Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy												Date: March 2023
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0206313M *I Marine Corps Comms Systems*							
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	1,683.951	105.494	114.264	192.625	-	192.625	162.434	140.723	134.463	129.747	Continuing	Continuing
2270: *Exp Indirect Fire Gen Supt Wpn Sys*	385.707	22.871	32.555	55.653	-	55.653	43.430	40.836	39.955	40.753	Continuing	Continuing
2273: *Air Ops Cmd & Control (C2) Sys*	461.900	6.946	12.087	15.473	-	15.473	12.922	9.125	9.018	9.077	Continuing	Continuing
2274: *Command & Control Warfare Sys*	87.337	21.643	29.633	22.969	-	22.969	21.110	22.842	21.211	22.055	Continuing	Continuing
2275: *Marine Corps Tactical Radio Systems*	92.427	14.683	17.566	47.985	-	47.985	34.813	24.025	23.757	16.809	Continuing	Continuing
2276: *Comms Switching and Control Sys*	54.480	4.053	2.122	1.008	-	1.008	2.955	2.224	1.703	1.737	Continuing	Continuing
2277: *System Engineering and Integration*	47.406	1.873	4.767	17.846	-	17.846	14.969	9.535	6.376	6.503	Continuing	Continuing
2510: *MAGTF CSSE & SE*	290.725	0.940	0.991	1.021	-	1.021	1.032	1.053	1.070	1.091	Continuing	Continuing
3099: *Radar System*	229.062	1.115	1.059	4.028	-	4.028	3.742	3.544	3.569	3.602	Continuing	Continuing
3772: *Information Related Capabilities (IRC)*	11.710	3.971	5.510	17.672	-	17.672	18.453	18.570	18.683	18.817	Continuing	Continuing
3773: *Fire Coordination and Sensors*	23.197	8.092	7.974	8.970	-	8.970	9.008	8.969	9.121	9.303	Continuing	Continuing
9999: *Congressional Adds*	0.000	19.307	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.307

A. Mission Description and Budget Item Justification

This program element provides funding to develop the command and control (C2) support and information infrastructures for the Fleet Marine Force and supporting establishment. Doctrinally, the C2 support system and the information infrastructure form two parts of a triad of capabilities which permits command and control systems to be transformed into a complete operating system. The third element of the triad is command and control organization and is not covered in this program element. USMC command and control is divided into seven functional areas and one supporting functional area as follows: intelligence C2, fire support C2, air operations C2, radio systems C2, combat service support C2, warfare C2, radar systems C2, and C2 support (information processing and communications).

Within this program element, subprojects have been grouped by C2 functional area for more efficient planning. Air defense weapons systems have been added to facilitate planning and a separate project is used for systems assigned to the supporting establishment. Subprojects which support the Commander's decision processes

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy	Date: March 2023
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have been collected into the Command Post Systems project since these systems must work in close cooperation to ensure effective C2 of Marine Air Ground Task Forces.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	108.695	114.305	123.424	-	123.424
Current President's Budget	105.494	114.264	192.625	-	192.625
Total Adjustments	-3.201	-0.041	69.201	-	69.201
• Congressional General Reductions	-	-0.041			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.111	0.000			
• SBIR/STTR Transfer	-3.090	0.000			
• Program Adjustments	0.000	0.000	24.398	-	24.398
• Rate/Misc Adjustments	0.000	0.000	44.803	-	44.803

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2022	FY 2023
Project: 9999: *Congressional Adds*		
Congressional Add: *Multi-function electronic warfare*	19.307	0.000
Congressional Add Subtotals for Project: 9999	19.307	0.000
Congressional Add Totals for all Projects	19.307	0.000

Change Summary Explanation

The net increase of $78.361M between FY 2023 and FY 2024 is primarily due to the following:

- Exp Indirect Fire Gen Supt Wpn Sys Project 2270: Mobile All-Domain Observation and Sensing System (MA-DOSS) transitioning from PE 0206625M, Project 2272 beginning FY 2024. Marine Air-Ground Task Force (MAGTF) Command and Control (C2) Systems (MAGTF C2) Tactical Service Oriented Architecture (TSOA) alignment and development of Artificial Intelligence (AI)/Machine Learning (ML) within Joint All-Domain Command and Control (JADC2) capabilities and continuing efforts of funding to support the addition of operation within a Development, Security, and Operations (DevSecOps) environment requirements and system engineering support.
- System Engineering and Integration Project 2277: E2O increase is due to a combination of program growth and DoD's increased E2O Expeditionary Energy efforts. These include vehicle electrification research and development initiatives, alternative energy technological developments, hydrogen production, distribution and power generation systems, advanced energy storage and battery technologies, energy harvesting, fuel distribution and reporting systems, and industry interface.

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- Marine Corps Tactical Radio Systems Project 2275: Initiation of SPEED software development and waveform modernization efforts.
- Information Related Capabilities (IRC) Project 3772: Initiation of product development efforts related to YETI. Details are held at a higher classification.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy											Date: March 2023	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*			
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**
2270: *Exp Indirect Fire Gen Supt Wpn Sys*	385.707	22.871	32.555	55.653	-	55.653	43.430	40.836	39.955	40.753	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Secure Expeditionary Resilient Positioning, Navigation and Timing (SERPNT) (formerly REPNT) - This is a critical Marine Corps Force Design program. Program efforts are focused on increasing the resiliency and assurance of Positioning, Navigation, and Timing (PNT) capabilities across the enterprise. This enables Marine Air-Ground Task Force (MAGTF) Commanders to know and trust position, effectively navigate, and receive precise and accurate timing for users, platforms, and systems across warfighting functions. Current SERPNT efforts will enable the Marine Corps to transition to a smaller form factor of Military Code (M-Code) GPS signal receivers through participation in Space Force-led Increment II technology maturation efforts. Program Office will research, assess, and integrate resilient and assured PNT alternative capabilities which will mitigate threats from peer and near peer adversaries to meet Force Design 2030, EABO, and Joint All-Domain Command and Control (JADC2) construct.

Marine Air-Ground Task Force (MAGTF) Command and Control (C2) Systems (MAGTF C2) - MAGTF C2 Tactical Service Oriented Architecture (TSOA) is an ACAT IV(M) program of record (POR). TSOA was created in order to achieve agility and greater cost reduction across the USMC Command and Control (C2) Enterprise. This POR has been identified by the USMC Combat Development and Integration (CD&I) as the USMC's Service Oriented Infrastructure (SOI) designed to support the Objective Network as defined by the Headquarters Marine Corps, Deputy Commandant for Information Network Modernization Plan. The USMC seeks to rectify its current C2 architecture, which is composed of disparate and duplicative legacy systems through TSOA. TSOA will enable a collapse of this disparate C2 construct and create a Net-Centric environment where Marines employ user-centered applications that access required information across Authoritative Data Sources (ADS). This will be achieved through the CD&I directed TSOA compliance effort in order to reduce duplicative product development and enable a divestiture of legacy disparate systems. This requires additional effort to ensure other ADS's are compliant with the TSOA product line.

TSOA's purpose is to ensure that Marines receive the right information, from trusted and accurate sources, when and where it is needed. This enables decisions "in context" for USMC operations across the Range of Military Operations and in support of the Unified Command Plan. TSOA's four capabilities include: Infrastructure and Services (I&S) which is the capability of authorized users to subscribe and publish required information from ADS with the use of software connectors; Agile Application Development (A2D) which is the capability to develop, accredit, and provide easy-to-learn, user-defined software applications that meet emergent Marine needs; Modular Software Architecture (MSA) which is virtualized, hardware agnostic, and scalable; Marine Corps Software Resource Center (MCSRC) is the Marine Corps' enterprise "App Store" for developed applications that allows Marines the ability to download, review, rate, and provide feedback.

Identity Dominance System - Marine Corps (IDS-MC) is a multi-modal (fingerprint, iris, and face) biometric collection system that provides the USMC a reliable and effective capability to collect, share, match, access, verify and store identity information. IDS-MC enables the Marine to collect appropriate biometric, biographical and reference information on an individual and match this locally developed information with pre-existing information available to the expeditionary force. The system displays match results with linkage to the respective individual's biographical and reference information as well as help analyze the response, update records as

appropriate, create reports and disseminate updated information. The primary mission of IDS-MC is to provide the Marine Corps with the means to identify persons encountered in the battle space. While IDS-MC is not an intelligence analysis system, it does provide identification information in support of military intelligence by providing positive identification of persons of interest. IDS-MC is an enabler in the areas of detainee management and questioning, base access, counterintelligence screening, border control, displaced persons' management and aiding in humanitarian assistance missions. IDS-MC supports the tactical application of identity dominance and fully supports a forward presence, crisis response and contingency response capability.

Forensics Dominance System - Marine Corps (FDS-MC) is a multi-modal (fingerprint, DNA, document, cellular, media, chemical, and fire arm) forensic collection system that provides the United States Marine Corps (USMC) a reliable and effective capability to recognize, protect, collect, analyze, store and share forensic information. This organic Marine Corps forensic capability supports deployed Marine Forces with agile, ruggedized, and scalable expeditionary forensics that are compatible and fully integrated with joint, other service, and interagency laboratories, yet also tailored to the unique operating requirements of the maritime domain. Maritime applications include the ability to support Marine Expeditionary Units with an at sea forensic exploitation capability to conduct vessel boarding and ship search operations. FDS-MC supports the Information Environment through sensitive forensic testing and analysis that positively identifies personnel and trace chemicals/elements; forensically exploits document and media; and scientifically links identities and networks to places, events, and activities. FDS-MC provides a transformative capability that integrates Artificial Intelligence and Machine Learning to enable intelligence operations, force protection, intelligence, and targeting.

Handheld Command and Control (H2C2) - Provides the dismounted user the to tactical edge, with handheld devices that provides integrated, on-the-move, secure, timely, and relevant Command & Control/Situational Awareness (C2/SA) information to tactical combat, combat support and combat service support commanders, leaders, and key C2 nodes. H2C2 provides leaders with a capability for selecting, managing, and assimilating relevant data and information. This allows them to pass orders and graphics that will provide the joint warfighter the capability to visualize the commander's intent and scheme of maneuver, and provide enhanced SA of friendly, reported enemy, neutral, and civilian entities.

MOBILE ALL-DOMAIN OBSERVATION AND SENSING SYSTEM (MA-DOSS) FoS provides persistent, all-domain sensing and surveillance support, tactical early warning, multi-domain intrusion-detection, and forward edge processing/computing of an AI/ML based computer vision capability to the FMF, at the Marine Littoral Regiment (MLR), down to any sized Marine element, in order to support the Naval Expeditionary Force (NEF) in the conduct of Sea Denial and Sea Control operations, and to enable force protection for expeditionary advanced bases (EABs), forward fixed sites, and installations. By providing mobile, expeditionary, amphibious, modular, multi-spectral, and persistent surveillance systems based on sensor agnostic unmanned platforms, the MA-DOSS FoS will provide the ability to observe, collect, detect, classify, identify, track, record, and report on contacts, objects of interest, and assess threats twenty-four hours a day utilizing a fused sensor data display while reducing manpower requirements and the cognitive workload on operators and analysts. MA-DOSS will employ advanced Human Machine Teaming (HMT) and leverage the force-multiplying capabilities of Artificial Intelligence/Machine Learning (AI/ML) to execute tasks that normally require human intelligence/interface. Additionally, increased mobility will be achieved with autonomous robotic platforms, thereby enhancing survivability of the primary system and stand-in forces operating inside adversary weapon engagement zones (WEX). Beginning FY 2024 MA-DOSS transitions to PE: 0206313M Marine Corps Comms Systems Proj: 2270 Exp Indirect Fire Gen Supt Wpn Sys. MA-DOSS was previously funded in PE 0206625M, Project 2272 in FY 2023.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: MAGTF C2: Product Development	8.016	15.620	21.375	0.000	21.375
Articles:	-	-	-	-	-
FY 2023 Plans: - Establish initial Development, Security, and Operations (DevSecOps) environment for development and delivery of TSOA. - Continue harvesting cloud data, which enables higher fidelity Machine Learning (ML) models. This will enable future Cognitive Assistants. - Continue MCSRC support for USCMC Common Handheld devices for lightweight applications. - Continue improvements to the federation and data correlation services to support COP/CTP across the MAGTF/JTF. - Initiate requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automates the integration of security at every phase of the software development lifecycle, from initial design through integration, testing, deployment, and software delivery.					
FY 2024 Base Plans: - Continue initial Development, Security, and Operations (DevSecOps) environment for development and delivery of TSOA. - Continue harvesting cloud data, which enables higher fidelity Machine Learning (ML) models. This will enable future Cognitive Assistants. - Continue MCSRC support for USMC Common Handheld devices for lightweight applications. - Continue improvements to the federation and data correlation services to support COP/CTP across the MAGTF/JTF. - Complete requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automate the integration of security at every phase of the software development life-cycle, from initial design through integration, testing, deployment, and software delivery. - Initiate alignment of TSOA capabilities focused on AI/ML within JADC2.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase from FY 2023 to FY 2024 supports TSOA alignment and development of AI/ML within JADC2 capabilities and continuing efforts of funding to support the addition of operation within a DevSecOps environment requirements and system engineering support.					
Title: MAGTF C2: Support Costs	1.387	1.543	1.600	0.000	1.600
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue system engineering support for system integration, configuration management, and technical assessments of TSOA software products. -Initiate requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automate the integration of security at every phase of the software development lifecycle, from initial design through integration, testing, deployment, and software delivery.					
FY 2024 Base Plans: - Continue system engineering support for system integration, configuration management, and technical assessments of TSOA software products. - Complete requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automates the integration of security at every phase of the software development life-cycle, from initial design through integration, testing, deployment, and software delivery. -Initiate engineering support TSOA capabilities focused on AI/ML within JADC2.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: Increase from FY 2023 to FY 2024 supports engineering support related to AI/ML within JADC2.					
Title: MAGTF C2: Test and Evaluation	2.100	2.789	3.730	0.000	3.730
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue TSOA compliance testing with USMC Tactical Data Systems (TDS). - Continue to participate in technical working groups in support of test and engineering.					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue to provide technical assistance to other programs supported by Marine Corps Tactical Systems Support Activity (MCTSSA) that involve the use of these systems as well as through the Operating Forces Tactical Systems Support Center (OFTSSC) trouble calls. - Initiate requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automates the integration of security at every phase of the software development lifecycle, from initial design through integration, testing, deployment, and software delivery. - Establish test and evaluation procedures for operations within a DevSecOps environment for TSOA. ***FY 2024 Base Plans:*** - Continue TSOA compliance testing with USMC Tactical Data Systems (TDS). - Continue to participate in technical working groups in support of test and engineering. - Continue to provide technical assistance to other programs supported by MCTSSA that involve the use of these systems as well as through the OFTSSC trouble calls. - Continue test and evaluation procedures for operations within a DevSecOps environment for TSOA. - Complete requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automates the integration of security at every phase of the software development life-cycle, from initial design through integration, testing, deployment, and software delivery. - Initiate test and evaluation of TSOA capabilities within the JADC2 construct. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 supports additional test and evaluation of TSOA capabilities within the JADC2 construct.					
Title: MAGTF C2: Management Services	1.296	1.757	1.810	0.000	1.810
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue to receive software engineering support to provide appropriate government direction in design and development of software, conduct of source code reviews, and prime vendor oversight from Federally Funded Research & Development Center (FFRDC). - Continue the examination and prototyping of AI applications for USMC tactical commanders.					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Initiate requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automates the integration of security at every phase of the software development lifecycle, from initial design through integration, testing, deployment, and software delivery. ***FY 2024 Base Plans:*** - Continue to receive software engineering support to provide appropriate government direction in design and development of software, conduct of source code reviews, and prime vendor oversight from FFRDC. - Continue the examination and prototyping of AI applications for USMC tactical commanders. - Continue requirements for the addition of operation within a DevSecOps environment which is a cultural approach to automates the integration of security at every phase of the software development lifecycle, from initial design through integration, testing, deployment, and software delivery. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 supports continued software engineering support for the addition of operation within a DevSecOps and for the design, development of software, conducting of source code reviews, and for prime vendor oversight.					
Title: IDS-MC: Product Development	0.503	0.588	0.263	0.000	0.263
Articles:	-	-	-	-	-
FY 2023 Plans: - Develop/integrate software/hardware enhancements for collection device and interoperability between devices and data systems. ***FY 2024 Base Plans:*** - Continue to develop/integrate software/hardware enhancements and interoperability between devices and data systems ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Decrease from FY 2023 to FY 2024 reflects reduced software/hardware enhancements and interoperability efforts.					
Title: IDS-MC: Support	0.327	0.196	0.081	0.000	0.081
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue software engineering support. - Initiate integration of enhanced identity collection capabilities in advance of IDS-MC Increment 3.					
FY 2024 Base Plans: - Continue integration of enhanced identity collection capabilities. - Conclude software engineering support. - Initiate market research for the transaction management application tech refresh. - Initiate market research to support mobile collection device tech refresh.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: Decrease from FY 2023 to FY 2024 supports initiation of market research related to the transaction management application tech refresh and mobile collection device tech refresh.					
Title: Forensics Dominance System - Marine Corps (FDS-MC): Support	0.050	0.184	0.275	0.000	0.275
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue laboratory integration to facilitate network connectivity, cybersecurity updates, Technical Readiness Reviews, and software patching.					
FY 2024 Base Plans: - Conclude laboratory integration to facilitate cybersecurity updates, Technical Readiness Reviews, and software patching. - Conduct market research for risk reduction and tech refresh of the FDS-MC system.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase from FY 2023 to FY 2024 supports the market research related to risk reduction and tech refresh of the FDS-MC system.					
Title: Forensics Dominance System - Marine Corps (FDS-MC): Test and Evaluation	0.080	0.086	0.729	0.000	0.729
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue evaluation of COTS forensics components for risk reduction of the FDS-MC system. ***FY 2024 Base Plans:*** - Complete the evaluation of COTS forensics components for risk reduction of the FDS-MC system. - Initiate the evaluation and procurement of hardware components for the FDS-MC system. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase from FY 2023 to FY 2024 is due to the increased effort of evaluating and procuring test assets of hardware components ahead of a FY25 procurement decision					
Title: H2C2: Product Development	1.722	1.480	1.650	0.000	1.650
Articles:	-	-	-	-	-
FY 2023 Plans: -Continue to develop cybersecurity and vulnerability patches for fielded software. -Continue software development to incorporate cybersecurity patches and software updates to improve interoperability with existing C2 Systems and peripheral devices as part of future Engineering Change Proposals (ECPs). ***FY 2024 Base Plans:*** -Continue to develop cybersecurity and vulnerability patches for fielded software. -Continue software development to incorporate cybersecurity patches and software updates to improve interoperability with existing C2 Systems and peripheral devices as part of future ECPs. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:***					

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase from FY 2023 to FY 2024 supports continuation of cybersecurity and development requirements associated with ECPs and wireless capabilities.					
Title: H2C2: Support	1.194	1.100	1.684	0.000	1.684
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue integration of additional software applications into the H2C2 end user device hardware platform. - Continue integration of emerging capabilities across the H2C2 portfolio to include: MAGTF Common Handheld (MCH) end user device, software application, peripheral equipment and integration with existing C2 programs of record. ***FY 2024 Base Plans:*** - Continue integration of additional software applications into the H2C2 end user device hardware platform. - Continue integration of emerging capabilities across the H2C2 portfolio to include MCH end user device, software application, peripheral equipment and integration with existing C2 programs of record. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 supports continuation of development efforts related to Marine Corps requirement to integrate and maintain interoperability with other existing and emerging command and control programs of record.					
Title: H2C2: Test and Evaluation	0.960	1.020	1.100	0.000	1.100
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue testing of cybersecurity and vulnerability patches for current MCH software. - Continue interoperability testing between follow on MCH software updates and other existing C2 systems. ***FY 2024 Base Plans:*** - Continue testing of cybersecurity and vulnerability patches for current MCH software. - Continue interoperability testing between follow on MCH software updates and other existing C2 systems. ***FY 2024 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 reflects continuation of cybersecurity and vulnerability patches for current MCH software testing as well as interoperability testing between follow on MCH software updates and other existing C2 systems.					
Title: SERPNT (formerly REPNT): Support ***Articles:*** ***FY 2023 Plans:*** - Continue evaluation of technologies to increase resiliency and assurance of PNT capabilities across the USMC enterprise. - Initiate development of Technical Data Packages (TDPs) and testing activities for follow-on technologies - Continue analysis of technologies for the Increment II handheld which will replace the DAGR. ***FY 2024 Base Plans:*** - Continue to support all technical and programmatic activities as the PNT CMO evaluates, procures, and fields M-Code and non-GPS capabilities to Marine operating forces. - Continue the evaluation of technologies that will increase the resiliency and assurance of PNT capabilities across the USMC enterprise. Assist PMOs with integration of M-Code capable A-PNT systems into their respective platforms, and assist client system PMOs in ensuring data interfaces work and that appropriate Graphical User Interfaces (GUIs) are developed to support combat operations in Navigation Warfare (NAVWAR) contested environments. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease from FY 2023 to FY 2024 reflects reduced integration efforts related to priority platform programs.	1.548 -	2.411 -	2.000 -	0.000 -	2.000 -
Title: SERPNT (formerly REPNT): Test and Evaluation ***Articles:*** ***FY 2023 Plans:*** - Continue laboratory analysis and simulations as well as field testing of Mounted PNT solutions during M-Code GPS implementation on Marine Corps focus of effort ground platforms.	1.840 -	3.022 -	1.256 -	0.000 -	1.256 -

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Initiate development of Technical Data Packages (TDPs) and testing activities for follow-on technologies. - Conduct analysis, testing, and evaluation on potential alternative PNT solutions. ***FY 2024 Base Plans:*** - Participate in Army's test events for the MAPS Gen II system which will lead to the successful fielding of the Marine Corps' Mounted Assured Resilient Navigation (MARNAV) capability. - Continue laboratory analysis and simulations as well as field testing of alternative PNT solutions as we field M-Code capable solutions to our priority host platforms. - Plan out future T&E activities to include the development of a TEMP and working hand-in-hand with MCOTEA. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease from FY 2023 to FY 2024 reflects reduced test and evaluation costs due to leveraging the Army's test events.					
Title: SERPNT: Management Services	1.848	0.759	0.720	0.000	0.720
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue MITRE Engineering support to develop and update PNT road map and technical studies focused on increasing resiliency and assurance of PNT capabilities across the USMC enterprise. - Continue research and development of technical strategies to ensure NAVWAR compliance during the Marine Corps' modernization to M-Code and other assured PNT capabilities. - Continue to provide subject matter expertise to the PNT CMO in all matters relevant to the GPS / PNT arena, and function as a technical liaison to other Service activities, industry partners, and academia. ***FY 2024 Base Plans:*** - Continue engineering and technical studies focused on increasing the resiliency and assurance of Assured PNT capabilities across the USMC enterprise. - Continue development of technical strategies that will ensure that NAVWAR compliance is implemented across the Marine Corps as M-Code capable solutions are identify, procured and fielded. - Continue to provide subject matter expertise to the PNT CMO in all matters relevant to the GPS / PNT arena, and function as a technical liaison to other Service activities, industry partners, and academia. ***FY 2024 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant change from FY 2023 to FY 2024.					
Title: Mobile All-Domain Observation and Sensing System (MA-DOSS) : Product Development ***Articles:*** ***FY 2023 Plans:*** N/A ***FY 2024 Base Plans:*** MA-DOSS was previously funded in PE 0206625M, Project 2272 in FY 2023. - Continues product development and integration of GBOSS AI/ML hardware and software within Sensor Family of Systems which will provide object detection capabilities resulting in decreased time required to conduct Indications and Warnings (I&W). - Continues development efforts in support of the MA-DOSS FoS: The MA-DOSS Fos will provide the ability to observe, collect, detect, classify, identify, track, record, and report on contacts, objects of interest, and assess threats twenty-four hours a day utilizing a fused sensor data display while reducing manpower requirements and the cognitive workload on operators and analysts. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** MA-DOSS was previously funded in PE 0206625M, Project 2272 in FY 2023. Budget decrease from FY 2023 to FY 2024 reflects reduction of development efforts in support of GBOSS AI/ML.	0.000 -	0.000 -	17.380 -	0.000 -	17.380 -
Accomplishments/Planned Programs Subtotals	22.871	32.555	55.653	0.000	55.653

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4652-1: *IDS-MC*	0.167	0.293	0.582	-	0.582	0.891	0.888	0.905	0.923	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4633-1: *SERPNT (formerly REPNT)*	1.500	30.957	35.444	-	35.444	19.821	20.054	30.455	30.864	Continuing	Continuing
• PMC/4631AB: *H2C2*	0.000	17.843	9.440	-	9.440	9.440	9.440	9.440	9.629	Continuing	Continuing
• PMC/4747/6438A: *MA-DOSS*	0.000	1.270	0.000	-	0.000	5.000	0.000	5.000	5.100	Continuing	Continuing
• PMC/4652-2: *FDS-MC*	0.000	0.000	1.200	-	1.200	1.100	0.000	0.000	0.000	0.000	2.300

Remarks

D. Acquisition Strategy

SERPNT (formerly REPNT): As the Position, Navigation, and Timing (PNT) Commodities Management Office (CMO), the Marine Corps program office will continue to leverage efforts conducted within the joint environment to assist in informing and implementing the enterprise PNT strategy for the Marine Corps. The program office will seek out opportunities to maximize the use of COTS/NDI products in its approach. The PNT CMO will identify opportunities for integration of emerging technologies across the variety of Marine Corps ground platforms.

MAGTF C2 Tactical Service Oriented Architecture (TSOA): TSOA program office has developed its Acquisition Strategy/Acquisition Plan (ASAP) to define the TSOA operational mission, business strategy and the detailed acquisition approach relative to cost, schedule and performance drivers. The TSOA program is being developed and managed using an "IT-Box" construct that supports agile development and requirements oversight for information systems." Requirements for TSOA are described in three key documents: the Information System Initial Capabilities Document (IS-ICD), the Requirements Definition Package (RDP), and the Capability Drop (CD).

IDS-MC: The IDS-MC Inc 2 acquisition strategy involved significant market research during FY 2017, resulting in a DoD Rapid Innovation Funding (RIF), Broad Agency Announcement (BAA) for IDS-MC Inc 2 prototyping, to provide a complete prototype identity operations system. Upon completion of the prototype system, the Program Office obtained a successful Milestone C/Full Rate Production (FRP) decision for IDS-MC Inc 2. The Program Office utilized a Justification and Approval to move into a traditional Federal Acquisition Regulations (FAR) based acquisition for both Low-Rate Initial Production and Full Rate Production contracts. IDS-MC Inc 2 achieved Full Operational Capability (FOC) in 3rd quarter FY 2022.

FDS-MC: The FDS-MC acquisition strategy is evolutionary, structured to deliver capabilities incrementally, recognizing the need for future capability improvements. This allows the current capability to be utilized in the field without interruption, while implementing updated components and improved technologies as they evolve. The FDS-MC acquisition strategy leverages market research, user feedback, and technology exploration to deliver a streamlined, efficient capability that can be easily sustainable by the Marine Corps going forward.

Handheld Command and Control (H2C2): H2C2 will use an evolutionary approach for technology insertion. The approach will leverage and mature COTS and NDI technologies to rapidly transition a handheld data capability to other acquisition programs. H2C2 inserts mature technology into existing programs in order to fill capability gaps and requirement shortfalls. These technologies will be inserted at different times along gaining program acquisition cycles. This strategy will apply to

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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available technology at different proposed technology insertion points for each gaining program. Additionally, H2C2 has been tasked to develop a solution that meets the JBC-P dismounted requirements and requires C2SA interoperability with existing C2 programs of record. The current iteration of MCH provides a dismounted C2SA capability at the squad level via a tethered connection to tactical radios. Future iterations will incorporate enhanced software and hardware capabilities based on technological maturity over time in accordance with the evolutionary development approach.

Mobile All-Domain Observation and Sensing System (MA-DOSS): MA-DOSS makes maximum use of COTS, GOTS and NDI with Firm Fixed Price Production.

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2 Product Development	C/CPFF	NIWC-LANT : Charleston, SC	63.823	2.130	Apr 2022	4.018	Apr 2023	6.392	Apr 2024	-		6.392	Continuing	Continuing	Continuing
MAGTF C2	C/CPFF	NIWC-PAC : San Diego, CA	13.332	2.179	May 2022	3.000	May 2023	3.600	May 2024	-		3.600	Continuing	Continuing	Continuing
MAGTF C2	WR	NIWC-LANT : Charleston, SC	13.736	0.000		2.602	Feb 2023	5.598	Feb 2024	-		5.598	0.000	21.936	-
MAGTF C2	WR	NRL : Washington, DC	4.957	1.500	Mar 2022	1.500	Mar 2023	0.000		-		0.000	Continuing	Continuing	Continuing
MAGTF C2	C/CPFF	ARL : Penn State, PA	1.200	1.500	Apr 2022	1.500	Apr 2023	0.000		-		0.000	0.000	4.200	-
MAGTF C2	C/CPFF	NG : San Diego, CA	8.614	0.707	Sep 2022	3.000	Apr 2023	5.785	Apr 2024	-		5.785	0.000	18.106	-
IDS-MC	C/CPFF	MCSC : Quantico, VA	0.116	0.163	May 2022	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
IDS-MC	C/FFP	AFRL/RI : Fairborn, OH	0.331	0.340	Feb 2022	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
IDS-MC	WR	NIWC-LANT : Charleston, SC	0.000	0.000		0.438	Nov 2022	0.263	Nov 2023	-		0.263	0.000	0.701	-
H2C2	WR	DPSS : China Lake, CA	1.433	1.722	Nov 2021	1.480	Nov 2022	1.650	Nov 2023	-		1.650	0.000	6.285	-
MA-DOSS GOV	WR	NSWC-CRANE : Crane,IN	0.000	0.000		0.000		4.677	Apr 2024	-		4.677	Continuing	Continuing	Continuing
MA-DOSS CTR	C/CPFF	NSWC-CRANE : Crane,IN	0.000	0.000		0.000		12.703	Apr 2024	-		12.703	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	170.399	0.000		0.000		0.000		-		0.000	0.000	170.399	-
IDS-MC	WR	GSA-FSA-QFOB : Washington, DC	0.000	0.000		0.150	Mar 2023	0.000		-		0.000	0.000	0.150	-
		Subtotal	277.941	10.241		17.688		40.668		-		40.668	Continuing	Continuing	N/A

Remarks

Product Development overall increase from FY 2023 to FY 2024 is largely attributed to the following:

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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2 (TSOA) alignment and development of AI/ML within JADC2 capabilities and continuing efforts of funding to support the addition of operation within a DevSecOps environment requirements and system engineering support. MA-DOSS was previously funded in PE 0206625M, Project 2272 in FY 2023 and transitioned to Project 2270 beginning FY 2024.															

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	WR	NIWC-P : San Diego, CA	11.253	1.387	Feb 2022	1.543	Mar 2023	1.600	Mar 2024	-		1.600	Continuing	Continuing	Continuing
IDS-MC	WR	NIWC LANT : Charleston, SC	2.338	0.035	Dec 2021	0.196	Oct 2022	0.081	Nov 2023	-		0.081	Continuing	Continuing	Continuing
IDS-MC	C/CPFF	AFRL/RI : Fairborn, OH	0.155	0.292	Feb 2022	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
FDS-MC	C/BA	NIWC LANT : Charleston, SC	0.066	0.027	Dec 2021	0.184	Oct 2022	0.275	Oct 2023	-		0.275	Continuing	Continuing	Continuing
FDS-MC	C/BA	AFRL/RI : Fairborn, OH	0.134	0.023	Feb 2022	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
H2C2	C/BA	NIWC LANT 1 : Charleston, SC	5.314	0.100	Dec 2021	0.100	Dec 2022	0.150	Dec 2023	-		0.150	0.000	5.664	-
H2C2	C/BA	NIWC LANT : Charleston, SC	2.556	0.000		0.286	Dec 2022	0.300	Dec 2023	-		0.300	0.000	3.142	-
H2C2	C/BA	NSWC Crane : Crane, IN	3.530	0.000		0.558	Dec 2022	0.600	Dec 2023	-		0.600	0.000	4.688	-
H2C2	C/BA	NSWC China Lake : China Lake, CA	5.137	0.594	Dec 2021	0.000		0.000		-		0.000	0.000	5.731	-
H2C2	C/BA	MCSC : Quantico, VA	0.844	0.200	Dec 2021	0.000		0.000		-		0.000	0.000	1.044	-
H2C2	C/BA	NSWC Crane2 : Crane, IN	0.360	0.000		0.156	Dec 2022	0.134	Dec 2023	-		0.134	0.000	0.650	-
H2C2	C/BA	MCTSSA : Camp Pendleton, CA	0.000	0.300	Dec 2021	0.000		0.500	Dec 2023	-		0.500	0.000	0.800	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SERPNT	C/BA	NIWC LANT : Charleston, SC	1.645	1.107	Jan 2022	2.411	Oct 2022	2.000	Oct 2023	-		2.000	0.000	7.163	-
SERPNT	C/BA	NSWC Corona : Norco, CA	0.000	0.441	Dec 2021	0.000		0.000		-		0.000	0.000	0.441	-
Prior Years Cumulative Funding	Various	Various : Various	2.292	0.000		0.000		0.000		-		0.000	0.000	2.292	-
		Subtotal	35.624	4.506		5.434		5.640		-		5.640	Continuing	Continuing	N/A

Remarks

Support overall increase from FY 2023 to FY 2024 is largely attributed to H2C2 increased requirements to integrate and maintain interoperability with other existing and emerging command and control programs of record.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	C/ FFPLOE	MCTSSA : Camp Pendleton, CA	9.531	2.100	Apr 2022	2.789	Apr 2023	3.730	Apr 2024	-		3.730	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	MIPR	NIWC L : Charleston, SC	1.166	0.040	Nov 2021	0.086	Oct 2022	0.729	Nov 2023	-		0.729	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/FFP	ARL/RI : Fairborn, OH	0.134	0.040	Nov 2021	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NIWC LANT : Charleston, South Carolina	4.195	0.100	Dec 2021	0.523	Dec 2022	0.500	Dec 2023	-		0.500	0.000	5.318	-
Operational Test & Evaluation (OT&E)	WR	MCOTEA : Quantico, VA	2.185	0.000		0.000		0.000		-		0.000	0.000	2.185	-
Developmental Test & Evaluation (DT&E)	C/FFP	NIWC LANT : Charleston, SC	1.583	0.100	Dec 2021	0.387	Dec 2022	0.350	Dec 2023	-		0.350	0.000	2.420	-
Developmental Test & Evaluation (DT&E)	C/FFP	MCTSSA : Camp Pendleton, CA	1.984	0.760	Dec 2021	0.110	May 2023	0.250	May 2024	-		0.250	0.000	3.104	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NIWC ATLANTIC : Charleston, SC	0.000	1.840	Dec 2021	3.022	Oct 2022	1.256	Oct 2023	-		1.256	0.000	6.118	-
Operational Test & Evaluation (OT&E)	C/CPFF	NIWC LANT : Charleston, SC	1.372	0.000		0.000		0.000		-		0.000	0.000	1.372	-
Operational Test & Evaluation (OT&E)	C/CPFF	MCSC : Quantico, VA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Operational Test & Evaluation (OT&E)	Various	Various : Various	32.285	0.000		0.000		0.000		-		0.000	0.000	32.285	-
		Subtotal	54.435	4.980		6.917		6.815		-		6.815	Continuing	Continuing	N/A

Remarks

Test and Evaluation: No significant change from FY 2023 to FY 2024.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF C2	C/CPFF	CECOM/MITRE : Ft. Monouth, NJ	12.716	1.296	Jun 2022	1.757	Jun 2023	1.810	Jun 2024	-		1.810	Continuing	Continuing	Continuing
FDS-MC	C/CPFF	CECOM/MITRE : Ft. Monouth, NJ	0.180	0.000		0.000		0.000		-		0.000	0.000	0.180	-
SERPNT	C/CPFF	CECOM/MITRE : Ft. Monouth, NJ	0.170	1.848	Feb 2022	0.759	Dec 2022	0.720	Oct 2023	-		0.720	0.000	3.497	-
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	4.641	0.000		0.000		0.000		-		0.000	0.000	4.641	-
		Subtotal	17.707	3.144		2.516		2.530		-		2.530	Continuing	Continuing	N/A

Remarks

Management Services: No significant change from FY 2023 to FY 2024.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	385.707	22.871		32.555		55.653		-		55.653	Continuing	Continuing	N/A

Remarks

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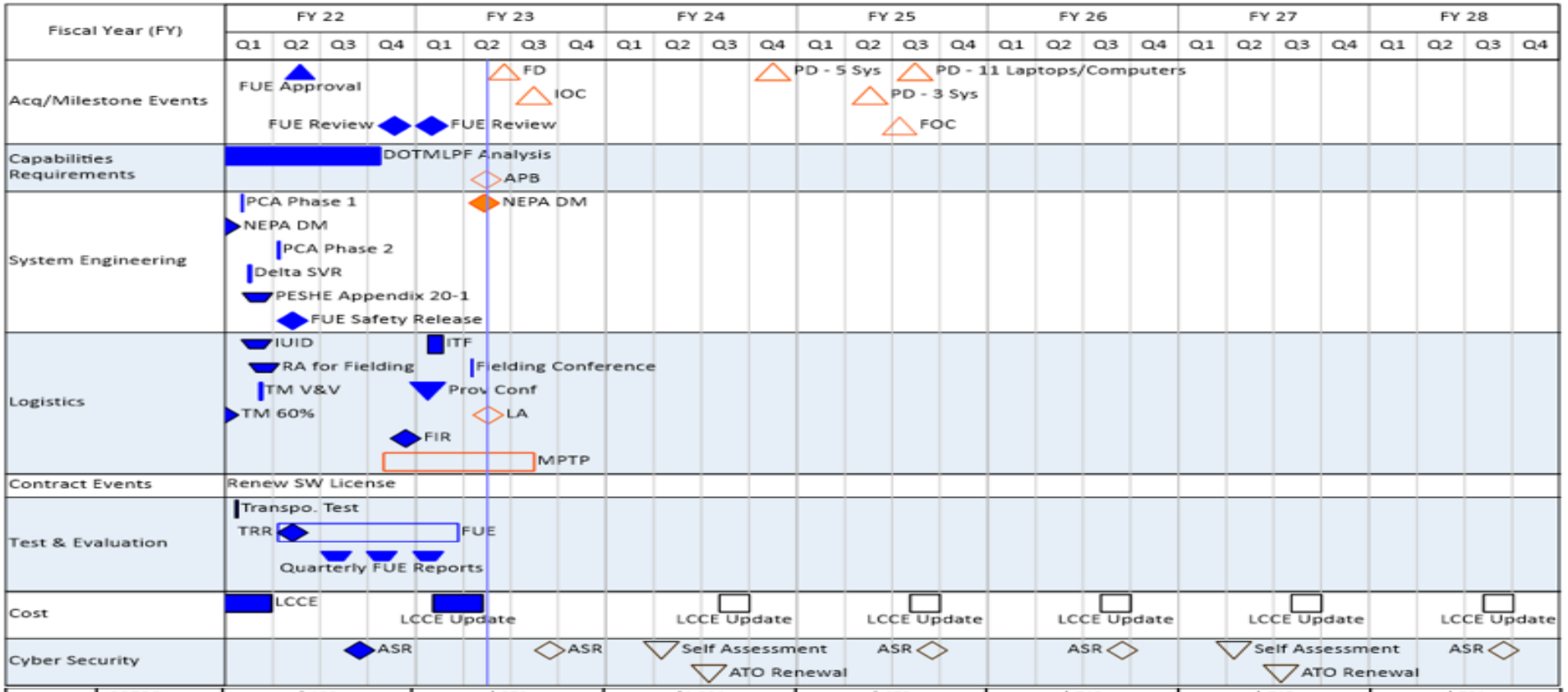
FDS-MC



Funding ($ in Millions)	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28
RDT&E	$.130	$.270	$1.004	$.672	$.710	$.715	$.721
O&M	$3.687	$.506	$4.009	$4.134	$4.240	$4.366	$4.486
Procurement	-	-	$1.200	$1.100	-	-	-
Quantities	0	0	5	3	0	0	0
Totals	$3.817	$.776	$6.213	$5.906	$4.950	$5.081	$5.207

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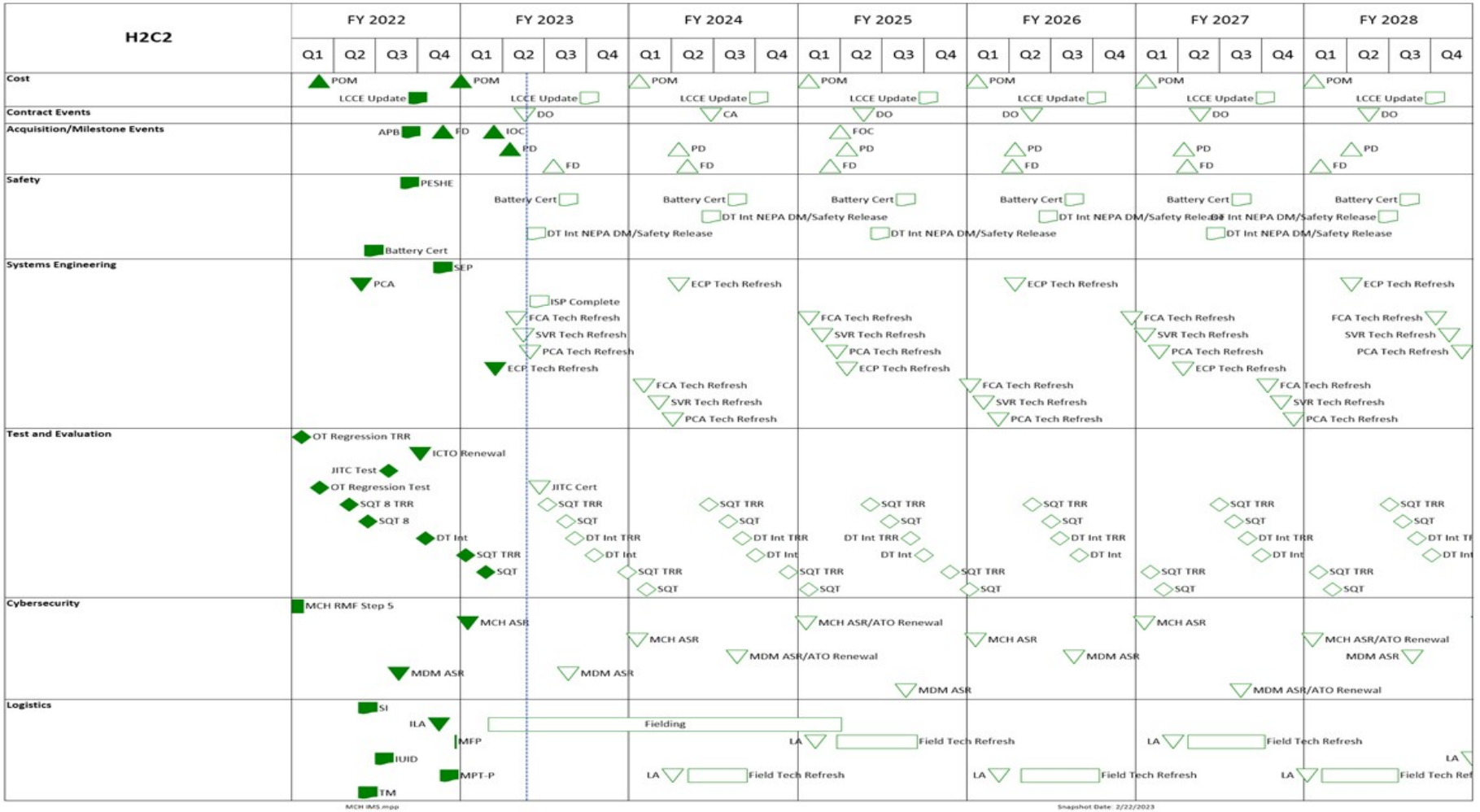

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
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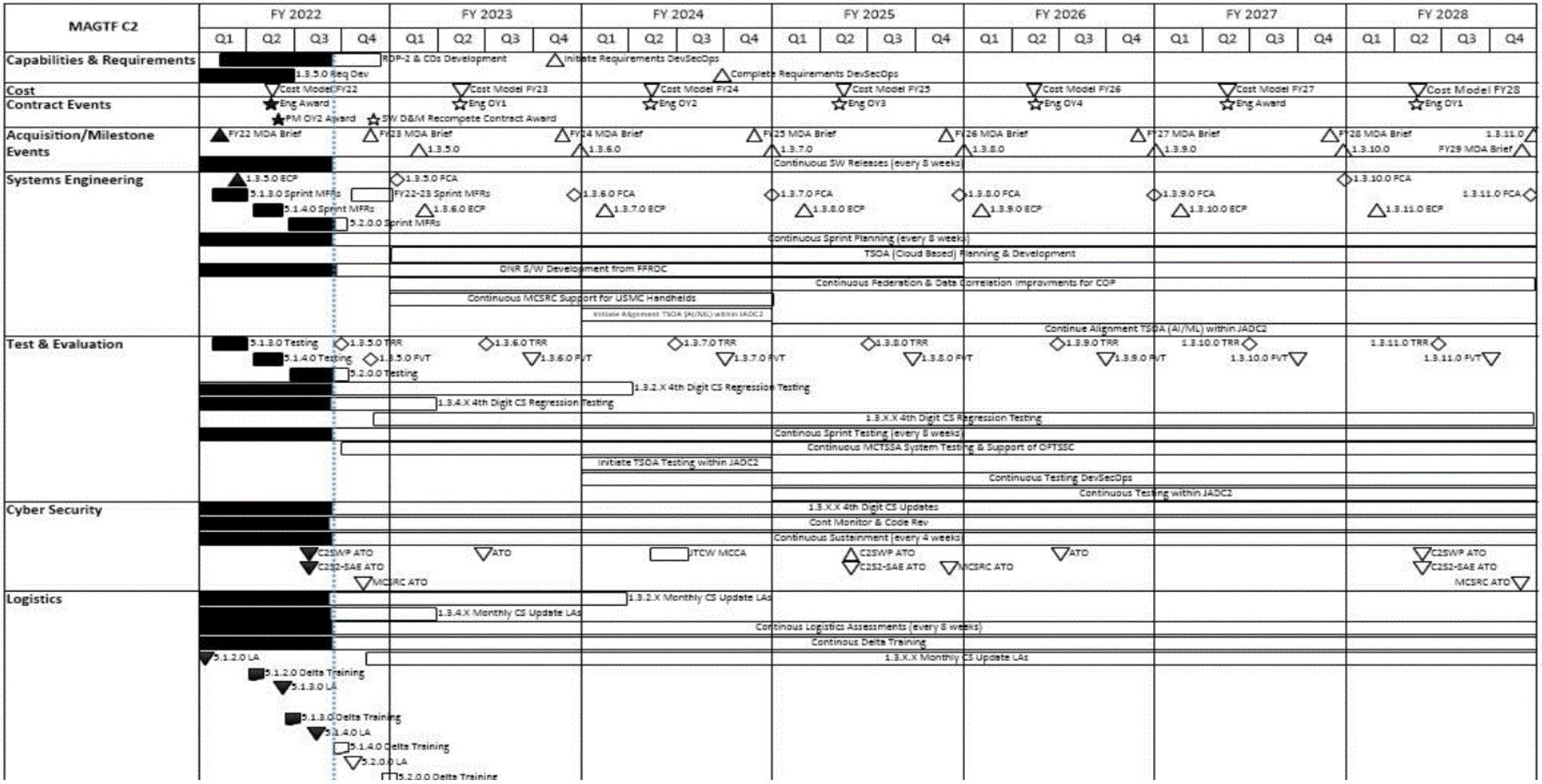

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

MA-DOSS Schedule

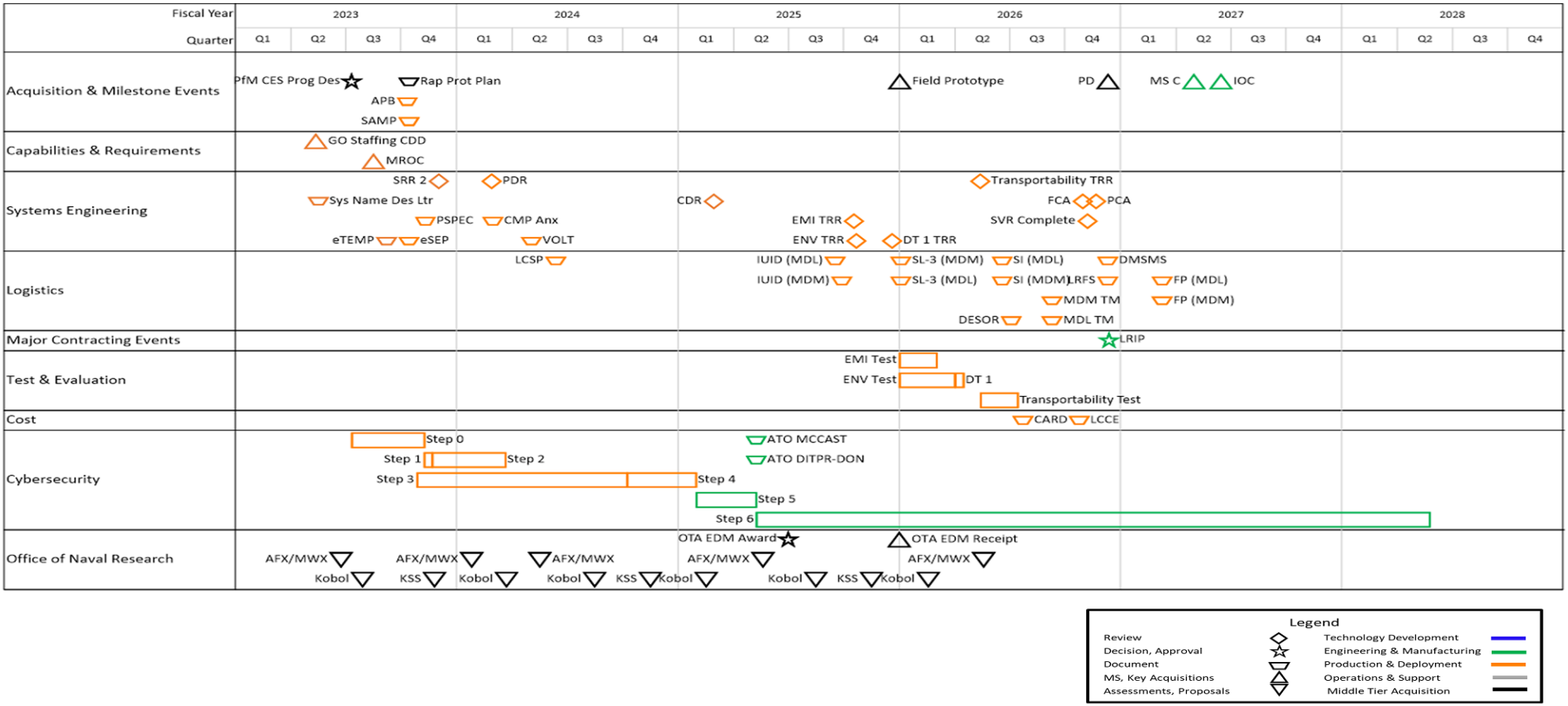

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

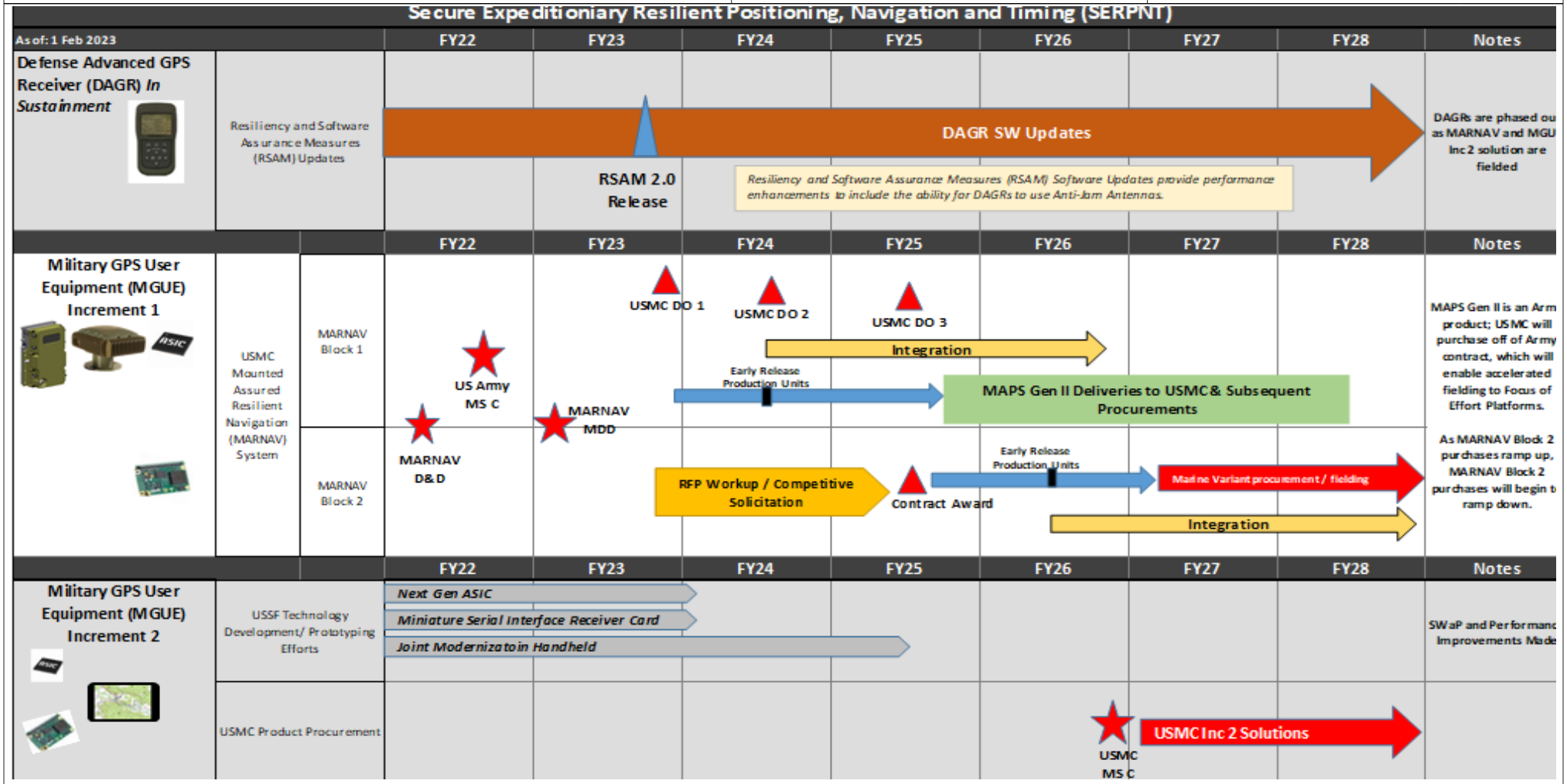

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

IDS-MC

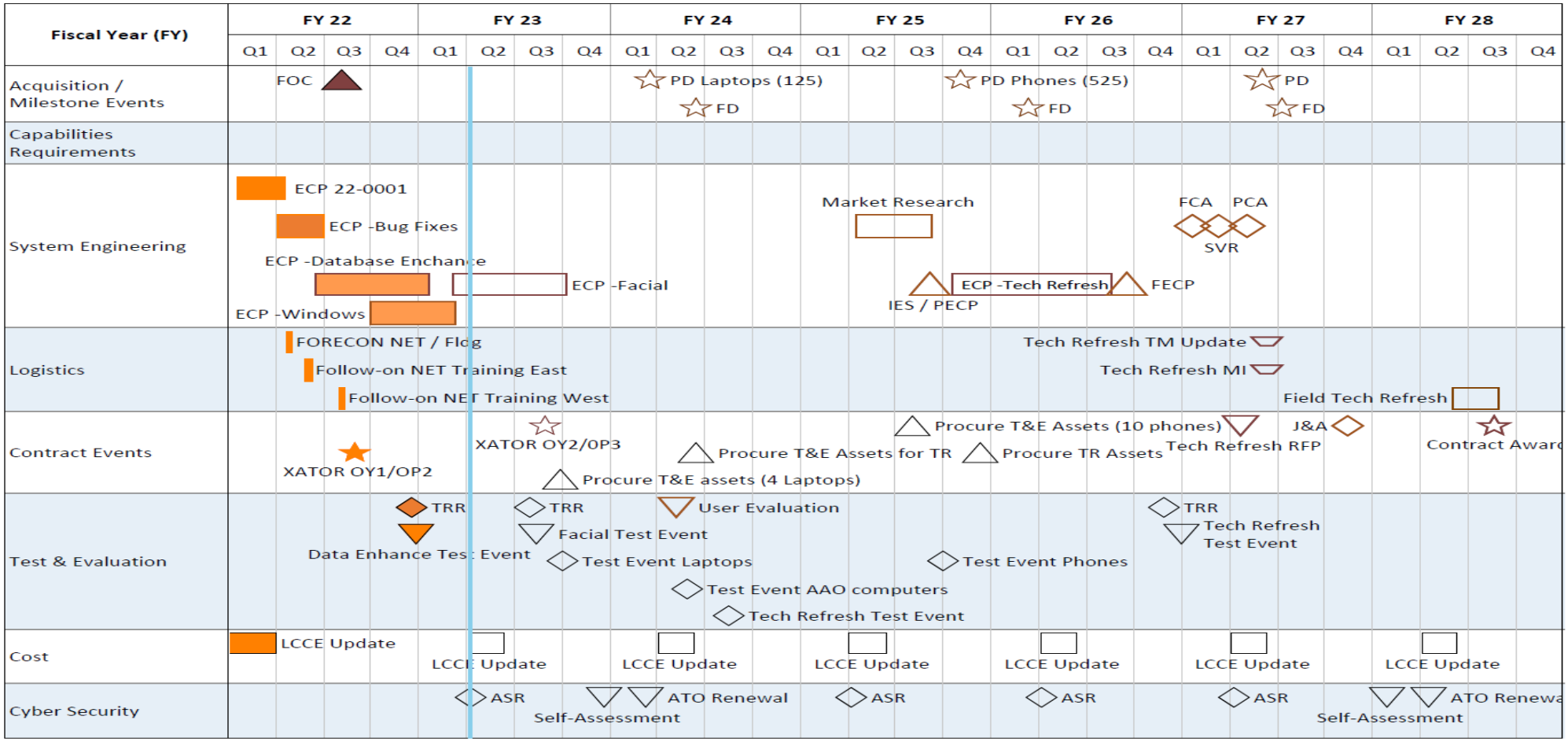

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2270 / *Exp Indirect Fire Gen Supt Wpn Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2270				
MAGTF C2 5.1.3.0 FIP	1	2022	1	2022
MAGTF C2 5.1.2.0 Release	2	2022	2	2022
MAGTF C2 Eng Award	2	2022	2	2022
MAGTF C2 5.1.3.0 Release	2	2022	2	2022
MAGTF C2 5.1.4.0 Release	3	2022	3	2022
MAGTF C2 1.3.5.0 TRR	3	2022	3	2022
MAGTF C2 5.2.0.0 Release	4	2022	4	2022
MAGTF C2 1.3.5.0 FVT	4	2022	4	2022
MAGTF C2 1.3.5.0 Release	1	2023	1	2023
MAGTF C2 CIB	1	2023	1	2023
MAGTF C2 1.3.6.0 ECP	1	2023	1	2023
MAGTF C2 FIP	2	2023	2	2023
MAGTF C2 ENG OY1 AWARD	2	2023	2	2023
MAGTF C2 1.3.7.0 ECP	1	2024	1	2024
MAGTF C2 ENG OY2	2	2024	2	2024
MAGTF C2 1.3.7.0 TRR	3	2024	3	2024
MAGTF C2 1.3.7.0 FVT	4	2024	4	2024
IDS-MC Tech Refresh Contract Award	2	2024	2	2024
IDS-MC OTA Demo	3	2022	3	2022
FDS-MC FUE	2	2022	2	2023
FDS-MC MS C	2	2022	2	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
FDS-MC IOC	2	2023	2	2023
MGUE Inc 1 MARNAV (MAPS) Procurement Decision	3	2022	3	2022
MGUE Inc 1 MARNAV (MAPS) Production Contract Award	2	2023	2	2023
MARNAV IOC	1	2025	1	2025
MADOSS Program Initiation MA-DOSS Medium (MDM) MA-DOSS Light (MDL)	2	2023	2	2023
H2C2 IOC	2	2022	2	2022
H2C2 Fielding	4	2022	2	2025
H2C2 Tech Refresh	2	2023	2	2023
H2C2 FCA Tech Refresh	2	2023	2	2023
H2C2 SVR Tech Refresh	2	2023	2	2023
H2C2 PCA Tech Refresh	2	2023	2	2023
H2C2 DT TRR	3	2023	3	2023
H2C2 ECP Tech Refresh	2	2024	2	2024
H2C2 FCA Refresh	1	2024	1	2024
H2C2 SVR Refresh	1	2024	1	2024
H2C2 SQT TRR	2	2024	2	2024

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
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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
2273: *Air Ops Cmd & Control (C2) Sys*	461.900	6.946	12.087	15.473	-	15.473	12.922	9.125	9.018	9.077	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Composite Tracking Network (CTN) - The Composite Tracking Network (CTN) is a Commandant of the Marine Corps (CMC) Force Design (FD) program which distributes composite tracking data to Command and Control (C2) and weapon systems participating in the US Navy's Cooperative Engagement Capability (CEC) network, which is a sensor network with integrated fire control capability that improves battle force air and missile defense capabilities by combining data from multiple battle force air search sensors on CEC-equipped units into a single, real-time, composite track picture. CTN greatly enhances fleet air defense working in concert with CEC by significantly contributing to real-time situational awareness. The program received ACAT III designation in Nov 2001 and is an instantiation of the USN CEC Program. The program is USMC led with US Navy and US Army cooperation. The 12 April 1995 Mission Need Statement (MNS) No. AAS 48 for the Common Aviation Command and Control System (CAC2S) established the Marine Corps' need to upgrade its existing air defense architecture with capabilities to support improved situational awareness (SA) and advanced engagement concepts. The Composite Tracking Network (CTN) program was initiated to address this capability gap. The CTN system (AN/MSQ-143A(V)1) is an integration effort consisting of an AN/USG-4B (the USMC CEC CTN platform) and other US Marine-unique components. The CTN system interfaces with the AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR) and the Common Aviation Command and Control System (CAC2S) to provide the Marine Air-Ground Task Force (MAGTF) and Joint Task Force Commanders a real-time, line of sight, high data-rate sensor and engagement data distribution network that combines all distributed sensor data, including G/ATOR measurements, into a fire control quality track picture which is the same for all CEC network nodes. CEC data combined with G/ATOR contributions, will effectively increase Situational Awareness by providing accurate, composite, and real-time surveillance tracks, reduce ground-to-air and air-to-air fratricide, enable air and surface Naval Integrated Fire Control-Counter Air (NIFC-CA), and extend the air defensive capability of forces in the littorals. Through integration & fielding of CEC Increment II capabilities, CTN shall integrate new sensor types and track data sources into the network, such as surface search radars and passive detection sensors, as well as relevant data from other networks. CTN shall accommodate more CUs and provide a more complete, robust, and resilient situational awareness picture, composite identification, and Integrated Fire Control (IFC), with assured communications for Integrated Air and Missile Defense (IAMD), surface warfare, and electronic mission warfare domains.

Air Battle Management (ABM) - ABM is a Commandant of the Marine Corps (CMC) Force Design (FD) program which contains the Theater Battle Management Core Systems-Marine Corps (TBMCS-MC). TBMCS-MC is the joint mandated air war planning tool for generation, dissemination, and execution of Air Tasking Orders (ATO) and Airspace Control Orders (ACO). TBMCS-MC is a core C2 system in the Marine aviation combat element for the tools required to conduct Situational Awareness and Assessment, Airspace De-confliction, Mission Planning/Execution/Re-planning, and Assault Support Processing. The Marine Corps derives, develops, and sustains the core TBMCS software suite in joint cooperation with the United States Air Force (USAF) and maintains its configuration of TBMCS-MC while continually improving its cybersecurity posture in accordance with relevant DoD and Marine Corps requirements and timelines. The Marine Corps maintains the responsibility to ensure the system meets Marine air C2 requirements and its operational relevant employment in a joint theater of operations while maintain interoperability with numerous Joint, Marine Corps, Navy and Air Force command and control systems.

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Remote Video Viewing Terminal (RVVT) - Consists of Commercial Off-The-Shelf (COTS) Video Down-Link (VDL) products such as the VideoScout Mobile Configuration 2 (VS-MC/2), VideoScout Mobile Configuration 3 (VS-MC/3), and Man Portable Video Down-Link (MPVDL) that allow for the viewing and exploitation of Full Motion Video (FMV) from Intelligence, Surveillance and Reconnaissance (ISR) assets. VDL systems are mission critical for coordination of direct and indirect fires and the prevention of fratricide. These systems provide the Fleet Marine "Forces" with critical video and metadata from all USMC manned and unmanned aircraft to include, but not limited to Raven B, Puma, Micro-UAS, Shadow, Predator, Fire Scout, and Litening Pod on P-3, AV8-B, F/A-18, and F35. These products ensure critical data is displayed to Forward Air Controllers (FACs), Forward Observers (FOs), Fire Support Teams (FSTs), Firepower Control Teams (FCTs), Tactical Air Control Parties (TACPs) and Reconnaissance Teams.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Composite Tracking Network (CTN): Support and Management Services	0.015	0.026	1.085	0.000	1.085
Articles:	-	-	-	-	-
FY 2023 Plans: - Complete travel, engineering support, and test support for Signal Data Processor (SDP) Next qualification testing. - Initiate travel, engineering support, and test support for CEC Block 2 (increment II) development. This ensure USMC CTN integration and software modifications align to support CEC Block 2. ***FY 2024 Base Plans:*** - Continue travel, engineering support, and test support for CEC Block 2 (increment II) development. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase from FY 2023 to FY 2024 is to support the expanded engineering support for CEC Block 2 development.					
Title: Composite Tracking Network (CTN): Engineering Development	0.303	3.202	6.157	0.000	6.157
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue software certification to maintain interoperability with CEC Network to include associated engineering support. - Development, integration, test, and certification activities required for insertion of new capabilities into CTN that interfaces to CAC2S & G/ATOR TPS-80. New capabilities currently include NIFC-CA, Mode S identify friend					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
or foe (IFF), Network Enabled Electronic Defense System (NEEDS) and Terrestrial Transmission Line of Sight (TRILOS) radio interoperability. ***FY 2024 Base Plans:*** - Continue software certification to maintain interoperability with CEC Network to include associated engineering support. - Continue the development, integration, test, and certification activities required for insertion of new capabilities into CTN that interfaces to CAC2S & G/ATOR TPS-80. - Develop SW changes/testing required to implement the full spectrum of Naval Integrated Fire Control (NIFC) - From the Sea within the CTN system. - CTN integration and SW modifications to support CEC Block 2 capabilities as required by the CEC Increment II CDD (approved in February 2022). ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase from FY 2023 to FY 2024 is to fund full spectrum of NIFC and integration and SW modifications to support CEC Block 2 capabilities.					
Title: Composite Tracking Network (CTN): Developmental Testing and Cyber Security	2.125	4.679	3.695	0.000	3.695
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue NIFC-CA system development with the Navy's CEC Network. - Continue systems engineering efforts and updates to the software baseline to support annual CEC FQT, maintain cybersecurity updates and its Authority to Operate. - Continue CEC Increment II development, integration and software modifications to support CEC Block 2 capabilities. - Complete Signal Data Processor (SDP) Next development and testing. ***FY 2024 Base Plans:*** - Continue NIFC-CA system development with the Navy's CEC Network. - Continue systems engineering efforts and updates to the software baseline to support annual CEC FQT, maintain cybersecurity updates and its Authority to Operate.					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue CEC Increment II development, integration and software modifications to support CEC Block 2 capabilities ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The decrease from FY 2023 to FY 2024 is due to the completion of SDP Next development and testing with the US Navy.					
Title: Remote Video Viewing Terminal (RVVT): Software Development Support	1.300	1.377	0.023	0.000	0.023
Articles:	-	-	-	-	-
FY 2023 Plans: -Complete software development for the integration of encrypted video with new and fielded sensor platforms, to include 5th generation sensor and air platform. -Continue implementation of Target Mensuration from Full Motion Video Meta Data. ***FY 2024 Base Plans:*** -Complete implementation of Target Mensuration from Full Motion Video Meta Data. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The decrease from FY 2023 to FY 2024 is due to the completion of the integrated encrypted video with required sensor platforms.					
Title: Air Battle Management (ABM): Engineering Support	0.675	0.628	0.335	0.000	0.335
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue engineering support for further system integration development of the TBMCS-MC and its tech refresh. This is a continuation of the effort to upgrade the TBMCS-MC until the replacement system is fielded. ***FY 2024 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue engineering support for further system integration development of the TBMCS-MC and its tech refresh. This is a continuation of the effort to upgrade the TBMCS-MC until the replacement system is fielded. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The decrease from FY 2023 to FY 2024 is due to the reduction in scope of needed engineering support for system integration development and sustainment of the TBMCS-MC until the replacement system is fielded.					
Title: Air Battle Management (ABM): Test and Evaluation	1.495	0.738	2.406	0.000	2.406
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue development and T&E of Air Force KRADOS modules to meet Marine Corps TBMCS-MC replacement Next Generation system capability requirements. - Continue IA testing on developmental software to meet cyber security posture and conduct risk reduction testing to identify potential software vulnerabilities. ***FY 2024 Base Plans:*** - Continue development and T&E of Air Force KRADOS modules to meet Marine Corps TBMCS-MC replacement Next Generation system capability requirements. - Continue IA testing on developmental software to meet cyber security posture and conduct risk reduction testing to identify potential software vulnerabilities. - Initiate transition software & hosting environment development and testing. This is a technical collaboration with USAF & joint partners to ensure the Marine Corps continues to manage Service-specific aviation assets and missions in the development of air battle plans. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase from FY 2023 to FY 2024 is due to the ramp up of testing and engineering support for transition software & hosting environment development and testing. This effort supports a technical collaboration with					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
USAF & joint partners to ensure the Marine Corps continues to manage Service-specific aviation assets and missions in the development of air battle plans.					
Title: Air Battle Management (ABM): Product Development	1.033	1.437	1.772	0.000	1.772
Articles:	-	-	-	-	-
FY 2023 Plans: - Initiate next generation equipment and application development to support replacement of TBMCS-MC as the system that provides the USMC its ABM capability. The ABM capability is vital to USMC Warfighting (i.e. Command and Control, Naval Operations, EABO, Composite Warfare) and develop joint integration with the US Navy and US Air Force in creating Air Battle Plans.					
FY 2024 Base Plans: - Continue the development of next generation equipment and application development to support the replacement of TBMCS-MC.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: The increase from FY 2023 to FY 2024 is due to development of the hosting environment as a part of the continued maturation and development of ABM's next generation system that will replace the TBMCS-MC.					
Accomplishments/Planned Programs Subtotals	6.946	12.087	15.473	0.000	15.473

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4640: *Air Operations C2 Systems*	1.457	11.048	23.744	-	23.744	20.635	10.149	9.153	9.375	Continuing	Continuing

Remarks

D. Acquisition Strategy

ABM - The Marine Corps continues to sustain unique requirements in addition to Air Force requirements and deviates from the Air Force-developed TBMCS-Force Level configuration as necessary to sustain its TBMCS-MC. The USMC separately manages the development and fielding of software and hardware engineering

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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change proposals for Information Assurance (IA) and functionality updates to ensure daily direct support of the Air Battle Plan in joint theaters of operation. The Marine Corps prevents TBMCS-MC obsolescence through cyclic and as-needed technical refreshment of information technology hardware when applicable. The USD (AT&L) canceled the US Air Force's Air Operations Center - Weapon System (AOC-WS) 10.2 program in 2018 that included the Command and Control (C2) Air Operations Suite - C2 Information Services (C2AOS-C2IS), therefore Air Force Program Executive Officer (PEO) Digital subsequently transitioned its efforts to a middle tier of acquisition (MTA) (Section 804 of the FY 2016 NDAA) rapid prototyping effort under the AOC-WS Modifications "Block 20" program. AOC-WS "Block 20" capabilities are being developed by the Kessel Run Experimentation Lab (KREL); an organic Air Force software development MTA effort. The Marine Corps will primarily inherit the Air Force's software suite called the Kessel Run All Domain Operations Suite (KRADOS) - formerly C2AOS-C2IS - from the larger AOC-WS upgrade efforts. The KRADOS product will replace legacy TBMCS software as the joint ABM capability for the execution of the Air Battle Plan (ABP). As the USAF leads the development of its replacement for their TBMCS-Force Level capability, the Marine Corps is aligning its investments toward the ability to host the new capability in the Marine Corps cyber network and combat operating environments, to include cloud-based technology solutions and network architecture. The Marine Corps TBMCS Next Generation Suite strategy includes developmental and operational testing with joint partner laboratories (i.e. CAOC-X, Langley AFB; 45th Test Squadron) as well as Marine peculiar system of systems interoperability evaluations within its own engineering support centers (i.e. NSWC Crane; MCTSSA, Camp Pendleton) and Marine test events. The Air Force seeks a deployment of the new capability in Q1 FY 2023 of and the Marine Corps plans to stay aligned to this schedule by testing released software in concert with the Air Force but will not dispose of TBMCS-MC until Q4 FY 2023. The Marine Corps will determine replacement of the current legacy TBMCS-MC when testing and evaluation confirms the new system is ready to provide sufficient capability to enable Marines to plan and execute aviation command and control and Air Battle Management operations in a joint environment.

CTN - The USMC's CTN acquisition strategy is to participate in the USN's Cooperative Engagement Capability (CEC) program procurement and testing, making necessary modifications to support the Marine Corps' requirement. CTN is currently conducting a technology refresh (TR) of the CTN system. The TR will address system obsolescence and enable CTN to remain aligned with the development of US Navy CEC Block II (Increment II) and Signal Data Processor (SDP-Next) upgrades as well as maintain CEC interoperability which is vital as CTN is the USMC gateway to Naval Integrated Fire Control-Counter Air (NIFC-CA) that enables the ACE to achieve resiliency of joint air C2 in an Expeditionary Advanced Base Operations (EABO) environment and supports CMC FD initiatives. The TR upgrade will improve CTN components: the Signal Data Processor-Sierra (SDP-S), Compact Solid State Antenna (CSSA), voice communications, and AN/USG-4B Shelters. These upgrades will directly result in improved interfaces with the AN/TPS-80 Ground/Air Task Oriented Radar (G/ATOR) and the Common Aviation C2 System (CAC2S) through displacement of sensor and C2 via RF link and multiple radar connections, providing the Marine Air-Ground Task Force (MAGTF) and Joint Task Force Commanders an improved ground based sensor netting solution that interfaces with the Navy's CEC network.
The USMC Air Combat Element (ACE) Operational Planning Team (OPT) has directed an increase to the CTN Approved Acquisition Objective (AAO) in support of Force Design 2030. CTN will produce and field eight (8) CTN systems, increasing the AAO from 11 to 19 systems in support of Force Design.

RVVT - The RVVT acquisition strategy is to continue integration of Video Down-Link (VDL) systems into new and existing sensor platforms by enhancing the encryption, range, and reducing the power and weight requirements in order to support existing and planned capabilities supporting targeting and fires activities. Efforts to integrate Full Motion Video (FMV) to support Joint Fires Observers (JFOs) and Joint Terminal Attack Controllers (JTACs) is an ongoing requirement to maintain interoperability with new and existing sensor systems.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	267.138	0.000		0.000		0.000		-		0.000	0.000	267.138	-
CTN Engineering Devlopment	C/CPFF	NAVSEA PEO IWS : Washington, DC	24.984	0.303	Feb 2022	3.202	Feb 2023	6.157	Feb 2024	-		6.157	Continuing	Continuing	Continuing
ABM Product Development	C/FFP	NSWC Crane : Crane, IN	0.689	1.033	Nov 2021	1.437	Nov 2022	1.772	Nov 2023	-		1.772	0.000	4.931	-
RVVT	WR	NAWC/China Lake : China Lake, CA	0.000	1.300	Nov 2021	1.377	Nov 2022	0.023	Nov 2023	-		0.023	0.000	2.700	-
		Subtotal	292.811	2.636		6.016		7.952		-		7.952	Continuing	Continuing	N/A

Remarks

CTN: The increase from FY 2023 to FY 2024 is to fund full spectrum of NIFC and integration and SW modifications to support CEC Block 2 capabilities.
ABM: The funding increase from FY 2023 to FY 2024 is due to development of the hosting environment as a part of the continued maturation and development of ABM's next generation system that will replace the TBMCS-MC.
RVVT: The decrease from FY 2023 to FY 2024 is due to the completion of the integrated encrypted video with required sensor platforms.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	47.878	0.000		0.000		0.000		-		0.000	0.000	47.878	-
CTN Engineering Support	WR	NSWC : Dahlgren, VA	7.888	0.000		0.000		0.725	Nov 2023	-		0.725	0.000	8.613	-
CTN Engineering Support	Various	Travel-TAD : Not Specified	1.198	0.015	Sep 2022	0.026	Oct 2022	0.052	Oct 2023	-		0.052	Continuing	Continuing	Continuing
CTN Engineering Support	WR	NSWC : Crane, IN	0.000	0.000		0.000		0.308	Oct 2023	-		0.308	0.000	0.308	-
ABM Engineering Support	Various	Travel - TAD : Not Specified	0.150	0.165	Sep 2022	0.118	Oct 2022	0.059	Oct 2023	-		0.059	0.000	0.492	-
ABM C2 SME support	C/FFP	NSWC : Crane, IN	0.415	0.000		0.000		0.000		-		0.000	0.000	0.415	-
ABM C2 SME support	C/CPFF	DTIC : Fort Belvoir, VA	0.717	0.510	Nov 2021	0.510	Nov 2022	0.000		-		0.000	0.000	1.737	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2273 / *Air Ops Cmd & Control (C2) Sys*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ABM C2 SME support	WR	NSWC : Indian Head, MD	0.000	0.000		0.000		0.276	Dec 2023	-		0.276	0.000	0.276	-
		Subtotal	58.246	0.690		0.654		1.420		-		1.420	Continuing	Continuing	N/A

Remarks

CTN: The increase in FY 2024 is to support the expanded engineering support for CEC Block 2 development.
ABM: The decrease in FY 2024 is due to the reduction in scope of needed engineering support for system integration development and sustainment of the TBMCS-MC until the replacement system is fielded.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	Various	VARIOUS : VARIOUS	59.222	0.000		0.000		0.000		-		0.000	0.000	59.222	-
Developmental Test & Evaluation (DT&E)	WR	NSWC Corona : Corona, CA	2.981	0.238	Nov 2021	0.925	Nov 2022	0.952	Nov 2023	-		0.952	0.000	5.096	-
Operational Test & Evaluation (OT&E)	C/CPFF	NAVSEA PEO IWS : Washington DC	5.166	1.200	Dec 2021	2.785	Dec 2022	1.803	Dec 2023	-		1.803	0.000	10.954	-
Developmental Test & Evaluation (DT&E)	WR	NSWC Dahlgren : Dahlgren, VA	0.855	0.687	Nov 2021	0.969	Nov 2022	0.940	Nov 2023	-		0.940	0.000	3.451	-
Operational Test & Evaluation (OT&E)	WR	NSWC : Crane, IN	2.001	0.995	Jun 2022	0.234	Jun 2023	0.561	Jun 2024	-		0.561	0.000	3.791	-
Developmental Test & Evaluation (DT&E)	C/FFP	NSWC Indian Head : Indian Head, MD	0.194	0.500	Mar 2022	0.504	Jun 2023	0.924	Jun 2024	-		0.924	0.000	2.122	-
Operational Test & Evaluation (OT&E)	WR	MCOTEA : Quantico, VA	1.220	0.000		0.000		0.000		-		0.000	0.000	1.220	-
Developmental Test & Evaluation (DT&E)	C/FFP	NSWC Crane : Crane, IN	1.421	0.000		0.000		0.000		-		0.000	0.000	1.421	-
Developmental Test & Evaluation (DT&E)	C/FFP	MCTSSA : Camp Pendleton, CA	0.740	0.000		0.000		0.921	Jun 2024	-		0.921	0.000	1.661	-
		Subtotal	73.800	3.620		5.417		6.101		-		6.101	0.000	88.938	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

CTN: The decrease from FY 2023 to FY 2024 is due to the completion of SDP Next development and testing with the US Navy.
ABM: The increase from FY 2023 to FY 2024 is due to the ramp up of testing and engineering support for transition software & hosting environment development and testing.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	36.391	0.000		0.000		0.000		-		0.000	0.000	36.391	-
ABM Program Support	C/FFP	NSWC Crane : Crane, IN	0.652	0.000		0.000		0.000		-		0.000	0.000	0.652	-
		Subtotal	37.043	0.000		0.000		0.000		-		0.000	0.000	37.043	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
Project Cost Totals	461.900	6.946		12.087		15.473		-		15.473	Continuing	Continuing	N/A

Remarks

The increase from FY 2023 to FY 2024 is to support CTN NIFC integration, CEC Block 2 development and ABM testing and engineering support for transition software & hosting environment development.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

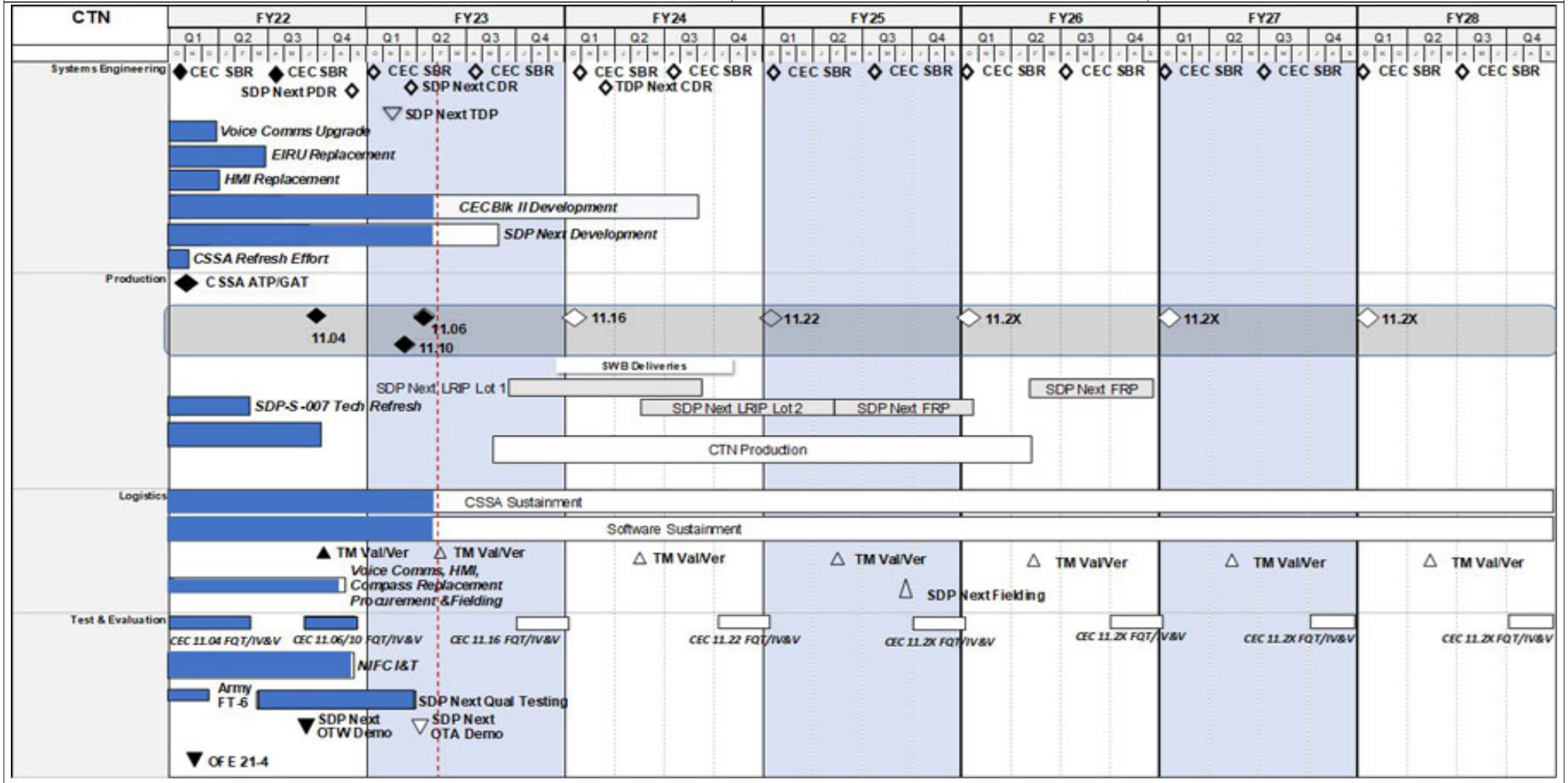


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

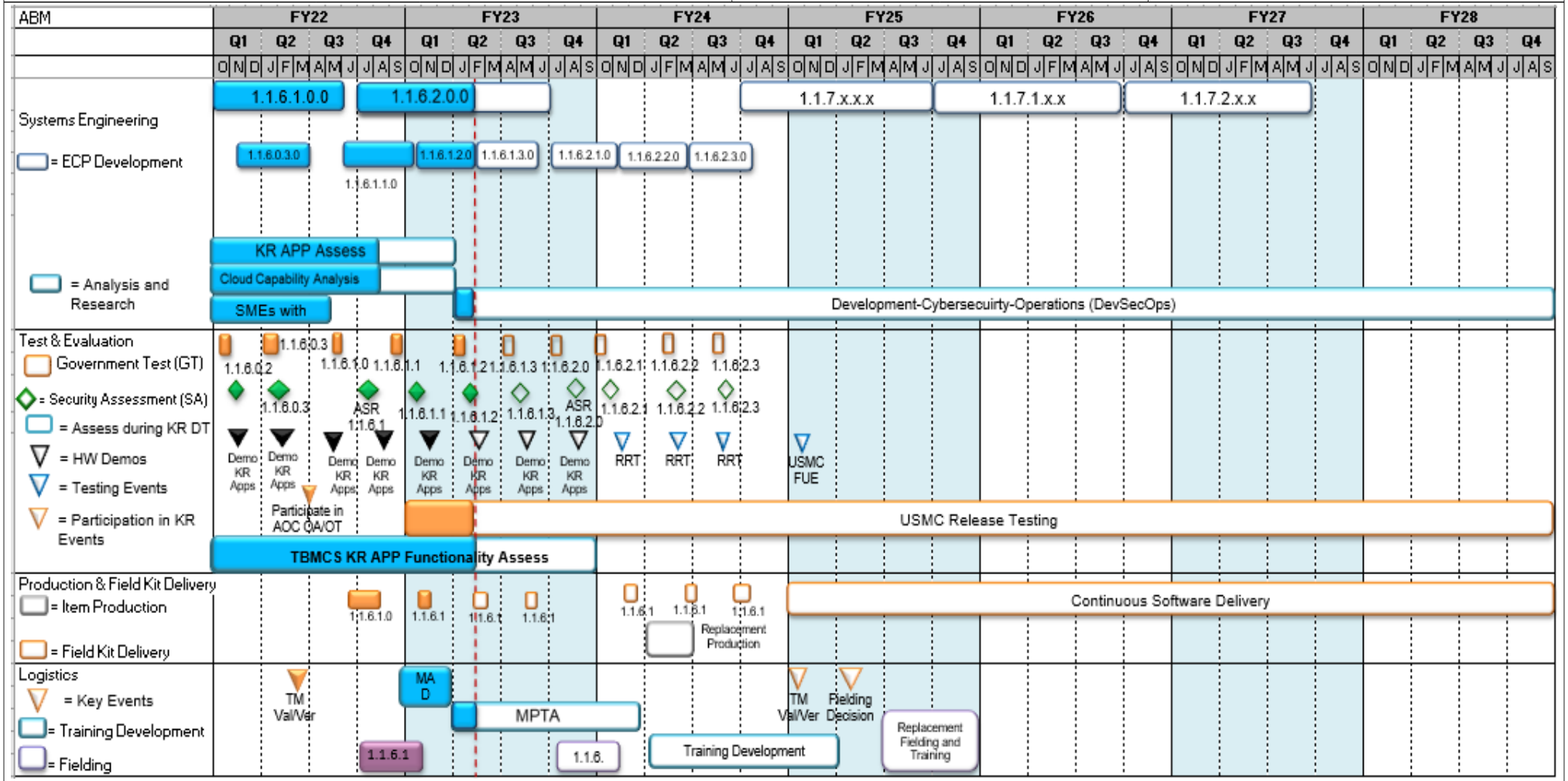
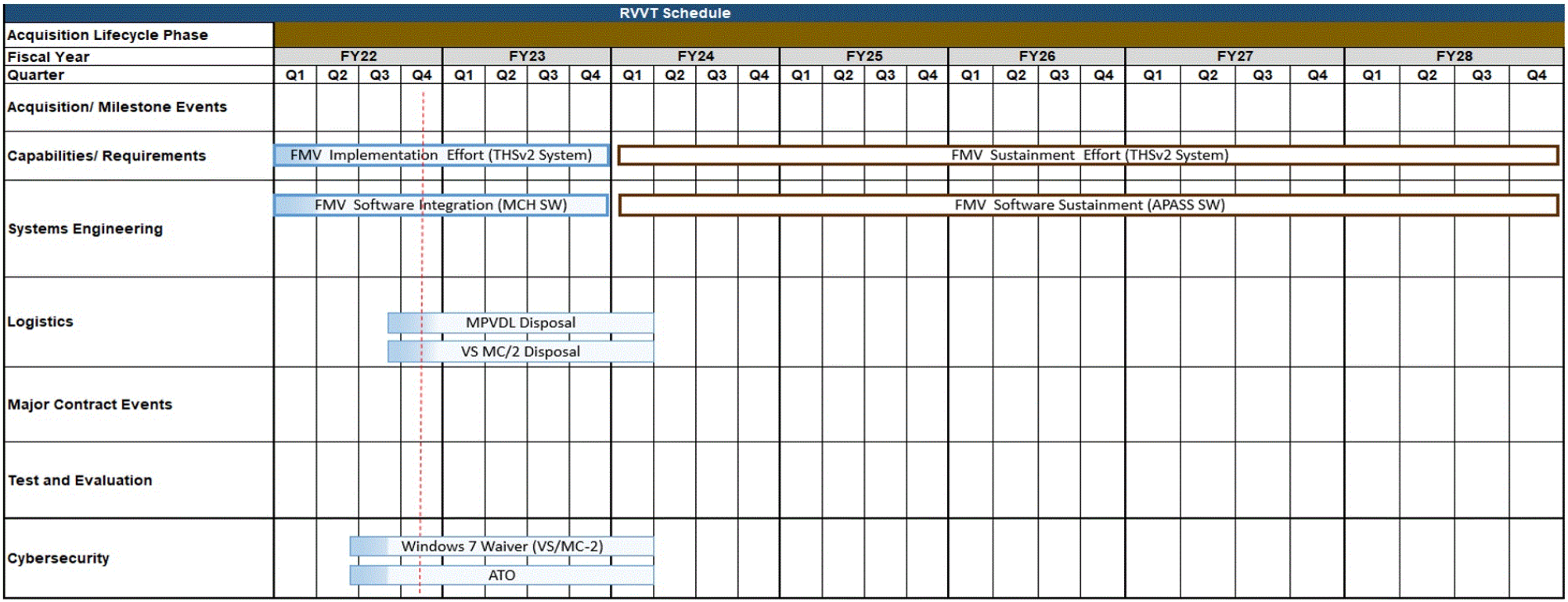


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*



LEGEND
- ☆ MDA Decision Approval (non-Milestone ((MS))
- △ MS/Key Acquisition Event
- ◇ Review
- ▭ Documentation
- ▽ Assessment, Proposal

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2273 / *Air Ops Cmd & Control (C2) Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2273				
CTN IPP Schedule: CTN Technology Refresh (ECP-143)	1	2022	2	2022
CTN IPP Schedule: CEC Block II (Increment II) Development	1	2022	3	2024
CTN IPP Schedule: SDP Next Development	1	2022	3	2023
CTN IPP Schedule: CTN Tech refresh: CSSA tech refresh	1	2022	1	2022
CTN IPP Schedule: CTN Tech refresh: SDP-S tech refresh	1	2022	2	2022
CTN IPP Schedule: CTN Production	3	2023	2	2026
CTN IPP Schedule: CSSA Sustainment	1	2022	4	2028
CTN IPP Schedule: Software Sustainment	1	2022	4	2028
CTN IPP Schedule: CEC FQT/IV&V	1	2022	4	2028
CTN IPP Schedule: Naval Integrated Fire Control-Counter Air Integration and Testing	1	2022	4	2022
CTN IPP Schedule: Signal Data Processor (SDP) Next qualification testing	2	2022	2	2023
ABM IPP Schedule: Annual Software Update Releases (1.1.6 / 1.1.7)	1	2022	2	2027
ABM IPP Schedule: Annual software Government Test (GT) and Cyber security assessment (SA)	1	2022	3	2028
ABM IPP Schedule: TBMCS-MC Replacement system development Cloud capability analysis	2	2022	1	2023
ABM IPP Schedule: Development-Cybersecuirty-Operations	2	2023	4	2028
ABM IPP Schedule: TBMCS-MC Replacement system development	2	2022	4	2022
ABM IPP Schedule: USMC SW release testing	1	2023	4	2028
ABM IPP Schedule: Continuous SW Delivery	1	2023	4	2028
ABM IPP Schedule: TBMCS-MC Replacement Fielding	3	2025	4	2025
RVVT Schedule: Full Motion Video Implementation Effort	1	2022	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2274 / *Command & Control Warfare Sys*	

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
2274: *Command & Control Warfare Sys*	87.337	21.643	29.633	22.969	-	22.969	21.110	22.842	21.211	22.055	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Marine Electromagnetic Warfare Ground Family of Systems (MEGFoS): MEGFoS is the future of USMC ground electromagnetic warfare being developed to replace the current capability provided by the Multi-Function Electronic Warfare (MFEW) family of systems which provides counter IED and counter UAS capabilities. The MEGFoS family of systems (FoS) will provide Marine Corps Forces the ability to maneuver effectively in the electromagnetic spectrum (EMS) in a peer-to-peer environment. MEGFoS will employ artificial intelligence (AI) to identify signals of interest (SOI) and provides a networked EW capability equipped with low probability of intercept (LPI) and low probability of detection (LPD) antennas enabling the ability to sense and make sense of the (EMS) throughout the area of operations. MEGFos provides electronic warfare operators the ability to conduct electronic fires on site, remotely attack targets identified via systems employed by incidental operators, conduct coordinated techniques across multiple systems, or pass target data to other systems to attack with kinetic fires. MEGFoS provides state of the art electronic attack (EA), electronic support (ES), and electronic protection capabilities throughout the EMS. MEGFoS enables an exquisite ability to deny, disrupt, and degrade adversary communications, navigation, RADAR, and other systems operating in the EMS. The ability for instantaneous sensing, identification, exploitation, and disruption of enemy capabilities using non-traditional attack vectors and techniques to defeat sources of intentional and unintentional radiated electromagnetic energy ensures a technological edge to the Marine Corps in a peer-to-peer environment. The MEGFoS detects and protects friendly spectrum access; senses and identifies spectrum usage; and disrupts the adversary's decision cycle. The future operations solution is fulfilled by MEGFoS, a critical Force Design program enabling the Expeditionary Advanced Base Operations (EABO) construct, facilitating ground-based EW in support of Force Design 2030.

MEGFoS is being developed using the C5ISR/EW Modular Open Suite of Standards (CMOSS) and Sensor Open Systems Architecture (SOSA) standards (in coordination with the Army, Navy, and Air Force) that will provide an open architecture HW & SW non-proprietary platform to host "best of breed" capabilities from across industry. This construct will eliminate multiple proprietary "green boxes" carried by Marines lowering the weight and power requirements in operations, reduce training burdens, lower procurement costs, and reduce sustainment costs. MEGFoS will be employed throughout the FMF, the largest number of systems will be employed by the ground combat element and in Littoral Combat Regiments (LCR). MEGFoS provides coordinated EW in support of Fires and Maneuver, Force Protection, Spectrum Management, and Battlespace Awareness.

The Marine Corps is seeking to evolve EW capabilities from existing legacy, proprietary EW systems to capabilities for an advanced multi-function electronic warfare mission focused on supporting Electromagnetic Spectrum Operations (EMSO). MEGFOS is the future for team portable, vehicle mounted and dismounted advanced tactical warfare capabilities supporting the EMSO concept. The program is essential for ensuring Marines have the ability to protect friendly use of spectrum, sense all spectrum usage in an area of responsibility, and to target adversaries inside spectrum with the intent to deny, delay, or degrade an adversary's decision making cycle.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: MEGFoS - Product Development	13.422	16.878	9.579	0.000	9.579
Articles:	-	-	-	-	-
FY 2023 Plans: -Continue integration of the developed common, open hardware backplane based off the C4ISR Modular Open Suites of Standards (CMOSS), and a Sensor Open Systems Architecture (SOSA). -Continue development of hardware components that will be interoperable across the mounted, dismounted and team portable systems for MEGFOS. -Continue development of networking capability for dismounted and team portable systems to provide a high level of situational awareness to commanders and Marines at the company level and fully realize advanced EA/ES capabilities for MEGFoS. -Continue development of MEGFoS Dismounted Systems. -Continue integration of Science and Technology (S&T) efforts into MEGFoS. -Initiate development of MEGFoS Mounted Systems. -Initiate development of techniques to counter emerging threats.					
FY 2024 Base Plans: - Continue integration of the developed common, open hardware backplane based off the C4ISR Modular Open Suites of Standards (CMOSS), and a Sensor Open Systems Architecture (SOSA). - Continue development of hardware components that will be interoperable across the mounted, dismounted and team portable systems for MEGFOS. -Continue development of networking capability for dismounted and team portable systems to provide a high level of situational awareness to commanders and Marines at the company level and fully realize advanced EA/ES capabilities for MEGFoS. -Complete development of MEGFoS Dismounted Systems. -Continue integration of Science and Technology (S&T) efforts into MEGFoS. -Continue development of MEGFoS Mounted Systems. -Continue development of techniques to counter emerging threats.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
The decrease from FY 2023 to FY 2024 reflects completion of product development of the MEGFoS Dismounted Back-Packable chassis and Dismounted Small Form Factor development of base configurations of SDRs, amplifiers, and antennas in FY 2023 to meet IOC.					
Title: MEGFoS - Support	2.593	8.310	10.709	0.000	10.709
Articles:	-	-	-	-	-
FY 2023 Plans: -Continue providing systems engineering support for the MFEW (mounted and dismounted), MEGFoS Hardware backplane, and Universal Test Sets by analyzing performance impacts resulting from compatibility, technology and software updates and environmental risks. -Continue MEGFoS dismounted development support, providing systems engineering support for MEGFoS dismounted and integration support of developed S&T effort into MEGFoS dismounted. -Initiate MEGFoS mounted development support, providing systems engineering support for MEGFoS mounted and integration support of developed S&T efforts into MEGFoS mounted.					
FY 2024 Base Plans: -Continue providing systems engineering support for the MFEW (mounted and dismounted), MEGFoS Hardware backplane, and Universal Test Sets by analyzing performance impacts resulting from compatibility, technology and software updates and environmental risks. -Continue MEGFoS dismounted development support, providing systems engineering support for MEGFoS dismounted and integration support of developed S&T effort into MEGFoS dismounted. -Continue MEGFoS mounted development support, providing systems engineering support for MEGFoS mounted and integration support of developed S&T efforts into MEGFoS mounted.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: The increase from FY 2023 to FY 2024 reflects continuation of MEGFoS mounted development systems engineering, and integration of developed S&T efforts as well as initiation of systems engineering support for MEGFoS mission load development and software cyber security and information assurance.					
Title: MEGFoS - Test and Evaluation	5.628	4.445	2.681	0.000	2.681
Articles:	-	-	-	-	-
FY 2023 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue developmental test of MEGFoS Architectures in relevant environments. - Continue testing new and developing load-sets ability to exploit or defeat advanced and emerging threat systems. - Complete testing of the mounted and dismounted MFEW engineering changes that will be procured and fielded. - Continue characterization testing for the Networking and enhanced Graphic User Interface (GUI) Engineering Change Proposal (ECP). -Conduct MEGFoS Team Portable Operational Demonstration, in preparation for Rapid Prototyping outcome decision. -Conduct MEGFoS dismounted developmental testing. ***FY 2024 Base Plans:*** -Continue developmental test of MEGFoS Architectures in relevant environments. -Continue testing new and developing load-sets ability to exploit or defeat advanced and emerging threat systems. -Continue MEGFoS Team Portable Operational Demonstration, in preparation for Rapid Prototyping outcome decision. -Continue MEGFoS dismounted developmental testing. -Initiate developmental testing of integrated MEGFoS research and development efforts. -Initiate developmental systems engineering testing for MEGFoS mission loads and software cyber security patches. -Initiate operational testing for the MEGFoS mounted variant. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The decrease from FY 2023 to FY 2024 is due to the completion of mounted and dismounted testing related to MFEW engineering changes that are being procured in FY 2023.					
Accomplishments/Planned Programs Subtotals	21.643	29.633	22.969	0.000	22.969

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/6520: *EOD Systems*	61.733	113.116	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/4367: *Electro Magnetic Spectrum Operations (EMSO)*	0.000	0.000	177.270	-	177.270	191.591	85.827	87.328	89.074	0.000	631.090

Remarks

MEGFoS procurement transitions from Budget Line Item 6520 EOD Systems to Budget Line Item 4367 Electro Magnetic Spectrum Operations (EMSO) beginning FY 2024.

Project 2274 funding FY 2020 - FY 2023 totaling $33.150M reflects funding associated with MEGFoS Middle Tier Acquisition (MTA) for rapid prototyping in addition to RDTE Project C796 FY 2022 funding totaling $15.100M.

MTA Funding RDTEN/0206313M/2274:
FY 2020: $3.922M
FY 2021: $5.648M
FY 2022: $11.604M
FY 2023: $11.977M

MTA Funding RDTEN/0206313M/C7964:
FY 2022: $15.100

D. Acquisition Strategy

Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) Ground Family of Systems (MEGFoS): The MFEW programs will continue to develop new counter techniques, improve capabilities, enhance software and develop upgrades to counter evolving threats and prevent technology obsolescence. Activities include waveform development, non-recurring engineering for system enhancements, capability upgrades, and the testing and government studies required to support these changes. In FY 2021, the initial 300 MFEW Mounted systems began issuance to the FMF. An additional 417 MFEW Mounted systems are planned for procurement and issuance between FY 2022-2024. MFEW systems are based on a USON requirement and will be augmented by the MEGFoS systems starting in FY 2025. MEGFoS will provide a significant improvement in capability when compared to MFEW and what is commercially available today. The MEGFoS Team Portable system was authorized for Middle Tier of Acquisition Rapid Prototyping in 3Q FY 2020, with planned prototyping completion in 1Q FY 2024. Upon successful prototyping of the Team Portable variant, MEGFoS will procure 49 systems. The intent is to use the MEGFoS Team Portable solution as the basis for the Dismounted and Mounted variants. Procurement of the Dismounted systems, planned for FY 2024-2025, while the MEGFoS Mounted systems are being developed. The iterative development approach for MEGFoS, focusing on a common hardware and software standard, provides the opportunity to integrate all EW sensors into a common operating picture, allowing all elements of the MAGTF to gain and maintain awareness in the electromagnetic spectrum. This will include, but is not limited to, Cyber, Communications, Signature Management, and advanced signals detection and attack techniques.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MEGFoS	TBD	MCSC : QUANTICO, VA	0.000	4.123	Dec 2021	4.070	Jul 2023	5.906	Jul 2024	-		5.906	Continuing	Continuing	Continuing
MEGFoS	TBD	TBD : TBD	0.000	0.000		3.000	Dec 2022	0.000		-		0.000	0.000	3.000	-
MEGFoS	WR	NIWC-LANT : CHARLESTON,SC	2.835	3.635	Oct 2021	4.122	Oct 2022	0.605	Oct 2023	-		0.605	Continuing	Continuing	Continuing
MEGFoS	C/CPFF	NIWC-LANT : CHARLESTON, SC	5.652	3.071	Jun 2022	4.100	Jun 2023	0.000		-		0.000	Continuing	Continuing	Continuing
MEGFoS	C/CPFF	JHU/APL : LAUREL, MD	0.800	2.226	Dec 2021	0.840	Dec 2022	2.308	Dec 2023	-		2.308	Continuing	Continuing	Continuing
MEGFoS	WR	NSWC-Crane : CRANE, IN	0.000	0.000		0.746	Dec 2022	0.760	Dec 2023	-		0.760	0.000	1.506	-
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	32.251	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	41.538	13.055		16.878		9.579		-		9.579	Continuing	Continuing	N/A

Remarks

The decrease from FY 2023 to FY 2024 reflects completion of the Dismounted Back-Packable chassis and Dismounted Small Form Factor development of base configurations of SDRs, amplifiers, and antennas in FY 2023 to meet IOC requirements.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MEGFoS	WR	NIWC-LANT : CHARLESTON, SC	0.742	0.760	Dec 2021	1.000	Dec 2022	5.209	Dec 2023	-		5.209	Continuing	Continuing	Continuing
MEGFoS	C/CPFF	NIWC-LANT : CHARLESTON	0.090	2.800	Nov 2021	4.930	Nov 2022	4.750	Nov 2023	-		4.750	Continuing	Continuing	Continuing
MEGFoS	TBD	TBD : TBD	0.000	1.424	Jun 2022	1.445	Jun 2023	0.000		-		0.000	Continuing	Continuing	Continuing
MEGFoS	WR	NSWC-CRANE : CRANE, IN	1.004	0.000		0.935	Jun 2023	0.750	Jun 2024	-		0.750	0.000	2.689	-
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	7.849	0.000		0.000		0.000		-		0.000	0.000	7.849	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	9.685	4.984		8.310		10.709		-		10.709	Continuing	Continuing	N/A

Remarks

The Support increase from FY 2023 to FY 2024 reflects initiation of systems engineering support for the MEGFoS for mission load development and software cyber security and information assurance.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	MIPR	YPG : YUMA, AZ	0.219	0.863	May 2022	1.574	Oct 2022	0.575	Oct 2023	-		0.575	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	NIWC-CD : CRANE, IN	0.599	0.500	Oct 2021	0.571	Oct 2022	0.000		-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	WR	NIWC-LANT : CHARLESTON, SC	0.105	2.091	Oct 2021	2.100	Oct 2022	1.064	Dec 2023	-		1.064	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPFF	NIWC-LANT : CHARLESTON, SC	0.000	0.150	Dec 2021	0.200	Jun 2023	1.042	Aug 2024	-		1.042	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	C/CPFF	MCSC : QUANTICO, VA	0.200	0.000		0.000	Jun 2023	0.000		-		0.000	0.000	0.200	-
Developmental Test & Evaluation (DT&E)	Various	VARIOUS : VARIOUS	21.931	0.000		0.000		0.000		-		0.000	0.000	21.931	-
		Subtotal	23.054	3.604		4.445		2.681		-		2.681	Continuing	Continuing	N/A

Remarks

Decrease from FY 2023 to FY 2024 is due to the completion of mounted and dismounted testing related to MFEW engineering changes that will be procured in FY 2023.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Years Cumulative Funding	Various	VARIOUS : VARIOUS	13.060	0.000		0.000		0.000		-		0.000	0.000	13.060	-
		Subtotal	13.060	0.000		0.000		0.000		-		0.000	0.000	13.060	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
Project Cost Totals	87.337	21.643		29.633		22.969		-		22.969	Continuing	Continuing	N/A

Remarks

Overall decrease from FY 2023 to FY 2024 is primarily attributed to the completion of the Team Portable Middle Tier Acquisition development and mounted and dismounted testing related to MFEW engineering changes that will be procured in FY 2023.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Multi-Function Electronic Warfare (MFEW) FoS

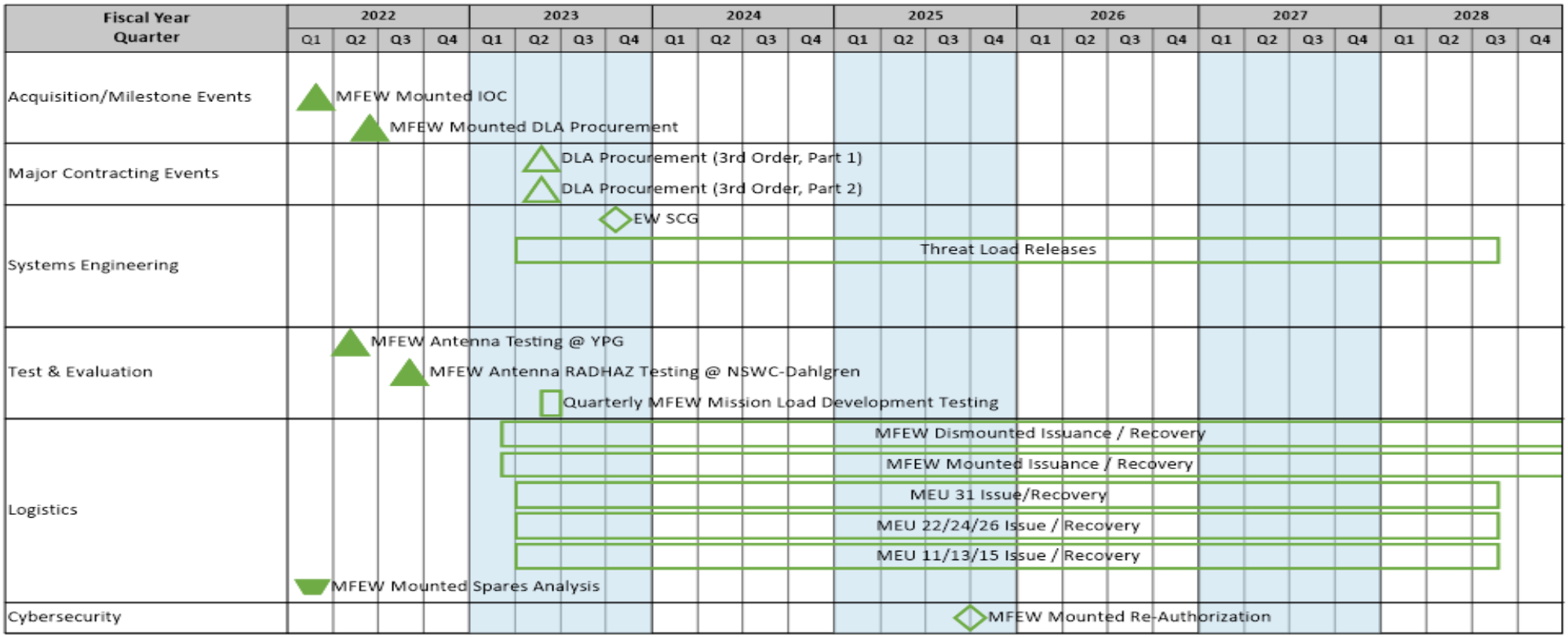


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) Ground Family of Systems (MEGFoS)

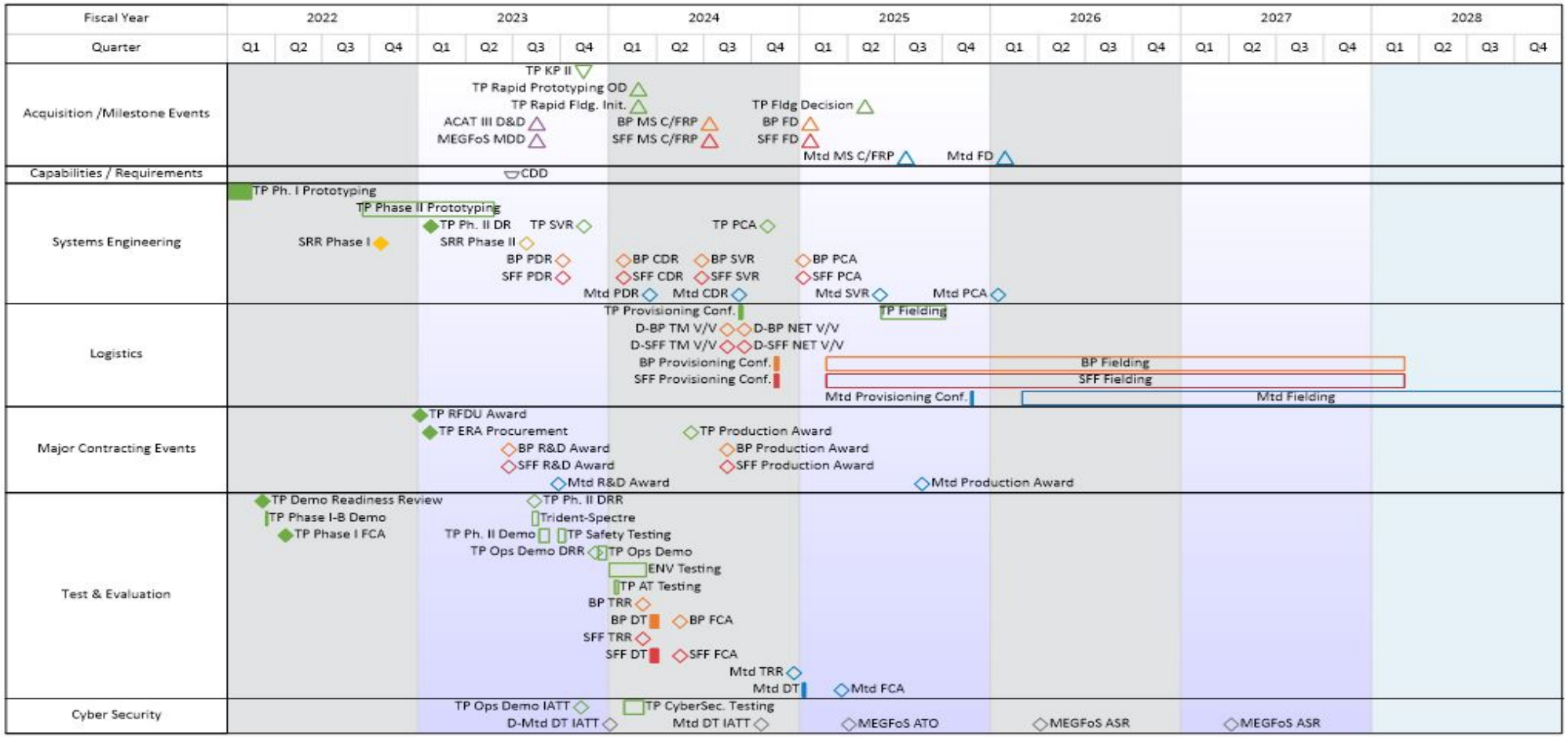


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2274 / *Command & Control Warfare Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2274				
MFEW Mounted and Dismounted Issuance & Recovery	1	2023	4	2028
MFEW Mounted and Dismouted DLA Procurement	2	2023	2	2023
MFEW Mounted and Dismounted Spares DLA Procurement	2	2024	2	2024
MEGFoS Team Portable Phase II Test and Ops Demo	3	2023	3	2023
MEGFoS Dismounted and Mounted MDD	3	2023	3	2023
MEGFoS Team Portable Rapid Prototyping Outcome Decision	2	2025	2	2025
MEGFoS Dismounted Milestone C/FRP	3	2024	3	2024
MEGFoS Team Portable Fielding Decision	2	2025	2	2025

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2275 / *Marine Corps Tactical Radio Systems*	

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
2275: *Marine Corps Tactical Radio Systems*	92.427	14.683	17.566	47.985	-	47.985	34.813	24.025	23.757	16.809	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Tactical Communications Modernization (TCM): TCM contains multiple CMC Force Design programs. TCM supports the research, testing, and evaluation of non-developmental tactical voice and data radio systems for mounted and dismounted operations within all echelons of the Marine Air-Ground Task Force. The testing will ensure the communication systems are joint networking capable and support National Security Agency (NSA) Communications Security (COMSEC) Modernization requirements. The funding provides contracted engineering support, facility test support, and test reporting for multiple systems. These include the Mobile User Objective System (MUOS), High Frequency Radio II (HFR II), and Multi-Channel Radio Family of System (MCR FoS) [Multi-Channel Man Pack (MCMP) and Multi-Channel Handheld (MCHH)] radios, Ground Link-16, antennas, current systems requiring updates or obsolescence issues, and Joint Enterprise Network Manager (JENM). Systems Planning Engineering Evaluation Device (SPEED) is a USMC government-off-the-shelf software program for communications planning and analysis. SPEED provides the Marine Corps and other services with a standard set of software tools used to perform radio link engineering and propagation analysis studies in support of a tactical environment.

Networking on the Move (NOTM): NOTM is a critical CMC Force Design program, essential to achieving Force Design initial operational capability (IOC) in FY 2023 and sustaining the momentum to achieve Force Design full operational capability (FOC) by 2030. NOTM is a critical enabler for "Command and Control (C2) in a Degraded Environment," a Force Design 2030 Line of Effort. NOTM enables persistence inside contested environments, and the conduct of sea denial operations as part of the Naval Expeditionary Force. NOTM achieves this by providing a state-of-the-art turn-key open architecture solution that enables forces to exercise command and control across operational domains - land, sea, air, and while transitioning between domains, by providing terrestrial line of sight and beyond line of sight satellite communication gateway services, and access to services and applications that enable forces to exercise command and control while transitioning between static and mobile positions. NOTM provides critical radio, voice, and data command and control links to key leaders in dynamic environments across multiple domains. The USMC has two NOTM programs, the NOTM Ground Combat Vehicle (NOTM-GCV), and the NOTM Airborne (NOTM-A) with requirements to field kits for the following platforms: High Mobility Multipurpose Wheeled Vehicle (HMMWV), Joint Light Tactical Vehicle (JLTV), Amphibious Assault Vehicle (AAV), Amphibious Combat Vehicle (ACV), Ultra-Light Tactical Vehicle (ULTV), KC-130J Hercules and MV-22 Osprey. One NOTM system for HMMWV, JLTV, and AAV consists of three vehicles per system ((1) Point of Presence (POP) and (2) Staff Vehicles). Each NOTM system for ULTV, ACV, and airborne platforms consists of one vehicle per system (POP vehicle). NOTM also supports Navy shipboard integration by installing NOTM Tactical Entry Point (TEP) Modem Kits on Amphibious L-class ships to provide services to Marine Littoral Regiment (MLR) forces ashore. COSMOS details are held at a higher classification.

Wideband Satellite Communications (WSATCOM) (formerly VSAT): This is a critical CMC Force Design program. WSATCOM is an integrated satellite communications family of systems (FoS) that is the primary beyond line-of-sight (BLOS) communications platform for the MAGTF. This FoS supports the expeditionary advanced base operations concept by enabling communication throughout all levels of distributed MAGTF operations. WSATCOM systems' modular architecture supports technology insertion through scalable and flexible SATCOM technologies. WSATCOM uses commercial Ku and military X and Ka frequency bands to provide BLOS connectivity to

support intra-MAGTF communications (NIPRNET, SIPRNET, telephony) at all levels of the MAGTF. It directly and indirectly supports the seven functions of information operation concepts, enabling commanders at all levels to reliably command and control forces and to support a wide range of information operation missions. Individuals of this FoS include Very Small Aperture Terminal (VSAT) Small, Medium, and Large. These systems are being replaced by the Marine Corps Wide-Band SATCOM (MCWS) Expeditionary (MCWS-X), and Light and Heavy (MCWS-L/H) and FY 2024 will focus on testing of the MCWS-L/H test assets systems.

Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): SMART-T provides tactical users with protected data and voice via Advanced Extremely High Frequency (AEHF) satellite communications. The SMART-T system is transported on High Mobility Multipurpose Wheeled Vehicles (HMMWVs), providing MAGTF Commanders a secure, survivable, long-haul, low/medium data rate communications link not subject to terrain masking and horizon limitations. The SMART-T is the only USMC asset that possesses a SATCOM AEHF capability.

Terrestrial Wideband Transmission Systems (TWTS): This is a CMC Force Design program. TWTS is a portfolio that provides the Fleet Marine Force with the capabilities of high throughput secure Beyond Line of Sight (BLOS) and Line of Sight (LOS) terrestrial digital data transmission. TWTS consists of systems that are Leading Readiness Indicators for the Marine Corps Force Design Effort supporting the conduct of Command and Control in a degraded environment. The Next Generation Troposcatter (NGT) will provide the BLOS capability, which is currently in the Engineering and manufacturing Development Phase. The NGT capability will provide significantly higher bandwidth communications over longer distances compared to the Army/Navy Transportable Radio Communications-170A (AN/TRC-170A) that has been in operations and sustainment since 1992. The Line-of-Sight Radio System Family of Systems (LRS FoS) which began fielding in FY 2022, and an optical communications system. The LRS FoS will provide Naval integration over long distances with both shore-to-shore and shore-to-ship connectivity. This capability is critical to the Force Design goals of establishing resilient communications architectures capable of closing kill webs in austere environments. LRS FoS includes a Transit Case based system for operational flexibility and the Tactical Elevated Antenna Mast II (TEAMS II) which provides the antenna height needed for transmitting over significant distances. The optical communications system operates outside of the Radio Frequency spectrum to provide Marines with an extremely high data rate communications pathway. The capabilities within the TWTS portfolio will modernize the Marine Corps ability to connect networks over long distances in contested and satellite denied environments.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: TCM: Product Development	0.254	5.804	22.424	0.000	22.424
Articles:	-	-	-	-	-
FY 2023 Plans: - Initiate MBR-II replacement development Continue funding the Marine Corp's fair share cost for development of the Joint Enterprise Network Manager (JENM) application required for MUOS. - Fund the procurement of antenna test asset and support during test events. (This initiative supports the following National Defense Strategy objective: sustain joint force military advantage)					
FY 2024 Base Plans: - Continue development efforts related to Multi-Band Radio II (MBR II) replacement systems.					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue funding the Marine Corp's fair share cost for development of the Joint Enterprise Network Manager (JENM) application required for MUOS. - Initiate SPEED software development efforts. - Initiate Waveform Modernization efforts to include MUOS, SATURN, SINCGARS Frequency Hop, and WREN. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase reflects the initiation of MBR II replacement development efforts, SPEED software development and waveform modernization efforts.					
Title: TCM: Engineering and Program Support ***Articles:*** ***FY 2023 Plans:*** - Continue engineering and support efforts for USMC Tactical radios, such as Multi-Channel Radios, High Frequency Radios, Multi Band Radios, HALO C2, Ground Link-16, as well as crypto modernization efforts. ***FY 2024 Base Plans:*** - Continue engineering and support efforts for USMC Tactical radios, such as Multi-Channel Radios, High Frequency Radios, Multi Band Radios, SPEED, Ground Link-16, Halo C2 as well as complete crypto modernization efforts. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase reflects additional support associated with SPEED developmental efforts and Ground LINK-16 requirements.	2.674 -	2.022 -	3.632 -	0.000 -	3.632 -
Title: TCM: Test and Evaluation Support ***Articles:*** ***FY 2023 Plans:*** - Fund test events including software development test, road shock, shake and vibration testing and MIL-STD testing for TCM FoS and system updates or obsolescence. ***FY 2024 Base Plans:***	2.181 -	0.716 -	0.730 -	0.000 -	0.730 -

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Conduct Ground Link-16 software ECP testing. - Conduct ECP testing for MCMP, MCHH, HFR II, MBR II. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant change from FY 2023 to FY 2024.					
Title: TCM: Management Services ***Articles:*** ***FY 2023 Plans:*** - Support FFRDC engineering and program support for the TCM Family of Systems (FoS), HFR II, MCR FoS, MBR II equipment, legacy equipment reaching obsolescence, and research/testing of new technology. ***FY 2024 Base Plans:*** - Support FFRDC engineering and program support for the TCM Family of Systems (FoS), HFR II, MCR FoS, MBR II equipment, legacy equipment reaching obsolescence, and research/testing of new technology. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant change from FY 2023 to FY 2024.	1.276 -	0.737 -	0.752 -	0.000 -	0.752 -
Title: NOTM: Product Development ***Articles:*** ***Description:*** Networking on the Move (NOTM) Research and Development funding supports the design, development, prototyping and Engineering for technology refresh and upgrades, system refreshes and new capabilities. ***FY 2023 Plans:*** - Complete prototyping efforts in support of NOTM Amphibious Combat Vehicle (ACV) integration. - Continue development efforts in support of network and SATCOM resiliency tools, including additional bands.	4.324 -	1.602 -	0.728 -	0.000 -	0.728 -

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Initiate Development effort for platform agnostic quick disconnect couplings to NOTM GCV components to allow for kits to be moved to multiple vehicles. ***FY 2024 Base Plans:*** - Continue development efforts in support of network and SATCOM resiliency tools, including additional bands. - Complete Development effort for platform agnostic quick disconnect couplings to NOTM GCV components ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease reflects completion of prototyping efforts in support of NOTM ACV integration.					
Title: NOTM: Test and Evaluation Support	2.521	1.475	0.400	0.000	0.400
Articles:	-	-	-	-	-
Description: Networking on the Move (NOTM) Test and Evaluation funding supports acquisition testing for design, development, production, engineering and fielding of system variants and equipment upgrades. ***FY 2023 Plans:*** - Continue testing in support of network configuration and network management tool suit. - Continue integration and usability testing in support of prototype SATCOM and network management tools/ upgrades, including Transport Security (TRANSEC) and potential lower profile SATCOM Antennas. ***FY 2024 Base Plans:*** - Complete usability evaluation for platform agnostic quick disconnect couplings to NOTM GCV components - Complete integration and usability testing in support of prototype SATCOM and network management tools/ upgrades, including Transport Security (TRANSEC) and potential lower profile SATCOM Antennas. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease reflects the reduction of Transport Security (TRANSEC) solution integration and testing activities.					
Title: WSATCOM (formerly VSAT): Engineering and Program Support	0.579	0.770	0.790	0.000	0.790
Articles:	-	-	-	-	-
FY 2023 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Initiate engineering documentation, to include the Program Protection Plan, PSPEC, and Cyber Security Plan in support of Man-Portable Secure Anti-Jam Terminal (MSAT) and Low Earth Orbit (LEO) - Initiate Cybersecurity documentation and RMF planning for MSAT and LEO. - Support engineering events and documentation development for MCWS FoS ECPs. ***FY 2024 Base Plans:*** - Produce engineering documentation in support of NIR, FCA, SVR for MCWS-Light and Heavy in preparation for MS-C. - Provide support for development of Test and Evaluation and Cybersecurity documentation. - Provide support to engineering events and documentation development for MCWS FoS ECPs. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant change from FY 2023 to FY 2024.					
Title: WSATCOM: Product Development ***Articles:*** ***FY 2023 Plans:*** N/A ***FY 2024 Base Plans:*** - Conduct research and development for the following Secure/Assured SATCOM capabilities: Protected Tactical Waveform (PTW), low probability of interception / low probability of detection (LPI / LPD), Polar, Phased Array technology, and SATCOM Diversity. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase reflects development of Secure/Assured SATCOM upgrades associated with the MCWS FoS.	0.000 -	0.000 -	2.500 -	0.000 -	2.500 -
Title: WSATCOM (formerly VSAT): Management Services ***Articles:*** ***FY 2023 Plans:***	0.021 -	0.137 -	0.646 -	0.000 -	0.646 -

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Complete engineering efforts through a FFRDC in support of analysis of requirements and research for Man-Portable Secure Anti-Jam Terminal (MSAT). - Support development of MCWS FoS Concept of Employment (CONEMP). ***FY 2024 Base Plans:*** - Conduct acquisition engineering through a FFRDC to support research of Secure/Assured SATCOM. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase reflects initiation of acquisition and engineering support related to Secure/Assured SATCOM development efforts.					
Title: WSATCOM: Test and Evaluation	0.000	0.000	1.200	0.000	1.200
Articles:	-	-	-	-	-
FY 2023 Plans: N/A ***FY 2024 Base Plans:*** - Initiate Government Acceptance Testing of MCWS-Light Test Assets - Initiate developmental testing of MCWS-Light Test Assets ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase reflects initiation of developmental testing associated with MCWS-Light test assets.					
Title: COSMOS: Product Development	0.000	1.300	8.903	0.000	8.903
Articles:	-	-	-	-	-
FY 2023 Plans: - Details for COSMOS are held at a higher classification level. ***FY 2024 Base Plans:*** - Details for COSMOS are held at a higher classification level. ***FY 2024 OCO Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Details for COSMOS are held at a higher classification level					
Title: COSMOS: Engineering and Program Support	0.000	0.050	1.189	0.000	1.189
Articles:	-	-	-	-	-
FY 2023 Plans: - Details for COSMOS are held at a higher classification level. ***FY 2024 Base Plans:*** - Details for COSMOS are held at a higher classification level. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Details for COSMOS are held at a higher classification level.					
Title: COSMOS: Test and Evaluation Support	0.000	2.100	2.783	0.000	2.783
Articles:	-	-	-	-	-
FY 2023 Plans: - Details for COSMOS are held at a higher classification level. ***FY 2024 Base Plans:*** - Details for COSMOS are held at a higher classification level. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Details for COSMOS are held at a higher classification level.					
Title: TWTS: Test and Evaluation	0.470	0.467	0.910	0.000	0.910
Articles:	-	-	-	-	-
FY 2023 Plans: - Complete LRS FoS test and evaluation activities. - Continue test and evaluation activities for Optical Capability.					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue test and evaluation activities for TEAMS II (Independent Mast) Capability. ***FY 2024 Base Plans:*** - Complete test and evaluation activities for TEAMS II (Independent Mast) Capability. - Continue test and evaluation activities for Optical Capability. - Initiate test and evaluation of waveforms, licenses, and antennas that enhance fielded system's ability to evade adversarial detection and jamming. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase reflects the initiation of test and evaluation efforts related to the waveforms, licenses, and antennas to evade adversarial detection and jamming.					
Title: TWTS: Product Development	0.383	0.386	0.398	0.000	0.398
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue support of technology scouting, prototype development, and evaluation support for TWTS programs. - Initiate product development for advanced, lightweight, non-traditional cases for TWTS systems. ***FY 2024 Base Plans:*** - Complete product development for advanced, lightweight, non-traditional cases for TWTS systems. - Continue support of technology scouting, prototype development, and evaluation support for TWTS programs. - Initiate product development of for waveforms and antennas that contribute to system and network resiliency. - Continue technology scouting and prototype development for waveforms and antennas that contribute to system and network resiliency. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** No significant change from FY 2023 to FY 2024.					
Accomplishments/Planned Programs Subtotals	14.683	17.566	47.985	0.000	47.985

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4633-1: *TCM*	274.279	260.357	357.713	-	357.713	136.132	143.800	123.670	126.143	Continuing	Continuing
• PMC/4631-1: *NOTM*	48.537	35.593	61.667	-	61.667	34.263	31.609	18.517	18.860	Continuing	Continuing
• PMC/4633-2: *WSATCOM (formerly VSAT)*	1.890	16.284	88.662	-	88.662	106.443	97.589	20.385	20.793	Continuing	Continuing
• PMC/4633-4: *TWTS*	166.615	204.668	57.454	-	57.454	3.549	3.624	3.696	3.770	Continuing	Continuing

Remarks

D. Acquisition Strategy

Tactical Communications Modernization (TCM): TCM will maximize the use of non-developmental radio solutions to meet the next generation of Marine Corps tactical radio requirements. The Mobile User Objective System (MUOS) testing at contracted government test labs to include environmental, shock, electromagnetic compatibility, and interoperability testing until full capability is completed. The Multi Channel Radios (MCR) Family of Systems (FoS) is an evolutionary program that will field non-developmental software defined radios (SDR) to meet the National Security Agency's (NSA) Communications Security Modernization end of Calendar Year 2024 deadline. Multi-Channel Radio Family of Systems, consists of the Multi Channel Hand Held (MCHH) and Multi-Channel Man-Pack (MCMP) systems. The MCHH system will be openly competed for Contract Award estimated in February 2022. RFP was released to industry in March 2021. The MCMP system procurement has been delayed to allow industry to resolve catastrophic heating issued that were discovered in testing, causing both a safety and performance risk. Anticipated procurement of this capability to be 4Q FY 2023 to meet COMSEC modernization by 1Q FY 2025.

Networking on the Move (NOTM): NOTM will use an evolutionary acquisition strategy that leverages Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) technology to procure, sustain, and meet emerging requirements. The design of the system provides for internal growth capability through an open system architecture enabling technology refresh to extend the system's life, maintain interoperability, Information Assurance (IA) compliance, and reduce costs due to Diminishing Manufacturing Sources and Material Shortages (DMSMS). It is envisioned that technology refresh will occur on the NOTM hardware and software periodically due to component obsolescence, user-driven requests for improvements, IA compliance, and mission-related requirements. Refresh will include investments to incorporate evolving capabilities to ensure compatibility with other systems, create lighter and more efficient equipment that is platform agnostic, and keep pace with evolving software requirements. End-of-life equipment refresh is expected throughout the program's life cycle and may be managed through kit purchases, replacement through Engineering Change Proposals (ECPs), or as replacement parts as equipment is repaired.

Wideband Satellite Communications (WSATCOM)(formerly VSAT): The VSAT Family of Systems (FoS) was fielded over 10 years and as a result, many subcomponents have reached End-of-Life/End-of-Sale (EoL/EoS). The WSATCOM acquisition strategy leverages Commercial-Off-The-Shelf (COTS) technology to keep the systems relevant and capable. Program will execute the MCWS-L/H efforts using the traditional acquisition framework. PM CS will procure Non-Developmental Item (NDI) technology. Market research and industry responses indicated that MCWS-L/H requirements can be met through integration of NDI. Specific areas of focus include a reduction of Size, Weight, and Power from the legacy VSAT FoS, as well as open architecture features to support future upgrades such as modem replacements and security enhancements. MCWS L/H is designated as an ACAT-IVT, with entrance into the acquisition framework at post MS B. Milestone Decision Authority (MDA)

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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is delegated to the Portfolio Manager (PfM) Command Element Systems (CES). The acquisition for MCWS-L/H will be sought through full and open competition. The program office plans to award an Indefinite Delivery/Indefinite Quantity (IDIQ) for test assets and production quantities. The first ordering period will be for MCWS-L and MCWS-H test asset development and testing, and follow-on ordering periods will be for MCWS-L and MCWS-H production quantities.

Secure Mobile Anti-Jam Reliable Tactical-Terminal (SMART-T): SMART-T is an Army led, ACAT II program. The Marine Corps SMART-T has fielded the full Authorized Acquisition Objective (AAO) of 42 terminals and 35 AN/PSQ-17 Network Planning tools and completed the Advanced Extremely High Frequency (AEHF) upgrades. The SMART-T Project Office will procure non developmental items utilizing an Army contract to mitigate obsolescence, Diminishing Manufacturing Sources and Material Shortages (DMSMS), and components whose warranty has expired. This strategy will continue until a NEXGEN AEHF solution is identified.

Terrestrial Wideband Transmission Systems (TWTS): TWTS is a portfolio that provides the Fleet Marine Force with the capabilities of secure Beyond Line of Sight (BLOS) and Line of Sight (LOS) terrestrial digital data transmission. The BLOS capability will be provided by the Next Generation Troposcatter (NGT) which is currently in the Engineering and Manufacturing Development Phase. NGT procurements for testing and fielding are being made through the Marine Corps FFP contract awarded in Q1 FY 2020. The LOS capability is being provided by the Line-of-Sight Radio System Family of Systems (LRS FoS) which is being purchased through an Army contract and began fielding in FY 2022. NGT and LRS are both Leading Readiness Indicators for the Marine Corps Force Design Effort supporting the conduct of Command and Control in a degraded environment. The LOS capability also includes an optical communications system with test assets being procured through an Other Transaction Authority (OTA) agreement and production systems being procured through a traditional contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TCM JENM Development	SS/CPFF	ARL : Aberdeen, MD	6.822	0.000	Feb 2022	1.207	Feb 2023	1.012	Feb 2024	-		1.012	Continuing	Continuing	Continuing
TCM FoS Development	Various	MCSC : Quantico, VA	0.000	0.254	Jul 2022	0.590	Jun 2023	0.855	Jun 2024	-		0.855	Continuing	Continuing	Continuing
TCM SPEED Development	Various	Crane, Indiana : NSWC Crane	0.000	0.000		0.000		3.420	Mar 2024	-		3.420	Continuing	Continuing	Continuing
TCM Test Assets	C/IDIQ	PRP : San Diego, CA	4.129	0.524	Jul 2022	0.000	Mar 2023	0.456	Mar 2024	-		0.456	0.000	5.109	-
TCM MBR II PIII	C/FFP	NIWC LANT : Charleston, SC	0.000	0.000		3.752	Mar 2023	3.806	Apr 2024	-		3.806	Continuing	Continuing	Continuing
TCM Ground Link-16	MIPR	NIWC-PAC : San Diego, CA	0.000	0.000		0.255	May 2023	0.275	May 2024	-		0.275	Continuing	Continuing	Continuing
TCM MBR II Replacement P3I	TBD	MCSC : Quantico, VA	0.000	0.000		0.000		12.600	Mar 2024	-		12.600	0.000	12.600	-
NOTM Development	WR	NIWC-PAC : San Diego, CA	5.052	0.241	Dec 2021	0.242	Dec 2022	0.228	Dec 2023	-		0.228	Continuing	Continuing	Continuing
NOTM Development/ Enhancement	C/CPFF	NIWC-PAC : San Diego, CA	0.000	0.360	Dec 2021	0.360	Dec 2022	0.000		-		0.000	0.000	0.720	-
NOTM Development	C/CPFF	NIWC-LANT : Charleston, SC	7.909	3.723	Dec 2021	1.000	Dec 2022	0.500	Dec 2023	-		0.500	0.000	13.132	-
NOTM COSMOS	Various	NIWC-PAC : San Diego, CA	0.000	0.000		1.300	Nov 2022	8.903	Nov 2023	-		8.903	0.000	10.203	-
TWTS Development	C/FFP	MCSC : Quantico, VA	0.559	0.383	May 2022	0.386	Jan 2023	0.398	Jan 2024	-		0.398	0.000	1.726	-
WSATCOM Secure/Assure SATCOM	TBD	Various : Various	0.000	0.000		0.000		2.500	Aug 2024	-		2.500	0.000	2.500	-
Prior Years Cumulative Funding	Various	Various : Various	28.925	0.000		0.000		0.000		-		0.000	0.000	28.925	-
		Subtotal	53.396	5.485		9.092		34.953		-		34.953	Continuing	Continuing	N/A

Remarks

Product Development overall increase is largely attributed to the initiation of MBR II Replacement efforts, TCM SPEED software development and waveform modernization efforts as well as COSMOS product development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TCM Engineering Support Gov	MIPR	NIWC-LANT : Charleston, SC	0.000	0.000		0.386	Nov 2022	0.402	Nov 2023	-		0.402	0.000	0.788	-
TCM Engineering Support	Various	MCSC : Quantico, VA	1.127	2.674	May 2022	1.430	May 2023	2.866	May 2024	-		2.866	Continuing	Continuing	Continuing
TCM Engineering Support	C/FFP	NIWC-LANT : Charleston, SC	0.000	0.000		0.206	Jul 2023	0.364	Jul 2024	-		0.364	0.000	0.570	-
WSATCOM/VSAT Engineering Support	WR	NIWC-PAC : San Diego, CA	1.576	0.000		0.000	Oct 2022	0.000		-		0.000	Continuing	Continuing	Continuing
WSATCOM/VSAT Engineering Support	WR	NIWC-LANT : Charleston, SC	0.029	0.000		0.000		0.000		-		0.000	0.000	0.029	-
WSATCOM Engineering Support	C/FFP	MCSC : Quantico, VA	0.000	0.579	May 2022	0.770	May 2023	0.790	May 2024	-		0.790	0.000	2.139	-
SMART-T Engineering Support 2	WR	NIWC-PAC : San Diego, CA	0.021	0.000		0.000		0.000		-		0.000	0.000	0.021	-
NOTM COSMOS	Various	NIWC-PAC : San Diego, CA	0.000	0.000		0.050	Nov 2022	1.189	Nov 2023	-		1.189	0.000	1.239	-
Prior Years Cumulative Funding	Various	Various : Various	7.239	0.000		0.000		0.000		-		0.000	0.000	7.239	-
		Subtotal	9.992	3.253		2.842		5.611		-		5.611	Continuing	Continuing	N/A

Remarks

Support overall increase is largely attributed to TCM SPEED developmental efforts and Ground LINK-16 requirements as well as COSMOS support.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation (OT&E)	Various	Various : Various	7.657	0.950	Aug 2022	0.000	Aug 2023	0.000	Aug 2024	-		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	MIPR	DTIC : Fort Belvoir, VA	1.726	0.707	Nov 2021	0.716	Jan 2023	0.730	Jan 2024	-		0.730	0.000	3.879	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NIWC-PAC : San Diego, CA	0.150	2.521	Nov 2021	1.475	Nov 2022	0.400	Nov 2023	-		0.400	0.000	4.546	-
Developmental Test & Evaluation (DT&E)	C/FFP	MCSC : Quantico	0.580	0.470	Mar 2022	0.467	Feb 2023	0.910	Jan 2024	-		0.910	0.000	2.427	-
Developmental Test & Evaluation (DT&E)	C/FFP	MCSC : Quantico, VA	0.000	0.000		0.000		1.200	Aug 2024	-		1.200	0.000	1.200	-
Developmental Test & Evaluation (DT&E)	WR	NIWC PAC : San Diego	0.000	0.000		2.100	Nov 2022	2.783	Nov 2023	-		2.783	0.000	4.883	-
		Subtotal	10.113	4.648		4.758		6.023		-		6.023	Continuing	Continuing	N/A

Remarks

Test and Evaluation overall increase is largely attributed to initiation of WSATCOM developmental testing associated with MCWS-Light test assets.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TCM Engineering Support	FFRDC	US Army, MITRE : Stafford, VA	2.548	1.276	Jan 2022	0.737	Feb 2023	0.752	Jan 2024	-		0.752	Continuing	Continuing	Continuing
WSATCOM Engineering Support	FFRDC	US Army, MITRE : Stafford, VA	6.454	0.021	Feb 2022	0.137	Feb 2023	0.646	Jan 2024	-		0.646	Continuing	Continuing	Continuing
SMART-T Engineering Support	FFRDC	US Army, MITRE : Stafford, VA	0.508	0.000		0.000	Feb 2023	0.000		-		0.000	0.000	0.508	-
Prior Years Cumulative Funding	FFRDC	US Army, MITRE : Stafford, VA	9.416	0.000		0.000	Feb 2023	0.000		-		0.000	0.000	9.416	-
		Subtotal	18.926	1.297		0.874		1.398		-		1.398	Continuing	Continuing	N/A

Remarks

Management Services overall increase is largely attributed to engineering and program support for the TCM Family of Systems (FoS), HFR II, MCR FoS, MBR II equipment, legacy equipment reaching obsolescence, and research/testing of new technology. Increase is also attributed to WSATCOM initiation of acquisition and engineering support related to Secure/Assured SATCOM development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	92.427	14.683		17.566		47.985		-		47.985	Continuing	Continuing	N/A

Remarks

Overall increase is largely attributed to initiation of TCM MBR II Replacement, SPEED software development, and waveform modernization efforts.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
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NOTM-A and NOTM-GCV All ECPs

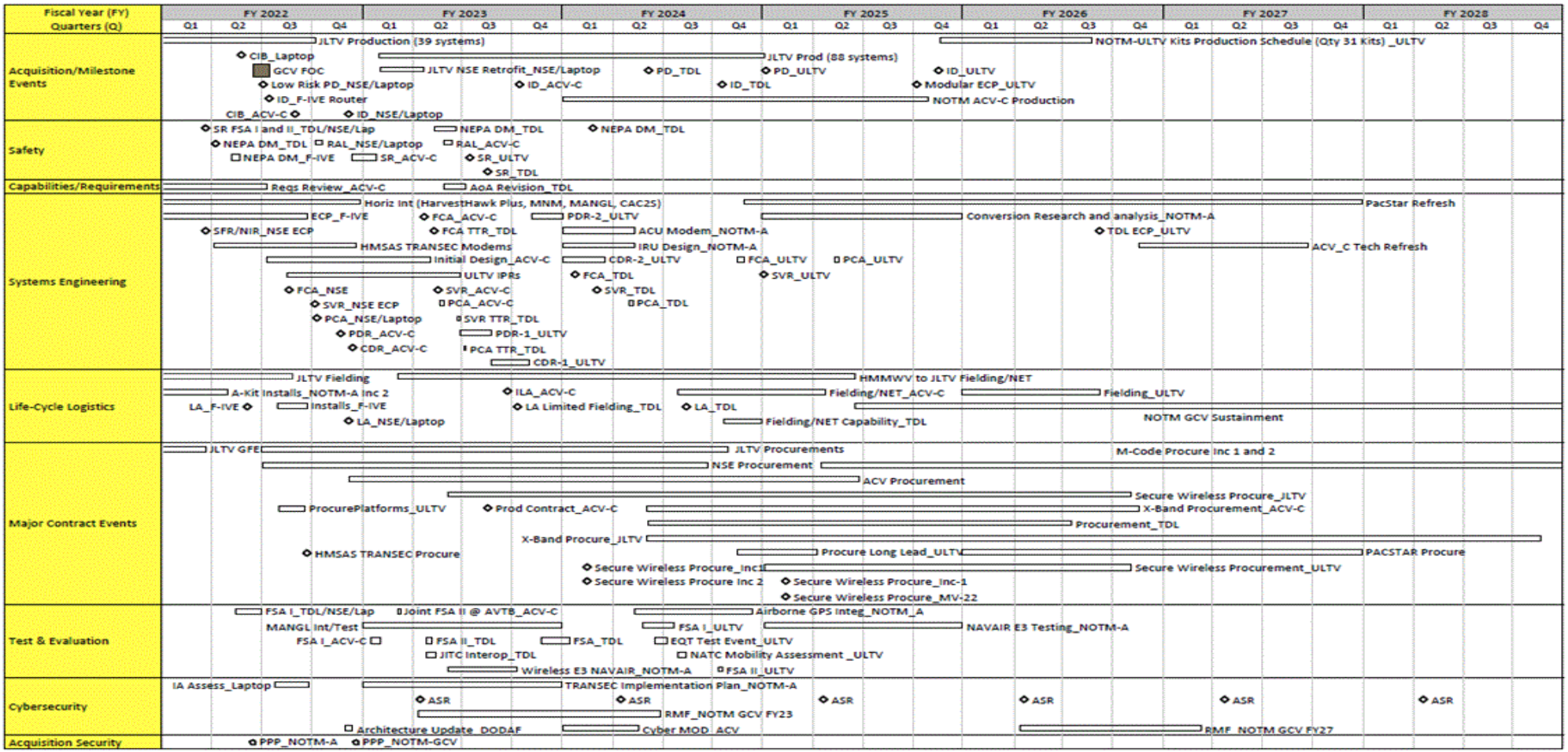


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

TWTS FY22-28 Schedule

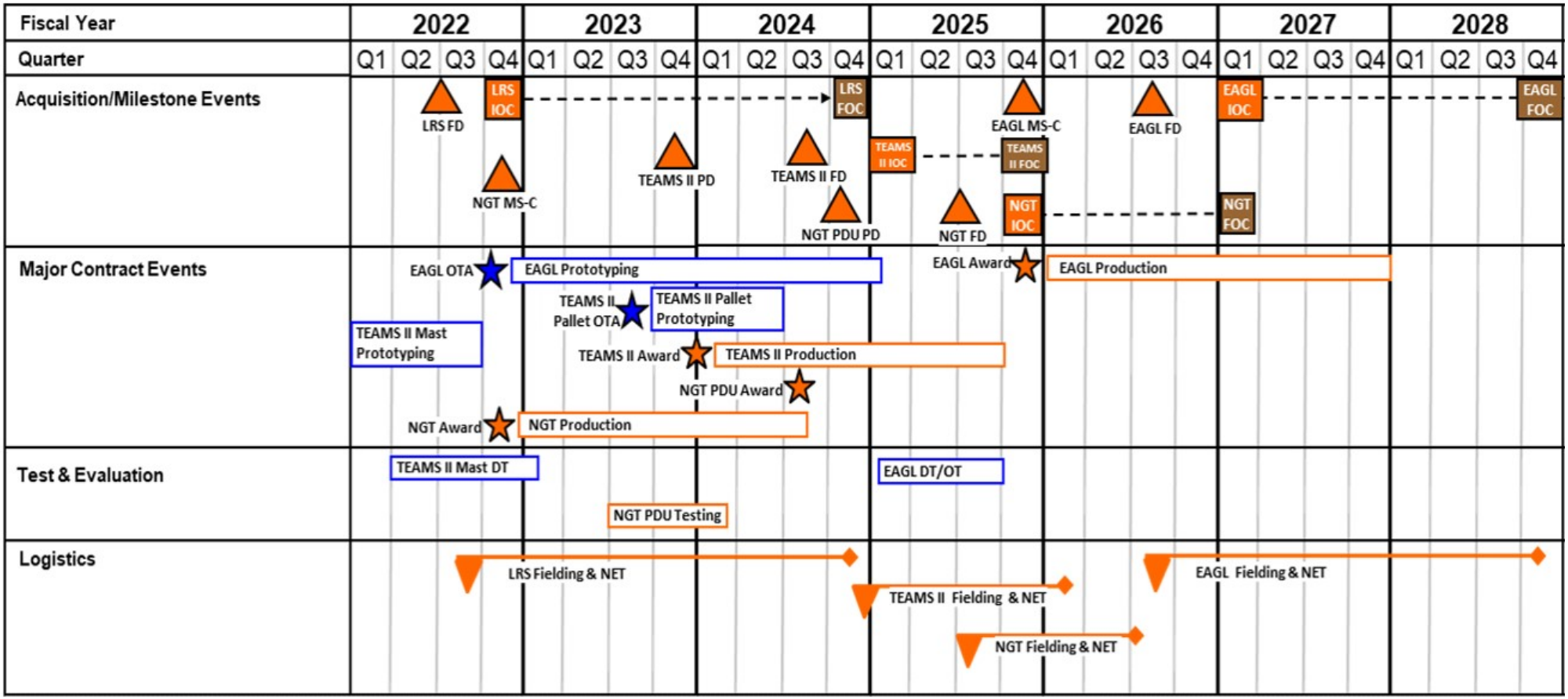
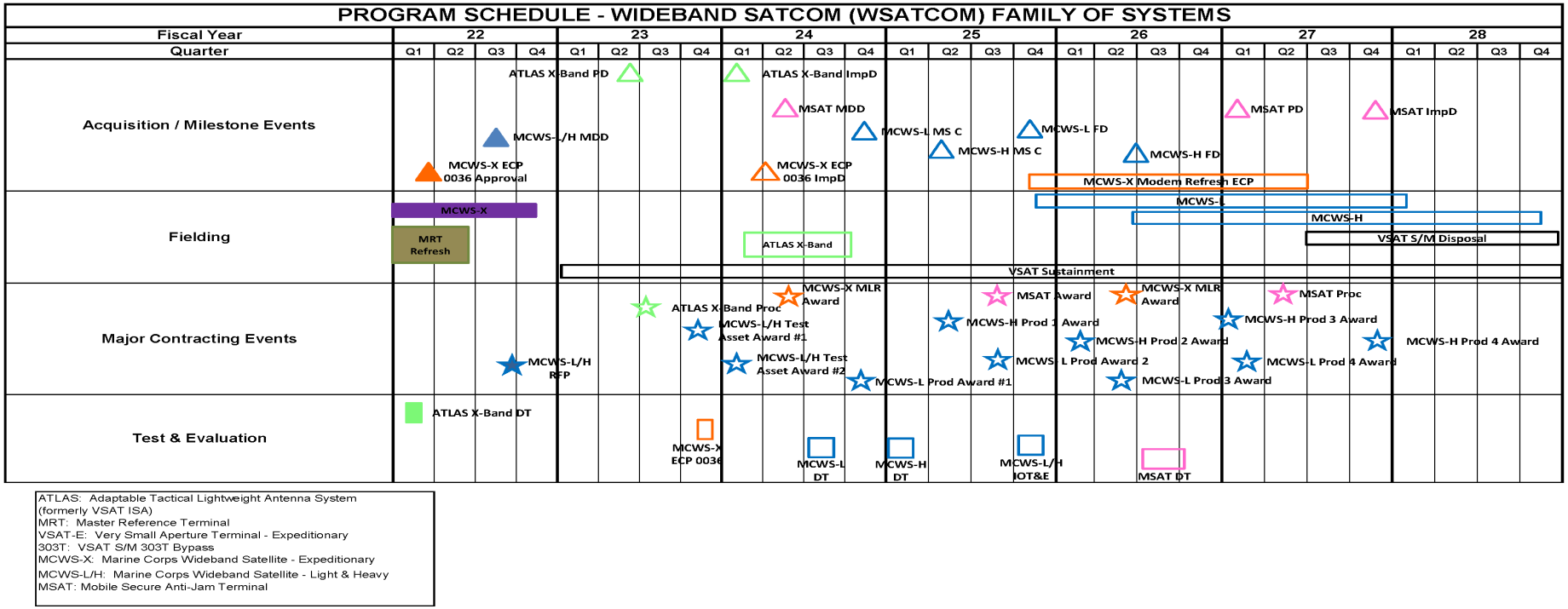


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*



ATLAS: Adaptable Tactical Lightweight Antenna System (formerly VSAT ISA)
MRT: Master Reference Terminal
VSAT-E: Very Small Aperture Terminal - Expeditionary
303T: VSAT S/M 303T Bypass
MCWS-X: Marine Corps Wideband Satellite - Expeditionary
MCWS-L/H: Marine Corps Wideband Satellite - Light & Heavy
MSAT: Mobile Secure Anti-Jam Terminal

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

TCM-MCMP

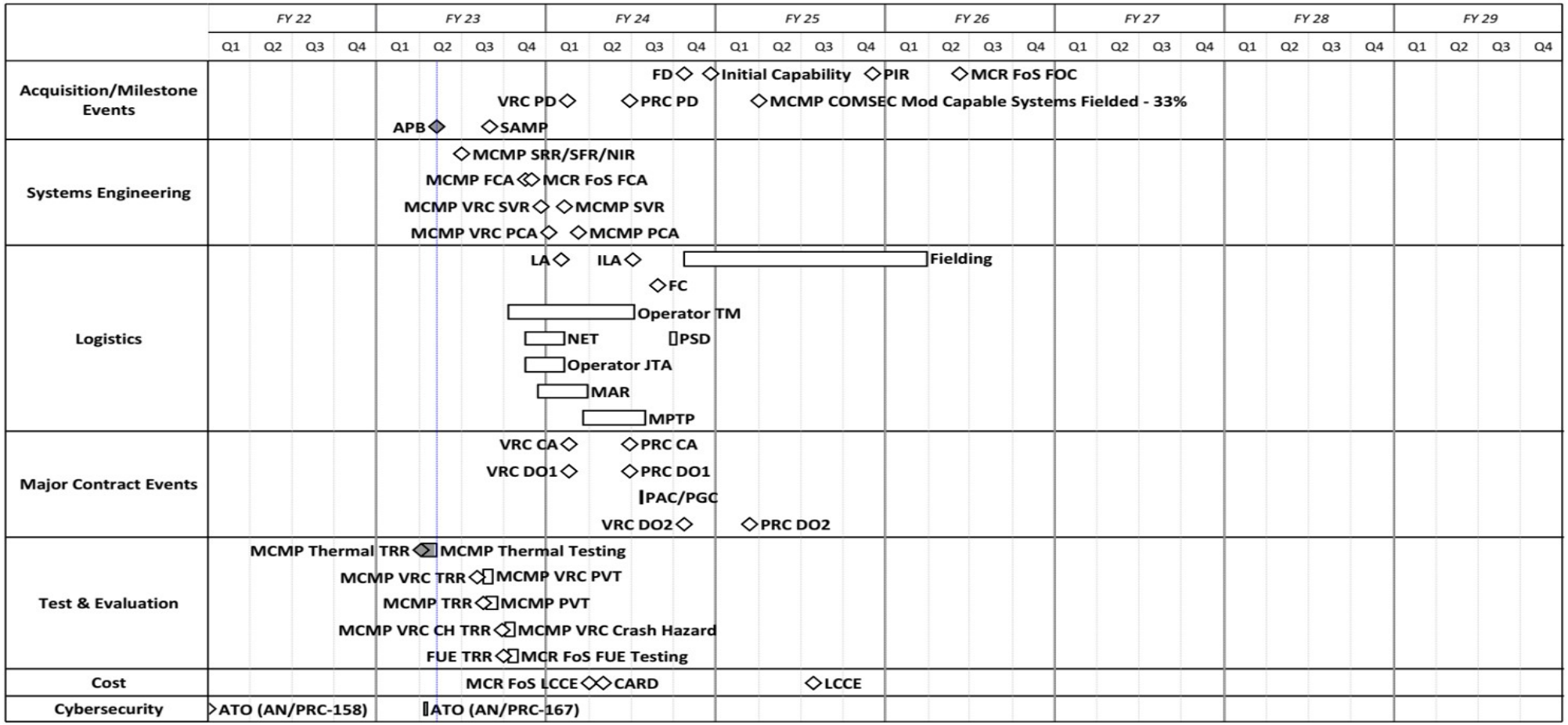


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

TCM-MCHH

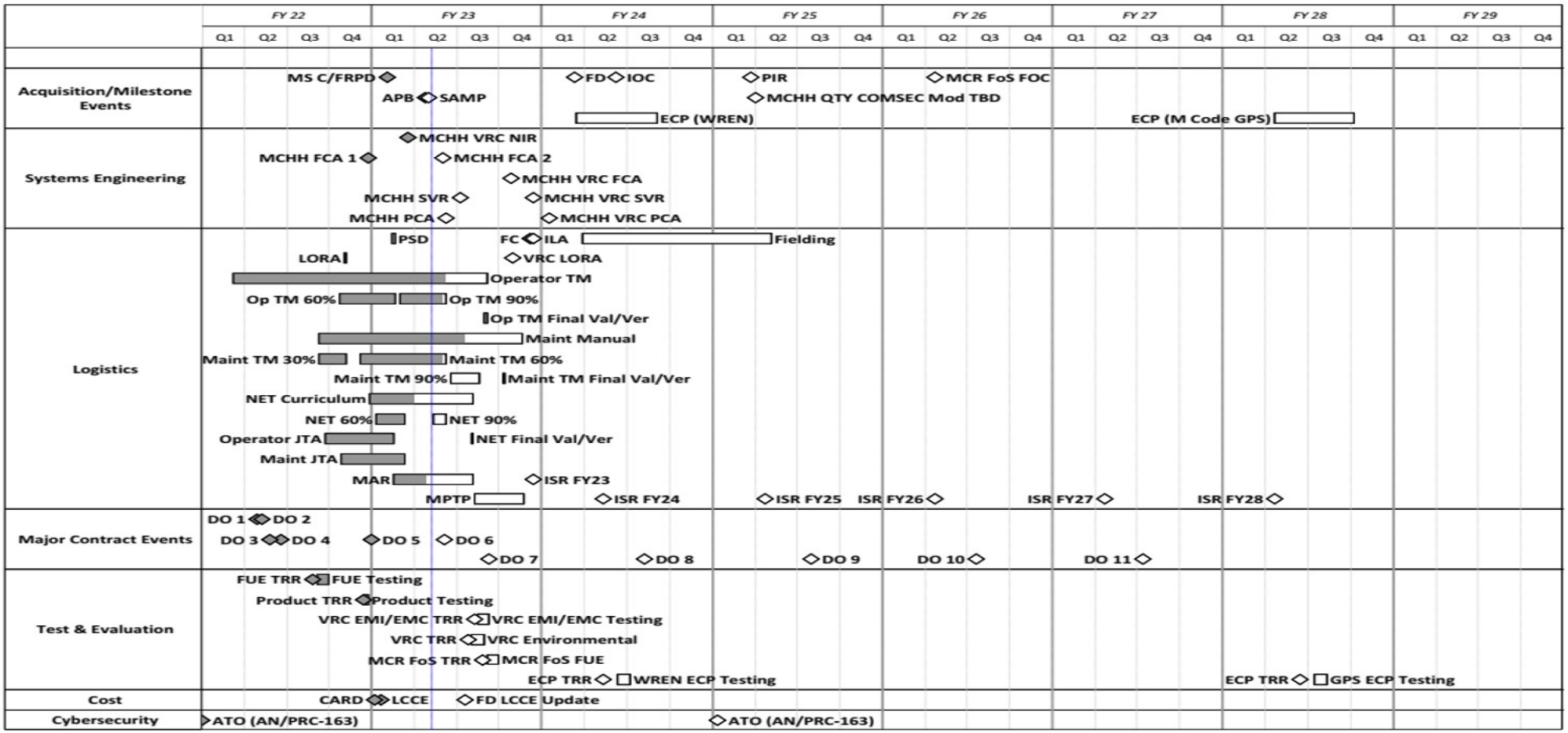


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

TCM-HFR II

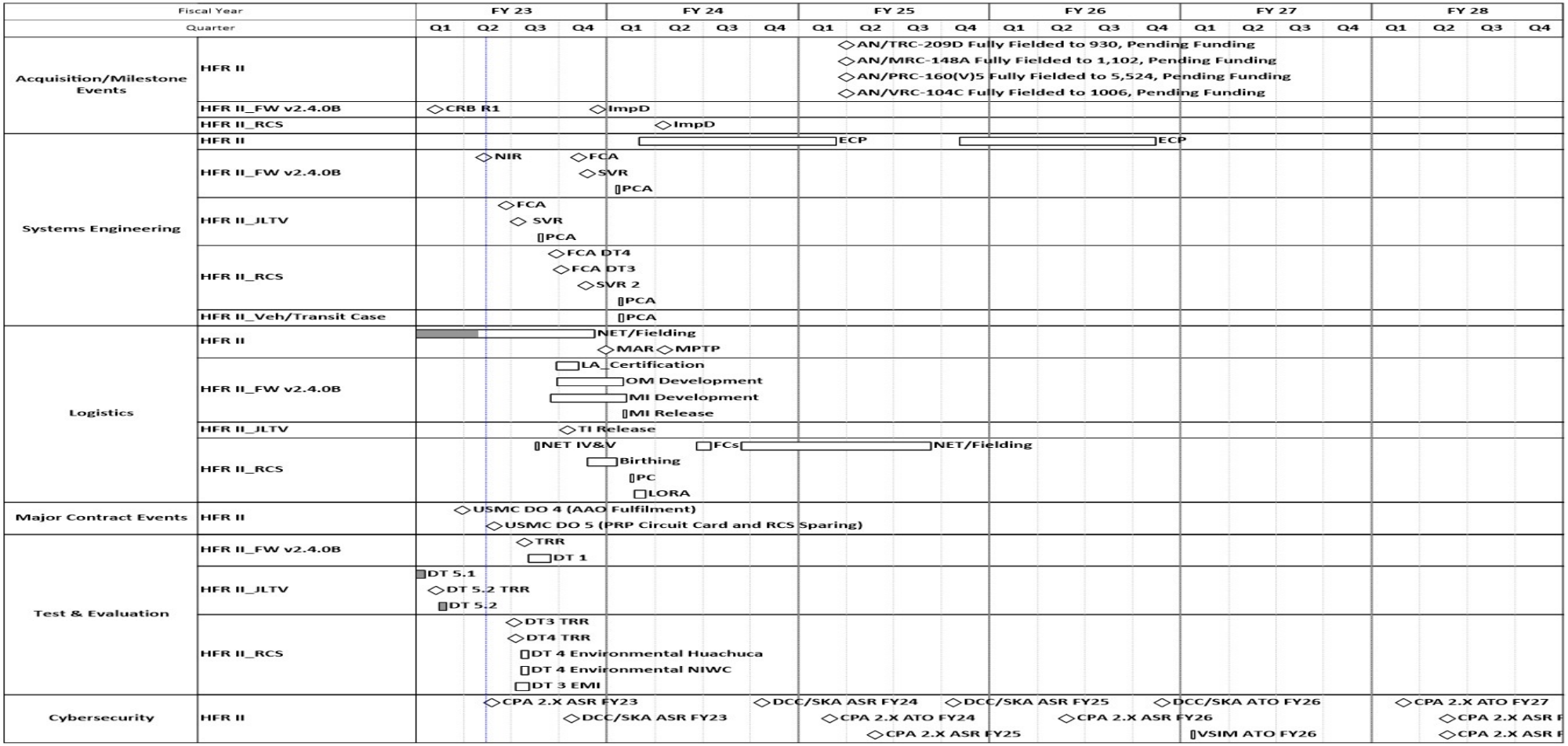


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

TCM-MBR II

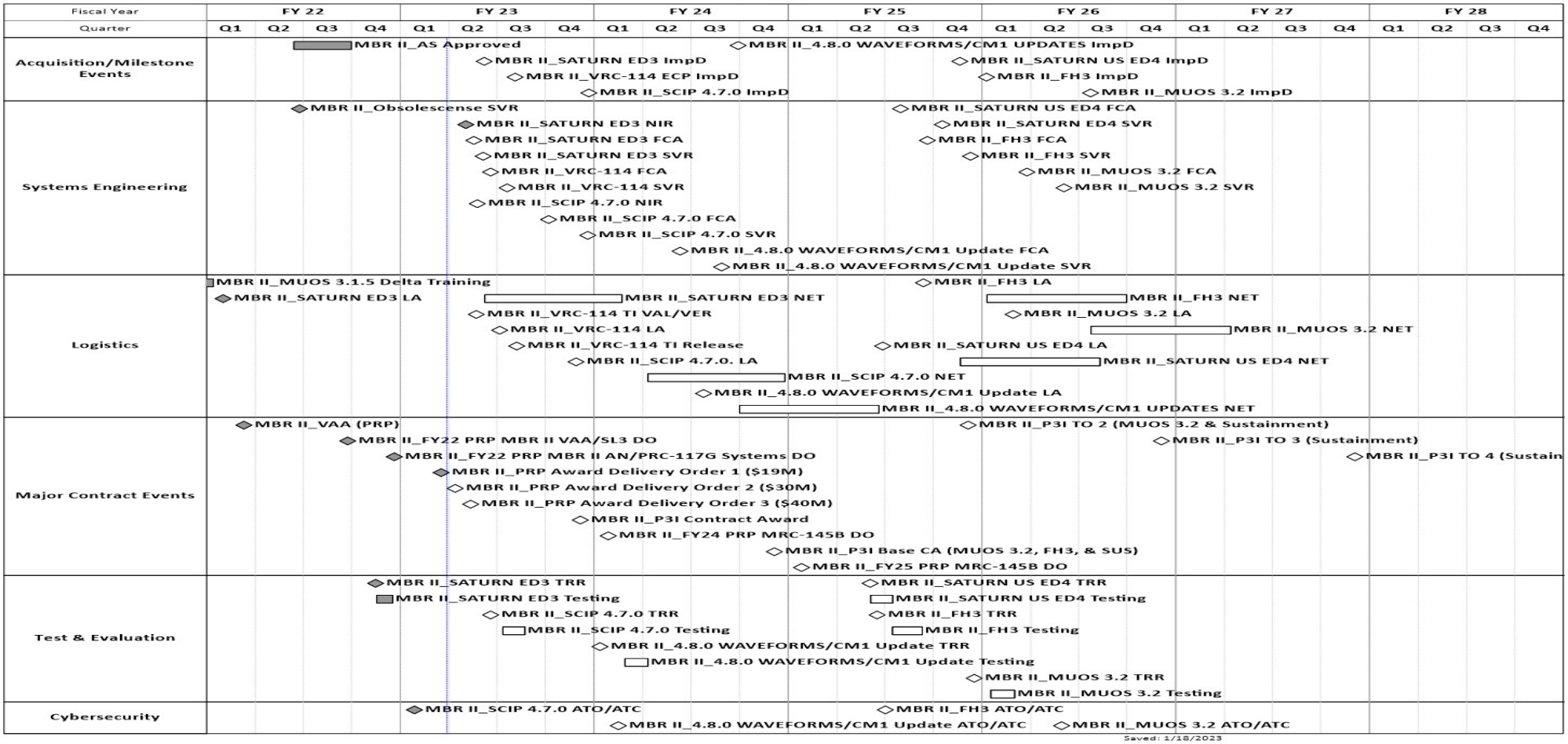


Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

SPEED Schedule

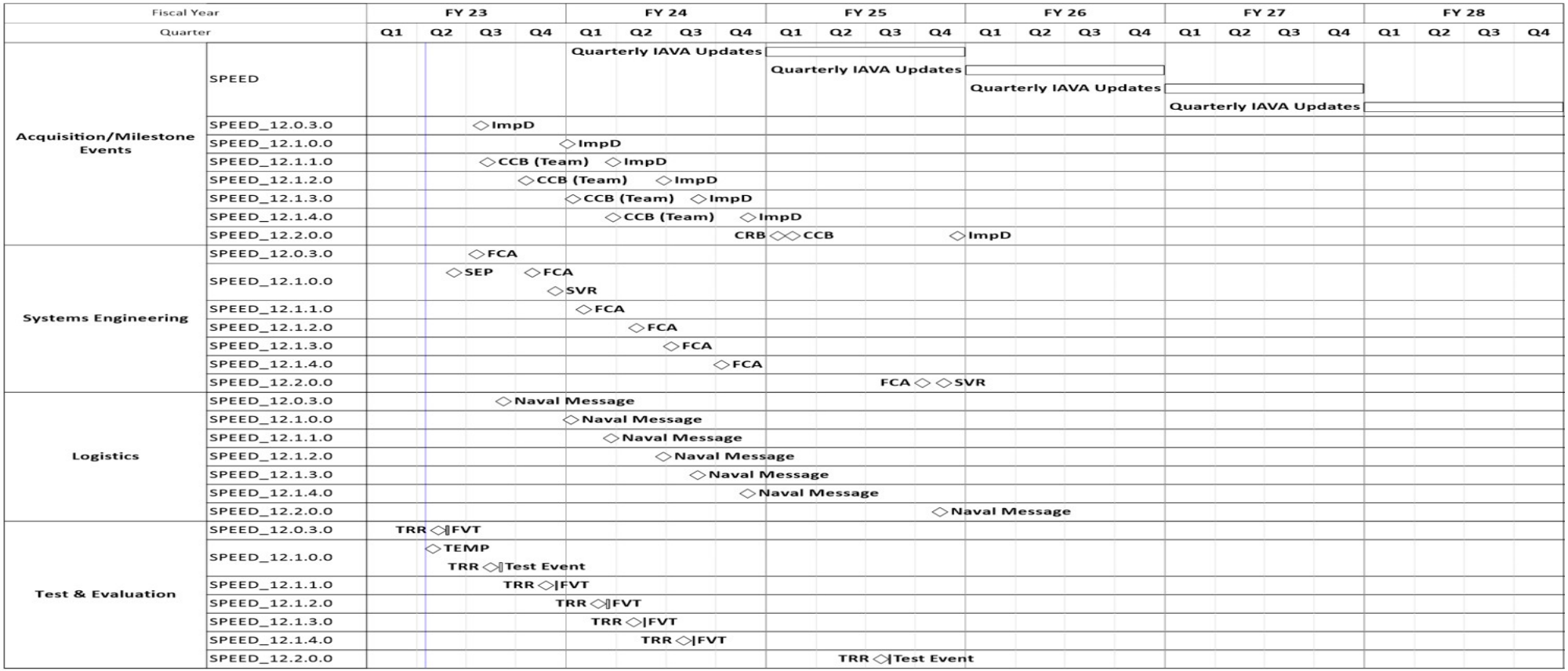


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2275				
TCM MCMP: MCMP PRC Fielding and NET	4	2024	2	2026
TCM MCMP: MCMP VRC Fielding and NET	4	2024	2	2026
TCM MCMP: MCMP PRC FD	4	2024	4	2024
TCM MCMP: MCMP VRC FD	4	2024	4	2024
TCM MCMP: MCMP PRC PD	3	2024	3	2024
TCM MCMP: MCMP VRC PD	1	2024	1	2024
TCM MCMP: MCMP VRC DO 1	1	2024	1	2024
TCM MCMP: MCMP PRC DO !	3	2024	3	2024
TCM MCMP: MCMP IOC	1	2025	1	2025
TCM MCMP: MCMP FOC	2	2026	2	2026
TCM HFR II: HFR II Remotes Fielding and NET	4	2023	4	2024
TCM HFR II: HFR II Fielding and NET	1	2023	4	2023
TCM HFR II: HFR II DO #1	3	2022	3	2022
TCM HFR II: HFR II Final Operating Capability (FOC)	4	2025	4	2025
TCM HFR II: HFR II DO #2	2	2023	2	2023
TCM MCHH: Contract Award DO #1	2	2022	2	2022
TCM MCHH: PRC Procurement Decision (PD)	4	2022	4	2022
TCM MCHH: PRC FD	1	2024	1	2024
TCM MCHH: PRC DO #2	2	2022	2	2022
TCM MCHH: PRC/VRC IOC	2	2024	2	2024
TCM MCHH: VRC Procurement Decision (PD)	4	2023	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
TCM MCHH: VRC DO #1	3	2023	3	2023
TCM MCHH: VRC FD	3	2024	3	2024
TCM MCHH: VRC DO #2	2	2024	2	2024
TCM SPEED: SPEED Software Development	1	2024	2	2025
TCM SPEED: SPEED Developmental Test	2	2024	2	2024
TCM SPEED: SPEED Developmental Test 2	3	2024	3	2024
TCM SPEED: SPEED Operational Test	4	2024	1	2025
TCM SPEED: SPEED UI/UX User Feedback	1	2024	4	2024
NOTM: NOTM Preliminary Design Review (PDR) Amphibious Combat Vehicle- C	1	2022	1	2022
NOTM: NOTM Critical Design Review (CDR) Amphibious Combat Vehicle- C	2	2022	2	2022
NOTM: NOTM Systems Verification Review (SVR) Amphibious Combat Vehicle- C	2	2023	2	2023
NOTM: NOTM Technical Data Link Systems Verification Review (SVR) 2	1	2024	1	2024
NOTM: NOTM Ultra Light Tactical Vehicle Systems Verification Review (SVR)	4	2024	1	2025
TWTS: TWTS TEAMS II Mast Prototype Testing	2	2022	1	2023
TWTS: TWTS TEAMS II Development Testing	2	2022	1	2023
TWTS: TWTS Optical Prototype Award	4	2022	4	2022
TWTS: TWTS TEAMS II Procurement Decision	4	2023	4	2023
TWTS: TWTS TEAMS II Contract Award	4	2023	4	2023
TWTS: TWTS TEAMS II Fielding Decision	3	2024	3	2024
TWTS: TWTS NGT PDU Procurement Decision	4	2024	4	2024
TWTS: TWTS NGT PDU Award	4	2024	4	2024
TWTS: TWTS Optical Development Testing	1	2025	3	2025
TWTS: TWTS Optical Operational Testing	2	2025	3	2025
WSATCOM: WSATCOM MCWS-L/H Test Asset Award DO #1	4	2023	4	2023
WSATCOM: WSATCOM MCWS-L/H Test Asset Award DO #2	1	2024	1	2024

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2275 / *Marine Corps Tactical Radio Systems*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
WSATCOM: WSATCOM MCWS-Light Test Asset Developmental Test	3	2024	3	2024
WSATCOM: WSATCOM MCWS-Heavy Test Asset Developmental Test	1	2025	1	2025
WSATCOM: WSATCOM MCWS-Light Production Award DO #1	4	2024	4	2024
WSATCOM: WSATCOM MCWS-Light Fielding Decision	4	2025	4	2025
WSATCOM: WSATCOM MCWS-Heavy Fielding Decision	3	2026	3	2026
WSATCOM: WSATCOM MCWS-X MLR Award	2	2024	2	2024
TCM Ground Link-16: Ground Link-16 Fielding and NET	2	2024	3	2025
TCM Ground Link-16: Ground Link-16 Procurement Decision	1	2024	1	2024
TCM Ground Link-16: Ground Link-16 Fielding Decision	2	2024	2	2024

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2276 / *Comms Switching and Control Sys*	

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
2276: *Comms Switching and Control Sys*	54.480	4.053	2.122	1.008	-	1.008	2.955	2.224	1.703	1.737	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Combat Data Network (CDN): The CDN provides a modular, integrated and interoperable suite of deployable network infrastructure equipment that facilitates network, routing, switching and hosting capability across all tactical echelons of the Marine Air-Ground Task Force (MAGTF). CDN enables Non-secure Internet Protocol Router Network (NIPRNet), Secret Internet Protocol Router Network (SIPRNet) and coalition network enclaves and serves as the hardware component responsible for hosting the Marine Corp's tactical cloud (Common Hosting Environment (CHE)). The CHE tactical cloud hosts warfighting applications and services that support Command and Control (C2) at the tactical edge. The CDN bridges the gap between current capabilities and the future of the tactical data communications backbone, Operational Command Post (OCP). The Operational Command Post delivers distinct new capabilities to the MAGTF enhancing tactical maneuverability, dispersion, signature management, and situational awareness. OCP takes existing networking and cloud capabilities, modernizes these capabilities, and delivers the Fleet Marine Force tactical users one intuitive System of Systems (SoS) capable of being deployed in numerous fashions to support unique mission sets.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: CDN/OCP: Product Development	3.055	1.240	0.095	0.000	0.095
Articles:	-	-	-	-	-
Description: CDN/OCP Product Development: Funds support sustainment and modernization of existing CDN network infrastructure and technology insertion of new capabilities under OCP.					
FY 2023 Plans: - Continue development of required hardware/software upgrades to support cloud-based technologies and mitigate obsolescence and cybersecurity risks, in addition to activities associated with OCP enhancements. Development efforts will focus on integration and testing of components selected for technology refresh and incorporation of new capabilities.					
FY 2024 Base Plans: - Continue development of required hardware/software upgrades to support cloud-based technologies and mitigate obsolescence and cybersecurity risks, in addition to activities associated with OCP enhancements. Development efforts will focus on integration and testing of components selected for technology refresh and incorporation of new capabilities.					
FY 2024 OCO Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease from FY 2023 to FY 2024 reflects the completion of product development efforts associated with OCP capabilities.					
Title: CDN/OCP: Developmental Test and Evaluation	0.563	0.882	0.913	0.000	0.913
Articles:	-	-	-	-	-
Description: CDN/OCP Developmental Test and Evaluation: Funds testing and evaluation support for sustainment and modernization of existing CDN network infrastructure and technology insertion of new capabilities under OCP. ***FY 2023 Plans:*** - Continue to support test and evaluation of the CDN system, to include upcoming technology refreshes for servers and firewalls, upgrades to the hosting environment, joint interoperability testing and demonstration, and new capabilities in support of transitioning to OCP. ***FY 2024 Base Plans:*** - Continue to support test and evaluation of the CDN system, to include upcoming technology refreshes, upgrades to the hosting environment, joint interoperability testing and demonstration, and new capabilities in support of transitioning to OCP. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 reflects test and evaluation efforts associated with the OCP technology insertion.					
Title: CDN: Management Services	0.435	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: CDN Management Services: : Funds Federally Funded Research and Development Contracts (FFRDC) support for technology research and assessments for CDN sustainment/modernization and OCP new capabilities and enhancements. ***FY 2023 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A ***FY 2024 Base Plans:*** N/A ***FY 2024 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	4.053	2.122	1.008	0.000	1.008

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4634: *CDN*	41.268	42,507.000	45.217	-	45.217	39.892	40.230	40.948	41.768	Continuing	Continuing

Remarks

D. Acquisition Strategy

CDN maximizes the use of commercial and government off the shelf technologies to maintain and modernize the core deployable tactical network capability for the Marine Corps. CDN leverages a variety of external contracts and government warfare centers to upgrade fielded hardware and software to mitigate obsolescence and cybersecurity risks, in addition to maintaining interoperability with Joint and Coalition forces and compatibility with other critical Marine Corps command and control capabilities. Research, development, test, and evaluation efforts will focus on integration and testing of next generation hardware components, enhancements to the Common Hosting Environment (CHE), and technology insertion of new capabilities supporting the transition to Operational Command Post (OCP). OCP will be the successor to CDN and provide critical technology enhancements and advanced capabilities to the existing tactical network infrastructure in order to enable Force Design 2030 objectives at the tactical edge. Key OCP enhancements include: National Security Administration (NSA) approved secure wireless connectivity, cross domain solutions (CDS) to allow for secure transfer of data, Radio over Internet Protocol (RoIP), tactical chat, Mission Partner Environment, cellular connectivity, tactical cloud enhancements, and hosting of Artificial Intelligence and Machine Learning (AI/ML) capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CDN Development Efforts	MIPR	NIWC-LANT : Charleston, SC	4.547	3.055	Jun 2022	1.240	Feb 2023	0.095	Feb 2024	-		0.095	Continuing	Continuing	Continuing
CDN EFFORTS	C/FFP	MCTSSA : Camp Pendleton, CA	0.000	0.000		0.000		0.000	May 2024	-		0.000	0.000	0.000	-
Prior Year Cumulative Funding	Various	Various : Various	30.590	0.000		0.000		0.000		-		0.000	0.000	30.590	-
		Subtotal	35.137	3.055		1.240		0.095		-		0.095	Continuing	Continuing	N/A

Remarks

Decrease from FY 2023 to FY 2024 to the completion of product development efforts associated with OCP capabilities.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cumulative Funding	Various	Various : Various	5.696	0.000		0.000		0.000		-		0.000	0.000	5.696	-
		Subtotal	5.696	0.000		0.000		0.000		-		0.000	0.000	5.696	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	MIPR	NIWC Pacific : San Diego, CA	2.092	0.563	Jun 2022	0.563	Mar 2023	0.586	Mar 2024	-		0.586	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	Various	Various : Various	2.886	0.000		0.000		0.000		-		0.000	0.000	2.886	-
Developmental Test & Evaluation (DT&E)	MIPR	NSWC Indian Head : Indian Head, MA	0.000	0.000		0.319	Mar 2023	0.327	Mar 2024	-		0.327	0.000	0.646	-
		Subtotal	4.978	0.563		0.882		0.913		-		0.913	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2276 / *Comms Switching and Control Sys*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Increase from FY 2023 to FY 2024 reflects test and evaluation efforts in support of Operational Command Post (OCP) technology insertion.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CDN	FFRDC	MITRE : Stafford, VA	3.137	0.435	Jun 2022	0.000	Dec 2022	0.000		-		0.000	Continuing	Continuing	Continuing
Prior Year Cummulative Funding	FFRDC	MITRE : Stafford, VA	5.532	0.000		0.000		0.000		-		0.000	0.000	5.532	-
		Subtotal	8.669	0.435		0.000		0.000		-		0.000	Continuing	Continuing	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
Project Cost Totals	54.480	4.053		2.122		1.008		-		1.008	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

CDN/OCP

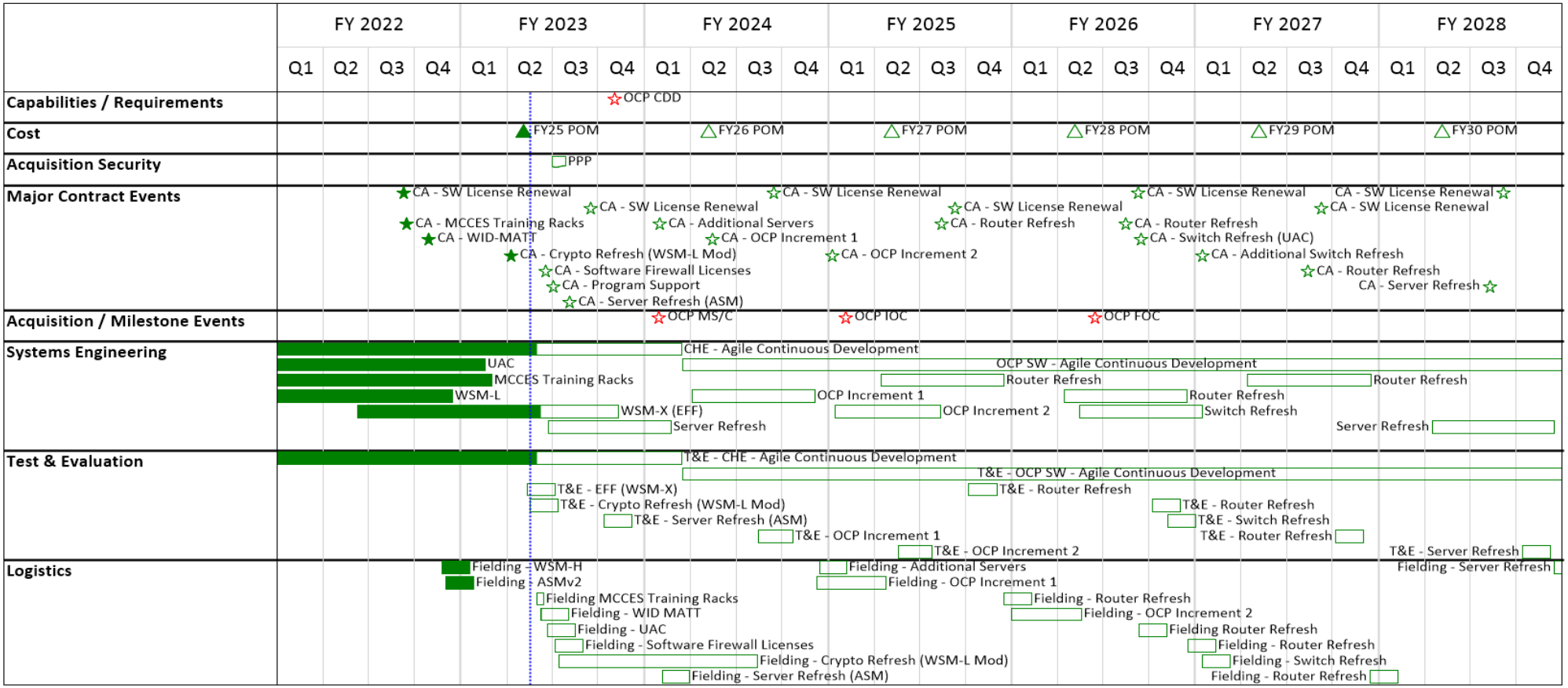

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2276 / *Comms Switching and Control Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2276				
OCP CDD	4	2023	4	2023
CA - MCCES TRAINING RACKS	3	2022	3	2022
CA - WID-MATT	3	2022	3	2022
CA - CRYPTO REFRESH (WSM - L MOD)	2	2023	2	2023
CA - SOFTWARE FIREWALL LICENSE	2	2023	2	2023
CA - PROGRAM SUPPORT	2	2023	2	2023
CA - SERVER REFRESH	3	2022	3	2022
CA - OCP INCREMENT 1	2	2024	2	2024
CA - OCP INCREMENT 2	1	2025	1	2025
CA - ROUTER REFRESH	3	2025	3	2025
OCP MS/C	1	2024	1	2024
OCP IOC	1	2025	1	2025
OCP FOC	2	2026	2	2026

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2277 / *System Engineering and Integration*	

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
2277: *System Engineering and Integration*	47.406	1.873	4.767	17.846	-	17.846	14.969	9.535	6.376	6.503	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Systems Engineering and Integration provides funding for engineering, test, and evaluation activity, which ensures that the systems being developed within the Program Element (PE) employ consistent standards for interoperability, and to the maximum extent feasible, use of hardware and software which is uniform and standard across programs.

Expeditionary Energy Office (E2O): The Commandant established the USMC Expeditionary Energy Office (E2O) with the mission to analyze, develop, and direct the Marine Corps' energy strategy in order to optimize expeditionary capabilities across all warfighting functions. E2O's role is to advise the Marine Requirements Oversight Council (MROC) on all energy and resource related requirements, acquisitions, and programmatic decisions. This office, both personnel and funding, directly supports execution of the USMC Expeditionary Energy Strategy and Implementation Plan, and priorities identified in Force Design 2030. The Marine Corps program aligns with the Commandant's Planning Guidance, the National Defense Authorization Act, DoD directives and SECNAV goals. This funding will support the achievement of the Strategy, and the activities of the USMC Expeditionary Energy Concepts process, managed by the E2O.

Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a Joint Chiefs-of-Staff (JCS)/DoD-mandated program for joint development, implementation, and testing of tactical data links and US Message Text Format (MTF) under the direction of the Defense Information Systems Agency (DISA) and Office of the Secretary of Defense/ Networks and Information Integration (OASD/NII) per the Commander Joint Chiefs of Staff (CJCSI) Instructions 6610.01F and CJCS16241.04 respectively. This effort also covers interoperability analyses, standardization, and testing of tactical message standards such as Link 16, Joint Range Extension Application Protocol (JREAP), and Variable Message Format (VMF) used between the Marine Corps and joint forces. Responsible for the development of Net Centric standards (XML, Web Services) to meet requirements of USMC/DoD/Coalition Net Centric Data Strategies. Efforts in this area include Marine Corps representation in tactical data link and tactical data message joint working groups and configuration control boards and application of the Interoperability Enhancement Process (IEP) across Marine Air Ground Task Force systems and platforms.

Systems Engineering, Integration and Coordination (SEIC) is MCSC Chief Engineer's systems engineering and integration program. SEIC provides the decision support tools and engineering analysis resources needed to assess, identify and resolve Marine Air Ground Task Force (MAGTF) inter-systems' Systems of Systems (SoS) issues and challenges. SEIC supports DC CD&I, DC PP&O, DC A, DC I&L, DC M&RA, HQMC C4, and HQMC INT in the analysis, evaluation, and assessment of MAGTF Systems and SoS requirements. SEIC centralized management of Command, Control, Communications, Computers and Intelligence Surveillance and Reconnaissance (C4ISR) programs allows the implementation of systems engineering certification process in support of milestone decision approval; a requirements and functional analysis process enabling system of systems engineering and an overarching C4ISR systems architecture, and a product realization process to support budget decisions. SEIC engineering conducts functional analyses for emergent system of systems challenges and ensures seamless integration and maximum interoperability of materiel across USMC, Naval, Joint, and DoD programs consistent with the Commandant's Vision and Strategy 2025.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Expeditionary Energy Office (E2O)	1.291	2.054	13.770	0.000	13.770
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue to support the USMC Expeditionary Energy Strategy and Implementation Plan, as well as the USMC Expeditionary Energy Water and Waste Initial Capabilities Document. - Continue to evaluate technologies for small unit power informing the Acquisition Requirement Micropower. - Initiate R&D efforts that explore and quantify engineering characteristics that promote battlefield electrification in support of Presidential Climate Change directives.					
FY 2024 Base Plans: - Continue to support the USMC Expeditionary Energy Strategy and Implementation Plan, as well as the USMC Expeditionary Energy Water and Waste Initial Capabilities Document. - Continue to evaluate technologies for small unit power in order to inform the Acquisition Requirement for power generation. - Continue to support R&D efforts that explore and quantify engineering characteristics that promote battlefield electrification in support of Presidential Climate Change directives. - Initiate alternative energy technologies that will replace legacy systems per Force Design (FD) 2030. - Initiate an aviation ground support equipment electrification testing and evaluation effort to support DoD energy and climate objectives. - Initiate alternate energy efforts to include man-portable hydrogen fuel cell (HFC) generator prototyping, water production via HFC exhaust capture, HFC battery electric vehicle direct current (DC) fast charging system for tactical and contingence operations, and compressed hydrogen storage aviation testing and airworthiness standards development. - Initiate efforts exploring highly efficient, high power, and lightweight range extenders for battery dominant hybrid electric vehicles and modular nuclear reactors. - Initiate testing and evaluation of advanced fuel filter technology that would drastically reduce weight and space, compared to current versions, and will potentially replace fuel filters throughout the Marine Corps. - Initial the research and development for the replacement of the Helicopter Expeditionary Refueling System (HERS), Hose Reel System (HRS), Ground Expeditionary Refueling System (GERS), and the Beach Receiving Unit (BRU). Currently systems contain legacy equipment that greatly limits capability, throughput, and storage.					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Initiate testing and evaluation of Artic FARP capabilities. The Marine Corps is currently not equipment to perform bulk fuel operations in severe cold weather temperatures. This would allow FARP operations in <30 degrees. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase is due to a combination of program growth and DoD's increased Expeditionary Energy efforts. These include vehicle electrification research and development initiatives, alternative energy technological developments, hydrogen production, distribution and power generation systems, advanced energy storage and battery technologies, energy harvesting, fuel distribution and reporting systems, and industry interface.					
Title: JINTACCS: JCS and DoD CIO Data Links Testing	0.581	1.384	1.619	0.000	1.619
Articles:	-	-	-	-	-
Description: Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a United States military program for the development and maintenance of tactical information exchange configuration items (CIs) and operational procedures. It was originated to ensure that the command and control (C2 and C3) and weapons systems of all US military services and NATO forces would be interoperable. MARCORSYSCOM Systems Engineering and Acquisition Logistics directs the JINTACCS Program. Created as a non-acquisition R&D engineering program it provides for critical engineering services in several areas. JINTACCS is essential to USMC development and maintenance of tactical data exchange standards (Link 16, VMF, MTF, etc.), maintenance of C2 systems interoperability issues, development of Net Centric standards (XML, Web Services) to meet requirements of DoD/USMC Net Centric Data Strategy, and participation in Marine Corps, Joint, and Coalition Interoperability Certification testing to DoD/JCS/USMC/NATO requirements in an ever-changing cyber environment. ***FY 2023 Plans:*** - Continue to provide Marine Corps representation at TDL and tactical data message working groups, CCBs, and other interoperability forums. Continue to assess and represent Marine Corps positions on ALL TDL and tactical data message ICPs, RFEs, and other initiatives. - Continue data collection and information dissemination associated with the Marine Corps IEP. Enter system bit-level information into the eSMART tool; conduct interoperability assessments of MAGTF systems using the eSMART tool to highlight gaps and identify investment opportunities to meet emerging interoperability needs;					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
provide feedback to JCS representatives concerning shortfalls or recommended improvements to the eSMART tool. - Provide training to Marine Corps Systems Command and Program Executive Office Land Systems programs in the use of the eSMART tool to enter system bit-level information into the eSMART tool; conduct interoperability assessments of MAGTF systems using the eSMART tool to highlight gaps and identify investment opportunities to meet emerging interoperability needs, - Support program office development of tactical data link and tactical data message documentation in support of Joint Interoperability Test Command certifications. - Continue to provide TDL subject matter expert support to Marine Corps Systems Command and Program Executive Office Land Systems programs to support test, certification, and modernization of Marine Corps capabilities. - Provide SME support in implementing, modernizing and sustaining VMF messages to USMC programs to enable them to remain interoperable within the MAGTF and with the naval, joint and coalition forces. (impacts GCCS-TCO, JTCW, AFATDS, CAC2S, M777, HIMARS, JWARN, THS, etc.). - Provide engineering expertise required to plan and implement the USG directed migration of USMC C2 systems and networks to eXtensible Machine Language (XML) - to facilitate continued interoperability with the Joint, naval and coalition force, as well as with other USG agencies.					
FY 2024 Base Plans: - Continue to provide Marine Corps representation at TDL and tactical data message working groups, CCBs, and other interoperability forums. -Continue to assess and represent Marine Corps positions on all TDL and tactical data message ICPs, RFEs, and other initiatives. - Continue data collection and information dissemination associated with the Marine Corps IEP. Enter system bit-level information into the eSMART tool; conduct interoperability assessments of MAGTF systems using the eSMART tool to highlight gaps and identify investment opportunities to meet emerging interoperability needs; provide feedback to JCS representatives concerning shortfalls or recommended improvements to the eSMART tool. - Provide training to Marine Corps Systems Command and Program Executive Office Land Systems programs in the use of the eSMART tool to enter system bit-level information into the eSMART tool; conduct interoperability assessments of MAGTF systems using the eSMART tool to highlight gaps and identify investment opportunities to meet emerging interoperability needs,					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Support program office development of tactical data link and tactical data message documentation in support of Joint Interoperability Test Command certifications. - Continue to provide full TDL subject matter expert support to Marine Corps Systems Command and Program Executive Office Land Systems programs to support test, certification, and modernization of Marine Corps capabilities. - Provide full SME support in implementing, modernizing and sustaining VMF messages to USMC programs to enable them to remain interoperable within the MAGTF and with the naval, joint and coalition forces. (impacts GCCS-TCO, JTCW, AFATDS, CAC2S, M777, HIMARS, JWARN, THS, NMESIS, etc.). - Provide full engineering expertise required to plan and implement the USG directed migration of USMC C2 systems and networks to eXtensible Machine Language (XML) - to facilitate continued interoperability with the Joint, naval and coalition force, as well as with other USG agencies. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase is due to meeting full engineering expertise required to plan and implement the USG directed migration of USMC C2 systems and networks to eXtensible Machine Language (XML). This will facilitate continued digital interoperability with the Joint, naval and coalition force, as well as with other USG agencies.					
Title: SEIC: Engineering and Technical Support	0.001	1.329	2.457	0.000	2.457
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue the integration of MAGTF C2 systems and C4 services with shipboard C2 architectures and C4ISR infrastructures in direct support of MEU deployments via Deploying Group Systems Integration Test (DGSIT). - Initiate the transition to a digital 3D solid model environment to support and align with DoD and DON digital engineering strategies and allow more efficient and error free support of Marine Corps systems resulting in more efficient advanced manufacturing processes and increased readiness. ***FY 2024 Base Plans:*** - Continue the integration of MAGTF C2 systems and C4 services with shipboard C2 architectures and C4ISR infrastructures in direct support of MEU deployments via Deploying Group Systems Integration Test (DGSIT)					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Continue to transition to a digital 3D solid model environment to support and align with DoD and DON digital engineering strategies and allow more efficient and error free support of Marine Corps systems resulting in more efficient advanced manufacturing processes and increased readiness ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase is due to transitioning to model-based systems engineering tools, process and requirements to convert existing engineering artifacts to digital formats. Also, increased costs associated with providing support for integration of MAGTF C2 systems and C4 services in support of MEU deployments.					
Accomplishments/Planned Programs Subtotals	1.873	4.767	17.846	0.000	17.846

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The System Engineering and Integration programs utilizes a non-traditional acquisition strategy. The program utilizes the Naval Surface Warfare Centers and contractor support for system engineering support services.

EEO - Expeditionary Energy Strategy and Implementation Plan, and priorities identified in the USMC Expeditionary Energy Water and Waste Initial Capabilities Document/Capabilities Based Assessment. The program utilize the Naval Surface Warfare Centers for system engineering support services.

JINTACCS - Created as a non-acquisition R&D engineering program it provides for critical engineering services in several areas. (JINTACCS) is a United States military program for the development and maintenance of tactical information exchange configuration items (CIs) and operational procedures. It was originated to ensure that the command and control (C2 and C3) and weapons systems of all US military services and NATO forces would be interoperable. MARCORSYSCOM Systems Engineering Directorate, Integration Division directs the JINTACCS Program, and is supported by Marine Corps Tactical Systems Support Activity (MCTSSA).

SEIC - Provides the decision support tools and engineering analysis resources needed to assess, identify and resolve Marine Air Ground Task Force (MAGTF) inter-systems' SoS issues and challenges. SEIC supports the Marine Corps in the analysis, evaluation, and assessment of MAGTF Systems and SoS requirements. The program utilize the Naval Surface Warfare Centers and contractor support for system engineering support services.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2277 / *System Engineering and Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hydrogen Fuel Cell BEV Charger	WR	Naval Research Lab : Washington, DC	0.000	0.000		0.000		1.100	Feb 2024	-		1.100	0.000	1.100	-
Hydrogen ULTV (H2 RZR)	WR	US Army GVSC : Detroit, MI	0.000	0.000		0.000		0.400	Feb 2024	-		0.400	0.000	0.400	-
Tactical Range Extender - Enhanced (TREE)	WR	US Army GVSC : Detroit, MI	0.000	0.000		0.000		1.000	Feb 2024	-		1.000	0.000	1.000	-
AMPOL Mobile Nuclear Reactor	MIPR	Los Alamos National Lab : Los Alamos, NM	0.000	0.000		0.000		1.000	Feb 2024	-		1.000	0.000	1.000	-
Prior Years Cumulative Funding	Various	Various : Various	10.899	0.000		0.000		0.000		-		0.000	0.000	10.899	-
		Subtotal	10.899	0.000		0.000		3.500		-		3.500	0.000	14.399	N/A

Remarks

Increase is due to a combination of program growth profile and DoD increased E2O Expeditionary Energy efforts. These include Hydrogen Fuel Cell BEV Charger, Hydrogen ULTV (H2 RZR), Tactical Range Extender-Enhanced (TREE), and AMPOL Mobile Nuclear Reactor.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MAGTF SEI&C	WR	NSWC : Dahlgren, VA	5.964	0.001	Mar 2022	0.000		1.300	Nov 2023	-		1.300	Continuing	Continuing	Continuing
MAGTF SEI&C	WR	NSWC : DAM NECK, VA	0.420	0.000		0.250	Nov 2022	0.300	Nov 2023	-		0.300	0.000	0.970	-
MAGTF SEI&C	C/FP	MANTECH : Stafford, VA	2.809	0.000		0.519	Nov 2022	0.578	Jan 2024	-		0.578	0.000	3.906	-
MAGTF SEI&C	WR	NIWC-LANT : Charleston, SC	0.000	0.000		0.560	Mar 2023	0.279	Nov 2023	-		0.279	0.000	0.839	-
JINTACCS	C/FFP	MCTSSA : Camp Pendleton, CA	2.909	0.300	Mar 2022	0.887	Apr 2023	1.054	Apr 2024	-		1.054	0.000	5.150	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2277 / *System Engineering and Integration*	

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
JINTACCS	C/FFP	MANTECH : Quantico, VA	0.664	0.225	Jan 2022	0.208	Jan 2023	0.250	Jan 2024	-		0.250	0.000	1.347	-
JINTACCS	C/FFP	GDIT : Stafford, VA	0.000	0.000		0.225	Apr 2023	0.250	Apr 2024	-		0.250	0.000	0.475	-
E2O-Experimentionary Advanced Base Operations	WR	Various : Various	2.968	0.000		0.100	Feb 2023	0.200	Feb 2024	-		0.200	0.000	3.268	-
E2O-Small Unit Power (SUP)	WR	NSWC : Carderock	1.470	0.275	Nov 2021	0.400	Feb 2023	0.000		-		0.000	0.000	2.145	-
E2O-Experimentionary Advanced Base Operations	WR	NAVFAC EXWC : Port Hueneme, CA	1.517	0.000		0.000		2.000	Jan 2024	-		2.000	0.000	3.517	-
E2O-Experimentionary Advanced Base Operations	WR	NSWC : Panama City, FL	0.609	0.254	Nov 2021	0.000		1.270	Jan 2024	-		1.270	0.000	2.133	-
E2O-Lightweight Energy Storage (REPS)	WR	NSWC : Crane, IN	1.313	0.275	Nov 2021	0.400	Feb 2023	0.000		-		0.000	0.000	1.988	-
E2O-Experimentionary Advanced Base Operations	C/FFP	DTIC : FT. Belvoir	0.350	0.075	Apr 2022	0.000		1.000	Feb 2024	-		1.000	0.000	1.425	-
E2O-Experimentionary Advanced Base Operations	WR	NSWC Dahlgreen : Dahlgren, VA	0.744	0.150	Mar 2022	0.000		0.000		-		0.000	0.000	0.894	-
E2O-Experimentionary Advanced Base Operations	WR	Naval Research Lab : Washington, DC	0.200	0.262	Apr 2022	0.436	Feb 2023	0.000		-		0.000	0.000	0.898	-
E2O-Experimental Forward Operating Base	WR	Various : Various	0.000	0.000		0.718	Nov 2022	0.000		-		0.000	0.000	0.718	-
E2O-Experimental Forward Operating Base	WR	NAVAIR : Patuxent River, MD	0.000	0.000		0.000		1.000	Jan 2024	-		1.000	0.000	1.000	-
E2O-Experimental Forward Operating Base	WR	DIU : Colorado Springs, CO	0.000	0.000		0.000		2.000	Feb 2024	-		2.000	0.000	2.000	-
Prior Years Cumulative Funding	Various	Various : Various	6.488	0.000		0.000		0.000		-		0.000	0.000	6.488	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	28.425	1.817		4.703		11.481		-		11.481	Continuing	Continuing	N/A

Remarks

E2O:
Increase is due to a combination of program growth profile and DoD increased Expeditionary Energy efforts. These include alternative energy technological developments, hydrogen power generation sources, more capable energy storage and battery technologies, energy harvesting, bio-fuel development, and industry interface.
MAGTF SEI&C:
Increase reflects transitioning to model-based systems engineering tools, process and requirements to convert existing engineering artifacts to digital formats. Also, increased costs associated with providing support for integration of MAGTF C2 systems and C4 services in support of MEU deployments.
JINTACCS:
Increase is due to meeting full engineering expertise required to plan and implement the USG directed migration of USMC C2 systems and networks to eXtensible Machine Language (XML). This will facilitate continued digital interoperability with the Joint, naval and coalition force, as well as with other USG agencies.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NAWCAD Lakehurst : Lakehurst, NJ	0.000	0.000		0.000		0.500	May 2024	-		0.500	0.000	0.500	-
Developmental Test & Evaluation (DT&E)	MIPR	US Army GVSC : Detroit, MI	0.000	0.000		0.000		1.300	Feb 2024	-		1.300	0.000	1.300	-
Developmental Test & Evaluation (DT&E)	WR	NAWCAD : Patuxent River, MD	0.000	0.000		0.000		1.000	Feb 2024	-		1.000	0.000	1.000	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	Various	Various : Various	7.611	0.000		0.000		0.000		-		0.000	0.000	7.611	-
		Subtotal	7.611	0.000		0.000		2.800		-		2.800	0.000	10.411	N/A

Remarks

Increase is due to a combination of program growth profile and DoD increased E2O Expeditionary Energy efforts. These include Aviation Ground Support Equipment (GSE) Electrification Experimentation, Hydrogen Fuel Cell BEV Charger, and Hydrogen Storage Aviation Safety Testing and Standards.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JINTACCS-Travel	Various	PROGRAM : TRAVEL	0.471	0.056	Feb 2022	0.064	Jun 2023	0.065	Aug 2024	-		0.065	Continuing	Continuing	Continuing
		Subtotal	0.471	0.056		0.064		0.065		-		0.065	Continuing	Continuing	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
Project Cost Totals	47.406	1.873		4.767		17.846		-		17.846	Continuing	Continuing	N/A

Remarks

Over all increase is due to a combination of program growth and DoD's increased E2O Expeditionary Energy efforts. These include vehicle electrification research and development initiatives, alternative energy technological developments, hydrogen production, distribution and power generation systems, advanced energy storage and battery technologies, energy harvesting, fuel distribution and reporting systems, and industry interface.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

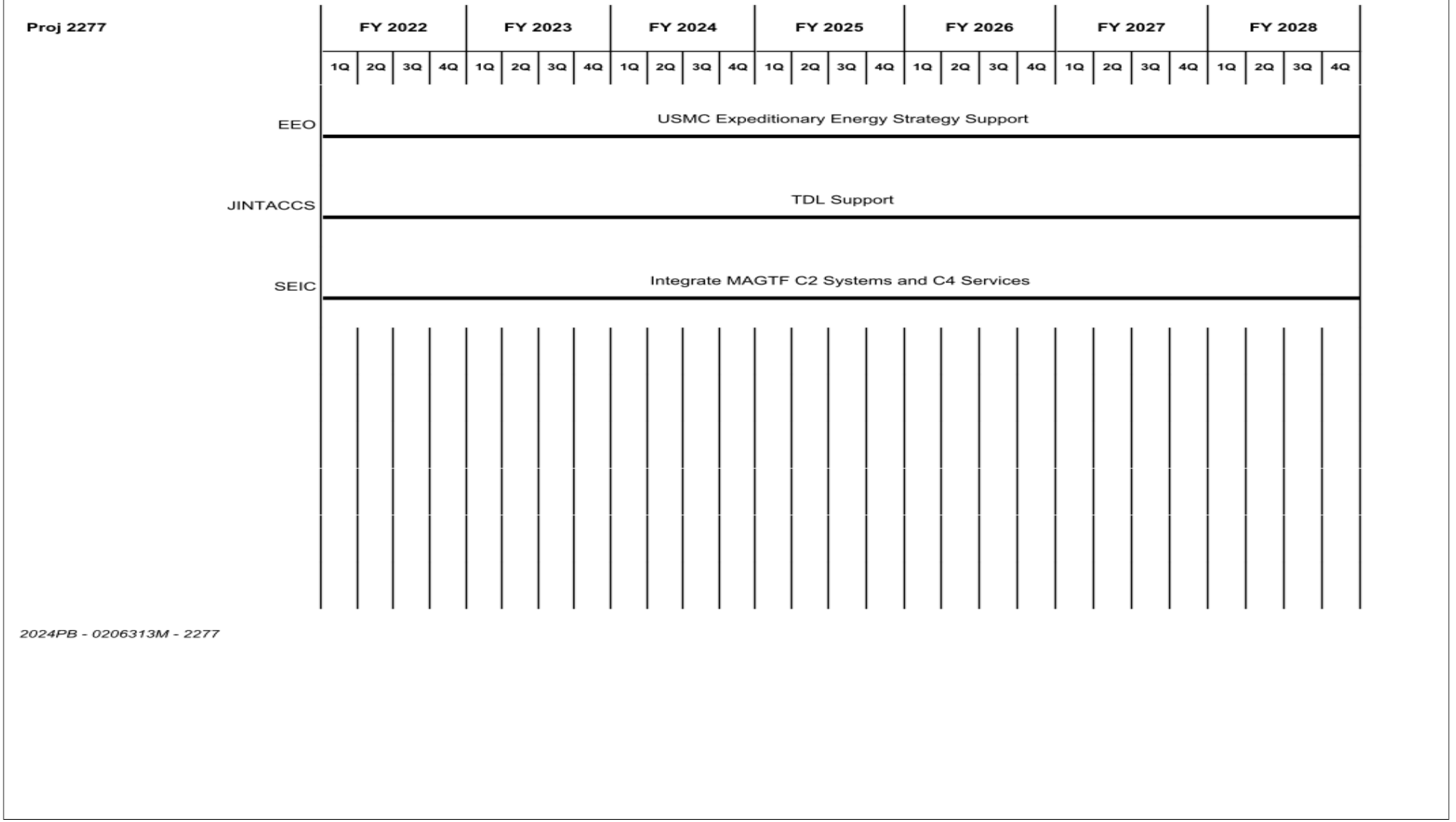


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2277 / *System Engineering and Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2277				
EEO: USMC Expeditionary Energy Strategy Support	1	2022	4	2028
JINTACCS: TDL Support	1	2022	4	2028
SEIC: Integrate MAGTF C2 Systems and C4 Services	1	2022	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy											Date: March 2023	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 2510 / *MAGTF CSSE & SE*			
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**
2510: *MAGTF CSSE & SE*	290.725	0.940	0.991	1.021	-	1.021	1.032	1.053	1.070	1.091	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

(U) The Marine Air Ground Task Force (MAGTF) Combat Service Support Element & Supporting Establishment (CSSE & SE) consists of mutually supporting Logistics Information Technology (IT) programs that support force deployment, planning, and execution; sustainment and distribution; and contributes to the Combatant Commander's Common Operating Picture to support rapid accurate decision making.

JOINT FORCE REQUIREMENTS GENERATOR II (JFRG II) is an Automated Information System (AIS), standalone desktop software application that operates in a classified environment to provide the Marine Corps users the capability to support Joint Command and Control (JC2) contingency and crisis deployment operations and plans. It serves as the single link between the Joint Operation Planning and Execution System (JOPES), Sea Service Deployment Module (SSDM) and War Reserve System (WRS)/Integrated Materiel Solution Toolset (IMAT). JFRG II desktop application permits multi-level planning with entry of Time-Phased Force and Deployment Data (TPFDD), including equipment and personnel data, transportation/movement data, and the phasing of the total force throughout the entire movement timeline. JFRG II desktop application generates standard, executive, and ad hoc reports and performs database queries to support JC2 deployment requirements.

MAGTF LOGISTICS SUPPORT SYSTEMS (MLS2): This is a Marine Corps Force Design Program. Composed of several main components including the Electronic Maintenance Support System (EMSS). EMSS is a rugged organizational-level (O-level), light-weight, one-man portable maintenance device capable of supporting multiple platforms and systems across maintenance communities. It provides a Commercial Off-The-Shelf (COTS) hardware device equipped with Built-In-Test/ Built-In-Test Equipment interfaces, and Software Defined Test Instrument General Purpose Electronic Test Equipment capabilities. These hardware capabilities will enable commercial or custom DoD and USMC software capabilities including interactive electronic technical manuals, computer based training, and other maintenance applications to be hosted on EMSS. EMSS also has the capability to connect to the Marine Corps Enterprise Network and access sites like Global Combat Support System - Marine Corps in order to facilitate maintenance and supply transactions, thereby improving readiness. With these capabilities, maintainers will make more informed decisions and sustain force readiness over time.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**
Title: JOINT FORCE REQUIREMENTS GENERATION II (JFRG II)	0.206	0.212	0.217	0.000	0.217
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue Engineering Change Proposals (ECPs) to increase user functionality for the desktop software application and deploy JFRG II Planning Toolset (J-PT) in 4Q FY 2023.					
FY 2024 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- JFRG II PMO's plan is to provide Post Deployment Software Support and upgrade J-PT and desktop application to keep pace with JOPES/JPES transition and JC2 operational requirements. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 is due to inflation. JFRG II program will maintain two software baselines until EOL or they are replaced by new solutions.					
Title: MAGTF LOGISTICS SUPPORT SYSTEMS (MLS2)	0.734	0.779	0.804	0.000	0.804
Articles:	-	-	-	-	-
FY 2023 Plans: - Initiate initial testing of artificial intelligence to be used in EMSS Marine Diagnostic Software capabilities and Wireless "At the Platform" Test Sets (WATS). - Continue to develop additional GOTS diagnostic software capability for additional Heavy Equipment, Motor Transport, Ordnance and Engineer weapon systems in order to enhance maintenance capabilities, migrate away from more expensive commercial off the shelf (COTS) solutions, and decrease total ownership cost (TOC) for supported platforms.					
FY 2024 Base Plans: - Continue to develop the use of Artificial Intelligence (AI) to perform hardware bench testing of EMSS, WATS, and other connected hardware. Initiate the usage data tracking software to provide data to AI and Machine Learning (ML) algorithms to streamline the EMSS user experience. - Continue to develop additional GOTS diagnostic software capability for additional Heavy Equipment, Motor Transport, Ordnance and Engineer weapon systems in order to enhance maintenance capabilities, migrate away from more expensive commercial off the shelf (COTS) solutions, and decrease total ownership cost (TOC) for supported platforms.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
The increase from FY 2023 to FY 2024 is due to continued support of artificial intelligence (AI) of EMSS, WATS and other connected hardware.					
Accomplishments/Planned Programs Subtotals	0.940	0.991	1.021	0.000	1.021

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/BLI 4181: *MAGTF Logistics Support Systems*	15.126	12.434	12.683	-	12.683	12.937	13.197	13.462	13.732	Continuing	Continuing

Remarks

D. Acquisition Strategy

JOINT FORCE REQUIREMENTS GENERATOR II (JFRG II) desktop application requires upgrades in order to continuously support the JC2 Capabilities Development Document requirements and keep pace with JOPES transition. JOPES will be replaced with the Joint Planning and Operation Services in June 2023. JFRG II Planning Toolset, a web application with the cross-domain solution is in development to automate TPFDD sharing between JOPES/JPES, SSDM, and WRS/IMAT via unclassified and classified servers. The upgrades will increase data protection and data processing efficiency to meet current cybersecurity requirements and replace the current air gap procedure. JFRG II desktop software application will remain supported until end of life or it is replaced by another application.

MAGTF LOGISTICS SUPPORT SYSTEMS (MLS2) is pursuing an evolutionary acquisition strategy in order to sustain operationally suitable and supportable capability across the Marine Corps as a maintenance aid. Electronic Maintenance Support Systems must evolve in concert with the supported platforms maintenance philosophy to provide extended functionality and access to network connectivity.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 2510 / *MAGTF CSSE & SE*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JFRG II	C/IDIQ	SAIC : Stafford, VA	2.706	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
JFRG II	WR	NIWC LANT : Charleston, SC	0.804	0.147	Nov 2021	0.212	Jan 2023	0.217	Jan 2024	-		0.217	Continuing	Continuing	Continuing
JFRG II	WR	DISA : Ft Meade, MD	0.502	0.060	Nov 2021	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
OT&E EMSS/MAGTF Logistics Support Systems	WR	NSWC, Crane : Crane, IN	2.757	0.733	Feb 2022	0.388	Feb 2023	0.804	Feb 2024	-		0.804	Continuing	Continuing	Continuing
OT&E EMSS/MAGTF Logistics Support Systems	WR	MCLC, Albany : Albany, GA	0.703	0.000	Feb 2022	0.391	Feb 2023	0.000		-		0.000	Continuing	Continuing	Continuing
Prior Years Cumulative Funding	Various	Various : Various	283.253	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	290.725	0.940		0.991		1.021		-		1.021	Continuing	Continuing	N/A

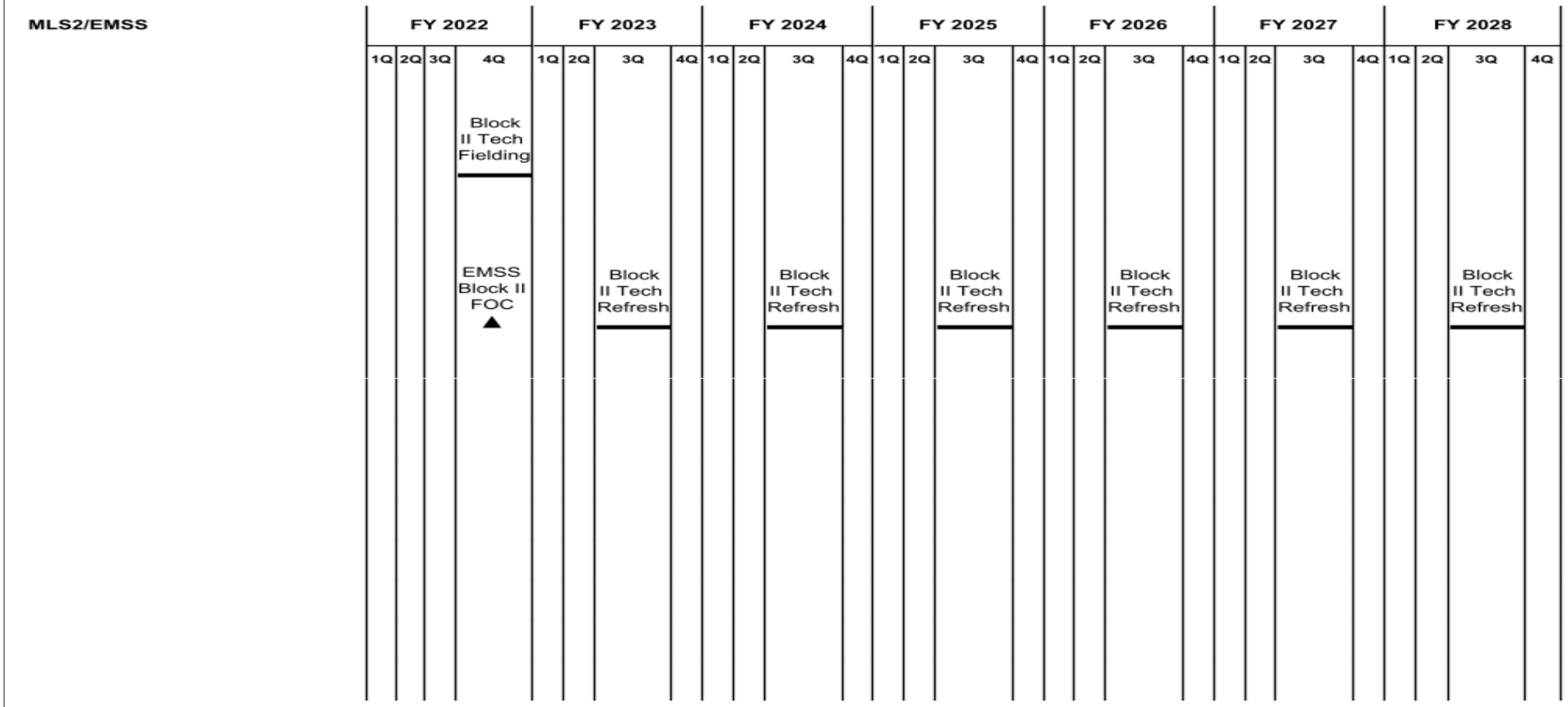
Remarks

The FY 2023 to FY 2024 increase is due to continued support of artificial intelligence (AI) of EMSS, WATS and other connected hardware.

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	290.725	0.940		0.991		1.021		-		1.021	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*



2024DON - 0206313M - 2510

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

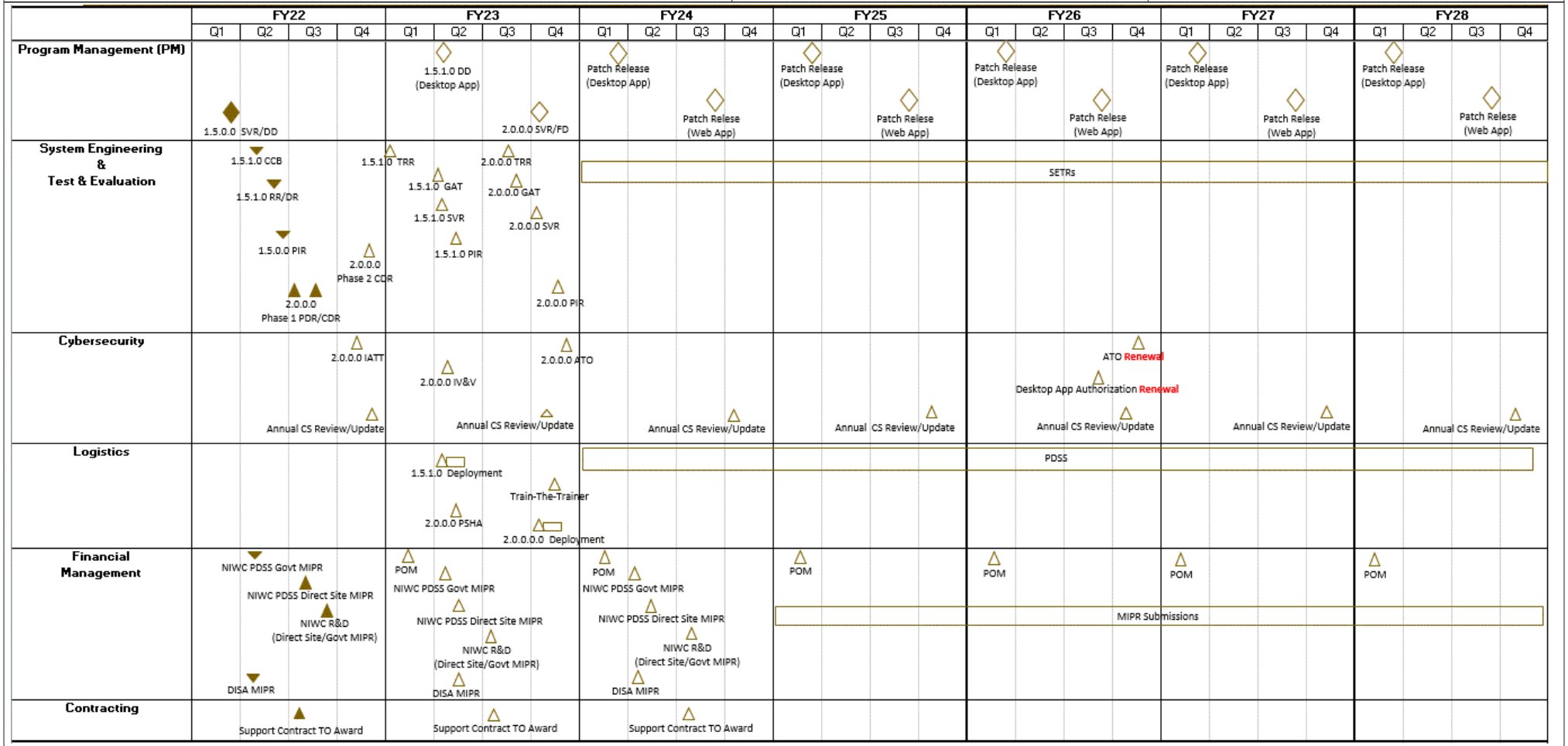


Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 2510 / *MAGTF CSSE & SE*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MLS2/EMSS				
FY22 EMSS Block II Fielding	4	2022	4	2022
FY22 EMSS Block II FOC	2	2023	2	2023
FY23 EMSS Block II Refresh	3	2023	3	2023
FY24 EMSS Block II Refresh	3	2024	3	2024
FY25 EMSS Block II Refresh	3	2025	3	2025
FY26 EMSS Block II Refresh	3	2026	3	2026
FY27 EMSS Block II Refresh	3	2027	3	2027
FY28 EMSS Block II Refresh	3	2028	3	2028
JFRG II				
Cont. Development of CDS Platform (J-PT)	1	2022	1	2022
ECP for Cyber Compliance	1	2023	1	2027

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy											Date: March 2023	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 3099 / *Radar System*			
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**
3099: *Radar System*	229.062	1.115	1.059	4.028	-	4.028	3.742	3.544	3.569	3.602	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Long Range Radar (AN/TPS-59) - The AN/TPS-59A(V)3 is a transportable, three dimensional, tactical radar system that provides the Marine Air Ground Task Force (MAGTF) with long-range surveillance. It is the MAGTF's only ground based long range sensor that provides the capability to detect and report Air Breathing Targets (ABT) and track Theater Ballistic Missiles (TBM). The AN/TPS-59A(V)3 Radar System is connected to the Common Aviation Command and Control Systems (CAC2S). It provides the air defense controllers data and may be used autonomously to conduct Ground Control Intercept, tactical en-route Air Traffic Control (ATC), or TBM alert operations via the Joint Integrated Air Missile Defense (IAMD) encrypted Link-16. AN/TPS-59 funding zeroed beginning FY 2021 due to Marine Corps decision to modernize in accordance with the National Defense Strategy (NDS)/Defense Planning Guidance (DPG).

Virtual Warfare Center (VWC) Support - The project team conducts fully interactive simulated war games at the Virtual Warfare Center (VWC) in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. The VWC provides a venue for the exploration of advanced engagement concepts focused on persistent forward naval engagements in support of the MAGTF and the development of associated Joint and Service specific tactics, techniques, and procedures (TTPs). VWC support encompasses a set of integrated fire control (IFC) activities that also includes concept/CONOPS development, family of systems architecture development, and systems engineering/integration efforts.

Prior to FY 2024, the VWC program was also funded in Program Element 0604504N Air Control Project 0718. In FY 2024 and out, the entirety of VWC funding is consolidated under PE 0206313M Project 3099.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**
Title: VWC: Support	0.857	0.782	3.510	0.000	3.510
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue the simulation of war games at the VWC in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area.					
FY 2024 Base Plans: - Continue the simulation of war games at the VWC in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area.					
FY 2024 OCO Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Overall increase from FY 2023 to FY 2024 reflects consolidation of funding from PE 0604504N Prj 0718 ($2.000M) and increased simulation efforts ($0.728M) required to determine system performance in the Integrated Air and Missile Defense (IAMD) mission area.					
Title: VWC: Test and Evaluation	0.258	0.277	0.518	0.000	0.518
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue the simulation of war games at the VWC in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. ***FY 2024 Base Plans:*** - Continue the simulation of war games at the VWC in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense (IAMD) mission area. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** FY 2023 to FY 2024 increase is due to increased simulation efforts required to determine system performance in the IAMD mission area.					
Accomplishments/Planned Programs Subtotals	1.115	1.059	4.028	0.000	4.028

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Virtual Warfare Center (VWC) Support - The project team conducts fully interactive simulated war games at the VWC in St. Louis, MO, in order to quantify family of systems performance and how it impacts effectiveness in the Integrated Air and Missile Defense mission area. VWC support encompasses a set of integrated fire control activities that also includes concept and concept of operations development, family of systems architecture development, and systems engineering/integration efforts. The Office of Naval Research is the lead for all VWC contracting actions.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 3099 / *Radar System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59 - DREX EDM Development	SS/CPFF	LMC : Syracuse, NY	11.536	0.000		0.000		0.000		-		0.000	0.000	11.536	-
AN/TPS-59 - DREX EDM Development Program Management	SS/CPFF	LMC : Syracuse, NY	6.927	0.000		0.000		0.000		-		0.000	0.000	6.927	-
Prior Year Cumulative Funding	Various	Various : Various	90.234	0.000		0.000		0.000		-		0.000	0.000	90.234	-
		Subtotal	108.697	0.000		0.000		0.000		-		0.000	0.000	108.697	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59 - Engineering Support	C/FFP	MCSC : Quantico, VA	4.189	0.000		0.000		0.000		-		0.000	0.000	4.189	-
VWC	C/CPFF	ONR : St. Louis, MO	26.995	0.857	Feb 2022	0.782	Feb 2023	3.510	Feb 2024	-		3.510	Continuing	Continuing	Continuing
Prior Year Cumulative Funding	Various	Various : Various	52.687	0.000		0.000		0.000		-		0.000	0.000	52.687	-
		Subtotal	83.871	0.857		0.782		3.510		-		3.510	Continuing	Continuing	N/A

Remarks

FY 2023 to FY 2024 increase reflects consolidation of funding from PE 0604504N Prj 0718 and increased simulation efforts required to determine system performance in the IAMD mission area.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	C/CPFF	NSWC, Corona : Corona, CA	0.692	0.000		0.000		0.000		-		0.000	0.000	0.692	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	C/CPFF	LMC : Syracuse, NY	0.817	0.000		0.000		0.000		-		0.000	0.000	0.817	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	MIPR	AIMS Prog Office : Warner Robbins AFB, GA	0.029	0.000		0.000		0.000		-		0.000	0.000	0.029	-
Developmental Test & Evaluation (DT&E)	C/CPFF	ONR : St. Louis, MO	2.392	0.258	May 2022	0.277	May 2023	0.518	May 2024	-		0.518	0.000	3.445	-
Prior Year Developmental Test & Evaluation Not Funded FYDP (PYDT&E)	Various	Various : Various	4.683	0.000		0.000		0.000		-		0.000	0.000	4.683	-
		Subtotal	8.613	0.258		0.277		0.518		-		0.518	0.000	9.666	N/A

Remarks

FY 2023 to FY 2024 increase is due to increased simulation efforts required to determine system performance in the IAMD mission area.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/TPS-59 Engineering Support	MIPR	MITRE : Bedford, MA	1.900	0.000		0.000		0.000		-		0.000	0.000	1.900	-
Prior Year Cumulative Funding	Various	Various : Various	25.981	0.000		0.000		0.000		-		0.000	0.000	25.981	-
		Subtotal	27.881	0.000		0.000		0.000		-		0.000	0.000	27.881	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
Project Cost Totals	229.062	1.115		1.059		4.028		-		4.028	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 3099 / *Radar System*	

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

FY 2023 to FY 2024 increase reflects consolidation of funding from PE 0604504N Prj 0718 and increased simulation efforts required to determine system performance in the IAMD mission area.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

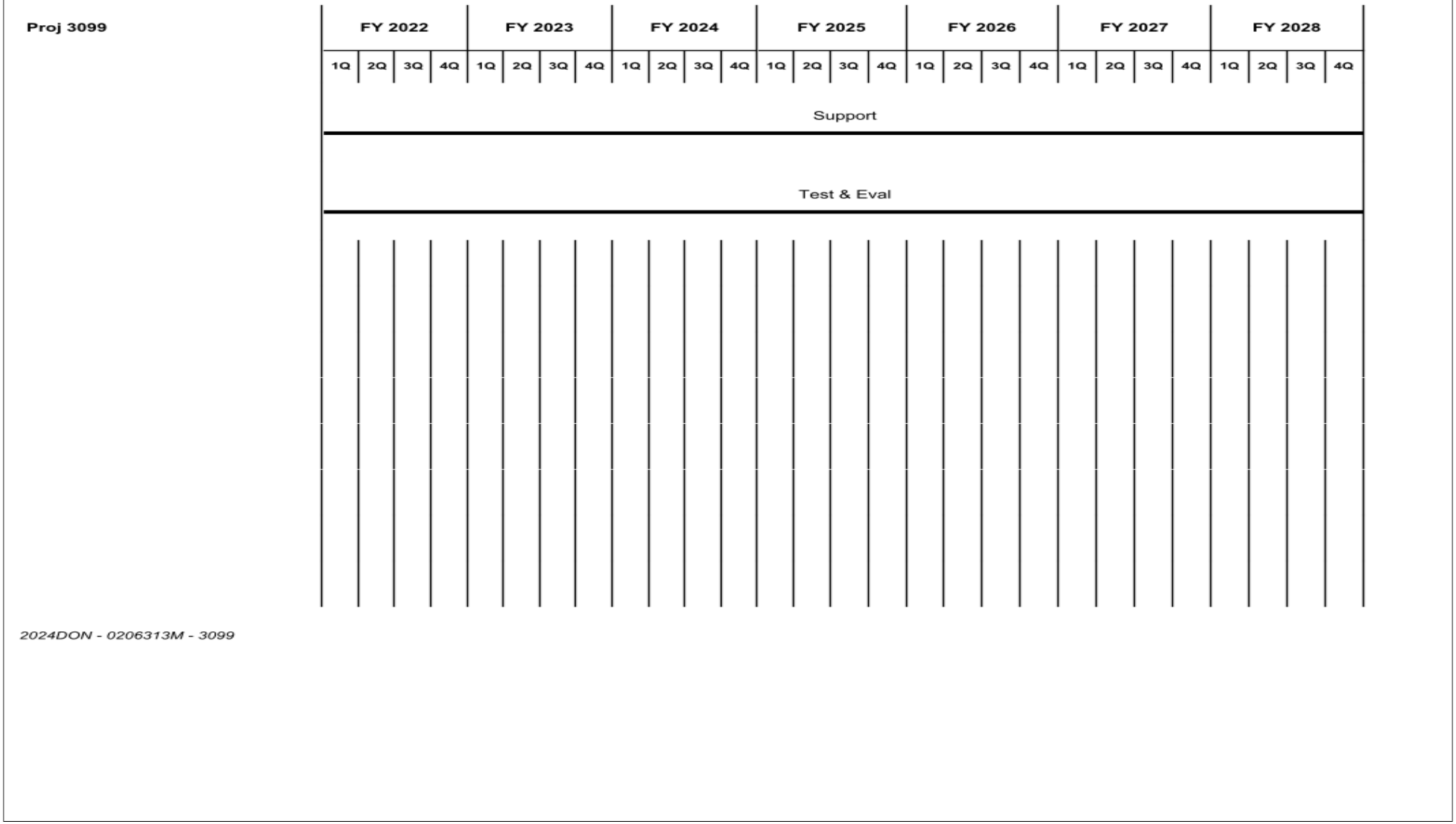

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3099 / *Radar System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3099				
VWC Support	1	2022	4	2028
VWC Test and Evaluation	1	2022	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
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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
3772: *Information Related Capabilities (IRC)*	11.710	3.971	5.510	17.672	-	17.672	18.453	18.570	18.683	18.817	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Signature Management (SIGMAN) - This is a CMC Force Design program. SIGMAN will be utilized by the Marine Corps Information Operations Center (MCIOC) SIGMAN platoon to provide commanders with the ability to understand their own forces' electromagnetic signatures and the ability to disrupt adversary units. SIGMAN supports the goals of the 38th Commandant's Planning Guidance and Force Design (FD) Initial Operational Capability (IOC) by providing tools enabling the FMF to conduct distributed operations (DO) and mass effects while minimizing electromagnetic signatures that put forces at risk for detection and targeting. Fluctuations within the funding profile due to different components being procured each year. SIGMAN Increment I is the SIGMAN Visualization and Planning Tool (SVPT) that provides commanders a display of their own forces electromagnetic signatures and the ability to implement measures to limit those signatures when possible. SIGMAN Increment II is the Radio Frequency (RF) Generator-Light and SIGMAN Increment III is the RF Generator- Heavy. The SIGMAN Increment II and Increment III systems will provide commanders the ability to develop and project electromagnetic signature countermeasures to mask their own blue-force signature. Cognitive Radio Frequency Inference Technology (CRIT) provides the ability to conduct blue force signature assessment, blue force signature planning, and advanced delivery. SIGMAN will procure production articles through the Lead Systems Integrator and the Army C5ISR program office. This program includes funding in support of YETI in which details are held at a higher classification level.

Digital Media Systems (DMS) (formerly Public Affairs Systems (PAS)) is the result of the Combat Camera and Public Affairs Occupational Fields (OccField) transitioning into the COMMSTRAT OccField in 2018. DMS provides the Marine Corps and the Joint Force with deployable systems to support Operations in the Information Environment (OIE), non-lethal fires, and the battle of narrative efforts. DMS supports the Fleet Marine Force (FMF) to be more lethal, survivable, and sustainable when conducting emerging maritime and warfighting concepts against competitor threats. The program maintains an evolutionary approach to acquisitions and leverages commercial industry-standard non-developmental items to provide the best value to the Marine Corps, while keeping Communication, Strategy and Operations (COMMSTRAT) Marines appropriately equipped to understand and affect the information environment. This effort supports research, testing, and evaluation of the Tactical Imagery Production System Next Generation (TIPS NG) to provide the FMF with the means to acquire, process, edit, develop, disseminate, transmit in near-real time, archive visual information (VI) products, and provide reprographics print speeds in support of Marine Corps missions across the competition continuum.

Military Information Support Operations (MISO) - Consists of the Fly Away Broadcast System (FABS) Marine Corps Variant (MCV) Family of Systems (FoS). In collaboration with Special Operations Command (SOCOM), the FABS MCV FOS provides the Marine Air Ground Task Force (MAGTF) Commander with a transportable, modular system capable of conveying and delivering messages via select bands within the radio frequency portion of the electromagnetic spectrum to influence select foreign groups and promote themes to change those groups' attitudes and behaviors. MISO capabilities are critical to the success of the MAGTF mission, enabling commanders to shape the information environment, counter enemy propaganda, misinformation, disinformation, and adversarial narratives. The FABS MCV FoS contains three variants: FABS Heavy (FABS-H), FABS Medium (FABS-M), and FABS Light (FABS-L). The FABS-H variant will provide greater power, range,

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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persistence, and capacity used at a Forward Operating Base (FOB). The FABS-M variant provides the MAGTF Commander with a tactical and portable system. The FABS-L variant provides the Marines a battery powered man-packable system.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Signature Management (SIGMAN): Product Development	1.081	3.309	13.815	0.000	13.815
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue the research and development of blue-force signature assessment, blue-force signature planning, and advanced delivery capability through Office of Naval Research (ONR) Cognitive Radio Frequency Inference Technology (CRIT) efforts. ***FY 2024 Base Plans:*** - Continue the research and development of blue-force signature assessment, blue-force signature planning, and advanced delivery capability through Office of Naval Research (ONR) Cognitive Radio Frequency Inference Technology (CRIT) efforts. - Initiate YETI effort - details are held at a higher classification. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY2024 reflects funding for product and follow on development for YETI. Details are held at a higher classification level.					
Title: Signature Management (SIGMAN): Test and Evaluation	1.855	1.004	2.721	0.000	2.721
Articles:	-	-	-	-	-
FY 2023 Plans: - Conduct test and evaluation for Signature Management (SIGMAN) related to Increment III electromagnetic signature emitter devices to include MIL-STD-810G testing and capability testing. ***FY 2024 Base Plans:*** - Conduct developmental test and evaluation of CRIT software on SIGMAN Increment III hardware baseline. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:***					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase from FY 2023 to FY 2024 reflects costs associated with CRIT software evaluation on SIGMAN Increment III hardware baseline.					
Title: Digital Media Systems (DMS) (Formerly Public Affairs System (PAS)): Test and Evaluation	0.908	0.336	0.308	0.000	0.308
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue product development/integration activities and conduct test and evaluation activities related to the Tactical Imagery Production System Next Generation (TIPS NG) providing production verification and user evaluation in support of upgrades for the COMMSTRAT Occfield.					
FY 2024 Base Plans: - Continue product development/integration activities and conduct test and evaluation activities related to the Tactical Imagery Production System Next Generation (TIPS NG) providing production verification and user evaluation in support of upgrades for the COMMSTRAT Occfield. - Initiate configuration management changes to Tactical Imagery Production System Next Generation (TIPS NG) first article. - Initiate Public Affairs Live Media Engagement System (PALMES) tech refresh leveraging preexisting SATCOM program of record in order to reduce research and development costs.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: Decrease from FY 2023 to FY 2024 reflects decrease in efforts for test and evaluation activities for Tactical Imagery Production System Next Generation (TIPS NG).					
Title: Military Information Support Operations (MISO): Support	0.000	0.552	0.828	0.000	0.828
Articles:	-	-	-	-	-
FY 2023 Plans: - Initiate Software Integration Support to compile and deploy software on the systems, create user accounts, system calibration and other activities as required. - Initiate technical assistance and support for Developmental and Integration Testing in proving out use cases for security component, mission planning and capability deployment.					
FY 2024 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Initiate engineering change proposal (ECP) support for the development of software and cyber upgrades for ongoing technology modernizations. - Continue Software Integration Support to compile and deploy software on the systems, create user accounts, system calibration and other activities as required. - Continue technical assistance and support for Developmental and Integration Testing in proving out use cases for security component, mission planning and capability deployment. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase from FY 2023 to FY 2024 reflects initiation of engineering change proposal (ECP) support required for the development of software and cyber upgrades for ongoing technology modernizations.					
Title: Military Information Support Operations (MISO): Test and Evaluation	0.127	0.309	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue production verification and user evaluation testing of the Fly-Away Broadcast System (FABS) Light and Medium variants. - Continue engineering change proposal (ECP) to support for the development of software and cyber upgrades for ongoing technology modernizations. - Initiate FABS Medium tactical and portable capability testing. ***FY 2024 Base Plans:*** N/A ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Decrease from FY 2023 to FY 2024 reflects completion of integration efforts related to the FABS Light and Medium variants.					
Accomplishments/Planned Programs Subtotals	3.971	5.510	17.672	0.000	17.672

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4620AA: *MARCIMS*	0.000	0.307	0.000	-	0.000	0.313	0.319	0.325	0.332	Continuing	Continuing
• PMC/4620BB: *DMS (Formerly PAS)*	0.693	2.653	2.274	-	2.274	3.474	3.534	3.600	3.672	Continuing	Continuing
• PMC/4620CC: *MISO*	4.021	3.838	4.249	-	4.249	4.227	4.312	4.398	4.486	Continuing	Continuing
• PMC/4620DD: *SIGMAN*	5.716	4.393	21.856	-	21.856	42.053	42.129	23.585	23.684	Continuing	Continuing

Remarks

D. Acquisition Strategy

SIGMAN FoS is a new capability using common hardware and software systems. SIGMAN FoS will expand upon capabilities and introduce new signature assessment and management capabilities as technology updates mature with increased modularity, flexibility, and mobility. SIGMAN will conduct RDT&E efforts in conjunction with the Lead System Integrator (LSI) to facilitate the integration of advanced capabilities. SIGMAN will procure production articles through the LSI and the Army C5ISR program office. This program includes funding in support of YETI in which details are held at a higher classification level.

Digital Media Systems will leverage existing Marine Corps Programs of Record and maximize the utilization of commercial-off-the-shelf devices and software to provide best overall cost, schedule and performance solutions to the warfighter with minimal developmental cost and schedule investments.

The MISO Family of Systems (FoS), which Consists of the Fly Away Broadcast System (FABS) Marine Corps Variant (MCV) Family of Systems (FoS). The FABS MCV acquisition strategy relies on procuring the latest mature and supported GOTS and COTS/Non-Developmental Item (NDI) technology. FABS MCV leverages existing technology and systems used by USSOCOM.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SIGMAN	C/CPFF	ONR : Arlington, VA	0.000	1.087	Mar 2022	3.309	Mar 2023	1.815	Mar 2024	-		1.815	Continuing	Continuing	Continuing
SIGMAN YETI	TBD	TBD : TBD	0.000	0.000		0.000		12.000	Dec 2023	-		12.000	Continuing	Continuing	Continuing
MISO	WR	NIWC LANT : Charleston, SC	0.869	0.000		0.000		0.000		-		0.000	0.000	0.869	-
Cumulative Prior Year	Various	Not Specified : Not Specified	4.031	0.000		0.000		0.000		-		0.000	0.000	4.031	-
		Subtotal	4.900	1.087		3.309		13.815		-		13.815	Continuing	Continuing	N/A

Remarks

Product Development overall increase from FY 2023 to FY 2024 is attributed to the initiation of YETI efforts. Details are held at a higher classification level.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MISO	MIPR	NIWC LANT : Charleston, SC	0.000	0.000		0.552	May 2023	0.828	Dec 2023	-		0.828	0.000	1.380	-
		Subtotal	0.000	0.000		0.552		0.828		-		0.828	0.000	1.380	N/A

Remarks

Support overall increase from FY 2023 to FY 2024 reflects initiation of engineering change proposal (ECP) support required for the development of software and cyber upgrades for ongoing technology modernizations.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	MIPR	NIWC : Charleston, SC	1.979	1.855	Feb 2022	1.004	Feb 2023	2.721	Feb 2024	-		2.721	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	MIPR	NIWC ATLANTIC : Charleston, SC	0.225	0.906	Mar 2022	0.336	Mar 2023	0.308	Feb 2024	-		0.308	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	WR	NAVSEA : Laurel, MD	4.606	0.000		0.000		0.000		-		0.000	0.000	4.606	-
Developmental Test & Evaluation (DT&E)	MIPR	NIWC LANT : Charleston, SC	0.000	0.123	Nov 2021	0.309	Nov 2022	0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	6.810	2.884		1.649		3.029		-		3.029	Continuing	Continuing	N/A

Remarks

Test and Evaluation overall increase from FY 2023 to FY 2024 reflects costs associated with CRIT software evaluation on SIGMAN Increment III hardware baseline.

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.710	3.971		5.510		17.672		-		17.672	Continuing	Continuing	N/A

Remarks

Overall increase from FY 2023 to FY 2024 is largely attributed to initiation of YETI efforts. Details are held at a higher classification level.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

MISO/FABS

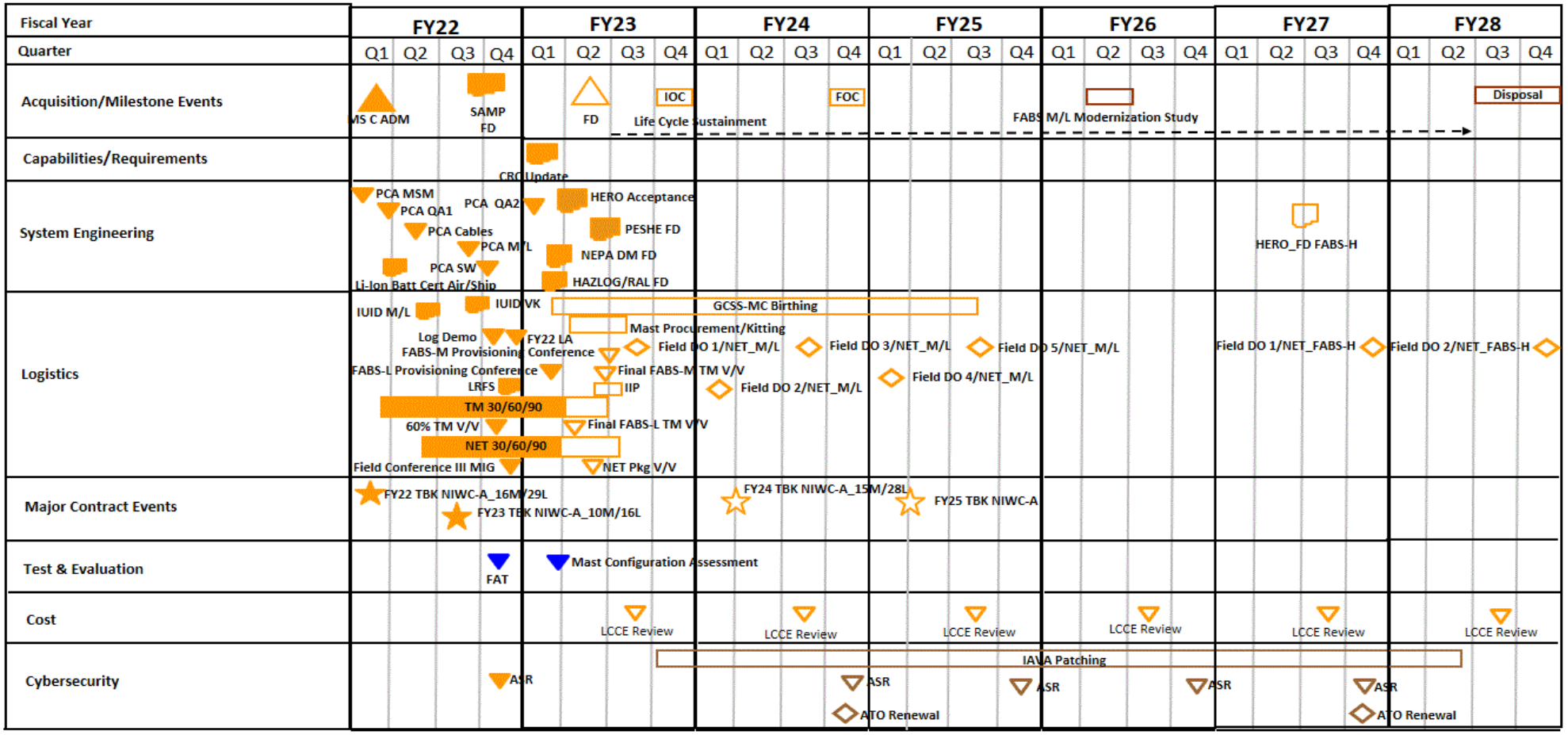

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

SIGMAN

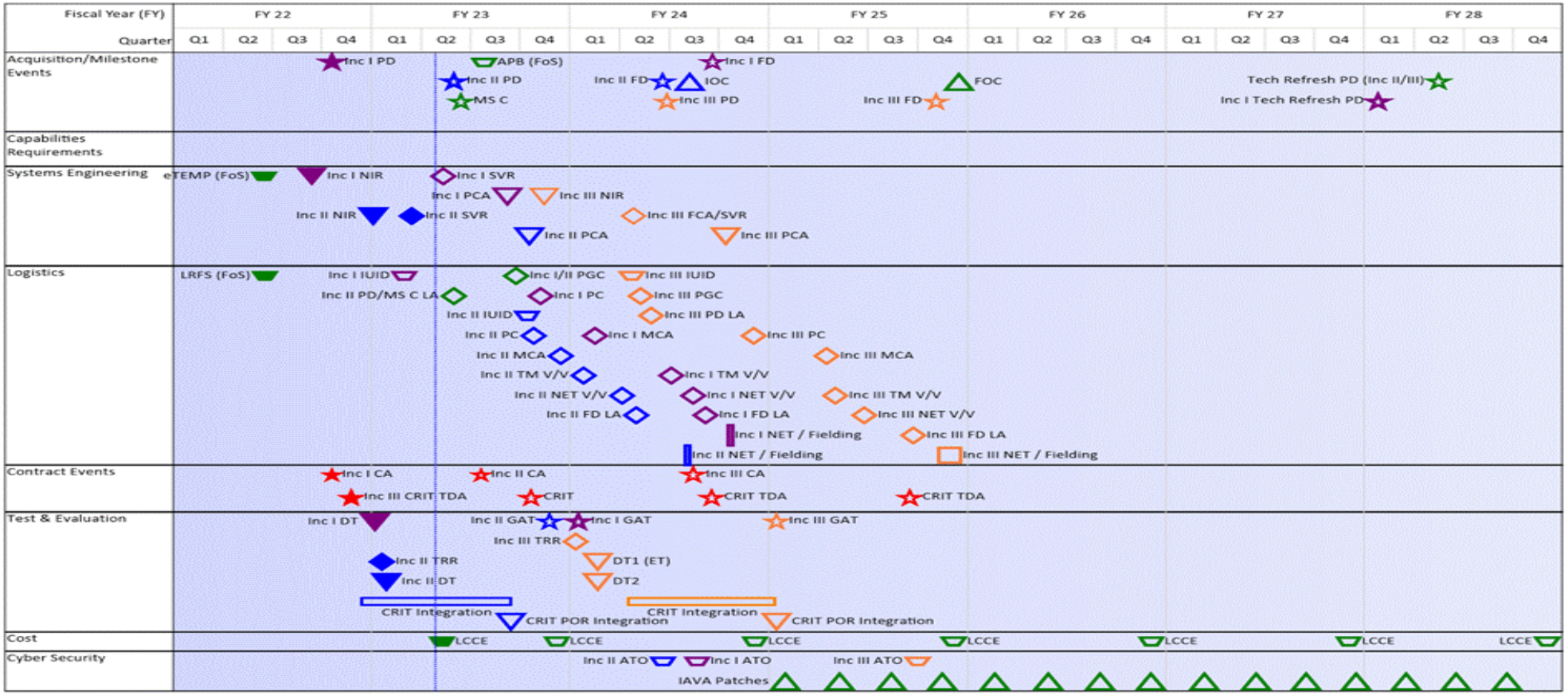

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

Didgital Media Systems - DMS

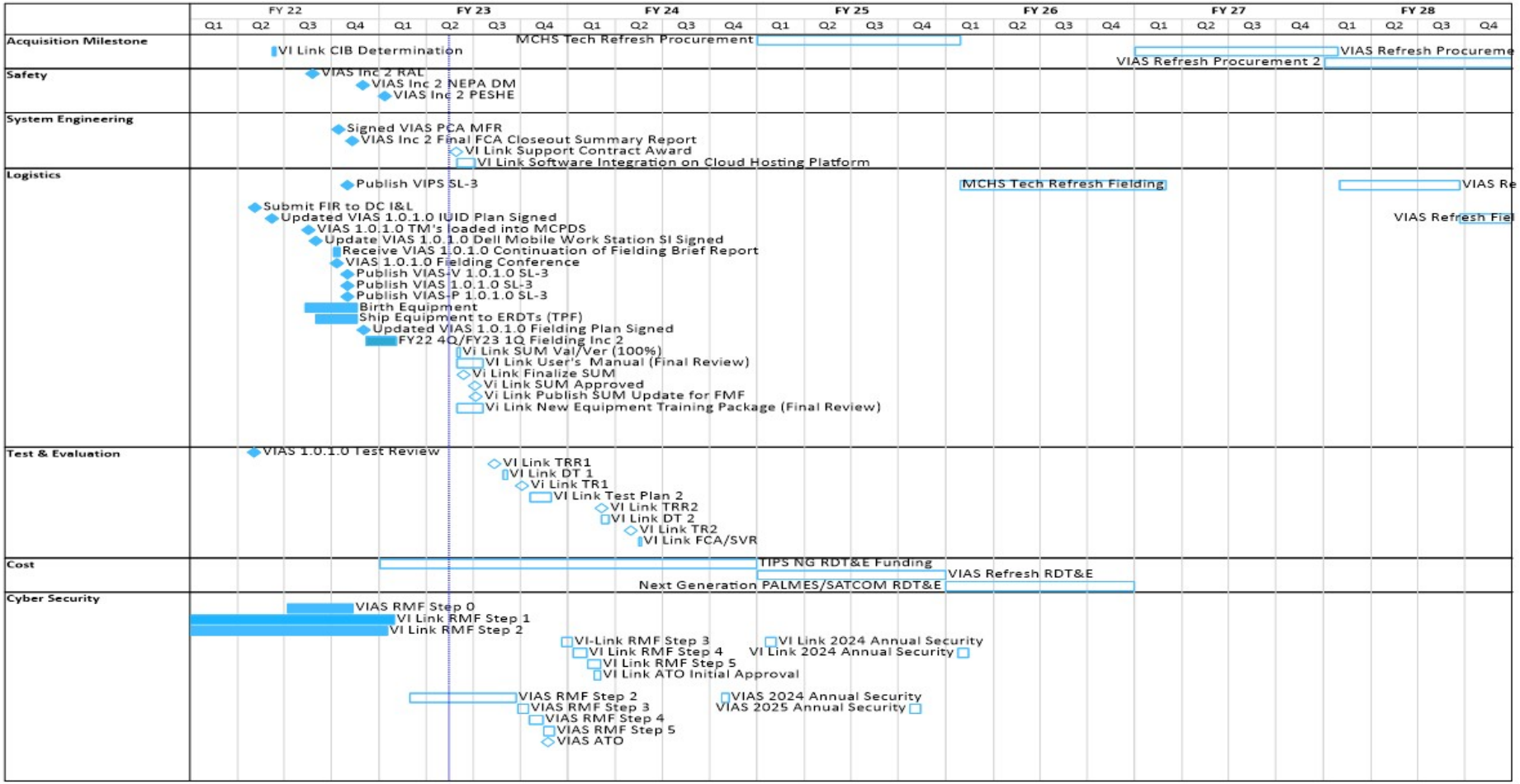

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SIGMAN				
MS C	2	2023	2	2023
Inc 1 Production Decision	4	2022	4	2022
Inc 2 Production Decision	1	2023	1	2023
Inc 3 Production Decision	2	2024	2	2024
Inc 1 Fielding Decision	3	2024	3	2024
Inc 2 Fielding Decision	2	2024	2	2024
Inc 3 Fielding Decision	4	2025	4	2025
FOC	4	2025	4	2025
IOC	3	2024	3	2024
Inc 3 DT 1 with CRIT	1	2024	1	2024
Inc 3 DT 2 with CRIT	1	2024	1	2024
DMS (Formerly PAS)				
VI LIink TRR	1	2023	1	2023
VI Link DT	1	2023	1	2023
VI Link TR 2	2	2024	2	2024
VI Link FCA/SVR	2	2024	2	2024
MISO				
INT FABS Medium Development	3	2022	4	2022
INT FABS Medium Testing	1	2023	3	2023
Field FABS-L and FABS-M I	3	2023	3	2023
FABS IOC	4	2023	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3772 / *Information Related Capabilities (IRC)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Field FABS-L and FABS-M II	3	2024	3	2024
FABS FOC	4	2024	4	2024

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy											Date: March 2023	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*				Project (Number/Name) 3773 / *Fire Coordination and Sensors*			
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**
3773: *Fire Coordination and Sensors*	23.197	8.092	7.974	8.970	-	8.970	9.008	8.969	9.121	9.303	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project 3773 Fire Coordination and Sensors funds the development of critical United States Marine Corps (USMC) fire support coordination, targeting, and digital interoperability systems required for the employment of air and ground fires. Fire Coordination and Sensors provides the systems needed to develop and integrate a digital networked sensor to shooter mission thread supporting the Marine Air Ground Task Force (MAGTF). Key systems included are:

Family of Target Acquisition Systems (FTAS) - The FTAS provides the MAGTF the capability to locate, identify and attack enemy indirect fire weapons systems, and observe and direct friendly artillery fire. The FTAS consists of the AN/TPQ-46B Firefinder radar, the AN/TPQ-54(V)1 Lightweight Counter Mortar Radar Mobile (LCMR), the AN/TPQ-49(A) Lightweight Counter Mortar Radar - Technical Refresh (LCMR-TR), and the Ground Counter Fire Sensor-Replacement (GCFS-R) Scalable Passive Acoustic Reporting and Targeting Node (SPARTN). The FTAS is critical in the execution of counterfire and the integration of target acquisition information enabling attack by MAGTF assets. The FTAS also provides artillery firing units the ability to conduct artillery registration and other friendly fire missions. The FTAS encompasses the equipment required to support target acquisition within the target acquisition platoon and is resident in the headquarters battery of each artillery regiment. The program will initiate development of replacement sensor systems and continue to address system issues that arise due to Diminishing Manufacturing Sources and Material Shortages (DMSMS) items with the FTAS.

Advanced Field Artillery Tactical Data System (AFATDS) Family of Systems (FoS) - The AFATDS FoS consists of two programs: AFATDS, and Mobile Shelters consisting of the Mobile Tactical Shelter (MTS), Target Processing Set (TPS), and the Mobile Command Vehicle (MCV) Shelter. AFATDS integrates all supporting arms assets within the MAGTF, such as mortars, cannon artillery, rockets and missiles, close air support, and naval surface fires support systems. AFATDS automates fire planning, tactical and technical fire direction, and fire support coordination. AFATDS facilitates the employment of USMC and Joint fires capabilities for operations ashore, sea control, sea denial, and other USMC/Joint fires requirements. In FY 2021 the decision was made to transition from the High Mobility Multipurpose Wheeled Vehicle mounted MTS and TPS to the JLTV mounted MCV Shelter for the increased AAO due to Force Design 2030. The MCV Shelter is primarily dedicated to housing the AFATDS and other fire support systems. MCV Shelters enhance the capabilities and survivability of USMC fire support units by enabling rapid emplacements, displacements, and by supporting command, control, and communications on the move.

Target Hand-Off System (THS) - The THS addressed a Marine Corps operational requirement for a lightweight, handheld, and accurate target acquisition engagement coordination system. THS provides MAGTF Commanders with the only man-portable target location and video downlink capability that allows Air Officers and Fire Support Coordinators to prosecute identified targets. The THS' advance interoperability capability provides the MAGTF Commander with the only portable target acquisition system able to interoperate with all target prosecution platforms available on the battlefield. The THS is designed for the Forward Air Controllers (FACs), Forward Observers (FOs), Fire Support Teams (FSTs), Firepower Control Teams (FCTs), Tactical Air Control Parties (TACPs) and Reconnaissance Teams to quickly

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

acquire targets in day, night and near-all-weather visibility conditions, in order to conduct precise, rapid indirect surface fire support, Naval Surface Fire Support (NSFS) and Close Air Support (CAS).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: FTAS	1.911	1.716	1.749	0.000	1.749
Articles:	-	-	-	-	-
FY 2023 Plans: - Continue Correlation / Fusion Technology Transition Agreement (TTA) Transition. - Conduct test and evaluation of software patches for the suite of FTAS equipment. - Initiate the development of the LCMR replacement. - Initiate the development of Engineering Change Proposal (ECP) to address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.					
FY 2024 Base Plans: - Continue Correlation/Fusion Technology Transition Agreement (TTA) Transition - Continue conducting test and evaluation of software patches for the suite of FTAS equipment - Continue the development of the LCMR replacement - Continue the development of Engineering Change Proposals (ECPs) to address DMSMS issues.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement: Increase of $0.033M from FY 2023 to FY 2024 is a result of expected increased ECP development needs to address DMSMS for the suite of FTAS equipment.					
Title: AFATDS	5.776	5.831	6.786	0.000	6.786
Articles:	-	-	-	-	-
FY 2023 Plans: - Fielding of AFATDS software version 6.8.1.2 patch 4 - Complete test and evaluation support for AFATDS software version 6.8.1.3. - Continue development of AFATDS version 6.8.1.4 software development to support Marine Corps-specific GBASM requirements. - Continue AFATDS 7.0 series software development. - Develop training material and conduct new equipment training (NET).					
FY 2024 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Field AFATDS software version 6.8.1.3 - Continue AFATDS version 6.8.1.4 software development. - Conduct test and evaluation support for AFATDS software version 6.8.1.4. - Continue AFATDS 7.0 series software development. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase of $0.955M from FY 2023 to FY 2024 reflects increased AFATDS software development to satisfy unique Marine Corps requirements.					
Title: THS	0.405	0.427	0.435	0.000	0.435
Articles:	-	-	-	-	-
FY 2023 Plans: - Initiate the implementation of the Variable Message Format (VMF) Standard 6017E within the THSv2 software. ***FY 2024 Base Plans:*** - Continue the implementation and testing of the Variable Message Format (VMF) Standard 6017E within the THSv2 software. ***FY 2024 OCO Plans:*** N/A ***FY 2023 to FY 2024 Increase/Decrease Statement:*** The increase $0.008M from FY 2023 to FY 2024 is due to inflation and funds the continued testing support required for the Variable Message Format (VMF) Standard 6017E within the THSv2 software.					
Accomplishments/Planned Programs Subtotals	8.092	7.974	8.970	0.000	8.970

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• PMC/4733: *Fire Support System*	38.424	44.822	58.483	-	58.483	185.607	279.256	168.252	267.098	0.000	1,478.878

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

D. Acquisition Strategy

Family of Target Acquisition Systems (FTAS): FTAS consists of 3 major components: AN/TPQ-46 Firefinder Radar AN/TPQ-49 Lightweight Counter Mortar Radar (LCMR), the AN/TPQ-49(A) Lightweight Counter Mortar Radar - Technical Refresh (LCMR-TR), and the Ground Counter Fire Sensor-Replacement (GCFS-R) Scalable Passive Acoustic Reporting and Targeting Node (SPARTN). The replacement of the AN/TPQ-46 by the Ground/Air Task Oriented Radar (G/ATOR) began in 2018. AN/TPQ-46 activities since 2020 limited to maintaining the authority to operate (ATO) accreditation and supporting remaining systems.

Advance Field Artillery Tactical Data System (AFATDS): AFATD software is managed through the Army Futures Command, Fire Support Command and Control, Aberdeen Proving Ground MD. R&D efforts for the next AFATDS v7.0.X.X, will be a combined effort between the software developer, the Army PM, and the USMC for software through the Defense Information Systems Agency (DISA). Current software enhancements are performed by the U.S. Army, Fort Sill, OK for v6.8.X.X. MCV was designated as an ACAT IV (M) program in September 2020. MCV competitively awarded Other Transactions Authority agreements for prototyping and development and will transition to a FAR contract for production. MCSC will administer both OTA and FAR contracting actions.

THS: The acquisition of components (software/hardware) for the THS initiative will maximize the use of existing Commercial-Off-The-Shelf (COTS), Government-Off-The-Shelf (GOTS), Non-Developmental Item (NDI), and Government Furnished Equipment (GFE). Software must maintain compatibility with seven Programs of Record (POR) and seven Operational Flight Programs (OFP). Equipment is purchased from multiple vendors with Space and Missile Defense Command (SMDC) acting as the lead integrator for the USMC.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FTAS: Correlation/Fusion Development	MIPR	SMDC : Huntsville, AL	2.193	0.751	Mar 2022	0.494	Dec 2022	0.495	Dec 2023	-		0.495	0.000	3.933	-
FTAS: ECP Kit Development	MIPR	TYAD : Tobyhanna, PA	0.508	0.098	Mar 2022	0.167	Dec 2022	0.184	Dec 2023	-		0.184	0.000	0.957	-
THS	MIPR	NAWC : China Lake	0.000	0.405	Nov 2021	0.427	Nov 2022	0.000		-		0.000	0.000	0.832	-
AFATDS v7.0 and 6.8.1.4 SW Dev	C/FFP	CECOM/MITRE : Aberdeen, MD	5.495	0.820	Apr 2022	0.712	Dec 2022	0.000		-		0.000	0.000	7.027	-
AFATDS v7.0 and 6.8.1.4 SW Dev	C/CPFF	DISA/DITCO : Aberdeen, MD	0.851	0.693	Nov 2021	2.264	Nov 2022	0.000		-		0.000	0.000	3.808	-
AFATDS v7.0 and 6.8.1.4 SW Dev	MIPR	NIWC/LANT : Charleston, SC	0.000	0.000		1.081	Jan 2023	0.000		-		0.000	0.000	1.081	-
AFATDS v7.0 and 6.8.1.4 SW Dev	C/FFP	CECOM/MITRE : Aberdeen, MD	0.000	0.000		0.000		0.953	Mar 2024	-		0.953	Continuing	Continuing	Continuing
AFATDS v7.0 and 6.8.1.4 SW Dev	C/CPFF	DISA/DITCO : Aberdeen, MD	0.000	0.000		0.000		3.895	Mar 2024	-		3.895	Continuing	Continuing	Continuing
AFATDS IV&V	MIPR	GSA : Philadelphia, PA	0.000	0.385	Jun 2022	0.000		0.000		-		0.000	0.000	0.385	-
AFATDS Human Factors Engineering	MIPR	NSWC : Dahlgren, VA	0.000	0.103	Apr 2022	0.000		0.000		-		0.000	0.000	0.103	-
AFATDS MCV Development	C/BA	Oshkosh : Oshkosh, WI	2.075	1.004	Feb 2022	0.000		0.000		-		0.000	0.000	3.079	-
AFATDS MCV Development	MIPR	NIWC : Charleston, SD	0.000	2.147	Feb 2022	0.000		0.000		-		0.000	0.000	2.147	-
All Prior Year Cumulative Funds	Various	Various : Various	9.768	0.000		0.000		0.000		-		0.000	0.000	9.768	-
		Subtotal	20.890	6.406		5.145		5.527		-		5.527	Continuing	Continuing	N/A

Remarks

AFATDS - The increase from FY 2023 to FY 2024 is a result of additional AFATDS v6.8.1.4 SW development to support Marine Corps-specific GBASM requirements as well as 7.0 series SW development.
FTAS - The increase from FY 2023 to FY 2024 is a result of expected increased ECP development needs to address DMSMS for the suite of FTAS equipment.
THS - Funds realigned in FY 2024 from Product Development to Test and Evaluation to correctly align the effort.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FTAS: Engineering Support	WR	NSWCDD : Dahlgren, VA	1.067	0.497	Jan 2022	0.403	Nov 2022	0.484	Nov 2023	-		0.484	0.000	2.451	-
FTAS: Test and Evaluation Support	C/FFP	MCTSSA : Camp Pendleton, CA	0.000	0.165	Mar 2022	0.270	Apr 2023	0.276	Mar 2024	-		0.276	0.000	0.711	-
		Subtotal	1.067	0.662		0.673		0.760		-		0.760	0.000	3.162	N/A

Remarks

FTAS - The increase from FY 2023 to FY 2024 supports additional planned engineering support for ECP development needs to address DMSMS for the suite of FTAS equipment.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	C/FFP	various : various	0.424	0.624	Jan 2022	1.774	Apr 2023	1.938	Mar 2024	-		1.938	0.000	4.760	-
Operational Test & Evaluation (OT&E)	MIPR	Various (THS) : Various	0.000	0.000		0.000		0.435	Jan 2024	-		0.435	0.000	0.435	-
		Subtotal	0.424	0.624		1.774		2.373		-		2.373	0.000	5.195	N/A

Remarks

AFATDS Developmental Test - The increase from FY 2023 to FY 2024 is due to an increase in AFATDS software testing requirements to ensure Marine Corps specific requirements have been validated during testing. FY24 developmental testing includes efforts at ARDEC and USMC locations.
THS Operational Test - The increase reflects funds realigned from FY 2023 to FY 2024 from Product Development to Test and Evaluation to correctly align the effort.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FTAS	C/CPFF	CECOM/MITRE : Ft. Monmouth, NJ	0.816	0.400	Dec 2021	0.382	Nov 2022	0.310	Dec 2023	-		0.310	0.000	1.908	-
		Subtotal	0.816	0.400		0.382		0.310		-		0.310	0.000	1.908	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

FTAS - The decrease from FY 2023 to FY 2024 is a result of the reduced overall required engineering support for the suite of FTAS equipment.

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	23.197	8.092		7.974		8.970		-		8.970	Continuing	Continuing	N/A

Remarks

The overall increase is primarily attributed to increased ECP development needs to address DMSMS for the suite of FTAS equipment, and additional Marine Corps requirements for AFATDS SW development.

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

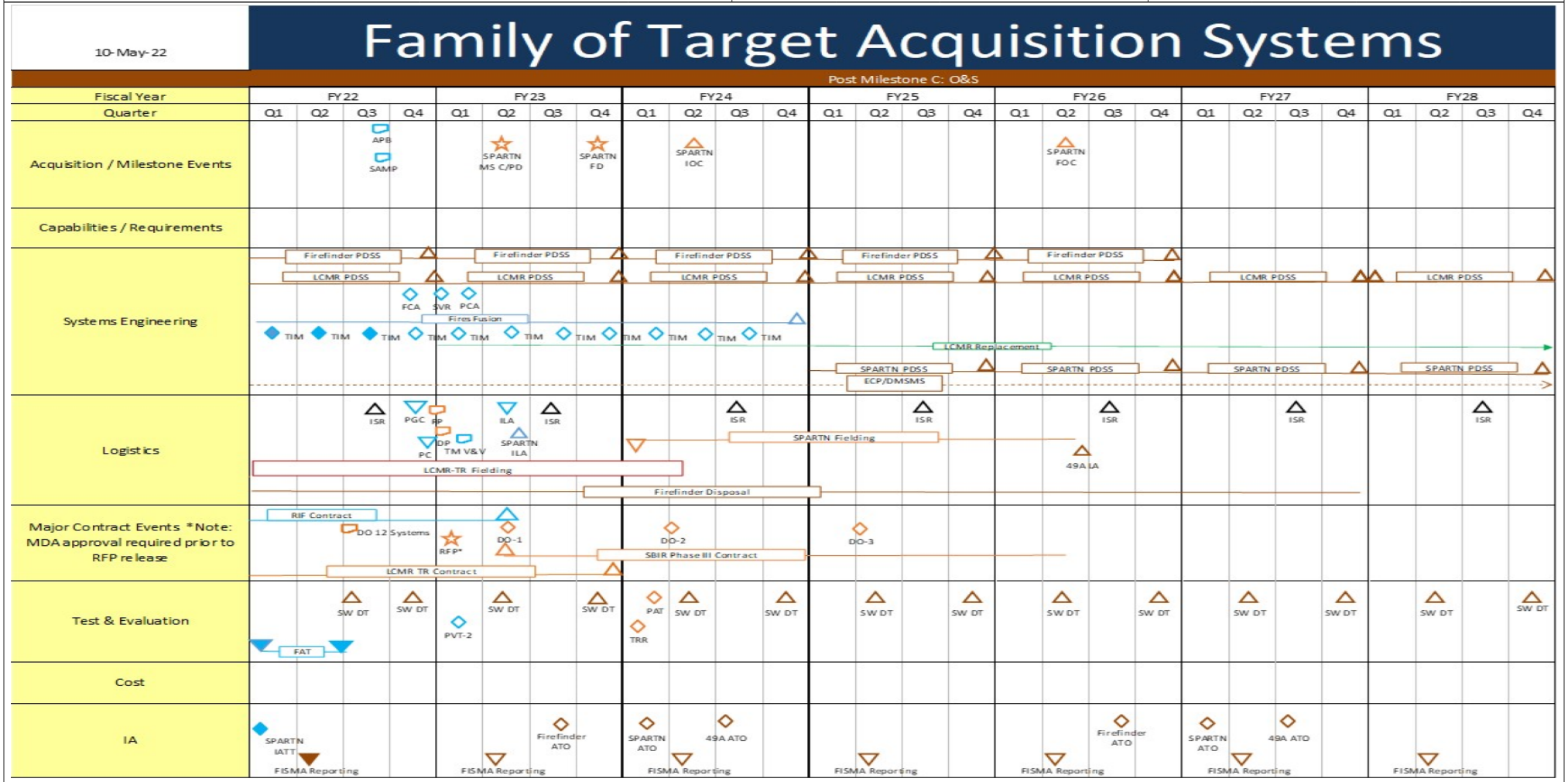

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

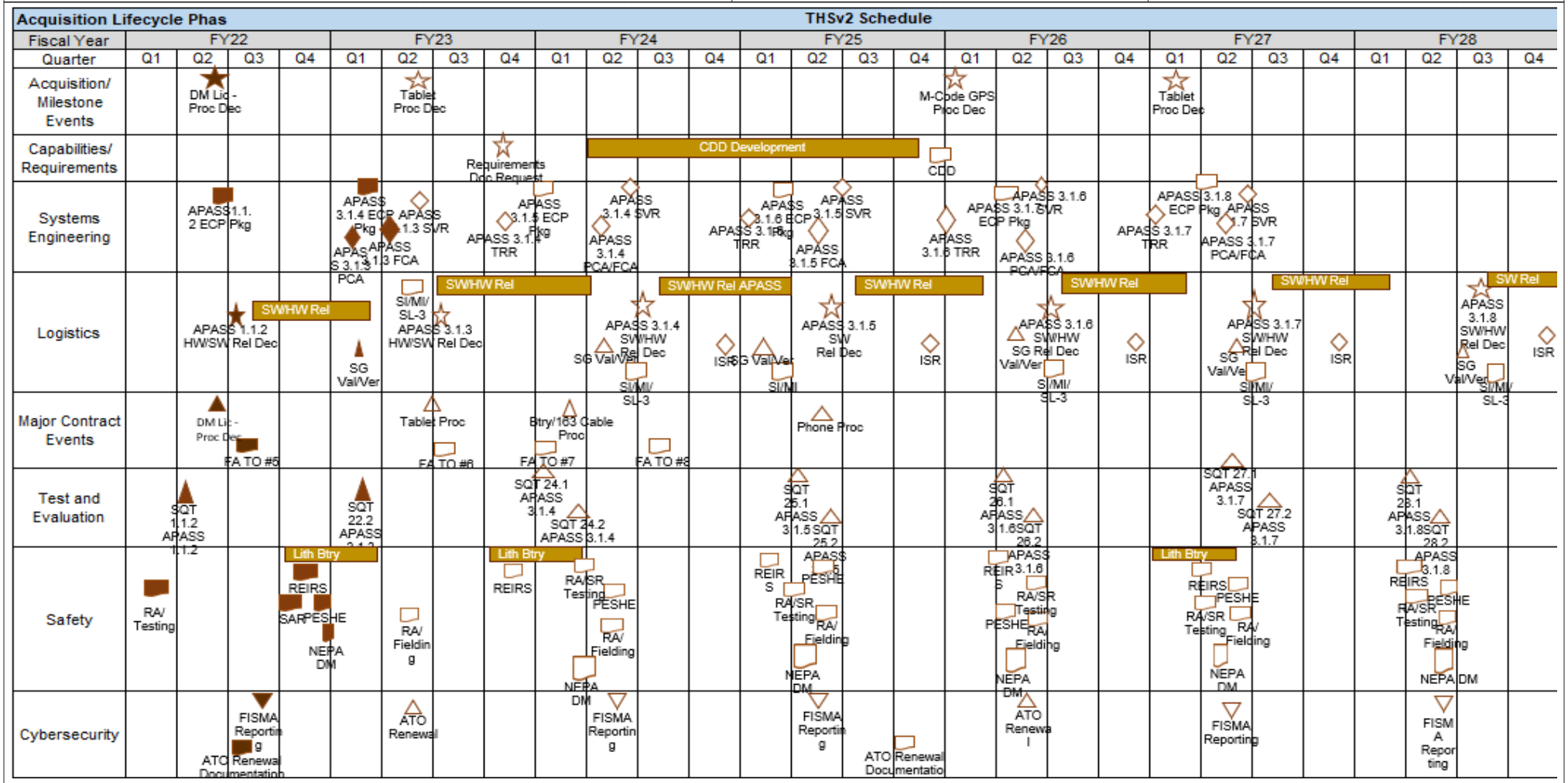

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

AFATDS Schedule

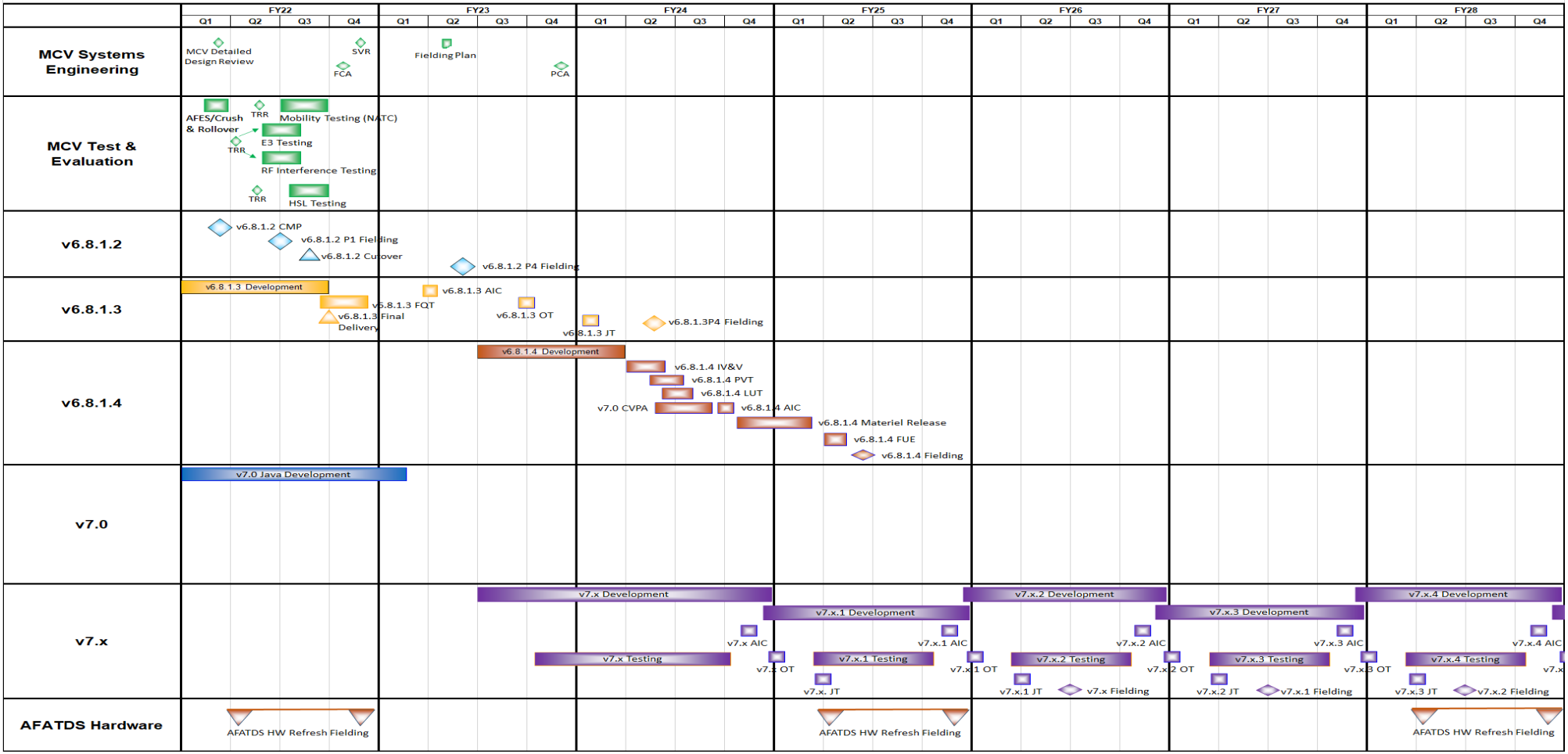

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 3773 / *Fire Coordination and Sensors*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3773				
AFATDS 6.8.1.4	3	2023	1	2024
AFATDS 7.0 Software Development	1	2022	1	2023
AFATDS 7.X Software Development	3	2023	4	2028
FTAS: Correlation/Fusion Engine Development	1	2022	4	2024
FTAS: ECP Kit Development	1	2022	4	2028
FTAS: Software Patch Evaluation	1	2023	1	2028
THS: Software Test Support	1	2022	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 9999 / *Congressional Adds*	

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
9999: *Congressional Adds*	0.000	19.307	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.307
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Marine Electromagnetic Warfare Ground Family of Systems (MEGFoS): MEGFoS is the future of USMC ground electromagnetic warfare being developed to replace the current capability provided by the Multi-Function Electronic Warfare (MFEW) family of systems which provides counter IED and counter UAS capabilities. The MEGFoS family of systems (FoS) will provide Marine Corps Forces the ability to maneuver effectively in the electromagnetic spectrum (EMS) in a peer-to-peer environment. MEGFoS will employ artificial intelligence (AI) to identify signals of interest (SOI) and provides a networked EW capability equipped with low probability of intercept (LPI) and low probability of detection (LPD) antennas enabling the ability to sense and make sense of the (EMS) throughout the area of operations. MEGFoS provides electronic warfare operators the ability to conduct electronic fires on site, remotely attack targets identified via systems employed by incidental operators, conduct coordinated techniques across multiple systems, or pass target data to other systems to attack with kinetic fires. MEGFoS provides state of the art electronic attack (EA), electronic support (ES), and electronic protection capabilities throughout the EMS. MEGFoS enables an exquisite ability to deny, disrupt, and degrade adversary communications, navigation, RADAR, and other systems operating in the EMS. The ability for instantaneous sensing, identification, exploitation, and disruption of enemy capabilities using non-traditional attack vectors and techniques to defeat sources of intentional and unintentional radiated electromagnetic energy ensures a technological edge to the Marine Corps in a peer-to-peer environment. The MEGFoS detects and protects friendly spectrum access; senses and identifies spectrum usage; and disrupts the adversary's decision cycle. The future operations solution is fulfilled by MEGFoS, a critical Force Design program enabling the Expeditionary Advanced Base Operations (EABO) construct, facilitating ground-based EW in support of Force Design 2030.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023
Congressional Add: Multi-function electronic warfare	19.307	0.000
FY 2022 Accomplishments: -Will initiate the purchase of prototypes for the MEGFoS team portable, dismounted and mounted variants to support the integration of common open hardware backplane based off the C4ISR Modular Open Suites of Standards (CMOSS), and a Sensor Open Systems Architecture (SOSA). -Will initiate the purchase of Military Communication equipment to support the development of a networking capability for dismounted and team portable systems to provide a high level of situational awareness to commanders and Marines at the company level and fully realize advanced EA/ES capabilities for MEGFoS. -Will initiate the purchase of prototype hardware components for the MEGFoS team portable, dismounted and mounted variants.		
FY 2023 Plans: N/A		
Congressional Adds Subtotals	19.307	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 9999 / *Congressional Adds*

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 6520: *MEGFoS*	72.071	160.248	217.270	-	217.270	236.591	85.827	87.328	0.000	0.000	859.335
• 4367A: *MEGFoS*	0.000	0.000	177.270	-	177.270	191.591	85.827	87.328	89.074	Continuing	Continuing

Remarks

MEGFoS funding transfers from BLI 6520 to BLI 4367 beginning FY 2024.

D. Acquisition Strategy

MEGFoS is being developed using the C5ISR/EW Modular Open Suite of Standards (CMOSS) and Sensor Open Systems Architecture (SOSA) standards (in coordination with the Army, Navy, and Air Force) that will provide an open architecture HW & SW non-proprietary platform to host "best of breed" capabilities from across industry. This construct will eliminate multiple proprietary "green boxes" carried by Marines lowering the weight and power requirements in operations, reduce training burdens, lower procurement costs, and reduce sustainment costs. MEGFoS will be employed throughout the FMF, the largest number of systems will be employed by the ground combat element and in Littoral Combat Regiments (LCR). MEGFoS provides coordinated EW in support of Fires and Maneuver, Force Protection, Spectrum Management, and Battlespace Awareness.

This funding line specifically funds the porting of the current highly effective counter IED and counter UAS capabilities from the proprietary Multi-Function Electronic Warfare (MFEW) family of systems into a 3U Virtual Path Cross-Connect (VPX) Field Programmable Gate Array (FPGA) single board computer. This ported capability will reduce a 42 pound backpackable MFEW system into a card based CMOSS compliant SDR allowing for MFEW to be one capability set in the MEGFoS chassis.

In addition, the Congressional Add will support the advancement of Marine Corps Electromagnetic Warfare capabilities from existing proprietary legacy systems to open architecture standards based capabilities for an advanced multi-function electromagnetic warfare mission focused on supporting Electromagnetic Spectrum Operations (EMSO). This advanced multi-function electromagnetic warfare mission is the requirement for MEGFoS, a Force Design critical capability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 9999 / *Congressional Adds*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MEGFoS	MIPR	Sierra Nevada Corporation : Folsom, CA	0.000	9.024	Apr 2023	0.000		0.000		-		0.000	0.000	9.024	-
MEGFoS	MIPR	MilTech : Bozeman, MT	0.000	3.000	Apr 2023	0.000		0.000		-		0.000	0.000	3.000	-
MEGFoS	MIPR	Schriever Air Force Base : Colorado Springs, CO	0.000	2.556	May 2023	0.000		0.000		-		0.000	0.000	2.556	-
		Subtotal	0.000	14.580		0.000		0.000		-		0.000	0.000	14.580	N/A

Remarks

The Congressional add in FY 2022 supports the advancement of Marine Corps Electromagnetic Warfare capabilities from existing proprietary legacy systems to open architecture SOSA/C4ISR Modular Open Suite of Standards (CMOSS) standards based capabilities for an advanced multi-function electromagnetic warfare mission focused on supporting Electromagnetic Spectrum Operations (EMSO). This funding line specifically funds the porting of the current highly effective counter IED and counter UAS capabilities from the proprietary Multi-Function Electronic Warfare (MFEW) family of systems into a 3U Virtual Path Cross-Connect (VPX) Field Programmable Gate Array (FPGA) single board computer. This ported capability will reduce a 42 pound backpackable MFEW system into a card based CMOSS compliant SDR allowing for MFEW to be one capability set in the MEGFoS chassis.

It will procure a US Space Force developed Range Closed Loop Environment (RCLE). The RCLE provides a complete spectrum testing and training capability that otherwise cannot be done without going out to expensive EW ranges.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	MIPR	NSWC Crane : Crane, IN	0.000	2.428	Apr 2023	0.000		0.000		-		0.000	0.000	2.428	-
		Subtotal	0.000	2.428		0.000		0.000		-		0.000	0.000	2.428	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0206313M / *Marine Corps Comms Systems*	Project (Number/Name) 9999 / *Congressional Adds*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MEGFoS	MIPR	MilTech : Bozeman, MT	0.000	2.299	Apr 2023	0.000		0.000		-		0.000	0.000	2.299	-
		Subtotal	0.000	2.299		0.000		0.000		-		0.000	0.000	2.299	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
Project Cost Totals	0.000	19.307		0.000		0.000		-		0.000	0.000	19.307	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 9999 / *Congressional Adds*

EWS Congressional Add Funding Schedule

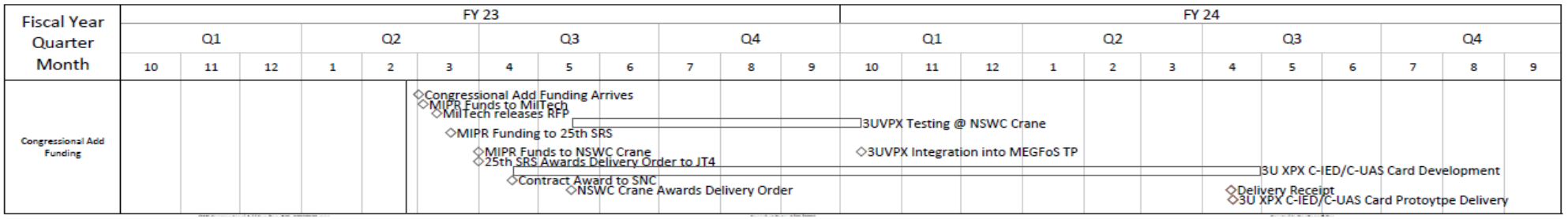

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0206313M / *Marine Corps Comms Systems*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9999				
3 UPVX Integration into MEGFOS TP	1	2024	1	2024