Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy											Date: February 2018	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605215N *I (U)Mission Planning*							
COST ($ in Millions)	**Prior Years**	**FY 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	32.876	33.430	32.714	-	32.714	42.194	35.634	33.840	34.564	Continuing	Continuing
2213: *Mission Planning*	0.000	21.415	21.580	21.868	-	21.868	30.889	24.155	22.272	22.744	Continuing	Continuing
2311: *Stores Planning and Weaponeering Module*	0.000	10.847	11.185	10.846	-	10.846	11.305	11.479	11.568	11.820	Continuing	Continuing
2312: *Common Helicopters*	0.000	0.614	0.665	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.279

Note

The FY 2019 funding request was reduced by $0.312 million to account for the availability of prior year execution balances.

A. Mission Description and Budget Item Justification

The Mission Planning PE is used to develop automated mission planning systems to support Naval Aviation.

The Joint Mission Planning System (JMPS) is the designated automated mission planning system for the Navy, supporting over 40 Type/Model/Series (T/M/S) of U.S. Navy and Marine Corps aircraft and expeditionary forces. JMPS-M (Maritime) enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, conduct mission rehearsal, execute missions, and conduct post-mission analysis. JMPS-E (Expeditionary) is a scalable, tailorable, and collaborative web-based mission planning and execution monitoring tool for Amphibious Squadron (PHIBRON) staffs embarked with each Amphibious Ready Group (ARG) and Expeditionary Strike Group (ESG). Electronic Kneeboard (EKB) is a mobile device configured with various software applications and features to support aircrew during pre-flight planning, in-flight re-planning and mission execution, and post-mission debriefing and analysis. Common Munitions BIT/Reprogramming Equipment (CMBRE) provides USN/USMC forces the critical capability to preform built-in test and programming/reprogramming of various weapons. FY20 and out includes funding for the research and the development in order to develop upgrades to the CMBRE system to support advanced operational capabilities, address system obsolescence, meet cyber security requirements, and meet mission readiness requirements.

The Stores Planning and Weaponeering Module, also referred to as Weaponeering and Stores Planning (WASP), is an integrated software product that allows aircrew to determine the best combinations of weapons and delivery conditions to achieve the desired level of target damage, eliminate weapon delivery solutions that violate aircraft T/M/S specific safety-of-flight envelopes, and perform detailed weapons employment planning for F/A-18 and E/A-18G aircraft.

Common Helicopters is used to develop unique planning capabilities and tools for helicopters (e.g. Weight and Power Calculators (WPC), Common Mission Data Loader (CMDL), Weapon Employment Zone Overlays Tool (WEZOT) and Point Selection Tool (PST)) for integration into JMPS Mission Planning Environments (MPE). Starting in FY19, Common Helicopters RDT&E funding in PU 2312 is being consolidated with JMPS-M Mission Planning funding in PU 2213.

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy	Date: February 2018
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605215N *I (U)Mission Planning*

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under MISSION PLANNING because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production decision.

B. Program Change Summary ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	33.570	33.430	33.570	-	33.570
Current President's Budget	32.876	33.430	32.714	-	32.714
Total Adjustments	-0.694	0.000	-0.856	-	-0.856
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.690	0.000			
• Program Adjustments	0.000	0.000	-0.312	-	-0.312
• Rate/Misc Adjustments	0.000	0.000	-0.544	-	-0.544
• Congressional General Reductions Adjustments	-0.004	-	-	-	-

Change Summary Explanation

The FY 2019 funding request was reduced by $0.312 million to account for the availability of prior year execution balances.

Technical: N/A

Schedule:

2213:

Clarified names of Mission Planning Environment (MPE) Integration and Test events and extended framework development period through 4th QTR 2020 to include latest USAF schedules. Changed Increment 4 IOC date to 1st QTR 2020 to align with the program APB. Extended 32-bit MPE integration and test out to 4th QTR 2020 to align with platform needs.

2311:

Due to the incorporation of agile software development into the WASP program, the Systems Development and Test and Evaluation periods for each WASP version are concurrent, thus accelerating IOCs of each version by at least one quarter to meet emerging warfighter requirements within available budget.

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy	Date: February 2018
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)*	**R-1 Program Element (Number/Name)** PE 0605215N *I (U)Mission Planning*

2312:

Common Helicopter efforts are consolidated under PU 2213 Mission Planning FY 2019 and out.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605215N / *(U)Mission Planning*	Project (Number/Name) 2213 / *Mission Planning*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2213: *Mission Planning*	0.000	21.415	21.580	21.868	-	21.868	30.889	24.155	22.272	22.744	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

JMPS-Maritime (JMPS-M) is the designated automated mission planning system for naval aviation, supporting over 40 T/M/S of U.S. Navy and Marine Corps aircraft. JMPS-M enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, conduct mission rehearsal, and conduct post-mission analysis. JMPS-M is a mission critical system which is a co-development effort between the United States Navy (USN) and United States Air Force (USAF). Common requirements are identified and core JMPS-M capabilities are developed and prioritized in an evolutionary approach. An individual JMPS-M Mission Planning Environment (MPE) requires the JMPS framework, common components, unique planning components (UPCs), federated applications, and the necessary system hardware required to satisfy mission planning objectives. Most tactical naval aviation platforms are dependent solely on JMPS-M to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. Common helicopter functionality will be developed for implementation in Joint Mission Planning System (JMPS). Common Helicopter components include, Weight and Power Calculators (WPC), Common Mission Data Loader (CMDL), Weapon Employment Zone Overlays Tool (WEZOT) and Point Selection Tool (PST).

The JMPS-M Increment 4 release transitions JMPS-M from Windows 7/32-bit Operating System (OS) (JMPS-M Increment 3) to Windows 10/64-bit OS. Transition to 64-bit allows for memory space expansion to accommodate future Microsoft Operating Systems, emerging technologies, and meet critical required cyber security mandates. Increment 4 development requires software conversion and refactoring to address memory limitations and system errors resulting in JMPS-M computer crashes. The transition from the current 32-bit architecture to a 64-bit architecture provides additional memory access, increased planning efficiencies, and creates an increased stability in the architecture resulting in fewer system crashes and improved cyber security. JMPS-M 64-bit transition efforts (Increment 4) also support platform capability enhancements that require increased amounts of data and processing power.

Next Generation Naval Mission Planning will provide a new mission planning system which supports future multi-domain mission planning, execution, management, and mission analysis capabilities required by the 21st century warfighter. Next Generation Naval Mission Planning will modernize system architecture to address technological obsolescence, deliver collaboration and automation capabilities, and leverage service-oriented architecture to provide affordable revolutionary improvements in workflow, usability, cybersecurity, portability of mission planning, mission execution, and mission analysis functions.

FY20 and out includes funding for Common Munitions BIT/Reprogramming Equipment (CMBRE) which provides the USN/USMC the critical capability to perform built-in-test and programming/reprogramming of various weapons. Funding will provide research and the development in order to develop upgrades to the CMBRE system to support advanced operational capabilities, address system obsolescence, meet cyber security requirements, and meet mission readiness requirements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Joint Mission Planning System Expeditionary (JMPS-E)	0.908	0.946	0.953	0.000	0.953

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Articles:	-	-	-	-	-
Description: JMPS Expeditionary (JMPS-E): JMPS-E provides a scalable, tailorable, mission planning and execution monitoring tool for Amphibious Squadron staffs. The primary focus of this system is to provide an automated capability to assist planners with mission analysis, course of action development and automated creation of doctrinal orders based on planning data in the system. JMPS-E provides a digital map enabling better response times to changing plans, easier distribution of planning artifacts and a reduction in human error during the planning process. The variety and geographically separated nature of forces involved with Ship to Objective Maneuver (STOM) amplifies the need for web-based technologies to enable collaborative planning, improve overall situational awareness and enable the monitoring of mission execution from different locations. The primary outputs are tasking orders, route plans, battlespace geometries and decision briefs. The system will also incorporate modeling and simulation tools to rehearse and deconflict mission plans. ***FY 2018 Plans:*** Continue integration and testing of JMPS-E MPE Version 3.0. ***FY 2019 Base Plans:*** Field JMPS-E MPE Version 3.0. Begin development, integration and testing of JMPS-E MPE Version 3.1 which updates the JMPS-E UPC and required Common Components, Federated Applications, COTS and GOTS software products to maintain current capabilities and required cyber posture. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase of $0.007M from FY 2018 to FY 2019 due to additional efforts required to support fielding and development of multiple JMPS-E versions (3.0 and 3.1).					
Title: Mission Planning Environment Program Mgmt, Integration, and Test	11.107	12.744	12.687	0.000	12.687
Articles:	-	-	-	-	-
Description: Mission Planning Environment (MPE) Integration and Test efforts support the Navy's developmental testing/operational testing, integration and system of system testing for MPE fielding, integrating, testing, and managing Electronic Kneeboard (EKB) efforts. Life-cycle management efforts consist of integration of components provided by various developers into a platform-centric MPE and testing of the integrated MPE. MPE integration and testing results in a consistent and repeatable system configuration that enables stability and reliability.					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
FY 2018 Plans: Continue integration and testing, project management and systems engineering for current MPEs. Continue integration for three new variants of the C/KC-130J, wireless JMPS, and EKB efforts. These wireless efforts will require additional testing and integration to meet cyber mandates. Continue supporting future releases of JMPS and Electronic Kneeboard (EKB) software to the fleet. Begin Next Generation Naval Mission Planning requirement analysis. ***FY 2019 Base Plans:*** Continue mission planning integration and testing, project management and system engineering for over 40 T/M/S to include fielding of Windows 10. Test and verify capabilities to support multi-ship mission coordination and update/validate fleet requirements in support of Next Generation Naval Mission Planning MPEs. Conduct integration and test of EKB to the fleet for functionality and cyber security mandates. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease of $0.057M from FY 2018 to FY 2019 due to reduced MPE integration and test efforts.					
Title: JMPS Framework (FW) and Common Components (CC) Development	9.400	7.890	8.228	0.000	8.228
Articles:	-	-	-	-	-
Description: Continue development and integration of JMPS 64-bit FW which provide additional capabilities for all naval aircraft to include airdrop, air refueling, and enhanced installations. Common component development include Common Mission Data Loader (CMDL), Weapon Employment Zone Overlays Tool (WEZOT) and Point Selection Tool (PST). FW support tasks include: system engineering processes, management interface controls, software architectural analysis, requirements management and a centralized website for Mission Planning Environment (MPE) developers. As platform(s) requirements emerge for new and enhanced mission planning capabilities, the demand for more complex integrated applications and software products increases. The transition to a 64-bit architecture provides the volume of integrated mission planning capability required by complex integrated combat operations. Common Components software updates augment core mission planning capabilities across multiple T/M/S. The JMPS FW and Common Components will also transition to Windows 10. ***FY 2018 Plans:*** Continue the Increment-4 JMPS Framework Core 64-bit development transition activities. Major activities include completing the 64-bit development and continuation of transitioning Windows 10 operating system					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
used by multiple platforms. The transition of the JMPS Common Components are aligned to meet platform(s) requirements for new and enhanced mission planning capability in a 64-bit environment. The 64-bit transition is required to address system memory requirements for fielded Mission Planning Environments (MPEs); thus reducing system crashes while improving mission planning performance for the fleet. All Common Components software updates across multiple T/M/S will be completed to support Increment 4. Integration activities will continue as platforms deliver their 64-bit Unique Planning Capabilities to NavMPS for integration, testing and fielding. ***FY 2019 Base Plans:*** Continue development and initiate the fielding of JMPS-M Increment 4 to include co-development with the Air Force for 64 bit Frameworks. This effort will result in Increment 4 being aligned with the Air Force for improved joint service affordability while also enhancing the systems cyber security. Continue development activities for NGNMPS framework which include implementing a modular, scalable architecture to support cyber security implementations for compliance with cyber mandates. Continue development and integration of common components to meet platform(s) requirements for new and enhanced mission planning capability required in a 64-bit environment. Integration activities will continue as platforms deliver their 64-bit Unique Planning Capabilities for integration, testing and fielding. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Increase of $0.338M from FY 2018 to FY 2019 due to additional efforts required to initially field Increment 4 and the consolidation of Common Helicopter PU into this Mission Planning PU.					
Accomplishments/Planned Programs Subtotals	21.415	21.580	21.868	0.000	21.868

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The initial Joint Mission Planning System (JMPS) development effort was a phased evolutionary approach. JMPS is a post Milestone III program and Initial Operational Capability (IOC) occurred in December 2005. Cost Plus Award Fee (CPAF) and Cost Plus Incentive Fee (CPIF) contracts were awarded during initial development. During the down-select process, one contractor was selected to develop the JMPS architecture work and Version 1.0 basic flight planning components. Additional phases focused on strike planning requirements (i.e., support Precision Guided Missions and other tactical data intensive missions) in order to migrate platforms from

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

legacy mission planning systems to JMPS. The USAF and USN continued the joint development of JMPS Frameworks via the USAF Mission Planning Enterprise Contract, which is used for JMPS Framework software development. The USN integration and fielding strategy supports a Mission Planning Environment (MPE) focus, where the JMPS Framework and other software components are integrated, tested, and fielded by T/M/S. As platforms plan their migration to newer versions of JMPS, the acquisition strategy, plan, and program baseline will be updated in order to divest legacy mission planning systems, meet the evolving requirements for integrated mission planning, and lower total life cycle cost. JMPS End of Life (EOF) is scheduled for 2027. This necessitates the development of a replacement system, Next Generation Naval Mission Planning System (NGNMPS). NGNMPS will provide a new mission planning system which supports future multi-domain mission planning, execution, management, and mission analysis capabilities required by the 21st century warfighter. NGNMPS will modernize system architecture to address technological obsolescence, deliver collaboration and automation capabilities, and leverage service-oriented architecture to provide affordable revolutionary improvements in workflow, usability, cybersecurity, portability of mission planning, mission execution, and mission analysis functions. NGNMPS requirements and acquisition documentation development will start in 2018.

E. Performance Metrics

Average time to plan a flight: Threshold value is < 1 hour average time to plan a flight that includes a Military Training Route (MTR), routing to and from the MTR, kneeboard card production, Instrument Flight Rules (IFR) flight planning materials and a Data Transfer Device (DTD) Load. Objective value is < 30 minutes average time to plan a flight that includes a MTR, routing to and from the MTR, kneeboard card production, IFR flight planning materials and a DTD Load.

Interoperability: Threshold value is 100% of top level Interoperability Exchange Requirements (IERs) designated critical will be satisfied. Objective value is 100% of top level IERs will be satisfied.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Software Development/JMPS Expeditionary	C/CPFF	Leidos : Reston, VA	0.000	0.400	Feb 2017	0.650	Feb 2018	0.665	Feb 2019	-		0.665	Continuing	Continuing	Continuing
Primary Software Development, FW	C/CPFF	Northrop Grumman : Long Beach, CA	0.000	4.500	Feb 2017	1.500	Feb 2018	1.500	Feb 2019	-		1.500	Continuing	Continuing	Continuing
Primary Software Development/(Human Factors)	C/CPFF	Georgia Technical Research Institute (GTRI) : Atlanta, GA	0.000	1.500	Mar 2017	1.000	Mar 2018	1.000	Mar 2019	-		1.000	Continuing	Continuing	Continuing
Primary Software Development	C/CPFF	TBD : TBD	0.000	0.000		2.890	Mar 2018	3.000	Mar 2019	-		3.000	Continuing	Continuing	Continuing
Primary Software Development (SEIC)	C/CPFF	Leidos : Orlando, FL	0.000	2.918	Feb 2017	2.500	Feb 2018	2.728	Feb 2019	-		2.728	Continuing	Continuing	Continuing
		Subtotal	0.000	9.318		8.540		8.893		-		8.893	Continuing	Continuing	N/A

Remarks

FY19 continues to support incremental funding for the Primary Software Development Framework (FW) efforts awarded via a competitive 2nd Qtr. FY18 contract award. The performing activity and location are currently TBD to support a competitive contracting strategy. Once awarded, the performing activity and location will be updated to reflect the selected contractor.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NAWCWD : Point Mugu, CA	0.000	0.208	Nov 2016	0.212	Nov 2017	0.216	Nov 2018	-		0.216	Continuing	Continuing	Continuing
Systems Eng & Integration	WR	NAWCWD : Point Mugu, CA	0.000	2.487	Nov 2016	2.324	Nov 2017	2.320	Nov 2018	-		2.320	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD : Patuxent River, MD	0.000	1.136	Nov 2016	1.300	Nov 2017	1.326	Nov 2018	-		1.326	Continuing	Continuing	Continuing
		Subtotal	0.000	3.831		3.836		3.862		-		3.862	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	WR	NAWCWD : Point Mugu, CA	0.000	5.311	Nov 2016	5.579	Nov 2017	5.343	Nov 2018	-		5.343	Continuing	Continuing	Continuing
Test & Evaluation	WR	COMOPTEVFOR : Norfolk, VA	0.000	1.046	Jan 2017	1.350	Jan 2018	1.377	Jan 2019	-		1.377	Continuing	Continuing	Continuing
		Subtotal	0.000	6.357		6.929		6.720		-		6.720	Continuing	Continuing	N/A

Remarks

The increase in FY18 COMOPTEVFOR Operational Test (OT) support is due to increased testing for new platforms transitioning to JMPS, increased testing requirements required for new cyber requirements, and additional testing required for the incorporation of new wireless technologies for multiple JMPS platforms

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support and Travel	WR	NAWCAD : Patuxtent River, MD	0.000	1.400	Nov 2016	1.600	Nov 2017	1.704	Nov 2018	-		1.704	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	Ausley Associates : Lexington Park, MD	0.000	0.509	May 2017	0.675	May 2018	0.689	May 2019	-		0.689	Continuing	Continuing	Continuing
		Subtotal	0.000	1.909		2.275		2.393		-		2.393	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	21.415		21.580		21.868		-		21.868	Continuing	Continuing	N/A

Remarks

Prior to FY17, the Mission Planning PU 2213 was funded under PE 0604231N.

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

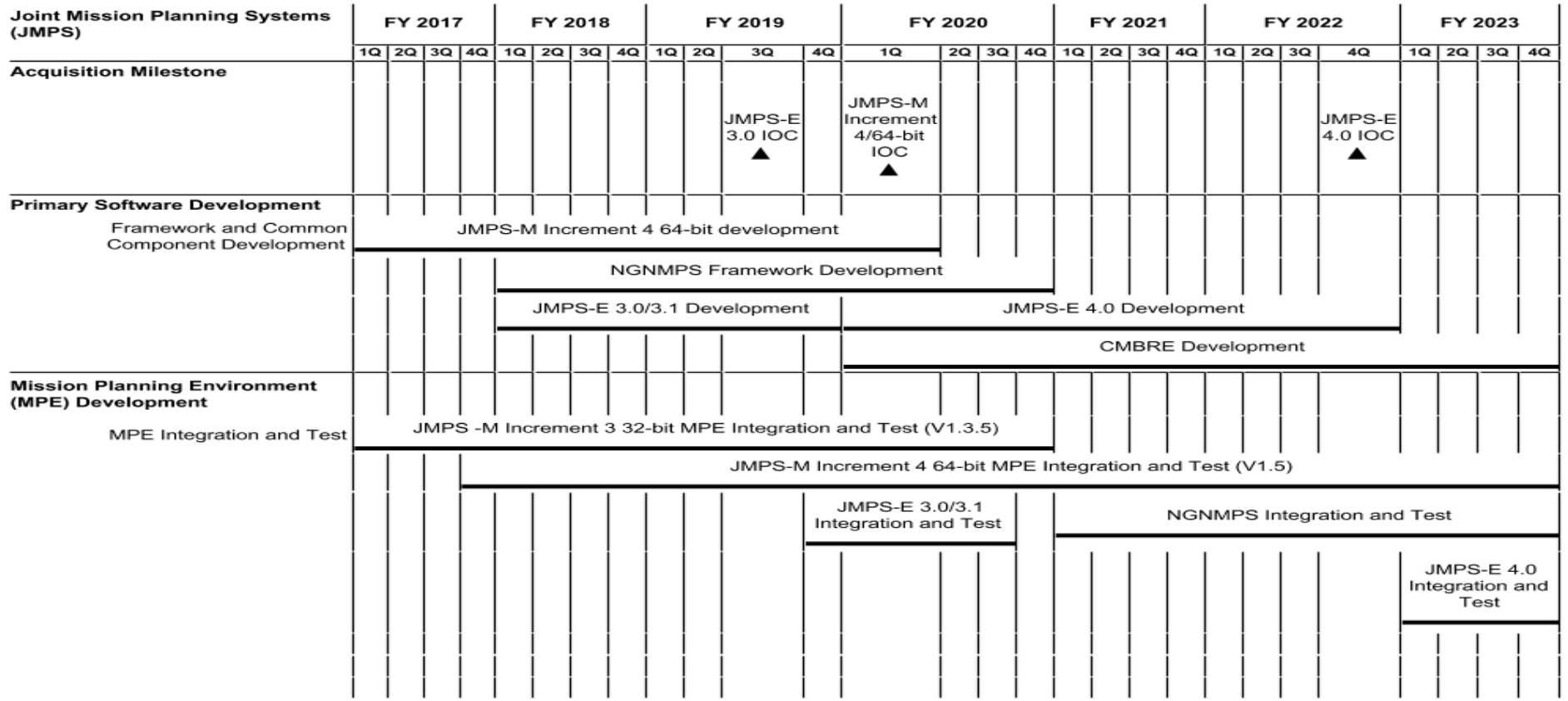

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2213 / *Mission Planning*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Joint Mission Planning Systems (JMPS)				
Acquisition Milestone: JMPS-E 3.0 Initial Operational Capability (IOC)	3	2019	3	2019
Acquisition Milestone: JMPS-M Increment 4/ 64-Bit Initial Operational Capability (IOC)	1	2020	1	2020
Acquisition Milestone: JMPS-E 4.0 Initial Operational Capability (IOC)	4	2022	4	2022
Primary Software Development: Framework and Common Component Development: Increment 4 64-Bit Architecture Development	1	2017	1	2020
Primary Software Development: Framework and Common Component Development: NGNMPS Framework Development	1	2018	4	2020
Primary Software Development: Framework and Common Component Development: JMPS-E 3.0/3.1 Development	1	2018	4	2019
Primary Software Development: Framework and Common Component Development: JMPS-E 4.0 Development	1	2020	4	2022
Primary Software Development: Framework and Common Component Development: CMBRE Development	1	2020	4	2023
Mission Planning Environment (MPE) Development: MPE Integration and Test: 32 bit MPE Integration (V1.3.5)	1	2017	4	2020
Mission Planning Environment (MPE) Development: MPE Integration and Test: 64 bit MPE Integration (V1.5)	4	2017	4	2023
Mission Planning Environment (MPE) Development: MPE Integration and Test: NGNMPS Integration and Test	1	2021	4	2023
Mission Planning Environment (MPE) Development: MPE Integration and Test: JMPS-E 3.0/3.1 Integration and Test	4	2019	3	2020
Mission Planning Environment (MPE) Development: MPE Integration and Test: JMPS-E 4.0 Integration and Test	1	2023	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605215N / *(U)Mission Planning*	Project (Number/Name) 2311 / *Stores Planning and Weaponeering Module*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2311: *Stores Planning and Weaponeering Module*	0.000	10.847	11.185	10.846	-	10.846	11.305	11.479	11.568	11.820	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Prior to FY17, Stores Planning and Weaponeering Module (PU 2311) was budgeted under Standards Development (PE 0604215N).

A. Mission Description and Budget Item Justification

The Weaponeering and Stores Planning (WASP) components are integrated software products that allow aircrew to determine the best combinations of weapons and delivery conditions to achieve the desired level of target damage, eliminate weapon delivery solutions that violate aircraft Type/Model/Series (T/M/S) specific safety-of-flight envelopes, and perform detailed weapons employment planning. WASP is approved by the Air Warfare Division (OPNAV N98) as the flight clearance implementation system for the F/A-18 A, A+, B, C, D, D (RC), E, F, EA-18G; and includes potential support for other platforms, to include F-35. WASP components will alert pilots if their planned weapon release conditions meet flight clearance limits, will result in bomb-to-bomb collisions, bomb-to-aircraft collisions, aircraft overstress, or excessive risk of aircraft loss/damage in the event of fuze early bursts. Weapon employment planning is fundamental to the Joint Capability Area of Force Application and joint mission areas of Strike and Amphibious Warfare. WASP provides the Navy and Marine Corps with weaponeering capabilities that are critical requirements for Interdiction, Armed Reconnaissance and Close Air Support mission planning. WASP is critical to successful employment of the Joint Mission Planning System (JMPS-M) for the F/A-18 A-F and EA-18G Mission Planning Environments (MPEs). WASP also affordably leverages a multitude of Government Furnished Information software components and tools including aircraft target maneuver simulations, and weapon flyout models. WASP requires updates as emergent requirements for new aircraft T/M/S, stores and weapons are approved, new flight clearances and flight restrictions are issued by Naval Air Systems Command Headquarters (NAVAIRSYSCOM), and cyber security mandates are released.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Product Development	5.541	5.803	5.685	0.000	5.685
Articles:	-	-	-	-	-
Description: Includes associated system engineering design, development, installation, integration and software development for Weaponeering and Stores Planning (WASP) components to support F/A-18 A-F and EA-18G. Provide domain engineering support for weapons separation, aircraft loads, flutter, fuzing and safe escape for application to WASP. Provide analysis of new requirements, allocation of requirements, design oversight, and life cycle management of the WASP program. Develop new aircraft configuration, aircraft loading, weapon optimization, store release and delivery planning components for F/A-18 A-F and EA-18G new flight clearances and flight restrictions issued by NAVAIRSYSCOM. Provide configuration management, system administration,					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2311 / *Stores Planning and Weaponeering Module*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
quality assurance, documentation, metrics and software risk management for WASP. Acquire, integrate and modify numerous Government Furnished Information (GFI) software components and tools (aircraft target maneuver simulations, weapon flyout models, etc.) that are used for the WASP software development. Integrate WASP with Joint Standoff Weapon/Joint Direct Attack Munitions/Standoff Land-Attack Missile - Expanded Response and other weapons mission planning systems as required. ***FY 2018 Plans:*** Complete WASP v4.0 development. Begin the development of WASP v4.1 and the release of multiple database updates. ***FY 2019 Base Plans:*** Continue WASP v4.1 development and release of multiple database updates to WASP v4.0. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease of $0.118M from FY2018 to FY2019 due to accounting for the availability of prior year execution balances.					
Title: Test and Evaluation (T&E) ***Articles:*** ***Description:*** Provide test and evaluation for unit and system level testing; functional qualification testing; safety of flight certification testing; integration and standards compliance testing for WASP versions. Provide JMPS MPE Integration test support. Provide testing and test support to ensure all components (to include internally developed software, externally developed GFI) comply with Department of Navy (DoN) and Department of Defense (DoD) software mandates and directives. These include Integrated Shipboard Network System IT-21, Cyber Risk Management Framework (RMF), and Navy Marine Corps Intranet (NMCI). All Fleet released software must comply with DoN and DoD software directives to permit execution on ship Local Area Networks or NMCI. ***FY 2018 Plans:*** Complete test and evaluation of WASP major v4.0 to support an FY19 release to the Fleet. Complete test and evaluation of multiple database updates. ***FY 2019 Base Plans:***	2.269 -	2.194 -	2.020 -	0.000 -	2.020 -

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2311 / *Stores Planning and Weaponeering Module*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Continue test and evaluation of WASP v4.1 and complete test and evaluation on multiple database updates to WASP v4.0. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease of $0.147M from FY2018 to FY2019 due to accounting for the availability of prior year execution balances.					
Title: Program Management/Systems Engineering ***Articles:*** ***Description:*** Provide program management and systems engineering support, which includes requirements definition and analysis, compliance with Naval Air Systems Command systems engineering technical review processes, acquisition documentation development, cost, schedule and performance management, and compliance with external directives. Provide travel for government personnel. ***FY 2018 Plans:*** Continue project management and systems engineering support to the WASP for future software releases to the fleet. Additional support will be required for multiple database releases. ***FY 2019 Base Plans:*** Continue project management and systems engineering support to the WASP for future software releases to the fleet. Provide continued support for multiple database releases. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease of $0.047M from FY2018 to FY2019 due to accounting for the availability of prior year execution balances.	3.037 -	3.188 -	3.141 -	0.000 -	3.141 -
Accomplishments/Planned Programs Subtotals	10.847	11.185	10.846	0.000	10.846

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

Weaponeering and Stores Planning (WASP) products, delivered annually, are developed in-house by NAVAIR consisting of Naval Air Warfare Center Aircraft Division and Naval Air Warfare Center Weapons Division engineers and support contractors. The team has migrated to a smaller government team that provides functional expertise in aircraft safety-of-flight (air-vehicle stores compatibility, weapons separation, aircraft aerodynamic flutter, ground/flight loads, authorized fuze arm times, aircraft safe escape), guided weapons employment and weapons effects against targets, with the majority of the software development conducted by various contractors. The Government, engineering, test, and support teams (test facilities, functional qualification testing and certification/accreditation test) are supplemented with contractor labor.

E. Performance Metrics

Average time to plan a flight: Threshold value is < 1 hour average time to plan a flight that includes full aircraft loadout and weapons delivery safe escape planning. Objective value is < 15 minutes average time to plan a flight that includes full aircraft loadout and weapons delivery safe escape planning. End product is a pilot's z-diagram kneeboard card.

Interoperability: Threshold value is 100% stand alone value.
Objective value is 100% stand alone value.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2311 / *Stores Planning and Weaponeering Module*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	WR	Naval Air Warfare Center Aircraft Division NAWCAD : Patuxent River, MD	0.000	0.177	Nov 2016	0.102	Nov 2017	0.100	Nov 2018	-		0.100	Continuing	Continuing	Continuing
Product Development	WR	Air Force Seek Eagle : Hill Air Force Base, UT	0.000	0.083	Mar 2017	0.085	Mar 2018	0.085	Mar 2019	-		0.085	Continuing	Continuing	Continuing
Primary Software Development	C/CPFF	DCS Corp : Alexandria, VA	0.000	0.781	Feb 2017	1.721	Feb 2018	0.000		-		0.000	0.000	2.502	2.502
Product Development (V4.X)	C/CPFF	DCS Corp : Alexandria, VA	0.000	4.500	Apr 2017	3.895	Mar 2018	5.500	Mar 2019	-		5.500	Continuing	Continuing	Continuing
		Subtotal	0.000	5.541		5.803		5.685		-		5.685	Continuing	Continuing	N/A

Remarks

The FY19 Product Development (V4.X) effort increase from FY18 is accounting for costs associated with the development of WASP V4.1 and multiple minor builds to support WASP v4.0. In FY18, the minor build costs were budgeted under the Primary Software Development line and the major build costs were budgeted under Product Development (V4.X). There is no cost increase for WASP development efforts in FY19.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation (Gov't)	WR	NAWCAD : Patuxent River, MD	0.000	1.185	Nov 2016	1.303	Nov 2017	1.190	Nov 2018	-		1.190	Continuing	Continuing	Continuing
Test & Evaluation (Contractor)	C/CPFF	DCS Corp : Alexandria, VA	0.000	1.084	Mar 2017	0.891	Mar 2018	0.830	Mar 2019	-		0.830	0.000	2.805	2.805
		Subtotal	0.000	2.269		2.194		2.020		-		2.020	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2311 / *Stores Planning and Weaponeering Module*

Management Services ($ in Millions)

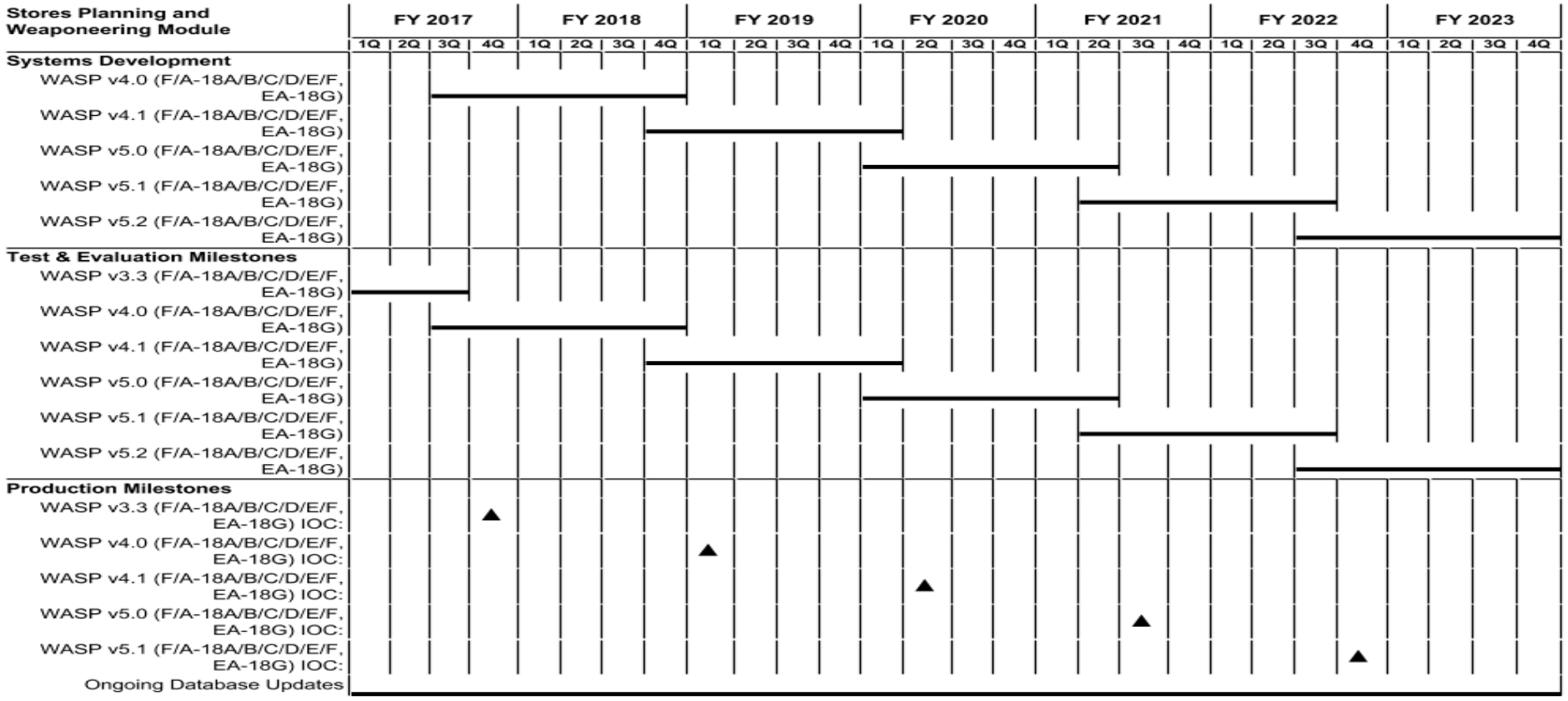
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering and Program Support	WR	NAWCAD : Patuxent River, MD	0.000	1.003	Nov 2016	1.200	Nov 2017	1.219	Nov 2018	-		1.219	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	Ausley : Lexington Park, MD	0.000	0.441	May 2017	0.450	May 2018	0.307	May 2019	-		0.307	0.000	1.198	1.341
Government Engineering Support: Guided Weapons	WR	Naval Air Warfare Center Weapons Division NAWCWD : China Lake, CA	0.000	0.023	Jan 2017	0.223	Jan 2018	0.250	Nov 2018	-		0.250	Continuing	Continuing	Continuing
Systems Engineering Support	C/CPFF	Wyle : Huntsville, AL	0.000	1.500	Jan 2017	1.200	Jan 2018	1.250	Mar 2019	-		1.250	0.000	3.950	3.950
Govt Engineering Support: Mission Planning Environment Integration	WR	NAWCWD : Point Mugu, CA	0.000	0.060	Nov 2016	0.100	Nov 2017	0.100	Nov 2018	-		0.100	Continuing	Continuing	Continuing
Travel	Various	NAVAIR : Patuxent River, MD	0.000	0.010	Nov 2016	0.015	Nov 2017	0.015	Nov 2018	-		0.015	Continuing	Continuing	Continuing
		Subtotal	0.000	3.037		3.188		3.141		-		3.141	Continuing	Continuing	N/A

	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	10.847		11.185		10.846		-		10.846	Continuing	Continuing	N/A

Remarks

Prior to FY17, PU 2311 was budgeted under PE 0604215N.

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2311 / *Stores Planning and Weaponeering Module*



2019DON - 0605215N - 2311

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2311 / *Stores Planning and Weaponeering Module*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Stores Planning and Weaponeering Module				
Systems Development: WASP v4.0 (F/A-18A/B/C/D/E/F, EA-18G):	3	2017	4	2018
Systems Development: WASP v4.1 (F/A-18A/B/C/D/E/F, EA-18G):	4	2018	1	2020
Systems Development: WASP v5.0 (F/A-18A/B/C/D/E/F, EA-18G):	1	2020	2	2021
Systems Development: WASP v5.1 (F/A-18A/B/C/D/E/F, EA-18G):	2	2021	3	2022
Systems Development: WASP v5.2 (F/A-18A/B/C/D/E/F, EA-18G):	3	2022	4	2023
Test & Evaluation Milestones: WASP v3.3 (F/A-18A/B/C/D/E/F, EA-18G):	1	2017	3	2017
Test & Evaluation Milestones: WASP v4.0 (F/A-18A/B/C/D/E/F, EA-18G):	3	2017	4	2018
Test & Evaluation Milestones: WASP v4.1 (F/A-18A/B/C/D/E/F, EA-18G):	4	2018	1	2020
Test & Evaluation Milestones: WASP v5.0 (F/A-18A/B/C/D/E/F, EA-18G):	1	2020	2	2021
Test & Evaluation Milestones: WASP v5.1 (F/A-18A/B/C/D/E/F, EA-18G):	2	2021	3	2022
Test & Evaluation Milestones: WASP v5.2 (F/A-18A/B/C/D/E/F, EA-18G):	3	2022	4	2023
Production Milestones: WASP v3.3 (F/A-18A/B/C/D/E/F, EA-18G) IOC::	4	2017	4	2017
Production Milestones: WASP v4.0 (F/A-18A/B/C/D/E/F, EA-18G) IOC::	1	2019	1	2019
Production Milestones: WASP v4.1 (F/A-18A/B/C/D/E/F, EA-18G) IOC::	2	2020	2	2020
Production Milestones: WASP v5.0 (F/A-18A/B/C/D/E/F, EA-18G) IOC::	3	2021	3	2021
Production Milestones: WASP v5.1 (F/A-18A/B/C/D/E/F, EA-18G) IOC::	4	2022	4	2022
Production Milestones: Ongoing Database Updates:	1	2017	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605215N / *(U)Mission Planning*	Project (Number/Name) 2312 / *Common Helicopters*	

COST ($ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2312: *Common Helicopters*	0.000	0.614	0.665	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.279
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Prior to FY17, Common Helicopters (PU 2312) was budgeted under Standards Development (PE 0604215N). FY19 and out Common Helicopters (PU 2312) was consolidated under PU 2213 Mission Planning in this PE.

A. Mission Description and Budget Item Justification

Automated mission planning systems have focused on developing planning capabilities for fixed-wing aircraft, while the unique planning requirements for helicopters are not yet fully addressed. The unique and enhanced automated mission planning requirements that must be developed and implemented for helicopters include: data loading, an enhanced route editor (serpentine routing, hover), manipulation of higher fidelity (smaller scale) maps and imagery, enhanced performance tools (performance in and out of ground effect, performance degradation due to atmospheric conditions & elevation), and enhanced fidelity of landing zone, target zone, and threat analyses. The following type/model/series aircraft are supported by this PU: AH-1W/Z, UH-1N/Y, H-46/E, H-53D/E, H-60H/R/S and V-22. Common helicopter functionality will be developed for implementation in Joint Mission Planning System (JMPS).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Product Development	0.614	0.400	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: Development of Common Helicopter functionality and integration with JMPS Framework Versions and 64-bit Operating System. Common Components include Common Mission Data Loader (CMDL), Weapon Employment Zone Overlays Tool (WEZOT) and Point Selection Tool (PST).					
FY 2018 Plans: Continue the development of Common Mission Data Loader (CMDL), Point Selection Tool (PST), and Weapon Employment Zone Overlays Tool (WEZOT).					
FY 2019 Base Plans: N/A					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement:					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2312 / *Common Helicopters*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Decrease of $0.400M from FY2018 to FY2019 due to consolidating Common Helicopter efforts under PU 2213 Mission Planning.					
Title: Test and Evaluation ***Articles:*** ***Description:*** Integration and test of Common Helicopter functionality with JMPS Framework Versions and 64-bit Operating System. Common Components include Common Mission Data Loader (CMDL), Weapon Employment Zone Overlays Tool (WEZOT) and Point Selection Tool (PST). ***FY 2018 Plans:*** Provide integration and test support for Common Mission Data Loader (CMDL), Point Selection Tool (PST), and Weapon Employment Zone Overlays Tool (WEZOT) for the 64-bit transition to JMPS framework 1.5.x. ***FY 2019 Base Plans:*** N/A ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** Decrease of $0.265M from FY2018 to FY2019 due to consolidating Common Helicopter efforts under PU 2213 Mission Planning.	0.000 -	0.265 -	0.000 -	0.000 -	0.000 -
Accomplishments/Planned Programs Subtotals	0.614	0.665	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not applicable.

E. Performance Metrics

Export Mission Data to Data Transfer Device: Threshold value is < 12 minutes to transfer navigation, communication, weapon system initialization settings and intelligence data. Interoperability: Threshold value is 100% of top level Information Exchange Requirements (IERs) designated critical will be satisfied. Objective value is 100% of top level IERs will be satisfied.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605215N / *(U)Mission Planning*	Project (Number/Name) 2312 / *Common Helicopters*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Software Development	C/CPFF	Joint Technology Engineering : Valparaiso, FL	0.000	0.614	Apr 2017	0.400	Mar 2018	0.000		-		0.000	0.000	1.014	1.014
		Subtotal	0.000	0.614		0.400		0.000		-		0.000	0.000	1.014	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Integration and Test	WR	NAWCWD : Point Mugu, CA	0.000	0.000		0.265	Nov 2017	0.000		-		0.000	0.000	0.265	-
		Subtotal	0.000	0.000		0.265		0.000		-		0.000	0.000	0.265	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.614		0.665		0.000		-		0.000	0.000	1.279	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2312 / *Common Helicopters*

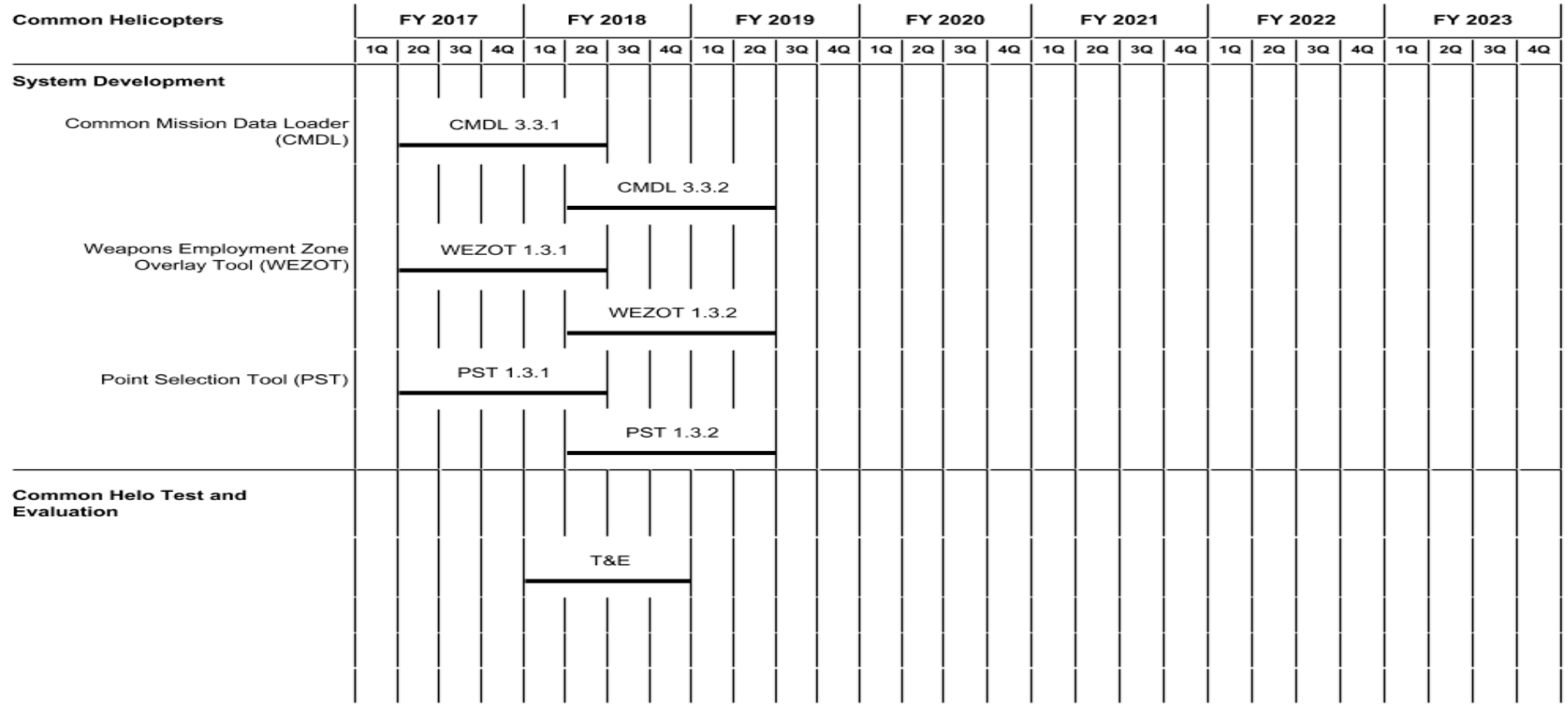


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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	**R-1 Program Element (Number/Name)** PE 0605215N / *(U)Mission Planning*	**Project (Number/Name)** 2312 / *Common Helicopters*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Common Helicopters				
System Development: Common Mission Data Loader (CMDL): CMDL 3.3.1	2	2017	2	2018
System Development: Common Mission Data Loader (CMDL): CMDL 3.3.2	2	2018	2	2019
System Development: Weapons Employment Zone Overlay Tool (WEZOT): WEZOT 1.3.1	2	2017	2	2018
System Development: Weapons Employment Zone Overlay Tool (WEZOT): WEZOT 1.3.2	2	2018	2	2019
System Development: Point Selection Tool (PST): PST 1.3.1	2	2017	2	2018
System Development: Point Selection Tool (PST): PST 1.3.2	2	2018	2	2019
Common Helo Test and Evaluation:	1	2018	4	2018