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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	7.014	0.533	1.234	2.107	-	2.107	2.016	1.815	1.832	1.869	Continuing	Continuing
2292: <i>Unmanned Air Systems (Intel)</i>	7.014	0.533	1.234	2.107	-	2.107	2.016	1.815	1.832	1.869	Continuing	Continuing

A. Mission Description and Budget Item Justification

Family of Small Unmanned Aircraft Systems (FoSUAS) (formerly Small Unit Remote Scouting System (SURSS) is a Commandant of the Marine Corps Force Design 2030 initiative. FoSUAS consists of Short Range/Short Endurance (SR/SE), Medium Range/Medium Endurance (MR/ME) and Long Range/Long Endurance (LR/LE) systems. The FoSUAS program provides Small Unmanned Aircraft Systems (SUAS) for battalion/company/detachment level units with scalable airborne Reconnaissance, Surveillance, and Target Acquisition (RSTA) capabilities to aid in detecting, identifying, engaging, and/or avoiding enemy units. Although Force Design 2030 prioritizes Group 2 LR/LE capabilities, the requirements for SR/SE and MR/ME systems remain, to minimize operational risk and improve operational flexibility in asset allocation that maximizes economy of force across the conflict continuum. FoSUAS meets the validated operational requirements delineated in the Operational Requirements Document (ORD), Vertical Take Off and Landing (VTOL) Rapid Acquisition Top Level Requirements (TLR), and Long Range/Long Endurance (LR/LE) TLR.

SR/SE is a SUAS less than 10 pounds in weight, with 5-10 kilometer range and endurance up to 50 minutes. SR/SE systems address the need for situational awareness in urban and challenging terrain environments and reduce request-to- response timeframes for RSTA coverage.

MR/ME is a SUAS less than 20 pounds in weight, with 10-20 kilometer range and endurance up to 4 hours. MR/ME provides an organic, persistent RSTA capability to company level units, Route Clearance Platoons (RCP), and Combat Logistics Patrols (CLP) to enhance force protection, detect Improvised Explosive Devices (IEDs), provide laser targeting/marketing/range finding, and communication relay.

LR/LE is a SUAS less than 55 pounds in weight, with 20-50 kilometer range and endurance up to 6 hours. LR/LE provides organic capabilities to battalion level units to satisfy Ground Combat Element RSTA needs. LR/LE SUAS are currently deployed to conduct multi-sensor RTSA operations for Marine Forces Special Operations Command and support Marine Corps fires and maneuver elements.

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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	0.533	1.234	2.107	-	2.107
Current President's Budget	0.533	1.234	2.107	-	2.107
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

The increase from FY 2023 to FY 2024 of \$0.873M due to research and development of new capabilities required to meet the implementation of SRA and the increased quantities of LR/LE to meet Force Design 2030 initiatives. Additionally, the FY 2024 budget anticipates increased needs of Interim Flight Clearances (IFC), Authority To Operate (ATO), Cyber Testing, and extensive Market research.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV				Project (Number/Name) 2292 / Unmanned Air Systems (Intel)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2292: Unmanned Air Systems (Intel)	7.014	0.533	1.234	2.107	-	2.107	2.016	1.815	1.832	1.869	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In support of the Commandant of the Marine Corps (CMC) Planning Guidance and Force Design 2030, the Family of Small Unmanned Aircraft Systems (FoSUAS) program provides small unmanned aircraft systems (SUAS) for battalion/company/detachment level units with scalable airborne RSTA capabilities to aid in detecting, identifying, engaging, and/or avoiding enemy units. FoSUAS meet validated operational requirements delineated in the Operational Requirements Document (ORD), Vertical Take Off and Landing (VTOL) Rapid Acquisition Top Level Requirements (TLR), and Long Range/Long Endurance (LR/LE) TLR.

SUAS Reusable Architecture (SRA) capability will reduce the size, weight, and manpower required to operate a SUAS, increases the mobility of the operator, and improves digital interoperability. The SRA project, a technology improvement effort, will increase interoperability, protect cyber security, and reduce cyber security risk, decrease maintenance and sustainment costs, minimize risk and cost associated with technology insertion and improvement, and reduce manpower required to operate a FoSUAS. FoSUAS is developing SRA to establish reference implementations and industry guidance for all key SUAS interfaces, drastically improving interoperability by permitting industry, government, and academia to design-to-field hardware and software capabilities with well-defined integration and cybersecurity requirements up front. In addition to accelerating payload integration, SRA will allow portability of both software and hardware-based functionality across disparate platforms and control segments, as well as enable rapid integration of both open and closed-source artificial intelligence/machine learning (AI/ML) tools to inject autonomy and target recognition capabilities into FoSUAS. This effort will reduce duplicative engineering, training, integration, and sustainment efforts associated with closed, proprietary systems. SRA also seeks to authorize all SRA-compliant systems under a single service accreditation in order to define, address, and mitigate security vulnerabilities at the enterprise-level in current and future platforms.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Product Development	0.401	0.926	1.400	0.000	1.400
Articles:	-	-	-	-	-
FY 2023 Plans:					
-Maintain oversight/tracking of contracted and follow on phase of SRA efforts					
-Track and report on foregone mandatory recurring SUAS cyber assessments and required initial cyber assessments on new SUAS systems/component					
FY 2024 Base Plans:					
- Continue design of engineering solutions for mandatory SUAS cyber security assessments					
- Continue to design engineering solutions to for all new SUAS systems/components					
- Perform analysis on system interoperability and modularity					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>- Integration efforts for SRA Project</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: FY 2023 to FY 2024 increase due to research and development of new capabilities required to meet the implementation of SRA and the increased requirement for LR/LE to meet Force Design 2030 initiatives. Additionally, the FY 2024 budget funds increased needs of Interim Flight Clearances (IFC), Authority To Operate (ATO), Cyber Testing, and extensive market research.</p>					
<p>Title: Support</p> <p align="right">Articles:</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: - Contract follow on phase of SRA efforts to meet the updated requirements of FD2030 objectives - Research in relevant technical areas where SRA refinement and modernization is required</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: FY 2023 to FY 2024 increase reflects the breakout of Support from Product Development (above). Prior years included a single category for Product Development and Support.</p>	0.000 -	0.000 -	0.507 -	0.000 -	0.507 -
<p>Title: Test and Evaluation</p> <p align="right">Articles:</p> <p>FY 2023 Plans: - Continue operational assessment of SUAS Reusable Architecture (SRA) for FoSUAS platforms. - Continue assessment of low cost, commercial available Unmanned Aerial Systems to inform future procurements, and determine potential adversary capabilities.</p> <p>FY 2024 Base Plans: - Continue operational assessment of SRA for FoSUAS platforms.</p>	0.132 -	0.308 -	0.200 -	0.000 -	0.200 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue assessment of low cost, commercial available UAS to inform future procurements, and determine potential adversary capabilities. FY 2024 OCO Plans: N/A FY 2023 to FY 2024 Increase/Decrease Statement: FY 2023 to FY 2024 decrease is due to reduction in technology demonstration verification and validation efforts.					
Accomplishments/Planned Programs Subtotals	0.533	1.234	2.107	0.000	2.107

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PMC/4757: RQ-11 UAV	24.299	42.249	52.273	-	52.273	63.793	63.285	98.190	100.153	Continuing	Continuing

Remarks

D. Acquisition Strategy
The program office continues to implement acquisition approaches to quickly field new technology and capabilities to meet requirements set forth by USMC in order to meet FD2030 objectives.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SRA Integration	WR	Various : Various	0.974	0.261	May 2022	0.400	May 2023	1.400	Jan 2024	-		1.400	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	2.976	0.000		0.000		0.000		-		0.000	0.000	2.976	-
Subtotal			3.950	0.261		0.400		1.400		-		1.400	Continuing	Continuing	N/A

Remarks
 FY 2023 to FY 2024 increase due to research and development of new capabilities required to meet the implementation of SRA and the increased quantities of LR/LE to meet FD2030 initiatives. Additionally, the FY 2024 budget funds increased needs of Interim Flight Clearances (IFC), Authority To Operate (ATO), Cyber Testing, and extensive market research.

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Commercial UAS Analysis/ Cyber Security	WR	NAWCAD : Pax River, MD	0.515	0.140	Mar 2022	0.264	Mar 2023	0.253	May 2024	-		0.253	Continuing	Continuing	Continuing
Engineering Analysis	WR	NAWCAD : Pax River, MD	1.354	0.000		0.262	Nov 2022	0.254	Nov 2023	-		0.254	0.000	1.870	-
Subtotal			1.869	0.140		0.526		0.507		-		0.507	Continuing	Continuing	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	WR	Various : Various	0.647	0.132	May 2022	0.308	May 2023	0.200	Jan 2024	-		0.200	Continuing	Continuing	Continuing
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	Various	Various : Various	0.548	0.000		0.000		0.000		-		0.000	0.000	0.548	-
Subtotal			1.195	0.132		0.308		0.200		-		0.200	Continuing	Continuing	N/A

Remarks
 FY 2023 to FY 2024 decrease is due to reduction in technology demonstration verification and validation efforts.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

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	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.014	0.533	1.234	2.107	-	2.107	Continuing	Continuing	N/A

Remarks
Overall increase is primarily attributed to research and development of new capabilities required to meet the implementation of SRA and the increased quantities of LR/LE to meet FD2030 initiatives. Additionally, the FY 2024 budget funds increased needs of Interim Flight Clearances (IFC), Authority To Operate (ATO), Cyber Testing, and extensive market research.

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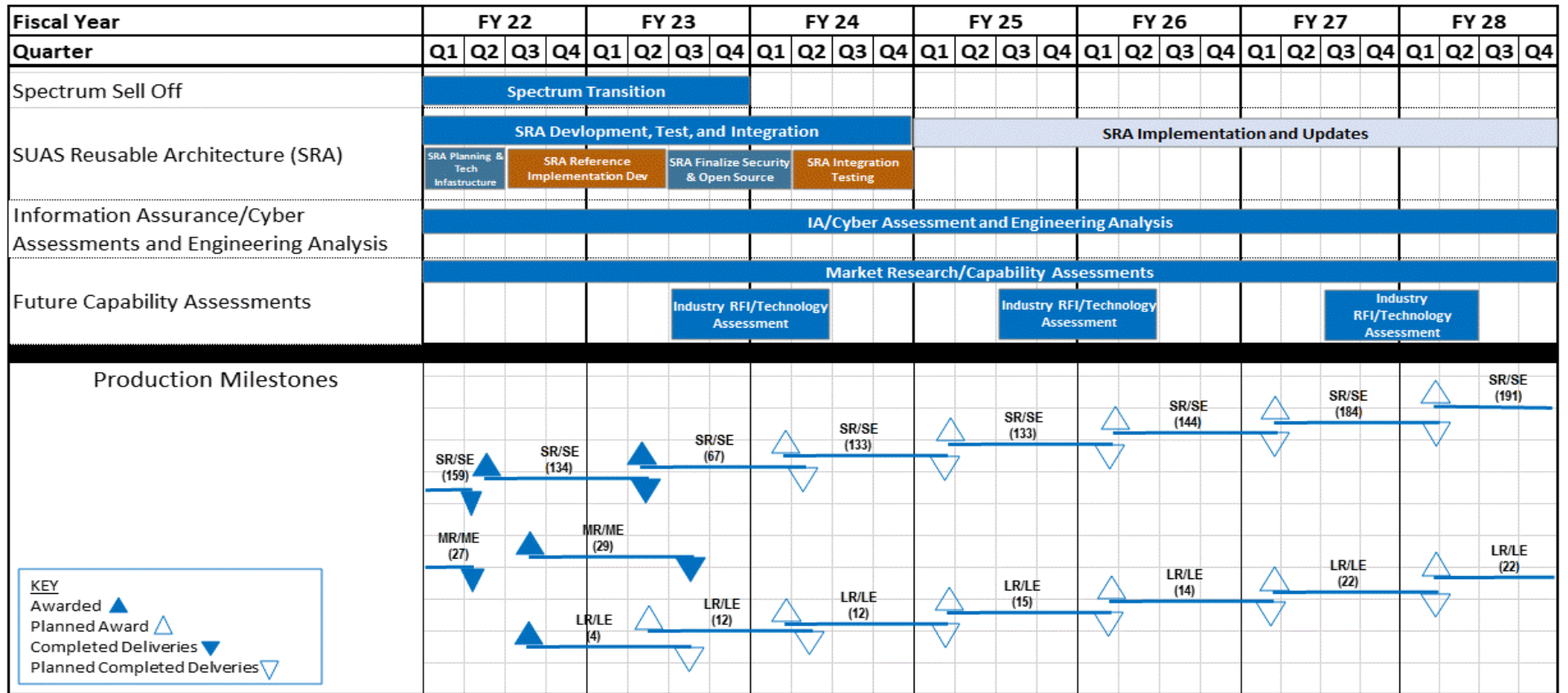
Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy

Date: March 2023

Appropriation/Budget Activity
1319 / 7

R-1 Program Element (Number/Name)
PE 0305232M / RQ-11 UAV

Project (Number/Name)
2292 / Unmanned Air Systems (Intel)



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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2292				
Spectrum Sell Off: Spectrum Transition	1	2022	4	2023
SUAS Reusable Architecture (SRA): SRA Development and Integration Verification	1	2022	4	2024
SUAS Reusable Architecture (SRA): SRA Implementation and Updates	1	2025	4	2028
SUAS Reusable Architecture (SRA): OTA Option 1	3	2022	3	2022
SUAS Reusable Architecture (SRA): OTA Option 2	1	2023	1	2023
SUAS Reusable Architecture (SRA): OTA Option 3	3	2023	3	2023
SUAS Reusable Architecture (SRA): Integration Testing	2	2024	2	2024
SUAS Reusable Architecture (SRA): Follow-On Contract	1	2025	1	2025
Future Capability Assessments/Cyber Assessments: Cyber Assessment	1	2022	4	2028
Future Capability Assessments/Cyber Assessments: Market Research/Capability Assessments	1	2022	4	2028
Future Capability Assessments/Cyber Assessments: FY23 Industry RFI/Technology Assessment	3	2023	2	2024
Future Capability Assessments/Cyber Assessments: FY25 Industry RFI/Technology Assessment	3	2025	2	2026
Future Capability Assessments/Cyber Assessments: FY27 Industry RFI/Technology Assessment	3	2027	2	2028
Production Milestones: MIPR Orders: FY22 MR/ME	3	2022	3	2022
Production Milestones: MIPR Orders: FY22 SR/SE	2	2022	2	2022
Production Milestones: MIPR Orders: FY22 LR/LE	3	2022	3	2022
Production Milestones: MIPR Orders: FY23 SR/SE	2	2023	2	2023
Production Milestones: MIPR Orders: FY23 LR/LE	1	2023	1	2023
Production Milestones: MIPR Orders: FY24 SR/SE	1	2024	1	2024

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305232M / RQ-11 UAV	Project (Number/Name) 2292 / Unmanned Air Systems (Intel)
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Production Milestones: MIPR Orders: FY24 LR/LE	1	2024	1	2024
Production Milestones: MIPR Orders: FY25 SR/SE	1	2025	1	2025
Production Milestones: MIPR Orders: FY25 LR/LE	1	2025	1	2025
Production Milestones: MIPR Orders: FY26 SR/SE	1	2026	1	2026
Production Milestones: MIPR Orders: FY26 LR/LE	1	2026	1	2026
Production Milestones: MIPR Orders: FY27 SR/SE	1	2027	1	2027
Production Milestones: MIPR Orders: FY27 LR/LE	1	2027	1	2027
Production Milestones: MIPR Orders: FY28 SR/SE	1	2028	1	2028
Production Milestones: MIPR Orders: FY28 LR/LE	1	2028	1	2028