Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy												Date: March 2024
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 0603563N *I Ship Concept Advanced Design*							
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
Total Program Element	567.828	127.749	89.939	110.800	-	110.800	111.149	116.359	85.619	87.345	Continuing	Continuing
2196: *Design, Tools, Plans and Concepts*	39.869	16.938	15.345	20.489	-	20.489	24.163	27.525	32.652	33.302	Continuing	Continuing
3161: *NAVSEA Tech Authority*	296.149	13.204	11.466	25.671	-	25.671	16.873	8.559	8.697	8.876	Continuing	Continuing
3244: *Cybersecurity Engineering*	30.382	15.509	36.117	36.981	-	36.981	37.530	37.311	37.690	38.451	Continuing	Continuing
3376: *Strategic Sealift*	38.304	6.778	6.134	13.489	-	13.489	26.122	26.499	4.116	4.200	Continuing	Continuing
3505: *Maritime Prepositioning Force Next*	0.000	0.000	1.502	1.484	-	1.484	2.519	16.465	2.464	2.516	Continuing	Continuing
4044: *Medium Landing Ship*	32.697	11.064	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	43.761
4045: *Next Generation Medium Logistics Ship*	40.362	2.844	8.810	7.697	-	7.697	0.000	0.000	0.000	0.000	0.000	59.713
5010: *AS(X) Submarine Tender*	15.781	14.919	10.565	4.989	-	4.989	3.942	0.000	0.000	0.000	0.000	50.196
9999: *Congressional Adds*	74.284	46.493	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	120.777

A. Mission Description and Budget Item Justification

Project 2196 - This project provides the analytical foundation for making informed force structure, capability and affordability decisions in the development of all future surface ship platforms, weapons, sensors and combat systems. It realizes this through total ship system engineering, technology integration, cost estimation, mission effectiveness analysis, force architecture synthesis, and force-level effectiveness analysis, as well as continuous development of the people, tools and processes required to accomplish these efforts efficiently. This includes early-stage concept development studies for all potential future surface ships. It also includes quantitative mission and force-level analysis to identify future capability gaps and requirements related to advances in threat capabilities, and evaluation of the effectiveness and affordability of potential future technology and concept of operations (CONOP) solutions. Results from this project are used to inform senior Navy leadership in support of budgetary decisions, Capability Evolution Plans (CEP), and requirements related to surface ship force structure, platforms and major combat system elements.

Project 3161 - This project is the only R&D effort that provides a coordinated approach to the development of cross platform ship and weapon system designs and technologies "common" to multiple ships and systems. This project directly influences technical standards for design, construction, certification and operation and provides an avenue for innovative solutions and technologies to compete with legacy product requirements and specifications. This project conducts risk reduction of alternative technical architectures, designs and technology solutions that meet Fleet operational and technical requirements at lower cost; and develops engineering capabilities in the areas of design tools, criteria and methods. This project funds a prioritized portfolio of time-sensitive initiatives through the Cross Platform Systems Development (CPSD) Program, supporting NAVSEA Technical Authority and associated risk reduction activity. The areas of exploration for the CPSD Program include Ship Technology Improvements, Fleet Maintenance and Life Cycle Cost Reduction, Advanced Manufacturing and Material Technology, Additive Manufacturing, Digital

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
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 0603563N *I Ship Concept Advanced Design*

Framework/Electromagnetic Environment, Development and Unmanned Systems and Condition Based Maintenance Plus (CBM+). The research products developed by this project directly support and influence both current Fleet requirements and future acquisition programs by providing a range of technically acceptable alternatives and evaluation of emerging technologies. The prototypes, standards/specs, tools and processes and other products developed in this project focus on technical requirements and technologies applicable to multiple ship classes or systems. Products from this project transition directly to early-stage ship design for Ship Preliminary Design and Feasibility Studies, Program Executive Office (PEO) ship acquisition programs, and Systems Engineering Technical Authority (SETA) requirements documentation. Tasks within this project include R&D efforts focused on increasing sustainment technologies and improving performance at reduced cost for current and future naval platforms. This Project supports the Navy National Shipbuilding Research Program (NSRP).

Project 3161 continued - Beginning in FY 2025, Condition Based Maintenance Plus (CBM+) is a maintenance optimization program that can generate significant benefits through maintenance program resets, maintenance effectiveness reviews, and active reliability centered maintenance (RCM) strategies at the program level. Employed as an enduring cross-life-cycle maintenance strategy, the program offers a technical solution to reduce maintenance burdens, increase operational availability and mission reliability of monitored systems, assists with identifying enterprise-wide cost avoidance, and will reduce overall life cycle costs. As a function of the Rapid Sustainment Improvement Process (RSIP), the CBM+ system will be developed, tested, evaluated, and then installed (using BLI 1445) on three to five surface combatants for selected shipboard equipment. Sensors for these systems will be defined and assessed. Further, the CBM+ system will be integrated with the Naval Maintenance, Repair, and Overhaul (N-MRO) suite of programs onboard ship to facilitate on ship and off ship monitoring.

Project 3505 - The MPF(X) ships will recapitalize the aging BOBO Class maritime prepositioning ships. The 'Sealift the Nation Needs' report to Congress defines a three-phase Sealift Recapitalization approach: Service Life Extensions, Acquiring Used ships, and new construction. The MPF(X) portion represents the prepositioning new construction aspect of the three-phase sealift recapitalization approach. USNS BOBO class ships will retire from service beginning in FY 2033. Conduct of an Analysis of Alternatives (AoA) and draft of a Capabilities Development Document (CDD) are planned beginning in FY 2024.

Project 3244 - This effort funds the research, design, development, testing, and installation of Cybersecurity solutions for all installed integrated computer networks to include shipboard Hull Mechanical and Electrical (HM&E), Navigation Systems, Combat Systems, Fire Control, Sonar, Radar, Communications and all other shipboard computerized control systems for all afloat U.S. Navy platforms. Cybersecurity Engineering supports the development of specifications and standards for the Cybersecurity of all Navy Control Systems (NCS).

Project 3376 - Strategic Sealift Research and Development - Develops new concepts and technologies which can be applied to or will enable future strategic sealift, and Seabasing systems. The technologies include ship configuration concepts, equipment to increase cargo handling and cargo loading/unloading rates (including commercial and merchant ship systems), improved man/machine interfaces, improved structural configurations and materials, and Logistics-Over-the-Shore (LOTS) equipment and system improvements. FY2016 and prior years (FY2014 and earlier) efforts were financed under the National Defense Sealift Fund (NDSF) BA 04 Project 3116 Strategic Sealift Research and Development. FY 2015, FY 2017, and FY 2019 and future efforts are financed under this program element and project (3376).

Project 4044 - Medium Landing Ship (LSM) is a medium-sized landing ship that enables distributed maneuver and logistics such as Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and Expeditionary Advanced Base Operations (EABO) in support of the newly established Marine

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
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 0603563N *I Ship Concept Advanced Design*

Littoral Regiment (MLR). It is designed to fill the gap in capability between the Navy's large, multipurpose amphibious warfare class ships and smaller landing vessels. This ship will deploy tailored logistics, select power projection and support strike capabilities via the embarked MLR.

Project 4045 - The Next Generation Logistics Ship (NGLS) is planned to be a new class of ships to augment the traditional Combat Logistics Force (CLF) to enable refueling, rearming, and resupply of Naval assets - afloat and ashore - near contested environments via ship-to-ship operations and ship-to port operations in support of Distributed Maritime Operations (DMO), Littoral Operations Contested Environment (LOCE), and Expeditionary Advanced Base Operations (EABO). Augmenting the traditional CLF, NGLS will provide a flexible, responsive platform to move fuel, personnel, equipment, and supplies between ships, advanced bases, ports, and dispersed nodes of the sea base; sustaining afloat (Surface Action Group) and ashore (Expeditionary Advanced Base) requirements. RDT&E funding will continue to support development of the NGLS ship design(s), specification development, affordability analyses, and definition of ship mission systems.

Project 5010 - This project supports Submarine Tender Recapitalization Acquisition Documentation development, Preliminary Design, Detail Design, Program Management/Engineering Services and Total Ship Integration. The Submarine Tender approach leverages current Submarine Tender capabilities, Nuclear Support Facility, integrating new VACL and CLB capabilities into the requirements generation and shipbuilding contracts. Identified missions include Submarine Tending, Re-arming, re-supply of material, medical/dental, Nuclear Support, Submarine Systems repair and other maintenance support. Funding will inform requirements definition, early industry engagement preliminary designs, trade studies, and follow-on assessment for Sub Tender.

Project 9999 (Congressional Add)- Funding provided in the Department of Defense Appropriations Act, 2023 for defense industrial skills and technology training systems, marine energy systems for sensors and microgrids, digital maintenance advisor for shipboard readiness, metallic additive manufacturing, and critical protection technology for cybersecurity engineering.

B. Program Change Summary ($ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	130.405	89.939	87.041	-	87.041
Current President's Budget	127.749	89.939	110.800	-	110.800
Total Adjustments	-2.656	0.000	23.759	-	23.759
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.369	0.000			
• SBIR/STTR Transfer	-3.027	0.000			
• Program Adjustments	0.000	0.000	23.525	-	23.525
• Rate/Misc Adjustments	0.002	0.000	0.234	-	0.234

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy	Date: March 2024
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 0603563N *I Ship Concept Advanced Design*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2023	FY 2024
Project: 9999: *Congressional Adds*		
Congressional Add: *Marine energy systems for sensors and microgrids*	14.469	0.000
Congressional Add: *Defense industrial Skills and Technology Training*	9.646	0.000
Congressional Add: *Metallic additive manufacturing*	3.858	0.000
Congressional Add: *Critical protection technology for cybersecurity engineering*	11.286	0.000
Congressional Add: *Digital maintenance advisor for shipboard readiness*	7.234	0.000
Congressional Add Subtotals for Project: 9999	46.493	0.000
Congressional Add Totals for all Projects	46.493	0.000

Change Summary Explanation

Program adjustments include:

Project 2196 Design, Tools, Plans, and Concepts: Funds added in support of the Collaborative Enduring Concepts and Tools (COLLECT) effort.

Project 3161 NAVSEA Tech Authority: Funds added in support of the development, testing, and evaluation of the Condition Based Maintenance Plus effort.

Project 3376 Strategic Sealift: Increase of $7.355M from FY2024 to FY2025 reflects prototype fabrication, installation, outfitting, and testing for T-AKE VLS and heavyweight torpedo rearming capability, sealift vessel survivability improvement project and USV logistics delivery system CONOPS and concept development project.

Project 4045 Decrease in funding of $1.113M from FY 2024 to FY 2025 are attributed to the advanced stage of completion the program will achieve in FY2024, needing fewer resources in FY2025 to finalize certain phases of the program.

Project 5010 AS(X) Submarine Tender: Decrease of $5.576M from FY 2024 to FY 2025 reflects transition from Preliminary Design to Detailed Design & Construction. Tasking remaining on this appropriation line are test related efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 2196 / *Design, Tools, Plans and Concepts*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
2196: *Design, Tools, Plans and Concepts*	39.869	16.938	15.345	20.489	-	20.489	24.163	27.525	32.652	33.302	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 2196 - This project provides the analytical foundation for making informed force structure, capability and affordability decisions in the development of all future surface ship platforms, weapons, sensors and combat systems. It achieves this through total ship system engineering, technology integration, cost estimation, mission effectiveness analysis, force architecture synthesis, and force-level effectiveness analysis, as well as continuous development of the people, tools and processes required to efficiently accomplish these efforts efficiently. This includes early-stage concept development studies for all potential future surface ships. It includes quantitative mission and force-level analysis to identify future capability gaps and requirements related to advances in threat capabilities, and evaluation of the effectiveness and affordability of potential future technology and concept of operations (CONOP) solutions. Results from this project are used to inform senior Navy leadership in support of budgetary decisions, Capability Evolution Plans (CEP), and requirements related to surface ship force structure, platforms and major combat system elements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Future Surface Combatant Force (FSCF) Analysis	7.899	6.680	7.701	0.000	7.701
Articles:	-	-	-	-	-
Description: Description: FSCF analysis focuses on the long time-horizon, approximately 20-25 years in the future, to understand necessary changes in the surface combatant force's structure and capabilities and informs near-term decisions and planning that drive these changes. FSCF Analysis provides warfighting effectiveness and cost analysis of force structure and concept of operations/employment (CONOP/CONEMP) alternatives, ship and combat system requirements, and key technology enablers for the FSCF to address future threats. It generates insights supporting budgetary decisions by senior Navy leadership and assists in establishing Capability Evolution Plans (CEP), as well as long-term future requirements for all future surface combatant ships and major combat system elements.					
FY 2024 Plans: Excursion Analysis, including evaluation of FY 2023 results' sensitivity to key assumptions and exploration of additional cost, capability and CONOP tradeoffs.					
FY 2025 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 2196 / *Design, Tools, Plans and Concepts*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Re-baseline analysis to capture key acquisition, technology, CONOPs and threat developments. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase in funding of $1.021M from FY 2024 to FY 2025 is attributed to an increase in the analysis of warfighting effectiveness, cost analysis of force structure, concept of operations/employment (CONOP/ CONEMP) alternatives, and ship and combat system requirements.					
Title: Naval Capability Integration Process (NCIP) - From the Sea (FTS)	4.300	3.665	4.634	0.000	4.634
Articles:	-	-	-	-	-
Description: NCIP is an annual process analyzing current, programmed, and non-programmed near-term capability alternatives relative to stressing threats in the short time-horizon, which is approximately 10 years in the future. NCIP-FTS focuses on surface combatant contributions to integrated effects chains, especially for Naval Surface Fires and Integrated Air and Missile Defense, which is aligned with NCIP From the Air (FTA), Information Warfare (IW), Anti-Submarine Warfare (ASW), and Marine Corp efforts. NCIP evaluates platform, weapon, sensor and combat system capabilities to address warfighting requirements and gaps. Additionally, it supports investment decisions that focus resources where they will have the greatest warfighting impact. ***FY 2024 Plans:*** Conduct mission and force-level effectiveness analysis via the annual NCIP-FTS process. Evaluate the ability of current, programmed and non-programmed near-term capabilities to address capability requirements and gaps within integrated effects chains relative to future stressing threats. Execute NCIP-FTS systems of systems analysis against the projected threat and provide quantitative analytical data to support Navy Leadership Program Objective Memorandum warfighting capability decisions. ***FY 2025 Base Plans:*** Conduct mission and force-level effectiveness analysis via the annual NCIP-FTS process. Evaluate the ability of current,					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 2196 / *Design, Tools, Plans and Concepts*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
programmed and non-programmed near-term capabilities to address capability requirements and gaps within integrated effects chains relative to future stressing threats and approved Presidential Budgets. Execute NCIP-FTS systems of systems analysis against the projected threat and provide quantitative analytical data to support Navy Leadership Program Objective Memorandum warfighting capability decisions. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase in funding of $0.969M provides the full level of effort needed to execute the NCIP-FTS process to include quantitative mission and force-level analysis. FY 2024 funding was reduced to account for slower than anticipated stand-up of analysis facilities in FY 2022 - FY 2023.					
Title: Ship Design Tool and Workforce Development	1.939	5.000	8.154	0.000	8.154
Articles:	-	-	-	-	-
Description: Develop and maintain the ship design workforce and tools that are critical enablers for affordable and effective maturation of new surface ship programs through continuous concept development, design synthesis and engineering analysis. Tool development focus areas include general rapid ship design and integration and domain specific tools such as those for assessment of shock, damage, hydrodynamics, structures and cost. It also includes utilization of high-performance computing (HPC) environments to achieve improved tool fidelity and efficiency. Lastly, it funds workforce development initiatives to develop the next generation naval engineering workforce. ***FY 2024 Plans:*** Increase development of ship design and analysis tools to improve efficiency and fidelity. Support mentorship, knowledge creation, capture, and transfer, foundational training, and career development opportunities to develop the next generation naval engineering workforce. Establish the Collaborative, Enduring, Concepts and Tools (COLLECT) effort, which accelerates the warfighting advantage through the development of the engineering and analytic workforce along with the tools that enable their work. COLLECT continuously executes warfighting analysis and concept design across the surface force to validate warfighting requirements and the platforms that best host them, as opposed to the formerly ad hoc nature of those efforts. This will maintain an experienced, sufficient workforce ready to execute engineering tasking while developing and sustaining the appropriate toolsets for their trades, including combat systems and mission level analysis, power and energy					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 2196 / *Design, Tools, Plans and Concepts*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
tools, and naval engineering and susceptibility analysis. The continuous efforts of COLLECT enable the efficient transition of appropriate capabilities into programs of record and validation of resource decision impacts. ***FY 2025 Base Plans:*** Increase development of ship design and analysis tools to improve efficiency and fidelity. Support mentorship, knowledge creation, capture, and transfer, foundational training, and career development opportunities to develop the next generation naval engineering workforce. Establish the Collaborative, Enduring, Concepts and Tools (COLLECT) effort which accelerates the warfighting advantage through the development of the engineering and analytic workforce along with the tools that enable their work. COLLECT continuously executes warfighting analysis and concept design across the surface force to validate warfighting requirements and the platforms that best host them, as opposed to the formerly ad hoc nature of those efforts. This will maintain an experienced workforce ready to execute engineering tasking and developing and sustaining the appropriate toolsets for their trades, including combat systems and mission level analysis, power and energy tools, and naval engineering and susceptibility analysis. The continuous efforts of COLLECT enable the efficient transition of appropriate capabilities into programs of record and validation of resource decision impacts. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase in funding from FY 2024 to FY 2025 of $3.154M is a planned increase in work scope for Collaborative Enduring Concepts and Tools (COLLECT) program. FY 2025 work scope will include Executive Board approved engineering studies & analysis to foster engineering workforce development, develop engineering tools, and be focused on applicable future design ship platforms.					
Title: Amphibious Capabilities Based Assessment	2.800	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: The Amphibious Capabilities Based Assessment (CBA) will identify capability gaps, capacity shortfalls, and risks in the amphibious force in the 2030s and beyond in the context of the Navy's projected roles, missions, and tasks. It will evaluate and prioritize the spectrum of mission needs and required capabilities for the future amphibious ships to support operational concepts in a contested environment; namely Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and Expeditionary Advanced Base Operations (EABO). It will provide recommendations for potential non-materiel and materiel approaches to the gaps, including the need for modified or new amphibious ships to meet future needs and pace future threats. This analysis will ensure the Marines have the platforms, tactics, and equipment they need to					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 2196 / *Design, Tools, Plans and Concepts*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
operate effectively in the new USMC missions and operational profiles. This assessment will act as the analytic basis for the development of an Initial Capabilities Document (ICD) and inform a future Analysis of Alternatives (AoA). ***FY 2024 Plans:*** N/A ***FY 2025 Base Plans:*** N/A ***FY 2025 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	16.938	15.345	20.489	0.000	20.489

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

This is a non-acquisition program for engineering and analysis to inform Navy leadership decisions and plans, as well as to improve and sustain Navy capabilities for ship design and analysis. Work is performed by Navy Warfare Centers and Government Labs with contractor support.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 2196 / *Design, Tools, Plans and Concepts*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPFF	FSCF Analysis Various Contractors : Various	10.803	0.742	Feb 2023	0.800	Feb 2024	0.727	Feb 2025	-		0.727	Continuing	Continuing	Continuing
Systems Engineering	WR	FSCF Analysis NSWC : Various	21.545	7.340	Oct 2022	5.880	Oct 2023	6.718	Oct 2024	-		6.718	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	NCIP NSMA : Various	1.700	0.942	Feb 2023	1.000	Feb 2024	1.027	Feb 2025	-		1.027	Continuing	Continuing	Continuing
Systems Engineering	WR	NCIP NSWC : Various	3.571	3.354	Oct 2022	2.665	Oct 2023	3.848	Oct 2024	-		3.848	Continuing	Continuing	Continuing
Systems Engineering	WR	Tools & Workforce Development NSWC : Various	2.250	1.879	Oct 2022	5.000	Oct 2023	7.669	Oct 2024	-		7.669	Continuing	Continuing	Continuing
Systems Engineering	WR	Amphibious CBA NSWC : Various	0.000	0.941	Nov 2022	0.000		0.000		-		0.000	0.000	0.941	-
Systems Engineering	C/CPFF	Amphibious CBA Various Contractors : Various	0.000	1.740	Feb 2023	0.000		0.000		-		0.000	0.000	1.740	-
Systems Engineering	C/CPFF	Tools & Workforce Development : Various	0.000	0.000		0.000		0.500	Feb 2025	-		0.500	0.000	0.500	-
		Subtotal	39.869	16.938		15.345		20.489		-		20.489	Continuing	Continuing	N/A

Remarks

Funding increase in support of the Collaborative Enduring Concepts and Tools (COLLECT) effort.

	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	39.869	16.938		15.345		20.489		-		20.489	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 2196 / *Design, Tools, Plans and Concepts*

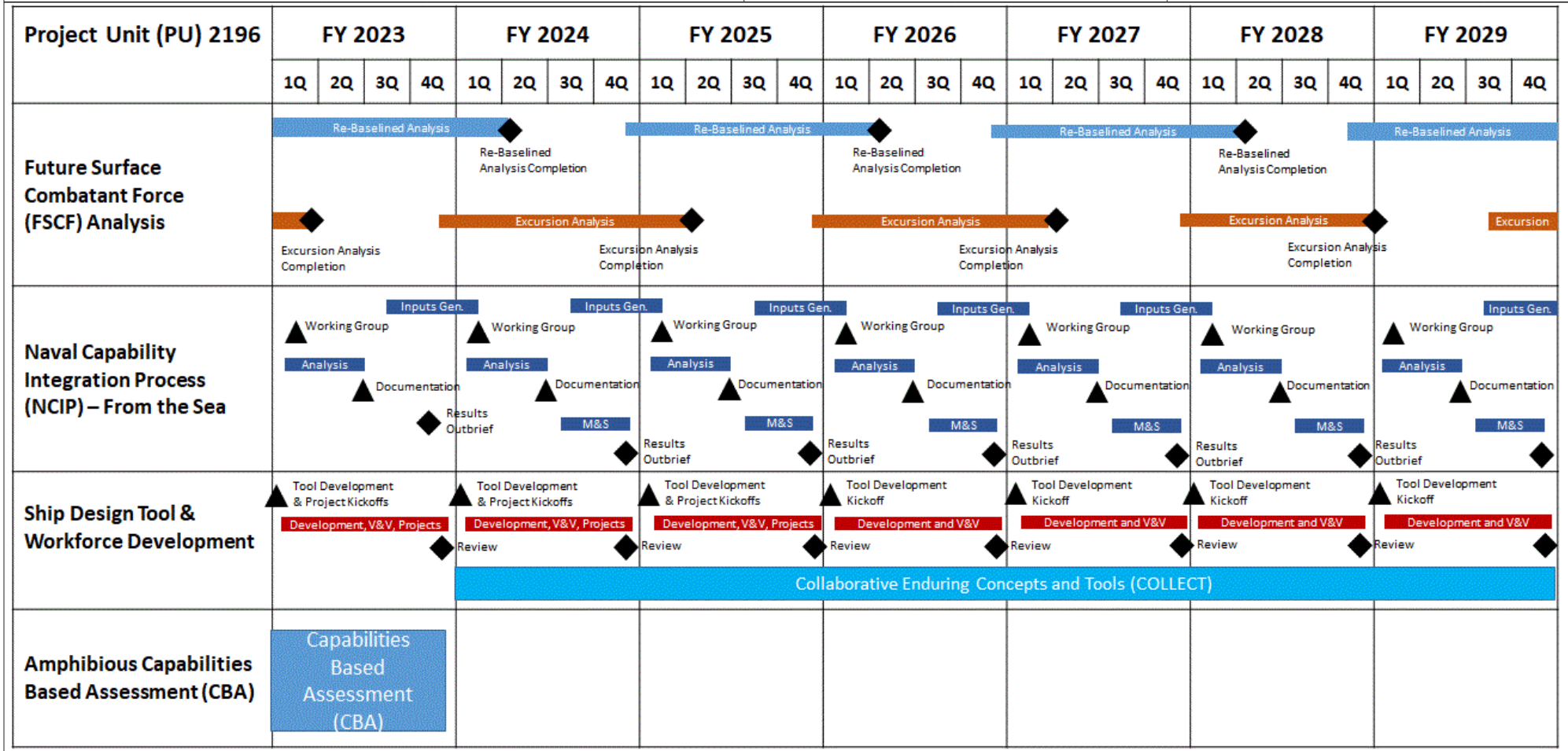

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 2196 / *Design, Tools, Plans and Concepts*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2196				
Proj 2196A: Future Surface Combatant Force Analysis	1	2023	4	2029
Proj 2196B: Naval Capability Integration Process - From the Sea	1	2023	4	2029
Proj 2196C: Ship Design Tools Development	1	2023	4	2029
Proj 2196D: Amphibious Capabilities Based Assessment (CBA)	1	2023	1	2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*				Project (Number/Name) 3161 / *NAVSEA Tech Authority*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
3161: *NAVSEA Tech Authority*	296.149	13.204	11.466	25.671	-	25.671	16.873	8.559	8.697	8.876	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project has been established to support the NAVSEA Technical Authority with the coordination of design and development efforts for cross-platform applicability to result in more affordable, mission-capable, and interoperable surface ship forces including ships that are less expensive to build and operate with reduced manning, reduced support costs, and greater utilization of emerging technology.

NAVSEA Tech Authority efforts under Project Unit (PU) 3161, known as the Cross Platform Systems Development (CPSD) Program, develops cross-program technology solutions and associated Technical Authority products. This project is the only R&D effort that provides a coordinated, collaborative approach to the development of cross-platform naval ship and weapon system technical requirements, design, as well as engineering capabilities in the areas of design tools, criteria, and methods. The CPSD project also provides innovative solutions for current fleet issues involving Technical Authority, such as interoperability issues with new systems or platforms and/or cross-cutting technology insertion topics. In FY 2023, CPSD was re-baselined to improve efficient and resilient alignment to CNO and NAVSEA Chief Engineer technical requirements and priorities. CPSD maintains the use of established functional areas for scope prioritization and portfolio diversification but now aligned to the "Support of Technical Authority."

Project Unit 3161 includes the Additive Manufacturing (AM) program. The AM program focuses on development and use of AM equipment for Naval applications in land-based and afloat applications, including system performance requirements, shipboard integration requirements and considerations, material selection, design optimization, equipment and component certification, and digital engineering integration. Efforts also include consideration of AM across a wide variety of potential applications ensuring AM manufactured components can meet mission requirements and that system/component technical requirements are updated to leverage AM.

Project Unit 3161 also includes the Learning to Action Board (L2AB) Firefighting Program. Following the USS Bonhomme Richard fire, the L2AB Firefighting Program was established to research and develop solutions for damage control and firefighting issues identified in a subsequent Major Fires Review. This program funds critical efforts in shipboard fire detection/suppression systems, fire prevention features, and advanced firefighting equipment.

Beginning in FY 2025, Condition Based Maintenance Plus (CBM+) is a maintenance optimization program that can generate significant benefits through maintenance program resets, maintenance effectiveness reviews, and active reliability centered maintenance (RCM) strategies at the program level. Employed as an enduring cross-life-cycle maintenance strategy, the program offers a technical solution to reduce maintenance burdens, increase operational availability and mission reliability of monitored systems, assists with identifying enterprise-wide cost avoidance, and will reduce overall life cycle costs. As a function of the Rapid Sustainment Improvement Process (RSIP), the CBM+ system will be developed, tested, evaluated, and then installed (using BLI 1445) on three to five surface combatants for selected shipboard equipment. Sensors for these systems will be defined and assessed. Further, the CBM+ system will be integrated with the Naval Maintenance, Repair, and Overhaul (N-MRO) suite of programs onboard ship to facilitate on ship and off ship monitoring.

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Additive and Advanced Manufacturing Technology	8.343	6.564	5.192	0.000	5.192
Articles:	-	-	-	-	-

Description: This effort funds the development of additive manufacturing technologies, advanced coating techniques, design and topology optimization, materials selection, characterization and process development.

FY 2024 Plans:
FY24 funding continues additive manufacturing (AM) technology RDT&E for metal and polymer components including materials characterization and process development, continued development of AM design and manufacturing standards, and application and technical data package (TDP) development. It will inform AM equipment performance requirements, capabilities and limitations for use in dynamic environments (i.e., shipboard). In addition, this funding will support development of documentation to qualify AM equipment for shipboard use. It provides for continued investment in a Digital Manufacturing Environment afloat for cyber-secure file and data transfer, as well as investigation of the Enterprise Product Lifecycle Management (ePLM) tool for the approval and configuration management of AM TDPs. It also enables continued investment in logistics integration of AM parts, including data-driven candidate part identification and AM part data analytics. This funding will enable continued exploration for the additive manufacturing of energetic materials and manufacturing/repair of printed circuit boards for electronic applications. This funding will also begin investment in other low technology readiness level technical transition efforts, such as specification and standard development for binder jetting AM technology.

FY 2025 Base Plans:
FY25 funding continues additive manufacturing (AM) technology RDT&E for metal and polymer components including materials characterization and process development, continued development of AM design and manufacturing standards, and application and technical data package (TDP) development. It will inform AM equipment performance requirements, capabilities and limitations for use in dynamic environments (i.e., shipboard). In addition, this funding will support development of documentation to qualify AM equipment for shipboard use. It provides for continued investment in a Digital Manufacturing Environment afloat for cyber-secure file and data transfer, as well as investigation of the Enterprise Product Lifecycle Management (ePLM) tool for the approval and configuration management of AM TDPs. It also enables continued investment in logistics integration of AM parts, including data-driven candidate part identification and AM part data analytics. This funding will enable continued exploration for the additive manufacturing of energetic materials and manufacturing/repair of printed circuit boards for electronic applications. This funding will also begin

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
investment in other low technology readiness level technical transition efforts, such as specification and standard development for binder jetting AM technology. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Funding decrease between FY 2024 to FY 2025 for proper phasing of requirements.					
Title: CPSD Support of Technical Authority	3.611	3.635	3.272	0.000	3.272
Articles:	-	-	-	-	-
Description: The CPSD effort funds the analysis of ship system technologies to reduce design, construction and sustainment costs, tools, analyses and technologies to reduce fleet life cycle costs, reduce life-cycle failure risk and improved refurbishment cycles. Efforts also include the development of validation tools to certify the safety and mission capability of platform concepts and eventually ships, development and application of advanced manufacturing capabilities including technical properties pertaining to their application in a naval environment, develop an understanding of the changing electromagnetic environment (EME) in the naval environment, adjust and develop practices and standards, development and application of digital engineering processes applied to system, design and risk assessment and aggregation, methodologies and systems for efficient and cost effective engineering analysis and risk reduction. CPSD supports technical authority needs for emerging capabilities associated with unmanned systems and platforms, advanced weapons systems, impacts of new materials, and increasing complexity of modern cyber-physical systems that employ software to operate hardware. ***FY 2024 Plans:*** In FY 2024 CPSD funds align to CPSD technical pillars: Ship Technology Improvement, Fleet Maintenance & Life Cycle Cost Reduction, and Digital Engineering/Electromagnetic Environment Effects. Representative projects include: (*) Emerging Radar Electromagnetic Environment (Ship Tech Improvement) - Enhance current M&S capabilities to increase analytical detail, decrease risk, and decrease ship-by-ship survey requirement applying M&S to Hazards of Electromagnetic Radiation to Ordnance (HERO) program and others. (*) Transformer Standards (Ship Tech Improvement) - Update 1980s specification for US Navy ship electric power transformers including use of 3-phase transformers common today.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
(*) Tie-Down Fitting Preservation (Fleet Maint & LCC Reduction) - Increase life of US Navy tie-downs used to secure aircraft and materiel. These tie-downs are extreme cost to US NAVY due to significant replacement. (*) Rudder Twisted Encapsulation (Fleet Maint & LCC Reduction) - Utilize innovative encapsulation method to reinforce rudder and create a twisted provide to decrease cavitation. Results will increase life-space of legacy 'fleet rudders'. FY24 culminates in installation onboard US Navy platform (pending ship avail schedule). (*) Hybrid Laser Arc Welding (Fleet Maint & LCC Reduction) - detailing a method for evaluating HLAW toughness without the use of time and labor-intensive SE testing and a set of standardized HLAW qualification requirements. (*) MBSE for EO/IR (Digital Engineering/E3) - Utilize Model Based Systems Engineering to support a Master Specification for EO/IR Systems. (*) MoVES Improvement (Digital Engineering/E3) - Accelerate Modeling and Visualization of Emission Signatures (MoVES) to support and future electro-optical and infrared system development including artificial intelligence enabling tracking and detection algorithms. ***FY 2025 Base Plans:*** In FY 2025, CPSD funds align to CPSD technical pillars: Ship Technology Improvement, Fleet Maintenance & Life Cycle Cost Reduction, and Digital Engineer/Electromagnetic Environment Effects. Representative projects include: (*) Mast Shock Qualification Standardization (Ship Tech Improvement) - Create standardized shock testing requirements for mast-mounted equipment to eliminate current case-by-case engineering efforts to define shock qualification tests. (*) HSSS Modernization (Ship Tech Improvement) - Update and modernize current Hull Structure Survival System (HSSS), a critical incident response ship structure assessment tool performing rapid structural strength evaluation of surface ship damage. (*) Fuel Oil Tank Repair (Fleet Maint & LCC Reduction) - Analyze ability and lifecycle of bonded repair methods to repair fuel oil tanks reducing repair time, increasing ship Ao, and decrease risks of current legacy processes (welding). (*) Rolled Comp D Nonskid (Fleet Maint & LCC Reduction) - Investigation of use of Composition D for rolled non-skid applications - demonstrate these nonskids on surface ships to validate their performance, add to the qualified products database (QPD) as approved products, then transition to the fleet for use.					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
(*) MoVES Improvement (Digital Engineering/E3) - Accelerate Modeling and Visualization of Emission Signatures (MoVES) to support and future electro-optical and infrared system development including artificial intelligence enabling tracking and detection algorithms. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease in budget from FY 2024 to FY 2025 is due to a reduction in technical pillar funding for Fleet Maintenance & Life Cycle Cost Reduction and Digital Engineering/Electromagnetic Environment Effects.					
Title: Learning to Action Board (L2AB) Recommended Fire Detection/Suppression	1.250	1.267	0.446	0.000	0.446
Articles:	-	-	-	-	-
Description: The L2AB Recommended Fire Detection/Suppression program was stood up to research & develop solutions to damage control and firefighting issues identified in a subsequent Major Fires Review following the 2020 USS Bonhomme Richard fire. This program funds critical efforts in shipboard fire detection/ suppression systems, fire prevention features, and advanced firefighting equipment; track programs to completion that were directed by the Vice Chief of Naval Operations. ***FY 2024 Plans:*** Fund research & development for the following technologies: Torpedo Suppression, Aviation Hose Devices, Alternate Fire Detectors, FDS Tool, Wireless Fire Detection, Portable Fire Monitors and NEXGEN FACU. Torpedo Suppression: The risk of a fire involving torpedoes is still not fully understood in the Navy's technical community. If a fire occurs in the torpedo room of a submarine there are no installed fire suppression systems to mitigate, suppress or extinguish the fire before catastrophic events involving munitions occur. Risk is based upon multiuse functions of torpedo rooms where combustible loading can be significant. Tasking involves conducting a study to characterize Torpedo Room fire hazard across submarine Fleet, research, and conduct an analysis of alternatives (AoA) of available suppression technologies that mitigate, suppress, or extinguish shipboard fire threats before catastrophic events involving munitions occur. Aviation Hose Devices: Aviation hose devices are used to secure fire hoses to the flight deck when fighting aircraft fires which may contain large amounts of fuel and/or ordnance placing personnel at risk. The current devices used by the fleet are obsolete with no manufacturer. Tasking includes developing a requirements					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
package to then find an entity who can reverse engineer the legacy devices and develop a replacement prototype. The prototype (perhaps using different parts and manufacturing methods) will then have to go through first article testing and validation through LFT&E to ensure the performance of the prototype matches that of the legacy aviation hose device. NEXGEN FACUs: Current fire alarm control unit (FACU) is obsolete. COTS FACUs cannot withstand the shipboard environment and would not pass first article testing. A COTS FACU compatible with the legacy LPD-17 detectors must be modified as a prototype to withstand extreme shock, vibration, and electromagnetic Interference (EMI) environments and then subjected to first article testing to ensure military suitability. Wireless Fire Detection System (FDS): Wireless fire detection systems are fairly new in the commercial market for use in buildings; however, the technology has many challenges in the shipboard environment. Despite these challenges, the fleet began adopting prototype wireless FDS in industrial availabilities to reduces the risk of a fire since the loss of USS Bonhomme Richard with limited success. NSWCPD to conduct research into prototype systems that have been deployed, understand the challenges, and conduct an analysis of alternatives (AoA) of various wireless versus wired technologies for rapid use in an industrial shipboard environment. FDS Network Tool: The fleet is in need of a new software tool that can monitor the current health of a fire detection system unique to each ship class and provide the impacts of industrial work and tag-outs and how that corresponds to heightened fire risk in an industrial availability. NSWCPD to develop a new software tool documenting FDS configuration including FACUs, DAUs/IOUs, network switches, alarm consoles, and associated power panels to each per ship class. Once a prototype is developed, beta testing will be required on the waterfront to see how to mature the design prior to recommendation for adoption in the fleet. Alternate Fire Detectors: The OEM providing fire detectors and their control units for DDG-51 class charges the Navy and exorbitant markup that results in millions of dollars of needless spending. Tasking includes researching the proprietary legacy control device onboard DDGs including the electrical characteristics to then develop a requirements package for compatible smoke, heat, and flame detectors. The requirement package will be used to solicit an entity who can then develop new prototype detectors compatible with the legacy control device that can also withstand the shipboard environment at a lower cost. The prototype detectors would then have to be connected to the legacy control device at the land-based test facility at NSWCPD to test electrical compatibility and fire performance. Additionally, prototype detectors will go through first article testing to ensure they can survive the shipboard environment.					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Portable Fire Monitors: Currently the Navy does not have large flow portable fire monitors for potential use in large spaces (vehicle spaces and hangars). Tasking includes researching commercial options to be subjected to Operational Test & Evaluation (OT&E) to determine military suitability and effectiveness. ***FY 2025 Base Plans:*** RDT&E efforts for the Self-Contained Breathing Apparatus (SCBA) Communication program to evaluate enhanced communication capabilities of 3M Scott Safety face piece (3M Scott Vision). Develop and outfit a continuous breathing air monitor at each Self-Contained Breathing Apparatus (SCBA) fixed breathing air charging station to ensure breathing air quality for each cylinder charge. Wireless Fire Detection System (FDS): Wireless fire detection systems are fairly new in the commercial market for use in buildings; however, the technology has many challenges in the shipboard environment. Despite these challenges, the fleet began adopting prototype wireless FDS in industrial availabilities to reduces the risk of a fire since the loss of USS Bonhomme Richard with limited success. NSWCPD to conduct research into prototype systems that have been deployed, understand the challenges, and conduct an analysis of alternatives (AoA) of various wireless versus wired technologies for rapid use in an industrial shipboard environment. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The funding decrease from FY 2024 to FY 2025 is due to decreasing L2AB Firefighting requirements.					
Title: Condition Based Maintenance Plus (CBM+)	0.000	0.000	16.761	0.000	16.761
Articles:	-	-	-	-	-
FY 2024 Plans: N/A ***FY 2025 Base Plans:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Beginning in FY 2025 as a function of the Rapid Sustainment Improvement Process (RSIP), the Condition Based Maintenance (CBM+) system will be developed, tested, evaluated, and then installed (using BLI 1445) on three to five surface combatants for selected shipboard equipment. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** FY 2025 increase provides funding for development and implementation of Condition Based Maintenance Plus.					
Accomplishments/Planned Programs Subtotals	13.204	11.466	25.671	0.000	25.671

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• RDTEN/0204202N: *DDG-1000*	197.436	98.223	35.404	-	35.404	25.462	4.617	0.000	0.000	Continuing	Continuing
• RDTEN/0603512N: *Carrier Systems Development*	11.567	10.085	7.789	-	7.789	7.788	7.697	0.000	0.000	Continuing	Continuing
• RDTEN/0603564N: *Preliminary Design/Feasibility Studies.*	75.327	119.213	50.475	-	50.475	44.541	44.809	0.000	0.000	Continuing	Continuing
• RDTEN/0604567N: *Ship Contcept Design/Live Fire T&E*	60.791	58.149	58.576	-	58.576	40.996	40.503	0.000	0.000	Continuing	Continuing
• RDTEN/0603582N: *Combat System Integration*	18.236	18.589	18.291	-	18.291	18.608	18.870	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

This is a non-acquisition program that develops, evaluates, and validates early stages of total ship concepts and technologies in support of SCN planning and potential future ship acquisition programs. This program also supports development, demonstration, evaluation, and validation of engineering tools, methods, and criteria for those concept designs and assessments. This program provides validated engineering tools, methods, and criteria for ship, and weapon system concept designs and assessments while fostering collaboration and coordination of efforts resulting in more effective use of funding.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CPSD Systems Engineering	C/CPFF	Various Contractors : Various	18.786	1.708	May 2023	0.275	May 2024	0.247	May 2025	-		0.247	Continuing	Continuing	Continuing
CPSD Engineering Support	WR	NSWCCD, NSWCPD, NRL : Various	65.100	0.180	Oct 2022	0.169	Nov 2023	0.141	Nov 2024	-		0.141	Continuing	Continuing	Continuing
CPSD Test and Evaluation	WR	NSWC : Various	12.111	0.232	Sep 2023	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
CPSD Systems Engineering	WR	NSWC DD : Dahlgren, VA	1.440	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
CPSD Systems Engineering	WR	NSWC CD : Carderock, MD	6.969	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
CPSD Systems Engineering	WR	NSWC PD : Philadelphia, PA	4.630	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
CPSD Engineering Development	WR	NRL : Washington, DC	0.889	0.232	Sep 2023	0.275	Nov 2023	0.247	Nov 2024	-		0.247	Continuing	Continuing	Continuing
CPSD Engineering Development	WR	NSWC DD : Dahlgren, VA	2.584	0.207	Oct 2022	0.300	Nov 2023	0.272	Nov 2024	-		0.272	Continuing	Continuing	Continuing
CPSD Engineering Development	WR	NSWC CD : Carderock, MD	5.143	1.490	Oct 2022	1.036	Nov 2023	1.008	Nov 2024	-		1.008	Continuing	Continuing	Continuing
CPSD Engineering Development	WR	NSWC PD : Philadelphia, PA	2.330	0.668	Nov 2022	0.870	Nov 2023	0.814	Nov 2024	-		0.814	Continuing	Continuing	Continuing
CPSD SBIR Withold	WR	Various : SBIR Withold	0.122	0.144	Jan 2023	0.150	Jan 2024	0.137	Jan 2025	-		0.137	Continuing	Continuing	Continuing
Cybersecurity Technologies	C/CPFF	JHU/APL : Baltimore, MD	10.331	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Cybersecurity Technologies	C/CPFF	MITRE : McLean, VA	1.108	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Cybersecurity Technologies	MIPR	PNNL DOE : Richland, WA	0.900	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Cybersecurity Technologies	WR	NUWC Keyport : Keyport, WA	0.550	0.000		0.000		0.000		-		0.000	0.000	0.550	-
Cybersecurity Technologies	WR	NUWC Newport : Newport, RI	2.306	0.000		0.000		0.000		-		0.000	0.000	2.306	-

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cybersecurity Technologies	WR	NSWC Crane : Crane, IN	0.700	0.000		0.000		0.000		-		0.000	0.000	0.700	-
Cybersecurity Technologies	WR	NSWC DD : Dahlgren, VA	15.914	0.000		0.000		0.000		-		0.000	0.000	15.914	-
Cybersecurity Technologies	WR	NSWC PD : Philadelphia, PA	4.600	0.000		0.000		0.000		-		0.000	0.000	4.600	-
Additive Manufacturing	WR	NSWC CD : Carderock, MD	9.286	1.108	Nov 2022	1.160	Nov 2023	1.200	Nov 2024	-		1.200	Continuing	Continuing	Continuing
Additive Manufacturing	Various	NSWC PD : Philadelphia, PA	4.266	1.034	Nov 2022	0.909	Nov 2023	1.100	Nov 2024	-		1.100	Continuing	Continuing	Continuing
Additive Manufacturing	Various	NUWC Newport : Newport, RI	0.837	0.268	Nov 2022	0.283	Nov 2023	0.300	Nov 2024	-		0.300	Continuing	Continuing	Continuing
Additive Manufacturing	WR	NUWC Keyport : Keyport, WA	0.100	0.000		0.000		0.000		-		0.000	0.000	0.100	-
Additive Manufacturing	Various	NUWC Keyport : Mechanicbsurg, PA	0.402	0.161	Nov 2022	0.216	Nov 2023	0.231	Nov 2024	-		0.231	Continuing	Continuing	Continuing
Additive Manufacturing	C/CPFF	JHU APL : Baltimore, MD	3.112	2.400	Jan 2023	0.876	Nov 2023	0.503	Nov 2024	-		0.503	Continuing	Continuing	Continuing
Additive Manufacturing	C/CPFF	PSU ARL : State College, PA	0.975	0.000		0.000		0.000		-		0.000	0.000	0.975	-
Additive Manufacturing	C/CPFF	Various Contracts : Various	2.525	0.012	Jan 2023	0.015	Jan 2024	0.015	Jan 2025	-		0.015	Continuing	Continuing	Continuing
Additive Manufacturing	WR	NRL : Washington DC	0.125	0.000		0.000		0.000		-		0.000	0.000	0.125	-
Additive Manufacturing	WR	NSWC Port Hueneme : Port Hueneme, CA	0.143	0.080	Nov 2022	0.080	Nov 2023	0.090	Nov 2024	-		0.090	Continuing	Continuing	Continuing
Additive Manufacturing	WR	NAVAIR : Patuxent River, MD	0.175	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Additive Manufacturing	WR	NSWC Crane : Crane, IN	0.303	0.270	Nov 2022	0.250	Nov 2023	0.275	Nov 2024	-		0.275	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Additive Manufacturing	WR	NSWC IH : Indian Head, MD	0.619	0.000	Nov 2022	1.390	Nov 2023	0.000		-		0.000	Continuing	Continuing	Continuing
Additive Manufacturing	WR	Various : Not Specified	0.480	0.041	Jan 2023	0.050	Jan 2024	0.055	Jan 2025	-		0.055	Continuing	Continuing	Continuing
Additive Manufacturing	Various	Various : SBIR Withold	0.827	0.000		0.176	Jan 2024	0.200	Jan 2025	-		0.200	Continuing	Continuing	Continuing
NCR2T AM	WR	Various : Not Specified	1.275	0.000		0.000		0.000		-		0.000	0.000	1.275	-
NCR2T CPSD	WR	Various : Not Specified	0.776	0.000		0.000		0.000		-		0.000	0.000	0.776	-
NCR2T BTR	C/CPFF	Various : Not Specified	4.400	0.000		0.000		0.000		-		0.000	0.000	4.400	-
Prior Years G/WR	WR	Various : Not Specified	89.747	0.000		0.000		0.000		-		0.000	0.000	89.747	-
Prior Years C/CPFF	C/BA	Various : Not Specified	4.899	0.000		0.000		0.000		-		0.000	0.000	4.899	-
Additive Manufacturing	WR	NUWC Keyport : Portsmouth, NH	0.610	0.314	Nov 2022	0.300	Nov 2023	0.300	Nov 2024	-		0.300	Continuing	Continuing	Continuing
Additive Manufacturing	WR	NAVSUP WSS : Mechanicsburg, PA	0.125	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Additive Manufacturing	WR	GSA : Washington, DC	0.044	0.039	Feb 2023	0.050	Feb 2024	0.050	Feb 2025	-		0.050	Continuing	Continuing	Continuing
L2AB Firefighting Program	MIPR	NSWCPCD : Panama City, FL	0.000	0.000		0.000		0.350	Feb 2025	-		0.350	Continuing	Continuing	Continuing
L2AB Firefighting Program	C/BA	NSWCPD : Philadelphia, PA	0.000	1.250	Aug 2023	1.267	Feb 2024	0.096	Feb 2025	-		0.096	Continuing	Continuing	Continuing
CPSD Engineering Development	WR	NUWC KPT : Keyport, WA	0.000	0.000		0.312	Nov 2023	0.284	Nov 2024	-		0.284	Continuing	Continuing	Continuing
CPSD Engineering Development	WR	NSWC Crane : Crane, IN	0.000	0.000		0.240	Nov 2023	0.212	Nov 2024	-		0.212	Continuing	Continuing	Continuing
NAVSEA Withhold	WR	Various : NAVSEA Withhold	0.000	0.000		0.007	Jan 2024	0.007	Jan 2025	-		0.007	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3161 / *NAVSEA Tech Authority*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Additive Manufacturing	Various	ATR : Beltsville, MD	0.000	1.139	Nov 2023	0.200	Jan 2024	0.200	Jan 2025	-		0.200	0.000	1.539	-
		Subtotal	282.564	12.977		10.856		8.334		-		8.334	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cybersecurity Technologies	WR	NSWC CD : Carderock, MD	2.569	0.000		0.000		0.000		-		0.000	0.000	2.569	-
Cybersecurity Technologies	MIPR	NIWC : Various	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
Cybersecurity Technologies	C/CPFF	Various Contractors : Various	3.303	0.000		0.000		0.000		-		0.000	0.000	3.303	-
		Subtotal	6.372	0.000		0.000		0.000		-		0.000	0.000	6.372	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NSWC CD : Carderock, MD	0.950	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPFF	JHU/APL : Baltimore, MD	1.650	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NSWC PD : Philadelphia, PA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Operational Test & Evaluation (OT&E)	WR	TBD : TBD	0.000	0.000		0.000		16.760	Nov 2024	-		16.760	Continuing	Continuing	Continuing
		Subtotal	2.600	0.000		0.000		16.760		-		16.760	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 3161 / *NAVSEA Tech Authority*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM/Travel	Allot	NAVSEA HQ : Washington, DC	0.999	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Mgmt Spt	WR	NSWC CD : Carderock, MD	1.250	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Program Mgmt Spt	C/CPFF	CSC : Washington, D.C.	0.815	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Cybersecurity Technologies	C/CPFF	CSC : Washington, D.C.	0.250	0.000		0.000		0.000		-		0.000	0.000	0.250	-
Cybersecurity Technologies	C/CPFF	Alion : Washington, D.C.	0.250	0.000		0.000		0.000		-		0.000	0.000	0.250	-
Cybersecurity Technologies	MIPR	NAVSEA HQ : Washington, D.C.	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Additive Manufacturing	C/CPFF	Various : Various	0.995	0.177	Oct 2022	0.560	Oct 2023	0.522	Oct 2024	-		0.522	Continuing	Continuing	Continuing
Additive Manufacturing	Allot	Various : Not Specified	0.054	0.050	Dec 2022	0.050	Dec 2023	0.055	Dec 2024	-		0.055	Continuing	Continuing	Continuing
		Subtotal	4.613	0.227		0.610		0.577		-		0.577	Continuing	Continuing	N/A

	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	296.149	13.204		11.466		25.671		-		25.671	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3161 / *NAVSEA Tech Authority*

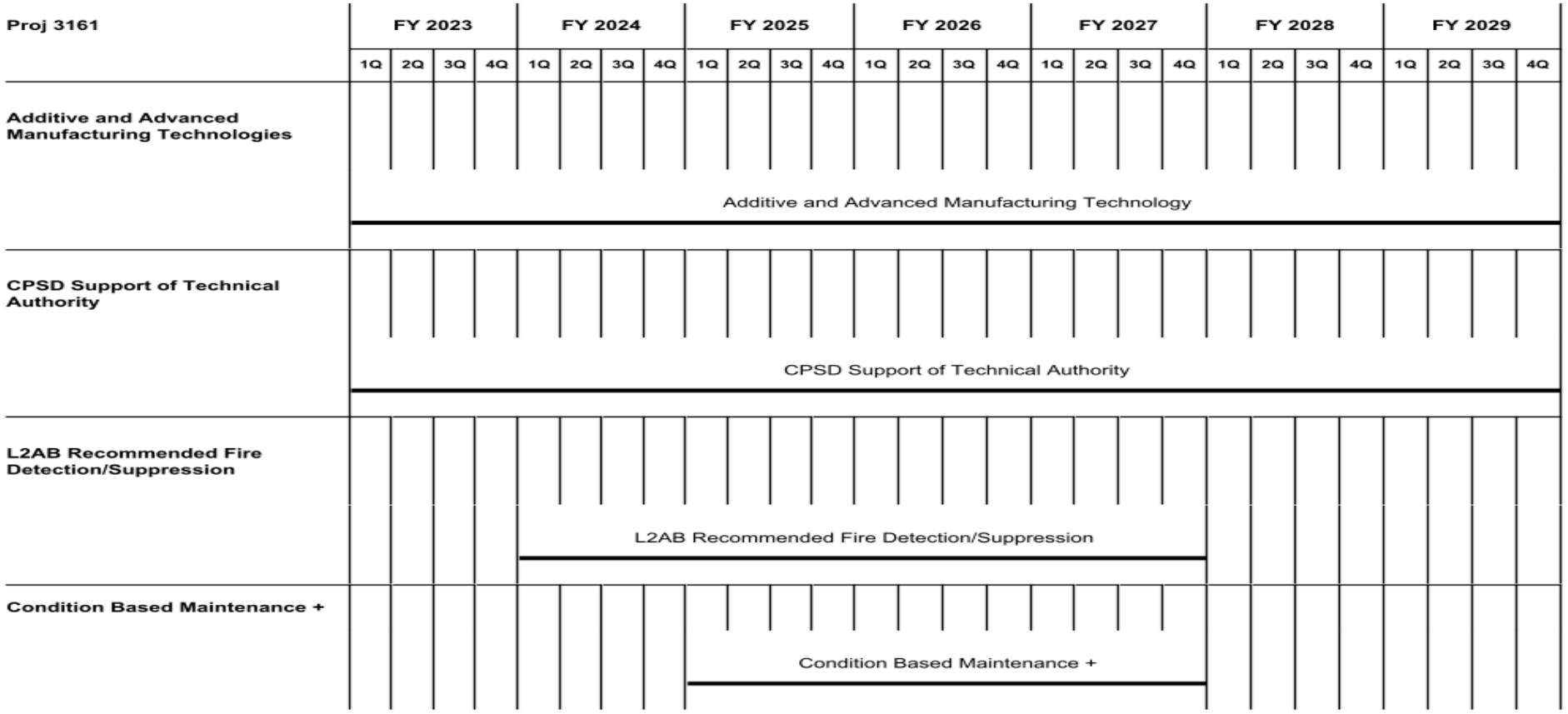

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Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3161 / *NAVSEA Tech Authority*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3161				
Additive and Advanced Manufacturing Technologies:	1	2023	4	2029
CPSD Support of Technical Authority:	1	2023	4	2029
L2AB Recommended Fire Detection/Suppression:	4	2023	4	2026
Condition Based Maintenance +:	1	2025	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*				Project (Number/Name) 3244 / *Cybersecurity Engineering*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
3244: *Cybersecurity Engineering*	30.382	15.509	36.117	36.981	-	36.981	37.530	37.311	37.690	38.451	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This effort funds two continuing cybersecurity programs, Situational Awareness Boundary Enforcement and Response (SABER) and USS SECURE, and two maturing Cybersecurity projects, High Availability Virtual Environment (HAVEN) and Cybersecurity Vulnerability Assessment Tool (CVAST). HAVEN and CVAST are called out individually this year for greater budgetary transparency and detail. SABER is the research, design, development, testing, and installation of Cybersecurity solutions for installed integrated computer networks to include shipboard Hull Mechanical and Electrical (HM&E), Navigation Systems, Combat Systems, Fire Control, Sonar, Radar, Communications, and other shipboard computerized control systems for all afloat U.S. Navy platforms. SABER provides network boundary defense and situational awareness to protect and detect against external and internal cybersecurity-threats. HAVEN is a secure operating environment that provides a resilient and redundant infrastructure platform for rapid software deployment and system restoration. HAVEN provides the secure operating environment for SABER and a secure hosting environment. HAVEN has been considered a part of SABER and continued HAVEN development has led us to understand that this capability may have use beyond hosting SABER. CVAST is a digital engineering decision support system for cyber risk assessment and engineering analysis of Navy systems. USS SECURE is a cybersecurity Test & Evaluation capability for operationally representative distributed system of-systems testing with scalable events from individual systems to enclave, platform, and strike group levels. USS SECURE is applicable to systems across Navy SYSCOMS and DoD Services. USS SECURE has been broken out from SABER into its own funding line to add greater visibility/transparency.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Title: SABER	9.361	29.877	30.850	0.000	30.850
Articles:	-	-	-	-	-
FY 2024 Plans: In FY 2024, SABER integration expanded from the Hull, Mechanical, and Electrical Enclaves to Navigation, Aviation, and Combat System Enclaves for afloat platforms. SABER will increase research, development, testing, and evaluation to support upcoming ship installs to additional platforms. This includes expanding cyber incident collection architecture to provide capabilities to new platforms and additional interfaces under protection. This also includes an increase in development of automation technologies for software qualification and pre-deployment integration testing. SABER will pursue technologies to handle increased bandwidth in support of meeting higher-bandwidth requirements for Navigation and Combat System enclaves. SABER will complete annual updates to enumeration technology tools, additional shipboard controllers, shore-side lab testing, and shipboard enumerations. SABER will mature					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3244 / *Cybersecurity Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
fielded capability to support developing cyber-threat requirements. Integration of Artificial Intelligence and Machine Learning methods and techniques will be ongoing in FY 2024. SABER will enhance afloat cybersecurity capability by expanding the core SABER software, continuing updates to ensure that configurations meet the need for advanced defensive cyber capabilities on afloat Navy platforms. The Navy will manage and lead the SABER Configuration Control Boards, continue to manage all non-recurring engineering, modifications, tailoring, and support continued deployment and life cycle maintenance. Software development, integration, maintenance, and lifecycle support will be provided for the 11 shipboard installations planned in FY 2024, and the 25 SABER systems that are installed in the Fleet. SABER will build Hull, Mechanical, and Electrical cybersecurity computing hardware lab units for ship integration testing that support installations in FY 2025 and FY 2026. FY 2024 efforts will evolve the design and development of second-generation SABER computing hardware. This additional work will develop and test new system variants as well as existing variants for additional ship classes. In FY 2024, this project continues development of HAVEN with containerization, transition to Azure requirements for the HAVEN package build farm in preparation for migrating to cloud environment, and integration into weapons systems as virtualized secure operating environment. It is also being integrated as a secure operating environment. As HAVEN is a part of SABER, continuing HAVEN development has led us to understand that this capability may have use beyond hosting SABER. In FY 2024, Cybersecurity Vulnerability Assessment Tool (CVAST) will focus on expanding tool functionality, user base, and accessibility at different classification levels. ***FY 2025 Base Plans:*** SABER will continue research, development, testing and evaluation necessary to support upcoming ship installs to additional platforms. SABER will be integrating directly with the Combat System enclave aboard FFG 62 class in addition to continued deployments in the HM&E enclaves. The program will continue development of automation technologies for software qualification as well as start the employment of those automation technologies. SABER will complete annual updates to enumeration technology tools, additional shipboard controllers, shore-side lab testing, and shipboard enumerations. SABER will continue investigation of technologies to handle increased bandwidth in support of maturing enclave requirements. SABER will mature fielded capability to support developing cyber threat requirements including activities related to updating the					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3244 / *Cybersecurity Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
program's threat model. Employment of Artificial Intelligence and Machine Learning methods and techniques will begin in FY 2025. In FY 2025, this project will deploy containerized HAVEN secure operating environment, complete transition to compiling and operating out of Azure cloud environment and continue integration into weapons systems as virtualized secure operating environment. In FY 2025, CVAST will continue to focus on expanding tool functionality, user base, and accessibility at different classification levels. Navy will continue to maintain CVAST's ability to automate the evaluation of cybersecurity risk to warfighting mission areas. CVAST will begin further development of enhancements to support incident response, vulnerability management and cybersecurity threat analysis by developing functionality to ingest the outputs of the Endpoint Enumeration Technology Suite. This capability will aide cybersecurity response teams with efficient identification of vulnerabilities, attack paths and possible secondary weaknesses that could allow for an attack across multiple systems as well as multiple platforms. CVAST will develop functionality to automate early detection and monitoring of supply chain cybersecurity risk through Supply Chain Risk Management. This will enable early detection and prompt inspection of equipment earlier in the design and support appropriate mitigations for fielded equipment. These developmental enhancements are intended for completion by Quarter 4 of FY 2027. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The increase of $0.973M will support the deployment of HAVEN, expand the new work planned in 2025 on CVAST, accelerate collection architecture research and advance the employment of Artificial Intelligence and Machine Learning software capabilities that will be implemented in FY 2025.					
Title: USS SECURE	6.148	6.240	6.131	0.000	6.131
Articles:	-	-	-	-	-
FY 2024 Plans: In FY 2024, the Navy will continue to conduct land-based end-to-end system cyber-security testing using USS SECURE. USS SECURE will continue to refine and develop test processes and methods in order to respond to					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3244 / *Cybersecurity Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
increased demand and tailoring testing services based on system complexity and lifecycle stage. USS SECURE will conduct three Cyber Risk Assessments in FY 2024 and will conduct other emergent tests as needed. ***FY 2025 Base Plans:*** In FY 2025, the Navy will continue to conduct land-based end-to-end system cyber-security testing using USS SECURE. USS SECURE will continue to refine and develop test processes and methods in order to respond to increased demand and tailoring testing services based on system complexity and lifecycle stage. USS SECURE will conduct three or more Cyber Risk Assessments in FY 2025 and will conduct other emergent tests as needed. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** The decrease of $0.109M has no significant impacts to the work planned for FY24 to FY25.					
Accomplishments/Planned Programs Subtotals	15.509	36.117	36.981	0.000	36.981

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

SABER is a non-acquisition program. SABER's capabilities are transitioned to acquisition programs for installation and sustainment. HAVEN is a non-acquisition program. In FY23 USS SECURE worked with NAVSEA PEOs IWS2.0, IWS80, and IWS 1T with regard to the PMS377 LHA and LPD platforms, PMS515 regarding the FFG62 platform, NAVAIR PMA 280 for the Tomahawk Weapon System, and the Coast Guard for the Offshore Patrol Cutter. In FY24, USS SECURE will perform Cyber Risk Assessments (CRAs) for NAVAIR PMA280 on Tomahawk, for the Coast Guard OPC for C5I and Navigation enclaves, PMS377 regarding Anti-Air Warfare, Amphibious Warfare, Anti-Surface Warfare Engagement, Command, Control, and Communications, Strike Warfare, and Mobility mission areas. CVN79 and Aegis Combat System are also considering CRAs in late FY24 or early FY25. In FY25, USS SECURE is planning to work with NAVSEA PEOs IWS 80 for Surface Ship Self Defense System, IWS 1 for Aegis Baseline 10, PMS 515 for FFG 62, and PMS378 for CVN79. In FY24, CVAST collaborated and performed work with IWS 1.0 (AEGIS), PMS 500 (DDG 1000), PMS400D (DDG125) and SHIPS GEM. There are also tight collaborations and ongoing discussions with end users utilizing the system in HPC. There is at least one user from each of the SYSCOMS. In FY25, CVAST anticipates tight collaboration with DDG Flight II (Platform Level), PEO Carriers (CVN78 Updates and CVN79) as well as FFGX (Multi SYSCOM). Each of these engagements represents different layers of assessment, system, system of system and platform level cyber risk assessments (CRAs).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 3244 / *Cybersecurity Engineering*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cybersecurity Technologies	C/CPFF	JHU APL : Baltimore, MD	1.200	0.300	Oct 2022	2.800	Oct 2023	3.000	Oct 2024	-		3.000	0.000	7.300	-
Cybersecurity Technologies	WR	NUWC Newport : Newport, RI	2.609	1.400	Oct 2022	3.000	Oct 2023	3.000	Oct 2024	-		3.000	0.000	10.009	-
Cybersecurity Technologies	WR	NSWC DD : Dahlgren, VA	2.351	1.400	Oct 2022	6.000	Oct 2023	6.000	Oct 2024	-		6.000	0.000	15.751	-
Cybersecurity Technologies	WR	NSWC PD : Philadelphia, PA	4.187	2.200	Oct 2022	6.000	Oct 2023	6.000	Oct 2024	-		6.000	0.000	18.387	-
Cybersecurity Technologies	MIPR	GSA : O'Fallon, IL	0.632	0.700	May 2023	2.500	May 2024	2.603	May 2025	-		2.603	0.000	6.435	-
Cybersecurity Technologies	C/CPFF	Various Contractors : Various	1.825	0.300	Oct 2022	1.777	Oct 2023	2.900	Oct 2024	-		2.900	0.000	6.802	-
		Subtotal	12.804	6.300		22.077		23.503		-		23.503	0.000	64.684	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NSWC CD : Carderock, MD	0.800	0.300	Oct 2022	0.400	Oct 2023	0.450	Oct 2024	-		0.450	Continuing	Continuing	Continuing
Program Management Support	WR	NIWC PAC : San Diego, CA	0.514	0.280	Oct 2022	0.300	Oct 2023	0.375	Oct 2024	-		0.375	0.000	1.469	-
Program Management Support	C/CPFF	Various Contractors : Various	4.990	0.200	Jan 2023	0.300	Jan 2024	0.500	Jan 2025	-		0.500	0.000	5.990	-
Program Management Support	MIPR	GSA : O'Fallon, IL	1.443	2.079	May 2023	3.500	May 2024	3.500	May 2025	-		3.500	0.000	10.522	-
Program Management Support	MIPR	DTIC : Fort Belvior, VA	0.000	1.750	Oct 2022	3.500	Oct 2023	2.750	Oct 2024	-		2.750	Continuing	Continuing	Continuing
		Subtotal	7.747	4.609		8.000		7.575		-		7.575	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3244 / *Cybersecurity Engineering*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NAWC CL : China Lake, CA	0.173	0.000	Oct 2022	0.000		0.000		-		0.000	0.000	0.173	-
Developmental Test & Evaluation (DT&E)	WR	NSWC PD : Philadelphia, PA	0.090	0.000	Oct 2022	0.000		0.000		-		0.000	0.000	0.090	-
Developmental Test & Evaluation (DT&E)	WR	NSWC CO : Corona, CA	2.030	1.200	Oct 2022	1.300	Oct 2023	1.000	Oct 2024	-		1.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NSWC DD : Dahlgren, VA	5.838	2.700	Oct 2022	3.700	Oct 2023	4.200	Oct 2024	-		4.200	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	MIPR	GSA : O'Fallon, IL	1.600	0.600	May 2023	0.840	May 2024	0.500	May 2025	-		0.500	Continuing	Continuing	Continuing
		Subtotal	9.731	4.500		5.840		5.700		-		5.700	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HQ PM Travel	Allot	NAVSEA HQ : Washington, DC	0.100	0.100	Oct 2022	0.200	Oct 2023	0.203	Oct 2024	-		0.203	Continuing	Continuing	Continuing
		Subtotal	0.100	0.100		0.200		0.203		-		0.203	Continuing	Continuing	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	30.382	15.509		36.117		36.981		-		36.981	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3244 / *Cybersecurity Engineering*

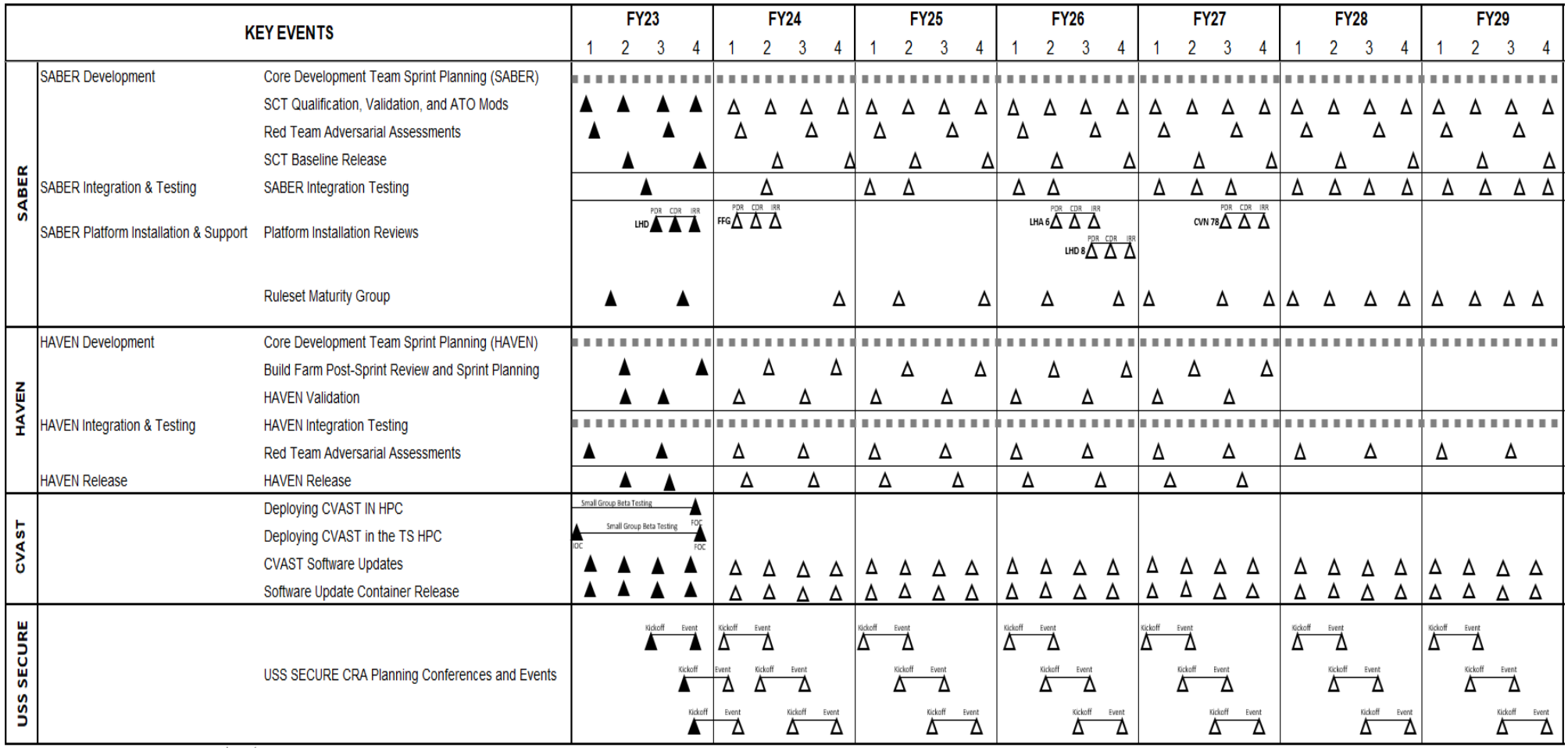


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3244 / *Cybersecurity Engineering*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3244				
SABER: Core Development Team Sprint Planning	1	2023	4	2029
SABER: SCT Qualification, Validation, and ATO Mods	1	2023	4	2029
SABER: Red Team Adversarial Assessments	1	2023	3	2029
SABER: SCT Baseline Release	2	2023	4	2029
SABER: SABER Integration Testing	3	2023	4	2029
SABER: Platform Installation Reviews	3	2023	4	2027
SABER: Ruleset Maturity Group	2	2023	4	2029
HAVEN: Core Development Team Sprint Planning	1	2023	4	2029
HAVEN: Build Farm Post-Sprint Review and Sprint Planning	2	2023	4	2027
HAVEN: HAVEN Validation	2	2023	3	2027
HAVEN: HAVEN Integration Testing	1	2023	4	2029
HAVEN: Red Team Adversarial Assessments	1	2023	3	2029
HAVEN: HAVEN Release	2	2023	3	2027
CVAST: Deploying CVAST in HPC	1	2023	4	2023
CVAST: Deploying CVAST in the TS HPC	1	2023	4	2023
CVAST: CVAST Software Updates	1	2023	4	2029
CVAST: Software Update Container Release	1	2023	4	2029
USS SECURE: USS SECURE CRA Planning Conferences and Events	3	2023	4	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 3376 / *Strategic Sealift*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
3376: *Strategic Sealift*	38.304	6.778	6.134	13.489	-	13.489	26.122	26.499	4.116	4.200	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 3376 - Strategic Sealift Research and Development - Develops new concepts and technologies which can be applied to or will enable future strategic sealift, and Seabasing systems. The technologies include ship configuration concepts, equipment to increase cargo handling and cargo loading/unloading rates (including commercial and merchant ship systems), improved man/machine interfaces, improved structural configurations and materials, and Logistics-Over-the-Shore (LOTS) equipment and system improvements.

Prior Years include: FY2016 and prior years (FY2014 and earlier) efforts financed under the National Defense Sealift Fund (NDSF) BA 04 Project 3116 Strategic Sealift Research and Development; FY2015, FY2017, FY2019 thru FY2024 efforts financed under this program element, RDT&E,N BA04, Project 3376 (Strategic Sealift); and FY2018 efforts financed under RDT&E,N BA 04 Project 9999/C403 (Congressional Adds).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Shipboard Crane Systems/Shipboard Cargo Systems	5.200	4.570	11.775	0.000	11.775
Articles:	-	-	-	-	-
FY 2024 Plans: Continue investigation and demonstration of shipboard crane/cargo system improvements including Vertical Launch System (VLS) Rearming and transfer capabilities. VLS rearming scope to include continuation of testing of intermodal container system for transportation of VLS missile canisters. Continue analysis and concept development for rearming of Naval Strike Missile. Continue concept development, and begin design and fabrication for T-AKE (dry cargo/ammunition ship) upgrades to enhance VLS and heavyweight torpedo rearming capabilities. Continue engineering design and development and begin fabrication for VLS Strike Up/Strike Down System transition.					
FY 2025 Base Plans: Continue investigation and demonstration of shipboard crane/cargo system improvements including Vertical Launch					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3376 / *Strategic Sealift*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
System (VLS) Rearming and transfer capabilities. Continue design and fabrication for T-AKE (dry cargo/ ammunition ship) upgrades to enhance VLS and heavyweight torpedo rearming capabilities. Continue analysis and concept development for rearming of Naval Strike Missile. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase of $7.205M from FY 2024 to FY 2025 reflects prototype fabrication, installation, outfitting, and testing for T-AKE VLS and heavyweight torpedo rearming capability.					
Title: Sealift Concept Development	0.951	1.047	1.195	0.000	1.195
Articles:	-	-	-	-	-
FY 2024 Plans: Continue Sealift Research and Technology development and program guidance. Continue investigation of improved sealift vessel survivability. ***FY 2025 Base Plans:*** Continue Sealift Research and Technology development and program guidance. Continue investigation of improved sealift vessel survivability. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase of $0.148M from FY 2024 to FY 2025 reflects the schedule of planned work for the sealift vessel survivability improvement project.					
Title: Lighter/HSV Seabase to Shore Cargo Transfer	0.000	0.517	0.519	0.000	0.519
Articles:	-	-	-	-	-
FY 2024 Plans: Development of Unmanned Surface Vessels (USV) logistics delivery system CONOPS and concepts. ***FY 2025 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3376 / *Strategic Sealift*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Continue development of Unmanned Surface Vessels (USV) logistics delivery system. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Increase of $0.002M from FY 2024 to FY 2025 reflects the schedule of planned work for the USV logistics delivery system CONOPS and concept development project.					
Title: Advanced Tools	0.627	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2024 Plans: N/A ***FY 2025 Base Plans:*** N/A ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** N/A					
Accomplishments/Planned Programs Subtotals	6.778	6.134	13.489	0.000	13.489

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable for SEALIFT R&D efforts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 3376 / *Strategic Sealift*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Shipboard Crane Systems/ Shipboard Cargo Systems	WR	Various Contractors : Various	15.029	5.200	Jan 2023	4.570	Jan 2024	11.775	Jan 2025	-		11.775	Continuing	Continuing	Continuing
Sealift Concept Development	WR	Various Contractors : Various	8.497	0.951	Jan 2023	1.047	Jan 2024	1.195	Jan 2025	-		1.195	Continuing	Continuing	Continuing
Lighter/HSV Seabase to Shore Cargo Transfer	WR	Various Contractors : Various	10.342	0.000		0.517	Jan 2024	0.519	Jan 2025	-		0.519	Continuing	Continuing	Continuing
Advanced Tools	WR	Various : Various	4.436	0.627	Jan 2023	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	38.304	6.778		6.134		13.489		-		13.489	Continuing	Continuing	N/A

Remarks

1. Prior Years column only includes FY2015 and FY2017 (project 3376); FY2018 Congressional Add (project C403; and FY2019-FY2024 (project 3376) funding as FY2016 and prior years (FY14 and earlier) were funded under NDSF BA 04 Project 3116 Strategic Sealift Research and Development.
2. Award dates reflect initial award of incremental execution.

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	38.304	6.778		6.134		13.489		-		13.489	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3376 / *Strategic Sealift*

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy | **Date:** January 2024
Appropriation/Budget Activity: 1319/04 | **R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design* | **Project (Number/Name)** 3376 / *Strategic Sealift*

Note: FY2016 and prior year (FY14 and earlier) efforts were financed under the National Sealift Defense Fund (NDSF) BA 04, Project 3116 (Strategic Sealift Research and Development). FY 2015, FY 2017, FY2018, FY2019, FY2020, FY2021 and out-year funds are financed under this program element.

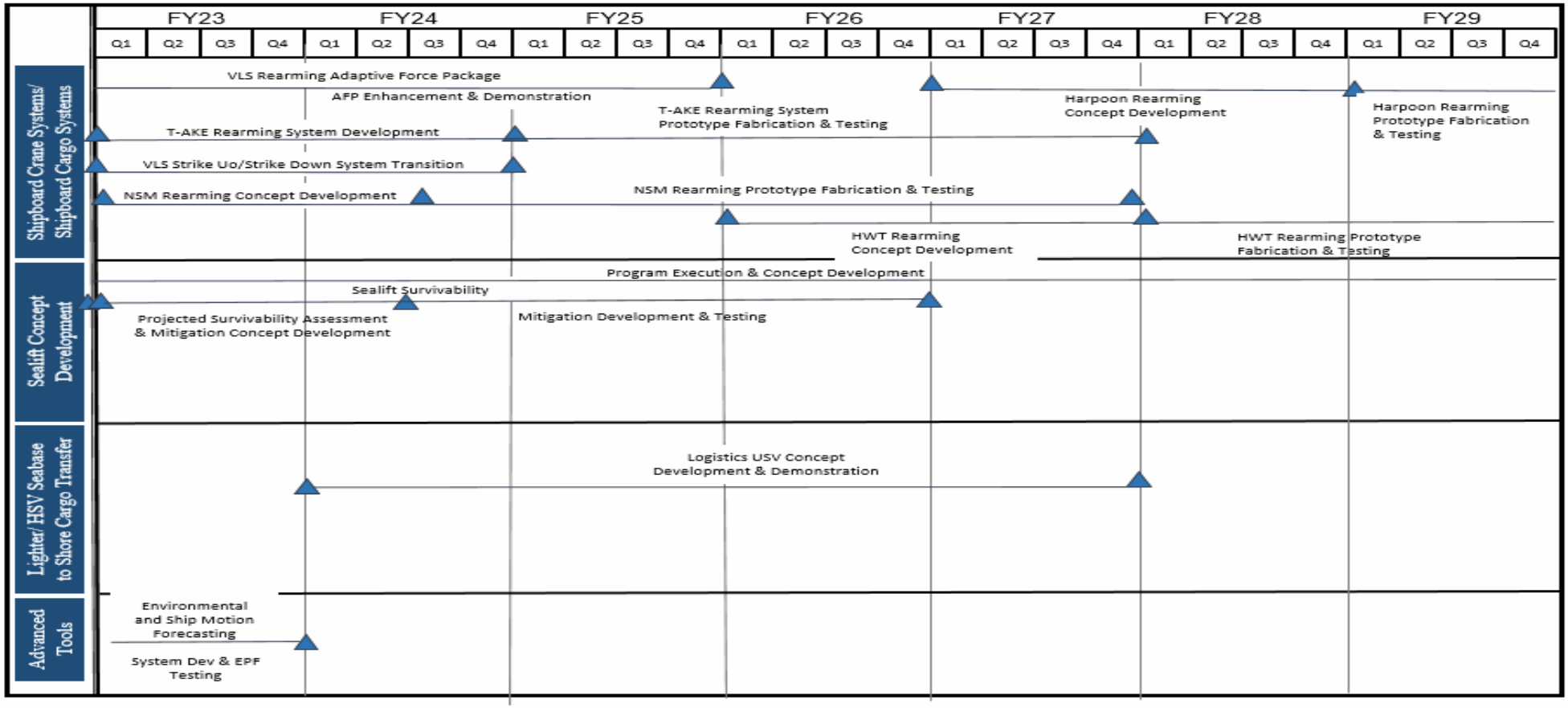


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3376 / *Strategic Sealift*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3376				
Shipboard Crane Systems/Shipboard Cargo Systems	1	2023	4	2029
Sealift Concept Development	1	2023	4	2029
Lighter/HSV Seabase to Shore Cargo Transfer FY24-FY28	1	2024	1	2028
Advanced Tools	1	2023	1	2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 3505 / *Maritime Prepositioning Force Next*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
3505: *Maritime Prepositioning Force Next*	0.000	0.000	1.502	1.484	-	1.484	2.519	16.465	2.464	2.516	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The MPF(X) ships will recapitalize the aging BOBO Class maritime prepositioning ships in consideration of evolved force concepts such as Distributed Maritime Operations. The 'Sealift the Nation Needs' report to Congress defines a three-phase Sealift Recapitalization approach: Service Life Extensions, Acquiring Used ships, and new construction. The MPF(X) portion represents the prepositioning new construction aspect of the three-phase sealift recapitalization approach in full consideration of force concepts. USNS BOBO class ships will retire from service beginning in FY 2033.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Maritime Prepositioning Force Next Design and Integration	0.000	1.502	1.484	0.000	1.484
Articles:	-	-	-	-	-
FY 2024 Plans: FY 2024 funds will be used to fund development and approval of an Initial Capabilities Document (ICD). ICD efforts will include identification of applicable gaps associated with operational risk across the joint force that the MPF(X) program is intended to fill, and proposal of materiel and/or non-materiel approaches that will be further studied in the Analysis of Alternatives (AoA). Early pre-AoA efforts to be completed by Warfare Centers and various Support Contractors are planned to begin in early 2024 to initiate formal AoA before third quarter of FY 2024.					
FY 2025 Base Plans: FY 2025 funds will complete the AoA initiated in FY 2024 wih deliverables including Navy and Marine Corps approved Top Level Requirements and an initial technical baseline of MPF(X). To accomplish these deliverables, Naval Sea Systems Command, Warfare Centers, and Support Contractors will perform requirements analyses and ship systems engineering. To support subsequent design studies with industry, FY					

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3505 / *Maritime Prepositioning Force Next*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
2025 funds will enable acquisition efforts and start of Capability Development Document and design specification development. ***FY 2025 OCO Plans:*** N/A ***FY 2024 to FY 2025 Increase/Decrease Statement:*** Budget decrease of $0.018M reflects decrease of team supporting the completion of the Analysis of Alternatives (AoA).					
Accomplishments/Planned Programs Subtotals	0.000	1.502	1.484	0.000	1.484

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Preliminary Design is contemplated to be completed by multiple industry partners. The acquisition strategy for the Detail Design & Construction efforts will be developed in the future.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3505 / *Maritime Prepositioning Force Next*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Initial Capability Document (ICD)	C/BA	Various : Various	0.000	0.000		0.500	Oct 2023	0.000		-		0.000	0.000	0.500	-
Capability Development Document (CDD)	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.400	Mar 2025	-		0.400	0.000	0.400	-
		Subtotal	0.000	0.000		0.500		0.400		-		0.400	0.000	0.900	N/A

Remarks

1. Award dates reflect initial award of incremental execution.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM & Engineering Support	C/BA	Variou : Various	0.000	0.000		0.301	Oct 2023	0.301	Jan 2025	-		0.301	Continuing	Continuing	Continuing
Warfare Center Analysis and Support	C/BA	Various : Various	0.000	0.000		0.701	Oct 2023	0.783	Jan 2025	-		0.783	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		1.002		1.084		-		1.084	Continuing	Continuing	N/A

Remarks

1. Award dates reflect initial award of incremental execution.

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		1.502		1.484		-		1.484	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3505 / *Maritime Prepositioning Force Next*

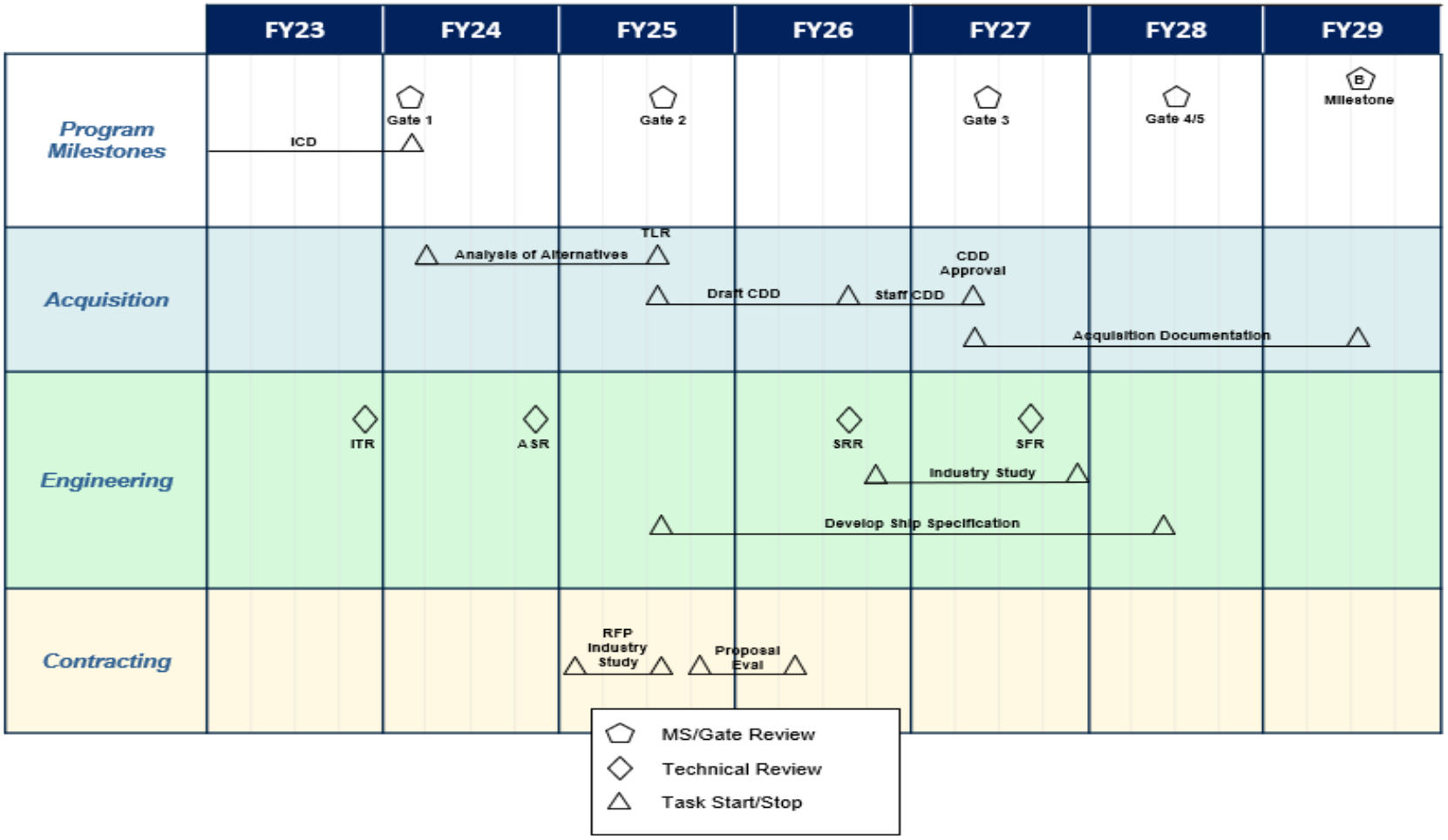


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 3505 / *Maritime Prepositioning Force Next*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3505				
Gate 1 ICD Approval	1	2024	1	2024
AoA	2	2024	3	2025
Gate 2 AoA Approval	3	2025	3	2025
CDD Development	3	2025	2	2027
Industry Studies	3	2026	4	2027
Gate 3 CDD Approval	2	2027	2	2027
MS B	3	2029	3	2029

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy											Date: March 2024	
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*				Project (Number/Name) 4044 / *Medium Landing Ship*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
4044: *Medium Landing Ship*	32.697	11.064	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	43.761
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Starting in FY2024, RDT&E requirements are detailed in PE 0603564N/Ship Preliminary Design & Feasibility Studies. PE changed to better align with scope of work for the program.

A. Mission Description and Budget Item Justification

Medium Landing Ship (LSM) is a medium-sized landing ship that enables distributed maneuver and logistics such as Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and Expeditionary Advanced Base Operations (EABO) in support of the newly established Marine Littoral Regiment (MLR). It is designed to fill the gap in capability between the Navy's large, multipurpose amphibious warfare class ships and smaller landing vessels. This ship will deploy tailored logistics, select power projection and support strike capabilities via the embarked MLR.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Medium Landing Ship	11.064	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2024 Plans: FY2024 Plans aligned under PE 0603564N, Ship Preliminary Design and Feasibility Studies to better align with the scope of the program.					
FY 2025 Base Plans: N/A					
FY 2025 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	11.064	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• RDTEN/0603564N: *Medium Landing Ship*	0.000	14.749	5.988	-	5.988	7.800	7.584	7.116	7.261	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4044 / *Medium Landing Ship*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• SCN/3050: *Medium Landing Ship*	0.000	0.000	268.068	-	268.068	200.000	349.476	305.088	311.495	2,425.421	3,859.548

Remarks

D. Acquisition Strategy

The Navy awarded the Concept Study /Preliminary Design contracts on 14 June 2021. Concept Studies completed in October 2021 and Preliminary Design options were exercised January 2022. The Detail Design and Construction award is planned for FY2025. This will allow the program to continue maturation of the design.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4044 / *Medium Landing Ship*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Concept Studies/ Preliminary Design/ Sensitivity Analysis	TBD	Various : Various	18.887	1.607	Dec 2022	0.000		0.000		-		0.000	0.000	20.494	Continuing
		Subtotal	18.887	1.607		0.000		0.000		-		0.000	0.000	20.494	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	TBD	Various : Various	6.844	6.939	Nov 2022	0.000		0.000		-		0.000	0.000	13.783	Continuing
Logistics Support	TBD	Various : Various	4.980	0.292	Nov 2022	0.000		0.000		-		0.000	0.000	5.272	Continuing
Program Mgmt Support	TBD	Various : Various	1.264	1.255	Nov 2022	0.000		0.000		-		0.000	0.000	2.519	Continuing
		Subtotal	13.088	8.486		0.000		0.000		-		0.000	0.000	21.574	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	TBD	Various : Various	0.722	0.971	Dec 2022	0.000		0.000		-		0.000	0.000	1.693	Continuing
		Subtotal	0.722	0.971		0.000		0.000		-		0.000	0.000	1.693	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	32.697	11.064		0.000		0.000		-		0.000	0.000	43.761	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4044 / *Medium Landing Ship*

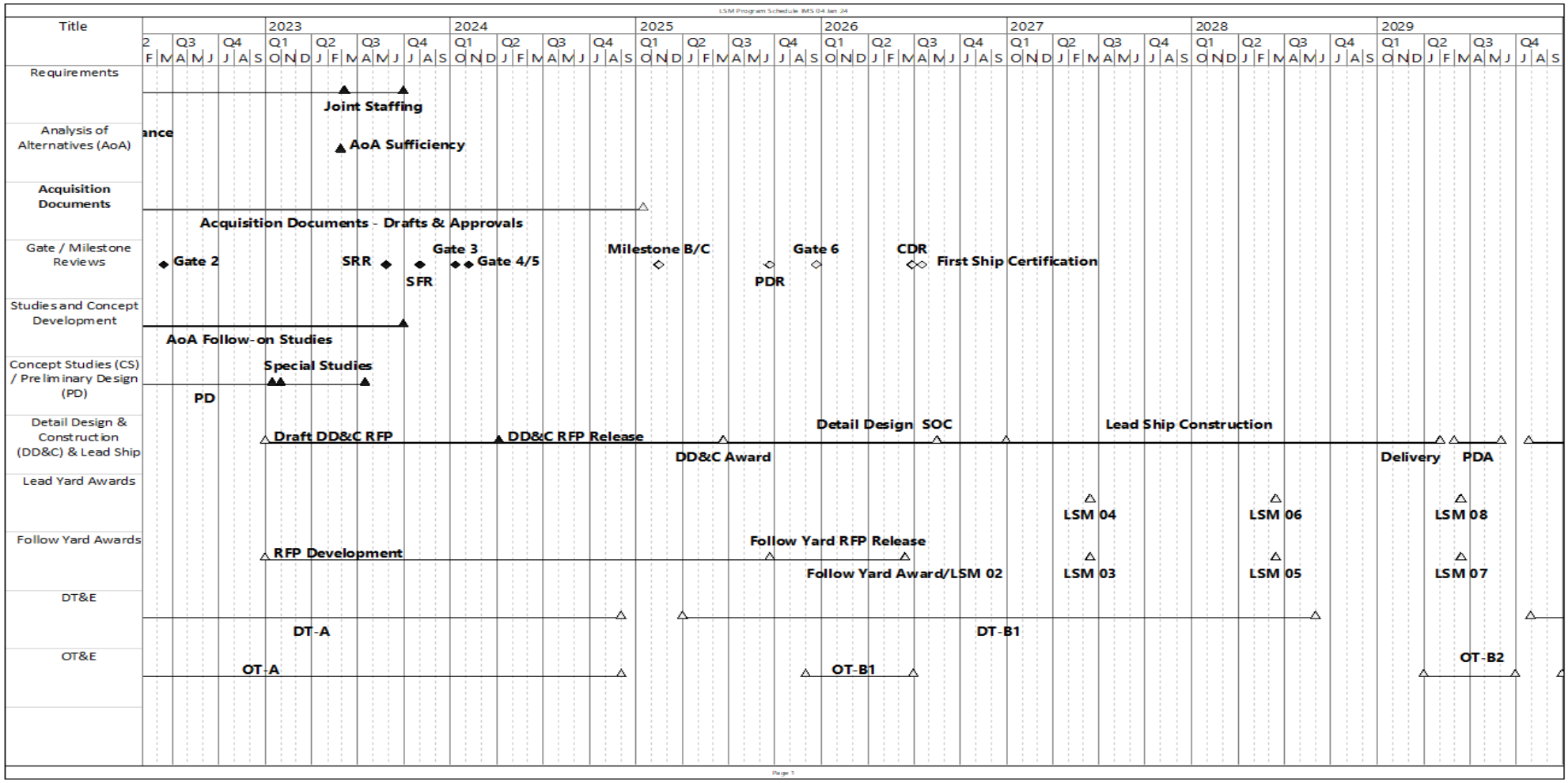


Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 4045 / *Next Generation Medium Logistics Ship*	

COST ($ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
4045: *Next Generation Medium Logistics Ship*	40.362	2.844	8.810	7.697	-	7.697	0.000	0.000	0.000	0.000	0.000	59.713
Quantity of RDT&E Articles		-	-	-	-	-	-	1	-	1		

A. Mission Description and Budget Item Justification

The Next Generation Logistics Ship (NGLS) is planned to be a new class of ships to augment the traditional Combat Logistics Force (CLF) to enable refueling, rearming, and resupply of Naval assets - afloat and ashore - near contested environments via ship-to-ship operations and ship-to port operations in support of Distributed Maritime Operations (DMO), Littoral Operations in a Contested Environment (LOCE), and Expeditionary Advanced Base Operations (EABO). Augmenting the traditional CLF, NGLS will provide a flexible, responsive platform to move fuel, personnel, equipment, and supplies between ships, advanced bases, ports, and dispersed nodes of the seabase; sustaining afloat (Surface Action Group) and ashore (Expeditionary Advanced Base) requirements. RDT&E funding will continue to support development of the NGLS ship design(s), specification development, affordability analyses, and definition of ship mission systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Next Generation Logistics Ship	2.844	8.810	7.697	0.000	7.697
Articles:	-	-	-	-	-
FY 2024 Plans: FY 2024 funds will be used for indicative design, Gate 2 Approval, start preliminary design efforts, and execution of Program Management and Engineering Support.					
FY 2025 Base Plans: FY 2025 funds will be used to support preliminary design efforts, Gate 3 Approval, Gate 4/5 Approval, and execution of Program Management and Engineering Support.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Decrease in funding of $1.113M from FY 2024 to FY 2025 are attributed to the stage of completion preliminary design efforts will achieve in FY2024, needing fewer resources in FY2025 to finalize certain phases of the program.					
Accomplishments/Planned Programs Subtotals	2.844	8.810	7.697	0.000	7.697

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4045 / *Next Generation Medium Logistics Ship*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• SCN/5028: *NEXT GENERATION LOGISTICS SHIP*	0.000	0.000	0.000	-	0.000	0.000	453.000	453.000	453.000	0.000	1,359.000

Remarks

D. Acquisition Strategy

Preliminary Design efforts will be performed by several industry partners.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4045 / *Next Generation Medium Logistics Ship*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Industry Studies & Design	Various	Various : Various	8.500	0.000		0.000		0.000		-		0.000	0.000	8.500	-
Preliminary Design	Various	Various : Various	0.000	0.000		4.810	Nov 2024	2.700	Nov 2024	-		2.700	0.000	7.510	-
Indicative Design	Various	Various : Maryland	5.000	0.500	Apr 2023	2.000	Apr 2024	0.000		-		0.000	0.000	7.500	-
Vessel Experimentation and Demonstration	C/BA	Various : Various	11.837	0.000		0.000		0.000		-		0.000	0.000	11.837	-
		Subtotal	25.337	0.500		6.810		2.700		-		2.700	0.000	35.347	N/A

Remarks

FY24 and FY25 funds are required to award multiple preliminary design contracts to industry partners.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM & Engineering Support	C/BA	Various : Various	4.629	1.004	Jul 2023	1.000	Mar 2024	3.497	Jan 2025	-		3.497	0.000	10.130	Continuing
Special Studies	C/BA	Various : Various	1.565	0.000		0.000		0.000		-		0.000	0.000	1.565	-
Warfare Center Analysis and Support	C/BA	Various WFC : Various WFC	2.959	0.840	Jun 2023	1.000	Feb 2024	1.000	Jan 2025	-		1.000	0.000	5.799	-
AoA Support	C/BA	Various : Various	5.872	0.500	May 2023	0.000		0.000		-		0.000	0.000	6.372	-
		Subtotal	15.025	2.344		2.000		4.497		-		4.497	0.000	23.866	N/A

Test and Evaluation ($ in Millions)

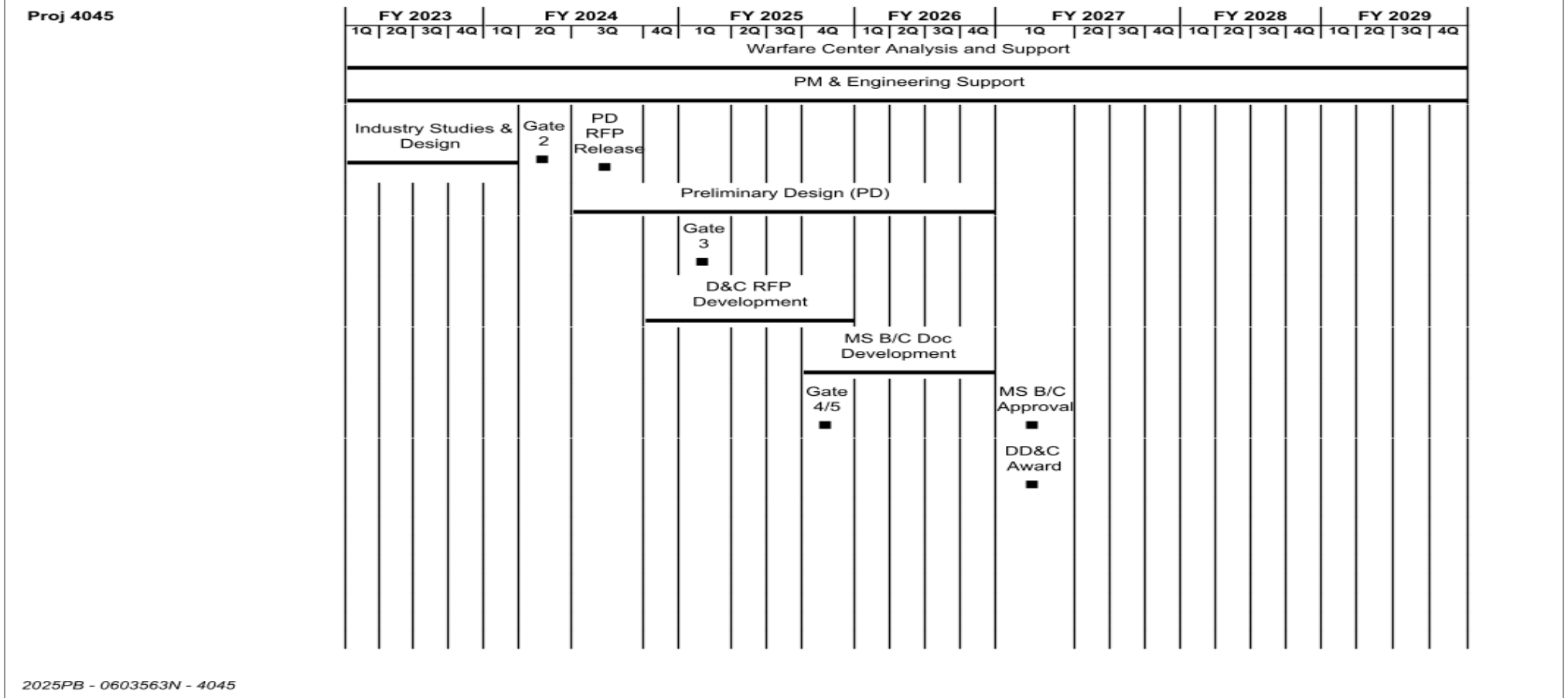
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	C/BA	Various : Various	0.000	0.000		0.000		0.500	Mar 2025	-		0.500	0.000	0.500	-
		Subtotal	0.000	0.000		0.000		0.500		-		0.500	0.000	0.500	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 4045 / *Next Generation Medium Logistics Ship*	

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	40.362	2.844		8.810		7.697		-		7.697	0.000	59.713	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4045 / *Next Generation Medium Logistics Ship*



2025PB - 0603563N - 4045

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 4045 / *Next Generation Medium Logistics Ship*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4045				
Warfare Center Analysis and Support	1	2023	4	2029
Program Management & Engineering Support	1	2023	4	2029
Industry Studies & Design	1	2023	1	2024
Approval of Material Solution & Updated TLRs	2	2024	2	2024
Release Preliminary Design Request for Proposal (RFP)	3	2024	3	2024
Preliminary Design (PD)	3	2024	4	2026
CDD and CONOPS Approval	1	2025	1	2025
Delivery and Construction (D&C) RFP Development	4	2024	4	2025
Milestone (MS) B/C Documentation Development	4	2025	4	2026
Approval for Request for Proposal (RFP) Release	4	2025	4	2025
Program Approval and Initiation/Approval to Award DD&C	1	2027	1	2027
DD&C Contract Award	1	2027	1	2027

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*				Project (Number/Name) 5010 / *AS(X) Submarine Tender*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
5010: *AS(X) Submarine Tender*	15.781	14.919	10.565	4.989	-	4.989	3.942	0.000	0.000	0.000	0.000	50.196
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

AS(X) will conduct steady state and wartime sustained, forward-based tending, resupply, depot and intermediate level repair operations on submarines and ships while anchored or pier side. In steady state, AS(X) will provide pier side support in a forward deployed submarine homeport, providing sustained repair, supply, weapons handling, and tending operations for submarines.

AS(X) is being specifically designed to support deployed VIRGINIA class (VCS), COLUMBIA class (CLB) and future generation submarines in the 21st century. AS(X) is required to support all aspects of Intermediate level maintenance and support to deliver expeditionary tending operations to VCS block V (and later) submarines.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**
Title: AS(X) Submarine Tender Design and Total Ship Integration	14.919	10.565	4.989	0.000	4.989
Articles:	-	-	-	-	-
FY 2024 Plans: FY24 will continue with AS(X) Program development efforts including continued development and refinement of acquisition documentation to support Milestone B/C. Additional efforts include award of the Detailed Design & Construction (DD&C) Contract as well as establishment of the Government oversight team.					
FY 2025 Base Plans: Test planning in support of early test phases of program, support of Cybersecurity Testing Table Top exercises, and the Operational Assessment (OA).					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: Budget decrease of $5.576M reflects transition from Preliminary Design to Detailed Design & Construction. Tasking remaining on this line are test related efforts.					
Accomplishments/Planned Programs Subtotals	14.919	10.565	4.989	0.000	4.989

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 5010 / *AS(X) Submarine Tender*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

The AS(X) Program pursued full and open competition to award three Preliminary Design Contracts, and is using a streamlined tailored acquisition approach with Acquisition Category (ACAT) II designation with tailoring of acquisition required documentation to support the FY 2022-2023 PD contract and FY 2023 Acquisition Documentation, Detail Design and Construction (DD&C) RFP and specification development based on PD. The program will be a single step to full capability, competitive contract, recapitalizing the existing 2 Submarine Tenders, and not an incremental procurement. AS(X) source selection, Preliminary Design contracts in FY 2022-2023 will aid in the development and finalization of the ship specification, Nuclear Support Facility (NSF) Interface Control Document (which will then be used to finalize the NSF specification), ship cost estimate, and detailed design and ship construction schedule. FY 2023 will focus on the DD&C contract solicitation and integrated Future Afloat Logistics Force (FALF) support for force logistics function of the sub tender.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 5010 / *AS(X) Submarine Tender*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Submarine Tender Design Maturation (PD)	Various	Various : Various	9.000	9.000	Jan 2023	0.000		0.000		-		0.000	0.000	18.000	-
		Subtotal	9.000	9.000		0.000		0.000		-		0.000	0.000	18.000	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program and Engineering Support	Various	Various : Various	2.600	3.600	Jan 2023	5.737	Jan 2024	0.000		-		0.000	0.000	11.937	-
		Subtotal	2.600	3.600		5.737		0.000		-		0.000	0.000	11.937	N/A

Remarks

1. Award dates reflect initial award of incremental execution.
2. $5.7M decrease from FY 2024 to FY 2025 reflects transition form Preliminary Design to Detailed Design and Construction.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	Various	Various : Various	0.090	0.030	Jan 2023	0.248	Jan 2024	4.989	Jan 2025	-		4.989	0.000	5.357	-
		Subtotal	0.090	0.030		0.248		4.989		-		4.989	0.000	5.357	N/A

Remarks

1. Award dates reflect initial award of incremental execution.
2. $4.7M increase from FY 2024 to FY 2025 reflects the development of test documentations and plans to support DT&E

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 5010 / *AS(X) Submarine Tender*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition Document Development	Various	Various : Various	4.091	2.289	Jan 2023	4.580	Jan 2024	0.000		-		0.000	0.000	10.960	-
		Subtotal	4.091	2.289		4.580		0.000		-		0.000	0.000	10.960	N/A

Remarks

1. Award dates reflect initial award of incremental execution.
2. $4.6M decrease from FY 2024 to FY 2025 reflects transition from Preliminary Design to Detailed Design and Construction.

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	15.781	14.919		10.565		4.989		-		4.989	0.000	46.254	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 5010 / *AS(X) Submarine Tender*

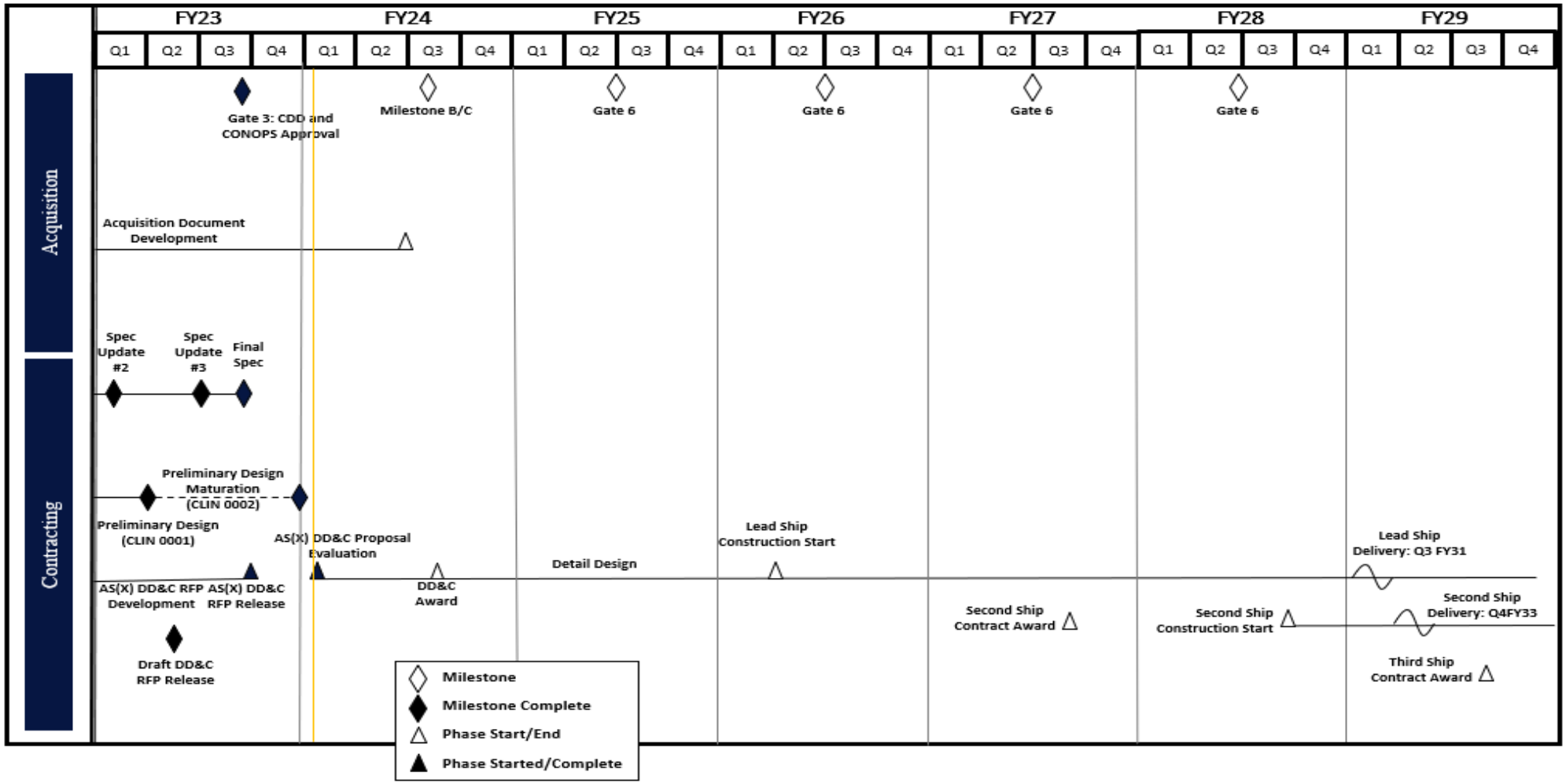


Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 5010 / *AS(X) Submarine Tender*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 5010				
Submarine Tender and NSF Specification Development	1	2023	3	2023
Submarine Tender Acquisition Documentation	1	2023	3	2024
Submarine Tender Preliminary Design Maturation/Special Studies	1	2023	1	2024
Submarine Tender DD&C RFP Development	1	2023	3	2023
CDD and CONOPS Approval	3	2023	3	2023
Submarine Tender DD&C RFP Release	4	2023	4	2023
Complete MS B/C Approval	3	2024	3	2024

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*				Project (Number/Name) 9999 / *Congressional Adds*			
COST ($ in Millions)	**Prior Years**	**FY 2023**	**FY 2024**	**FY 2025 Base**	**FY 2025 OCO**	**FY 2025 Total**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**	**Cost To Complete**	**Total Cost**
9999: *Congressional Adds*	74.284	46.493	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	120.777
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project C545 - Marine Energy Systems for Sensors and Microgrids
Funding provided in the Department of Defense Appropriations Act, 2023. Funding will continue maturation of Polymorphic Build Farms (PBFs) for distribution of polymorphic operating systems for DoD use. This includes the engineering, set up, delivery, implementation, and support for GovCloud PBFs. The build farm includes technologies such as the Point in Time Cache that allows for faithful and accurate builds of operating systems, both current and legacy/end-of-life. This includes the ability to lock down a specific version and configuration if needed for compliance/accreditation etc. The PBF will provide complete, end-to-end source code with the ability to create and update those operating systems as needed. The build out of PBFs facilitates the critical distribution of software to the fleet by providing scalability, redundancy and ensures availability of resources.

Project C602 - Defense Industrial Skills and Technology Training
Funding provided in the Department of Defense Appropriations Act, 2023. The Defense Industrial Skills and Technology Training (DISTT) program focuses on forging a next generation industrial workforce to improve the resiliency, lethality and availability of defense assets.
Work includes: Increasing expertise to improve operational efficiency; modernization and alignment of traditional trade work and work settings to meet operational mission requirements; and synergy between organic and defense industry partners to improve national industrial efficiencies resulting in faster fielding of new capabilities at scale

Project C752 - Metallic Additive Manufacturing
Funding provided in the Department of Defense Appropriations Act, 2023. Funding will support additive manufacturing of metal parts using 3D printers, which are used to support the needs of the U.S. Navy Fleet.

Project C753 - Critical Protection Technology for Cybersecurity Engineering
Funding provided in the Department of Defense Appropriations Act, 2023. Funding will support programs with a controlled resilient supply chain Anti-Tamper solution that enhances current cybersecurity protection measures and provides a value-added extension to the technologies at the enclave core.

Project C871 - Digital Maintenance Advisor for Shipboard Readiness
Funding provided in the Department of Defense Appropriations Act, 2023. Funding enables Naval Sea Systems Command (NAVSEA) to demonstrate the "Digital Maintenance Advisor" artificial intelligence platform that analyzes data on the maintenance and health of shipboard assets in the Navy, improving military readiness, predicting and diagnosing issues before they occur, and lowering maintenance costs.

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 9999 / *Congressional Adds*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
Congressional Add: Marine energy systems for sensors and microgrids ***FY 2023 Accomplishments:*** Continue maturation of software and hosting environment foundation to harden operating systems for cybersecurity resiliency to defend against sophisticated threats including nation state actors. Continue to develop and deploy technologies that enhance comprehensive platform cybersecurity capabilities. Continue exploration for hardening defense weapon systems for cybersecurity resiliency. Explore programs across Department of Navy for early adoption, e.g., Situational Awareness, Boundary Enforcement and Response (SABER) and Integrated Combat Systems. ***FY 2024 Plans:*** N/A	14.469	0.000
Congressional Add: Defense industrial Skills and Technology Training ***FY 2023 Accomplishments:*** FY 2023 Plans Develop tools, actions and tactics to understand the gaps between current and required future state. Validate observations through interactive fielding exercises, to learn, adjust and then establish requirements for DISTT that can be scaled. ***FY 2024 Plans:*** N/A	9.646	0.000
Congressional Add: Metallic additive manufacturing ***FY 2023 Accomplishments:*** AM efforts will focus on the development of advanced designs for valves and air elements for submarine applications. Efforts will also focus on qualification of vendors to additively manufacture parts for Navy to expand the defense industrial base. ***FY 2024 Plans:*** N/A	3.858	0.000
Congressional Add: Critical protection technology for cybersecurity engineering ***FY 2023 Accomplishments:*** Complete Non-recurring Engineering (NRE) for Preliminary Design Reviews (PDR) and Critical Design Reviews (CDR). Deliver PDR and CDR packages. Complete software/hardware demonstrations and deliver Demonstration Report. Start Test and Evaluation (T&E) of Keystone. ***FY 2024 Plans:*** N/A	11.286	0.000
Congressional Add: Digital maintenance advisor for shipboard readiness ***FY 2023 Accomplishments:*** To research, develop, test, and demonstrate the "Digital Maintenance Advisor" artificial intelligence platform that analyzes data on the maintenance and health of shipboard assets in the Navy,	7.234	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 9999 / *Congressional Adds*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2023	FY 2024
improving military readiness, predicting and diagnosing issues before they occur, and lowering maintenance costs. ***FY 2024 Plans:*** N/A		
Congressional Adds Subtotals	46.493	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 9999 / *Congressional Adds*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Manufacturing of Critical Scale Materials	TBD	Various : Various	0.988	0.000		0.000		0.000		-		0.000	0.000	0.988	-
Battery Prototype	TBD	Various : Various	1.482	0.000		0.000		0.000		-		0.000	0.000	1.482	-
C602 Defense Inudstrial Skills	MIPR	Various : Various	7.400	6.646	Jun 2023	0.000		0.000		-		0.000	0.000	14.046	-
C439 Additive Manufacturing (AM)	MIPR	AFRL : WPAFB, OH	2.980	0.000		0.000		0.000		-		0.000	0.000	2.980	-
C439 Additive Manufacturing (AM)	WR	NSWC CD : Bethesda, MD	1.820	0.000		0.000		0.000		-		0.000	0.000	1.820	-
C580 - Cold Spray	MIPR	ARMY : Various	2.842	0.000		0.000		0.000		-		0.000	0.000	2.842	-
C752 - Metallic Additive Manufacturing (AM)	MIPR	AFRL : WPAFB, OH	2.538	2.000	Sep 2024	0.000		0.000		-		0.000	0.000	4.538	-
C634 - Polymorphic Build Farms	MIPR	GSA : Various	8.000	0.000		0.000		0.000		-		0.000	0.000	8.000	-
C753 - Critical Protection Technology	MIPR	GSA : Various	5.000	10.300	May 2023	0.000		0.000		-		0.000	0.000	15.300	-
C752 - Metallic Additive Manufacturing (AM)	WR	NSWC CD : Bethesda, MD	1.562	1.500	Sep 2024	0.000		0.000		-		0.000	0.000	3.062	-
C545 - Marine Energy Systems for Sensors and Microgrids	MIPR	GSA : Various	0.000	9.500	May 2023	0.000		0.000		-		0.000	0.000	9.500	-
C545 - Marine Energy Systems for Sensors and Microgrids	WR	NSWC DD : Virginia	0.000	2.055	May 2023	0.000		0.000		-		0.000	0.000	2.055	-
C871 - Digital Maintenance Advisor for Shipboard Readiness	Various	Various : Various	0.000	7.234	Sep 2024	0.000		0.000		-		0.000	0.000	7.234	-
		Subtotal	34.612	39.235		0.000		0.000		-		0.000	0.000	73.847	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 9999 / *Congressional Adds*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C602 - Program Management Support	WR	Various : Various	0.494	1.000	Sep 2023	0.000		0.000		-		0.000	0.000	1.494	-
C580 - Program Mgmt Support	TBD	Various : Various	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
C752 - Metallic Additive Manufacturing (AM)	TBD	Various : Various	0.000	0.358	Sep 2024	0.000		0.000		-		0.000	0.000	0.358	-
C634 - Polymorphic Build Farms	WR	NSWC DD : NSWC DD	0.428	0.000		0.000		0.000		-		0.000	0.000	0.428	-
C634 - Polymorphic Build Farms	C/CPFF	Various : Various	1.219	0.000		0.000		0.000		-		0.000	0.000	1.219	-
C753 - Critical Protection Techonology	MIPR	Various : Various	1.653	1.400	May 2023	0.000		0.000		-		0.000	0.000	3.053	-
C545 - Marine Energy Systems for Sensors and Microgrids	MIPR	GSA : Various	0.000	2.500	May 2023	0.000		0.000		-		0.000	0.000	2.500	-
		Subtotal	4.294	5.258		0.000		0.000		-		0.000	0.000	9.552	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	TBD	Various : Various	17.178	0.000		0.000		0.000		-		0.000	0.000	17.178	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	TBD	Various : Various	1.976	0.000		0.000		0.000		-		0.000	0.000	1.976	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	MIPR	GSA : Various	13.400	0.000		0.000		0.000		-		0.000	0.000	13.400	-
		Subtotal	32.554	0.000		0.000		0.000		-		0.000	0.000	32.554	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy			Date: March 2024
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603563N / *Ship Concept Advanced Design*	Project (Number/Name) 9999 / *Congressional Adds*	

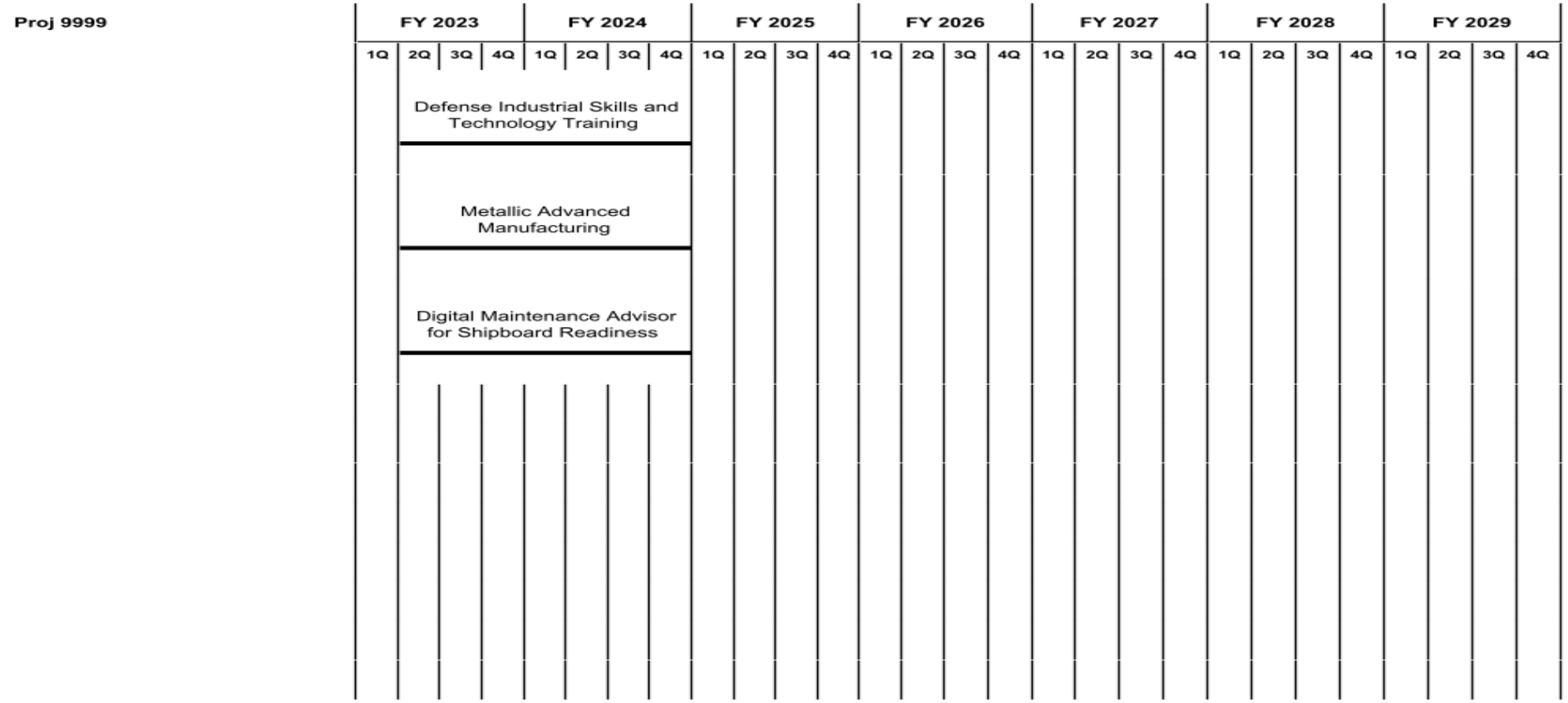
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2023 Cost	FY 2023 Award Date	FY 2024 Cost	FY 2024 Award Date	FY 2025 Base Cost	FY 2025 Base Award Date	FY 2025 OCO Cost	FY 2025 OCO Award Date	FY 2025 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C602 - Project Support	WR	Various : Various	2.000	2.000	Jul 2023	0.000		0.000		-		0.000	0.000	4.000	-
C752 - Metallic Additive Manufacturing (AM)	TBD	Various : Various	0.724	0.000		0.000		0.000		-		0.000	0.000	0.724	-
C753 - Critical Protection Technology	WR	NSWC CD : Besthesda, MD	0.100	0.000		0.000		0.000		-		0.000	0.000	0.100	-
		Subtotal	2.824	2.000		0.000		0.000		-		0.000	0.000	4.824	N/A

	Prior Years	FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	74.284	46.493		0.000		0.000		-		0.000	0.000	120.777	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 9999 / *Congressional Adds*



2025DON - 0603563N - 9999

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603563N / *Ship Concept Advanced Design*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
Defense Industrial Skills and Technology Training	2	2023	4	2024
Polymorphic Build Farm for Open Source Technologies	2	2023	4	2024
Metallic Advanced Manufacturing	2	2023	4	2024
Critical Protection Technology	2	2023	4	2024
Digital Maintenance Advisor for Shipboard Readiness	2	2023	4	2024