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

<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 0603596N / <i>LCS Mission Modules</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	897.110	75.189	31.707	31.464	-	31.464	29.472	33.538	43.385	46.173	Continuing	Continuing
2550: <i>Mine Countermeasure (MCM) Mission Package</i>	105.734	49.776	19.963	16.971	-	16.971	15.639	18.842	11.957	12.092	Continuing	Continuing
2551: <i>Anti-Submarine Warfare (ASW) Mission Package</i>	103.030	16.832	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	119.862
2552: <i>Surface Warfare (SUW) Mission Package</i>	35.760	0.000	3.000	0.851	-	0.851	0.000	0.000	0.000	0.000	0.000	39.611
3129: <i>LCS Mission Package Development</i>	652.586	8.581	8.744	13.642	-	13.642	13.833	14.696	31.428	34.081	Continuing	Continuing

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** 443

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

The Littoral Combat Ship (LCS) Mission Modules (MM) Program Element (PE) provides funds for detailed design, development, issue resolution, certification, integration, and testing of the LCS MM. LCS is a fast, agile, and networked surface combatant with capabilities optimized to defeat asymmetric threats, and ensure naval and joint force access into contested littoral regions. It uses open-systems architecture design, modular weapons, sensor systems, and a variety of manned and unmanned vehicles to expand the battle space and project offensive power into the littorals.

The LCS MM Program employs an incremental development approach to deliver capability, which allows for insertion of mature capabilities throughout the life of the program without the need for modifications to the seaframes. Future capabilities will be considered when joint warfighting objectives or changing threats create new operational capability requirements that cannot be met by current mission package designs, or when new technological opportunities allow significant progress toward delivering cost effective, enhanced capabilities. Future mission module increments can be tested, constructed, and incorporated into existing mission packages, which is one of the most important benefits of LCS modular design.

Mission Package funding is aligned into four (4) projects:  
 2550 Mine Countermeasures (MCM) Mission Package  
 2551 Anti-Submarine Warfare (ASW) Mission Package  
 2552 Surface Warfare (SUW) Mission Package  
 3129 LCS Mission Package Development

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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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 0603596N / <i>LCS Mission Modules</i>
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MCM MP: Counters bottom, tethered, near surface, and surface mines in the littorals without putting sailors in the minefield. In FY24, the MCM MP will conduct Cyber Security testing of the MCM MP, develop MCM MPAS 4.0 software, modify the MCM MP to commence integration of Barracuda, development of the Near Surface Neutralization Module (NSN) and TBEC design upgrades.

SUW MP: Increases firepower and offensive/defensive capabilities against large numbers of highly maneuverable, fast, small craft threats, giving LCS the ability to protect the sea lanes while moving a force quickly through a choke point or other strategic waterway, and to conduct maritime security missions. In FY24, the SUW MP will complete the efforts to revise the SSMM hatch and cover design. In FY24, project 3129 (LCS Mission Package Common Development) efforts include continuing MPCE v2.0 tech refresh development and initiation of MVCS v1.X tech refresh development.

ASW MP: Enables the LCS to conduct detect-to-engage operations against modern submarines. In FY23, the ASW Mission Package will be divested from the LCS Mission Modules program.

C5I: Enabling products required by all MPs such as common hardware interfaces, computer operating environment (Mission Package Computing Environment (MPCE)), communications systems (Multi-Vehicle Communications System (MVCS)), aviation interface systems, and Mission Package Portable Control Stations (MPPCS). MPCE provides common services and an Operating Environment to support all Mission Package Application Software (MPAS) and Open Architecture Products. MVCS enables the simultaneous control and data exchange between unmanned mission vehicles and the ship. Aviation interface systems include integration and management of data communications, data processing, and physical hardware interfaces such as common equipment and containers used by all mission packages. MPPCS provides a mobile operating environment installed in a 20ft ISO container and serves as a surrogate ship during mission package development and integration test events at test ranges.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	75.995	41.533	39.758	-	39.758
Current President's Budget	75.189	31.707	31.464	-	31.464
Total Adjustments	-0.806	-9.826	-8.294	-	-8.294
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-16.826			
• Congressional Rescissions	-	-			
• Congressional Adds	-	7.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.806	0.000			
• Program Adjustments	0.000	0.000	-9.075	-	-9.075
• Rate/Misc Adjustments	0.000	0.000	0.781	-	0.781

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

**Appropriation/Budget Activity**  
1319: *Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)*

**R-1 Program Element (Number/Name)**  
PE 0603596N / *LCS Mission Modules*

**Change Summary Explanation**

FY23 Congressional reductions: [-\$14.826M] for ASW Mission Package (MP) termination, [-\$2.000M] for LCS MP DevSecOps development maintain level of effort.

FY23 Congressional increase: [+\$7.000M] for Mine Countermeasures Mission Package to increase weight capacity of the Twin Boom Extensible Crane (TBEC) to support increased MCM USV endurance and OP-4 requirements for Barracuda.

FY24 programmatic adjustments support divestment from ASW MP.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules				<b>Project (Number/Name)</b> 2550 / Mine Countermeasure (MCM) Mission Package			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2550: Mine Countermeasure (MCM) Mission Package	105.734	49.776	19.963	16.971	-	16.971	15.639	18.842	11.957	12.092	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 443												

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

The MCM Mission Package (MP) employs an incremental development approach to deliver capability which allows the continued insertion of mature capabilities throughout the life of the program without the need for modifications to the seaframes. The focus is to minimize service life extensions to both MCM-1 ships and the MH-53E helicopters. Future MCM MP capabilities will be considered when joint warfighting objectives or changing threats create new operational capability requirements that cannot be met by current mission package designs, or when new technological opportunities allow significant progress toward delivering cost effective enhanced capabilities. Future mission module increments can be tested, constructed, and incorporated into existing mission packages, one of the most important benefits of LCS modular design. MCM MP successfully completed IOT&E in Q4FY22 and will achieve Initial Operational Capability (IOC) in Q2FY23.

The program has begun investigation into the feasibility of integrating the MCM MP on Vessels of Opportunity (VOO). In FY19 and FY20, the program demonstrated the flexibility of the modular MCM MP components by conducting a MCM Vessel of Opportunity (VOO) at-sea demonstration onboard the USS Hershel "Woody" Williams (T-ESB 4).

The MCM MP will counter deep, shallow, and tethered mines in the littorals without putting sailors in the minefield. When the MCM MP is embarked, LCS is capable of conducting detect-to-engage operations (hunting, sweeping, and neutralization) against very shallow to deep-water sea mine threats and detect mines in the Beach Zone. The MCM MP provides these capabilities through the use of sensors and weapons deployed from an MH-60S multi-mission helicopter, unmanned offboard vehicles, and support equipment/containers. The MCM MP consists of the following modules:

- Unmanned Minesweeping (UMS) Module: Unmanned Influence Sweeping System (UISS) (USV + Minesweeping Payload Delivery System (PDS))
- Airborne Mine Neutralization (AMN) Module: Airborne Mine Neutralization System (AMNS) + MH-60S helicopter
- Near Surface Detection (NSD) Module: Airborne Laser Mine Detection System (ALMDS) + MH-60S helicopter
- Coastal Mine Reconnaissance (CMR) Module: Coastal Battlefield Reconnaissance & Analysis (COBRA) + MQ-8 Fire Scout Vertical Take-off and Landing Tactical Unmanned Aerial Vehicle (VTUAV)
- Buried Minehunting (BMH) Module: Knifefish Unmanned Undersea Vehicle (JUUV)
- Remote Minehunting (RMH) Module: Unmanned Surface Vehicle (USV) + Minehunting PDS + AN/AQS-20 Minehunting Sonar
- Near-surface Mine Neutralization (NSN) Module: Barracuda (Barracuda Neutralizer + USV + Mine Neutralization PDS)

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2550 / Mine Countermeasure (MCM) Mission Package

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Mine Countermeasures (MCM) Mission Modules	49.776	19.963	16.971	0.000	16.971
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b>					
<ul style="list-style-type: none"> <li>- Design a sufficient reinforcement to the LCS IND Twin Boom Extendable Crane (TBEC) foundations and upgrade components within the TBEC system to allow LCS to launch and recover a fully-fueled and ordnance-loaded Mine Countermeasures (MCM) Unmanned Surface Vessel through Sea State conditions.</li> <li>- Ensure TBEC is improved to meet required safety margins to meet OP-4 weapons handling requirements.</li> <li>- Improve TBEC software and HMI to address variety issues and support integration of new vehicle</li> <li>- Commence development of CONOPS for the Near Surface Neutralization Module (NSN)</li> <li>- Document top level requirements and preliminary design efforts for Mine Neutralization Module as part of MCM MP</li> <li>- Commence certification effort s for the MCM MP Continue development of the MCM MP training package from interim training to Navy schoolhouse supported training to support the establishment of Ready for Training (RFT)</li> <li>- Continue developing the LCS MCM MP Logistic products and training material, including technical manuals and provisioning documentation.</li> <li>- Improve usability and effectiveness of Integrated Contact Management.</li> </ul>					
<b>FY 2024 Base Plans:</b>					
<ul style="list-style-type: none"> <li>- Certify MCM MP for deployment.</li> <li>- Develop work package to increase weight capacity of the Twin Boom Extensible Crane (TBEC) to support increased MCM USV endurance.</li> <li>- Integration of Common Control Station (CCS) into MCM MPAS 4.0</li> <li>- Develop Data Management Plan for collection and storage for MCM MP.</li> <li>- Certify the LCS MCM MP Logistic products and training material, including technical manuals and provisioning documentation.</li> <li>- Deliver and install Common PMA into LCS MPCE Hardware</li> <li>- Commence development of USV Support Container</li> <li>- Conduct engineering study to evaluation the MPAS architecture to accept Barracuda Software (weapons fire control circuit)</li> <li>- Integration and further development of all MCM MP Tactics</li> <li>- Integration and further development of all MCM MP Training</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2550 / Mine Countermeasure (MCM) Mission Package

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
- Support Fleet experimentation with Beyond Line Of Sight (BLOS) and other MCM capabilities with Unmanned Systems					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The decrease in FY2024 slows integration of Barracuda into the MCM MP.					
<b>Accomplishments/Planned Programs Subtotals</b>	49.776	19.963	16.971	0.000	16.971

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPN 1600: LCS Common Mission Modules Equipment	63.501	54.883	49.060	-	49.060	44.214	37.226	32.276	32.991	360.231	1,258.966
• OPN 1601: LCS MCM Mission Modules	30.119	92.495	93.961	-	93.961	122.654	103.972	59.906	61.344	1,508.277	2,664.640

**Remarks**

**D. Acquisition Strategy**

The LCS MM Acquisition Strategy employs an incremental procurement approach to allow for the rapid introduction of additional capabilities as system technology matures. This phased plan provides incremental fielding of capability as technology is matured, into the MCM MP until the full baseline capability defined in the Capability Development Document (CDD) is reached.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603596N / LCS Mission Modules				Project (Number/Name) 2550 / Mine Countermeasure (MCM) Mission Package					
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
MCM MP	WR	NSWC PCD : Panama City, FL	37.571	35.682	Oct 2021	9.901	Nov 2022	14.251	Nov 2023	-		14.251	Continuing	Continuing	Continuing
MCM MP	Sub Allot	PMS 406 : Various	7.650	0.000		0.000		0.000		-		0.000	0.000	7.650	-
MCM MP	Sub Allot	PMS 495 : Various	1.000	0.000		0.000		0.000		-		0.000	2.400	3.400	-
MCM MP	WR	NSWC PHD : Port Hueneme, CA	9.571	0.000		1.154	Dec 2022	0.500	Nov 2023	-		0.500	12.800	24.025	-
MCM MP	C/CPFF	Northrop Grumman : Bethpage, NY	17.347	2.700	Oct 2021	0.800	Nov 2022	1.338	Dec 2023	-		1.338	2.100	24.285	-
MCM MP TBEC Modifications	WR	NSWC PD : Philadelphia, PA	0.000	0.000		1.000	Apr 2023	0.000		-		0.000	0.000	1.000	-
MCM MP TBEC Modifications	C/CPIF	Various : Various	0.000	0.000		2.500	Jun 2023	0.000		-		0.000	0.000	2.500	-
MCM MP Mine Neutralization	WR	NSWC PCD : Panama City, FL	0.000	0.000		3.500	Apr 2023	0.000		-		0.000	0.000	3.500	-
<b>Subtotal</b>			73.139	38.382		18.855		16.089		-		16.089	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC PCD : Panama City, FL	26.765	0.000		0.000		0.000		-		0.000	0.000	26.765	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC PHD : Port Hueneme, CA	4.432	10.572	Oct 2021	0.250	Oct 2022	0.000		-		0.000	0.000	15.254	-
<b>Subtotal</b>			31.197	10.572		0.250		0.000		-		0.000	0.000	42.019	N/A



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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2550 / Mine Countermeasure (MCM) Mission Package
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Proj 2550	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
MCM Integration and Testing on Independence Variant				MCM USV + MH IOT&E																												
				MCM MP IOT&E		MCM MP IOC		MCM MP Cyber Planning			MCM MP Cyber OT																					
									Post Test MPAS Find-Fix-Repair																							
					TBEC MODs				MN PDS Intg																							
Follow-on Efforts																																
												Barracuda S/W Integration																				
																NSN Integration																
																				NSN Integration Test												

2024PB - 0603596N - 2550

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2550 / Mine Countermeasure (MCM) Mission Package

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2550</b>				
MCM Integration and Testing on Independence Variant: MCM USV + MH IOT&E	4	2022	4	2022
MCM Integration and Testing on Independence Variant: OT-C10 IOT&E	4	2022	4	2022
MCM Integration and Testing on Independence Variant: MCM MP IOC	2	2023	2	2023
MCM Integration and Testing on Independence Variant: MCM MP Cyber Planning & Test	4	2023	4	2023
MCM Integration and Testing on Independence Variant: MCM MP Cyber OT	3	2024	3	2024
MCM Integration and Testing on Independence Variant: Post Test MPAS Find-Fix-Repair	1	2024	4	2026
MCM Integration and Testing on Independence Variant: TBEC Modification	2	2023	4	2024
MCM Integration and Testing on Independence Variant: MN PDS Integration	1	2025	4	2026
Follow-on Efforts: Barracuda Software Integration	1	2025	1	2026
Follow-on Efforts: Near Surface Neutralization (NSN) Module Integration	1	2026	1	2028
Follow-on Efforts: Near Surface Neutralization (NSN) Module Integration Testing	1	2028	4	2028

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2551 / Anti-Submarine Warfare (ASW) Mission Package
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2551: Anti-Submarine Warfare (ASW) Mission Package	103.030	16.832	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	119.862
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Project MDAP/MAIS Code:** 443

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

In FY23, the LCS ASW MP will be divested in alignment with the planned decommissioning of LCS class ships. FY23 events will occur simultaneously with divestment of the LCS ASW MP.

The ASW MP enables LCS to conduct detect-to-engage operations against submarines. Specific ASW capabilities include protecting forces in transit, protecting joint operating areas, and establishing ASW barriers. The ASW MP provides the warfighter capabilities that can be employed for ASW area search as well as high value unit escort missions. Key components of the ASW MP include a Variable Depth Sonar, a Multi-Function Towed Array and sonar signal processing systems. The individual systems are combined into modules: an ASW Escort Mission Module (EMM) that provides High Value Unit (HVU) escort capability and an Aviation Module that offers airborne threat localization and engagement capability through a MH-60R with MK54 torpedoes.

This project delivered the ASW EMM Pre-Production Test Article (PPTA) and the Aviation Module in Q1 FY19. Following the delivery of the PPTA, the ASW MP was installed on board a Freedom variant hull in Q4 FY19 to support Developmental Testing (DT). The project conducted DT on USS Fort Worth (LCS 3) in FY20 and FY21. In FY21, design updates were incorporated to improve reliability and hydrodynamic performance in turns and at higher speeds. Testing at the end of FY21 indicated hydrodynamic and transducer issues had not be resolved.

In FY22, the program continued hydrodynamic maturation efforts for the PPTA through land-based test events held at the Large Cavitation Channel (LCC) and implementation of an active control solution. Testing at Seneca Lake to show improved transducer reliability was also conducted. The Program is also planning to conduct a foreign comparative test of an alternate ASW payload on an Unmanned Surface Vehicle (USV) as part of a NATO exercise.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Anti-Submarine Warfare (ASW) Mission Modules	16.832	0.000	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> N/A					
<b>FY 2024 Base Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2551 / Anti-Submarine Warfare (ASW) Mission Package

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
N/A					
<b>FY 2024 OCO Plans:</b>					
N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	16.832	0.000	0.000	0.000	0.000

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

<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPN 1600: LCS Common Mission Modules Equipment	63.501	54.883	49.060	-	49.060	44.214	37.226	32.276	32.991	360.231	1,258.966
• OPN 1602: LCS ASW Mission Modules	1.565	3.594	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	68.135

**Remarks**

**D. Acquisition Strategy**

The LCS MM Acquisition Strategy is employing an incremental procurement approach to allow for the rapid introduction of additional capabilities as system technology matures. This phased plan provides incremental fielding of capability through the introduction of mature programs of record into the respective Mission Packages until the full baseline capability defined in the Capability Development Document (CDD) is reached.

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2551 / Anti-Submarine Warfare (ASW) Mission Package
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<b>Product Development (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
2.0 ASW MP	Various	PEO IWS 5E : Various	1.650	0.000		0.000		0.000		-		0.000	0.000	1.650	-
2.0 ASW MP	WR	NUWC NPT : Newport RI	5.780	3.150	Nov 2021	0.000		0.000		-		0.000	0.000	8.930	-
2.0 ASW MP	WR	NIWC : San Diego, CA	1.000	0.000		0.000		0.000		-		0.000	0.000	1.000	-
2.0 ASW MP	C/CPFF	Northrop Grumman : Bethpage, NY	4.300	0.000		0.000		0.000		-		0.000	0.000	4.300	-
2.0 ASW MP	Sub Allot	PEO IWS 5A : Various	38.657	5.647	Mar 2022	0.000		0.000		-		0.000	0.000	44.304	-
2.0 ASW MP	C/CPFF	CACI : Washington, DC	0.255	0.000		0.000		0.000		-		0.000	0.000	0.255	-
2.0 ASW MP	WR	NSWC DD : Dahlgren, VA	0.225	0.000		0.000		0.000		-		0.000	0.000	0.225	-
2.0 ASW MP	WR	SUPSHIP Bath : Bath, Me	3.421	0.000		0.000		0.000		-		0.000	0.000	3.421	-
2.0 ASW MP	MIPR	NAWC WD : Point Mugu, CA	0.410	0.000		0.000		0.000		-		0.000	0.000	0.410	-
2.0 ASW MP	C/FFP	Raytheon : Portsmouth, RI	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
2.0 ASW MP	C/CPFF	Huntington Ingalls Industry : Pascagoula MS	2.200	0.000		0.000		0.000		-		0.000	0.000	2.200	-
ASW USV Demo	C/CPFF	TBD : Various	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
<b>Subtotal</b>			57.898	8.797		0.000		0.000		-		0.000	0.000	66.695	N/A

<b>Support (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
2.0 ASW MP	WR	NUWC KPT : Keyport, Wa	2.150	1.050	Dec 2021	0.000		0.000		-		0.000	0.000	3.200	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 4				PE 0603596N / LCS Mission Modules				2551 / Anti-Submarine Warfare (ASW) Mission Package							
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
<b>Subtotal</b>			2.150	1.050		0.000		0.000		-		0.000	0.000	3.200	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	COMOPTEVFOR : Norfolk, VA	1.300	0.600	Nov 2021	0.000		0.000		-		0.000	0.000	1.900	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC PHD : Port Hueneme, Ca	7.796	1.500	Dec 2021	0.000		0.000		-		0.000	0.000	9.296	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	Range Service : Var*	7.454	0.000		0.000		0.000		-		0.000	0.000	7.454	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NUWC NPT : Newport, RI	14.934	0.850	Nov 2021	0.000		0.000		-		0.000	0.000	15.784	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NUWC KPT : Keyport, Wa	5.100	0.000		0.000		0.000		-		0.000	0.000	5.100	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	C/CPFF	Raytheon : Portsmouth, RI	3.300	1.888	Dec 2021	0.000		0.000		-		0.000	0.000	5.188	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	C/CPFF	Northrop Grumman : Bethpage, NY	1.300	1.500	Dec 2021	0.000		0.000		-		0.000	0.000	2.800	-
<b>Subtotal</b>			41.184	6.338		0.000		0.000		-		0.000	0.000	47.522	N/A

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2551 / Anti-Submarine Warfare (ASW) Mission Package
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<b>Management Services (\$ in Millions)</b>				<b>FY 2022</b>		<b>FY 2023</b>		<b>FY 2024 Base</b>		<b>FY 2024 OCO</b>		<b>FY 2024 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
2.0 ASW MP	C/CPIF	Booz Allen Hamilton : Washington, DC	1.798	0.647	Jan 2022	0.000		0.000	Nov 2023	-		0.000	0.000	2.445	-
<b>Subtotal</b>			1.798	0.647		0.000		0.000		-		0.000	0.000	2.445	N/A
<b>Project Cost Totals</b>			103.030	16.832		0.000		0.000		-		0.000	0.000	119.862	N/A

**Remarks**  
FY 2018 and prior funding in Project 3129.

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2551 / Anti-Submarine Warfare (ASW) Mission Package
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Proj 2551	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<b>ASW MP AxB Development Process</b>	ACB-19 with TI-20																											
<b>ASW MP Divestment Efforts</b>	Stop ASW Development								DEMO								Divestment											

2024PB - 0603596N - 2551

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / <i>LCS Mission Modules</i>	<b>Project (Number/Name)</b> 2551 / <i>Anti-Submarine Warfare (ASW) Mission Package</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Proj 2551</i></b>				
ASW MP AxB Development Process: ACB-19 with TI-20	1	2022	4	2022
ASW MP Divestment Efforts: Stop ASW Development	2	2022	2	2022
ASW MP Divestment Efforts: USV ASW Payload Demonstrations	1	2022	4	2023
ASW MP Divestment Efforts: ASW MP Divestment Efforts	1	2023	4	2023

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2552 / Surface Warfare (SUW) Mission Package
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2552: Surface Warfare (SUW) Mission Package	35.760	0.000	3.000	0.851	-	0.851	0.000	0.000	0.000	0.000	0.000	39.611
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Project MDAP/MAIS Code:** 443

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

The SUW MP increases firepower and offensive/defensive capabilities against large numbers of highly maneuverable, fast, small craft threats, giving LCS the ability to protect the sea lanes and move a force quickly through a choke point or other strategic waterway. The SUW MP is composed of several mission modules including the Gun Mission Module (GMM), the Aviation Module, the Maritime Security Module (MSM), and the Surface-to-Surface Missile Module (SSMM). The GMM is composed of two high velocity 30mm cannons which is augmented by the ship's resident 57mm gun to counter close in to mid-range threats. The Aviation Module uses the embarked MH-60R helicopter with Hellfire missile and the MQ-8B Fire Scout VTUAV for the detection, identification, and classification of surface contacts and to engage long range threats. The MSM supports the embarkation of a Visit, Board, Search, and Seizure (VBSS) team. The SSMM is a self-contained module consisting of 2 Missile Exhaust Containment Structures (MECS), integrated articulating hatch covers, a fire control system, and 12 two-rail MK 210 launchers to support load out and firing of 24 Longbow Hellfire missiles. SSMM provides missile coverage for mid-range threats and small boats.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Surface Warfare (SUW) Mission Modules	0.000	3.000	0.851	0.000	0.851
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> - Conduct shock qualification testing of the SSMM. This testing is required to meet the shock hardening verification requirement for the SSMM and the ship shock certification requirement documented in OPNAVINST 9072.2A. - Hatch Cover Modification and Design: Revise the current SSMM hatch and cover design to address water leaking, hatch heaters, manual hatch opening, Heat Sensing Devices (HSD) relocation, new hatch stops, fall restraint staples, and limit switch changes.					
<b>FY 2024 Base Plans:</b> Complete SSMM Hatch Modification Development & Design					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 2552 / Surface Warfare (SUW) Mission Package

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
The decrease from FY2023 to FY2024: Shock Qualification in completed in FY2023.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	3.000	0.851	0.000	0.851

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPN 1600: LCS Common Mission Module Equipment	63.501	54.883	49.060	-	49.060	44.214	37.226	32.276	32.991	360.231	1,258.966
• OPN 1603: LCS SUW Mission Module	3.395	5.100	12.102	-	12.102	11.101	3.500	0.100	0.146	14.236	251.663
• WPN 4221: LCS Module Weapons	2.121	4.580	3.264	-	3.264	2.463	2.266	2.258	2.322	63.142	122.403

**Remarks**

**D. Acquisition Strategy**  
 The LCS MM Acquisition Strategy is employing an incremental procurement approach to allow for the rapid introduction of additional capabilities as system technology matures. This phased plan provides incremental fielding of capability through the introduction of mature programs of record into the respective Mission Packages until the full baseline capability defined in the Capability Development Document (CDD) is reached.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 4				PE 0603596N / LCS Mission Modules				2552 / Surface Warfare (SUW) Mission Package							
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
3.0 SUW MP	MIPR	JAMS PO : Various	2.250	0.000		0.000		0.000		-		0.000	0.000	2.250	-
3.0 SUW MP	WR	NSWC DD : Dahlgren, VA	7.465	0.000		3.000	Nov 2022	0.851	Nov 2023	-		0.851	0.000	11.316	-
<b>Subtotal</b>			9.715	0.000		3.000		0.851		-		0.851	0.000	13.566	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
3.0 SUW MP	C/CPIF	Northrop Grumman : Bethpage, NY	2.600	0.000		0.000		0.000		-		0.000	0.000	2.600	-
3.0 SUW MP	WR	NSWC PHD : Port Hueneme, CA	2.000	0.000		0.000		0.000		-		0.000	0.000	2.000	-
<b>Subtotal</b>			4.600	0.000		0.000		0.000		-		0.000	0.000	4.600	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	Sub Allot	NSWC PHD : Port Hueneme, CA	5.778	0.000		0.000		0.000		-		0.000	0.000	5.778	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC Corona : Corona, CA	1.950	0.000		0.000		0.000		-		0.000	0.000	1.950	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC DD : Dahlgren, VA	11.553	0.000		0.000		0.000		-		0.000	0.000	11.553	-
Prior Year Operational Test & Evaluation Not Funded FYDP (PYOT&E)	WR	COMOPTEVFOR : Norfolk, VA	0.800	0.000		0.000		0.000		-		0.000	0.000	0.800	-
<b>Subtotal</b>			20.081	0.000		0.000		0.000		-		0.000	0.000	20.081	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2024 Navy</b>		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules
		<b>Project (Number/Name)</b> 2552 / Surface Warfare (SUW) Mission Package

Proj 2552	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
SUW Mission Package					SSMM Shock				SSMM Hatch Mod Design																							

2024DON - 0603596N - 2552

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / <i>LCS Mission Modules</i>	<b>Project (Number/Name)</b> 2552 / <i>Surface Warfare (SUW) Mission Package</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2552</b>				
SUW Mission Package: SSMM Shock Qualification Testing	1	2023	4	2023
SUW Mission Package: SSMM Hatch Modification Development & Design	1	2024	4	2024

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 4					<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules				<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3129: LCS Mission Package Development	652.586	8.581	8.744	13.642	-	13.642	13.833	14.696	31.428	34.081	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 443												

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

The LCS Mission Modules Common Equipment consists of enabling products required by all Mission Packages to provide common hardware interfaces, computer operating environment, communications systems, aviation interface systems, and portable development & integration test-sets. Common hardware interfaces include definition, installation, and control of mechanical, electrical, and cooling requirements common to all mission packages. The Mission Package Computing Environment (MPCE) provides common services and Operating Environment to support all Mission Package Application Software (MPAS) and Open Architecture Products. The Multi-Vehicle Communications System (MVCS) enables the control and data exchange of simultaneous unmanned mission vehicles and the ship. Aviation interface systems include integration and management of data communications, data processing, and physical hardware interfaces such as common equipment and containers used by all mission packages. Development and integration test-sets provide a mobile operating environment installed in the Mission Package Portable Control Stations (MPPCSs) to serve as a surrogate ship during mission package development and integration test events at test ranges.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Command, Control, Communication, Computers, Cyber and Intelligence (C5I) and Mission Package Tactical Team Trainers	8.581	8.744	13.642	0.000	13.642
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Mission Package Computing Environment (MPCE) - AN/SYK-31 In support of Technology Refresh of MPCE and certification of version 2.0: - Continue integration and testing of MPCE v2.0 with the MCM Mission Package Application Software (MPAS) - Complete development and deliver MPCE version 2.0 Technical Data Package (TDP) - Conduct Mission Package testing with MPCE 2.0 - Conduct Production Readiness Review (PRR) and transition MPCE version 2.0 to production  Multi-Vehicle Communications System (MVCS) - AN/SYC-1: - Develop requirements for MVCS 1.X (Tech Refresh) - Complete MCM USV and LCS integration testing and certification of MVCS 1.2.1  LCS Common Mission Package Portable Control Station (MPPCS)/Common Mission Package Trainer (CMPT)					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / <i>LCS Mission Modules</i>	<b>Project (Number/Name)</b> 3129 / <i>LCS Mission Package Development</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>- Continue the MPCE version 2.0 into MPPCS and CMPT</p> <p><b><i>FY 2024 Base Plans:</i></b>                      Mission Package Computing Environment (MPCE) - AN/SYK-31                      In support of Technology Refresh of MPCE and certification of version 2.X:                      - Complete integration and testing of MPCE v2.X with the MCM Mission Package Application Software (MPAS)                      - Conduct and complete integration testing of MPCE v2.X with LCS Lethality and Survivability Combat System                      - Conduct integration and testing of MPCE v2.X with the SUW Mission Package Application Software (MPAS)                      - Deliver first MPCE 2.X unit in support of LCS Lethality and Survivability upgrades                      - Begin development of next version of MPCE to address post MCM IOC requirements, new SUW MP requirements, cybersecurity improvements, and general hardware obsolescence/necessary technology refresh                      Multi-Vehicle Communications System (MVCS) - AN/SYC-1:                      - Support the implementation of Unmanned Vehicle transition to the Common Control Software (Beyond Line of Sight)                      - Begin development of MVCS 2.X (Tech Refresh)                      - Conduct MVCS 2.X PDR                      - Investigate/select replacement antenna for MVCS to support alternate operating frequencies                      - Continue development of software/security improvements to meet latest cybersecurity requirements                      -</p> <p>LCS Common Mission Package Portable Control Station (MPPCS)/Common Mission Package Trainer (CMPT)                      - Develop and integrate latest versions of SUW and MCM CMPT systems                      - Develop improvements to MPPCS to ensure system meets MCM Vessel of Opportunity requirements and supports follow-on SUW capabilities</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The increase in FY2024 support initiating development of the next version of MPCE</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	8.581	8.744	13.642	0.000	13.642

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To	
			Base	OCO	Total					Complete	Total Cost
• OPN 1600: LCS Common Mission Modules Equipment	63.501	54.883	49.060	-	49.060	44.214	37.226	32.276	32.991	360.231	1,258.966
• OPN 1601: LCS MCM Mission Modules	30.119	92.495	93.961	-	93.961	122.654	103.972	59.906	61.344	1,508.277	2,664.640
• OPN 1602: LCS ASW Mission Modules.	1.565	3.594	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	68.135
• OPN 1603: LCS SUW Mission Modules	3.395	5.100	12.102	-	12.102	11.101	3.500	0.100	0.146	90.088	327.515
• WPN 4221: LCS Module Weapons	2.121	4.580	3.264	-	3.264	2.463	2.266	2.258	2.322	63.142	122.403

**Remarks**

**D. Acquisition Strategy**

The LCS Mission Module Acquisition Strategy is employing an incremental procurement approach to allow for the rapid introduction of additional capabilities as system technology matures. This phased plan provides incremental fielding of capability through the introduction of mature programs of record into the respective Mission Packages until the full baseline capability defined in the Capability Development Document (CDD) is reached.

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
6.1 System Engineering	WR	NSWC PCD : Panama City, FL	0.275	0.000		0.000		0.000		-		0.000	0.000	0.275	-
6.1 System Engineering	WR	NSWC DD : Dahlgren, VA	1.784	0.000		0.000		0.000		-		0.000	0.000	1.784	-
6.1 System Engineering	WR	NAVSEALOGCEN : Norfolk, VA	1.520	0.000		0.000		0.000		-		0.000	0.000	1.520	-
6.1 System Engineering	C/CPFF	Northrop Grumman : Bethpage, NY	14.542	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
6.1 System Engineering	WR	NSWC Carderock : Bethesda, MD	2.610	0.000		0.000		0.000		-		0.000	0.000	2.610	-
6.1 System Engineering	WR	NSWC PHD : Port Hueneme, CA	1.568	0.000		0.000		0.000		-		0.000	0.000	1.568	-
6.1 System Engineering	WR	NIWC : San Diego, CA	7.660	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
6.1 System Engineering	C/CPIF	Booz Allen Hamilton : Washington, DC	0.355	0.000		0.000		0.000		-		0.000	0.000	0.355	-
6.4 Integration, Assembly, Test and Checkout	Sub Allot	CECOM Bldg 1207 : Various	1.092	0.000		0.000		0.000		-		0.000	0.000	1.092	-
6.4 Integration, Assembly, Test and Checkout	WR	NAWC AD : Patuxent River, MD	1.930	0.000		0.000		0.000		-		0.000	0.000	1.930	-
6.4 Integration, Assembly, Test and Checkout	WR	NSWC DD : Dahlgren, VA	0.203	0.000		0.000		0.000		-		0.000	0.000	0.203	-
6.4 Integration, Assembly, Test and Checkout	WR	NSWC PC : Panama City, FL	0.075	0.000		0.000		0.000		-		0.000	0.000	0.075	-
6.4 Integration, Assembly, Test and Checkout	C/CPFF	Northrop Grumman : Bethpage, NY	1.498	0.000		0.000		0.000		-		0.000	0.000	1.498	-
6.4 Integration, Assembly, Test and Checkout	WR	NSWC Carderock : Bethesda, MD	8.625	0.000		0.000		0.000		-		0.000	0.000	8.625	-
6.4 Integration, Assembly, Test and Checkout	C/CPFF	PMS 501 : Various	1.075	0.000		0.000		0.000		-		0.000	0.000	1.075	-
6.4 Integration, Assembly, Test and Checkout	WR	NIWC : San Diego, CA	1.857	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
6.4 Integration, Assembly, Test and Checkout	WR	NSWC PHD : Port Hueneme, CA	1.312	0.000		0.000		0.000		-		0.000	0.000	1.312	-
6.4 Integration, Assembly, Test and Checkout	C/CPIF	Booz Allen Hamilton : Washington, DC	0.950	0.000		0.000		0.000		-		0.000	0.000	0.950	-
6.4 Integration, Assembly, Test and Checkout	WR	NAVAIR : Lakehurst, NJ	0.200	0.000		0.000		0.000		-		0.000	0.000	0.200	-
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	C/CPFF	AAC : Uniontown, PA	23.114	2.647	Dec 2021	2.647	Dec 2022	4.794	Dec 2023	-		4.794	0.000	33.202	-
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	WR	NAWC TSD : Orlando, FL	2.304	0.000		0.552	Jan 2023	2.195	Jan 2024	-		2.195	0.000	5.051	-
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	C/CPFF	Northrop Grumman : Bethpage, NY	5.282	0.030	Nov 2021	0.030	Nov 2022	0.050	Nov 2023	-		0.050	Continuing	Continuing	Continuing
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	WR	NSWC PC : Panama City, FL	18.696	4.188	Nov 2021	4.296	Nov 2022	4.382	Nov 2023	-		4.382	Continuing	Continuing	Continuing
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	WR	NUWC NPT : Newport, RI	3.279	0.260	Dec 2021	0.260	Dec 2022	0.275	Dec 2023	-		0.275	Continuing	Continuing	Continuing
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	C/CPIF	Booz Allen Hamilton : Washington, DC	3.927	0.000		0.000		0.000		-		0.000	0.000	3.927	-
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	WR	NIWC PAC : San Diego, CA	6.651	0.600	Jan 2022	0.200	Jan 2023	0.612	Jan 2024	-		0.612	0.000	8.063	-

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	WR	NSWC DD : Dahlgren, VA	4.837	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	WR	PMW 760 : Various	0.889	0.000		0.000		0.000		-		0.000	0.000	0.889	-
4.0 Command, Control, Communication, Computers, Collaboration and Intelligence (C5I)	C/CPFF	Progeny : Manassas, VA	1.730	0.000		0.000		0.000		-		0.000	0.000	1.730	-
1.0 MCM MP	WR	NSWC PC : Panama City, FL	71.297	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
1.0 MCM MP	Sub Allot	PMS 406 : Various	42.761	0.000		0.000		0.000		-		0.000	0.000	42.761	-
1.0 MCM MP	Sub Allot	PMS 495 : Various	0.249	0.000		0.000		0.000		-		0.000	0.000	0.249	-
1.0 MCM MP	WR	NSWC PHD : Port Hueneme, CA	2.300	0.000		0.000		0.000		-		0.000	0.000	2.300	-
1.0 MCM MP	C/CPIF	Booz Allen Hamilton : Washington, DC	0.400	0.000		0.000		0.000		-		0.000	0.000	0.400	-
1.0 MCM MP	C/CPFF	Northrop Grumman : Bethpage, NY	1.892	0.000		0.000		0.000		-		0.000	0.000	1.892	-
1.0 MCM MP	WR	Various : Various	1.124	0.000		0.000		0.000		-		0.000	0.000	1.124	-
2.0 ASW MP	Sub Allot	PEO IWS5E : Various	41.094	0.000		0.000		0.000		-		0.000	0.000	41.094	-
2.0 ASW MP	WR	NUWC NPT : Newport, RI	29.320	0.000		0.000		0.000		-		0.000	0.000	29.320	-
2.0 ASW MP	WR	SSC PAC : San Diego, CA	4.967	0.000		0.000		0.000		-		0.000	0.000	4.967	-
2.0 ASW MP	WR	CDSA Dam Neck : Virginia Beach, VA	11.145	0.000		0.000		0.000		-		0.000	0.000	11.145	-
2.0 ASW MP	C/CPFF	Northrop Grumman : Bethpage, NY	10.914	0.000		0.000		0.000		-		0.000	0.000	10.914	-

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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<b>Product Development (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
2.0 ASW MP	WR	PEO IWS 5A : Various	9.301	0.000		0.000		0.000		-		0.000	0.000	9.301	-
2.0 ASW MP	C/CPFF	SPA : Washington, DC	1.687	0.000		0.000		0.000		-		0.000	0.000	1.687	-
2.0 ASW MP	WR	NSWC DD : Dahlgren, VA	0.871	0.000		0.000		0.000		-		0.000	0.000	0.871	-
2.0 ASW MP	WR	NUWC KPT : Keyport, WA	1.095	0.000		0.000		0.000		-		0.000	0.000	1.095	-
2.0 ASW MP	WR	NSWC PHD : Port Hueneme, CA	1.550	0.000		0.000		0.000		-		0.000	0.000	1.550	-
2.0 ASW MP	C/FPIF	Booz Allen Hamilton : Washington, DC	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
2.0 ASW MP	WR	NAWC WD : Point Mugu, CA	5.430	0.000		0.000		0.000		-		0.000	0.000	5.430	-
2.0 ASW MP	C/CPFF	Various : Various	3.757	0.000		0.000		0.000		-		0.000	0.000	3.757	-
2.0 ASW MP	Sub Allot	Raytheon : Portsmouth, RI	42.056	0.000		0.000		0.000		-		0.000	0.000	42.056	-
3.0 SUW MP	C/CPFF	JAMS PO : Various	7.980	0.000		0.000		0.000		-		0.000	0.000	7.980	-
3.0 SUW MP	WR	NAWC WD : Ridgecrest, CA	7.826	0.000		0.000		0.000		-		0.000	0.000	7.826	-
3.0 SUW MP	C/CPFF	Northrop Grumman : Bethpage, NY	60.524	0.000		0.000		0.000		-		0.000	0.000	60.524	-
3.0 SUW MP	WR	NSWC CD : Crane, IN	0.396	0.000		0.000		0.000		-		0.000	0.000	0.396	-
3.0 SUW MP	WR	NSWC Corona : Corona, CA	1.695	0.000		0.000		0.000		-		0.000	0.000	1.695	-
3.0 SUW MP	WR	NSWC DD : Dahlgren, VA	60.316	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
3.0 SUW MP	WR	NSWC PHD : Port Hueneme, CA	30.437	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
3.0 SUW MP	Sub Allot	PEO IWS 3 : Various	9.819	0.000		0.000		0.000		-		0.000	0.000	9.819	-
<b>Subtotal</b>			582.543	7.725		7.985		12.308		-		12.308	Continuing	Continuing	N/A

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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<b>Support (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
6.5 Training Systems Development	WR	NAWC TSD : Orlando, FI	0.909	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
6.5 Training Systems Development	WR	NSWC PHD : Port Hueneme, CA	0.390	0.000		0.000		0.000		-		0.000	0.000	0.390	-
6.5 Training Systems Development	C/CPIF	Booz Allen Hamilton : Washington, DC	0.268	0.000		0.000		0.000		-		0.000	0.000	0.268	-
6.5 Training Systems Development	C/CPAF	Northrop Grumman : Bethpage, NY	0.575	0.000		0.000		0.000		-		0.000	0.000	0.575	-
6.5 Training Systems Development	Sub Allot	Various : Various	3.221	0.000		0.000		0.000		-		0.000	0.000	3.221	-
6.5 Training Systems Development	WR	JHU/APL : Laurel, MD	1.479	0.000		0.000		0.000		-		0.000	0.000	1.479	-
<b>Subtotal</b>			6.842	0.000		0.000		0.000		-		0.000	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC PHD : Port Hueneme, CA	27.963	0.000		0.000		0.000		-		0.000	0.000	27.963	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	COMOPTEVFOR : Norfolk, VA	4.944	0.000		0.000		0.000		-		0.000	0.000	4.944	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NSWC Corona : Corona, CA	0.500	0.000		0.000		0.000		-		0.000	0.000	0.500	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	WR	NIWC : San Diego, CA	5.258	0.000		0.000		0.000		-		0.000	0.000	5.258	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	C/CPIF	Booz Allen Hamilton : Washington, DC	0.750	0.000		0.000		0.000		-		0.000	0.000	0.750	-

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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<b>Test and Evaluation (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Subtotal</b>			39.415	0.000		0.000		0.000		-		0.000	0.000	39.415	N/A

<b>Management Services (\$ in Millions)</b>				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
6.2 Program Management	C/CPFF	CACI : Fairfax, VA	7.698	0.000		0.000		0.000		-		0.000	0.000	7.698	-
6.2 Program Management	C/CPIF	Booz Allen Hamilton : Washington DC	5.505	0.856	Dec 2021	0.759	Dec 2022	0.755	Dec 2023	-		0.755	0.000	7.875	-
6.2 Program Management	FFRDC	Mitre : McLean, VA	2.679	0.000		0.000		0.000		-		0.000	0.000	2.679	-
6.2 Program Management	FFRDC	JHU/APL : Laurel, MD	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
6.2 Program Management	C/CPFF	Northrop Grumman : Bethpage, NY	4.977	0.000		0.000		0.579	Nov 2023	-		0.579	0.000	5.556	-
6.2 Program Management	C/CPFF	NSWC Crane : Various	2.927	0.000		0.000		0.000		-		0.000	0.000	2.927	-
<b>Subtotal</b>			23.786	0.856		0.759		1.334		-		1.334	0.000	26.735	N/A

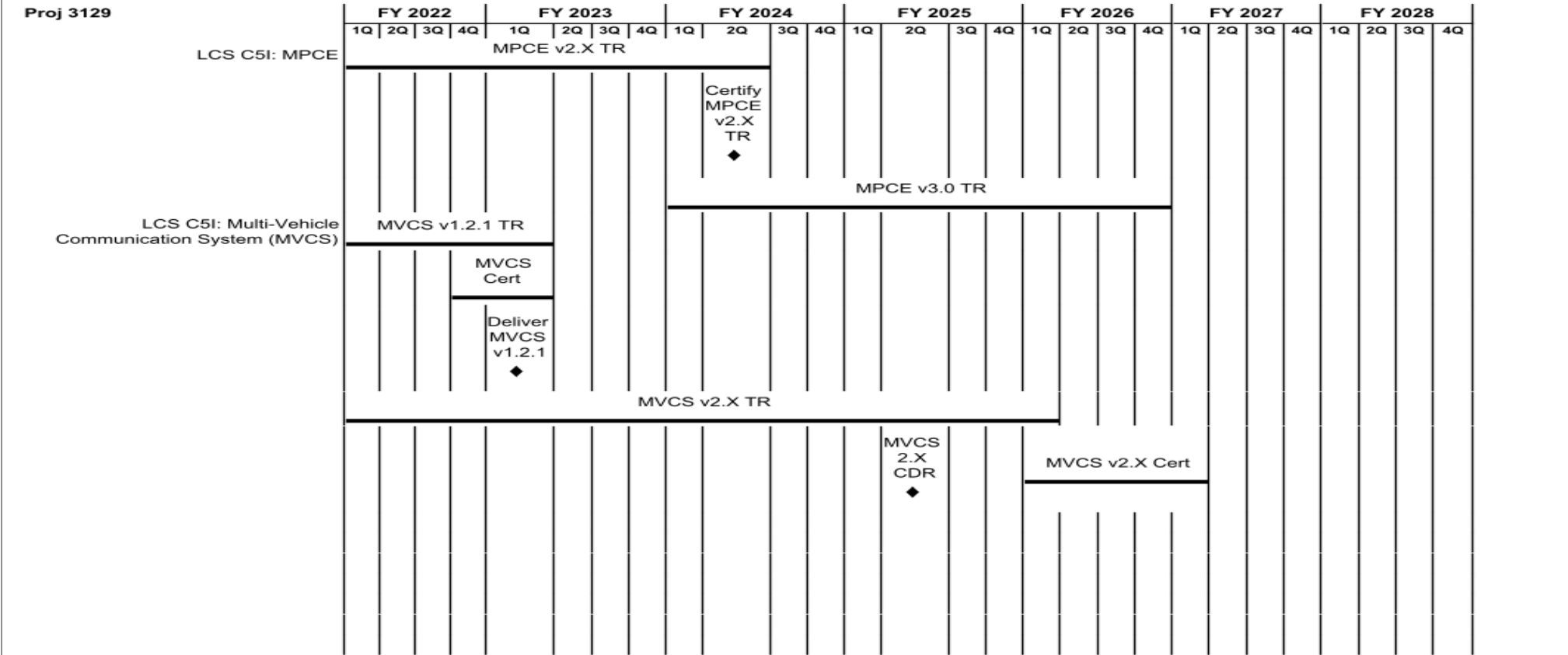
	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract	
<b>Project Cost Totals</b>		652.586	8.581	8.744	13.642	-	13.642	Continuing	Continuing	N/A

**Remarks**  
 Beginning in FY 2019, Mission Package funding is realigned into four (4) projects:  
 2550 Mine Countermeasures (MCM) Mission Package  
 2551 Anti-Submarine Warfare (ASW) Mission Package  
 2552 Surface Warfare (SUW) Mission Package  
 3129 LCS Mission Package Development  
  
 Prior to FY 2019 all Mission Package funding was in Project 3129.

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

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / LCS Mission Modules	<b>Project (Number/Name)</b> 3129 / LCS Mission Package Development
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2024PB - 0603596N - 3129

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2024 Navy</b>		<b>Date: March 2023</b>
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603596N / <i>LCS Mission Modules</i>	<b>Project (Number/Name)</b> 3129 / <i>LCS Mission Package Development</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3129</b>				
LCS C5I: MPCE: MPCE v2.X Tech Refresh Development	1	2022	2	2024
LCS C5I: MPCE: Certify MPCE v2.X	2	2024	2	2024
LCS C5I: MPCE: MPCE v3.0 Tech Refresh Development	1	2024	4	2026
LCS C5I: Multi-Vehicle Communication System (MVCS): MVCS v1.2.1 Tech Refresh Development	1	2022	1	2023
LCS C5I: Multi-Vehicle Communication System (MVCS): MVCS: Certify MVCS v1.2.1	4	2022	1	2023
LCS C5I: Multi-Vehicle Communication System (MVCS): Deliver MVCS v1.2.1	1	2023	1	2023
LCS C5I: Multi-Vehicle Communication System (MVCS): MVCS v2.X Tech Refresh Development	1	2022	1	2026
LCS C5I: Multi-Vehicle Communication System (MVCS): MVCS: CDR for MVCS v2.X	2	2025	2	2025
LCS C5I: Multi-Vehicle Communication System (MVCS): MVCS: Certify MVCS v2.X	1	2026	1	2027