	3	2015	4	2015
Product Development: Prototype Design and Development	1	2016	4	2016
Product Development: Correction of Deficiencies	3	2017	4	2017
Product Development: Software Development and Updates 1	2	2018	3	2018
Product Development: Software Development and Updates 2	2	2019	3	2019
Product Development: Software Development and Updates 3	2	2020	3	2020
Product Development: Software Development and Updates 4	2	2021	3	2021
Test and Evaluation: Experimental Test	3	2016	3	2016
Test and Evaluation: Developmental Test	2	2017	2	2017
Production: Low Rate Initial Production	4	2017	4	2017
Production: Full Rate Production	3	2018	3	2018

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*	

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
5502: *Synthetic Aperture Radar/ Motion Target Indicator (SAR/ MTI)*	0.000	0.000	3.682	5.119	-	5.119	5.824	3.146	1.016	1.039	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The UAS Payloads program will develop and integrate a Synthetic Aperture Radar (SAR) with Motion Target Indicator (MTI) for Marine Corps small tactical UASs. This capability fills current capability gaps for the Marine Corps Intelligence, Surveillance and Reconnaissance (ISR) mission and will allow Marine Corps ISR assets to locate and track ground targets that cannot effectively be located or tracked with the current ground based sensor technology.

The ability to locate and track moving ground targets from small tactical UAV is an essential capability that facilitates the six functions of Marine Corps Aviation and the Marine Corps Intelligence Surveillance, and Reconnaissance Enterprise across the range of military operations.

The SAR/MTI payload will leverage payloads previously developed by other Services and/or DoD laboratories to reduce cost and minimize schedule. This project continues efforts started in Program Element 0305242M Project 2298.

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	0.000	2.515	3.655	0.000	3.655
Articles:	-	-	-	-	-
FY 2015 Accomplishments: N/A					
FY 2016 Plans: - Continue SAR/MTI payload component development, in preparation for integrated payload development in FY17.					
FY 2017 Base Plans: - Complete SAR/MTI payload development and initiate integrated payload development.					
FY 2017 OCO Plans: N/A					
Title: Management Services	0.000	0.225	0.225	0.000	0.225
Articles:	-	-	-	-	-

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
FY 2015 Accomplishments: N/A ***FY 2016 Plans:*** - Complete refinement and documentation of acquisition strategy. - Initiate mapping of payload requirements to specifications. - Initiate development of an integrated master schedule. ***FY 2017 Base Plans:*** - Complete mapping of payload requirements to specifications. - Complete development of an integrated master schedule. - Initiate engineering required for flight clearances. ***FY 2017 OCO Plans:*** N/A					
Title: Support ***Articles:*** ***FY 2015 Accomplishments:*** N/A ***FY 2016 Plans:*** - Initiate development of SAR/MTI payload software. - Initiate engineering analysis of alternatives for SAR/MTI payload components. ***FY 2017 Base Plans:*** - Complete development of SAR/MTI payload software. - Complete engineering analysis of alternatives for SAR/MTI payload components. ***FY 2017 OCO Plans:*** N/A	0.000 -	0.942 -	1.239 -	0.000 -	1.239 -
Accomplishments/Planned Programs Subtotals	0.000	3.682	5.119	0.000	5.119

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*

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/4787: *UAS Payloads*	0.000	0.000	2.971	-	2.971	7.057	4.072	0.000	0.000	0.000	14.100

Remarks

D. Acquisition Strategy

The UAS Payload program utilizes a Hybrid Acquisition Model of Incremental/Spiral approach that leverages upon work conducted by various government laboratories in order to field capability that meet threshold requirements, and facilitates the six functions of Marine Corps Aviation and the Marine Corps Intelligence Surveillance, and Reconnaissance Enterprise across the range of military operations.

E. Performance Metrics

Validation of funding, derived requirements, project risks, cost and schedule estimates, contracting strategy and achievement of a technology readiness level of a TRL 7 or higher for Program of Record Transition. Successful development of a SIGINT payload, completion of DT/OT, and integration onboard a Marine Corps small tactical UAV.

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*	

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
Systems Engineering	MIPR	AFRL : Dayton, OH	0.000	0.000		1.925	Feb 2016	3.065	Feb 2017	-		3.065	Continuing	Continuing	Continuing
Government Engineering	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.450	Nov 2015	0.450	Nov 2016	-		0.450	Continuing	Continuing	Continuing
Governemnt Logistics	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.140	Nov 2015	0.140	Nov 2016	-		0.140	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		2.515		3.655		-		3.655	-	-	-

Remarks

Funding increases from FY16 to FY17 support the experimental testing to be accomplished by AFRL in FY17.

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
Software Engineering Support	MIPR	AFRL : Dayton, OH	0.000	0.000		0.692	Feb 2016	0.989	Feb 2017	-		0.989	Continuing	Continuing	Continuing
Contractor Engineering Support	Various	Various : Various	0.000	0.000		0.250	Feb 2016	0.250	Feb 2017	-		0.250	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.942		1.239		-		1.239	-	-	-

Management Services ($ 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
Program Management Support	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.200	Feb 2016	0.200	Feb 2017	-		0.200	Continuing	Continuing	Continuing
Travel	Various	Various : Various	0.000	0.000		0.025	Feb 2016	0.025	Feb 2017	-		0.025	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.225		0.225		-		0.225	-	-	-

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	Project (Number/Name) 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*	

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		3.682		5.119		-		5.119	-	-	-

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 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*

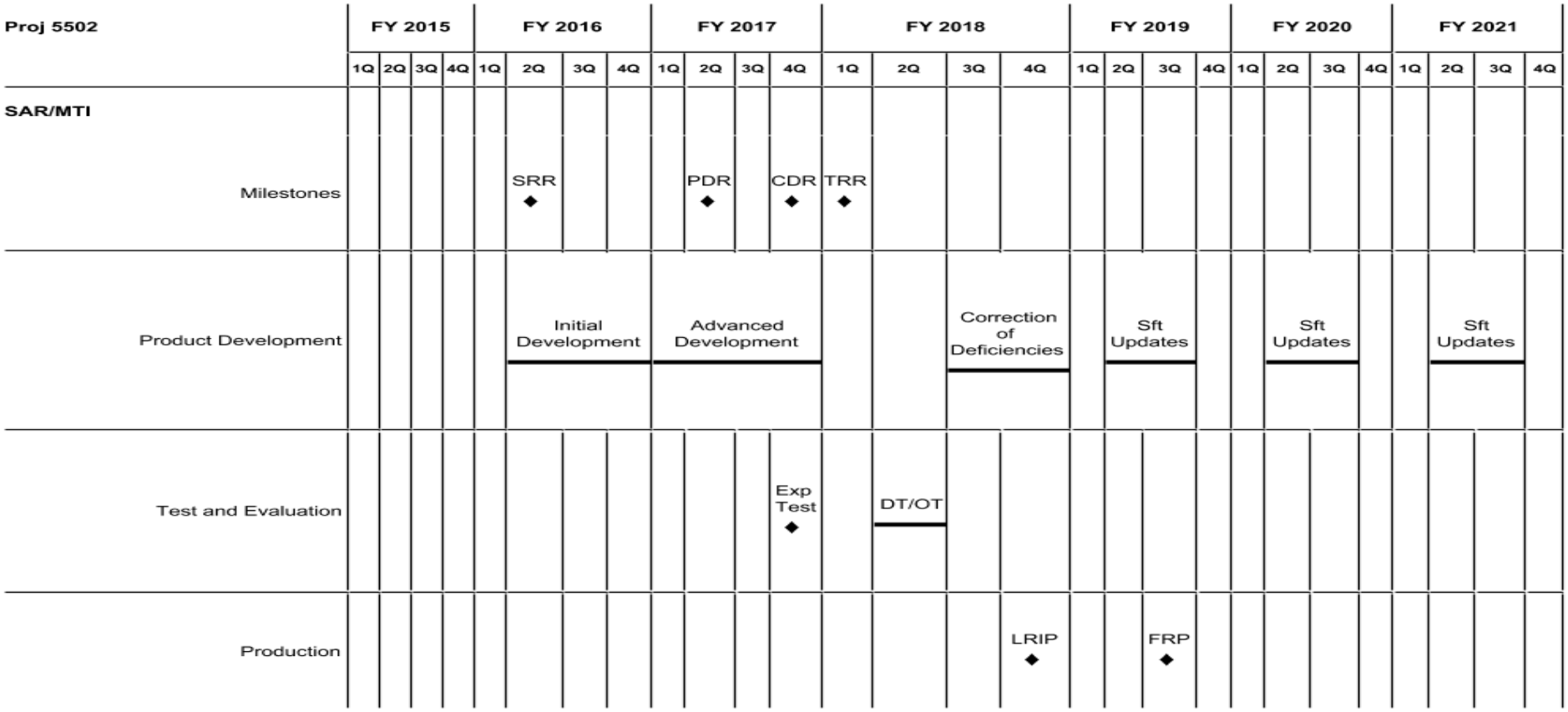


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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305242M / *(U)Unmanned Aerial Systems (UAS) Payloads*	**Project (Number/Name)** 5502 / *Synthetic Aperture Radar/Motion Target Indicator (SAR/MTI)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 5502				
SAR/MTI: Milestones: System Requirements Review	2	2016	2	2016
SAR/MTI: Milestones: Test Readiness Review	1	2018	1	2018
SAR/MTI: Milestones: Product Design Review	2	2017	2	2017
SAR/MTI: Milestones: Critical Design Review	4	2017	4	2017
Product Development: Component Development	2	2016	4	2016
Product Development: Design/Prototype	1	2017	4	2017
Product Development: Correction of Deficiencies	3	2018	4	2018
Product Development: Software Update	2	2019	3	2019
Product Development: Software Update 2	2	2020	3	2020
Product Development: Software Update 3	2	2021	3	2021
Test and Evaluation: Experimental Test	4	2017	4	2017
Test and Evaluation: Developmental and Operational Test	2	2018	2	2018
Production: Low Rate Initial Production	4	2018	4	2018
Production: Full Rate Production	3	2019	3	2019

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