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 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0204136N *I F/A-18 Squadrons*							
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	5,041.259	169.473	224.470	193.086	-	193.086	170.095	116.368	84.070	87.836	Continuing	Continuing
1662: *F/A-18 Improvement*	4,293.409	62.601	69.759	102.938	-	102.938	72.980	77.428	75.111	78.695	Continuing	Continuing
2065: *F/A-18 Radar Upgrade*	726.534	10.844	8.018	7.002	-	7.002	8.773	8.782	8.959	9.141	Continuing	Continuing
2069: *F/A-18 Infrared Search and Track (IRST)*	0.000	94.094	86.993	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	181.087
2071: *F/A-18 Block III*	0.000	0.000	59.700	83.146	-	83.146	88.342	30.158	0.000	0.000	0.000	261.346
9999: *Congressional Adds*	21.316	1.934	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	23.250
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** P510												

A. Mission Description and Budget Item Justification

The F/A-18 is required to perform multiple missions. Capabilities of the F/A-18 weapon system and ancillary equipment can be upgraded to accommodate and incorporate new or enhanced weapons as well as advances in technology to respond effectively to emerging future threats. Continued F/A-18 E/F and EA-18G "Flight Plan" spiral capability development is critical to the baseline of the Super Hornet next generation mission system capability and maintaining tactical relevance in support of Navy Aviation Plan 2030. Development continues for a platform solution to threat Advanced Electronic Attack and Counter-Electronic Attack (CEA). F/A-18 solutions to CEA include upgrades to existing sensors such as F/A-18 Radar Upgrade, Infrared Search and Track Block I/II, and development of a fused picture between these sensors. Additionally, continued advanced development engineering for improvements in reliability and maintainability are required to ensure maximum benefit is achieved through reduced cost of ownership and to provide enhanced availability.

Future integrated Carrier Air Wing CONOPS demand certain changes to the base line Block II Super Hornet. In response, the Block III Super Hornet is submitted. While none of the changes to the aircraft are considered revolutionary, the combined impact to the capability of the aircraft and its contribution to the Airwing are significant. The initial F/A-18 Block III concept includes low risk changes which can be incorporated in the near term with a combination of forward fit production line incorporation and via retrofit modifications to the aircraft already planned as part of the Service Life Modification (SLM) Plan. The FY19 budget request funds Non-Recurring (NRE) for these ECPs.

Congressional add support of an engine noise reduction study. The University of Mississippi (UofM)/National Center for Physical Acoustics (NCPA) is conducting the study.

Funding is added for transition ONR FNC Strike Accelerator developed target (AITR) algorithms which is part of Integrated Capabilities Package 3 (ICP-3). ICP-3 bring advanced capability required to keep the aircraft relevant and meet current and future threats.

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy	Date: February 2018
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Funding is added for Naval Aviation Physiological Episode (PE) mitigation and root cause investigation in aircraft.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	189.125	224.470	286.160	-	286.160
Current President's Budget	169.473	224.470	193.086	-	193.086
Total Adjustments	-19.652	0.000	-93.074	-	-93.074
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-4.920	0.000			
• Program Adjustments	0.000	0.000	19.700	-	19.700
• Rate/Misc Adjustments	0.000	0.000	-112.774	-	-112.774
• Congressional General Reductions Adjustments	-0.032	-	-	-	-
• Congressional Directed Reductions Adjustments	-16.700	-	-	-	-
• Congressional Add Adjustments	2.000	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2017	FY 2018
Project: 9999: *Congressional Adds*		
Congressional Add: *Noise Reduction*	1.934	0.000
Congressional Add Subtotals for Project: 9999	1.934	0.000
Congressional Add Totals for all Projects	1.934	0.000

Change Summary Explanation

Technical:
1662: ICPS AITR capability funding is included with the 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 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0204136N *I F/A-18 Squadrons*

Physiological Episode Mitigation funding is included with the budget.

2065: Not Applicable

2069: Not Applicable

2071: Block III request for F/A-18E/F capability upgrades Non-recurring Engineering (NRE) funding is included with the budget.

Schedule:
1662: MSI program schedule was changed to reflect program execution.

Physiological Episode Mitigation was added to reflect program execution.

2065: Not Applicable

2069: Not Applicable

2071: Block III request for F/A-18E/F capability upgrades Non-recurring Engineering (NRE) funding is included with the budget.

The FY 2019 funding request was reduced by $3.086 million to reflect the Department of Navy's effort to support the Office of Management and Budget directed reforms for Efficiency and Effectiveness that include a lean, accountable, more efficient government.

The FY2019 funding request was reduced by $108.7M due to a transfer to Program Element 0604014N F/A-18 Infrared Search and Track (IRST) PU 2069.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 1662 / *F/A-18 Improvement*	

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
1662: *F/A-18 Improvement*	4,293.409	62.601	69.759	102.938	-	102.938	72.980	77.428	75.111	78.695	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The F/A-18 is a multi-mission strike fighter aircraft that is used in Air-to-Air, strike, surveillance, reconnaissance and tanking roles through selected use of external equipment (fuel tanks, tactical and reconnaissance pods, and various ordnance launching racks). Additional capabilities are required for interoperability in a network-centric tactical environment. In order to respond effectively to emerging future threats, F/A-18 aircraft capabilities are being expanded and upgraded to incorporate new/enhanced weapons systems and avionics including Dual Mode Weapons, Counter-Electronic Attack (CEA), Infra-red Search and Track (IRST) integrated with the Active Electronically Scanned Array (AESA) Radar to provide Narrow Band High Gain Electronic Attack and Multi-System Integration. Continued advanced development engineering and analysis of hardware/software is required to successfully optimize fleet F/A-18 weapon systems for interoperability in a network centric tactical environment (such as Naval Integrated Fire Control-Counter Air), to include: enhanced software capabilities, potential new hardware development, enhanced existing hardware, and enhanced network centric capabilities. Additionally, continued effort is needed to perform technical evaluations, modeling and simulations, investigative flight testing, enhanced software modifications based on reported fleet deficiencies and the development and testing of design modifications to address obsolescence issues with the F/A-18 weapon system and ancillary equipment. This funding line continues F/A-18E/F "Flight Plan" spiral capability development, to include Multi-System Integration and further Flight Plan Engineering and System Configuration Set development and integration. This budget continues funding for F/A-18A-F Test Wing Maintenance support and funds development efforts needed for integration of air launched laser guided rockets on F/A-18 A+/C/D.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Multi-System Integration	31.089	49.148	39.891	0.000	39.891
Articles:	-	-	-	-	-
Description: Multi-System Integration migrates from the previous Multi-Sensor Integration Phased approach and allows for insertion of new technologies and requirements to keep pace with rapidly evolving warfighter demands. Also, includes a naming convention change in regards to System Configuration Set (SCS) builds 27 and 29. Initially all "X" labeled builds to include Block I Super Hornets, now 27 and 29 will no longer include Super Hornets thus going back to a "C" SCS label designation to include only legacy A-D aircraft.					
FY 2018 Plans: Flight Plan Multi-System Integration (MSI) of capabilities continues through mission computer, Joint Mission Planning System Unique Planning Component (JMPS UPC), and weapon system software System Configuration Set (SCS) updates associated with each incremental Block (H build) software update to include Software Modernization and Cyber. Advances in Super Hornet Air and Surface Warfare will continue with ongoing integration of weapons and sensors into a Common Tactical Picture (CTP), Display Improvements					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
to enhance air-to-air and air-to-surface situational awareness and aircrew decision superiority, and Counter Electronic Attack enhancements to improve survivability and lethality. Increased engineering efforts for integration of active and passive kill chain capabilities and sensors associated with Flight Plan Naval Integrated Fire Control-Counter Air (NIFC-CA), Over the Horizon Anti-Surface Warfare (OASuW) and Strike Accelerator Future Naval Capability (FNC) Target Identification transition efforts continues. MSI algorithm and sensor developmental efforts also increase at test activities, including ongoing modeling and simulation upgrades such as Net Enabled Weapon Controller Interface Model interoperability software and equipment, and Live Virtual Constructive developmental efforts. Increased Test and Evaluation funding in FY18 provides funding to Commander Operational Test Forces (COTF) for MSI Operational Test (OT). Over the Horizon Anti-Surface Warfare (OASuW) and Strike Accelerator Future Naval Capability (FNC)efforts are noted in the MSI line, and funding was provided specifically for these projects.					
FY 2019 Base Plans: Flight Plan Multi-System Integration (MSI) of capabilities continues through mission computer, Joint Mission Planning System Unique Planning Component (JMPS UPC), and weapon system software System Configuration Set (SCS) updates associated with each incremental Block (H build) software update to include Software Modernization and Cyber. Advances in Super Hornet Air and Surface Warfare will continue with ongoing integration of weapons and sensors into a Common Tactical Picture (CTP), Display Improvements to enhance air-to-air and air-to-surface situational awareness and aircrew decision superiority, and Counter Electronic Attack enhancements to improve survivability and lethality. Increased engineering efforts for integration of active and passive kill chain capabilities and sensors associated with Flight Plan Naval Integrated Fire Control-Counter Air (NIFC-CA), Over the Horizon Anti-Surface Warfare (OASuW) and Strike Accelerator Future Naval Capability (FNC) Target Identification transition efforts continues. MSI algorithm and sensor developmental efforts also increase at test activities, including ongoing modeling and simulation upgrades such as Net Enabled Weapon Controller Interface Model interoperability software and equipment, and Live Virtual Constructive developmental efforts. Increased Test and Evaluation funding in FY19 provides funding to Commander Operational Test Forces (COTF) for MSI Operational Test (OT).					
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
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
The FY 2019 funding request was reduced by $9.257 million due H14 MSI development entering OT and efforts for the next phase of MSI, labeled Common Tactical Picture (CTP) Phase I, beginning its ramp up effort for inclusion in H18.					
Title: Flight Plan Engineering / System Configuration Set Development and Integration	25.706	18.011	32.397	0.000	32.397
Articles:	-	-	-	-	-
Description: Continue F/A-18 E/F and EA-18G "Flight Plan" spiral capability development is critical to the baseline of the Super Hornet next generation mission system capability. Funding will support the development, test and integration efforts required to maintain tactical relevance in support of Navy Aviation Plan 2030. ***FY 2018 Plans:*** Continue Flight Plan Engineering efforts to include F/A-18E/F improvements necessary for Super Hornet relevance and tactical supremacy, Software Modernization and Cyber, Navy Integrated Fire Control-Counter Air system configuration set requirements to support Navy Integrated Air and Missile Defense capability requirements and enhance F/A-18 Cooperative Engagement Capability. Funding supports (hardware and software), test and integration efforts for Flight Plan requirements such as Stationary Target Recognition, Maritime Multiple Target Track and Engagement, Multi-Level Security, Strike Accelerator and Advanced Tactical Data Link; Display Improvements for enhanced sensor integration; Tactical Targeting Network Technology internet protocol capability; Flight Path Control (Magic Carpet); Advanced Targeting Forward Looking Infrared modernization and obsolescence mitigation efforts; and Precision Approach and Landing Capability, in support of Integrated Capability Package 2 and 3. ***FY 2019 Base Plans:*** Continue Flight Plan Engineering efforts to include F/A-18E/F improvements necessary for Super Hornet relevance and tactical supremacy, Software Modernization and Cyber, Navy Integrated Fire Control-Counter Air system configuration set requirements to support Navy Integrated Air and Missile Defense capability requirements and enhance F/A-18 Cooperative Engagement Capability. Increase in FY19 is due to incorporating AESA Multiple Target Tracking Algorithm & Tracking Confirmation, and transitions ONR FNC Strike Accelerator developed target recognition (AiTR) algorithms. Funding supports (hardware and software), test and integration efforts for Flight Plan requirements such as Stationary Target Recognition, Maritime Multiple Target Track and Engagement, Multi-Level Security, Strike Accelerator and Advanced Tactical Data Link; Display Improvements for enhanced sensor integration; Tactical Targeting Network Technology internet protocol capability; Flight Path Control (Magic Carpet); Advanced Targeting					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Forward Looking Infrared modernization and obsolescence mitigation efforts; and Precision Approach and Landing Capability, in support of Integrated Capability Package 2 and 3. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY19 funding request was increased by $14.386 million for transition of ONR FNC Strike Accelerator developed target (AITR) algorithms which is part of Integrated Capabilities Package 3 (ICP-3). ICP-3 bring advanced capability required to keep the aircraft relevant and meet current and future threats.					
Title: Physiological Episode Mitigation	0.000	0.000	28.000	0.000	28.000
Articles:	-	-	-	-	-
Description: Funding provides for design, development, integration and test of platform improvements for F/A-18A-F and EA-18G Weapon Systems to include Naval Aviation Physiological Episode (PE) mitigation and root cause investigation in aircraft (F/A-18A-F and EA-18G). ***FY 2018 Plans:*** N/A ***FY 2019 Base Plans:*** Continue studies & development efforts for platform improvements for F/A-18A-F and EA-18G Weapon Systems, including F/A-18 and EA-18G PE mitigation and root cause investigation. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The FY 2019 funding request was increased by $28 million due to platform improvements to the F/A-18 and EA-18G for PE mitigation and root cause investigation.					
Title: Test Wing Maintenance Conversion	4.806	2.500	2.550	0.000	2.550
Articles:	-	-	-	-	-
Description: Funding supports maintenance of aircraft at NAVAIR Test Wing used to support Program Office objectives. ***FY 2018 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Perform aircraft maintenance on Test Wing aircraft. ***FY 2019 Base Plans:*** Perform aircraft maintenance on Test Wing aircraft. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** FY19 funding request was increased by $0.05 million for increased support for aircraft maintenance of F/A-18 test wing aircraft.					
Title: F/A-18 Obsolescence Redesign	1.000	0.100	0.100	0.000	0.100
Articles:	-	-	-	-	-
Description: Develop and test modifications to address obsolescence issues. ***FY 2018 Plans:*** Develop and test design modifications to hardware components and software systems in response to F/A-18 weapon system and ancillary equipment obsolescence issues. ***FY 2019 Base Plans:*** Develop and test design modifications to hardware components and software systems in response to F/A-18 weapon system and ancillary equipment obsolescence issues. ***FY 2019 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	62.601	69.759	102.938	0.000	102.938

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• APN/0525: *F-18 SERIES*	999.424	943.661	1,213.482	-	1,213.482	1,350.530	1,364.484	1,360.496	1,714.989	7,939.984	25,104.766
• RDTEN/3063: *EA-18G DEVELOPMENT*	100.825	173.488	147.419	-	147.419	159.472	159.966	129.280	108.238	Continuing	Continuing
• APN/0145: *FA-18E/F*	1,146.912	1,200.146	1,990.524	-	1,990.524	1,929.651	1,948.066	1,731.992	1,663.687	0.000	55,476.794
• APN/0145C: *FA-18E/F*	0.000	52.971	58.799	-	58.799	62.499	54.828	41.150	0.000	0.000	270.247

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

Line Item	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

Remarks

D. Acquisition Strategy

The F/A-18 Improvement program consists of extensive spiral development efforts mapped out in the capability-based approach F/A-18 E/F "Flight Plan." These efforts are critical to the baseline of the Super Hornet next generation mission system capability and maintaining tactical relevance in support of Navy Aviation Plan 2030. The major programs within the F/A-18 Improvement project are based on six Weapon System Capabilities: Net Centric Operations/Battle Space Management, Sensor Integration, Air to Ground and Maritime Attack, and Air to Air Attack. The major efforts included in this project are: Dual Mode Weapons integration; Multi-System Integration; continued advanced development and F/A-18E/F Flight Plan engineering and analysis; continued enhanced software capabilities development; and engineering support to perform technical evaluations, modeling and simulations, and investigative flight testing.

- Multi-System Integration. Multi-System Integration development is provided on a sole source cost plus fixed fee contract on a Research and Development Basic Ordering Agreement to Boeing.

E. Performance Metrics

Execute the system engineering process for software delivery and support the design, development, integration, and sensor fusion of the contributing systems for MSI capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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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
Multi System Integration - Develop Sensor Integration	C/IDIQ	Various : Various	1.500	8.465	Feb 2017	15.157	Feb 2018	17.387	Feb 2019	-		17.387	Continuing	Continuing	Continuing
Multi-System Integration Development Support	WR	NAWCWD : China Lake, CA	0.000	13.500	Dec 2016	14.953	Dec 2017	17.895	Dec 2018	-		17.895	0.000	46.348	-
Multi-System Integration Development Support	WR	NAWCAD : Pax River, MD	0.000	5.000	Dec 2016	7.159	Dec 2017	10.508	Dec 2018	-		10.508	0.000	22.667	-
Physiological Epidsode Mitigation- Development	TBD	Various : Various	0.000	0.000		0.000		24.500	Jan 2019	-		24.500	0.000	24.500	24.500
Flight Plan / PALC(WAAS)	C/CPFF	Boeing : St. Louis, MO	3.650	3.664	Jul 2017	3.188	Aug 2018	2.451	Dec 2018	-		2.451	0.000	12.953	12.953
Flight Plan/SCS Development	WR	NAWCAD : Pax River, MD	6.151	5.496	Dec 2016	1.000	Dec 2017	1.020	Dec 2018	-		1.020	0.000	13.667	-
Flight Plan/SCS Development (Magic Carpet)	C/CPIF	Boeing : St. Louis, MO	7.433	9.264	Dec 2016	4.500	Dec 2017	4.000	Dec 2018	-		4.000	0.000	25.197	25.197
Flight Plan/SCS Development	Various	DMEA : Various	0.000	0.000		4.600	Dec 2017	2.193	Dec 2018	-		2.193	0.000	6.793	-
ATFLIR Modernization	TBD	Various : Various	0.000	0.740	Jul 2017	0.000		0.100	Dec 2018	-		0.100	Continuing	Continuing	Continuing
Prior Year Prod Dev cost no longer funded in FYDP	Various	Various : Various	774.426	0.000		0.000		0.000		-		0.000	0.000	774.426	-
		Subtotal	793.160	46.129		50.557		80.054		-		80.054	Continuing	Continuing	N/A

Remarks

FY19 Multi-System Integration development efforts increased due to Strike Accelerator requirements.

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
Multi-System Integration Development Support	WR	NSMA : Arlington, VA	4.600	2.300	Mar 2017	1.679	Mar 2018	1.713	Mar 2019	-		1.713	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
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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
Physiological Epidsode Mitigation- Support	Various	Various : Various	0.000	0.000		4.100	Feb 2018	2.500	Dec 2018	-		2.500	6.000	12.600	-
Flight Plan/System Configuration Set Development & Integration	WR	NAWCAD : Pax River, MD	3.063	2.714	Nov 2016	0.350	Nov 2017	0.307	Nov 2018	-		0.307	Continuing	Continuing	Continuing
ATFLIR Modernization - Development Support	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		0.050	Nov 2018	-		0.050	Continuing	Continuing	Continuing
Obsolescence Redesign	Various	Various : Various	0.900	1.000	Jun 2017	0.100	Jun 2018	0.100	Jun 2019	-		0.100	Continuing	Continuing	Continuing
Prior Year Support costs no longer funded in FYDP	Various	Various : Various	3,106.545	0.000		0.000		0.000		-		0.000	0.000	3,106.545	-
		Subtotal	3,115.108	6.014		6.229		4.670		-		4.670	Continuing	Continuing	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
Multi-System Integration	WR	OPTEVFOR : Norfolk, VA	1.461	0.000		5.100	Dec 2017	10.102	Dec 2018	-		10.102	Continuing	Continuing	Continuing
Physiological Epidsode Mitigation- Test & Evaluation	WR	NMRC : Silver Spring, MD	0.000	0.200	Sep 2017	1.000	Jan 2018	1.000	Dec 2018	-		1.000	1.000	3.200	-
Flight Plan/SCS Test & Evaluation	WR	NAWCAD : Pax River, MD	1.000	1.000	Dec 2016	0.000		0.000		-		0.000	0.000	2.000	-
ATFLIR Modernization - Developmental Test	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		0.100	Nov 2018	-		0.100	Continuing	Continuing	Continuing
Prior Year T&E costs no longer funded in FYDP	Various	Various : Various	192.414	0.000		0.000		0.000		-		0.000	0.000	192.414	-
		Subtotal	194.875	1.200		6.100		11.202		-		11.202	Continuing	Continuing	N/A

Remarks

MSI increase from FY18 to FY19 is due operational test. Start of H14 (MSI large portion) operational test taking place in FY19

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 1662 / *F/A-18 Improvement*	

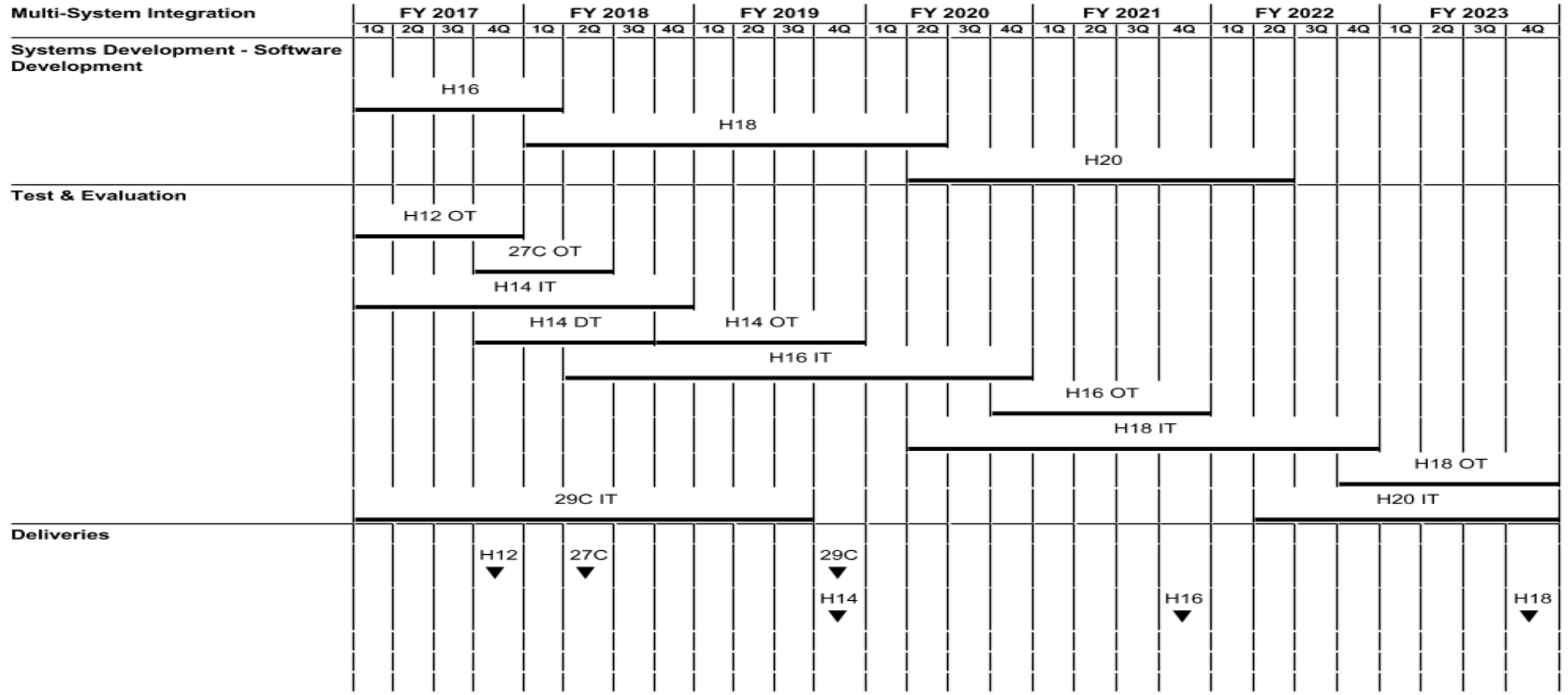
Management Services ($ in Millions)

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 Mgmt Support - MISC	Various	NAWCAD : Pax River, MD	16.305	0.659	Dec 2016	0.659	Dec 2017	0.672	Dec 2018	-		0.672	Continuing	Continuing	Continuing
Seaport CSS - Program Management Support	C/CPFF	Wyle Lab : Pax River, MD	24.766	2.626	Dec 2016	2.603	Dec 2017	2.655	Dec 2018	-		2.655	0.000	32.650	32.650
Travel	Various	NAVAIR : Pax River, MD	5.423	0.250	Nov 2016	0.250	Nov 2017	0.255	Dec 2018	-		0.255	Continuing	Continuing	Continuing
Test Wing Maintenance Conversion	WR	NAWCAD : Pax River, MD	32.580	2.403	Dec 2016	1.250	Dec 2017	1.275	Dec 2018	-		1.275	Continuing	Continuing	Continuing
Test Wing Maintenance Conversion	WR	NAWCWD : China Lake, CA	33.506	2.403	Dec 2016	1.250	Dec 2017	1.275	Dec 2018	-		1.275	Continuing	Continuing	Continuing
Flight Plan / System Configuration Set Development & Integration	WR	NAWCAD : Pax River, MD	6.350	0.459	Dec 2016	0.431	Dec 2017	0.440	Dec 2018	-		0.440	Continuing	Continuing	Continuing
Flight Plan / System Configuration Set Development & Integration	WR	NAWCWD : China Lake, CA	6.350	0.458	Dec 2016	0.430	Dec 2017	0.440	Dec 2018	-		0.440	Continuing	Continuing	Continuing
Prior Year Mgmt costs no longer funded in FYDP	Various	Various : Various	64.986	0.000		0.000		0.000		-		0.000	0.000	64.986	-
		Subtotal	190.266	9.258		6.873		7.012		-		7.012	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	4,293.409	62.601		69.759		102.938		-		102.938	Continuing	Continuing	N/A

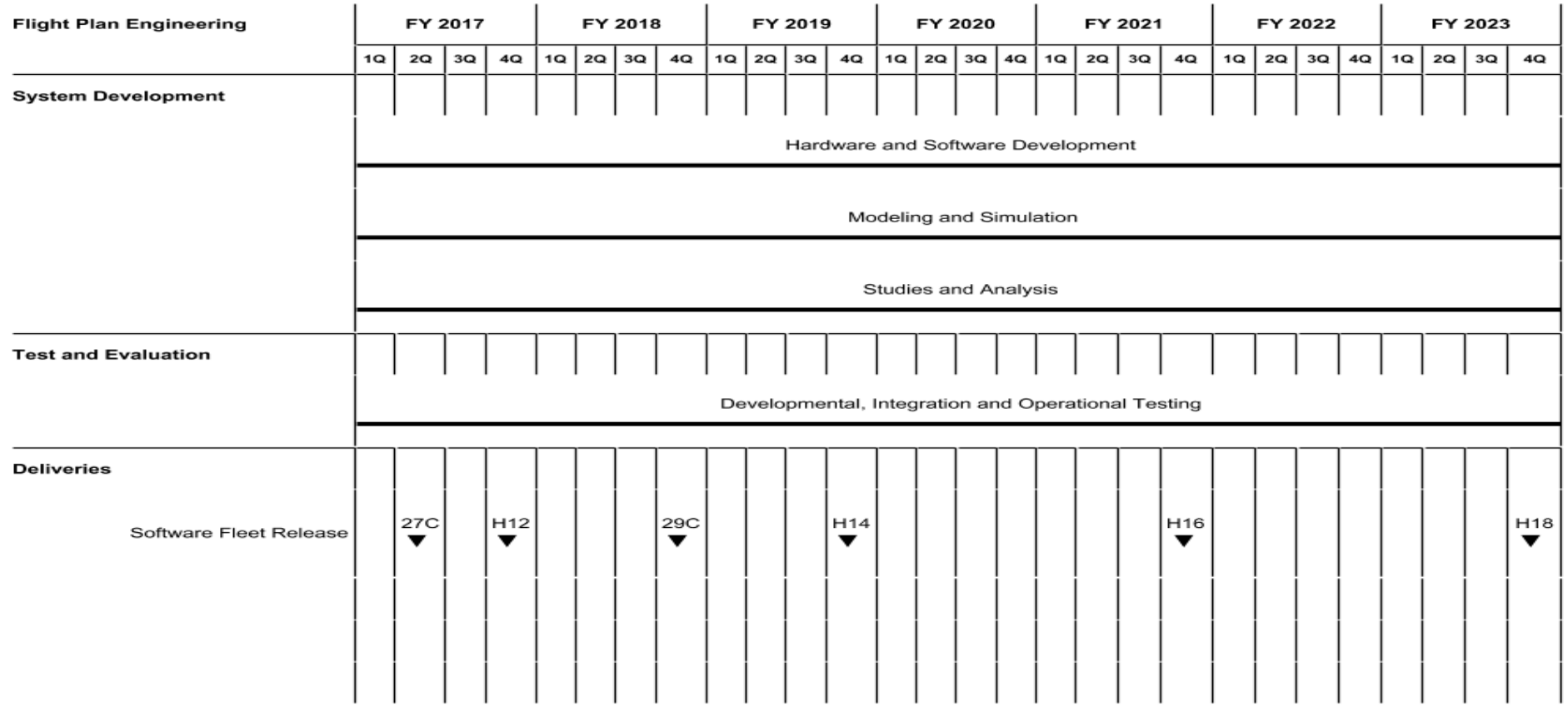
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*



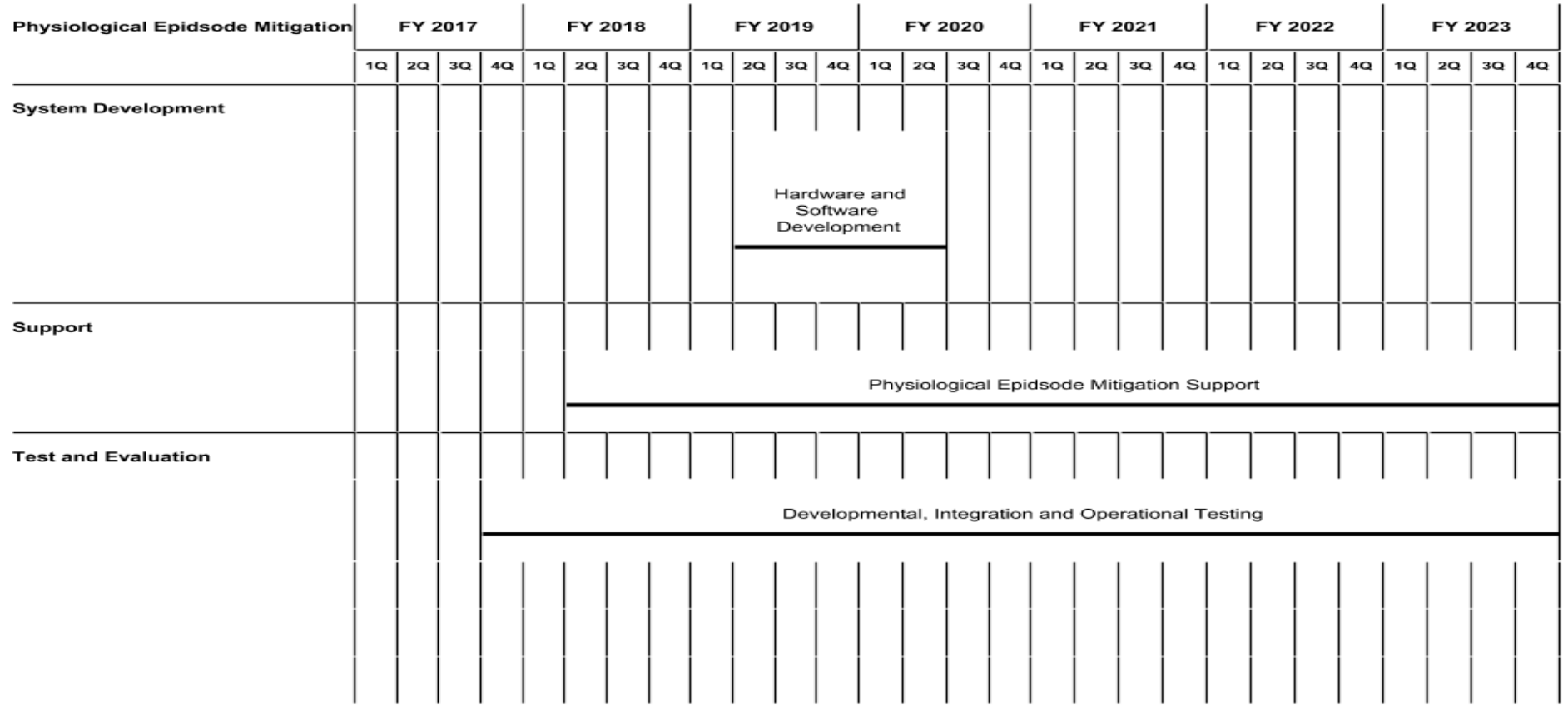
2019PB - 0204136N - 1662

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*



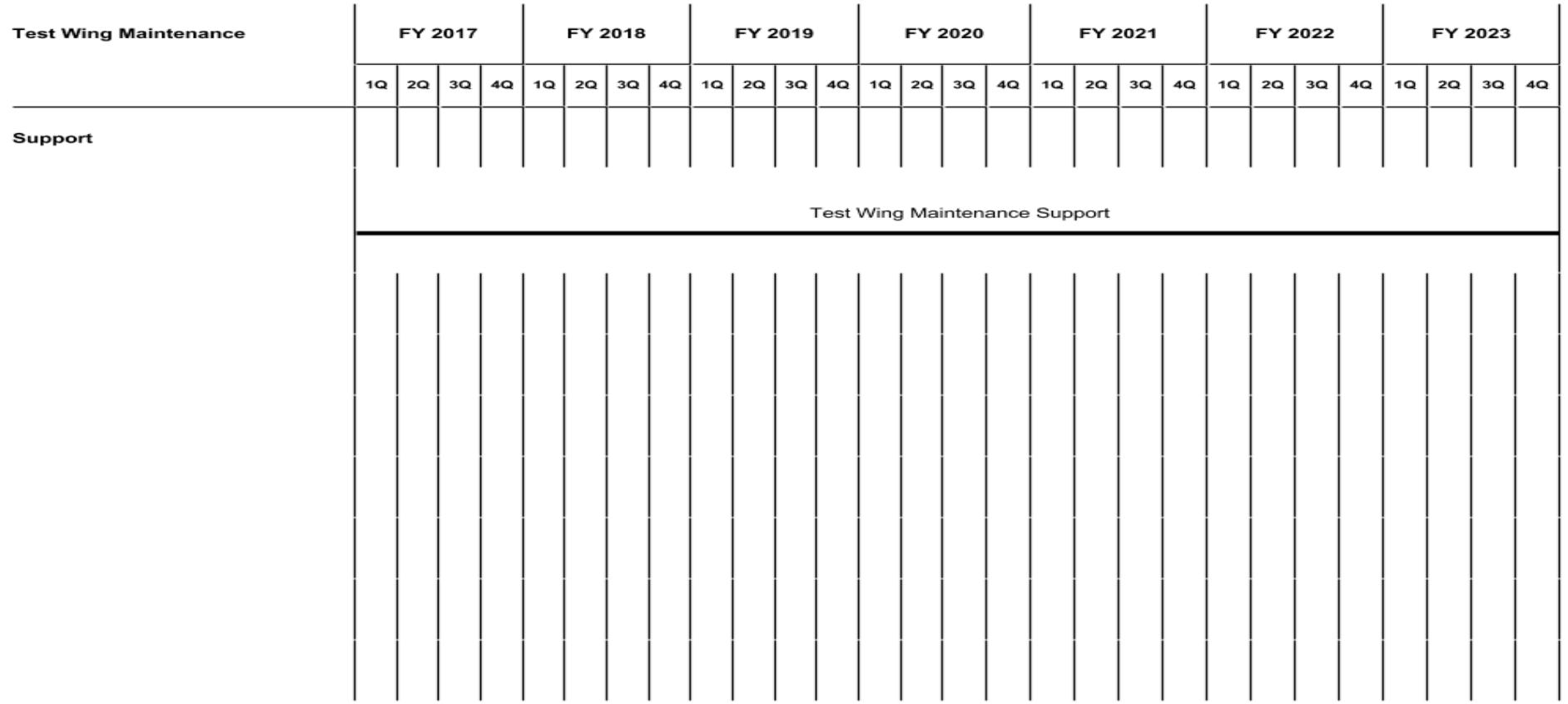
2019PB - 0204136N - 1662

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*



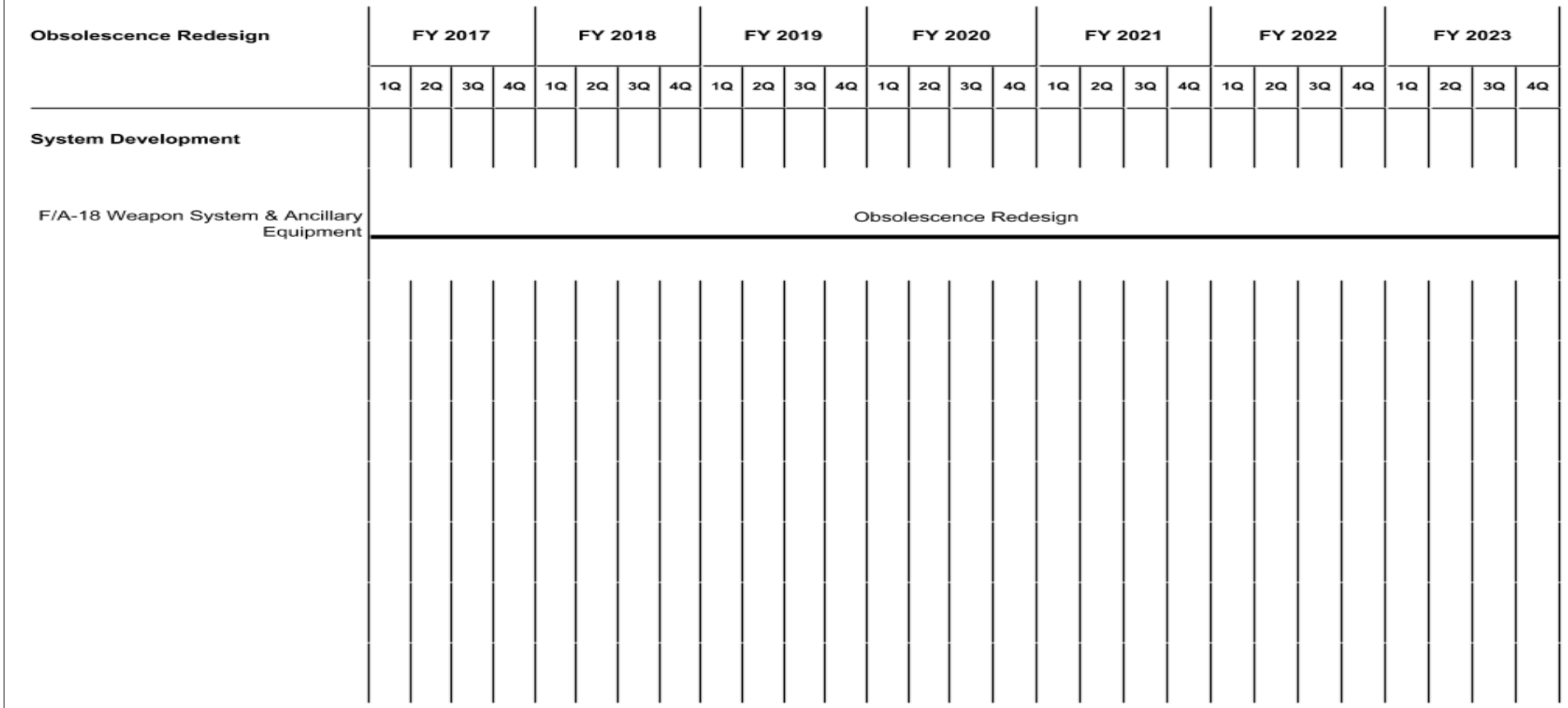
2019PB - 0204136N - 1662

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*



2019PB - 0204136N - 1662

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*



2019PB - 0204136N - 1662

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Multi-System Integration				
Systems Development - Software Development: H16 Software Development	1	2017	1	2018
Systems Development - Software Development: H18 Software Development	1	2018	2	2020
Systems Development - Software Development: H20 Software Development	2	2020	2	2022
Test & Evaluation: H12 Operational Testing	1	2017	4	2017
Test & Evaluation: 27C Operational Testing	4	2017	2	2018
Test & Evaluation: H14 Integration Testing	1	2017	4	2018
Test & Evaluation: H14 Developmental Testing	4	2017	3	2018
Test & Evaluation: H14 Operational Testing	4	2018	4	2019
Test & Evaluation: H16 Integration Testing	2	2018	4	2020
Test & Evaluation: H16 Operational Testing	4	2020	4	2021
Test & Evaluation: H18 Integration Testing	2	2020	4	2022
Test & Evaluation: H18 Operational Testing	4	2022	4	2023
Test & Evaluation: H20 Integration Testing	2	2022	4	2023
Test & Evaluation: 29C Integration Testing	1	2017	3	2019
Deliveries: H12 Fleet Release	4	2017	4	2017
Deliveries: 27C Fleet Release	2	2018	2	2018
Deliveries: 29C Fleet Release	4	2019	4	2019
Deliveries: H14 Fleet Release	4	2019	4	2019
Deliveries: H16 Fleet Release	4	2021	4	2021
Deliveries: H18 Fleet Release	4	2023	4	2023
Flight Plan Engineering				
System Development: Hardware and Software Development	1	2017	4	2023

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 1662 / *F/A-18 Improvement*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
System Development: Modeling and Simulation	1	2017	4	2023
System Development: Studies and Analysis	1	2017	4	2023
Test and Evaluation: Developmental, Integration and Operational Testing	1	2017	4	2023
Deliveries: Software Fleet Release: H12 Fleet Release	4	2017	4	2017
Deliveries: Software Fleet Release: 27C Fleet Release	2	2017	2	2017
Deliveries: Software Fleet Release: 29C Fleet Release	4	2018	4	2018
Deliveries: Software Fleet Release: H14 Fleet Release	4	2019	4	2019
Deliveries: Software Fleet Release: H16 Fleet Release	4	2021	4	2021
Deliveries: Software Fleet Release: H18 Fleet Release	4	2023	4	2023
Physiological Epidsode Mitigation				
System Development: Hardware and Software Development	2	2019	2	2020
Support: Physiological Epidsode Mitigation Support	2	2018	4	2023
Test and Evaluation: Developmental, Integration and Operational Testing	4	2017	4	2023
Test Wing Maintenance				
Support: Test Wing Maintenance Support	1	2017	4	2023
Obsolescence Redesign				
System Development: F/A-18 Weapon System & Ancillary Equipment: Obsolescence Redesign Development & Testing	1	2017	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2065 / *F/A-18 Radar Upgrade*	

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
2065: *F/A-18 Radar Upgrade*	726.534	10.844	8.018	7.002	-	7.002	8.773	8.782	8.959	9.141	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

F/A-18 Radio Detection and Ranging (RADAR) Upgrade: The F/A-18 RADAR Upgrade, Active Electronically Scanned Array (AESA) development program, which began in FY 1999, is the last of three pre-planned upgrades to the F/A-18 Type/Model/Series RADAR. The AESA system corrects operational test deficiencies noted in the AN/APG-73. It provides multi-target tracking, Synthetic Aperture RADAR (SAR) imagery, SAR Target Location Error (TLE), and improved spotlight map resolution. In addition, it provides greater lethality than previous F/A-18 RADARs by allowing full tactical support of existing and planned air-to-air (A/A) and air-to-ground (A/G) weapons and it significantly increases A/A and A/G detection and tracking ranges. The AESA system provides greater survivability through self-protection and standoff jamming capabilities, while its greater range allows for reduced detection by enemy RADAR. This budget continues spiral capability development of AESA with increased efforts to address Phase II Operational Requirements Document requirements such as Counter-Electronic Attack(CEA) against multiple Radio Frequency Emitters, AESA Multi-Jammer Electronic Protection, Precision TLE Improvement, Monopulse and 5th/6th Channel development and Air Combat Maneuvering/Short Range Search and Track development and includes upgrades to RADAR Instrumentation, test and evaluation assets and threat assets, and upgraded modeling and simulation of both clean and Electronic Attack threat environments. Budget also supports development and testing of design modifications to address obsolescence issues with APG-65, APG-73 and APG-79 RADAR systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Distributed Targeting - CEA Software Development, Developmental Testing, Operational Testing, & Integration	9.609	5.788	6.085	0.000	6.085
Articles:	-	-	-	-	-
Description: Funding being utilized to support hardware (HW) and software (SW) capabilities development, integration and associated testing.					
FY 2018 Plans: Continue HW/SW development, integration and testing of instrumentation required to support AESA RADAR spiral capability upgrades. Funds engineering efforts associated with software development and integration of active and passive kill chain capabilities and sensors into the AESA Radar in support of CEA.					
FY 2019 Base Plans: Continue HW/SW development, integration and testing of instrumentation required to support AESA RADAR spiral capability upgrades. Funds engineering efforts associated with software development and integration of					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2065 / *F/A-18 Radar Upgrade*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
active and passive kill chain capabilities and sensors into the AESA Radar in support of CEA. H14 Operational testing and H16 Integration testing starts in FY18 and continues into FY19. ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The FY 2019 funding request was increased by $.297 million to support H16 CEA software development and integration requirements to include additional active and passive kill chain capabilities.					
Title: F/A-18 RADAR Obsolescence Redesign ***Articles:*** ***Description:*** Develop and test design modifications to address obsolescence issues. ***FY 2018 Plans:*** Develop and test design modifications to hardware components and software systems in response to F/A-18 RADAR system obsolescence issues. ***FY 2019 Base Plans:*** N/A ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The FY 2019 funding request was decreased by $1.313 million to support H16 CEA software development and integration requirements to include additional active and passive kill chain capabilities.	1.235 -	2.230 -	0.917 -	0.000 -	0.917 -
Accomplishments/Planned Programs Subtotals	10.844	8.018	7.002	0.000	7.002

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• APN/05250: *F-18 Series Mod (OSIP 002-07)*	219.347	130.400	165.683	-	165.683	191.508	96.376	52.728	120.307	90.192	2,009.004
• APN/0145: *FA-18E/F*	1,146.912	1,200.146	1,990.524	-	1,990.524	1,929.651	1,948.066	1,731.992	1,663.687	0.000	55,476.794
• APN/0145C: *FA-18E/F*	0.000	52.971	58.799	-	58.799	62.499	54.828	41.150	0.000	0.000	270.247

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2065 / *F/A-18 Radar Upgrade*

C. Other Program Funding Summary ($ in Millions)

Line Item	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

Remarks

D. Acquisition Strategy

The Active Electronically Scanned Array program continues developmental efforts following a successful Full Rate Production milestone decision, after completing a two-phase Acquisition approach during the FY1999 through FY2007 timeframe. This strategy continues utilization of reform initiatives such as: early partnering with industry; leveraging industry investment; optimizing use of Commercial Off-The Shelf software and Non-Developmental Item; using Cost as an Independent Variable; and Electronic Data Deliverables. Basic Ordering Agreement orders for Request for Proposal developments are in place for Boeing, the airframe prime manufacturer/ integrator, and Raytheon, the Radio Detection and Ranging RADAR manufacturer, for focused risk reduction and sustainment of prior developmental activities.

E. Performance Metrics

Execute the system engineering process for software delivery and support the design and development of Electronic Protection, air to air, and air to ground capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2065 / *F/A-18 Radar Upgrade*	

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
Systems Engineering	WR	NAWCAD : Pax River, MD	6.084	2.180	Nov 2016	1.915	Nov 2017	1.374	Nov 2018	-		1.374	Continuing	Continuing	Continuing
CEA - Development/ Integration Counter Electronic Attack (CEA)	Various	NSMA : Arlington, VA	77.427	5.197	Dec 2016	2.825	Dec 2017	2.333	Dec 2018	-		2.333	Continuing	Continuing	Continuing
Systems Engineering - Capabilities	WR	NAWCWD : China lake, CA	0.000	0.000		1.000	Dec 2017	1.020	Dec 2018	-		1.020	0.000	2.020	-
Hardware-Obsolescence	MIPR	DMEA : Sacramento, CA	1.210	1.165	May 2017	0.899	May 2018	0.917	May 2019	-		0.917	Continuing	Continuing	Continuing
Prior Year Prod Dev cost no longer funded in FYDP	Various	Various : Various	468.195	0.000		0.000		0.000		-		0.000	0.000	468.195	-
		Subtotal	552.916	8.542		6.639		5.644		-		5.644	Continuing	Continuing	N/A

Remarks

Systems Engineering - Capabilities: Cyber security regulations require additional measures. This funds USG personnel to conduct an independent review of RADAR software code developed by Raytheon.

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
Software Development (Instrumentation)	WR	NAWCWD : China Lake, CA	44.173	0.250	Dec 2016	0.150	Dec 2017	0.153	Dec 2018	-		0.153	Continuing	Continuing	Continuing
Chamber Support	WR	NSMA : Arlington, VA	0.000	0.000		0.500	Dec 2017	0.510	Dec 2018	-		0.510	0.000	1.010	-
Obsolescence Redesign	Various	Various : Various	0.300	0.070	May 2017	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Prior Year Support cost no longer funded in the FYDP	Various	Various : Various	2.027	0.000		0.000		0.000		-		0.000	0.000	2.027	-
		Subtotal	46.500	0.320		0.650		0.663		-		0.663	Continuing	Continuing	N/A

Remarks

Chamber Support: Funding is for (test) chamber support; supports testing of CEA and software capabilities on the RADAR.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2065 / *F/A-18 Radar Upgrade*	

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
Operational Test	WR	NAWCWD : China Lake, CA	0.000	0.300	Dec 2016	0.150	Dec 2017	0.121	Dec 2018	-		0.121	Continuing	Continuing	Continuing
AESA Radar Test Asset	C/FPIF	Raytheon : El Segundo, CA	0.000	1.103	Mar 2017	0.000		0.000		-		0.000	0.000	1.103	1.103
Prior Year T&E cost no longer funded in FYDP	Various	Various : Various	110.808	0.000		0.000		0.000		-		0.000	0.000	110.808	-
		Subtotal	110.808	1.403		0.150		0.121		-		0.121	Continuing	Continuing	N/A

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 (Seaport CSS)	C/CPFF	Wyle : Pax River, MD	8.229	0.414	Dec 2016	0.414	Dec 2017	0.422	Dec 2018	-		0.422	0.000	9.479	9.479
Contractor Engineering Support	Various	Various : Various	3.078	0.018	Dec 2016	0.018	Dec 2017	0.018	Dec 2018	-		0.018	0.000	3.132	3.132
Program Management Support	WR	NAWCAD : Pax River, MD	3.213	0.101	Dec 2016	0.101	Dec 2017	0.087	Dec 2018	-		0.087	0.800	4.302	-
Travel	Various	NAVAIR : Pax River, MD	1.790	0.046	Nov 2016	0.046	Nov 2017	0.047	Nov 2018	-		0.047	0.000	1.929	-
		Subtotal	16.310	0.579		0.579		0.574		-		0.574	0.800	18.842	N/A

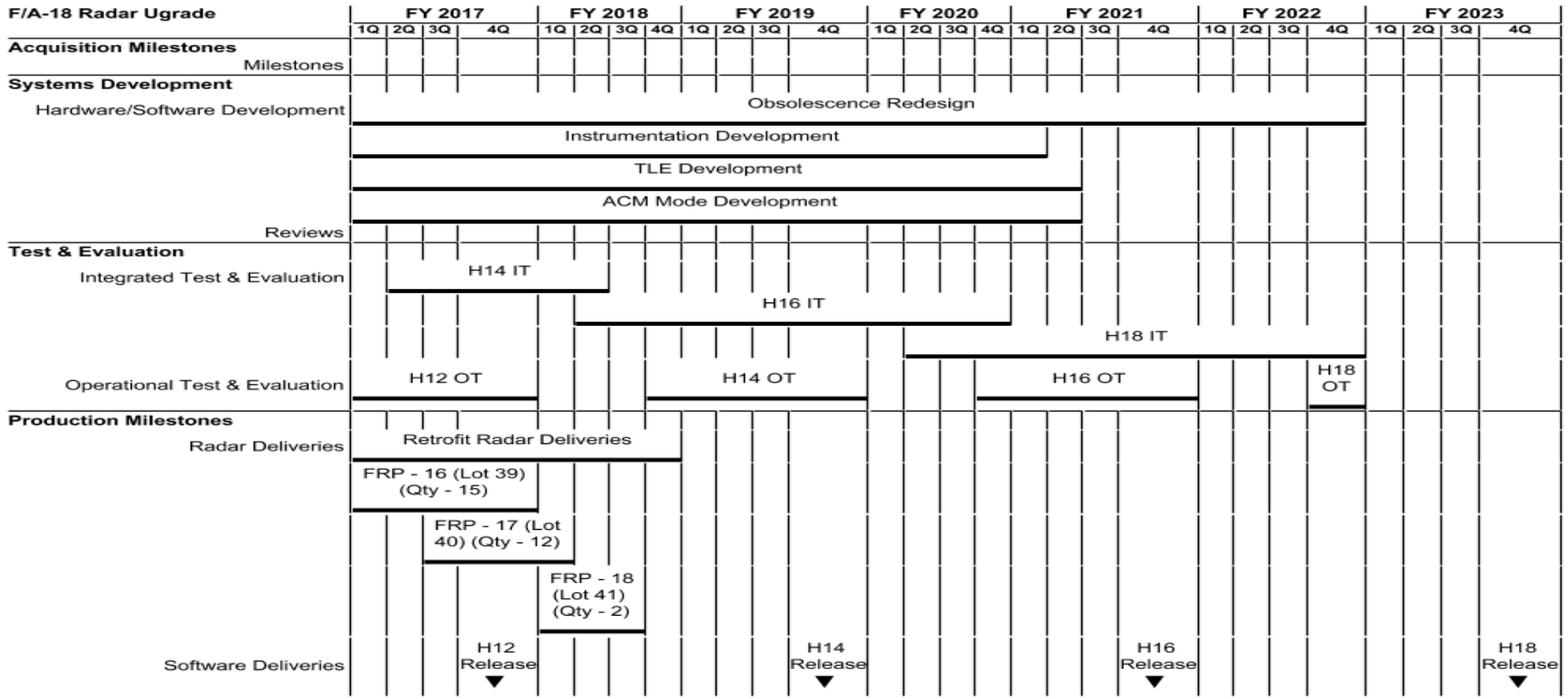
Remarks

Seaport support is noted and can be different based on overall bill, and PMA division of services provided.

	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	726.534	10.844		8.018		7.002		-		7.002	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2065 / *F/A-18 Radar Upgrade*



2019PB - 0204136N - 2065

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2065 / *F/A-18 Radar Upgrade*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
F/A-18 Radar Ugrade				
Systems Development: Hardware/Software Development: Obsolescence Redesign Development & Testing	1	2017	4	2022
Systems Development: Hardware/Software Development: Instrumentation Development	1	2017	1	2021
Systems Development: Hardware/Software Development: TLE Development	1	2017	2	2021
Systems Development: Hardware/Software Development: ACM Mode Development	1	2017	2	2021
Test & Evaluation: Integrated Test & Evaluation: H14 Integration Testing	2	2017	2	2018
Test & Evaluation: Integrated Test & Evaluation: H16 Integration Testing	2	2018	4	2020
Test & Evaluation: Integrated Test & Evaluation: H18 Integration Testing	2	2020	4	2022
Test & Evaluation: Operational Test & Evaluation: H12 Operational Testing	1	2017	4	2017
Test & Evaluation: Operational Test & Evaluation: H14 Operational Testing	4	2018	4	2019
Test & Evaluation: Operational Test & Evaluation: H16 Operational Testing	4	2020	4	2021
Test & Evaluation: Operational Test & Evaluation: H18 Operational Testing	4	2022	4	2022
Production Milestones: Radar Deliveries: Retrofit Radar Deliveries	1	2017	4	2018
Production Milestones: Radar Deliveries: FRP Deliveries B - 16 (Lot 39)	1	2017	4	2017
Production Milestones: Radar Deliveries: FRP Deliveries B - 17 (Lot 40)	3	2017	1	2018
Production Milestones: Radar Deliveries: FRP Deliveries B - 18 (Lot 41)	1	2018	3	2018
Production Milestones: Software Deliveries: H12 FLEET RELEASE	4	2017	4	2017
Production Milestones: Software Deliveries: H14 FLEET RELEASE	4	2019	4	2019
Production Milestones: Software Deliveries: H16 FLEET RELEASE	4	2021	4	2021
Production Milestones: Software Deliveries: H18 FLEET RELEASE	4	2023	4	2023

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2069 / *F/A-18 Infrared Search and Track (IRST)*	

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
2069: *F/A-18 Infrared Search and Track (IRST)*	0.000	94.094	86.993	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	181.087
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: P510

A. Mission Description and Budget Item Justification

F/A-18 Infra-Red Search and Track (IRST): The F/A-18 E/F IRST system is a passive long-wave Infra-Red (IR) sensor which provides an alternate fire control system in a high Electronic Attack / Radio Detection and Ranging (RADAR) denied environment. The IRST Block II Engineering Change Proposal (ECP) upgrades two Weapons Replaceable Assemblies (WRAs); the Infra-Red Receiver (IRR) and processor in order to provide full Capabilities Development Document (CDD) capability and enhanced warfighting capability through an improved engagement timeline, improved situational awareness, longer range passive detection and tracking and a larger field of regard with specification performance.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Infra-Red Search and Track (IRST)	94.094	86.993	0.000	0.000	0.000
Articles:	6	-	-	-	-
Description: Technology development and engineering and manufacturing development of an IRST sensor for the F/A-18 E/F. Block I supported technology development and engineering and manufacturing development of an IRST sensor for the F/A-18E/F to provide an alternate fire control system in a high Electronic Attack / Radio Detection and Ranging (RADAR) denied environment. Block I systems currently in production will be utilized as test assets for continued integration, tactics development and aircrew familiarization; will be upgraded via retrofit to a Block II configuration prior to fleet delivery. Block II IRST upgrades the Infra-Red Receiver (IRR) and processor to provide full Capabilities Development Document (CDD) capability and enhanced warfighting capability through an improved engagement timeline, improved situational awareness, longer range passive detection and tracking and a larger field of regard with specification performance.					
FY 2018 Plans: Award IRST Block II ECP Development Phase 2 (hardware and software). Conduct IRST Block II ECP System level Preliminary Design Review and Critical Design Review. Continue IRST Integration Testing (H14 and H16). Complete instrumentation of Block I production units. Continue development of support equipment and complete specific Block II technology, performance, reliability and producability trade studies. Begin King Air					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2069 / *F/A-18 Infrared Search and Track (IRST)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Integration Lab flight testing. Conduct H14 DT/OT assist. Continue Block I/II prototype/EDM conversions and upgrades to full Block II configuration. ***FY 2019 Base Plans:*** N/A ***FY 2019 OCO Plans:*** N/A ***FY 2018 to FY 2019 Increase/Decrease Statement:*** The FY 2019 - FY 2023 funding was transferred to Program Element 0604014N F/A-18 Infrared Search and Track (IRST) PU 2069.					
Accomplishments/Planned Programs Subtotals	94.094	86.993	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• APN/05250: *F-18 Series Mod (OSIP 04-14)*	2.478	3.655	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	161.021

Remarks

D. Acquisition Strategy

Infra-Red Search and Track (IRST). The IRST system is an evolutionary Navy acquisition program with Block I and Block II capabilities. The IRST Block I system developed by the Navy provides a basic capability, supported integration of the sensor onto a fuel tank and into the aircraft and supported aeromechanical flight test required for clearance and carrier qualification of the system. IRST Block I is in the Production and Deployment phase following a successful MS-C decision in December 2014 and will support continued integration with the F/A-18E/F Advanced Mission Computer software through flight testing with System Configuration Sets H14 and H16.

IRST Block II is an ECP to upgrade two WRAs that will provide full CDD capability. Early risk reduction activities were initiated in FY2016, the program executed a pre-development In Progress Review (IPR 1) in October 2017 and has a planned pre-production IPR (IPR 2) scheduled for 4th Quarter FY2018 leading to a planned low rate initial production (APN-5 funded) start in FY2019 to achieve an Initial Operating Capability (IOC) in 4th Quarter FY2021.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2069 / *F/A-18 Infrared Search and Track (IRST)*

E. Performance Metrics

IRST Program achieved MS B on 17 June 2011, achieved MS C on 02 December 2014. IRST Block II Pre-Development IPR-1 was conducted 1st Quarter 2018; Pre-Production IPR-2 is scheduled for 4th Quarter FY2018.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2069 / *F/A-18 Infrared Search and Track (IRST)*

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 Development (Hardware/Software) Infra-Red Search and Track (IRST)	Various	Boeing : St. Louis, MO	0.000	36.266	May 2017	26.048	Dec 2017	0.000		-		0.000	0.000	62.314	62.314
Hardware Development	MIPR	USAF (MIT) : Hanscom AFB, MA	0.000	0.522	Jul 2017	1.000	Nov 2017	0.000		-		0.000	0.000	1.522	-
Software (S/W) Development	WR	NAWCWD : China Lake, CA	0.000	5.283	Jun 2017	3.057	Dec 2017	0.000		-		0.000	0.000	8.340	-
IRST Support Equipment Development	WR	NAWCAD : Lakehurst, NJ	0.000	0.047	Nov 2016	0.045	Nov 2017	0.000		-		0.000	0.000	0.092	-
Primary Development	Various	NSMA : Various	0.000	40.156	Mar 2017	44.832	Jan 2018	0.000		-		0.000	0.000	84.988	-
		Subtotal	0.000	82.274		74.982		0.000		-		0.000	0.000	157.256	N/A

Remarks

NAWCAD Lakehurst, New Jersey, is developing Support Equipment necessary to support the IRST pods. Block II EMD effort ramps up significantly in FY 2019 to support alignment with H16 development and testing in order to achieve IOC in FY 2021.

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
Development Support	WR	NAWCWD : China Lake, CA	0.000	1.133	Mar 2017	1.143	Nov 2017	0.000		-		0.000	0.000	2.276	-
Development Support	WR	NAWCAD : Patuxent River, MD	0.000	2.239	Mar 2017	2.866	Nov 2017	0.000		-		0.000	0.000	5.105	-
Development Support	WR	NSWC : Indian Head, MD	0.000	0.060	Jul 2017	0.060	Nov 2017	0.000		-		0.000	0.000	0.120	-
Development Support	WR	NAWCWD : Pt. Mugu, CA	0.000	0.022	Jul 2017	0.022	Dec 2017	0.000		-		0.000	0.000	0.044	-
Development Support	WR	FRC Southeast : Jacksonville, FL	0.000	0.917	Nov 2016	0.900	Nov 2017	0.000		-		0.000	0.000	1.817	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2069 / *F/A-18 Infrared Search and Track (IRST)*

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
Development Support	C/CPFF	NRL : Washington, DC	0.000	0.338	Jun 2017	0.344	Dec 2017	0.000		-		0.000	0.000	0.682	0.682
Development Support	WR	NAVSUP : Mechanicsburg, PA	0.000	0.040	Jun 2017	0.041	Jan 2018	0.000		-		0.000	0.000	0.081	-
Obsolescence Redesign	Various	Various : Various	0.000	0.250	Dec 2016	0.250	Dec 2017	0.000		-		0.000	0.000	0.500	-
		Subtotal	0.000	4.999		5.626		0.000		-		0.000	0.000	10.625	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
Developmental Test & Evaluation (DT&E)	WR	NAWCAD : Patuxent River, MD	0.000	1.183	Mar 2017	1.196	Nov 2017	0.000		-		0.000	0.000	2.379	-
Developmental Test & Evaluation (DT&E)	WR	NAWCWD : China Lake, CA	0.000	5.337	May 2017	3.998	Nov 2017	0.000		-		0.000	0.000	9.335	-
Operational Test & Evaluation (OT&E) - CSS	Various	OPTEVFOR : VX-9	0.000	0.106	Jul 2017	0.110	Jul 2018	0.000		-		0.000	0.000	0.216	-
Operational Test & Evaluation (OT&E) - CSS	Various	OPTEVFOR : Norfolk, VA	0.000	0.000		0.100	Mar 2018	0.000		-		0.000	0.000	0.100	-
		Subtotal	0.000	6.626		5.404		0.000		-		0.000	0.000	12.030	N/A

Management Services ($ in Millions)

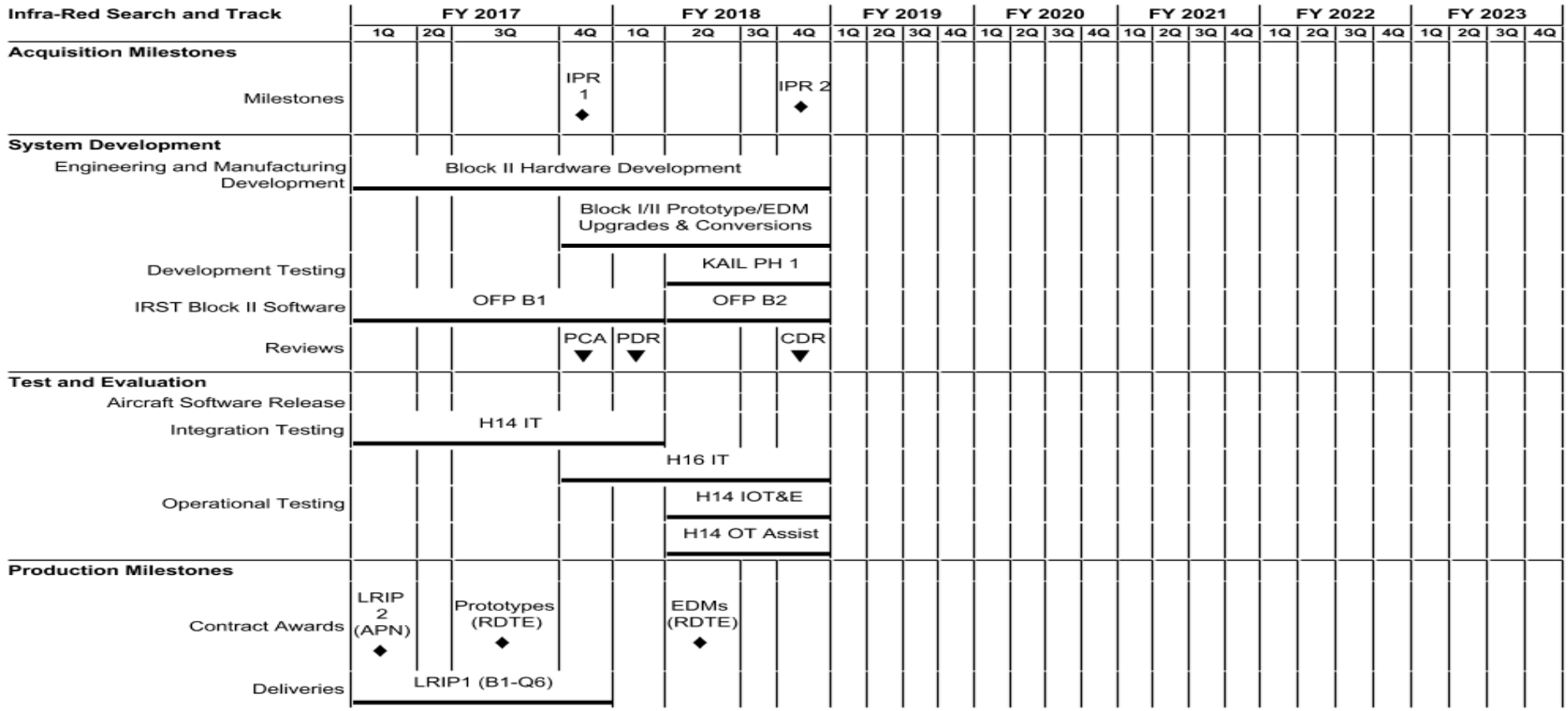
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Various	NAVAIR : Patuxent River, MD	0.000	0.020	Oct 2016	0.020	Oct 2017	0.000		-		0.000	0.000	0.040	-
Program Management Support - MISC	Various	NAWCAD : Patuxent River, MD	0.000	0.175	Oct 2016	0.961	Oct 2017	0.000		-		0.000	0.000	1.136	-
		Subtotal	0.000	0.195		0.981		0.000		-		0.000	0.000	1.176	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2069 / *F/A-18 Infrared Search and Track (IRST)*	

	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	94.094		86.993		0.000		-		0.000	0.000	181.087	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2069 / *F/A-18 Infrared Search and Track (IRST)*



2019PB - 0204136N - 2069

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2069 / *F/A-18 Infrared Search and Track (IRST)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Infra-Red Search and Track				
Acquisition Milestones: Milestones: Pre-development In Process Review (IPR 1)	4	2017	4	2017
Acquisition Milestones: Milestones: Pre-production In Process Review (IPR 2)	4	2018	4	2018
System Development: Engineering and Manufacturing Development: Block II ECP Hardware Development	1	2017	4	2018
System Development: Engineering and Manufacturing Development: Sensor Hardware Conversion and Upgrades (Block I/II Prototype & EDM)	4	2017	4	2018
System Development: Development Testing: King Air Integration Lab Block II Phase I	2	2018	4	2018
System Development: IRST Block II Software: IRST OFP SW B1	1	2017	1	2018
System Development: IRST Block II Software: IRST OFP SW B2	2	2018	4	2018
System Development: Reviews: Block II ECP System PDR	1	2018	1	2018
System Development: Reviews: Block II ECP System CDR	4	2018	4	2018
System Development: Reviews: Physical Configuration Audit (PCA)	4	2017	4	2017
Test and Evaluation: Integration Testing: SCS H14 Integration Testing	1	2017	1	2018
Test and Evaluation: Integration Testing: SCS H16 Integration Testing	4	2017	4	2018
Test and Evaluation: Operational Testing: SCS H14 Integrated Operational Test & Evaluation (IOT&E)	2	2018	4	2018
Test and Evaluation: Operational Testing: SCS H14 OT Assist	2	2018	4	2018
Production Milestones: Contract Awards: Block II Prototype Test Assets (RDTE)	3	2017	3	2017
Production Milestones: Contract Awards: Block II EDM Test Assets (RDTE)	2	2018	2	2018
Production Milestones: Contract Awards: Block I LRIP 2 (APN)	1	2017	1	2017
Production Milestones: Deliveries: LRIP 1 (Block I Lot 1 - Qty 6)	1	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2071 / *F/A-18 Block III*	

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
2071: *F/A-18 Block III*	0.000	0.000	59.700	83.146	-	83.146	88.342	30.158	0.000	0.000	0.000	261.346
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

F/A-18 Block III is a series of several of Engineering Change Proposals (ECPs) that bring several planned upgrades to the F/A-18E/F. The combined impact of these upgrades brings significant capability to the aircraft. Block III is a follow-on to Block II upgrades. The FY18 budget request funds Non-Recurring Engineering (NRE) for these ECPs which include Advanced Network Architecture, aircraft Signature Enhancements, Advanced Cockpit Displays, and Conformal Fuel tanks.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: F/A-18 Block III	0.000	59.700	83.146	0.000	83.146
Articles:	-	-	-	-	-
Description: Block III Super Hornet upgrades provide additional capability to the aircraft and its contribution to the Airwing are significant. The capability upgrades consist of several Engineering Change Proposals (ECPs) which will be incorporated in the near term with a combination of forward fit production line incorporation and via retrofit modifications to the aircraft already planned as part of the Service Life Modification (SLM) Plan. The FY18 budget request funds Non-Recurring (NRE) for these ECPs.					
FY 2018 Plans: F/A-18 Block III is a series of several of Engineering Change Proposals (ECPs) that bring several planned upgrades to the F/A-18E/F aircraft. The combined impact of these upgrades brings significant capability to the aircraft. The FY18 budget request funds the Non-Recurring (NRE) needed for these ECPs.					
FY 2019 Base Plans: F/A-18 Block III is a series of several of Engineering Change Proposals (ECPs) that bring several planned upgrades to the F/A-18E/F aircraft. The combined impact of these upgrades brings significant capability to the aircraft. The FY19 budget request funds the Non-Recurring (NRE) needed for these ECPs. F/A Block III flight testing will have significant increase in flight testing in FY2019 for advance cockpit, and conformal fuel tank.					
FY 2019 OCO Plans: N/A					
FY 2018 to FY 2019 Increase/Decrease Statement: The FY 2019 funding request was increased by $23.446 million. The initial F/A-18 Block III					

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2071 / *F/A-18 Block III*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
concept includes low risk changes which can be incorporated in the near term with a combination of forward fit production line incorporation and via retrofit modifications to the aircraft already planned as part of the Service Life Modification (SLM) Plan. The FY19 budget request funds Non-Recurring (NRE) for these ECPs.					
Accomplishments/Planned Programs Subtotals	0.000	59.700	83.146	0.000	83.146

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• APN/0525: *F-18 Series*	999.424	943.661	1,213.482	-	1,213.482	1,350.530	1,364.484	1,360.496	1,714.989	7,939.984	25,104.766
• APN/0145: *FA-18E/F*	1,146.912	1,200.146	1,990.524	-	1,990.524	1,929.651	1,948.066	1,731.992	1,663.687	0.000	55,476.794

Remarks

D. Acquisition Strategy

A series of Block III Engineering Change Proposals (ECPs) are planned to be incorporated into production aircraft starting in FY19. The ECPs will provide capability upgrades to Block II aircraft to give them Block III capabilities. Block II Fleet aircraft (Lots 26 and up) will receive capability upgrades when inducted for Service Life Modification (SLM) events.

E. Performance Metrics

The PB19 budget request funds the Non-Recurring Engineering (NRE) for the Block III Engineering Change Proposals (ECPs) that will provide upgraded capabilities to the F/A-18 E/F aircraft. Block III capability upgrades is planned to be incorporated into the aircraft on the production line starting with the FY19 procurement. Block II aircraft will receive the Block III ECPs when the aircraft are inducted for Service Life Modification (SLM) events.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 2071 / *F/A-18 Block III*

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
Block III primary development	Various	Boeing : St Louis MO	0.000	0.000		56.700	Dec 2017	82.126	Dec 2018	-		82.126	108.500	247.326	249.326
		Subtotal	0.000	0.000		56.700		82.126		-		82.126	108.500	247.326	N/A

Remarks

Flight testing for conformal fuel tanks and advance cock pit systems for BLCK III will be taking place in FY2019.

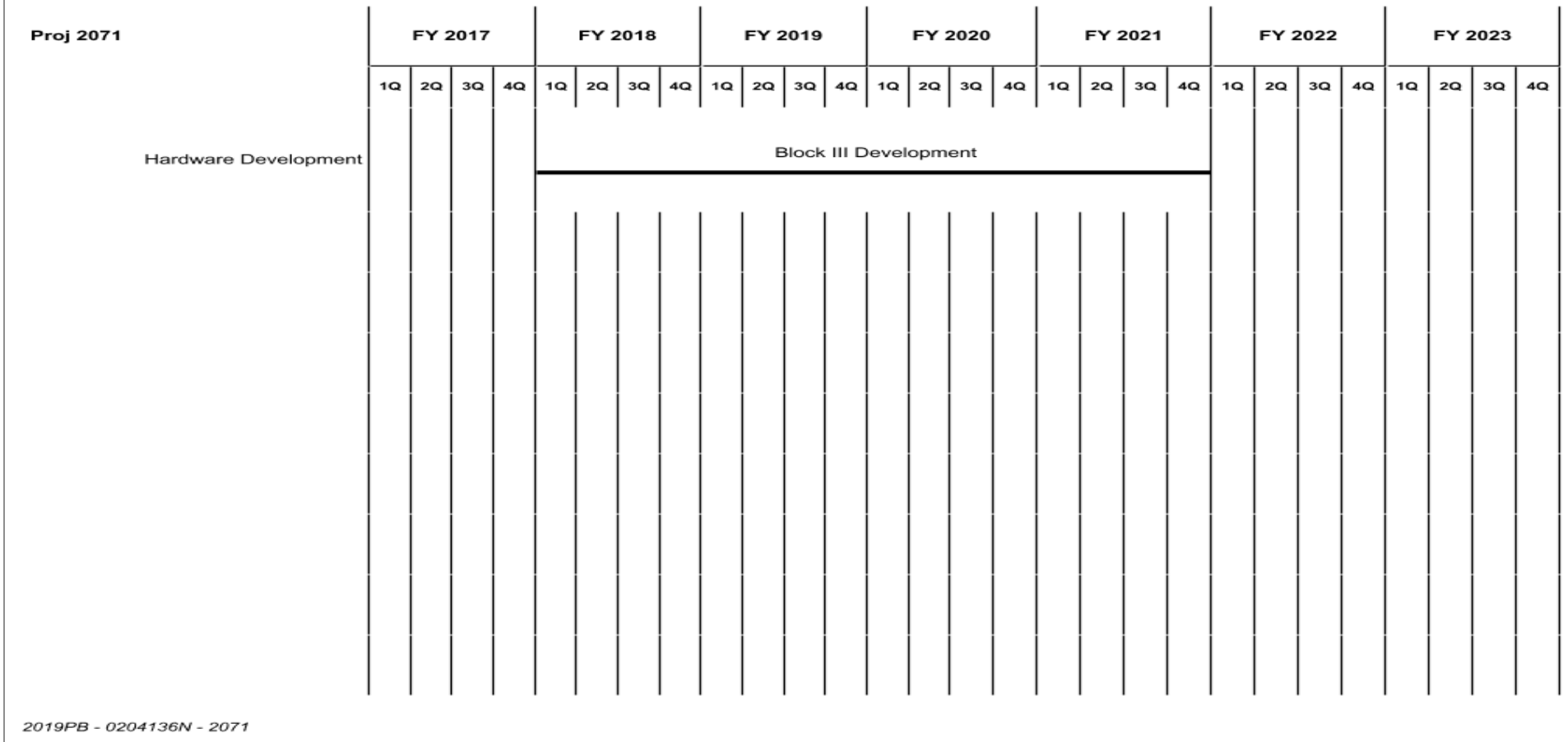
Support ($ in Millions)

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
Development Support	WR	Various : Various	0.000	0.000		3.000	Dec 2017	1.020	Dec 2018	-		1.020	10.000	14.020	-
		Subtotal	0.000	0.000		3.000		1.020		-		1.020	10.000	14.020	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	0.000		59.700		83.146		-		83.146	118.500	261.346	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2071 / *F/A-18 Block III*



2019PB - 0204136N - 2071

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 2071 / *F/A-18 Block III*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2071				
Hardware Development: Block III Development	1	2018	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy											Date: February 2018	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*				Project (Number/Name) 9999 / *Congressional Adds*			
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**
9999: *Congressional Adds*	21.316	1.934	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	23.250
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Congressional Add.

Noise Reduction study conducted by the University of Mississippi National Center for Physical Acoustics (NCPA).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018
Congressional Add: Noise Reduction	1.934	0.000
FY 2017 Accomplishments: N/A		
FY 2018 Plans: N/A		
Congressional Adds Subtotals	1.934	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Not Required for Congressional Adds.

E. Performance Metrics

Not Required for Congressional Adds.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204136N / *F/A-18 Squadrons*	Project (Number/Name) 9999 / *Congressional Adds*

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
Universal Armament Interface (UAI)	C/IDIQ	Various : Various	19.621	0.000		0.000		0.000		-		0.000	0.000	19.621	19.621
		Subtotal	19.621	0.000		0.000		0.000		-		0.000	0.000	19.621	N/A

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
Universal Armament Interface-Studies and Analysis	WR	NAWCWD : China Lake, CA	0.247	0.000		0.000		0.000		-		0.000	0.000	0.247	-
Noise Reduction-Studies and Analysis	SS/IDIQ	Mississippi : NCPA	1.448	1.934	Aug 2017	0.000		0.000		-		0.000	0.000	3.382	3.382
		Subtotal	1.695	1.934		0.000		0.000		-		0.000	0.000	3.629	N/A

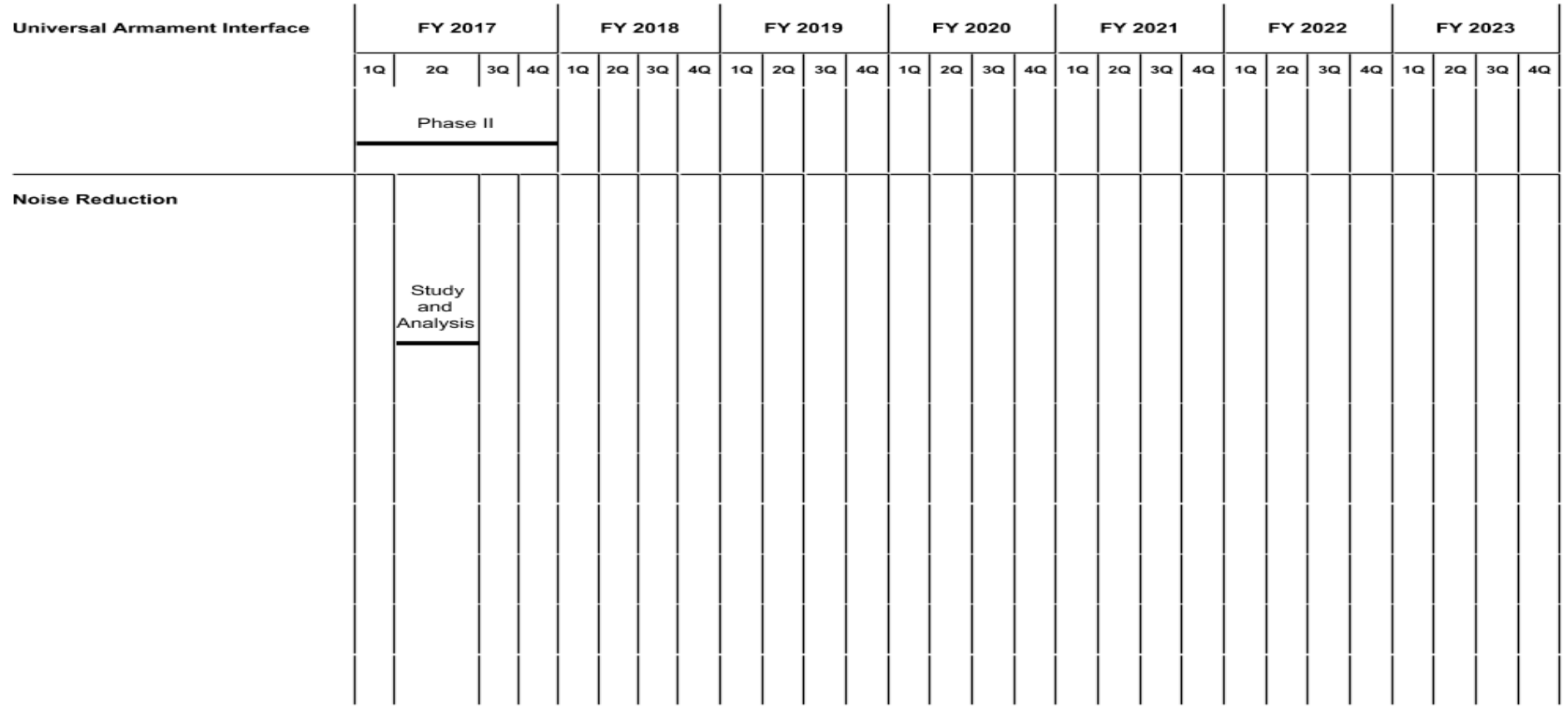
Remarks

Noise reduction study conducted by the University of Mississippi National Center for Physical Acoustics (NCPA).

	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	21.316	1.934		0.000		0.000		-		0.000	0.000	23.250	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 9999 / *Congressional Adds*



2019DON - 0204136N - 9999

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0204136N / *F/A-18 Squadrons*	**Project (Number/Name)** 9999 / *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Universal Armament Interface				
Phase II - Lethality	1	2017	4	2017
Noise Reduction: Study and Analysis	2	2017	2	2017