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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / <i>Airborne Mine Countermeasures</i>
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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	43.820	17.433	18.669	47.389	-	47.389	63.988	64.966	45.662	46.383	Continuing	Continuing
2131: <i>Assault Breaching System</i>	40.926	14.539	18.669	47.389	-	47.389	63.988	64.966	45.662	46.383	Continuing	Continuing
9999: <i>Congressional Adds</i>	2.894	2.894	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.788

**Note**  
 PE includes funding for COBRA Block II Program.

**A. Mission Description and Budget Item Justification**

FY 2023 reflects a net increase of \$28.72 million. Increase is associated with the award of the COBRA Block II development contract, the System Requirements Review (SRR), and System Functional Review (SFR).

The Assault Breaching System (ABS) program provides a combination of U.S. Navy systems to counter the threat to amphibious forces from obstacles and anti-landing/ sea mines in the Beach Zone and Surf Zone (0-10 ft water). The Assault Breaching Systems (ABS) consist of a system of systems approach that includes the following programs: Joint Direct Attack Munition (JDAM) Assault Breaching System (JABS); Coastal Battlefield Reconnaissance and Analysis (COBRA); Precision Navigation and Marking System (PNMS); Command, Control, Computers, Communications, and Intelligence (C4I). The Assault Breaching Systems enable the Navy-Marine Corps team to conduct Joint Forcible Entry Operations (JFEO), Ship-To-Objective Maneuver (STOM), and other combat operations to project power ashore.

JABS is a fielded system that neutralizes surface mines and obstacles in the Beach Zone (BZ) and Surf Zone (SZ). The ABS Tactical Decision Aid optimizes the Desired Points of Impact (DPI) for JDAM munitions to effectively neutralize mines and obstacles while minimizing the required number of munitions and friendly aircraft sorties. Continued testing is required to optimize the ABS Tactical Decision Aid database for the most common enemy mines and obstacles.

COBRA conducts Intelligence Surveillance Reconnaissance and Targeting (ISR/T). This system, which consists of two COBRA Airborne Payloads (CAPS) and one Post Mission Analysis (PMA) station, provides Coastal Mine Reconnaissance (CMR) capability. Block I is a multispectral sensor capable of daytime detection of surface-laid minefields and obstacles in the Beach Zone (BZ) and has on-board real-time processing. Block II capability adds an active illuminator sensor that enables nighttime detection of mines and obstacles in the BZ and the Surf Zone (SZ) (0-10 ft of water), and will detect, classify, localize floating and near-surface, moored sea mines. COBRA consists of a modular payload architecture that is integrated onto the MQ-8 Fire Scout, other vessels of opportunity, and in its expeditionary configuration, from the shore. COBRA will serve in the CMR mission module for the SZ and BZ in the Littoral Combat Ship (LCS) Mine Countermeasures (MCM) Mission Package.

PNMS provides navigational upgrades for the Landing Craft, Air Cushion (LCAC); Landing Craft, Utility (LCU); and Amphibious Assault Vehicle (AAV). A system of virtual lane marking improved the navigation ability of these two assault craft which enables them to navigate safely through the neutralized assault lanes provided by JABS. LCU Navigation Upgrade provides modernized navigation system to enable safe transit through the breach lane. LCAC autopilot upgrade provides an integrated improvement to the LCAC Service Life Extension Program (SLEP) navigation system for craft control to allow precise navigation and hovering within the breach lane.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2023 Navy	<b>Date:</b> April 2022
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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / <i>Airborne Mine Countermeasures</i>
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These software upgrades and backfits occur during scheduled LCAC SLEPs. AAV Navigation Upgrade will provide modernized navigation system to enable precise transit through the breach lane.

C4I system will tie all of the above systems together under an integrated ABS architecture that is compatible with the existing Mine Warfare architecture.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Previous President's Budget	17.889	18.669	0.000	-	0.000
Current President's Budget	17.433	18.669	47.389	-	47.389
Total Adjustments	-0.456	0.000	47.389	-	47.389
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.456	0.000			
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	47.389	-	47.389

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Congressional Adds*

Congressional Add: *Coastal Battlefield Reconnaissance and Analysis*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	<b>FY 2021</b>	<b>FY 2022</b>
	2.894	0.000
	2.894	0.000
	2.894	0.000

**Change Summary Explanation**

FY 2021 reflects a net decrease of \$456K for SBIR assessments

FY 2022 no adjustments

FY 2023 no adjustments

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

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures				<b>Project (Number/Name)</b> 2131 / Assault Breaching System			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2131: Assault Breaching System	40.926	14.539	18.669	47.389	-	47.389	63.988	64.966	45.662	46.383	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Assault Breaching System (ABS) program provides a combination of U.S. Navy systems to counter the threat to amphibious forces from obstacles and anti-landing/ sea mines in the Beach Zone and Surf Zone (0-10 ft water). The Assault Breaching Systems (ABS) consist of a system of systems approach that includes the following programs: Joint Direct Attack Munition (JDAM) Assault Breaching System (JABS); Coastal Battlefield Reconnaissance and Analysis (COBRA); Precision Navigation and Marking System (PNMS); Command, Control, Computers, Communications, and Intelligence (C4I). The Assault Breaching Systems enable the Navy-Marine Corps team to conduct Joint Forcible Entry Operations (JFEO), Ship-To-Objective Maneuver (STOM), and other combat operations to project power ashore.

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C4I system will tie all of the above systems together under an integrated ABS architecture that is compatible with the existing Mine Warfare architecture.

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

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<b>Title:</b> Product Development	2.031	12.452	38.673	0.000	38.673

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

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<b>Articles:</b>	-	-	-	-	-
<p><b>FY 2022 Plans:</b>            COBRA BLOCK II:            - Commence initial development of tech data, interface control documents, safety documents and test &amp; evaluation planning.            - Continue program documentation updates (system/subsystem specification and interface control documents) for preparation of Request for Proposal (RFP) release.            - Commence initial supportability analysis.            - Obtain Capabilities Development Document (CDD) approval.            - Release RFP for competitive contract for the design, development and fabrication of Block II.</p> <p>JABS:            - Continue design and engineering of weapon effectiveness for BZ and SZ modeling, simulation and testing.</p> <p><b>FY 2023 Base Plans:</b>            COBRA BLOCK II:            - Obtain MS B approval from the Milestone Decision Authority (MDA).            - Award a competitive contract to support the design, development and fabrication of three next generation MCM optical system EDM prototypes.            - Conduct an Integrated Baseline Review (IBR) to confirm sufficient resource loading and establish a baseline to track earned value.            - Commence initial development of tech data, interface control documents, safety documents and test &amp; evaluation planning.            - Conduct System Engineering Technical Reviews (SRR/SFR) to verify requirements traceability, finalize sub system specs and system design.            - Continue component modeling, simulation, fabrication and testing to verify design at Preliminary Design Review (PDR).</p> <p><b>FY 2023 OCO Plans:</b>            N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b></p>					

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<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures	<b>Project (Number/Name)</b> 2131 / Assault Breaching System				
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
FY 2022 to FY 2023 increase is associated with the commencement of hardware & software design, initial supportability analysis, and integration development efforts of the Block II EDMs with the award of the COBRA Block II contract.						
<b>Title:</b> Technical Support		1.588	3.000	5.716	0.000	5.716
		<b>Articles:</b>	-	-	-	-
<b>FY 2022 Plans:</b>						
COBRA BLOCK I:						
- Continue to provide management and shipping, contract and test/studies, C4I Data Fusion.						
- Provide technical support and documentation (data collection / demonstration events and drawings).						
COBRA BLOCK II:						
- Conclude Block II system specifications.						
- Perform activities for RFP Release .						
- Complete risk reduction for Block II technologies.						
<b>FY 2023 Base Plans:</b>						
COBRA BLOCK II:						
- Commence detailed system design; conduct and manage technical as design matures.						
- Evaluate and manage contractor deliverables, overseeing system engineering design and establish system configuration management.						
- Commence and manage safety reviews as design matures.						
- Continue program documentation updates (system/subsystem specification and interface control documents) for design of EDMs.						
<b>FY 2023 OCO Plans:</b>						
N/A						
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b>						
FY 2022 to FY 2023 increase is associated with continued detailed system design and reviews associated with COBRA Block II EDMs.						
<b>Title:</b> Test and Evaluation		9.810	0.347	0.000	0.000	0.000
		<b>Articles:</b>	-	-	-	-
<b>FY 2022 Plans:</b>						

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
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<p>COBRA BLOCK I: - Perform and complete flight demonstration / data collection of COBRA of algorithm optimization efforts and SMSI Camera integration system enhancements.</p> <p>JABS: - Conduct SZ and BZ characterization testing.</p> <p><b>FY 2023 Base Plans:</b> COBRA BLOCK II: N/A</p> <p>JABS: N/A</p> <p><b>FY 2023 OCO Plans:</b> N/A</p> <p><b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY 2022 to FY 2023 decrease is associated with the completion of COBRA Block I testing.</p>					
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<p><b>Title:</b> Management</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2022 Plans:</b> COBRA: - Continue contract and financial management support.</p> <p>JABS: - Continue to manage Mine magazine inventory management and shipping, contract management and tests/ studies, C4I/Data fusion.</p> <p><b>FY 2023 Base Plans:</b> COBRA: - Continue contract and financial management support.</p> <p>JABS:</p>	1.110	2.870	3.000	0.000	3.000
	-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures	<b>Project (Number/Name)</b> 2131 / Assault Breaching System

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
- Continue to manage Mine magazine inventory management and shipping, contract management and tests/studies, C4I/Data fusion.  <b>FY 2023 OCO Plans:</b> N/A  <b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY 2022 to FY 2023 increase is associated with support requirements for COBRA Block II design efforts.					
<b>Accomplishments/Planned Programs Subtotals</b>	14.539	18.669	47.389	0.000	47.389

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023 Base</u>	<u>FY 2023 OCO</u>	<u>FY 2023 Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/2624: SHALLOW WATER Mine CM SHIP	5.493	5.610	0.000	-	0.000	1.529	1.116	6.237	6.357	0.000	98.667

**Remarks**

**D. Acquisition Strategy**

Countermine/Counter Obstacle (CM/CO) JDAM Assault Breaching System (JABS) and ABS Tactical Decision Aid testing is ongoing. Intelligence/Surveillance/Reconnaissance/ Targeting (ISR/T) - COBRA Block I achieved IOC in July 2017. The COBRA program will continue to use Evolutionary Acquisition and introduce additional COBRA capabilities through the use of Incremental ("Block") Development. Three increments (or Blocks) of development have been planned in order to meet the mine line and minefield detection requirements. The contract for Block I was awarded to Arete in Tucson, AZ in FY 2018 and will complete in FY 2023. The development contract for Block II will be a competitive contract award and is planned for Q2 FY 2023.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
1319 / 4				PE 0604126N / Airborne Mine Countermeasures					2131 / Assault Breaching System						
Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Dev, COBRA	C/CPAF	Arete : Tucson, AZ	18.782	0.772	Nov 2020	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Design and Development, COBRA Block II	TBD	Prime Contractor : TBD	0.000	0.000		0.000		33.149	Jul 2023	-		33.149	Continuing	Continuing	Continuing
Design and Development, COBRA Block II	Various	JHU/APL : Columbia, MD	0.000	0.000		2.160	May 2022	0.000		-		0.000	0.000	2.160	-
Systems Engineering, COBRA Block I & II	WR	NSWC, PC : PANAMA CITY, FL	2.057	1.161	Nov 2020	5.566	Nov 2021	2.210	Nov 2022	-		2.210	Continuing	Continuing	Continuing
JABS	WR	NSWC PC : NSWC IH	1.153	0.000		0.000		0.940	Nov 2022	-		0.940	Continuing	Continuing	Continuing
ABS IPT/Test Assets/Proj Eng	WR	NSWC, PC : PANAMA CITY, FL	0.536	0.098	Nov 2020	0.126	Nov 2021	0.371	Nov 2022	-		0.371	Continuing	Continuing	Continuing
Design and Development, COBRA Block II	WR	NAVAIR : Patuxent River, MD	0.000	0.000		4.600	Dec 2021	2.003	Dec 2022	-		2.003	Continuing	Continuing	Continuing
<b>Subtotal</b>			22.528	2.031		12.452		38.673		-		38.673	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	NSWC, PC : PANAMA CITY, FL	2.463	0.933	Nov 2020	1.858	Nov 2021	3.487	Nov 2022	-		3.487	Continuing	Continuing	Continuing
Integrated Logistics Support	WR	NSWC PC : PANAMA CITY, FL	0.243	0.216	Nov 2020	0.411	Nov 2021	0.783	Nov 2022	-		0.783	Continuing	Continuing	Continuing
Configuration Management	WR	NSWC, PC : PANAMA CITY, FL	0.244	0.217	Nov 2020	0.360	Nov 2021	0.685	Nov 2022	-		0.685	Continuing	Continuing	Continuing
Studies & Analysis	WR	NSWC IH : INDIAN HEAD, MD	0.746	0.222	Nov 2020	0.371	Nov 2021	0.761	Nov 2022	-		0.761	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.696	1.588		3.000		5.716		-		5.716	Continuing	Continuing	N/A

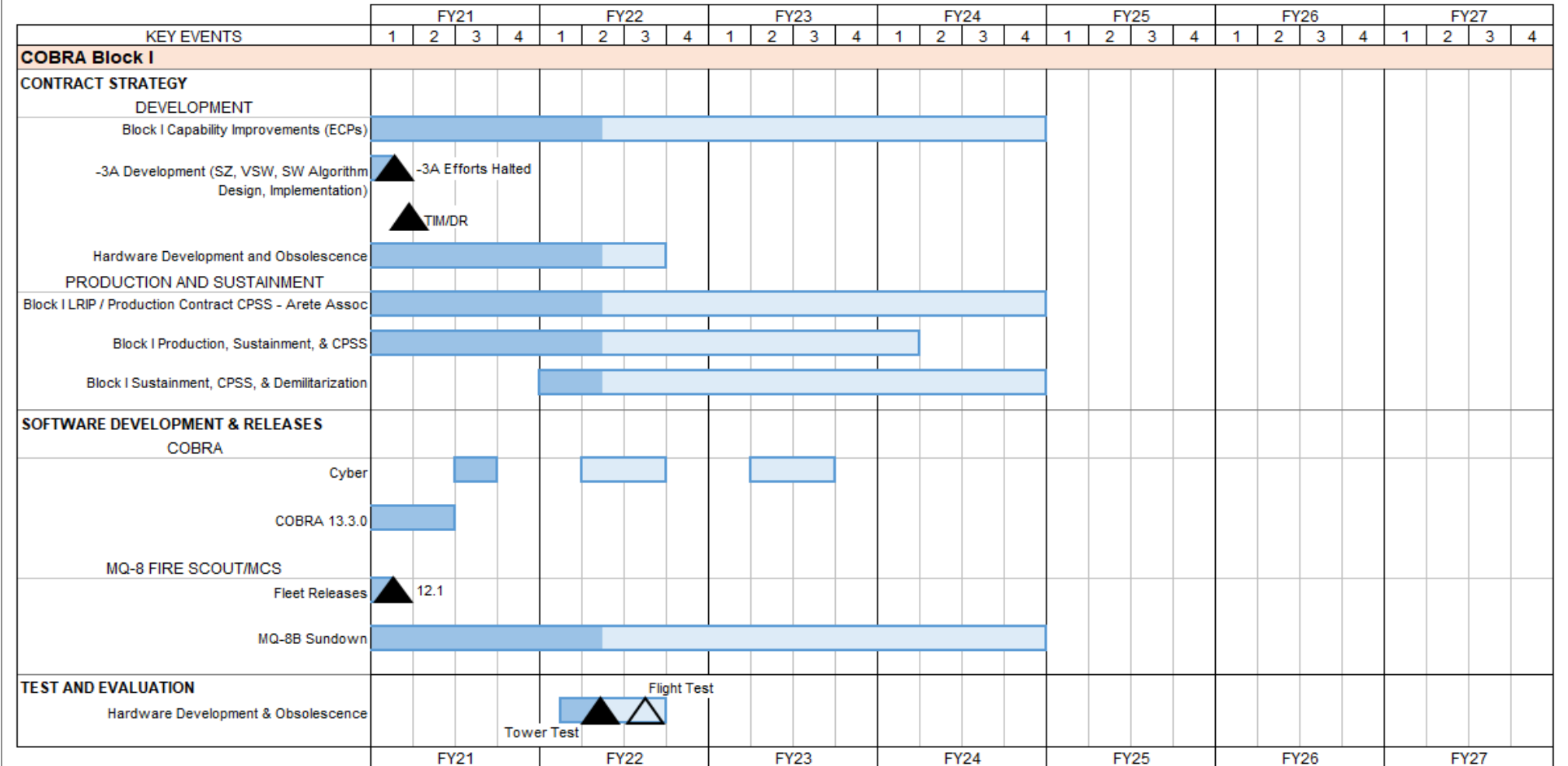
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy												Date: April 2022			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 4				PE 0604126N / Airborne Mine Countermeasures				2131 / Assault Breaching System							
Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NSWC, IH : INDIAN HEAD, MD	3.056	1.471	Nov 2020	0.151	Nov 2021	0.000		-		0.000	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC PC : Panama City, FL	1.294	0.690	Nov 2020	0.196	Nov 2021	0.000		-		0.000	Continuing	Continuing	Continuing
Development Test	WR	NSWC PC : Panama City, FL	2.239	0.000	Nov 2020	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
ONR FNC, SMAMD	WR	NAVAIR : Patuxent River, MD	5.000	7.649	Nov 2020	0.000		0.000		-		0.000	0.000	12.649	-
<b>Subtotal</b>			11.589	9.810		0.347		0.000		-		0.000	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	BAH, Northrop Grumman : DC, FL	0.361	0.137	Dec 2020	0.353	Dec 2021	0.562	Dec 2022	-		0.562	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC, IH : INDIAN HEAD, MD	1.365	0.495	Nov 2020	1.075	Nov 2021	1.085	Nov 2022	-		1.085	Continuing	Continuing	Continuing
Program Management Support	WR	NSWC/ IH, PC : INDIAN HEAD, PANAMA CITY	1.235	0.422	Oct 2020	1.312	Oct 2021	1.201	Oct 2022	-		1.201	Continuing	Continuing	Continuing
Travel	WR	NAVSEA : WNY, DC	0.152	0.056	Nov 2020	0.130	Nov 2021	0.152	Nov 2022	-		0.152	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.113	1.110		2.870		3.000		-		3.000	Continuing	Continuing	N/A
<b>Project Cost Totals</b>			40.926	14.539		18.669		47.389		-		47.389	Continuing	Continuing	N/A
<b>Remarks</b>															

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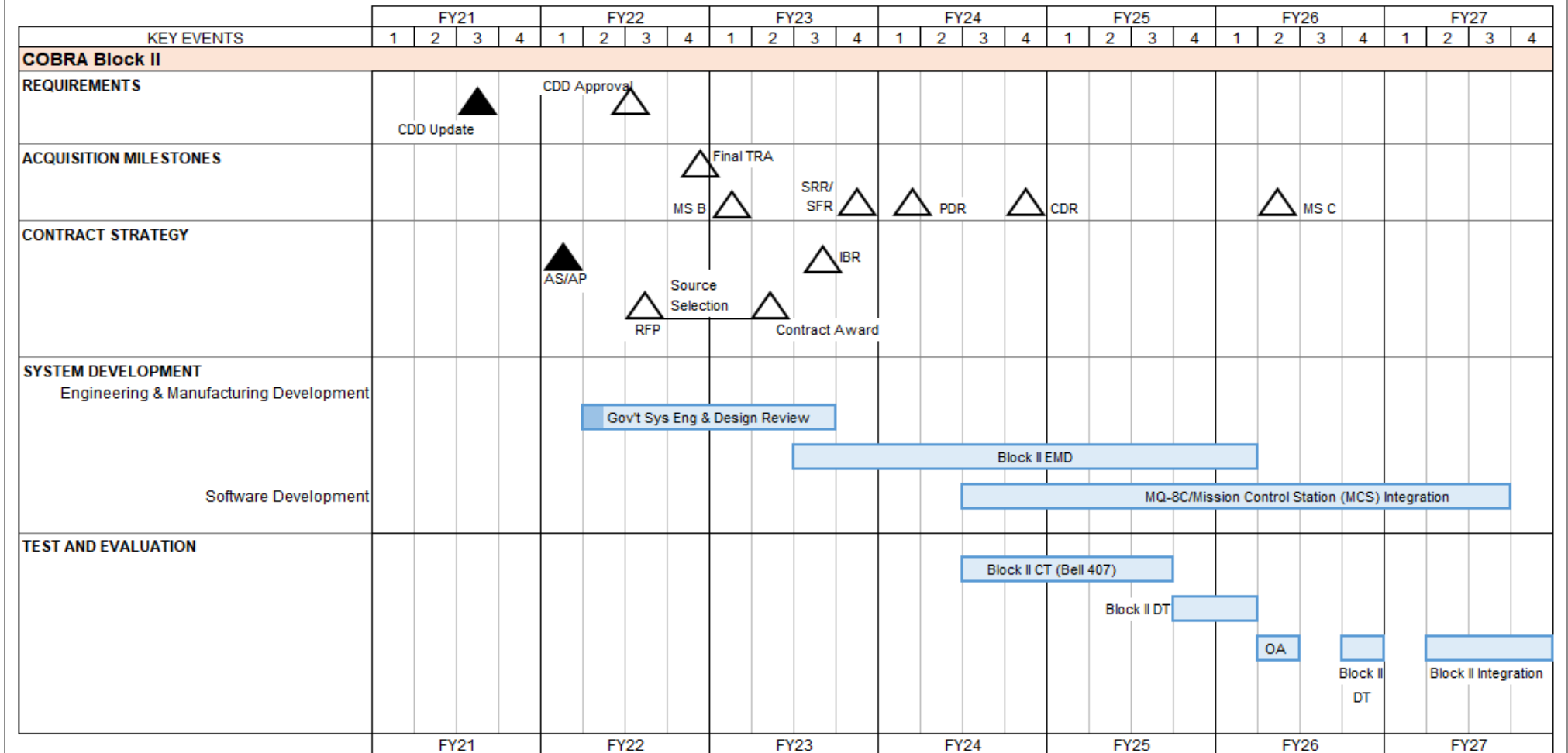
**Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures	<b>Project (Number/Name)</b> 2131 / Assault Breaching System
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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2023 Navy</b>												<b>Date: April 2022</b>					
<b>Appropriation/Budget Activity</b> 1319 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures						<b>Project (Number/Name)</b> 2131 / Assault Breaching System					



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / <i>Airborne Mine Countermeasures</i>	<b>Project (Number/Name)</b> 2131 / <i>Assault Breaching System</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>COBRA BLOCK I</b>				
Development: Capability Improvements (ECPs)	1	2021	4	2024
Development: -3A Development	1	2021	1	2021
Development: TIM/DR	1	2021	1	2021
Development: Hardware Development & Obsolescence	1	2021	3	2022
Production & Sustainment: LRIP/Production	1	2021	4	2024
Production & Sustainment: Production/Sustainment/CPSS	1	2021	1	2024
Production & Sustainment: Sustainment/CPSS/Demilitarization	1	2022	4	2024
Software Development & Releases: COBRA Block I: Cyber	3	2021	3	2021
Software Development & Releases: COBRA Block I: Cyber 2	2	2022	3	2022
Software Development & Releases: COBRA Block I: Cyber 3	2	2023	3	2023
Software Development & Releases: COBRA Block I: 13.3.0	1	2021	2	2021
Software Development & Releases: MQ-8 Fire Scout/MCS: 12.1 Fleet Releases	1	2021	1	2021
Software Development & Releases: MQ-8 Fire Scout/MCS: MC-8B Sundown	1	2021	4	2024
Test & Evaluation: Hardware Development & Obsolescence	1	2022	3	2022
Test & Evaluation: Tower Test	2	2022	2	2022
Test & Evaluation: Flight Test	3	2022	3	2022
<b>COBRA BLOCK II</b>				
Acquisition Milestones: Milestone B	1	2023	1	2023
Acquisition Milestones: SRR / SFR	4	2023	4	2023
Acquisition Milestones: Preliminary Design Review	1	2024	1	2024
Acquisition Milestones: Critical Design Review	4	2024	4	2024

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures	<b>Project (Number/Name)</b> 2131 / Assault Breaching System
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Acquisition Milestones: Milestone C	2	2026	2	2026
Contract Strategy: AS/AP	1	2022	1	2022
Contract Strategy: RFP	3	2022	3	2022
Contract Strategy: Contract Award	2	2023	2	2023
Contract Strategy: Integrated Baseline Review (IBR)	3	2023	3	2023
System Development: Engineering & Manufacturing Development	3	2023	1	2026
System Development: MQ-8C/Mission Control Station (MCS) Integration	3	2024	3	2027
Test & Evaluation: Contractor Testing	3	2024	3	2025
Test & Evaluation: Development Test B1 & B2	4	2025	1	2026
Test & Evaluation: Operational Assessment	2	2026	2	2026
Test & Evaluation: Development Test B3	4	2026	4	2026
Test & Evaluation: Block II Integration Test	2	2027	4	2027

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**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures				<b>Project (Number/Name)</b> 9999 / Congressional Adds			
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
9999: Congressional Adds	2.894	2.894	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.788
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

COBRA conducts Intelligence Surveillance Reconnaissance and Targeting (ISR/T). This system, which consists of two COBRA Airborne Payloads (CAPS) and one Post Mission Analysis (PMA) station, provides Coastal Mine Reconnaissance (CMR) capability. Block I is a multispectral sensor capable of daytime detection of surface-laid minefields and obstacles in the Beach Zone (BZ) and has on-board real-time processing. Block II capability adds an active illuminator sensor that enables nighttime detection of mines and obstacles in the BZ and the Surf Zone (SZ) (0-10 ft of water). COBRA consists of a modular payload architecture that is integrated onto the MQ-8 Fire Scout, other vessels of opportunity, and in its expeditionary configuration, from the shore. COBRA will serve in the CMR mission module for the SZ and BZ in the Littoral Combat Ship (LCS) Mine Countermeasures (MCM) Mission Package.  
 FY20 Congressional increase of \$2.894M to support acceleration of the COBRA program.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	FY 2021	FY 2022
<b>Congressional Add:</b> Coastal Battlefield Reconnaissance and Analysis	2.894	0.000
<b>FY 2021 Accomplishments:</b> N/A		
<b>FY 2022 Plans:</b> N/A		
<b>Congressional Adds Subtotals</b>	2.894	0.000

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / Airborne Mine Countermeasures	<b>Project (Number/Name)</b> 9999 / Congressional Adds

FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<b>Proj 9999</b>	
System Development: Block I Hardware Integration	■

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0604126N / <i>Airborne Mine Countermeasures</i>	<b>Project (Number/Name)</b> 9999 / <i>Congressional Adds</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 9999</b>				
System Development: Block I Hardware Integration	1	2021	1	2021