Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy											Date: April 2022	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604757N *I Ship Self Def (Engage: Soft Kill/EW)*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	664.586	82.933	65.307	92.687	-	92.687	93.096	80.093	56.629	53.122	Continuing	Continuing
0954: *Shipboard EW Improvement Program*	67.887	16.015	15.764	15.501	-	15.501	17.141	17.000	16.983	17.237	Continuing	Continuing
2190: *NULKA Decoy*	52.123	5.220	6.711	6.211	-	6.211	7.409	7.335	7.233	7.369	Continuing	Continuing
3068: *Long Endurance Electronic Decoy (LEED)*	0.000	0.000	10.637	38.444	-	38.444	40.552	32.938	21.489	21.790	Continuing	Continuing
3316: *Advanced Offboard EW*	281.602	43.460	28.843	26.321	-	26.321	19.245	16.611	4.930	0.816	Continuing	Continuing
3321: *SEWIP Block 3*	262.974	18.238	3.352	6.210	-	6.210	8.749	6.209	5.994	5.910	Continuing	Continuing

Note

The FY 2023 funding request was reduced by $1.300M to account for the availability of prior year execution balances.

A. Mission Description and Budget Item Justification

0954 - The Surface Electronic Warfare Improvement Program (SEWIP) is segmented into Block 1A, Block 1B, Block 2, Block 3 and Soft Kill Coordination System (SKCS). Block 1A upgraded the AN/SLQ-32 pulse-processing computers. Block 1B added adjunct sensors, including Specific Emitter Identification (SEI), and High Gain High Sensitivity (HGHS) (Block 1B3), a critical improvement for extending the battle space. Block 2 enhanced Surface Electronic Warfare (EW) and provided improved Anti-Ship Missile Defense (ASMD) and situational awareness (SA) through an improved Electronic Support (ES) receiver, antenna, and combat system interface. The addition of Block 2 to Block 1B3 forms the AN/SLQ-32(V)6. Block 3 will provide an enhanced Onboard Electronic Attack (EA) capability to improve ASMD and counter-targeting. The addition of Block 3 to AN/SLQ-32(V)6 forms the AN/SLQ-32(V)7 system. The SKCS will provide SK weapon coordination and enhanced situational awareness to the AN/SLQ-32(V)6 and (V)7 with EW/radar track association to support Softkill (SK) engagement decisions. EW Rapid Capability Insertion Process (RCIP) identifies system and mission capability gaps by analyzing EW baseline and fleet requirements, prioritizes those gaps based on fleet input and critical technology maturity, and develops upgrades to the AN/SLQ-32(V) product line to address those gaps. RCIP also integrates Future Naval Capability (FNC) programs into SEWIP.

The FY23 budget request of $15.501M supports continued development, test and integration of SKCS with AEGIS Baseline (BL) 9 and BL 10, year three efforts for RCIP #7 which analyze and design hardware upgrades to improve signal throughput and system reliability, and completes fielding of Propagation Channel Assessment and Prediction's (PCAP) new operator tools and displays for improved situation awareness. Funding also initiates RCIP #8 to improve anti-ship missile defense capability of SLQ-32(V)6/7 when operating with other netted EW sensors and effectors.

2190 - The Offboard Active Decoy (Nulka) is a joint cooperative program between the United States and Australia that developed an active offboard decoy that utilizes a broadband radio frequency repeater mounted atop a hovering rocket. Nulka counters a wide variety of present and future radar guided Anti-Ship Missiles (ASMs) by radiating a large radar cross section while flying a ship-like trajectory. The United States developed the electronic payload and fire control system, while Australia developed the hovering rocket. The FY23 funding request includes Decoy Launcher Processor (DLP) technology refresh to address threat studies as well as address

obsolescence issues. The Objective Architecture development will continue which provides improved Nulka decoy deployment as well as Soft Kill Coordination System (SKCS) integration.

3068 - The Long Endurance Electronic Decoy (LEED) program will deliver an expendable long endurance autonomous off-board decoy Countermeasure system, comprised of a flight vehicle and Radio Frequency (RF) payload with modular capability allowing for rapid modification of the Electronic Warfare (EW) payload. LEED development executes under a middle tier rapid prototyping acquisition strategy pursuant to Section 804 of the FY16 National Defense Authorization Act. LEED will integrate with SLQ-32 and address EW gaps in response to a fleet requirement to counter Anti-Ship Missile (ASM) threats. LEED will provide the fleet with enhanced EW coordination and capability, including the ability to stretch engagement timelines and counter heterogeneous missile attacks.

The overarching strategy consists of three phases comprising development and initial production: Countermeasure Prototype Development (FY22-FY24), Integrated Countermeasure Prototype Development (FY24-FY25), and Follow-On Production (FY25-FY27+). The first phase includes competitive development of operational-level Countermeasure prototypes that demonstrate and validate critical capabilities, including flight performance and RF functionality. The second phase will build on the critical technologies to develop production representative Engineering Development Models (EDMs). The third phase will procure and field initial units to the fleet, while the transition to major capability acquisition for full production and sustainment is executed.

LEED will be developed alongside the Office of Naval Research (ONR) Long Endurance Airborne Platform (LEAP) Project, which began in FY21. LEED will leverage technologies developed and matured under the ONR LEAP Project.

The FY23 funding request is for LEED Countermeasure prototype development and testing for the first phase of development, including final material purchases, component integration, preliminary demonstration testing, and formal Countermeasure Performance Testing, as well as initiation activities for the second phase of development for the integrated Countermeasure prototype.

3316 - The Advanced Offboard EW (AOEW) program is for the development of long duration off-board decoys integrated with onboard systems for EW coordination to counter identified EW gaps (additional details classified) in response to an urgent operational need from the Fleet that has been approved by the CNO for execution. In FY 2012, the program began with a Rapid Response Effort (RRE) which was completed in FY 2014. The RRE consisted of the evaluation and integration of commercially available decoys. The Decoy Development Effort (DDE) consists of the development and evaluation of a long duration, active electronic offboard decoy system (payload) integrated on an existing flight vehicle (MH-60R/MH-60S), integration with ship and air systems, and a government software development effort to integrate AOEW into the Soft Kill Coordination System (SKCS) to gain maximum effectiveness from the decoy through coordination with an onboard system.

In the DDE/E&MD Contract effort, which commenced in 2017, the program is developing and integrating Engineering Development Models (EDMs) with the System of Systems (SOS) partners to include FY22 delivery of the Technical Data Package (TDP), conduct of FQT, and preparation for the program's test phase ramping up in Q4 FY22.

As part of the MH-60R/S Flight Certification effort, the program is required to complete NAVAIR Avionics Operating Program (AOP) software development and Flight Certification, which are critical to support fielding of the AOEW decoy. The AOP software supports integration of the AOEW decoy with the MH-60R/S airframe and is

required for successful completion of Flight Certification. AOP software development was completed in FY21. Flight Certification testing includes Ground and Flight Jettison, Flight Test for Mission Performance / Spec Compliance Flight Test, Functional Software Test, and Decoy Fit and Egress Test, which ensures operational Safety of Flight and is critical to successful decoy fielding.

The FY23 budget request supports planning, execution, and analysis associated with three government-led Developmental Test events at NAS Patuxent River and NSWCDD. Additionally, NAVAIR will conduct Avionics Operating Program (AOP) MH-60R and MH-60S Software Testing necessary for AOEW Decoy and Helicopter Integration into the baseline.

3321 - SEWIP Block 3 is developing an advanced Electronic Attack (EA) capability to keep pace with the evolving Anti-Ship Missile Defense (ASMD) threat and counter targeting required for the AN/SLQ-32(V) system. SEWIP Block 3 will provide the AN/SLQ-32(V)7 system for all surface ships (CVN, DDG, LHD) outfitted with the active variant of the AN/SLQ-32, mainly the (V)3 and (V)4, as well as select new construction platforms.

The SEWIP Block 3 Acquisition leverages technology developed under the Office of Naval Research's (ONR) Integrated Topside (InTop) Science and Technology (S&T) effort. SEWIP Block 3 will continue to expand the integrated shipboard combat system by providing a new integrated EA transmitter, array, and associated EA techniques. The AN/SLQ-32(V)7 integrates the new EA countermeasure (SEWIP Block 3) with the AN/SLQ-32(V)6. The AN/SLQ-32(V)6 includes an Electronic Support(ES) receiver (SEWIP Block 2), a High Gain High Sensitivity (HGHS) receiver (SEWIP Block 1B3), a Specific Emitter Identifier (SEI) receiver (SEWIP Block 1B2), display console, and backend electronics. SEWIP Block 3 includes a government software development and integration effort for a SoftKill Coordinator (SKC) to manage EA engagements. SEWIP Block 3 is developing an Electronic Warfare Test Bed (EWTB) to validate system performance via modeling and simulation.

The FY23 funding request for SEWIP Block 3 will focus on the conduct of Land Based Testing (LBT) and preparation for TECHEVAL and Initial Operational Test & Evaluation (IOT&E). Additionally, training curriculum development, EWTB model upgrades, and software and hardware fixes/upgrades will continue through the test phase. Additionally, development efforts to increase High Power Amplifier (HPA) efficiency to reduce required power and fuel consumption will commence.

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	84.852	69.006	0.000	-	0.000
Current President's Budget	82.933	65.307	92.687	-	92.687
Total Adjustments	-1.919	-3.699	92.687	-	92.687
• Congressional General Reductions	-	-0.153			
• Congressional Directed Reductions	-	-3.546			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.919	0.000			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy					Date: April 2022
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604757N *I Ship Self Def (Engage: Soft Kill/EW)*		
• Adjustments to Budget Year	-	-	92.687	-	92.687

Change Summary Explanation

- FY21 funding decrease is due to a $1.919M SBIR reduction.
- FY22 funding decrease is due to $3.546M reduction for the LEED program (concurrency) and $0.153M for FFRDC reduction.

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 0954 / *Shipboard EW Improvement Program*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
0954: *Shipboard EW Improvement Program*	67.887	16.015	15.764	15.501	-	15.501	17.141	17.000	16.983	17.237	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

0954 - The Surface Electronic Warfare Improvement Program (SEWIP) is segmented into Block 1A, Block 1B, Block 2, Block 3 and Soft Kill Coordination System (SKCS). Block 1A upgraded the AN/SLQ-32 pulse-processing computers. Block 1B added adjunct sensors, including Specific Emitter Identification (SEI), and High Gain High Sensitivity (HGHS) (Block 1B3), a critical improvement for extending the battle space. Block 2 enhanced Surface Electronic Warfare (EW) and provided improved Anti-Ship Missile Defense (ASMD) and situational awareness (SA) through an improved Electronic Support (ES) receiver, antenna, and combat system interface. The addition of Block 2 to Block 1B3 forms the AN/SLQ-32 (V)6. Block 3 will provide an enhanced Onboard Electronic Attack (EA) capability to improve ASMD and counter-targeting. The addition of Block 3 to AN/SLQ-32 (V)6 forms the AN/ SLQ-32(V)7 system. The SKCS will provide SK weapon coordination and enhanced situational awareness to the AN/SLQ-32 (V)6 and (V)7 with EW/radar track association to support Softkill (SK) engagement decisions. EW Rapid Capability Insertion Process (RCIP) identifies system and mission capability gaps by analyzing EW baseline and fleet requirements, prioritizes those gaps based on fleet input and critical technology maturity, and develops upgrades to the AN/SLQ-32(V) product line to address those gaps. RCIP also integrates Future Naval Capability (FNC) programs into SEWIP.

FY23 budget request supports continued development, test and integration of SKCS with AEGIS Baseline (BL) 9 and BL 10, year three efforts for RCIP #7 which analyze and design hardware upgrades to improve signal throughput and system reliability, and completes fielding of Propagation Channel Assessment and Prediction's (PCAP) new operator tools and displays for improved situation awareness. Funding also initiates RCIP #8 to improve anti-ship missile defense capability of SLQ-32(V)6/7 when operating with other netted EW sensors and effectors.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Electronic Warfare Rapid Capability Insertion Process (EW RCIP)	16.015	15.764	15.501	0.000	15.501
Articles:	-	-	-	-	-
FY 2022 Plans: FY 2022 Plans: - Complete the transition of the Future Naval Capability (FNC) program SPARTA into SKCS; Utilize developed algorithms to measure and improve key features observed in Softkill (SK)engagements and EA effectiveness, and perform real-time assessment of SK performance; Continue to develop and update the interface, architecture and algorithms required for full transition into SKCS, taking into account ongoing SKCS build and capability completions; transition Softkill Performance and Real-Time Assessment (SPARTA) into an SKCS Build for AEGIS Advanced Build (ACB) 20.					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Continue RCIP #4 SKCS efforts to address platform gaps for automatic and semi-automatic engagements using Nulka decoys, onboard Electronic Attack (EA) (AN/SLQ-32 (V)7), and offboard EA systems; Initiate software development and system integration and testing activities for delivery of completed software builds with capabilities including coordination of Nulka and combination engagements with AN/SLQ-32(V)6, AN/ SLQ-32(V)7, and offboard EW for enhanced coordination technique deployment; Continue integration and testing activities in support of AEGIS ACB 20 (Baseline 10) by participating in AEGIS ACB 20 integration events and preparing a fully tested software build for element certification; Complete SKCS FQT for a software build in support of AN/SLQ-32(V)6 FQT, and continue to participate in system integration events with AN/ SLQ-32(V)6, AN/SLQ-32(V)7 and Offboard EW; Continue SSDS ACB 20, OPC, and FFG(X) integration support efforts. Initiate development of SKCS automated software test lab using cloud computing resources. - Continue SEWTT development of trainer enhancements including additional SKCS, Nulka, and Offboard EW capabilities; continue testing, integration, and documentation of the enhanced trainer and update associated training materials. - Complete TACSIM development of variant for ship-board testing and Electronic Support simulators for use with AN/ SLQ-32(V)6/7 tactical software. - Complete the prototype and demonstration of AN/SLQ-32(V)6 and AN/SLQ-32(V)7 Electronic Support (ES) system algorithm enhancements to provide advanced EW electronic sensing capabilities; Complete development activities for a new ES technique capable of addressing a new identified anti-ship missile (ASM) threat, including demonstration of the technique's effectiveness and readiness to be integrated into SEWIP. - In support of the Propagation Channel Assessment and Prediction (PCAP) Future Naval Capability (FNC) transition, continue software development activities for an AN/SLQ-32(V)6 Signal Nominal Range (SNR) Tool including coding of a Tactical Computer Software Configuration Item (CSCI) for the SEWIP program to include the SNR tool functionality into the EW operator tactical interfaces. - Continue RCIP #7 HW Processing & Reliability Improvements which focus on increasing the AN/SLQ-32(V)6 operator's tactical situational awareness and confidence in both system performance and availability; Evaluate the current state of system components and analyze candidate hardware upgrades to increase system emitter processing throughput, reduce false detections/classifications, increase system fault tolerance and simplify maintenance. This RCIP must be nearly complete before starting RCIP #6 BIT & Processing Improvements because the RCIP #6 software upgrades are dependent on the system hardware configuration. - Complete TACSIM development of variant for Electronic Support simulators for use with AN/ SLQ-32(V)6/7 tactical software and Aegis Virtual Twin.					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Identify additional EW technology shortfalls and capability gaps based on the current and emerging Anti-Ship Missile (ASM) threats and fleet requirements; Solicit industry, University Affiliate Research Centers or government activities for technical solutions; Evaluate and select RCIP technology candidates; Evaluate RCIP technologies production readiness; Develop execution plans for selected candidates based on evaluated readiness and countermeasure technology prioritization.					
FY 2023 Base Plans: - Continue RCIP #4 SKCS efforts to address platform gaps for automatic and semi-automatic engagements using Nulka decoys, onboard Electronic Attack (EA) (AN/SLQ-32 (V)7), and offboard EA systems; Continue and complete software development and system integration and testing activities for delivery of completed software builds with capabilities including coordination of Nulka and combination engagements with AN/SLQ-32(V)6, AN/SLQ-32(V)7, and offboard EW for enhanced coordination technique deployment; Continue integration and testing activities in support of AEGIS ACB 20 (Baseline 10) by participating in AEGIS ACB 20 integration events and preparing a fully tested software build for element certification; Complete SKCS FQT for a software build in support of AN/SLQ-32(V)6 FQT, and continue to participate in system integration events with AN/ SLQ-32(V)6, AN/SLQ-32(V)7 and Offboard EW; Continue SSDS ACB 20, OPC, and FFG(X) integration support efforts. Continue development of SKCS automated software test lab using cloud computing resources. - Continue SEWTT development of trainer enhancements including additional SKCS, and Offboard EW capabilities; Initiate development of trainer enhancements for SLQ-32(V)7's Onboard EA. Complete testing, integration, and documentation of the enhanced trainer and update associated training materials. - In support of the Propagation Channel Assessment and Prediction (PCAP) FNC transition, complete software development activities for an AN/SLQ-32(V)6 Signal Nominal Range (SNR) Tool including coding of a Tactical Computer Software Configuration Item (CSCI) for the SEWIP program to include the SNR tool functionality into the EW operator tactical interfaces. - Continue RCIP #7 HW Processing & Reliability improvements which focus on increasing the AN/SLQ-32(V)6 operator's tactical situational awareness and confidence in both system performance and availability; Evaluate the current state of system components and analyze candidate hardware upgrades to increase system emitter processing throughput, reduce false detections/classifications, increase system fault tolerance and simplify maintenance. Develop a system product baseline in preparation for implementation of a system prototype. Initiate collaborative development with the SLQ-32 Signal Identification Improvement (SI2) FNC. -Initiate RCIP #8 Netted Electronic Warfare Directed Engagement Logic (NEWDEL) improvements to the AN/ SLQ-32(V)6 and AN/SLQ-32(V)7 to improve EW operator control and awareness of EW assets connected via					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
tactical data links. Develop a Tactical Computer Software Configuration Item (CSCI) for the AN/SLQ-32(V)6 and (V)7 to monitor and control netted EW assets for improved anti-ship missile defense performance. - Identify additional EW technology shortfalls and capability gaps based on the current and emerging Anti-Ship Missile (ASM) threats and fleet requirements; Solicit industry, University Affiliate Research Centers or government activities for technical solutions; Evaluate and select RCIP technology candidates; Evaluate RCIP technologies production readiness; Develop execution plans for selected candidates based on evaluated readiness and countermeasure technology prioritization. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease from FY22 to FY23 is due to completion of AN/SLQ-32(V)6 and (V)7 SW Algorithm Enhancements and RCIP #5 TACSIM, and RCIP #4 tasking reduction to better align with Navy priorities.					
Accomplishments/Planned Programs Subtotals	16.015	15.764	15.501	0.000	15.501

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/2312: *OPN BA-2 AN/SLQ-32(V)*	343.961	360.817	292.417	-	292.417	331.273	278.391	474.514	495.999	4,105.241	8,444.789
• OMN PE 024575N: *OMN BA-1 AN/SLQ-32(V)*	4.330	4.451	4.741	-	4.741	4.939	5.044	5.372	5.477	Continuing	Continuing

Remarks

D. Acquisition Strategy

RCIP matures, develops and validates technology solutions to address requirements gaps for insertion into SEWIP Block upgrades. Technology solutions result in Government owned technical data packages with Government owned data rights. Solutions are incorporated into the SEWIP Block technical data packages for incorporation into production and/or back-fit of fielded systems. Acquisition strategy supports full and open completion for technical solutions.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RCIP #4 SKCS	SS/CPFF	JHU APL : Laurel, MD	7.645	2.326	Dec 2020	2.185	Dec 2021	1.830	Dec 2022	-		1.830	Continuing	Continuing	Continuing
RCIP #4 SKCS	WR	NSWC Dahlgren : Dahlgren, VA	15.393	5.282	Nov 2020	5.310	Nov 2021	4.866	Nov 2022	-		4.866	Continuing	Continuing	Continuing
RCIP #5 TACSIM	WR	NSWC Dahlgren : Dahlgren, VA	4.923	0.387	Nov 2020	0.224	Nov 2021	0.000		-		0.000	0.000	5.534	-
SEWTT Development	SS/CPFF	EWA : Fairmont, WV	1.150	0.620	Nov 2020	0.549	Nov 2021	0.242	Nov 2022	-		0.242	Continuing	Continuing	Continuing
CESARS	WR	NRL : Washington, DC	1.181	0.230	Nov 2020	0.000		0.000		-		0.000	0.000	1.411	-
PCAP	WR	NRL : Washington DC	0.227	0.300	Nov 2020	0.000		0.025	Nov 2022	-		0.025	0.000	0.552	-
PCAP	C/CPFF	LM : Syracuse, NY	0.000	0.570	Nov 2020	0.200	Nov 2021	0.025	Nov 2022	-		0.025	0.000	0.795	-
RCIP #7 HW Processing & Reliability Improvements	C/CPFF	LM : Syracuse, NY	0.000	2.480	Nov 2020	3.619	Nov 2021	4.202	Nov 2022	-		4.202	Continuing	Continuing	Continuing
AN/SLQ-32(V)6 and (V)7 SW Algorithm Enhancements	MIPR	MIT : Hanscom AFB, MA	0.626	0.350	Jan 2021	0.352	Jan 2022	0.000	Jan 2023	-		0.000	0.000	1.328	-
RCIP #4 SKCS	C/CPFF	IDT : San Jose, CA	0.100	0.250	Apr 2021	0.251	Apr 2022	0.229	Apr 2023	-		0.229	Continuing	Continuing	Continuing
RCIP #8 Netted EW Improvements	SS/CPFF	JHU APL : Laurel, MD	0.000	0.000		0.000		0.230	Dec 2022	-		0.230	Continuing	Continuing	Continuing
RCIP #8 Netted EW Improvements	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.000		0.000		0.542	Nov 2022	-		0.542	Continuing	Continuing	Continuing
		Subtotal	31.245	12.795		12.690		12.191		-		12.191	Continuing	Continuing	N/A

Remarks

- In FY23, RCIP #8 is initiating for Netted Electronic Warfare Directed Engagement Logic (NEWDEL).
- Decrease from FY22 to FY23 is due to completion of AN/SLQ-32(V)6 and (V)7 SW Algorithm Enhancements and RCIP #5 TACSIM, and RCIP #4 tasking reduction to better align with Navy priorities. RCIP #7 product development increase is due to additional costs for prototype's electronic components.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Government Engineering Support	WR	NSWC Dahlgren : Dahlgren, VA	8.028	0.171	Nov 2020	0.188	Nov 2021	0.192	Nov 2022	-		0.192	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	WR	NSWC Crane : Crane, IN	6.265	0.499	Nov 2020	0.437	Nov 2021	0.438	Nov 2022	-		0.438	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	WR	NRL : Washington, DC	4.517	0.000		0.000		0.000		-		0.000	0.000	4.517	Continuing
Block 1 Government Engineering Support	SS/CPFF	APL : Laurel, MD	3.768	0.280	Nov 2020	0.281	Nov 2021	0.287	Nov 2022	-		0.287	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	MIPR	MIT : Hanscom AFB, MA	2.592	0.828	Nov 2020	0.723	Nov 2021	0.667	Nov 2022	-		0.667	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	MIPR	DISA : Fort Meade, MD	0.050	0.000		0.000		0.000		-		0.000	0.000	0.050	-
		Subtotal	25.220	1.778		1.629		1.584		-		1.584	Continuing	Continuing	N/A

Remarks

Reduction in Support from FY22 to FY23 is due to early completion of V(6)/V(7) SW Algorithm Enhancements.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RCIP Test Planning/T&E Events	WR	NSWC Dahlgren : Dahlgren, VA	3.181	0.442	Nov 2020	0.445	Nov 2021	0.455	Nov 2022	-		0.455	Continuing	Continuing	Continuing
RCIP Test Planning/T&E Events	WR	NSWC Crane : Crane, IN	0.889	0.000		0.000		0.000		-		0.000	0.000	0.889	-
RCIP Test Planning/T&E Events	WR	NRL : Washington, DC	2.476	0.000		0.000		0.000		-		0.000	0.000	2.476	-
RCIP Test Planning/T&E Events	SS/CPFF	APL : Laurel, MD	0.100	0.000		0.000		0.251	Nov 2022	-		0.251	0.000	0.351	-
RCIP Test Planning/T&E Events	WR	COMOPTEVFOR : Norfolk, VA	0.104	0.000		0.000		0.000		-		0.000	0.000	0.104	-
		Subtotal	6.750	0.442		0.445		0.706		-		0.706	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

In FY23, T&E efforts at APL resume in alignment with the initiation of the RCIP #8 effort.

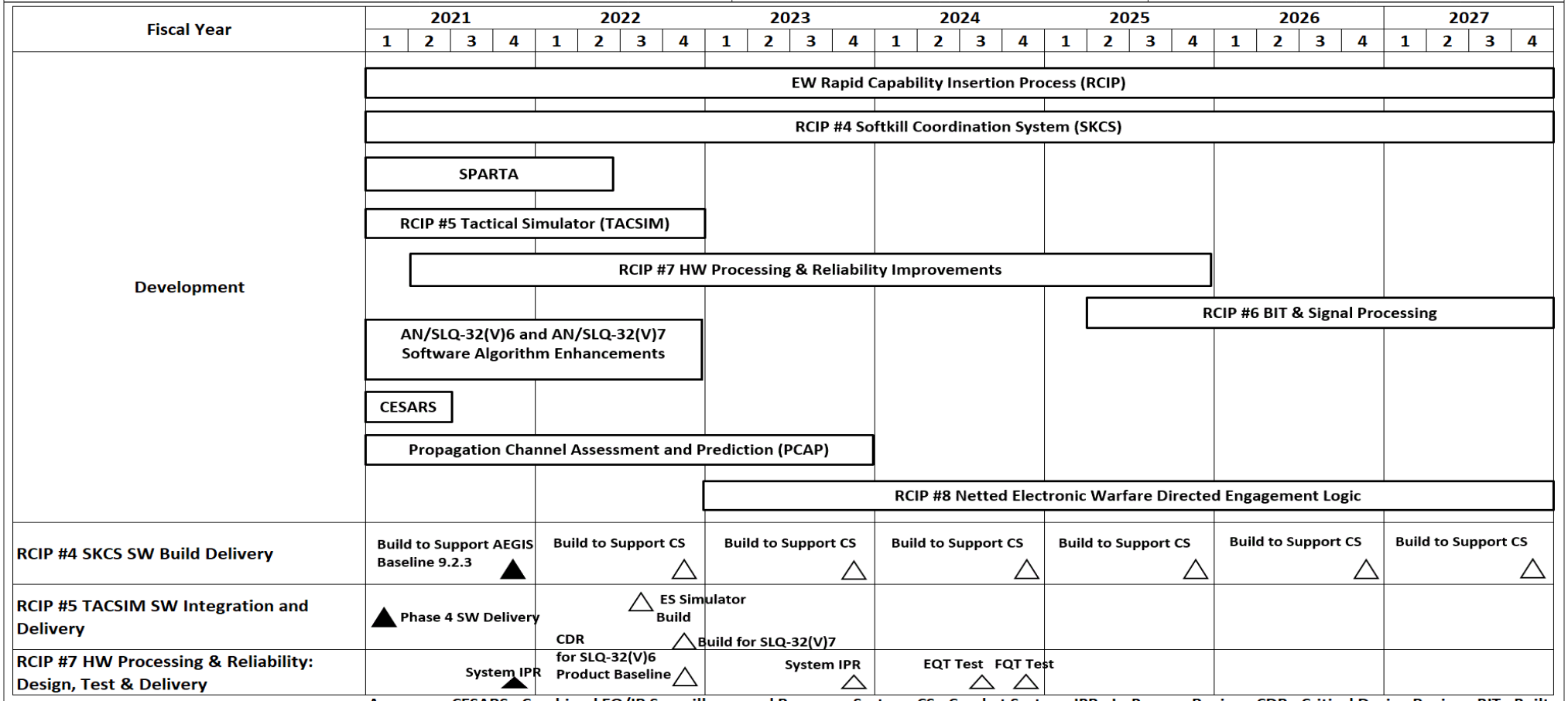
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Program Management Support	C/CPIF	TMB (SEAPORT) : Washington, D.C.	1.298	0.400	Nov 2020	0.400	Nov 2021	0.405	Nov 2022	-		0.405	Continuing	Continuing	Continuing
Block 1 Program Management Support	C/CPIF	SPA : Washington, DC	1.226	0.380	Nov 2020	0.380	Nov 2021	0.385	Nov 2022	-		0.385	Continuing	Continuing	Continuing
Block 1 Program Managment Support	C/CPIF	CACI (SEAPORT) : Washington, DC	0.762	0.200	Nov 2020	0.200	Nov 2021	0.210	Nov 2022	-		0.210	Continuing	Continuing	Continuing
Block 1 Travel	Sub Allot	NAVSEA Program Office Travel : Washington, DC	1.386	0.020	Nov 2020	0.020	Nov 2021	0.020	Nov 2022	-		0.020	Continuing	Continuing	Continuing
		Subtotal	4.672	1.000		1.000		1.020		-		1.020	Continuing	Continuing	N/A

	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	67.887	16.015		15.764		15.501		-		15.501	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*



Acronyms: CESARS - Combined EO/IR Surveillance and Response System; CS - Combat System; IPR - In-Process Review; CDR - Critical Design Review; BIT - Built In Test; FQT - Formal Qualification Test; EQT - Environmental Qualification Test; SPARTA - Softkill Performance and Real Time Assessment

Remarks

RCIP #8 initiates in Q1 FY23.

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 0954 / *Shipboard EW Improvement Program*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0954				
EW Rapid Capability Insertion Process (RCIP)	1	2021	4	2027
RCIP #4: SKCS	1	2021	4	2027
Softkill Performance and Real-Time Assessment (SPARTA)	1	2021	2	2022
RCIP #5 TACSIM	1	2021	4	2022
AN/SLQ-32(V)6 and AN/SLQ-32(V)7 Software Algorithm Enhancements	1	2021	4	2022
Combined EO/IR Surveillance and Response System (CESARS)	1	2021	2	2021
Propagation Channel Assessment and Prediction (PCAP)	1	2021	4	2023
RCIP #4 SKCS SW Build Delivery	1	2021	4	2027
RCIP #5 TACSIM SW Integration and Delivery	1	2021	4	2022
RCIP #7: HW Processing & Reliability Improvements	2	2021	4	2025
RCIP #7: HW Processing & Reliability Improvements - System Prototype Delivery	4	2021	4	2025
RCIP #8 Netted Electronic Warfare Directed Engagement Logic (NEWDEL)	1	2023	4	2027
RCIP #6: BIT and Signal Processing	2	2025	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 2190 / *NULKA Decoy*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
2190: *NULKA Decoy*	52.123	5.220	6.711	6.211	-	6.211	7.409	7.335	7.233	7.369	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Offboard Active Decoy (Nulka) is a joint cooperative program between the United States and Australia that developed an active offboard decoy that utilizes a broadband radio frequency repeater mounted atop a hovering rocket. Nulka counters a wide variety of present and future radar guided Anti-Ship Missiles (ASMs) by radiating a large radar cross section while flying a ship-like trajectory. The United States developed the electronic payload and fire control system, while Australia developed the hovering rocket.

The FY23 budget request includes Decoy Launcher Processor (DLP) technology refresh to address threat studies as well as address obsolescence issues. The Objective Architecture development will continue which provides improved Nulka decoy deployment as well as Soft Kill Coordination System (SKCS) integration.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: NULKA Decoy Subsystem	5.220	6.711	6.211	0.000	6.211
Articles:	-	-	-	-	-
FY 2022 Plans: - Conduct engineering and effectiveness studies to evaluate new and existing threats; update Fly-Out Tactics table for specific platforms (as appropriate) - Develop and test new Nulka library files to support new platforms with SKCS (as appropriate) - Develop and complete NULKA-X/Y modeling and simulation tools and update lab equipment to support threat assessments - Continue and complete development and testing of DLPP 6_9 software that will integrate with SKCS and Advanced Nulka Decoy - Continue Decoy Launch Processor (DLP) technology refresh to design and develop hardware obsolescence solutions - Continue development and testing of the Decoy Launch Message Convertor (DLMC) to support the Nulka Objective Architecture - Conduct Factory Qualification Testing (FQT) and Environmental Qualification Testing (EQT) to improve employment of the Nulka system					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 2190 / *NULKA Decoy*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Develop and test Decoy Launch Controller (DLC) including Nulka Launch Management (NLMt) to support the Nulka Objective Architecture ***FY 2023 Base Plans:*** - Continue engineering and effectiveness studies to evaluate new and existing threats; update Fly-Out Tactics table for specific platforms (as appropriate) - Continue to develop and test new Nulka library files to support new platforms with SKCS (as appropriate) - Continue DLP technology refresh to design and develop hardware obsolescence solutions - Support the DLMC Low Rate Initial Production (LRIP) decision to support the Nulka Objective Architecture integration with SKCS - Continue to develop and test Decoy Launch Controller (DLC) including Nulka Launch Management (NLMt) to support the Nulka Objective Architecture ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY23 decrease is due to completion of DLPP6_9 and DLMC development efforts in FY22.					
Accomplishments/Planned Programs Subtotals	5.220	6.711	6.211	0.000	6.211

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/5530: *Anti-Ship Missile Decoy System*	72.056	76.994	86.264	-	86.264	63.696	79.690	93.047	128.645	791.034	1,428.878
• OMN/11CD0 (1C1C): *NULKA*	6.451	7.438	7.853	-	7.853	8.155	8.083	8.095	8.259	Continuing	Continuing

Remarks

D. Acquisition Strategy

Nulka is a joint cooperative program between United States and Australia.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 2190 / *NULKA Decoy*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NRL : Washington, DC	22.976	1.609	Dec 2020	1.682	Nov 2021	2.080	Nov 2022	-		2.080	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC Dahlgren : Dahlgren, VA	17.572	1.835	Nov 2020	3.089	Nov 2021	3.282	Nov 2022	-		3.282	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC Crane : Crane, IN	8.931	1.410	Nov 2020	1.472	Nov 2021	0.371	Nov 2022	-		0.371	Continuing	Continuing	Continuing
		Subtotal	49.479	4.854		6.243		5.733		-		5.733	Continuing	Continuing	N/A

Remarks

FY22-FY23 increased funding for NRL is due to the continuing development of objective architecture for SKCS. FY22-FY23 increased funding for Dahlgren is due to DLMC integration with SKCS. FY22 to FY23 reduction for Product Development is due to NSWC Crane's completion of DLMC development efforts in FY22.

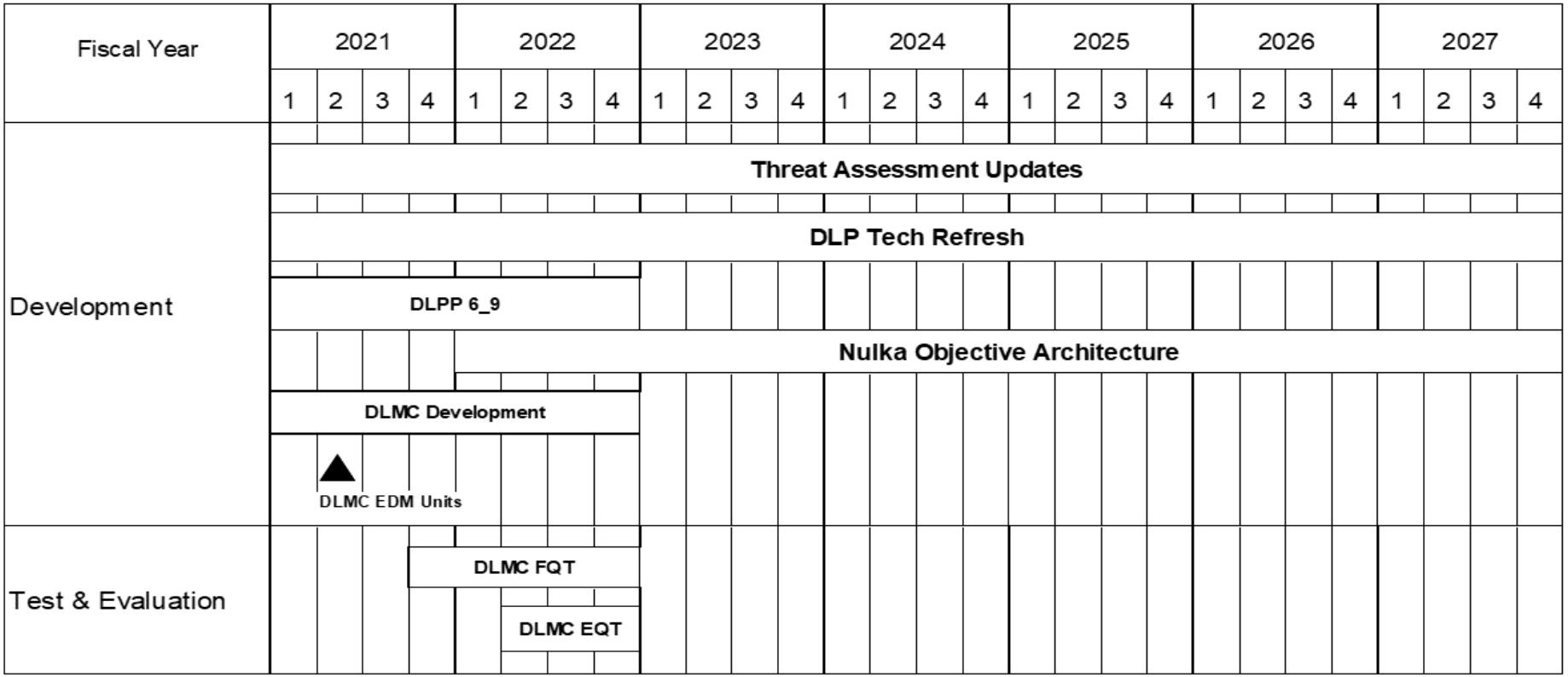
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPIF	ICI (SEAPORT) : Washington, DC	0.323	0.000		0.000		0.000		-		0.000	0.000	0.323	-
Program Management Support	C/CPIF	TMB (SEAPORT) : Washington, DC	0.570	0.107	Nov 2020	0.136	Nov 2021	0.139	Nov 2022	-		0.139	Continuing	Continuing	Continuing
Program Management Support	C/CPIF	SPA : Washington, DC	1.033	0.254	Jul 2021	0.322	Nov 2021	0.329	Nov 2022	-		0.329	Continuing	Continuing	Continuing
Travel	Allot	NAVSEA Program Office Travel : Washington, DC	0.718	0.005	Nov 2020	0.010	Nov 2021	0.010	Nov 2022	-		0.010	Continuing	Continuing	Continuing
		Subtotal	2.644	0.366		0.468		0.478		-		0.478	Continuing	Continuing	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	52.123	5.220		6.711		6.211		-		6.211	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 2190 / *NULKA Decoy*



Acronyms: DLMC - Decoy Launch Message Convertor; DLP - Decoy Launch Processor; DLPP - Decoy Launch Processor Program; EDM - Engineering Development Models; EQT - Environmental Qualification Testing; FQT - Factory Qualification Testing

Note: For DLPP6_9, additional time was necessary to clear Trouble Reports (TRs) and to conduct SoftKill Coordinator Subsystems (SKCS) integration with DLPP6_9 to support Fleet fielding. As a result, the completion of this effort was extended one year from Q4FY21 to Q4FY22 to complete all related DLPP6_9 efforts.

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 2190 / *NULKA Decoy*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2190				
Threat Assessment Updates	1	2021	4	2027
Decoy Launch Processor (DLP) Tech Refresh	1	2021	4	2027
Decoy Launch Processor Program (DLPP 6_9)	1	2021	4	2022
Decoy Launch Message Convertor (DLMC) Development	1	2021	4	2022
DLMC Engineering Development Model (EDM) Units	2	2021	2	2021
DLMC Facotry Qualification Testing (FQT)	4	2021	4	2022
Nulka Objective Architecture	1	2022	4	2027
DLMC Environmental Qualification Testing (EQT)	2	2022	4	2022

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 3068 / *Long Endurance Electronic Decoy (LEED)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3068: *Long Endurance Electronic Decoy (LEED)*	0.000	0.000	10.637	38.444	-	38.444	40.552	32.938	21.489	21.790	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

This project is a new start in FY 2022

A. Mission Description and Budget Item Justification

3068 - The Long Endurance Electronic Decoy (LEED) program will deliver an expendable long endurance autonomous off-board decoy Countermeasure system, comprised of a flight vehicle and Radio Frequency (RF) payload with modular capability allowing for rapid modification of the Electronic Warfare (EW) payload. LEED development executes under a middle tier rapid prototyping acquisition strategy pursuant to Section 804 of the FY16 National Defense Authorization Act. LEED will integrate with SLQ-32 and address EW gaps in response to a fleet requirement to counter Anti-Ship Missile (ASM) threats. LEED will provide the fleet with enhanced EW coordination and capability, including the ability to stretch engagement timelines and counter heterogeneous missile attacks.

The overarching strategy consists of three phases comprising development and initial production: Countermeasure Prototype Development (FY22-FY24), Integrated Countermeasure Prototype Development (FY24-FY25), and Follow-On Production (FY25-FY27+). The first phase includes competitive development of operational-level Countermeasure prototypes that demonstrate and validate critical capabilities, including flight performance and RF functionality. The second phase will build on the critical technologies to develop production representative Engineering Development Models (EDMs). The third phase will procure and field initial units to the fleet, while the transition to major capability acquisition for full production and sustainment is executed.

LEED will be developed alongside the Office of Naval Research (ONR) Long Endurance Airborne Platform (LEAP) Project, which began in FY21. LEED will leverage technologies developed and matured under the ONR LEAP Project.

The FY23 funding request is for LEED Countermeasure prototype development and testing for the first phase of development, including final material purchases, component integration, preliminary demonstration testing, and formal Countermeasure Performance Testing, as well as initiation activities for the second phase of development for the integrated Countermeasure prototype.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Long Endurance Electronic Decoy (LEED)	0.000	10.637	38.444	0.000	38.444
Articles:	-	-	-	-	-
FY 2022 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
This Project is a new start in FY22. - Initiate the first phase of Countermeasure Development with development of a LEED Countermeasure prototype, which is comprised of: (1) a long duration autonomous flight vehicle; and (2) a modular RF EW payload. - Procure hardware components necessary to meet a subset of Technical Performance Measures (TPMs). - Execute non-recurring engineering design, software development, and contract support activities in order to initiate development of functional countermeasure systems that meet a subset of specified TPMs. - Initiate development of preliminary concepts for a ship launch system based on feasibility studies for modification of an existing decoy ship launch system. - Initiate development of test procedures and facilities that will support demonstration of prototype performance that meets specified TPMs, with a focus on RF performance test procedures. - Implement an Integrated Product Team (IPT) to support requirements, systems engineering, testing, and product support. - Initiate development of modeling and simulation tools to support threat and countermeasure performance assessments. - Conduct in process and technical design reviews, including a System Requirements Review (SRR), System Functional Review (SFR), and System Preliminary Design Review (PDR) to demonstrate initial countermeasure system development progress, risks, and performance. ***FY 2023 Base Plans:*** - Continue the first phase of LEED Countermeasure Development with development and testing of a LEED Countermeasure prototype. - Complete hardware purchases and execute non-recurring engineering design, software development, and contract support activities in order to develop, test and deliver a functional Countermeasure system that meets specified TPMs. - Develop test procedures and facilities to demonstrate Countermeasure prototype performance that meets specified TPMs, with a focus on RF performance and vehicle flight performance test procedures. - Conduct preliminary demonstration testing of the Countermeasure prototype to assess key risk areas against a subset of TPMs with a focus on RF functionality, and utilize results to inform final prototype development activities in preparation for formal Countermeasure Performance Testing. - Conduct the Countermeasure Critical Design Review (CDR).					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Conduct formal Countermeasure Performance Testing to measure Countermeasure prototype performance against all TPMs and government approved requirements. - Integrate the payload and flight vehicle into a functional Countermeasure. - Continue developing preliminary concepts for a ship launch system, based on feasibility studies and Countermeasure development, for modification of an existing decoy ship launch system. - Continue developing modeling and simulation tools to support threat and countermeasure performance assessments. - Continue execution of an IPT to support requirements, systems engineering, testing, and product support: Coordinate and conduct government led testing events; Support the development of test procedures and testing facilities, monitor and engage in Prime Contractor performance, attend and provide technical support for Contractor-led testing events, and assess all testing outcomes for effectiveness; Utilize modeling and simulation tools to support threat and countermeasure performance assessments; Commence ship design and ship integration planning activities. - Initiate technical and contractual planning activities for the second phase of LEED Countermeasure development. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** FY23 increase is for ramp-up of LEED program development, including payment for final hardware material purchases for the first phase of development and component integration, preliminary demonstrations and formal Countermeasure Performance Testing, and initiation activities for the second phase of development for the integrated Countermeasure prototype.					
Accomplishments/Planned Programs Subtotals	0.000	10.637	38.444	0.000	38.444

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

LEED development executes under a middle tier rapid prototyping acquisition strategy pursuant to Section 804 of the FY16 National Defense Authorization Act. The acquisition strategy for LEED is based on the validated LEED Top Level Requirements document and ASN(RDA) Middle Tier Acquisition and Acquisition Agility Interim

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*

Guidance Update Memorandum (10 Jan 2019) and will be finalized with successful completion of an Acquisition Decision Memorandum (ADM) for Middle Tier of Acquisition (MTA) Rapid Prototyping Designation in the Q2FY22.

To accomplish the LEED Countermeasure Development, Other Transaction Authority (OTA) agreements will be utilized for development by one or more vendors in a cooperative acquisition approach with the Office of Naval Research (ONR). ONR will initiate technology maturation efforts in FY21 as part of their LEAP project, which LEED will capitalize on. The FY21 ONR efforts will allow for the matured technologies in LEAP to be leveraged sooner by LEED and support the overall LEED development and fielding timeline. OTA agreements will be utilized through an initial production follow-on to prototype development, with a transition to Federal Acquisition Regulation (FAR)-based contracting for Major Capability Acquisition for Full Rate Production (FRP).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LEED Rapid Development	C/CPFF	Lockheed Martin : Grand Prairie, TX	0.000	0.000		8.574	Apr 2022	29.270	Nov 2022	-		29.270	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		8.574		29.270		-		29.270	Continuing	Continuing	N/A

Remarks

FY22 increase reflects funding required for Phase 1 development based on offeror proposals and based on the initial award of the LEAP-LEED Other Transaction agreement by Office of Naval Research in Q1 FY22. FY22 to FY23 increase is for ramp-up of Prime Contractor development. The increase supports purchasing the hardware required to complete the final Phase 1 countermeasure prototype and performing component integration of all parts and subcomponents to build the final countermeasure prototype. The remaining hardware must be purchased in FY23 in order to complete the development of the countermeasure prototype for formal Countermeasure Performance Testing. The increase also supports Prime Contractor execution of the Phase 1 countermeasure prototype testing, which is comprised of (1) preliminary demonstration testing and (2) formal Countermeasure Performance Testing. In FY23, all testing will be executed, and the increase will cover execution of all developmental testing activities. The increase also supports Prime Contractor preparation for the second phase of development, which initiates immediately after Phase 1 testing and prototype final development is complete, and includes phase exit and entrance support activities such as reporting, documentation, facilities set-up, and prototype delivery. FY22 award dates were moved from Q1 to Q3 FY22 to account for late receipt of funds.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.000		0.076	Apr 2022	0.810	Nov 2022	-		0.810	Continuing	Continuing	Continuing
Technical Support	WR	NSWC Crane : Crane, IN	0.000	0.000		0.234	Apr 2022	0.577	Nov 2022	-		0.577	Continuing	Continuing	Continuing
Technical Support	WR	NRL : Washington, DC	0.000	0.000		0.378	Apr 2022	1.492	Nov 2022	-		1.492	Continuing	Continuing	Continuing
Systems Engneering Support	SS/CPFF	APL : Laurel, MD	0.000	0.000		0.315	May 2022	0.638	Nov 2022	-		0.638	Continuing	Continuing	Continuing
Technical Support	MIPR	MT-LL : Boston, MA	0.000	0.000		0.000		0.810	Nov 2022	-		0.810	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		1.003		4.327		-		4.327	Continuing	Continuing	N/A

Remarks

FY22 to FY23 increase is for ramp-up of government oversight and support of Prime Contractor development and component integration activities. Government support activities and the Integrated Product Team (IPT) will increase systems engineering activities in support of Prime Contractor reviews and demonstrations and support initial ship integration planning. Additionally, the government IPT will perform planning and preparation for the second phase of development, including prototype acceptance, phase exit

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 3068 / *Long Endurance Electronic Decoy (LEED)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
and entrance support activities, and technical support for facilities management and set-up. FY22 award dates were moved from Q1 to Q3 FY22 to account for late receipt of funds.															

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation Support	WR	NRL : Washington, DC	0.000	0.000		0.377	Apr 2022	1.519	Nov 2022	-		1.519	Continuing	Continuing	Continuing
Test and Evaluation Support	WR	NSWC Crane : Crane, IN	0.000	0.000		0.081	Apr 2022	0.578	Nov 2022	-		0.578	Continuing	Continuing	Continuing
Test and Evaluation Support	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.000		0.000		0.810	Nov 2022	-		0.810	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.458		2.907		-		2.907	Continuing	Continuing	N/A

Remarks

FY22 decrease in T&E is due to a realignment of funds after reduction in control. FY22 to FY23 increase is for ramp-up of government oversight and support of Prime Contractor developmental testing activities. In FY23, all testing will be executed, and the increase will cover government oversight and support of Prime Contractor's developmental testing activities, including all Countermeasure Performance Testing events and demonstrations. Additionally, the government Integrated Product Team (IPT) will develop testing requirements, coordinate and conduct government-led testing events, and assess all testing outcomes. FY22 award dates were moved from Q1 to Q3 FY22 to account for late receipt of funds.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPIF	TMB : Washington, DC	0.000	0.000		0.281	Apr 2022	0.950	Nov 2022	-		0.950	Continuing	Continuing	Continuing
Program Management Support	C/CPIF	SPA : Washington, DC	0.000	0.000		0.281	Apr 2022	0.950	Nov 2022	-		0.950	Continuing	Continuing	Continuing
Travel	Sub Allot	NAVSEA Program Office : Washington, DC	0.000	0.000		0.040	Apr 2022	0.040	Nov 2022	-		0.040	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.602		1.940		-		1.940	Continuing	Continuing	N/A

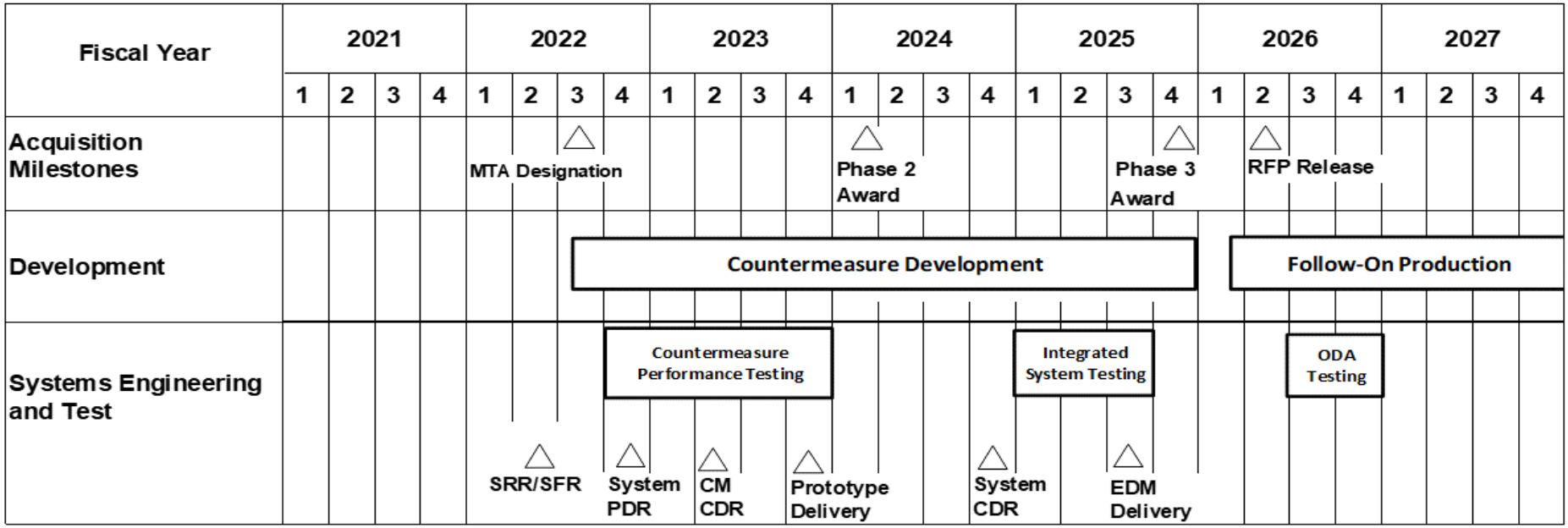
Remarks

FY22 to FY23 increase is for ramp-up of program management, acquisition, cost analysis, financial, and documentation development support required to manage the ramp-up of Prime Contractor development and support the execution and completion of the first phase of development. The increase also supports planning and preparation for the second phase of development, including program acquisition, financial, and contracting actions for phase exit and entrance. FY22 award dates were moved from Q1 to Q3 FY22 to account for late receipt of funds.

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		10.637		38.444		-		38.444	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*



Acronyms: CDR - Critical Design Review; CM - Countermeasure; EDM - Engineering Development Model; MTA - Middle Tier Acquisition; ODA - Operational Demonstration Assessment; PDR - Preliminary Design Review; RFP - Request for Proposal; SRR - System Requirements Review; SFR - System Functional Review

Note:
Test support will begin in FY22 for Countermeasure Performance Testing in FY23. All schedule changes are based on the ONR LEAP Other Transaction agreement negotiated in 4QFY21, which includes a negotiated timeline of program events and deliverables. The agreement informed the update to the length of development phases and testing timelines, and established SRR/SFR, System PDR, CM CDR, and removed Phase 1 In Process Review (IPR). Based on the negotiated agreement, updated plans are reflected for MTA Designation, Follow-On Production, and RFP Release.

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3068 / *Long Endurance Electronic Decoy (LEED)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3068				
System Requirements Review (SRR)/System Functional Review (SFR)	2	2022	2	2022
Middle Tier Acquisition (MTA) Designation	3	2022	3	2022
Countermeasure Development	3	2022	4	2025
Countermeasure Performance Testing	4	2022	4	2023
System Preliminary Design Review (PDR)	4	2022	4	2022
Countermeasure Critical Design Review (CDR)	2	2023	2	2023
Prototype Delivery	4	2023	4	2023
Phase 2 Award	1	2024	1	2024
System Critical Design Review (CDR)	4	2024	4	2024
Integrated System Testing	1	2025	3	2025
Engineering Development Model (EDM) Delivery	3	2025	3	2025
Phase 3 Award	4	2025	4	2025
Follow On Production	1	2026	4	2027
Request for Proposal (RFP) Release	2	2026	2	2026
Operational Demonstration Assessment (ODA) Testing	3	2026	4	2026

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 3316 / *Advanced Offboard EW*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3316: *Advanced Offboard EW*	281.602	43.460	28.843	26.321	-	26.321	19.245	16.611	4.930	0.816	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

3316 - The Advanced Offboard EW (AOEW) program is for the development of long duration off-board decoys integrated with onboard systems for EW coordination to counter identified EW gaps (additional details classified) in response to an urgent operational need from the Fleet that has been approved by the CNO for execution. In FY 2012, the program began with a Rapid Response Effort (RRE) which was completed in FY 2014. The RRE consisted of the evaluation and integration of commercially available decoys. The Decoy Development Effort (DDE) consists of the development and evaluation of a long duration, active electronic offboard decoy system (payload) integrated on an existing flight vehicle (MH-60R/MH-60S), integration with ship and air systems, and a government software development effort to integrate AOEW into the Soft Kill Coordination System (SKCS) to gain maximum effectiveness from the decoy through coordination with an onboard system.

In the DDE/E&MD Contract effort, which commenced in 2017, the program is developing and integrating Engineering Development Models (EDMs) with the System of Systems (SOS) partners to include FY22 delivery of the Technical Data Package (TDP), conduct of FQT, and preparation for the program's test phase ramping up in Q4 FY22.

As part of the MH-60R/S Flight Certification effort, the program is required to complete NAVAIR Avionics Operating Program (AOP) software development and Flight Certification, which are critical to support fielding of the AOEW decoy. The AOP software supports integration of the AOEW decoy with the MH-60R/S airframe and is required for successful completion of Flight Certification. AOP software development was completed in FY21. Flight Certification testing includes Ground and Flight Jettison, Flight Test for Mission Performance / Spec Compliance Flight Test, Functional Software Test, and Decoy Fit and Egress Test, which ensures operational Safety of Flight and is critical to successful decoy fielding.

The FY23 funding request supports planning, execution of, and analysis associated with three government-led Developmental Test events at NAS Patuxent River and NSWCDD. Additionally, NAVAIR will conduct Avionics Operating Program (AOP) MH-60R and MH-60S Software Testing necessary for AOEW Decoy and Helicopter Integration into the baseline.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: AOEW - Decoy Development Effort (DDE) Government Engineering	12.393	14.128	22.198	0.000	22.198
Articles:	-	-	-	-	-
FY 2022 Plans: - Complete support of development of TDP - Complete support of Security Software development					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Complete Battery Certification - Continue support of AOEW Model Development - Continue identification of and update of test assets needed to support Operational Testing - Complete Technique Verification - Complete tactics development and continue tactics analysis - Complete support of EMI Test Planning - Complete support of FQT Planning - Commence and complete support of FQT - Continue integration of ship and air interfaces - Continue interoperability analysis to ensure all System Of Systems (SOS) are compatible - Conduct land-based Developmental Testing (1 event) and commence Developmental Testing Analysis - Continue testing of AOP to update MH-60R/S software necessary for AOEW decoy and helicopter integration - Continue Engineering Data Requirements Agreement Plan (EDRAP) development - Continue NAVAIR MH-60R/S Flight Certification Testing - Continue sustainment and training plan development - Continue Installation Planning					
FY 2023 Base Plans: - Complete support of Security Software development - Continue support of AOEW Model Development - Continue identification of and update of test assets needed to support Operational Testing - Continue tactics analysis - Continue integration of ship and air interfaces - Continue interoperability analysis to ensure all SOS are compatible - Complete array integration test planning for PAX chamber test (2 government-led DT Test events) - Complete integration test planning for Dahlgren open air test (1 government-led DT Test) - Conduct 3 government-led Developmental Testing events and commence test analysis - Continue testing of AOP to update MH-60R/S software necessary for AOEW decoy and helicopter integration - Continue EDRAP development - Continue NAVAIR MH-60R/S Flight Certification Testing - Continue sustainment and training plan development - Continue Installation Planning					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Commence and complete update of Improved Control and Displays (ICADs) ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase for Government Engineering in FY23 is to conduct three scheduled Developmental Test events led by the government at NAS Patuxent River and NSWC Dahlgren, and to support NAVAIR Flight Certification testing.					
Title: AOEW - Decoy Development Effort (DDE) Development	31.067	14.715	4.123	0.000	4.123
Articles:	-	-	-	-	-
FY 2022 Plans: - Complete EDM Hardware and Software development and integration - Complete assembly and delivery of 1 EDM - Complete delivery of 3 EDMs - Complete development of TDP - Continue Security Software development - Complete support of battery certification - Continue AOEW Model Development - Complete support of Technique Verification - Complete Environmental/EMI Test planning - Complete FQT planning - Conduct FQT - Continue integration support of Ship and Air interfaces - Continue support of AOP MH-60R and MH-60S software testing necessary for AOEW decoy and Helicopter integration - Continue support for NAVAIR Flight Certification testing of EDMs - Complete support of Sustainment and Training Plan Development					
FY 2023 Base Plans: - Complete Security Software development - Complete AOEW Model Development - Complete Integration Support of Ship and Air Interfaces - Complete Support of Array Integration Test Planning for PAX Chamber Test (DT Testing) - Complete Support of Integration Test Planning for Dahlgren Open Air Test (DT Testing)					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Continue support of Avionics Operating Program (AOP) MH-60R and MH-60S Software Testing Necessary for AOEW Decoy and Helicopter Integration - Continue support for NAVAIR Flight Certification Testing of EDMs - Continue support of Sustainment and Training Plan Development ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease for Development Engineering in FY23 is due to the completion of assembly and test of three EDMs in FY22.					
Accomplishments/Planned Programs Subtotals	43.460	28.843	26.321	0.000	26.321

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/5530: *Anti-ship Missile Decoy System*	72.056	76.994	86.264	-	86.264	63.696	79.690	93.047	128.645	791.034	1,428.878
• OMN/11CD0 (1C1C): *AOEW*	0.000	0.000	6.000	-	6.000	9.600	10.400	11.100	11.900	0.000	49.000

Remarks

Since the FY22 budget cycle, FYDP funding has been restored to the AOEW program to continue procurement of ALQ-248 pods and spares, along with associated installations, ship integration, modeling and simulation, and production support.

D. Acquisition Strategy

AOEW DDE Decoy is re-negotiating options on the E&MD Contract to procure Low-Rate Initial Production (LRIP) units for FY22. A sole-source contract is planned in FY23-24 for LRIPs and Design Agent services. A competitive contract is planned for production of additional LRIPs and Full-Rate Production (FRP) units in FY25-29.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Concept Analysis and Integration Assessment	SS/CPFF	APL : Laurel, MD	11.707	0.000		0.000		0.000		-		0.000	0.000	11.707	Continuing
Concept Analysis and Technology Studies	MIPR	MIT-LL : Boston, MA	4.857	0.000		0.000		0.000		-		0.000	0.000	4.857	Continuing
Concept Development and Technology Studies	WR	NRL : Washington, D.C.	25.856	0.000		0.000		0.000		-		0.000	0.000	25.856	Continuing
Technology Development and Systems Requirements	WR	NSWC Dahlgren : Dahlgren, VA	14.595	0.000		0.000		0.000		-		0.000	0.000	14.595	Continuing
DDE Avionics Development	WR	NAVAIR : Patuxent River, MD	16.337	1.330	Nov 2020	0.500	Nov 2021	2.366	Nov 2022	-		2.366	Continuing	Continuing	Continuing
DDE Preliminary Design/ E&MD	C/CPIF	Lockheed Martin : Syracuse, NY	118.149	31.067	Nov 2020	14.715	Nov 2021	4.123	Nov 2022	-		4.123	Continuing	Continuing	Continuing
Ship Integration	WR	SPAWAR : San Diego, CA	0.975	0.000		0.000		0.000		-		0.000	0.000	0.975	-
Ship Integration	WR	NSWC Dahlgren : Dahlgren, VA	0.330	0.000		0.000		0.000		-		0.000	0.000	0.330	-
		Subtotal	192.806	32.397		15.215		6.489		-		6.489	Continuing	Continuing	N/A

Remarks

- Within FY21, funding for Product Development increased compared to the FY22 budget cycle amount due to additional scope required for DDE Preliminary Design/E&MD including M&S and Security Software.
- DDE Avionics Development is reduced in FY22 due to a contract gap, which is planned to be resolved by FY23. In FY23, DDE Avionics Development ramps up to complete trouble report resolution and software testing for the SC-24/26 AOP software baseline.
- Between FY21-FY23, funding for DDE Preliminary Design/E&MD decreases as EDM build and test are completed in FY22.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Development Support	WR	NRL : Washington, DC	19.192	1.105	Nov 2020	1.947	Nov 2021	1.680	Nov 2022	-		1.680	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 3316 / *Advanced Offboard EW*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Development and Engineering Support	WR	NSWC Dahlgren : Dahlgren, VA	14.275	1.286	Nov 2020	1.519	Nov 2021	3.211	Nov 2022	-		3.211	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC Crane : Crane, IN	17.503	1.946	Nov 2020	1.951	Nov 2021	2.468	Nov 2022	-		2.468	Continuing	Continuing	Continuing
Logistics/Training	SS/CPFF	EWA : Fairmont, WV	1.616	0.000		0.000		0.000		-		0.000	0.000	1.616	Continuing
Government Engineering Support	WR	NSWC Carderock : Bethesda, MD	1.303	0.191	Nov 2020	0.000		0.000		-		0.000	0.000	1.494	-
Systems Engineering Support	SS/CPFF	APL : Laurel, MD	7.781	0.552	Nov 2020	0.345	Apr 2022	0.602	Nov 2022	-		0.602	Continuing	Continuing	Continuing
Government Development Support	WR	NAVAIR : Patuxent River, MD	6.191	0.534	Nov 2020	0.938	Nov 2021	1.590	Nov 2022	-		1.590	Continuing	Continuing	Continuing
Systems Engineering Support	MIPR	MIT-LL : Boston, MA	0.034	0.000		0.000		0.000		-		0.000	0.000	0.034	-
Program Management Support	MIPR	DISA : Pensacola, FL	0.195	0.000		0.000		0.000		-		0.000	0.000	0.195	-
Installation Support	WR	SUPSHIP : Bath, ME	0.098	0.000		0.014	Feb 2022	0.000		-		0.000	0.000	0.112	-
Integrated Logistics Assessment	WR	NSWC PHD : Port Hueneme, CA	0.021	0.000		0.000		0.000		-		0.000	0.000	0.021	-
Integrated Logistics Assessment	WR	NSWC Panama City : Panama City Beach, FL	0.009	0.000		0.000		0.000		-		0.000	0.000	0.009	-
Integrated Logistics Assessment	WR	NAVSUP WSS : Philadelphia, PA	0.004	0.000		0.000		0.000		-		0.000	0.000	0.004	-
Integrated Logistics Assessment	WR	NSWC IHEOD : Indian Head, MD	0.004	0.007	Jan 2021	0.000		0.000		-		0.000	0.000	0.011	-
MRTS Support	WR	NAWC TSD : Orlando, FL	0.015	0.000		0.000		0.000		-		0.000	0.000	0.015	-
Ship Integration	WR	NIWC PAC : San Diego, CA	0.000	0.028	Jan 2021	0.000		0.000		-		0.000	0.000	0.028	-
		Subtotal	68.241	5.649		6.714		9.551		-		9.551	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

- Within FY21, funding for Support decreased since the FY22 budget cycle and was realigned to Product Development due to additional scope required for DDE Preliminary Design/E&MD including M&S and Security Software.
- Between FY22-FY23, funding for Support increased to support analysis of three Developmental Test Events, continued sustainment and training planning development and installation planning in addition to modeling and simulation/modeling development of the EDMs.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Planning and Development Testing	WR	NRL : Washington, DC	5.213	0.935	Nov 2020	1.226	Nov 2021	2.420	Nov 2022	-		2.420	Continuing	Continuing	Continuing
Test Planning and Development Testing	WR	NSWC/Dahlgren : Dahlgren, VA	3.679	0.938	Nov 2020	1.198	Nov 2021	2.411	Nov 2022	-		2.411	Continuing	Continuing	Continuing
Test Planning and Development Testing	WR	NSWC Crane : Crane, IN	1.428	0.043	Nov 2020	0.020	Nov 2021	0.500	Nov 2022	-		0.500	Continuing	Continuing	Continuing
Test Planning and Development Testing	WR	NAVAIR : Patuxent River, MD	5.294	3.321	Nov 2020	4.289	Nov 2021	4.800	Nov 2022	-		4.800	Continuing	Continuing	Continuing
Test Planning and Development Testing	WR	OPTEVFOR : Norfolk, VA	0.734	0.085	Nov 2020	0.151	Nov 2021	0.100	Nov 2022	-		0.100	Continuing	Continuing	Continuing
Test Planning and Development Testing	SS/CPFF	APL : Laurel, MD	0.000	0.000		0.000		0.010	Nov 2022	-		0.010	Continuing	Continuing	Continuing
		Subtotal	16.348	5.322		6.884		10.241		-		10.241	Continuing	Continuing	N/A

Remarks

- Between FY22-FY23, funding for Test and Evaluation increased due to the conduct of three developmental tests, completion of security software and model development, integration test planning for PAX chamber and continued support for MH-60R/S flight certification and DDE land based test and certification.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

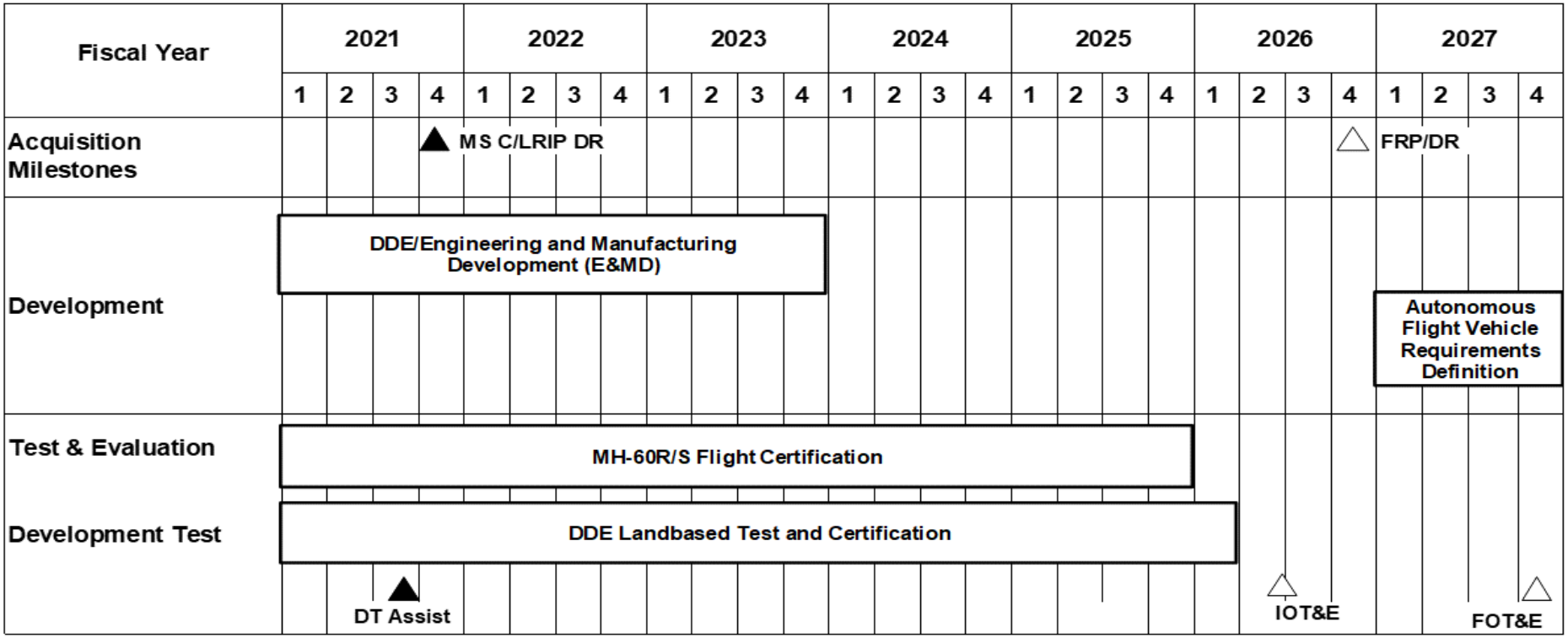
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPIF	CACI (SEAPORT) : Washington, DC	1.170	0.000		0.000		0.000		-		0.000	0.000	1.170	-
Program Management Support	C/CPIF	SPA : Washington, DC	0.821	0.000		0.000		0.000		-		0.000	0.000	0.821	-
Program Management Support	C/CPIF	TMB (SEAPORT) : Washington, DC	1.693	0.000		0.000		0.000		-		0.000	0.000	1.693	-
Program Management Support	C/CPIF	STRATEGIC INSIGHT (SEAPORT) : Washington, DC	0.058	0.000		0.000		0.000		-		0.000	0.000	0.058	-
Program Management Support	WR	NSWC Indian Head : Indian Head, MD	0.053	0.000		0.000		0.000		-		0.000	0.000	0.053	-
Travel	Allot	NAVSEA Program Office Travel : Washington, DC	0.229	0.010	Nov 2020	0.030	Nov 2021	0.040	Nov 2022	-		0.040	Continuing	Continuing	Continuing
Cost Management Support	C/CPIF	CACI (SEAPORT) : Washington, DC	0.183	0.082	Apr 2021	0.000		0.000		-		0.000	0.000	0.265	-
		Subtotal	4.207	0.092		0.030		0.040		-		0.040	Continuing	Continuing	N/A

	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	281.602	43.460		28.843		26.321		-		26.321	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*



Acronyms: DDE - Decoy Development Effort; DR - Decision Review; DT - Developmental Test; FOT&E - Follow-on Operational Test and Evaluation; FRP - Full Rate Production; IOT&E - Initial Operational Test and Evaluation; LRIP - Low Rate Initial Production; MS - Milestone

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3316 / *Advanced Offboard EW*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3316				
DDE / E&MD	1	2021	4	2023
MH60-R/S Flight Certification	1	2021	4	2025
DDE Land-Based Test and Certification	1	2021	1	2026
Developmental Test (DT) Assist	3	2021	3	2021
Milestone (MS) C / LRIP DR	4	2021	4	2021
Initial Operational Test and Evaluation (IOT&E)	3	2026	3	2026
Full Rate Production (FRP) / Decision Review (DR)	4	2026	4	2026
Autonomous Flight Vehicle Requirements Definition	1	2027	4	2027
Follow-On Operational Test and Evaluation (FOT&E)	4	2027	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 3321 / *SEWIP Block 3*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3321: *SEWIP Block 3*	262.974	18.238	3.352	6.210	-	6.210	8.749	6.209	5.994	5.910	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

SEWIP Block 3 is developing an advanced Electronic Attack (EA) capability to keep pace with the evolving Anti-Ship Missile Defense (ASMD) threat and counter-targeting required for the AN/SLQ-32(V) system. SEWIP Block 3 will provide the AN/SLQ-32(V)7 system for all surface ships (CVN, DDG, LHD) outfitted with the active variant of the AN/SLQ-32, mainly the (V)3 and (V)4, as well as select new construction platforms.

The SEWIP Block 3 Acquisition leverages technology developed under the Office of Naval Research's (ONR) Integrated Topside (InTop) Science and Technology (S&T) effort. SEWIP Block 3 will continue to expand the integrated shipboard combat system by providing new integrated EA transmitters, arrays, and associated EA techniques. The AN/SLQ-32(V)7 integrates the new EA countermeasure (SEWIP Block 3) with the AN/SLQ-32(V)6. The AN/SLQ-32(V)6 includes an Electronic Support (ES) receiver (SEWIP Block 2), a High Gain High Sensitivity (HGHS) receiver (SEWIP Block 1B3), a Specific Emitter Identifier (SEI) receiver (SEWIP Block 1B2), display console, and backend electronics. SEWIP Block 3 includes the government software development and integration effort for a SoftKill Coordinator (SKC) to manage EA engagements. SEWIP Block 3 is developing an Electronic Warfare Test Bed (EWTB) to validate system performance via modeling and simulation.

The FY23 funding request for SEWIP Block 3 will focus on the conduct of Land Based Testing (LBT) and preparation for TECHEVAL and Initial Operational Test & Evaluation (IOT&E). Additionally, training curriculum development, EWTB model upgrades, and software and hardware fixes/upgrades will continue through the test phase. Additionally, development efforts to increase High Power Amplifier (HPA) efficiency to reduce required power and fuel consumption will commence.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: SEWIP Block 3 Government Engineering	3.781	2.849	4.877	0.000	4.877
Articles:	-	-	-	-	-
FY 2022 Plans: - Continue to conduct LBT events at Wallops Island. - Continue EWTB model upgrades and verification/validation of model performance. - Continue test planning for TECHEVAL/IOT&E. - Continue monitoring of SW & HW fixes/upgrades. - Continue monitoring training curriculum development.					
FY 2023 Base Plans: - Complete LBT events at Wallops Island. - Continue EWTB model upgrades and verification/validation of model performance.					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3321 / *SEWIP Block 3*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
- Continue test planning for TECHEVAL/IOT&E. - Commence energy efficiency engineering design and development. - Continue monitoring of SW & HW fixes/upgrades. - Continue monitoring training curriculum development. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** - The increase in FY23 is due to the ramp up of Test & Evaluation (T&E) efforts. The program's primary focus in FY23 is system T&E, completing Land-Based Testing (LBT) and planning/executing TECHEVAL/IOT&E. This increase is also due to additional requirement of HPA efficiency engineering efforts.					
Title: SEWIP Block 3 Development	14.457	0.503	1.333	0.000	1.333
Articles:	-	-	-	-	-
FY 2022 Plans: - Continue upgrades of software and hardware baseline based on LBT results. ***FY 2023 Base Plans:*** - Continue upgrades of software and hardware baseline based on LBT results. - Re-initiate effort to complete the SEWIP Block 3 training modules of the Surface EW Tactical Trainer (SEWTT). - Commence energy efficiency engineering design and development. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** - Increase in FY23 is due to additional requirement of HPA efficiency engineering efforts.					
Accomplishments/Planned Programs Subtotals	18.238	3.352	6.210	0.000	6.210

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPN/2312: *AN/SLQ-32*	343.961	360.817	292.417	-	292.417	331.273	278.391	474.514	495.999	4,105.241	8,444.789
• OMN PE 024575N: *AN/SLQ-32*	0.000	4.581	16.617	-	16.617	18.370	19.412	17.721	19.555	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3321 / *SEWIP Block 3*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

SEWIP developed Block upgrades to AN/SLQ-32 based on integrating technology advances and adding functional capabilities in an incremental fashion. Each Block and sub-Block was developed and contracted in an individual yet coordinated and overlapping fashion. Specifically, SEWIP Block 3 involves the transitioning and leveraging of work performed under the Integrated Topside (INTOP) program sponsored by ONR, which focused on designing/architecting an integrated Electronic Attack (EA), Information Operations (IO), and Line of Site (LOS) Comms system for Naval Surface Platforms. The SEWIP Block 3 acquisition strategy included a full and open competition for EM&D and the first LRIP units. As part of EMD and LRIP, the OEM delivered a level III, build-to-print Technical Data Package (TDP) to support full and open competition for additional LRIP and FRP units.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3321 / *SEWIP Block 3*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 SEWTT Development	SS/CPFF	EWA-GSI : Fairmont, WV	1.619	0.707	Dec 2020	0.000		0.100	Nov 2022	-		0.100	Continuing	Continuing	Continuing
Block 3 Preliminary Design/E&MD	C/CPIF	Northrop Grumman : Baltimore, MD	253.686	13.750	Oct 2020	0.503	Oct 2021	1.233	Nov 2022	-		1.233	Continuing	Continuing	Continuing
		Subtotal	255.305	14.457		0.503		1.333		-		1.333	Continuing	Continuing	N/A

Remarks

-Product Development increases in FY21 from the FY22 budget due to increased training module development required for the Surface EW Tactical Trainer (SEWTT).
-Product Development decreases in FY22 due to completion of SEWIP Block 3 Development and delivery of the EDM to the Land Based Test Site (LBTS).
-Product Development increases in FY23 is due to additional requirement of HPA efficiency engineering efforts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Integrated Logistics Support	WR	NSWC Corona : Corona, CA	0.023	0.000		0.000		0.000		-		0.000	0.000	0.023	-
Block 3 Government Engineering Support	MIPR	MIT-LL : Cambridge, MA	4.794	0.000		0.000		0.000		-		0.000	0.000	4.794	-
Block 3 Feasibility Studies	WR	BIW : Bath, ME	0.510	0.000		0.000		0.000		-		0.000	0.000	0.510	-
Block 3 Platform Integration Studies	WR	Norfolk Naval Shipyard (NNSY) : Norfolk, VA	0.040	0.000		0.000		0.000		-		0.000	0.000	0.040	-
Block 3 Platform Integration Studies	WR	SUPSHIP Gulf Coast : Pascagoula, MS	0.062	0.000		0.000		0.000		-		0.000	0.000	0.062	-
Block 3 Platform Integration Studies	WR	NSWC Philadelphia : Philadelphia, PA	0.212	0.000		0.000		0.000		-		0.000	0.000	0.212	-
Block 3 Platform Integration Studies	WR	NAVSEA 05 (Alion) : Washington, DC	0.297	0.000		0.000		0.000		-		0.000	0.000	0.297	-
Block 3 Platform Integration Studies	WR	NAVSEA 05 (CSRA) : Washington, DC	0.149	0.000		0.000		0.000		-		0.000	0.000	0.149	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy			Date: April 2022
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	Project (Number/Name) 3321 / *SEWIP Block 3*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Platform Integration Studies	WR	Lockheed Martin : Moorstown, NJ	0.202	0.000		0.000		0.000		-		0.000	0.000	0.202	-
		Subtotal	6.289	0.000		0.000		0.000		-		0.000	0.000	6.289	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Test Planning/T&E Events	WR	NSWC Dahlgren : Dahlgren, VA	0.000	0.378	Nov 2020	0.200	Nov 2021	0.000		-		0.000	0.000	0.578	-
Block 3 Test Planning/T&E Events	WR	NSWC Crane : Crane, IN	0.000	0.051	Nov 2020	0.130	Nov 2021	0.275	Nov 2022	-		0.275	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	WR	NRL : Washington, DC	0.000	1.254	Nov 2020	1.225	Nov 2021	3.292	Nov 2022	-		3.292	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	SS/CPFF	APL : Laurel, MD	0.000	0.767	Nov 2020	0.100	Nov 2021	0.262	Nov 2022	-		0.262	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	WR	COMOPTEVFOR : Norfolk, VA	0.070	0.120	Nov 2020	0.150	Nov 2021	0.310	Nov 2022	-		0.310	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	WR	Surface Combat Systems Center : Wallops Island, VA	1.028	0.612	Nov 2020	0.709	Nov 2021	0.478	Nov 2022	-		0.478	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	WR	USACE (DREN) : Wallops Island, VA	0.090	0.058	Nov 2021	0.055	Nov 2021	0.000		-		0.000	0.000	0.203	-
Block 3 Test Planning/T&E Events	WR	NAVFAC Mid-Atlantic : Norfolk, VA	0.192	0.000		0.000		0.000		-		0.000	0.000	0.192	-
Block 3 Test Planning/T&E Events	WR	Defense Logistics Agency (DLA) : Fort Belvoir, VA	0.000	0.379	Jun 2021	0.000		0.000		-		0.000	0.000	0.379	-
		Subtotal	1.380	3.619		2.569		4.617		-		4.617	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3321 / *SEWIP Block 3*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

- Test & Evaluation decreases in FY21 since the FY22 budget cycle accounts for IT-DT testing delays due to an increased level of complexity of developmental tests and analysis.
- Test & Evaluation decreases in FY22 are due to reduced Land-Based Test Site (LBTS) NRE infrastructure requirements.
- Test & Evaluation increase in FY23 is due to the ramp up of planning/executing TECHEVAL/IOT&E. This increase is also due to test planning for HPA efficiency component designs.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Program Management Support	C/CPIF	TMB (SEAPORT) : Washington, DC	0.000	0.027	Nov 2020	0.080	Nov 2021	0.100	Nov 2022	-		0.100	Continuing	Continuing	Continuing
Block 3 Program Management Support	C/CPIF	BAH (SEAPORT) : Washington, DC	0.000	0.000		0.070	Nov 2021	0.000	Nov 2022	-		0.000	0.000	0.070	-
Block 3 Program Management Support	C/CPIF	SPA : Washington, DC	0.000	0.105	Nov 2020	0.080	Nov 2021	0.100	Nov 2022	-		0.100	Continuing	Continuing	Continuing
Block 3 Travel	Sub Allot	NAVSEA Program Office : Washington, DC	0.000	0.030	Nov 2020	0.050	Nov 2021	0.060	Nov 2022	-		0.060	Continuing	Continuing	Continuing
		Subtotal	0.000	0.162		0.280		0.260		-		0.260	Continuing	Continuing	N/A

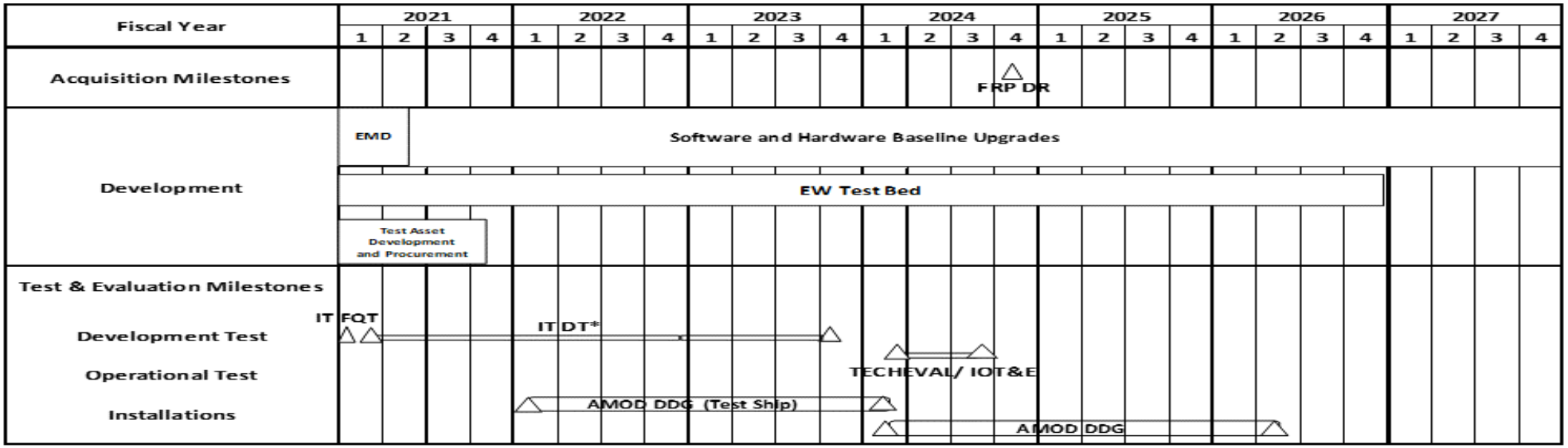
Remarks

- Management Services increases in FY21 due to additional requirement for management support for the level of complexity of developmental tests.

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	262.974	18.238		3.352		6.210		-		6.210	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3321 / *SEWIP Block 3*



* Includes the following test events: Land Test-Block 3 Stand-Alone Operation, Flight Test-Threat Engagements (over water), IA / Maint Demo (Dry Run), CMS Integration (Aegis), DDG-51 Combat System Certification (Aegis Integration), Environment, EMI, RCS, and Shock Tests

Acronyms: DR-Decision Review; DT-Developmental Test; EMD - Engineering & Manufacturing Development; EDM - Engineering Development Modle; FOT&E - Follow-on Operational Test & Evaluation; FQT-Formal Qualification Testing; FRP-Full Rate Production; IOT&E-Initial Operational Test & Evaluation; IT-Integrated Testing; LRIP-Low Rate Initial Production; MS-Milestone;

Note 1: Since the FY22 budget cycle, IT-DT completion moved from Q4FY22 to Q4FY23 due to increased level of complexity of developmental tests and analysis.

Note 2: Since the FY22 budget cycle, AMOD DDG (Test Ship) availability start has moved from Q4FY21 to Q1FY22 and AMOD DDG availability start has moved from Q2FY22 to Q1FY24.

Note 3: TECHEVAL/IOT&E start moved from Q1FY23 to Q1FY24 due to Test Ship availability completion shift from Q4FY23 to Q1FY24.

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0604757N / *Ship Self Def (Engage: Soft Kill/EW)*	**Project (Number/Name)** 3321 / *SEWIP Block 3*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3321.L24				
Block 3 Engineering and Manufacturing Development (E&MD)	1	2021	2	2021
EW Testbed	1	2021	4	2026
Test Asset Development and Procurement	1	2021	4	2021
IT-FQT	1	2021	1	2021
IT-DT	1	2021	4	2023
Software and Hardware Baseline Upgrades	1	2021	4	2027
AMOD DDG (Test Ship)	1	2022	1	2024
AMOD DDG	1	2024	2	2026
Block 3 TECHEVAL and IOT&E	1	2024	3	2024
Block 3 FRP DR	4	2024	4	2024