Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy												Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0605513N *I UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	0.000	0.000	170.838	-	170.838	-	-	-	-	-	-
3067: *Unmanned Surface Vehicle Enabling Capabilities*	0.000	0.000	0.000	170.838	-	170.838	-	-	-	-	-	-

Note

Unmanned Surface Vehicle (USV) Enabling Capabilities (Project 3067) was a new start in FY 2020. FY 2020 funding in Program Element (PE) 0603502N. Project 3067 realigned from PE 0603502N to PE 0603178N in FY 2021, and from 0603178N to 0605513N in FY 2022 and future years.

A. Mission Description and Budget Item Justification

Project 3067 provides resources to develop enabling capabilities and critical technologies for the unmanned platforms in the Navy's Future Surface Combatant Force (FSCF) and Unmanned Surface Vehicle (USV) Family of Systems (FoS). This includes the development and transition of technologies, standardizing Autonomy architectures, Command & Control (C2) systems, and learning through demonstration during both ashore and underway fleet exercises to support seven key capabilities (autonomy, communications, USV Operations Centers, sensors/component integration, data management, machinery qualification and non-combat payload prototyping) for operating Unmanned Surface Vehicles to meet mission needs. These efforts continue to maintain federated systems while encouraging the transition of Small Business Innovation Research (SBIR), Future Naval Capabilities (FNC), other DOD Science and Technology (S&T) efforts, and current Program of Record (PoR) systems to support a modular system for enhanced performance and affordability.

The USV Enabling Capabilities program is responsible for the development and improvement of USV autonomous systems, payloads, and sensors in support of machinery and Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) operations on USVs. Enabling Capabilities leads the development, modification, engineering, and integration activities, facilitating the unmanned operations of surface vessels. This includes capabilities to support autonomy, C2 beyond line of sight, monitoring, and securing sensitive equipment from remote locations. These capabilities support Medium Unmanned Surface Vehicles (MUSV), Large Unmanned Surface Vessels (LUSV), and Unmanned Operations Centers.

Project 3067 also provides a Navy-wide program to develop required standards for Autonomy, C2, Payload Interface, and USV Operations Centers in support of future unmanned surface vehicle development.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0605513N *I UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	170.838	-	170.838
Total Adjustments	0.000	0.000	170.838	-	170.838
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	170.838	-	170.838

Change Summary Explanation

Program Adjustments:
FY20: N/A
FY21: N/A
FY22: +$170.838M realignment of Unmanned Surface Vehicle (USV) Enabling Capabilities (Project 3067) from PE 0603178N to PE 0605513N in FY 2022.
Technical: Not applicable.
Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy			Date: May 2021
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	Project (Number/Name) 3067 / *Unmanned Surface Vehicle Enabling Capabilities*	

COST ($ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3067: *Unmanned Surface Vehicle Enabling Capabilities*	0.000	0.000	0.000	170.838	-	170.838	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

FY 2020 and prior funding in Program Element (PE) 0603502N. Project 3067 realigned from PE 0603502N starting in FY 2021.
FY 2021 funding in Program Element (PE) 0603178N. Unmanned Surface Vehicle (USV) Enabling Capabilities (Project 3067) realigned from PE 0603178N in FY 2022.

A. Mission Description and Budget Item Justification

In order to accelerate future capability and support steady growth of the Navy's Unmanned Surface Vehicle (USV) Family of Systems (FoS), the USV Enabling Capabilities project includes the development, test, and integration of USV technologies, the advancement of Defense Advanced Research Projects Agency (DARPA), Office of the Secretary of Defense (OSD) Strategic Capabilities Office (SCO), Office of Naval Research (ONR) and Industry USV efforts for associated technologies, and the development and fabrication of payloads for Large Unmanned Surface Vessels (LUSVs) and Medium Unmanned Surface Vehicles (MUSVs). USV technology efforts in this project unit support the development and demonstration of autonomy, communications, USV Operations Centers, sensor and component integration for navigation compliance and reliability, data management, machinery qualification, non-combat payload feasibility, and enabling technologies for other USVs in the USV FoS, as applicable.

The Autonomy portion of this project funds efforts to standardize autonomy architecture and interfaces, develop and test low Technology Readiness Level (TRL) autonomy functions, develop and test common vessel control systems, software modeling and simulation, and employ a Secure Development and Operations (DevSecOps) software pipeline to facilitate integration and improve security. These autonomy efforts are executed under the Rapid Autonomy Integration Laboratory (RAIL) framework and include advanced development, prototyping, and demonstrations.

The Communications portion of this project funds efforts to develop, test, and demonstrate autonomous communication hardware and software. A key enabler to allow man-in-the-loop or man-on-the-loop control of the USVs and USV FoS will be the development of an unmanned communications suite. Initial efforts have focused on the modification of existing Program of Record of Program Executive Office (PEO) C4I systems. Further efforts are needed to engineer autonomous behaviors into the Navy's next generation of PEO C4I systems to meet USV operational needs. Additionally, this effort will include the modification and testing of cryptographic equipment as needed to obtain the necessary approvals and certifications for use in unmanned, high-threat environments.

The USV Operations Center portion of this project will outfit and sustain land-based USV Operations Centers. These Operations Centers will allow the Fleet to control multiple USVs and multiple types of USVs simultaneously, conduct exercises, and continue CONOPS development.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

The sensor and component integration for navigation compliance and reliability portion of this project funds efforts to analyze the performance of commercial hardware/ software and integrate those sensors/components into USVs for improved performance. These funds also identify gaps in performance for future SBIRs, Department of Defense Science and Technology efforts, and industry feedback as well as establish standards of performance for future contracting actions.

The data management portion of this project will develop the data infrastructure needed to collect, store, and analyze data from the USVs in order to certify system performance, maintain and improve software, and identify sensors/components in need of further improvement.

Non-combat modular payloads employed by USVs will be developed under this project unit. Payloads will be customized to meet Navy needs and demonstrate useful capability for the Fleet. Some examples include Intelligence, Surveillance, and Reconnaissance (ISR) payloads as well as persistent airborne systems that extend the C2 reach of host platforms.

In FY 2022, one modular communication and surveillance payload and both variants of the persistent airborne systems will be procured. Also in FY 2022, several contracts for autonomy development and management will be awarded, low TRL autonomy functions will continue to be developed and tested, communication equipment will continue to be made either remote-capable or autonomous, unmanned cryptographic systems will continue to be developed, data management infrastructure will be expanded to include additional users, and autonomy integration will begin with the Land Based Test Site. Finally, funding from the Program Element will be used to develop and initially execute an USV machinery qualification plan led by industry with government oversight. Contracts will be awarded to multiple vendors to qualify LUSV-representative machinery (which may also be used by other USVs) in order to reduce technical and schedule risk while providing multiple options for vendors on the future LUSV Detail Design and Construction solicitation. These qualification efforts will be closely coordinated with the Navy's LBTS at Naval Surface Warfare Center, Philadelphia.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Product Development	0.000	0.000	135.201	0.000	135.201
Articles:	-	-	-	-	-
FY 2021 Plans: FY 2021 Plans under Program Element 0603178N					
FY 2022 Base Plans: All developmental ICS efforts will have been transitioned to the LUSV project unit (PE 0603178N, PU 3066). Unmanned communications is a cross-platform capability, therefore development efforts are being consolidated into this project. Autonomous and remote operation requirements for next generation PEO C4I systems will be integrated into developmental programs and functional block diagrams will be developed. Further, cryptographic system development will continue including building and testing a functional prototype of a cryptographic zeroization system. Autonomy is also a cross-platform capability. Efforts in FY22 will be increased with the award of multiple contracts for further autonomy software development and management as well as the creation of software/certification support infrastructure in the areas of DevSecOps environment, sensor development,					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
and data management infrastructure under the Rapid Autonomy Integration Laboratory (RAIL) framework. Utilize Rapid Innovative Fund (RIF) contract to install and demonstrate Containerized Tethered Elevated Payload (C-TEP) functionality on Overlord Prototype. Procure additional C-TEP prototype for Overlord /MUSV autonomy development. Conduct Source Selection and award contract for C-TEM via PEO USC IDIQ MAC. Experimentation support that is platform specific is being realigned to the MUSV and LUSV projects. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The increase in funding from FY21 to FY22 is due to autonomy development, machinery qualification efforts, purchase of elevated sensors, and transfer of funding responsibilities for communications and cryptographic equipment development from the LUSV project unit (PE 0603178N, PU 3066). The Navy will purchase 1 modular Payload in FY22. The C-TEM payload costs approximately $1.5M per unit and C-TEP costs $2.0M per unit.					
Title: Support	0.000	0.000	31.470	0.000	31.470
Articles:	-	-	-	-	-
FY 2021 Plans: FY 2021 Plans under Program Element 0603178N ***FY 2022 Base Plans:*** Efforts will continue on the development of UMAA standards, autonomy Interface Control Documents (ICDs), and common control systems. Sensor and perception standards and testing capabilities will be established. Land-based USV Operations Centers will be established and support for USV squadron operations will continue. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase to support USV Operations Centers.					
Title: Management Services	0.000	0.000	4.167	0.000	4.167
Articles:	-	-	-	-	-
FY 2021 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
FY 2021 Plans under Program Element 0603178N ***FY 2022 Base Plans:*** Continue to provide oversight and management of product development and support efforts. Continue program management activities and management for the production of the prototype modular payloads awarded in FY2022. Continue coordination with and across supporting activities (e.g., PEO IWS, PEO C4I, DARPA, OSD SCO, ONR, warfare centers, labs, and industry partners) to address requirements, manage funding, and execute plans. Continue to develop and refine required acquisition documents and artifacts that support required capabilities managed under this project. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase in management services to support award/execution of multiple contracts and oversight of increased developmental activities.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	170.838	0.000	170.838

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• RDTEN/0603502N/3067: *Unmanned Surface Vehicle Enabling Capabilities*	48.438	0.000	0.000	-	0.000	-	-	-	-	-	-
• RDTEN/0603178N/3067: *Unmanned Surface Vehicle Enabling Capabilities*	0.000	22.113	0.000	-	0.000	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

USV Enabling Capabilities efforts will accelerate future capability and support steady growth of the Navy's Unmanned Surface Vehicle (USV) Family of Systems (FoS). This will occur by leveraging efforts from the Department of Defense Research and Development Enterprise and industry for associated technologies and payloads and integrating them into USVs at the appropriate level of technical maturity. Coordination with UxS platforms will eliminate redundant efforts, encourage innovation and improve coordination of unmanned systems across multiple domains. Leveraging Office of the Secretary of Defense (OSD) Strategic Capabilities Office (SCO)-

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE V EHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

developed standalone capabilities, the plan is to develop these capabilities for the initial prototype USVs and then transition those capabilities into Program of Record USVs through incremental development and integration across the funding portfolio. The Navy will accomplish efforts under USV Enabling Capabilities through existing contract vehicles prepared for OSD SCO and Office of Naval Research (ONR) efforts, the USV FoS Indefinite Delivery Indefinite Quantity (IDIQ) Multiple Award Contract (MAC) which was awarded in FY 2020, the prime contract awarded for MUSV design and fabrication, existing contracts for payload fabrication, and future contracts for further software development and maintenance.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Services	WR	Various : Various	0.000	0.000		0.000		1.690	Oct 2021	-		1.690	-	-	-
Elevated Sensors	C/CPIF	TBD : TBD	0.000	0.000		0.000		11.000	Mar 2022	-		11.000	-	-	-
Unmanned Communications	Various	TBD : TBD	0.000	0.000		0.000		40.700	Mar 2022	-		40.700	-	-	-
Unmanned Cryptographic Systems	Various	Various : Various	0.000	0.000		0.000		5.000	Mar 2022	-		5.000	-	-	-
USV Machinery Qualification	C/CPIF	TBD : TBD	0.000	0.000		0.000		47.311	Mar 2022	-		47.311	-	-	-
Low TRL Autonomy	Various	Various : Various	0.000	0.000		0.000		18.500	Nov 2021	-		18.500	-	-	-
Rapid Autonomy Integration Laboratory (RAIL)	Various	Various : Various	0.000	0.000		0.000		10.000	Dec 2021	-		10.000	-	-	-
Sensors and Perceptions	WR	Various : Various	0.000	0.000		0.000		1.000	Dec 2021	-		1.000	-	-	-
		Subtotal	0.000	0.000		0.000		135.201		-		135.201	-	-	N/A

Remarks

Project Moved from Program Element 0603178N

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Autonomy Standrads (UMAA)	Various	Various : Various	0.000	0.000		0.000		1.000	Oct 2021	-		1.000	-	-	-
Command and Control (C2) Integration	Various	Various : Various	0.000	0.000		0.000		2.400	Oct 2021	-		2.400	-	-	-
USV Squadron Operations	WR	Various : Various	0.000	0.000		0.000		7.000	Oct 2021	-		7.000	-	-	-
Delta Requirements RFP Development Evaluation	WR	Various : Various	0.000	0.000		0.000		1.870	Oct 2021	-		1.870	-	-	-
RFP Development	WR	Various : Various	0.000	0.000		0.000		0.500	Dec 2021	-		0.500	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USV Operations Center (UOC)	WR	Various : Various	0.000	0.000		0.000		18.700	Nov 2021	-		18.700	-	-	-
		Subtotal	0.000	0.000		0.000		31.470		-		31.470	-	-	N/A

Remarks

Project Moved from Program Element 0603178N

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	Various	Various : Various	0.000	0.000		0.000		4.167	Oct 2021	-		4.167	-	-	-
		Subtotal	0.000	0.000		0.000		4.167		-		4.167	-	-	N/A

Remarks

Project Moved from Program Element 0603178N

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		170.838		-		170.838	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

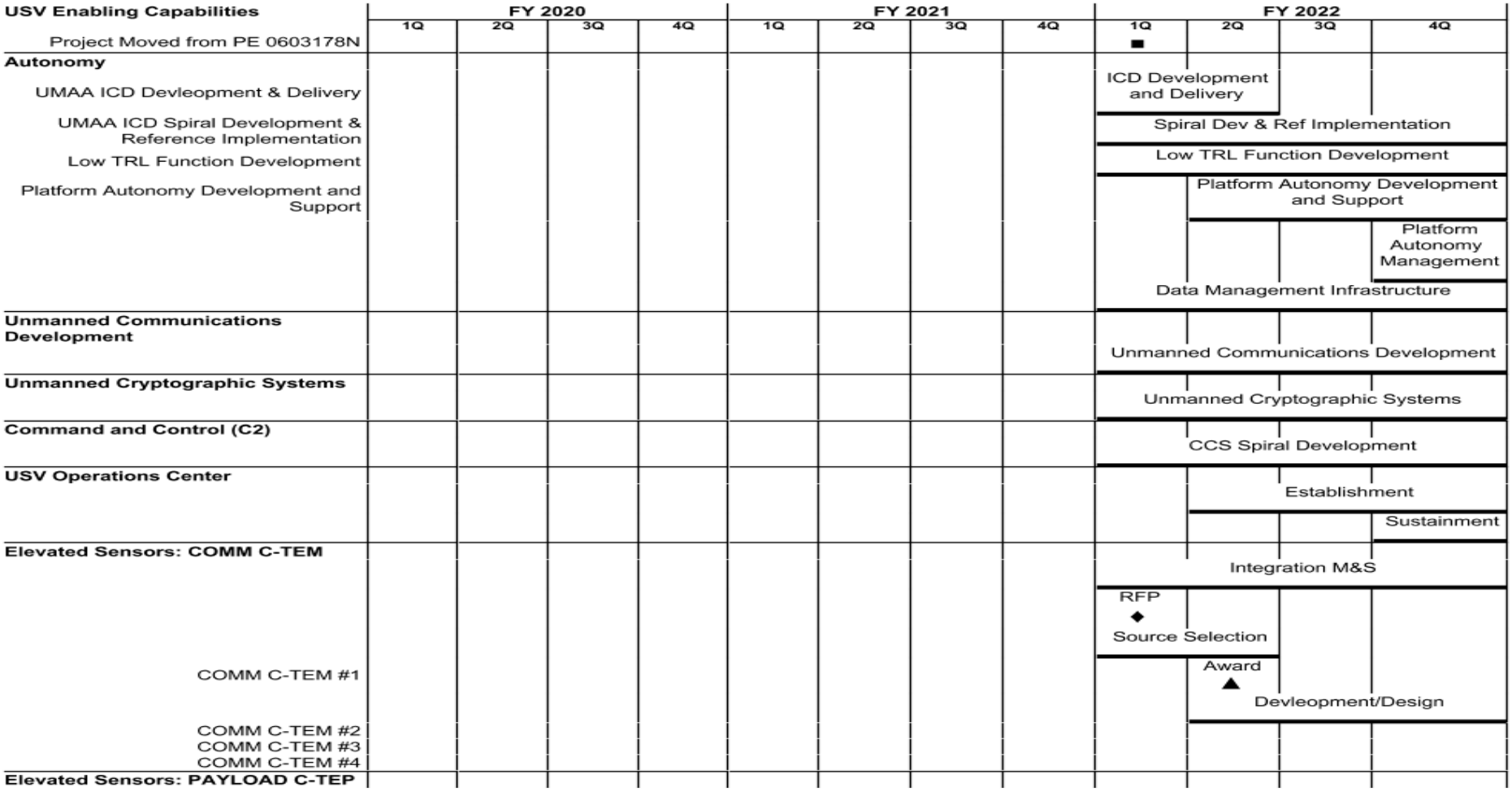

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

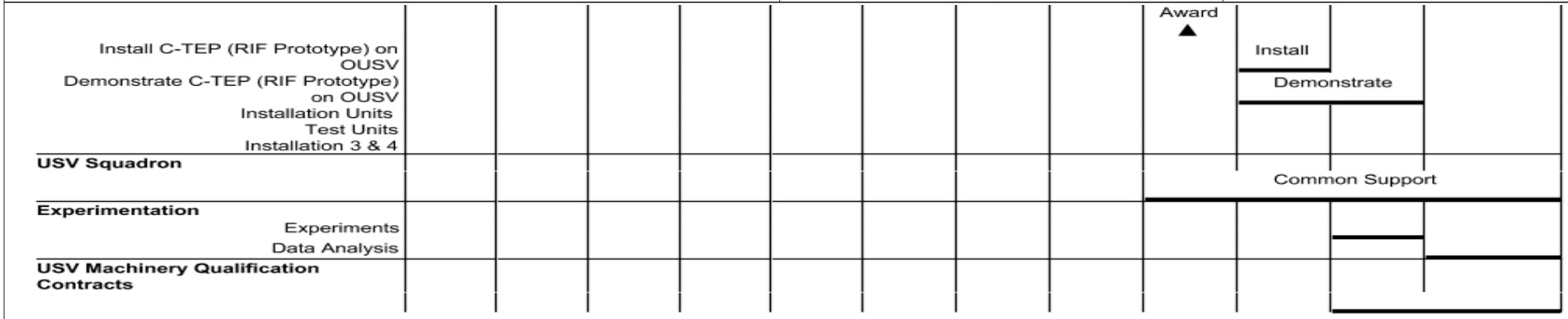

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
USV Enabling Capabilities				
Project Moved from PE 0603178N: New PE	1	2022	1	2022
Autonomy: UMAA ICD Devleopment & Delivery: UMAA ICD Devleopment & Delivery	1	2022	2	2022
Autonomy: UMAA ICD Spiral Development & Reference Implementation: UMAA ICD Spiral Development & Reference Implementation	1	2022	4	2022
Autonomy: Low TRL Function Development: Low TRL Function Development	1	2022	4	2022
Autonomy: Platform Autonomy Development and Support: Platform Autonomy Development and Support	2	2022	4	2022
Autonomy: Platform Autonomy Development and Support: Platform Autonomy Management	4	2022	4	2022
Autonomy: Platform Autonomy Development and Support: Data Management Infrastructure	1	2022	4	2022
Unmanned Communications Development:	1	2022	4	2022
Unmanned Cryptographic Systems:	1	2022	4	2022
Command and Control (C2):	1	2022	4	2022
USV Operations Center: Establishment	2	2022	4	2022
USV Operations Center: Sustainment	4	2022	4	2022
Elevated Sensors: COMM C-TEM: Integration Modeling and Simulation	1	2022	4	2022
Elevated Sensors: COMM C-TEM: RFP Release	1	2022	1	2022
Elevated Sensors: COMM C-TEM: Source Selection	1	2022	2	2022
Elevated Sensors: COMM C-TEM: COMM C-TEM #1: Award	2	2022	2	2022
Elevated Sensors: COMM C-TEM: COMM C-TEM #1: Devleopment/Design	2	2022	4	2022
Elevated Sensors: PAYLOAD C-TEP: Award for 2 Units	1	2022	1	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0605513N / *UNMANNED SURFACE VEHICLE ENABLING CAPABILITIES*	**Project (Number/Name)** 3067 / *Unmanned Surface Vehicle Enabling Capabilities*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Elevated Sensors: PAYLOAD C-TEP: Install C-TEP (RIF Prototype) on OUSV: Install C-TEP (RIF Prototype) on OUSV	2	2022	2	2022
Elevated Sensors: PAYLOAD C-TEP: Demonstrate C-TEP (RIF Prototype) on OUSV: Demonstrate C-TEP (RIF Prototype) on OUSV	2	2022	3	2022
USV Squadron:	1	2022	4	2022
Experimentation: Experiments: Q3	3	2022	3	2022
Experimentation: Data Analysis: Q3	4	2022	4	2022
USV Machinery Qualification Contracts: Qualification Contracts	3	2022	4	2022