Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305231N *I MQ-8 UAV*							
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
Total Program Element	564.976	29.613	28.968	26.543	-	26.543	-	-	-	-	-	-
2768: *MQ-8 Fire Scout*	564.976	29.613	28.968	26.543	-	26.543	-	-	-	-	-	-
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 253												

A. Mission Description and Budget Item Justification

The MQ-8 Unmanned Air System is a Joint Military Intelligence Program.

The MQ-8 Unmanned Air System (Fire Scout) program achieved MS C in June 2017. MQ-8C Unmanned Air System declared Initial Operational Capability in June 2019. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities. All acquisition actions previously planned under the RDCs have transitioned into the Program of Record (POR).

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle damage assessment including voice communications relay. Development efforts respond to emerging fleet requirements through integration and improvements to Common Operational Picture (COP) capabilities, avionics, payloads, range, endurance, and targeting.

The MQ-8 launches and recovers vertically, and can operate from suitably-equipped air capable ships, as well as confined area land bases. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the MCS, also referred to as a Ground Control Station (GCS), and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 is provided through standard DoD Command, Control, Communications, Computers and ISR (C4ISR) system architectures and protocols.

A deployed MQ-8 system includes air vehicle(s), payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, and other specialty payloads), MCS (with TCS and TCDL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. The schedules for MCS and UCARS components are based on host ship requirements, while schedules for air vehicle components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control stations will also support depot-level maintenance/post-maintenance activities. The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. MQ-8 systems will support missions on Littoral Combat Ship (LCS), Expeditionary Mobile Base (T-ESB), FFG(X), and/or suitably-equipped air capable ships. Quantities of air vehicles are derived from LCS and/or suitably-equipped air capable ship deployment requirements for Surface Warfare (SUW) and Mine Countermeasures mission sets.

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305231N *I MQ-8 UAV*

The MQ-8 Radar capability is the initial effort as part of the SUW Increment of the MQ-8C. A non-developmental maritime Radar has been competitively selected for integration into the MQ-8C Fire Scout System. This system will provide the MQ-8 operators and the supported LCS, T-ESB and FFG(X) crew enhanced situational awareness of the Recognized Maritime Picture (RMP) by providing multiple operational modes to include surface search, track, Inverse Synthetic Aperture Radar (ISAR) maritime target classification, and Synthetic Aperture Radar (SAR) target classification capabilities. The maritime Radar will be fully integrated with the Mission Control Systems (MCS) and ship's combat systems providing data in standardized format for ease of dissemination to other users. Integration of the Radar capability also includes integration of the Minotaur mission management software on both the Air Vehicle and MCS. Minotaur provides the Radar operator interface, command and control Electro-optical Infrared (EO/IR) payloads, map management, and sensor track correlation.

The MQ-8C Link-16 capability will disseminate sensor track data to other Link-16 participants contributing to the Common Operational Picture (COP). Line-of-Sight (LOS) capability will connect Fleet users and disadvantaged users increasing situational awareness. Additionally, the Link-16 In-Flight Target Update (IFTU) capability will allow for Network Enabled Weapon Targeting (NEW-T) for Over-the-Horizon Targeting (OTH-T). Minotaur software will be used to correlate sensor data and manage the Link-16 network.

The MQ-8C Electronic Warfare/Passive Targeting (EW/PT) capability adds electronic warfare sensors and antennas to enable the MQ-8C to exploit the electromagnetic spectrum to provide maritime Indications and Warnings (I&W), ISR, and targeting through passive threat geo-location. The PT capability gives the operational commander the ability to maximize the lethality of the ship while performing Distributed Maritime Operations (DMO) and allows the MQ-8C to provide OTH-T/Beyond Visual Range (BVR) enemy cueing.

This budget prioritizes system wholeness to ensure program of record capabilities are fully integrated and support fleet requirements. System wholeness supports development of radar, development of Link-16, development of Electronic Warfare/Passive Targeting (EW/PT) system and component redesign required to maintain system hardware.

B. Program Change Summary ($ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	29.618	28.968	19.968	-	19.968
Current President's Budget	29.613	28.968	26.543	-	26.543
Total Adjustments	-0.005	0.000	6.575	-	6.575
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.005	0.000			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	9.000	-	9.000
• Rate/Misc Adjustments	0.000	0.000	-2.425	-	-2.425

Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy	Date: May 2021
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0305231N *I MQ-8 UAV*

Change Summary Explanation

The programmatic increases in FY 2022 of $9.0M for the start of the Electronic Warfare/Passive Targeting(EW/PT) effort.

The FY2022 funding request was reduced by $2.175 million to account for the availability of prior year execution balances, and reduction of $0.250 due to Working Capital fund rate adjustments.

Schedule:
Updated delivery schedules for the current production plan.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy											Date: May 2021	
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*				Project (Number/Name) 2768 / *MQ-8 Fire Scout*			
COST ($ in Millions)	**Prior Years**	**FY 2020**	**FY 2021**	**FY 2022 Base**	**FY 2022 OCO**	**FY 2022 Total**	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Cost To Complete**	**Total Cost**
2768: *MQ-8 Fire Scout*	564.976	29.613	28.968	26.543	-	26.543	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 253

A. Mission Description and Budget Item Justification

This budget prioritizes system wholeness to ensure program of record capabilities are fully integrated and support fleet requirements. System wholeness supports development of radar, development of Link-16, development of Electronic Warfare/Passive Target (EW/PT) component redesign required to maintain system hardware and trade studies for the MQ-8C weaponization requirements.

The MQ-8 Unmanned Air System (Fire Scout) program achieved MS C in June 2017. MQ-8C Unmanned Air System declared Initial Operational Capability in June 2019. The program includes MQ-8B air vehicles, MQ-8C air vehicles, and associated Mission Control Systems (MCS), Unmanned Aerial Vehicle Common Automatic Recovery Systems (UCARS) and support equipment. In addition to the air vehicles, Radar and Weapons capabilities were developed under the Navy's Rapid Deployment Capability (RDC) authorities. All acquisition actions previously planned under the RDCs have transitioned into the Program of Record (POR).

The MQ-8 System provides real-time and non-real-time Intelligence, Surveillance and Reconnaissance (ISR) data to tactical users without the use of manned aircraft or reliance on limited joint theater or national assets. The baseline MQ-8 can accomplish missions including over-the-horizon tactical reconnaissance, classification, targeting and laser designation and battle damage assessment including voice communications relay. Development efforts respond to emerging fleet requirements through integration and improvements to Common Operational Picture (COP) capabilities, avionics, payloads, range, endurance, and targeting.

The MQ-8 launches and recovers vertically, and can operate from suitably-equipped air capable ships, as well as confined area land bases. Interoperability is achieved through the use of the Tactical Control System (TCS) software in the MCS, also referred to as a Ground Control Station (GCS), and through the use of the Tactical Common Data Link (TCDL). The data from the MQ-8 is provided through standard DoD Command, Control, Communications, Computers and ISR (C4ISR) system architectures and protocols.

A deployed MQ-8 system includes air vehicle(s), payloads (i.e. electro-optical/infrared/laser designator-range finder, Automated Identification System, voice communications relay, Radar, and other specialty payloads), MCS (with TCS and TCDL integrated for interoperability), a UCARS for automatic launch and recovery, and associated spares and support equipment. The schedules for MCS and UCARS components are based on host ship requirements, while schedules for air vehicle components, support equipment, and training equipment are based on operational deployment plans. A limited number of land-based mission control systems supplement the shipboard systems to support shore-based operations, such as pre-deployment or acceptance functional check flights. These land-based mission control stations will also support depot-level maintenance/post-maintenance activities. The MQ-8C provides additional mission endurance and payload-weight-power, increased reliability, and improved maintainability to the MQ-8 Fire Scout System. MQ-8 systems will support missions on Littoral Combat Ship (LCS), Expeditionary Mobile Base (T-ESB), FFG(X), and/or suitably-equipped air capable ships. Quantities of air vehicles are derived from LCS and/or suitably-equipped air capable ship deployment requirements for Surface Warfare(SUW)and Mine Countermeasures mission sets.

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

The MQ-8 Radar capability is the initial effort as part of the Surface Warfare Increment of the MQ-8C. A non-developmental maritime Radar has been competitively selected for integration into the MQ-8C Fire Scout System. This system will provide the MQ-8 operators and the supported Littoral Combat Ship (LCS) crew enhanced situational awareness of the Recognized Maritime Picture (RMP) by providing multiple operational modes to include surface search, track, Inverse Synthetic Aperture Radar (ISAR) maritime target classification, and Synthetic Aperture Radar (SAR) target classification capabilities. The maritime Radar will be fully integrated with the Mission Control Systems (MCS) and ship's combat systems providing data in standardized format for ease of dissemination to other users.

The MQ-8C Link-16 capability will disseminate sensor tack data to other Link-16 participants contributing to the Common Operational Picture. This capability will connect Fleet users and disadvantaged users increasing situational awareness. Additionally, the Link-16 In-Flight Target Update (IFTU) capability will allow for Network Enabled Weapon Targeting (NEW-T) for Over-the-Horizon Targeting (OTH-T). Minotaur will be used to correlate sensor data and manage the Link-16 network.

The MQ-8C Weapons capability integration study evaluated weapons requirements outlined in the MQ-8C Capabilities Production Document (CPD). Weapons trade study was conducted to assess the mission effectiveness and potential impacts of adding candidate weapons systems to the MQ-8C Fire Scout in a SUW scenario. Additional trade studies have been conducted to analyze weapons platform integration, software architecture, stores management, and air vehicle structural requirements for addition of the MQ-8C Weapons capability.

The MQ-8C Electronic Warfare/Passive Targeting (EW/PT) capability adds electronic warfare sensors and antennas to enable the MQ-8C to exploit the electromagnetic spectrum to provide maritime Indications and Warnings (I&W), ISR, and targeting through passive threat geo-location. The PT capability gives the operational commander the ability to maximize the lethality of the LCS by using the full range of the Naval Strike Missile (NSM) while performing Distributed Maritime Operations (DMO) and allows the MQ-8C to provide OTH-T/Beyond Visual Range (BVR) enemy cueing.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Hardware and System Development	13.716	10.654	11.575	0.000	11.575
Articles:	-	-	-	-	-
FY 2021 Plans: Continue MQ-8C hardware, software modifications, other payload integration, cyber vulnerability closure and safety capability improvements such a backup landing system and collision avoidance systems. Continue MQ-8 integration and testing on LCS. Continue integration and test of the selected Radar with the MQ8-C Air Vehicles and MCS. Conduct MQ-8C Link-16 Preliminary Design Review (PDR)/Critical Design Review (CDR). Develop software build for Link-16 integration.					
FY 2022 Base Plans: Continue MQ-8C hardware, software modifications, other payload integration, cyber vulnerability closure and safety capability improvements such a backup landing system and collision avoidance systems Complete software build for Link-16 integration and FQT/SIT. Start Electronic Warfare/Passive Targeting (EW/PT) integration on					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
the MQ-8C including award of PT hardware and Phase I integration contracts (AV prime, ground control station prime, and Minotaur software). Conduct MQ-8C Link-16 Critical Design Review (CDR).Conduct the PT System Requirements Review (SRR). Conduct Link-16 development test. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The increase from FY21 to FY22 adds PT integration to the MQ-8C. Tasks in FY22 include awarding the PT hardware contract (competitive); awarding sole source phase I integration contracts to the air vehicle prime (NGC), the ground control station prime (Raytheon), and the Minotaur software prime (JHU/APL); and conducting the System Requirements Review (SRR).					
Title: Development/Operational Testing	7.103	8.901	4.250	0.000	4.250
Articles:	-	-	-	-	-
FY 2021 Plans: Continue MQ-8C developmental testing of hardware and software modifications and planning for other payload integration. Complete MQ-8C Radar DT. Conduct MQ-8C Radar FOT&E. ***FY 2022 Base Plans:*** Continue MQ8-C developmental testing of hardware and software modifications and planning for other payload integration. Finalize the operational testing for Radar on the MQ8-C and commence the MQ-8C Link-16 developmental test. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** The decrease is due to reduction of the completion of testing associated with Radar IOC planned for 3Q21.					
Title: Engineering and Technical Services	8.794	9.413	10.718	0.000	10.718
Articles:	-	-	-	-	-
FY 2021 Plans: Continue engineering, program technical management, logistics support of the MQ-8C. Continue acquisition planning and execution to transition the Radar capabilities. Continue Radar, Weapons, other payloads, LCS					

Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
integration, and system studies and design. Continue MQ-8 FOT&E. Award contracts for L-16 integration and test. Conduct Link-16 integration PDR/CDR. ***FY 2022 Base Plans:*** Initiate acquisition planning and execution of the MQ-8C EW/PT capability to include award of integration contracts. Conduct EW/PT SRR. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase from FY 21 to FY 22 is due to the additional engineering, program technical management, logistics support required for Passive Targeting capability.					
Accomplishments/Planned Programs Subtotals	29.613	28.968	26.543	0.000	26.543

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• APN/0443: *MQ-8 UAV*	44.944	34.759	49.249	-	49.249	-	-	-	-	-	-
• APN/0605: *MQ-8 UAV Spares*	2,168.602	2,197.486	0.000	-	0.000	-	-	-	-	-	-
• APN/0588: *MQ-8 Series*	31.686	28.774	31.624	-	31.624	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The Navy's acquisition strategy capitalizes on prior Rapid Deployment Capability efforts, while leveraging existing program investments. The acquisition strategy maintains commonality of MQ-8B and MQ-8C systems, payloads, avionics, software, and ancillary equipment where possible. The acquisition strategy supports the revised Capability Production Document. Initial Operational Capability (IOC) of an MQ-8B-based system was achieved in 2QFY14. IOC of an MQ-8C-based system onboard Littoral Combat Ship (LCS) was achieved in 3QFY19. The maritime Radar has been competitively selected. The integration effort will require sole source contracts to the current prime Original Equipment Manufacturers (OEM) for the Tactical Control System (TCS) and the MQ-8 Fire Scout air vehicle. The Link-16 effort will require sole source contracts to the current OEM for the TCS, Link-16 J-series Message Implementation Plan, and the MQ-8 Fire Scout air vehicle. Existing Department of Defense contracts will be leveraged for Link-16 Terminal, Minotaur, and peripheral procurements. The Passive Targeting/Electronic warfare hardware will require a competitive source selection. The integration effort will require sole source contracts to the current prime Original Equipment Manufacturers (OEM) for the Tactical Control System (TCS) and the MQ-8 Fire Scout air vehicle and Minotaur Software developer.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development (MQ-8)	C/CPIF	Northrop Grumman Corp : San Diego, CA	372.434	5.566	Jan 2020	0.000		0.000		-		0.000	-	-	-
Primary Hardware Development (MQ-8)	C/CPIF	Raytheon Corp : Falls Church, VA	27.589	0.650	Jan 2020	0.000		0.000		-		0.000	-	-	-
Primary Hardware Development (RADAR OEM)	C/CPIF	Leonardo MW : Edinburgh, United Kingdom	10.821	0.000		0.000		0.000		-		0.000	-	-	-
Primary Hardware Development (Minotaur)	C/BA	John Hopkins University : Laurel, MD	7.293	0.000		0.000		0.000		-		0.000	-	-	-
Primary Hardware Development(Link-16)	C/CPIF	Northrop Grumman : San Diego, CA	0.000	4.500	Jun 2020	2.274	Apr 2021	3.325	Dec 2021	-		3.325	-	-	-
Primary Hardware Development(Link-16)	C/CPIF	Raytheon Corp : Falls Church, VA	0.000	1.000	Jun 2020	1.780	Dec 2020	1.100	Dec 2021	-		1.100	-	-	-
Primary Hardware Development(Link-16)	C/BA	John Hopkins University : Laurel, MD	0.000	1.000	Mar 2020	4.500	Dec 2020	1.500	Dec 2021	-		1.500	-	-	-
Primary Hardware Development(Link-16)	IA	GSA -VIA SAT : Washington, DC	0.000	1.000	Mar 2020	2.100	Dec 2020	0.550	Dec 2021	-		0.550	-	-	-
Primary Hardware Development(EW/PT)	C/CPIF	Northrop Grumman : San Diego, CA	0.000	0.000		0.000		2.100	Jan 2022	-		2.100	-	-	-
Primary Hardware Development(EW/PT	C/CPIF	Raytheon Corp : Falls Church, VA	0.000	0.000		0.000		1.000	Feb 2022	-		1.000	-	-	-
Primary Hardware Development(EW/PT	C/CPIF	Johns Hopkins/APL : Laurel, MD	0.000	0.000		0.000		1.000	Apr 2022	-		1.000	-	-	-
Primary Hardware Development(EW/PT	C/FFP	TBD : TBD	0.000	0.000		0.000		1.000	Apr 2022	-		1.000	-	-	-
		Subtotal	418.137	13.716		10.654		11.575		-		11.575	-	-	N/A

Remarks

Increase from FY21 to FY22 for Primary Hardware Development is attributable to LINK-16. During FY21, the program initiates incremental funding for LINK-16 Phase I development efforts. LINK-16 Phase II developmental efforts continue in FY22 at a higher level of funding and occurs after the Critical Design Review (CDR). Phase II incorporates solutions identified by the CDR.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	Various	Various : Various	5.255	0.250	Dec 2019	0.712	Dec 2020	0.900	Dec 2021	-		0.900	-	-	-
		Subtotal	5.255	0.250		0.712		0.900		-		0.900	-	-	N/A

Remarks

Increase from FY21 to FY22 for additional ILS support for Electronic Warfare/Passive Targeting (EW/PT) efforts.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD : PAXRV, MD	32.329	3.500	Dec 2019	3.601	Dec 2020	3.500	Dec 2021	-		3.500	-	-	-
Operational Test & Evaluation/QRA	WR	NAWC : Various	18.265	3.603	Nov 2019	5.300	Nov 2020	0.750	Nov 2021	-		0.750	-	-	-
Prior Years T&E no longer funded in the FYDP	Various	Various : Various	1.646	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	52.240	7.103		8.901		4.250		-		4.250	-	-	N/A

Remarks

FY21 to FY22 Decrease of funding is due to the reduction of Radar related DT/OT testing efforts as the Radar will IOC during FY21.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD : PAXRV, MD	64.053	5.841	Dec 2019	5.930	Dec 2020	5.962	Dec 2021	-		5.962	-	-	-
Program Management Support	Various	Various : Various	20.537	2.603	Dec 2019	2.671	Dec 2020	3.756	Dec 2021	-		3.756	-	-	-
Travel	WR	NAVAIR : PAXRV, MD	2.297	0.100	Dec 2019	0.100	Dec 2020	0.100	Dec 2021	-		0.100	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305231N / *MQ-8 UAV*	Project (Number/Name) 2768 / *MQ-8 Fire Scout*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior years Mgmt Svcs no longer funded in the FYDP	Various	Various : Various	2.457	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	89.344	8.544		8.701		9.818		-		9.818	-	-	N/A

Remarks

FY21 to FY22 Increase for government engineering and program management support for the Electronic Warfare/Passive Targeting (EW/PT) development and integration events.

	Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	564.976	29.613		28.968		26.543		-		26.543	-	-	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

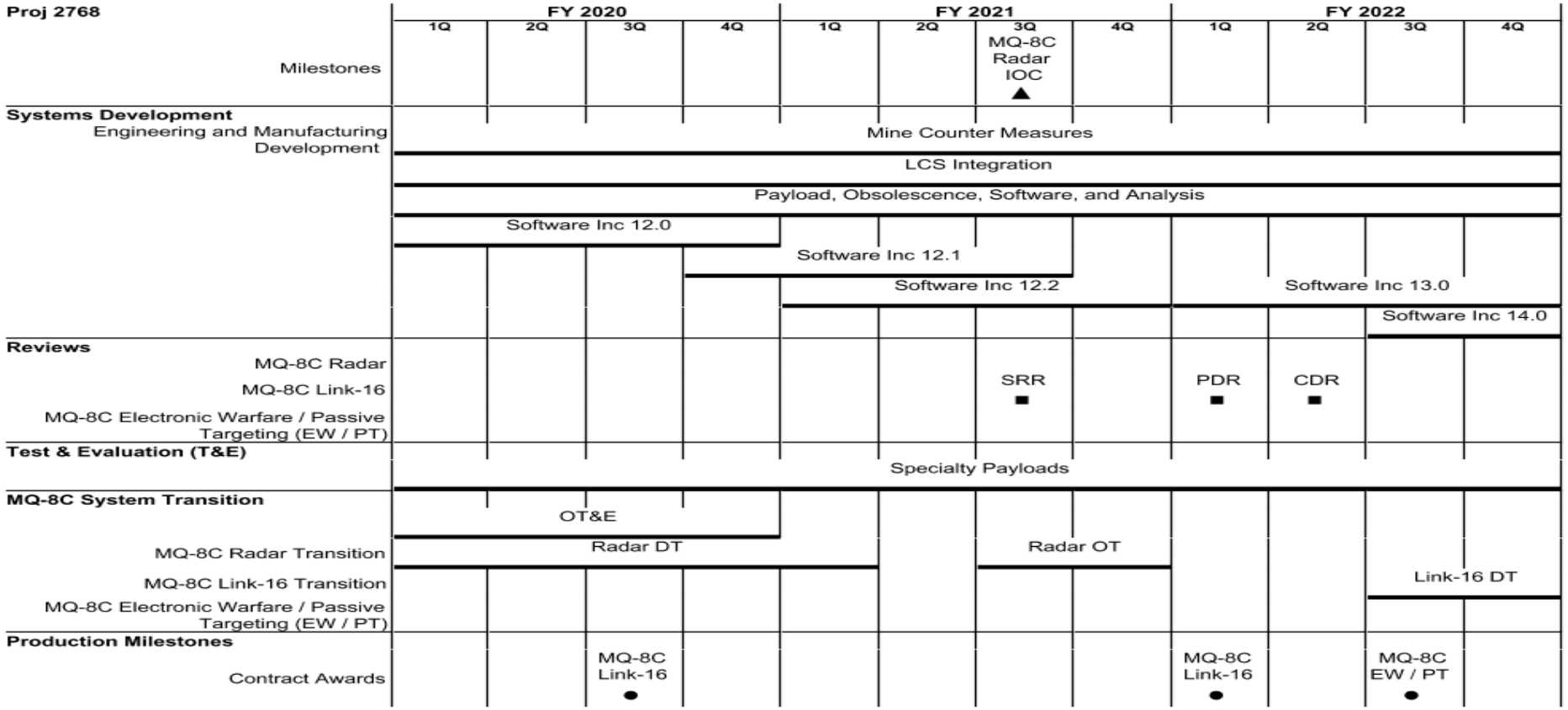

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2768				
Milestones: MQ-8C Radar IOC	3	2021	3	2021
Systems Development: Engineering and Manufacturing Development: Coastal Battlefield Reconnaissance and Analysis Integration (COBRA), BLK 1/2/3	1	2020	4	2022
Systems Development: Engineering and Manufacturing Development: Littoral Combat Ship (LCS) Integration	1	2020	4	2022
Systems Development: Engineering and Manufacturing Development: Payload, Obsolescence, Software, and Analysis	1	2020	4	2022
Systems Development: Engineering and Manufacturing Development: Software Increment 12.0	1	2020	4	2020
Systems Development: Engineering and Manufacturing Development: Software Increment 12.1	4	2020	3	2021
Systems Development: Engineering and Manufacturing Development: Software Increment 12.2	1	2021	4	2021
Systems Development: Engineering and Manufacturing Development: Software Increment 13.0	1	2022	4	2022
Systems Development: Engineering and Manufacturing Development: Software Increment 14.0	3	2022	4	2022
Reviews: MQ-8C Link-16: System Requirement Review (SRR)	3	2021	3	2021
Reviews: MQ-8C Link-16: MQ-8C Link 16 Preliminary Design Review (PDR)	1	2022	1	2022
Reviews: MQ-8C Link-16: MQ-8C Link 16 Critical Design Review (CDR)	2	2022	2	2022
Test & Evaluation (T&E): Specialty Payloads	1	2020	4	2022
MQ-8C System Transition: Operational Test and Evaluation (OT&E)	1	2020	4	2020
MQ-8C System Transition: MQ-8C Radar Transition: Radar Developmental Test (DT)	1	2020	1	2021
MQ-8C System Transition: MQ-8C Radar Transition: Radar Operational Test (OT)	3	2021	4	2021

Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 7	**R-1 Program Element (Number/Name)** PE 0305231N / *MQ-8 UAV*	**Project (Number/Name)** 2768 / *MQ-8 Fire Scout*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MQ-8C System Transition: MQ-8C Link-16 Transition: Link-16 Development Test (DT)	3	2022	4	2022
Production Milestones: Contract Awards: MQ-8C Link-16 Phase I	3	2020	3	2020
Production Milestones: Contract Awards: MQ-8C Link-16 Phase II	1	2022	1	2022
Production Milestones: Contract Awards: MQ-8C Electronic Warfare / Passive Targeting Phase I	3	2022	3	2022