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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2025 Navy **Date:** March 2024

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	70.759	17.022	12.565	18.332	-	18.332	18.071	14.341	10.239	7.422	Continuing	Continuing
3373: <i>Common Aviation Command and Control System (CAC2S)</i>	70.759	17.022	12.565	18.332	-	18.332	18.071	14.341	10.239	7.422	Continuing	Continuing

**Program MDAP/MAIS Code:**  
**Project MDAP/MAIS Code(s):** MN36

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

Common Aviation Command and Control System (CAC2S) is a Commandant of the Marine Corps Force Design program which provides the Aviation Combat Element with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. CAC2S accomplishes the missions with a family of systems to support the Marine Air Ground Task Force (MAGTF), Naval forces, Joint Services, and Coalition Forces. CAC2S integrates the functions of aviation command and control (C2) into an interoperable system that supports the core competencies of all Marine Corps warfighting concepts. CAC2S, in conjunction with the Marine Air Command and Control System organic sensors, AN/TPS-80 Ground/Air Task Oriented Radar, and the weapon system Composite Tracking Network (CTN) provides: enhanced air control, improved situational awareness, sensor integration, full Tactical Data Link integration, airspace and battle planning and command functionality, and sensor netting integration (CTN). CAC2S, with these organic MACCS programs, support the tenets of Expeditionary Maneuver Warfare and foster joint interoperability. CAC2S Increment I replaced legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center, Tactical Air Command Center, Tactical Air Operations Center, and Marine Air Traffic Control. In line with Force Design, CAC2S is to begin the development and prototyping of the Small Form Factor (SFF) variant in FY 2022. The SFF is a CAC2S variant required to meet the needs of Expeditionary Advance Base Operations and Force Design. The SFF variant will possess the same Tactical System, Data Link, and interface capabilities as the CAC2S Increment 1 system with the added benefits of being rapidly deployable, emitting at a lower signature, and reduced size and weight. The SFF's versatility will be a key enabling capability to support the task organization of the Marine Littoral Regiments as it meets the needs of Marine Corps Expeditionary Advance Base Operations.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	14.865	12.565	7.418	-	7.418
Current President's Budget	17.022	12.565	18.332	-	18.332
Total Adjustments	2.157	0.000	10.914	-	10.914
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.505	0.000			
• SBIR/STTR Transfer	-0.349	0.000			
• Program Adjustments	0.000	0.000	12.954	-	12.954
• Rate/Misc Adjustments	0.001	0.000	-2.040	-	-2.040

**Change Summary Explanation**

Increase from Previous President's Budget is primarily due to the Sensor and Sensor Netting Interface Modernization (MINOTAUR & MRADR) development and an increase in scope NIFC to include Net Enabled Weapons (NEW).

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 1319 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>				<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3373: <i>Common Aviation Command and Control System (CAC2S)</i>	70.759	17.022	12.565	18.332	-	18.332	18.071	14.341	10.239	7.422	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> MN36												

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

Common Aviation Command and Control System (CAC2S) is a Commandant of the Marine Corps (CMC) Force Design (FD) program, which provides the Aviation Combat Element (ACE) with the necessary hardware, software, equipment, and facilities to effectively command, control, and coordinate aviation operations. CAC2S accomplishes the missions with a family of systems to support the Marine Air Ground Task Force (MAGTF), Naval forces, Joint Services, and Coalition Forces. CAC2S integrates the functions of aviation command and control (C2) into an interoperable system that supports the core competencies of all Marine Corps warfighting concepts. CAC2S, in conjunction with the Marine Air Command and Control System (MACCS) organic sensors, AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR), and the weapon system Composite Tracking Network (CTN) provides enhanced air control, improved situational awareness, sensor integration, full Tactical Data Link integration, airspace and battle planning and command functionality, as well as sensor netting integration (CTN). CAC2S, with these organic MACCS programs, support the tenets of Expeditionary Maneuver Warfare and foster joint interoperability. CAC2S Increment I replaced legacy aviation command and control systems in the following Marine aviation agencies: Direct Air Support Center (DASC), Tactical Air Command Center (TACC), Tactical Air Operations Center (TAOC), and Marine Air Traffic Control (MATC). CAC2S is the C2 system that enables the distribution of G/ATOR sensors and is critical to developing Naval and Marine integrated fire control methods. CAC2S sensor data correlation and distribution via the Composite Tracking Network (CTN) enables Marine Air Ground Task Force sensor data to be shared with Naval forces to inform the Joint targeting and decision-making process. In line with Force Design, CAC2S has begun the development and prototyping of an AN/TSQ-197 AC2S Small Form Factor (SFF) variant. The SFF is a CAC2S variant required to meet the needs of Expeditionary Advance Base Operations and Force Design. The SFF variant will possess the same Tactical System, Data Link, and interface capabilities as the CAC2S Increment 1 system with the added benefits of being rapidly deployable, emitting at a lower signature, and reduced size and weight. In addition, the SFF's versatility will be a key enabling capability to support the task organization of the Marine Littoral Regiments (MLRs) as it meets the needs of US Marine Corps Expeditionary Advance Base Operations (EABO).

The increase from FY 2024 to FY 2025 is due to an increase in the scope of support required for Naval Integrated Fire Control (NIFC) and Net Enabled Weapons (NEW) to extend Sea Shield capabilities; and CAC2S interface development of sensor netting capabilities with Air Surveillance Sensors (Ground/Air Task Oriented Radar (G/ATOR), MINOTAUR Family of Services (MFoS), Composite Tracking Network (CTN), and Medium Range Air Defense Radar (MRADR)) to enable the USMC to support Joint Integrated Air and Missile Defense (IAMD).

In FY 2025:

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>

CAC2S will continue the development and testing of a small form factor (SFF) variant prototype of the AN/TSQ-297 Air Command & Control System. This is an approved FD initiative from the Capabilities Development Directorate (CDD) which is to take into account lessons learned from the Marine Corps Warfighting Laboratory (MCWL) Rapid Capabilities Office (RCO) initiatives with 15th Marine Expeditionary Unit (MEU) and war gaming exercises per CMC guidance, in support the USMC Expeditionary Advanced Base Operations (EABO) concept, which is an amphibious forward operating unit that will secure, sustain, and maintain warfighters and their weapons systems on a more amorphous and difficult-to-target forward-basing infrastructure. This system variant is to be developed and produced to meet the critical shortfalls of forward deployed small, scalable, survivable aviation C2 nodes capable of performing control of aircraft and missiles necessary for integration and defeat of dynamic targets performed by MAGTF, naval, joint, and national technical enabling capabilities like the current fielded AN/TSQ-297. The SFF variant will be fielded to the Marine Littoral Regiments (MLRs).

CAC2S will continue to develop and integrate Naval Integrated Fire Control (NIFC) and implement Net Enabled Weapons. This initiative allows CAC2S to be a key enabler in the Joint Fight in executing the Kill Web across the MAGTF and Joint Services, linking sensors and weapons in providing fire control solutions from information from multiple sensors. IFC capabilities support sea-based sensor and weapon system extend the Sea Shield's engagement capabilities to provide early warning and engagement of airborne threats to the MAGTF and Naval Forces.

CAC2S will develop sensor netting interfaces in concert with other Air Surveillance Sensors (Ground/Air Task Oriented Radar (G/ATOR), MINOTAUR Family of Services (MFoS), Composite Tracking Network (CTN), and Medium Range Air Defense Radar (MRADR)) to enable the USMC to support Joint Integrated Air and Missile Defense (IAMD). These sensor netting interfaces will directly support CAC2S's anticipated roles within Force Design 2030, the Expeditionary Advance Base Operations (EABO), and the Littoral Operations in a Contested Environment (LOCE) concept of operations (CONOPS). These interfaces will provide CAC2S the ability to conduct sea control and sea denial operations from key maritime terrain.

CAC2S will begin to develop and test engineering changes for the integration of its AN/TSQ-297520 and AN/MRQ-13 Communications Subsystem onto the M1279 Joint Light Tactical Vehicle (JLTV) and the M1289 trailer. CAC2S will begin the replacement of its current aging prime mover, the legacy HMMWV (Humvee), beginning in FY 2025.

Lastly, CAC2S will upgrade Tactical Data Link (TDL) Military Standard (MIL-STD) compliance and enhancing CAC2S software develop upgrades to Military Standard (Mil-Std) for data forwarding between tactical data systems employing Links 11/11B and tactical data systems employing Link 16. This TDL upgrade will align to the Technical Interoperability Standards Working Group (TISWG) and is approved by Joint Forces. MIL-STD-6016 and MIL-STD-6020 aligns the latest TDL message with current standards for interoperability across Services as well as Variable Message Format (VMF).

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
<b>Title:</b> Product Development	11.576	6.496	11.615	0.000	11.615
<b>Articles:</b>	-	-	-	-	-
<b>FY 2024 Plans:</b>					

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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
<ul style="list-style-type: none"> <li>- To begin the integration development of the AN/TSQ-297 and AN/MRQ-13 CS onto the M1279 Joint Light Tactical Vehicle (JLTV) and the M1289 trailer</li> <li>- To continue the development and integration of Naval Integrated Fire Control (NIFC).</li> <li>- To continue research of new capabilities derived from Force Design and the EABO concept, and conduct analysis on the technical approaches needed.</li> <li>- To continue the development and testing of the AN/TSQ-297 Air Command &amp; Control (AC2S) Small Form Factor (SFF) variant.</li> </ul> <p><b>FY 2025 Base Plans:</b></p> <ul style="list-style-type: none"> <li>- Interface development of sensor netting capabilities with Ground/Air Task Oriented Radar (G/ATOR), MINOTAUR Family of Services (MFoS), Composite Tracking Network (CTN), and Medium Range Air Defense Radar (MRADR) to support integration of Joint Integrated Air and Missile Defense (IAMD).</li> <li>- Continue the integration development of the AN/TSQ-297 and AN/MRQ-13 CS onto the M1279 Joint Light Tactical Vehicle (JLTV) and the M1289 trailer</li> <li>- To continue the development and integration of Naval Integrated Fire Control (NIFC) and to develop interfaces and integrate Net Enabled Weapons capability.</li> <li>- To continue the development and testing of the AN/TSQ-297 Air Command &amp; Control (AC2S) Small Form Factor (SFF) variant.</li> </ul> <p><b>FY 2025 OCO Plans:</b> N/A</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The increase from FY 2024 to FY 2025 is due to the Sensor and Sensor Netting Interface Modernization (MINOTAUR &amp; MRADR) development and an increase in scope NIFC to include Net Enabled Weapons (NEW).</p> <p><b>Title:</b> Support</p>					
<b>Articles:</b>	1.932	2.186	3.043	0.000	3.043
	-	-	-	-	-
<p><b>FY 2024 Plans:</b></p> <ul style="list-style-type: none"> <li>- To continue yearly Cyber Compliance Tests required with each of the CAC2S quarterly software releases and conduct the Annual Security Review testing to support the maintenance of the CAC2S ATO/ATC.</li> <li>- To continue the development required to integrate MIDS JTRS for the AN/TSQ-297 AC2S Link-16 modernization.</li> </ul>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>										
<p>- To begin the engineering support for the integration of the Automatic Dependent Surveillance - Broadcast (ADS-B) system capability.</p> <p><b>FY 2025 Base Plans:</b></p> <ul style="list-style-type: none"> <li>- To continue yearly Cyber Compliance Tests required with each of the CAC2S quarterly software releases and conduct the Annual Security Review testing to support the maintenance of the CAC2S ATO/ATC.</li> <li>- Develop and integrate Tactical Data Link (TDL) and enhanced software to enable CAC2S to upgrade to MIL-STD-6016 and MIL-STD-6020 and remain aligned with current standards for interoperability across Services as well as Variable Message Format (VMF).</li> <li>- Software sustainment for fielded AC2S systems.</li> <li>- To continue the development required to integrate MIDS JTRS for the AN/TSQ-297 AC2S Link-16 modernization.</li> </ul> <p><b>FY 2025 OCO Plans:</b> N/A</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b></p> <ul style="list-style-type: none"> <li>- The increase from FY 2024 to FY 2025 is due to an increase in software support for Tactical Data Link (TDL) Enhancement and CAC2S Sensor and Sensor Netting Interface Modernization.</li> </ul>						<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
<b>Title:</b> Management Services										
<b>Articles:</b>										
	0.700	1.200	1.316	0.000	1.316					
	-	-	-	-	-					
<p><b>FY 2024 Plans:</b></p> <ul style="list-style-type: none"> <li>- To fund continued support from vendor MITRE to monitor CAC2S integration efforts with the MACS sensors, G/ATOR, CTN/CEC, and GBAD development. MITRE continue its development of prototype radar and track data injection tools to facilitate contractor integration and Government laboratory testing of CAC2S.</li> </ul> <p><b>FY 2025 Base Plans:</b></p> <ul style="list-style-type: none"> <li>- To fund continued support from vendor MITRE to monitor CAC2S integration efforts with the MACS sensors, G/ATOR, CTN/CEC, and GBAD development. MITRE continue its development of prototype radar and track data injection tools to facilitate contractor integration and Government laboratory testing of CAC2S.</li> </ul> <p><b>FY 2025 OCO Plans:</b> N/A</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b></p>										

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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
The increase from FY 2024 to FY 2025 is for continued support from MITRE for development tools to support government laboratory testing.					
<b>Title:</b> Test and Evaluation	2.814	2.683	2.358	0.000	2.358
<b>Articles:</b>	-	-	-	-	-
<b>FY 2024 Plans:</b> - To continue required integration and interface testing of upgraded hardware components and software enhancements. - To continue testing to support system software capability enhancements for capability improvement and to maintain system ATO and ATC. - To continue the development testing for the Automatic Dependent Surveillance - Broadcast (ADS-B) system capability.					
<b>FY 2025 Base Plans:</b> - CAC2S Performance Data Management Test and Evaluation Analysis support. - To continue required integration and interface testing of upgraded hardware components and software enhancements. - To continue testing to support system software capability enhancements for capability improvement and to maintain system ATO and ATC.					
<b>FY 2025 OCO Plans:</b> N/A					
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> The decrease from FY 2024 to FY 2025 is due to the end of testing and evaluation of the Automatic Dependent Surveillance - Broadcast (ADS-B) system capability.					
<b>Accomplishments/Planned Programs Subtotals</b>	17.022	12.565	18.332	0.000	18.332

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/4644: <i>Common Aviation Command And Control System (CAC2S)</i>	30.292	75.382	84.764	-	84.764	97.193	23.623	12.159	20.407	0.000	590.189

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Navy	<b>Date:</b> March 2024
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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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**Remarks**  
RDT&E prior to FY 2015 was in PE 0206313M Marine Corps Comms Systems, Project 2273 Air Operations Command & Control (C2) Systems.

PMC funding for FY 2015 and beyond is in BLI 4644 Common Aviation Command and Control System (CAC2S). Prior to FY 2015 PMC funding is listed in BLI 4640 Air Operations C2 Systems, Common Aviation Command and Control Systems (CAC2S).

**D. Acquisition Strategy**

CAC2S employs an evolutionary acquisition strategy utilizing an incremental and phased approach for development and fielding of the CAC2S. The Capability Production Document (CPD) identifies two increments to achieve the full requirements of CAC2S. The current acquisition strategy addresses Increment I of the CAC2S development process and focuses on the requirements that will modernize the assault and air support, air defense and control, and Aviation Combat Element (ACE) battle management capabilities of the Marine Air Command and Control System (MACCS). Increment I of the CAC2S has been accomplished through a two phased approach. Phase 1 addressed the requirements to establish the baseline CAC2S capabilities for the MACCS and improved Air Command and Control (AC2) performance and effectiveness. Phase 2 addresses the requirements for remaining ACE Battle Management Command & Control (BMC2) requirements. Nine (9) Phase 2 Limited Deployment Unit systems were procured in FY 2015 and FY 2016 and fielded in FY 2017. The Full Deployment Unit (FDU) production contract was awarded 24 August 2017 and a total of forty one (41) systems were procured and fielded over three years (FY 2018-FY 2020).

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy** **Date:** March 2024

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 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>			
AC2S SFF Development	C/BA	NSWC Crane : Crane, IN	4.800	3.140	Nov 2022	0.238	Nov 2023	0.243	Nov 2024	-		0.243	0.000	8.421	-
NIFC & NEW Development	C/BA	NSWC Crane : Crane, IN	0.000	2.985	Nov 2022	0.648	Nov 2023	0.000		-		0.000	0.000	3.633	-
Force Design Technology Enhancements	C/BA	NSWC Crane : Crane, IN	0.000	4.050	Feb 2023	1.100	Feb 2024	0.000		-		0.000	0.000	5.150	-
Sensor and Sensor Netting Interface Modernization	C/BA	NSWC Crane : Crane, IN	0.000	0.000		0.000		3.550	Dec 2024	-		3.550	0.000	3.550	-
NIFC & NEW Development	C/FFP	Raytheon Solipsys : Fulton, MD	0.000	1.401	May 2023	0.485	May 2024	5.243	May 2025	-		5.243	0.000	7.129	-
Prime Mover Integration Development	C/BA	NSWC Crane : Not Specified	0.000	0.000		4.025	Mar 2024	2.579	Mar 2025	-		2.579	0.000	6.604	-
<b>Subtotal</b>			4.800	11.576		6.496		11.615		-		11.615	0.000	34.487	N/A

**Remarks**  
The increase from FY 2024 to FY 2025 is due to the Sensor and Sensor Netting Interface Modernization (MINOTAUR & MRADR) development and an increase in scope NIFC to include Net Enabled Weapons (NEW).

<b>Support (\$ in Millions)</b>				<b>FY 2023</b>		<b>FY 2024</b>		<b>FY 2025 Base</b>		<b>FY 2025 OCO</b>		<b>FY 2025 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>			
Travel	Various	Travel : TBD	0.484	0.095	Oct 2022	0.096	Oct 2023	0.172	Oct 2024	-		0.172	Continuing	Continuing	Continuing
Engineering Support	WR	NSWC DD : Dahlgren, VA	2.761	0.000		0.253	Nov 2023	0.000		-		0.000	0.000	3.014	-
Acquisition Support	WR	NSWC CD : Crane, IN	2.459	1.238	Nov 2022	0.820	Nov 2023	0.000		-		0.000	0.000	4.517	-
Software Support	C/FFP	Raytheon Solipsys : Fulton, MD	1.330	0.249	May 2023	0.250	May 2024	1.626	May 2025	-		1.626	0.000	3.455	-
Software Support	C/FFP	Ternion : Huntsville, AL	0.542	0.000		0.000		0.000		-		0.000	0.000	0.542	-

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy** **Date:** March 2024

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>
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<b>Support (\$ in Millions)</b>				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Software Support	C/FFP	Ultra : San Diego, CA	0.516	0.350	Jun 2023	0.767	Jun 2024	1.245	Jun 2025	-		1.245	0.000	2.878	-
Prior Years Cumulative Funding	Various	Various : Various	4.121	0.000		0.000		0.000		-		0.000	0.000	4.121	-
<b>Subtotal</b>			12.213	1.932		2.186		3.043		-		3.043	Continuing	Continuing	N/A

**Remarks**  
The increase from FY 2024 to FY 2025 is due to a increase in software support for Tactical Data Link (TDL) Enhancement and CAC2S Sensor and Sensor Netting Interface Modernization.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
Operational Test & Evaluation (OT&E)	WR	NSWC CD : Crane, IN	14.014	1.626	Nov 2022	1.010	Nov 2023	0.595	Nov 2024	-		0.595	7.445	24.690	-
Operational Test & Evaluation (OT&E)	WR	NSWC DD : Dahlgren, VA	5.691	0.000		0.000		0.000		-		0.000	0.000	5.691	-
Developmental Test & Evaluation (DT&E)	WR	NSWC Corona : Corona, CA	1.799	1.113	Nov 2022	1.648	Nov 2023	1.737	Nov 2024	-		1.737	0.000	6.297	-
Operational Test & Evaluation (OT&E)	C/BA	JITC : Ft. Huachuca, NM	0.371	0.075	Jan 2023	0.025	Jan 2024	0.026	Jan 2025	-		0.026	0.000	0.497	-
Developmental Test & Evaluation (DT&E)	Various	Various : Various	22.795	0.000		0.000		0.000		-		0.000	0.000	22.795	-
<b>Subtotal</b>			44.670	2.814		2.683		2.358		-		2.358	7.445	59.970	N/A

**Remarks**  
The decrease from FY 2024 to FY 2025 is due to the end of testing and evaluation of the Automatic Dependent Surveillance - Broadcast (ADS-B) system capability.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy** **Date:** March 2024

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>
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<b>Management Services (\$ in Millions)</b>				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 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			
T&E Mgmt Support	C/FFP	GID : Fredericksburg, VA	0.266	0.000		0.000		0.000		-		0.000	0.000	0.266	-
Sensor Management	C/FFP	MITRE : Bedford, MA	6.078	0.700	Sep 2023	1.200	Sep 2024	1.316	Sep 2025	-		1.316	2.958	12.252	-
Prior Years Cumulative Funding	Various	Various : Various	2.732	0.000		0.000		0.000		-		0.000	0.000	2.732	19,096.227
<b>Subtotal</b>			9.076	0.700		1.200		1.316		-		1.316	2.958	15.250	N/A

**Remarks**  
The increase from FY 2024 to FY 2025 is for continued support from MITRE for development tools to support government laboratory testing.

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	70.759	17.022	12.565	18.332	-	18.332	Continuing	Continuing	N/A

**Remarks**  
The increase from FY 2024 to FY 2025 is due to an increase in the scope of support required Naval Integrated Fire Control (NIFC) and Net Enabled Weapons (NEW) to extend Sea Shield capabilities; and CAC2S interface development of sensor netting capabilities with Air Surveillance Sensors (Ground/Air Task Oriented Radar (G/ATOR), MINOTAUR Family of Services (MFoS), Composite Tracking Network (CTN), and Medium Range Air Defense Radar (MRADR)) to enable the USMC to support Joint Integrated Air and Missile Defense (IAMD).

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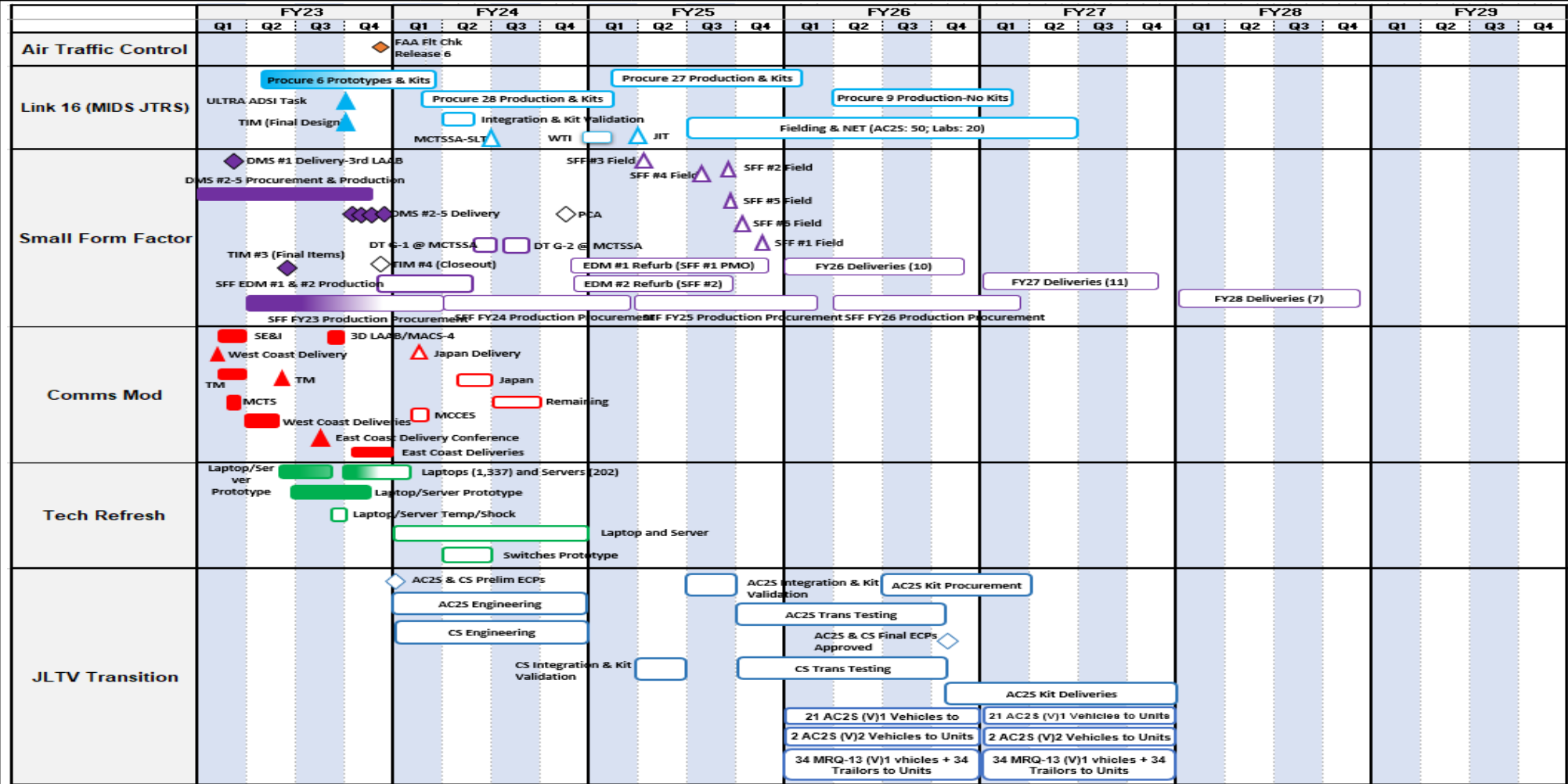
Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy

Date: March 2024

Appropriation/Budget Activity  
1319 / 7

R-1 Program Element (Number/Name)  
PE 0206335M / Common Aviation Command and Control Sys (CAC2S)

Project (Number/Name)  
3373 / Common Aviation Command and Control System (CAC2S)



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Navy		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3373</b>				
Air Traffic Control: Air Traffic Control (ATC) FAA Flight Checks	4	2023	4	2023
Link-16 Modernization (MID-JTRS): MID JTRS Procurement	2	2023	1	2027
Link-16 Modernization (MID-JTRS): ADSI Task	4	2023	4	2023
Link-16 Modernization (MID-JTRS): TIM (Final Design)	4	2023	4	2023
Link-16 Modernization (MID-JTRS): Integration & Kit Validation	2	2024	2	2024
Link-16 Modernization (MID-JTRS): MCTSSA-SLT	3	2024	3	2024
Link-16 Modernization (MID-JTRS): WTI	4	2024	1	2025
Link-16 Modernization (MID-JTRS): JIT	2	2025	2	2025
Link-16 Modernization (MID-JTRS): Fielding & NET	3	2025	2	2027
CAC2S Small Form Factor: DMS Procurement & Production	1	2023	4	2023
CAC2S Small Form Factor: DMS Deliveries	1	2023	4	2023
CAC2S Small Form Factor: TIM #3	2	2023	2	2023
CAC2S Small Form Factor: SFF EDM #1 & #2 Production	4	2023	2	2024
CAC2S Small Form Factor: SFF EDM #1 & #2 Refurb #1 & #2	4	2024	4	2025
CAC2S Small Form Factor: SFF Production Procurement	2	2023	1	2027
CAC2S Small Form Factor: SFF Deliveries	1	2026	4	2028
Comms Mod: SE&I	1	2023	1	2023
Comms Mod: West Coast Deliveries	1	2023	2	2023
Comms Mod: TM	1	2023	2	2023
Comms Mod: MCTS	3	2023	3	2023
Comms Mod: MCCES	3	2023	3	2023

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**Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy** **Date:** March 2024

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0206335M / <i>Common Aviation Command and Control Sys (CAC2S)</i>	<b>Project (Number/Name)</b> 3373 / <i>Common Aviation Command and Control System (CAC2S)</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Comms Mod: East Coast Deliveries	3	2023	4	2023
Comms Mod: Japan Deliveries	1	2024	3	2024
AC2S Tech Refresh: Prototype Procurements	2	2023	3	2023
AC2S Tech Refresh: Prototype Engineering	2	2023	4	2029
AC2S Tech Refresh: Prototype Testing	4	2023	4	2023
AC2S Tech Refresh: PMO Integration Testing	3	2023	3	2023
AC2S Tech Refresh: Phase 1 Comms Mod Deliveries	1	2024	2	2024
AC2S Tech Refresh: Phase 2 Comms Mod Deliveries	1	2025	4	2026
JLTV Transition: Solidify Configuration & Design for CAC2S	3	2023	3	2023
JLTV Transition: AC2S & CS Preliminary ECPs	1	2024	1	2024
JLTV Transition: AC2S & CS Engineering	1	2024	4	2024
JLTV Transition: AC2S & CS Trans Testing	4	2025	4	2026
JLTV Transition: Final ECPs Approval	4	2026	4	2026
JLTV Transition: AC2S Kit Deliveries	4	2026	4	2027