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 0305220N *I MQ-4C Triton*							
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	3,503.639	11.784	11.120	13.029	-	13.029	-	-	-	-	-	-
4020: *MQ-4C TRITON*	3,503.639	11.784	11.120	13.029	-	13.029	-	-	-	-	-	-
Program MDAP/MAIS Code: **Project MDAP/MAIS Code(s):** 373												

Note

MQ-4C Triton RDT&E funding for modernization was segregated into a new program element (from PE 0305220N to PE 0305421N) in order to satisfy Congressional direction for increased transparency.

A. Mission Description and Budget Item Justification

MQ-4C Triton Unmanned Air System (UAS). The popular name Triton was approved for the MQ-4C UAS in June 2012, designating the RQ-4 Broad Area Maritime Surveillance UAS as the MQ-4C Triton.

The MQ-4C Triton is a high altitude-long endurance UAS designed to provide Fleet and combatant commanders with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) of nearly all the world's high-density sea-lanes, littorals, and areas of national interest. Teamed with its manned-capability counterpart, the P-8A, Triton will be a key component of the Navy's family of systems to achieve maritime domain awareness. MQ-4C Triton will seek to leverage Maritime Patrol and Reconnaissance Force manpower, training and maintenance efficiencies.

The MQ-4C Triton features sensors designed to provide near worldwide coverage through a network of orbits inside and outside continental United States, with sufficient air vehicles to remain airborne for 24 hours a day, 7 days a week, out to ranges of 2,000 nautical miles. Onboard sensors will provide detection, classification, tracking and identification of maritime targets and include maritime radar, electro-optical/infra-red and Electronic Support Measures systems. Additionally, the MQ-4C will have a communications relay capability designed to link dispersed forces in the theater of operations and serve as a node in the Navy's networked strategy. Tactical-level data analysis will occur in real-time at shore-based mission control sites connected to the air vehicle via satellite communications. Further intelligence exploitation can be conducted at Fleet shore-based sites or aboard aircraft carriers and other ships.

The MQ-4C Triton UAS will implement phased capability upgrades within the ongoing acquisition program to pace capability with rapidly evolving technologies and threats to ensure the Navy maintains persistent ISR dominance through the system's lifecycle, and to support the Maritime Intelligence, Surveillance, Reconnaissance and Targeting (MISR&T) transition plan. System upgrades will include Multi-Intelligence capabilities, Counter Electronic Attack upgrades, a more robust electronic support capability, and continued improvements to baseline mission system payloads.

The MQ-4C air vehicle, mission control system, specialized sensors, and communications suite will play a significant role in achieving the Navy's strategic vision for the 21st century. The Triton system as a persistence ISR enabler provides the supported combatant commander and fleet commander with unparalleled situational awareness of the maritime battle space to develop and sustain the common operational tactical picture. The system will also serve as a Fleet response plan enabler

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 0305220N *I MQ-4C Triton*

with a persistent, global force offering to provide critical trip wire information for intelligence preparation of the environment. Triton will connect to both the Global Information Grid and the Distributed Common Ground System-Navy information backbone to provide the Warfighter with unprecedented levels of battlespace awareness to synchronize actions necessary to maintain maritime Full Spectrum Superiority.

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 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	11.784	11.120	13.751	-	13.751
Current President's Budget	11.784	11.120	13.029	-	13.029
Total Adjustments	0.000	0.000	-0.722	-	-0.722
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-0.722	-	-0.722

Change Summary Explanation

FY 2022 reduction since previous President's Budget submission due to rate/miscellaneous adjustments.

Schedule Changes:
Initial Operational Capability delayed from 4th Quarter FY 2022 to after Q4 FY 2023 due to the program adopting an incremental approach to deliver the IFC-4 Multi-INT capability.
QC separated in QC 1 and QC 2.
B3 delivery moved 2 Quarters from 1st Quarter 2021 to 3rd Quarter 2021.
MB7P delivery moved 2 Quarters from 1st Quarter FY 2021 to 3rd Quarter FY 2021.

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 0305220N / *MQ-4C Triton*				Project (Number/Name) 4020 / *MQ-4C TRITON*			
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**
4020: *MQ-4C TRITON*	3,503.639	11.784	11.120	13.029	-	13.029	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 373

A. Mission Description and Budget Item Justification

MQ-4C Triton Unmanned Air System (UAS). The popular name Triton was approved for the MQ-4C UAS in June 2012, designating the RQ-4 Broad Area Maritime Surveillance UAS as the MQ-4C Triton.

The MQ-4C Triton is a high altitude-long endurance UAS designed to provide Fleet and combatant commanders with persistent maritime Intelligence, Surveillance and Reconnaissance (ISR) of nearly all the world's high-density sea-lanes, littorals, and areas of national interest. Teamed with its manned-capability counterpart, the P-8A, Triton will be a key component of the Navy's family of systems to achieve maritime domain awareness. MQ-4C Triton will seek to leverage Maritime Patrol and Reconnaissance Force manpower, training and maintenance efficiencies.

The MQ-4C Triton features sensors designed to provide near worldwide coverage through a network of orbits inside and outside continental United States, with sufficient air vehicles to remain airborne for 24 hours a day, 7 days a week, out to ranges of 2,000 nautical miles. Onboard sensors will provide detection, classification, tracking and identification of maritime targets and include maritime radar, electro-optical/infra-red and Electronic Support Measures systems. Additionally, the MQ-4C will have a communications relay capability designed to link dispersed forces in the theater of operations and serve as a node in the Navy's networked strategy. Tactical-level data analysis will occur in real-time at shore-based mission control sites connected to the air vehicle via satellite communications. Further intelligence exploitation can be conducted at Fleet shore-based sites or aboard aircraft carriers and other ships.

The MQ-4C Triton UAS will implement phased capability upgrades within the ongoing acquisition program to pace capability with rapidly evolving technologies and threats to ensure the Navy maintains persistent ISR dominance through the system's lifecycle, and to support the Maritime Intelligence, Surveillance, Reconnaissance and Targeting (MISR&T) transition plan. System upgrades will include Multi-Intelligence capabilities, Counter Electronic Attack upgrades, a more robust electronic support capability, and continued improvements to baseline mission system payloads.

The MQ-4C air vehicle, mission control system, specialized sensors, and communications suite will play a significant role in achieving the Navy's strategic vision for the 21st century. The Triton system as a persistence ISR enabler provides the supported combatant commander and fleet commander with unparalleled situational awareness of the maritime battle space to develop and sustain the common operational tactical picture. The system will also serve as a Fleet response plan enabler with a persistent, global force offering to provide critical trip wire information for intelligence preparation of the environment. Triton will connect to both the Global Information Grid and the Distributed Common Ground System-Navy information backbone to provide the Warfighter with unprecedented levels of battlespace awareness to synchronize actions necessary to maintain maritime Full Spectrum Superiority.

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Product Development	11.181	10.773	12.682	0.000	12.682
Articles:	-	-	-	-	-
Description: Awarded contract in FY 2008 to initiate the MQ-4C Triton System Development and Demonstration (SDD) phase effort. The Prime Contractor is responsible for overall system development and performance, as well as associated management, engineering and logistics activities. ***FY 2021 Plans:*** Efforts within this PE continue on airframe fatigue testing and analysis. ***FY 2022 Base Plans:*** Efforts within this PE continue on airframe fatigue testing and analysis. ***FY 2022 OCO Plans:*** N/A ***FY 2021 to FY 2022 Increase/Decrease Statement:*** Increase of $1.909M from FY 2021 to continue airframe fatigue testing and analysis as well as support transition into post-test teardown, inspections and reporting for portions of the full-scale test effort, namely the outboard ruddervator and nose landing gear.					
Title: ILS, Support, Studies & Analysis	0.305	0.305	0.305	0.000	0.305
Articles:	-	-	-	-	-
Description: Integrated Logistics Support, Studies and Analysis. ***FY 2021 Plans:*** Continue integrated logistics support, logistics supportability analyses and environmental planning, and development of technical data to support fielding of the MQ-4C Triton UAS capabilities. ***FY 2022 Base Plans:*** Continue integrated logistics support, logistics supportability analyses and environmental planning, and development of technical data to support fielding of the MQ-4C Triton UAS capabilities. ***FY 2022 OCO Plans:*** N/A					
Title: Test & Evaluation (T&E)	0.280	0.024	0.024	0.000	0.024
Articles:	-	-	-	-	-

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Description: T&E efforts. ***FY 2021 Plans:*** Continue Developmental Test support of MQ-4C Triton fatigue testing. ***FY 2022 Base Plans:*** Continue Developmental Test support of MQ-4C Triton fatigue testing. ***FY 2022 OCO Plans:*** N/A					
Title: Program Management (PM)	0.018	0.018	0.018	0.000	0.018
Articles:	-	-	-	-	-
Description: PM support and travel. ***FY 2021 Plans:*** Continue the following: PM support and travel, development of milestone and acquisition-related documentation, capability refinement and open systems architecture development, resource justification, affordability assessments and cost analyses, risk reduction and risk management, system integration and interoperability planning, technology maturity reviews, program protection planning, corrosion prevention planning, and joint and international cooperation efforts. ***FY 2022 Base Plans:*** Continue the following: PM support and travel, development of milestone and acquisition-related documentation, capability refinement and open systems architecture development, resource justification, affordability assessments and cost analyses, risk reduction and risk management, system integration and interoperability planning, technology maturity reviews, program protection planning, corrosion prevention planning, and joint and international cooperation efforts. ***FY 2022 OCO Plans:***					

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A					
Accomplishments/Planned Programs Subtotals	11.784	11.120	13.029	0.000	13.029

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
• RDTEN/0305421N: *RQ-4 Modernization*	195.445	129.164	134.323	-	134.323	-	-	-	-	-	-
• APN/0442: *MQ-4 Triton*	477.835	287.072	160.151	-	160.151	-	-	-	-	-	-
• APN/0605/J0442: *Spares and Repair Parts*	171.874	3.227	28.387	-	28.387	-	-	-	-	-	-
• APN/0596: *MQ-4 Series*	27.994	3.584	7.100	-	7.100	-	-	-	-	-	-
• OMN/1D4D: *Weapons Maintenance*	24.939	24.674	42.061	-	42.061	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The MQ-4C Triton acquisition approach supports the Navy's Maritime Intelligence, Surveillance, Reconnaissance, and Targeting (MISR&T) Transition Plan by providing a stable and effective baseline early operational capability (EOC) in 2020 to facilitate Fleet introduction and learning while continuing System Development and Demonstration engineering and integrated test on Signals Intelligence (SIGINT) and other upgrades to deliver a Multi-INT configuration at Initial Operational Capability (IOC). Phased capability upgrades will continue post IOC to enable the MQ-4C Triton to keep pace with rapidly evolving technologies and threats, and address correction of deficiencies and obsolescence issues to ensure the Navy maintains persistent Intelligence, Surveillance and Reconnaissance dominance through the system's lifecycle.

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*

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	C/CPIF	Northrop Grumman : Rancho Bernardo, CA	2,852.906	9.723	Nov 2019	10.473	Nov 2020	12.001	Nov 2021	-		12.001	-	-	-
Systems Engineering	Various	Various : Various	20.641	0.000		0.000		0.000		-		0.000	-	-	-
Systems Engineering	WR	NAWC-AD : Patuxent River, MD	245.760	1.458	Nov 2019	0.300	Nov 2020	0.681	Nov 2021	-		0.681	-	-	-
Systems Engineering	WR	NAWC-WD : China Lake, CA	13.418	0.000		0.000		0.000		-		0.000	-	-	-
Contractor Engineering	C/CPFF	Mitre : Mclean, VA	4.044	0.000		0.000		0.000		-		0.000	-	-	-
Prior Year Prod Dev no longer in the FYDP	Various	Various : Various	24.553	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	3,161.322	11.181		10.773		12.682		-		12.682	-	-	N/A

Remarks

The Primary Hardware Development line resources Northrop Grumman for prime contractor activities, which include System Development and Demonstration (SDD) and System Demonstration Test Article (SDTA) vehicles and Fatigue Testing.

Increased funding from FY 2021 to FY 2022 reflects the resources required to continue airframe fatigue testing and analysis as well as to support efforts to transition into post-test teardown, inspections and reporting for portions of the full-scale test effort, namely the outboard ruddervator and nose landing gear.

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
Development Support	Various	Various : Various	21.552	0.000		0.000		0.000		-		0.000	-	-	-
Integrated Logistics Support	Various	Various : Various	21.330	0.005	Nov 2019	0.025	Nov 2020	0.025	Nov 2021	-		0.025	-	-	-
Integrated Logistics Support	WR	NAWC-AD : Patuxent River, MD	54.959	0.300	Nov 2019	0.280	Nov 2020	0.280	Nov 2021	-		0.280	-	-	-
Prior year cost no longer funded in the FYDP	Various	Various : Various	10.784	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	108.625	0.305		0.305		0.305		-		0.305	-	-	N/A

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*

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	Various	Various : Various	20.370	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test & Evaluation	WR	NAWC-AD : Patuxent River, MD	161.356	0.280	Nov 2019	0.024	Nov 2020	0.024	Nov 2021	-		0.024	-	-	-
Operational Test & Evaluation	Various	Various : Various	4.133	0.000		0.000		0.000		-		0.000	-	-	-
Developmental Test & Evaluation (SATCOMM)	MIPR	DITCO : Various	11.184	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	197.043	0.280		0.024		0.024		-		0.024	-	-	N/A

Management Services ($ in Millions)

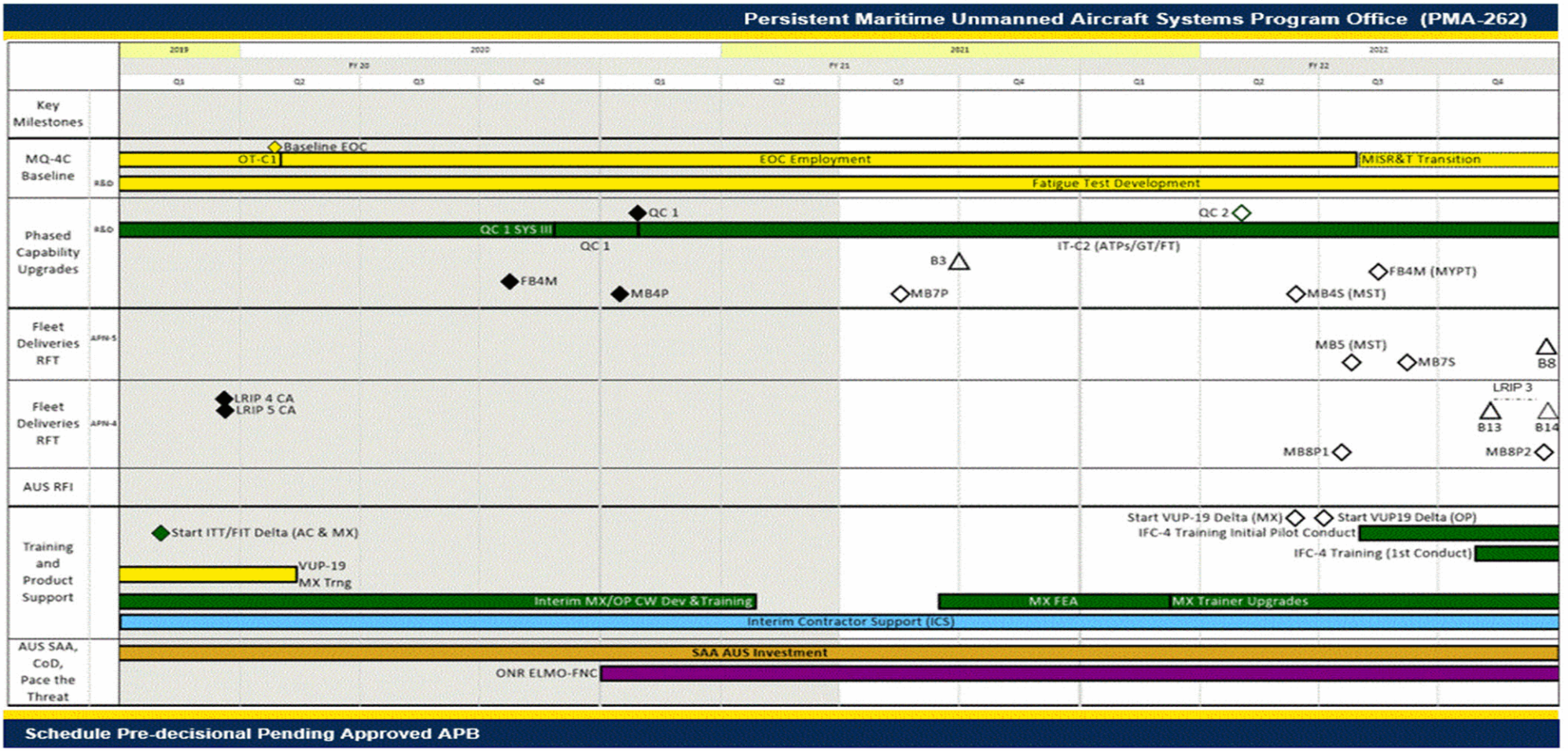
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2020 Cost	FY 2020 Award Date	FY 2021 Cost	FY 2021 Award Date	FY 2022 Base Cost	FY 2022 Base Award Date	FY 2022 OCO Cost	FY 2022 OCO Award Date	FY 2022 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Various : Various	3.507	0.000		0.000		0.000		-		0.000	-	-	-
Travel	Allot	Various : Various	1.810	0.018	Nov 2019	0.018	Nov 2020	0.018	Nov 2021	-		0.018	-	-	-
Program Management Support	C/CPFF	Ausley : Lexington Park, MD	26.324	0.000		0.000		0.000		-		0.000	-	-	-
Prior year cost no longer funded in the FYDP	Various	Various : Various	5.008	0.000		0.000		0.000		-		0.000	-	-	-
		Subtotal	36.649	0.018		0.018		0.018		-		0.018	-	-	N/A

	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	3,503.639	11.784		11.120		13.029		-		13.029	-	-	N/A

Remarks

Prior to FY 2010, MQ-4C Triton, formerly known as RQ-4 Broad Area Maritime Surveillance (BAMS), was budgeted for in PE 0305205N: Endurance Unmanned Aer Veh.

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*



Note: Low Rate Initial Production Lot 1 aircraft are conditionally accepted in IFC 3.0 configuration and retrofit to Multi-INT configuration. Low Rate Initial Production Lot 2 aircraft, excluding aircraft B12, are conditionally accepted in IFC 3.0 configuration and retrofit to Multi-INT configuration. R-4 schedule depicts Ready for Tasking aircraft delivered to the fleet vice initial government acceptance of the aircraft.

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 0305220N / *MQ-4C Triton*	**Project (Number/Name)** 4020 / *MQ-4C TRITON*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4020				
Acquisition Milestones: Baseline Early Operational Capability	2	2020	2	2020
System Development: Airframe Fatigue Testing and Analysis	1	2020	4	2022
System Development: Phased Capability Upgrades - Multi-INT (IFC 4.0)	1	2020	4	2022
Test & Evaluation Activities: Integrated Test (Combined/Developmental/Operational)	1	2020	4	2022
Production Milestones: Contracts: Low Rate Initial Production Lot 4 Contract Award	1	2020	1	2020
Production Milestones: Contracts: Low Rate Initial Production Lot 5 Contract Award	1	2020	1	2020
Production Milestones: Deliveries: Low Rate Initial Production Lot 3 Delivery	4	2022	4	2022