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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305205N / <i>UAS Integration & Interoperability</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	84.593	24.235	40.446	62.098	-	62.098	58.418	40.780	37.607	38.225	Continuing	Continuing
3379: <i>Common Control System</i>	84.593	24.235	40.446	62.098	-	62.098	58.418	40.780	37.607	38.225	Continuing	Continuing

Note

The Common Control System (CCS) was budgeted in PE 06404404N prior to FY16.

A. Mission Description and Budget Item Justification

Common Control System (CCS) budget profile supports MQ-25 Stingray, MQ-8 Fire Scout and follow on UxS platforms.

The primary mission of CCS is to provide common control across the Navy's UxSs portfolio to add scalable and adaptable warfighting capability, implement robust cybersecurity attributes, leverage existing government owned products, eliminate redundant software development efforts, consolidate product support, encourage innovation thru competition, improve cost control and enable rapid integration of UxS capabilities across Aviation, Surface, Sub-Surface, and Ground domains.

CCS is a ship/shore/airborne/expeditionary based common control system that provides Vehicle Management (VM) and Mission Management/Mission Planning (MM/MP) capabilities for Naval Group 1 through 5 Unmanned Air Vehicles (UAVs) as well as other domain UxSs. VM is the software that allows the operator to control the UxS. MM/MP is the software that allows the operator to create mission plans and control the UxS's sensors and payloads. CCS software is based on the Society of Automotive Engineers (SAE) Unmanned Control Segment (UCS) architecture which is a service oriented open architecture that is modular and scalable to meet evolving Service requirements and is also supportive of safety/airworthiness certification and cybersecurity certification. The CCS requirements are documented in an approved and validated Information Systems Initial Capabilities Document (IS-ICD) and in approved Requirement Definition Packages (RDP).

This program defines, develops, and delivers CCS capability that enables the flexibility for Ground Control Systems (GCS) that could be ship, shore, airborne, or expeditionary based to operate multiple and dissimilar Naval UxSs. CCS includes a common framework, user interface, and common components that will also be integrated and tested with legacy platform components. CCS is being developed with an open and modular business model with robust cybersecurity implementation and will be provided as Government Furnished Equipment (GFE) to UxS contractors as required.

The CCS acquisition approach provides increasing capability through incremental development for UxS platforms as follows:

Increment I delivered initial unmanned vehicle management (VM) functionality for MQ-25 Stingray in FY 2018, which included flight maneuvering and stationing, situational awareness, and health & performance status monitoring, hosted on legacy platform hardware. CCS VM functionality was delivered to MQ-8 Fire Scout in 1Q FY 2019 with updates delivered in 3Q FY 2019. CCS VM Updates were also delivered to MQ-25 in 4Q FY 2019. Monthly cybersecurity patches and quarterly corrections of deficiencies are being delivered on schedule.

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Increment II builds upon CCS Increment I software delivery, adding discrete common MM/MP capabilities as well as maturing VM capabilities. These MM/MP capabilities include route planning, sensor and payload control, and data processing and dissemination. CCS Increment II software will be hosted on legacy platform hardware. Increment II adds robust cybersecurity controls, key systems safety attributes and core program infrastructure, to include a system integration lab and software support activity (SSA). Additional efforts include developing and executing plans for integration of common CCS VM services already developed under this program into other UxS cross-domain platforms' control stations to reduce department-level Total Ownership Costs for unmanned Ground Control Systems.

Increment III provides common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings.

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	24.663	42.315	66.056	-	66.056
Current President's Budget	24.235	40.446	62.098	-	62.098
Total Adjustments	-0.428	-1.869	-3.958	-	-3.958
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.869			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.428	0.000			
• Program Adjustments	0.000	0.000	-4.200	-	-4.200
• Rate/Misc Adjustments	0.000	0.000	0.242	-	0.242

Change Summary Explanation

FY 2020 congressional directed reduction for Increment III early to need.

FY 2021 funding request was reduced \$2.2M to account for the availability of prior year execution balances, \$2.0M for a funding realignment from RDT&E to OMN to support fielded CCS Cybersecurity Resilience capabilities, and increased by \$0.242M for miscellaneous/rate adjustments.

Schedule Changes:

Changed Increment III start from 2Q FY 2020 to 2Q FY 2021

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Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0305205N / UAS Integration & Interoperability				Project (Number/Name) 3379 / Common Control System			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
3379: <i>Common Control System</i>	84.593	24.235	40.446	62.098	-	62.098	58.418	40.780	37.607	38.225	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Common Control System (CCS) budget profile supports MQ-25 Stingray, MQ-8 Fire Scout and follow on UxS platforms.

The primary mission of CCS is to provide common control across the Navy's UxSs portfolio to add scalable and adaptable warfighting capability, implement robust cybersecurity attributes, leverage existing government owned products, eliminate redundant software development efforts, consolidate product support, encourage innovation thru competition, improve cost control and enable rapid integration of UxS capabilities across Aviation, Surface, Sub-Surface, and Ground domains.

CCS is a ship/shore/airborne/expeditionary based common control system that provides Vehicle Management (VM) and Mission Management/Mission Planning (MM/MP) capabilities for Naval Group 1 through 5 Unmanned Air Vehicles (UAVs) as well as other domain UxSs. VM is the software that allows the operator to control the UxS. MM/MP is the software that allows the operator to create mission plans and control the UxS's sensors and payloads. CCS software is based on the Society of Automotive Engineers (SAE) Unmanned Control Segment (UCS) architecture which is a service oriented open architecture that is modular and scalable to meet evolving Service requirements and is also supportive of safety/airworthiness certification and cybersecurity certification. The CCS requirements are documented in an approved and validated Information Systems Initial Capabilities Document (IS-ICD) and in approved Requirement Definition Packages (RDP).

This program defines, develops, and delivers CCS capability that enables the flexibility for Ground Control Systems (GCS) that could be ship, shore, airborne, or expeditionary based to operate multiple and dissimilar Naval UxSs. CCS includes a common framework, user interface, and common components that will also be integrated and tested with legacy platform components. CCS is being developed with an open and modular business model with robust cybersecurity implementation and will be provided as Government Furnished Equipment (GFE) to UxS contractors as required.

The CCS acquisition approach provides increasing capability through incremental development for UxS platforms as follows:

Increment I delivered initial unmanned vehicle management (VM) functionality for MQ-25 Stingray in FY 2018, which included flight maneuvering and stationing, situational awareness, and health & performance status monitoring, hosted on legacy platform hardware. CCS VM functionality was delivered to MQ-8 Fire Scout in 1Q FY 2019 with updates delivered in 3Q FY 2019. CCS VM Updates were also delivered to MQ-25 in 4Q FY 2019. Monthly cybersecurity patches and quarterly corrections of deficiencies are being delivered on schedule.

Increment II builds upon CCS Increment I software delivery, adding discrete common MM/MP capabilities as well as maturing VM capabilities. These MM/MP capabilities include route planning, sensor and payload control, and data processing and dissemination. CCS Increment II software will be hosted on legacy platform hardware. Increment II adds robust cybersecurity controls, key systems safety attributes and core program infrastructure, to include a system integration lab and software support

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activity (SSA). Additional efforts include developing and executing plans for integration of common CCS VM services already developed under this program into other UxS cross-domain platforms' control stations to reduce department-level Total Ownership Costs for unmanned Ground Control Systems.

Increment III provides common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>Title: Increment I</p> <p align="right">Articles:</p> <p>Description: Common Control System (CCS) Increment 1 provided Unmanned System (UxS) Vehicle Management (VM) hosted on legacy platform hardware required to support UxSs control system development, integration and test. Initial platforms included MQ-25 Stingray and MQ-8 Fire Scout.</p> <p>FY 2020 Plans: N/A</p> <p>FY 2021 Base Plans: N/A</p> <p>FY 2021 OCO Plans: N/A</p>	3.013	0.000	0.000	0.000	0.000
	-	-	-	-	-
<p>Title: Increment II</p> <p align="right">Articles:</p> <p>Description: CCS Increment II develops common MM/MP capabilities and updates and matures VM capabilities, integrating these capabilities into the core CCS software baseline delivered under Increment I in support of Naval UxSs. CCS Increment II is the future common control system software that provides maximum commonality for affordable transition to MQ-25 Stingray, MQ-8 Fire Scout, and other UxS to reduce enterprise Total Ownership Cost for UxS Ground Control Systems. Increment II also incorporates cyber security measures, key systems safety attributes, and core program infrastructure to include system integration lab and software support activities (SSA).</p> <p>FY 2020 Plans: Development of common CCS mission management/mission planning capabilities continue. The SSA will continue to provide integrated software baselines to supported UxS platforms, correct identified deficiencies, ensure cybersecurity compliance, and support engineering/test/evaluation activities. CCS Increment II continues</p>	21.222	40.446	60.198	0.000	60.198
	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<p>software common service development including the continued refinement of incremental common services release for MQ-25 Stingray and MQ-8 Fire Scout, which will support other future UxS platforms transitioning to CCS. Integration and test support for CCS platforms will continue. Advanced development and risk reduction efforts support future UxS integration and establishment of formal CCS software test capabilities. Follow-on efforts for Systems Engineering Technical Agent (SETA) and SSA-Software Integration will initiate in FY 2020 to ensure there are no gaps in software support.</p> <p>FY 2021 Base Plans: Development of common CCS mission management/mission planning capabilities continue. Follow-on efforts for SETA and SSA will be implemented ensuring there are no gaps in software support. The SSA will continue to provide integrated software baselines to supported UxS platforms, correct identified deficiencies, ensure cyber security compliance, and support engineering/test/evaluation activities. The CCS Increment II effort continues common software service development and population of the common CCS software library. The CCS Increment II effort continues refinement of incremental common service release for MQ-25 Stingray and MQ-8 Fire Scout as well as supporting transition of existing legacy UxS platforms to CCS as well as integrating new UxS platforms with the CCS software. Integration and test support for CCS platforms will continue.</p> <p>FY 2021 OCO Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Increase from FY 2020 to FY 2021 is due to phased support of UxS platform requirements as detailed in IS-ICD and RDP. Funding is based upon the CCS Increment II life-cycle cost estimate approved at Milestone-B, in December 2018.</p>					
<p>Title: Increment III</p> <p align="right">Articles:</p> <p>Description: Increment III provides common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings.</p> <p>FY 2020 Plans: N/A</p> <p>FY 2021 Base Plans:</p>	0.000 -	0.000 -	1.900 -	0.000 -	1.900 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Increment III efforts begin with studies and analyses. The studies/analyses includes identification of the overarching requirements, initiation of a draft Concept of Operations, potential hardware solutions, impacts to user training, and potential acquisition strategies. The program continues to work with the end user, OPNAV requirements sponsor, and Service Acquisition Executive to determine the appropriate entry point into the acquisition process. FY 2021 OCO Plans: N/A FY 2020 to FY 2021 Increase/Decrease Statement: Funding increases from FY 2020 to FY 2021 introduces funding to initiate studies and analyses associated with CCS Increment III.					
Accomplishments/Planned Programs Subtotals	24.235	40.446	62.098	0.000	62.098

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/4250: Common Control System	0.594	0.792	1.189	-	1.189	1.494	11.819	11.978	12.274	Continuing	Continuing

Remarks

D. Acquisition Strategy

Program Executive Office Unmanned Aviation and Weapon Systems (PEO(U&W)) issued an Acquisition Decision Memorandum (ADM) 5000 Ser PEO(U&W)/11-093 dated July 1, 2011 to establish the Common Control System (CCS) to achieve Unmanned Aircraft System (UAS) common control across PEO(U&W) UAS platforms to eliminate redundant efforts, encourage innovation and improve cost control of unmanned aviation. As directed by the ADM the program will define, develop and deliver a common control system to operate respective naval Unmanned Systems (UxS)s. This will include a common framework, a common user interface and common components that will be integrated and tested with unique components on emerging or legacy platforms. The CCS acquisition approach provides increasing UxS capability through incremental development for UxS platforms as follows: Increment I provided common Vehicle Management (VM) capability to MQ-25 Stingray and MQ-8 Fire Scout which can also support other UxSs. Increment II develops common MM/MP capabilities and updates and matures VM capabilities, integrating these capabilities into the core CCS software baseline delivered under Increment I in support of Naval UxSs. Increment III provides common hardware for hosting CCS. CCS Increment III software will be developed and delivered with additional capabilities to include cross-domain capabilities and control of multiple dissimilar UxS for further enterprise-level Total Ownership Cost savings. CCS was provided to the MQ-25 Stingray air vehicle prime as Government-Furnished Equipment (GFE) in FY 2018 and was also provided for transition to MQ-8 Fire Scout starting in FY2019. CCS will also be provided to additional follow-on UxS platforms to further reduce enterprise

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<p>Total Ownership Cost for Ground Control Systems. CCS leverages existing government-owned products and will employ competitive procurement vehicles. ASN (RDA) designated CCS Increment II as an ACAT II program on December 1, 2017.</p> <p>PEO(U&W) issued ADM 5000 Ser PEO(U&W)/18-119 dated September 11, 2018 approving the CCS Increment II Acquisition Strategy. PEO(U&W) issued ADM 5000 Ser PEO(U&W)/18-157 dated October 5, 2018 approving the CCS acquisition documentation tailoring and entry criteria for Increment II Milestone B. OPNAV N9 letter designating CCS as the Navy's Unmanned Systems' (UxS) Control Station software signed 31 JAN 19. CCS IS-ICD signed by OPNAV N9 on 01 MAR 19 and validated by JROC on 23 JUL 19. Requirements Definition Package (RDP) for CCS Unmanned Aircraft System (UAS) VM was signed by OPNAV N98 on 07 MAR 19. RDP for CCS UAS MM/MP signed by OPNAV N98 on 07 MAR 19.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy											Date: February 2020				
Appropriation/Budget Activity 1319 / 7						R-1 Program Element (Number/Name) PE 0305205N / UAS Integration & Interoperability					Project (Number/Name) 3379 / Common Control System				

Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Software Development (Increment I)	C/CPFF	Raytheon : Dulles, VA	41.727	2.450	Jan 2019	0.000		0.000		-		0.000	0.000	44.177	44.228
Primary Software Development - Software Services (Increment II)	C/CPFF	TBD : TBD	0.000	0.000		14.298	Mar 2020	33.224	Nov 2020	-		33.224	Continuing	Continuing	Continuing
Primary Software Development - Software Services (Increment II)	C/CPFF	Northrop Grumman : Rancho Bernardo, CA	0.000	4.647	Apr 2019	1.730	Apr 2020	0.000		-		0.000	0.000	6.377	6.377
Studies & Analysis (Increment III)	TBD	TBD : TBD	0.000	0.000		0.000		1.900	Jan 2021	-		1.900	Continuing	Continuing	Continuing
Advanced Development	WR	NAWC-WD : China Lake, CA	5.354	1.925	Nov 2018	1.505	Nov 2019	0.000		-		0.000	0.000	8.784	8.779
Software Cyber Modeling	C/CPFF	JHU APL : Baltimore, MD	2.000	0.000		2.599	Jan 2020	3.000	Jan 2021	-		3.000	Continuing	Continuing	Continuing
Architecture Development	C/CPFF	SEI : Hanscom, MA	1.355	0.000		0.000		0.000		-		0.000	0.000	1.355	1.355
Architecture Development	C/CPFF	NRL : Washington, DC	2.330	0.000		0.000		0.000		-		0.000	0.000	2.330	2.330
Architecture Development	Various	Various : Various	3.605	0.000		0.000		0.000		-		0.000	0.000	3.605	3.605
SSA - Software Integration	C/CPFF	Raytheon : Dulles, VA	1.500	5.628	Nov 2018	7.095	Jan 2020	0.000		-		0.000	0.000	14.223	14.788
SSA - Software Integration	C/CPFF	TBD : TBD	0.000	0.000		3.500	Mar 2020	9.072	Nov 2020	-		9.072	Continuing	Continuing	Continuing
Subtotal			57.871	14.650		30.727		47.196		-		47.196	Continuing	Continuing	N/A

Remarks

The FY 2021 primary software development - Software services (Increment II) contracts support the development of the software services that will be incorporated into CCS. Separate contracts for these software services will be awarded and incrementally funded. The performing activity and location are currently TBD because of the competitive contracting strategy. This contract activity increases because of multiple incrementally funded design, development, and integration efforts. The CCS Version 2.0 release will be delivered and available for platform integration in 2QFY21.

In FY 2021 the prior SSA-Software Integration contract activity concludes. The contractor will deliver laboratory assets to the government. The government will evaluate potential government and contractor support options and initiate a follow-on SSA-Software Integration effort in FY 2020 to ensure there are no gaps in software support. The FY 2021 SSA-Software Integration subsequently will continue integration of Increment II common services and delivery to supported programs.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy **Date:** February 2020

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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC-AD : Pax River, MD	10.727	3.732	Nov 2018	4.322	Nov 2019	9.568	Nov 2020	-		9.568	Continuing	Continuing	Continuing
Lead Systems Engineering and Integration	WR	NAWC-WD : Pt Mugu, CA	2.995	0.000		0.000		0.000		-		0.000	0.000	2.995	2.995
Systems Engineering	C/CPFF	Engility : Pax River, MD	0.756	0.000		0.000		0.000		-		0.000	0.000	0.756	0.756
Systems Engineering Integration Test	C/CPFF	Booz Allen : Pax River, MD	2.714	0.000		0.000		0.000		-		0.000	0.000	2.714	2.714
Systems Engineering Study	C/CPFF	CNA : Alexandria, VA	0.800	0.000		0.000		0.000		-		0.000	0.000	0.800	0.800
Systems Engineering	Various	Various : Various	1.666	0.000		0.000		0.000		-		0.000	0.000	1.666	1.666
Systems Engineering Technical Agent	C/CPFF	DCS Corporation : Alexandria, VA	3.935	3.032	Nov 2018	4.003	Nov 2019	0.000		-		0.000	0.000	10.970	9.530
Systems Engineering Technical Agent	C/CPFF	TBD : TBD	0.000	0.000		0.000		2.146	Nov 2020	-		2.146	Continuing	Continuing	Continuing
Subtotal			23.593	6.764		8.325		11.714		-		11.714	Continuing	Continuing	N/A

Remarks
 FY 2021 activities continue the development of the CCS architecture and requirements for future mission management/mission planning contract actions and supports the development of an increased number of common services in FY 2021. A competitive follow-on Systems Engineering Technical Agent (SETA) effort will also be awarded in 1Q FY 2021, and ensure no gaps in architecture and requirements development.

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DT&E/OT	WR	NAWC-AD : Pax River, MD	1.142	0.570	Nov 2018	0.561	Nov 2019	2.254	Nov 2020	-		2.254	Continuing	Continuing	Continuing
DT&E	WR	NAWC-WD : Pt Mugu, CA	0.730	0.000		0.000		0.000		-		0.000	0.000	0.730	0.730
DT&E/OT	C/CPFF	BAE : Rancho Bernardo, CA	0.000	1.750	Jul 2019	0.000		0.000		-		0.000	0.000	1.750	1.750

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Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			1.872	2.320		0.561		2.254		-		2.254	Continuing	Continuing	N/A

Remarks
FY 2021 Test and Evaluation efforts support DT/OT events for the integration and test of an increased number of CCS Increment II software services support, MQ-8 Fire Scout, MQ-25 Stingray, and additional UxS platforms.

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	WR	NAWC-AD : Pax River, MD	1.004	0.209	Nov 2018	0.429	Nov 2019	0.430	Nov 2020	-		0.430	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	Ausley Associates : Lexington Park, MD	0.253	0.292	Nov 2018	0.404	Nov 2019	0.504	Nov 2020	-		0.504	Continuing	Continuing	Continuing
Subtotal			1.257	0.501		0.833		0.934		-		0.934	Continuing	Continuing	N/A

Remarks
Increased Contractor support for multiple platforms in FY 2021.

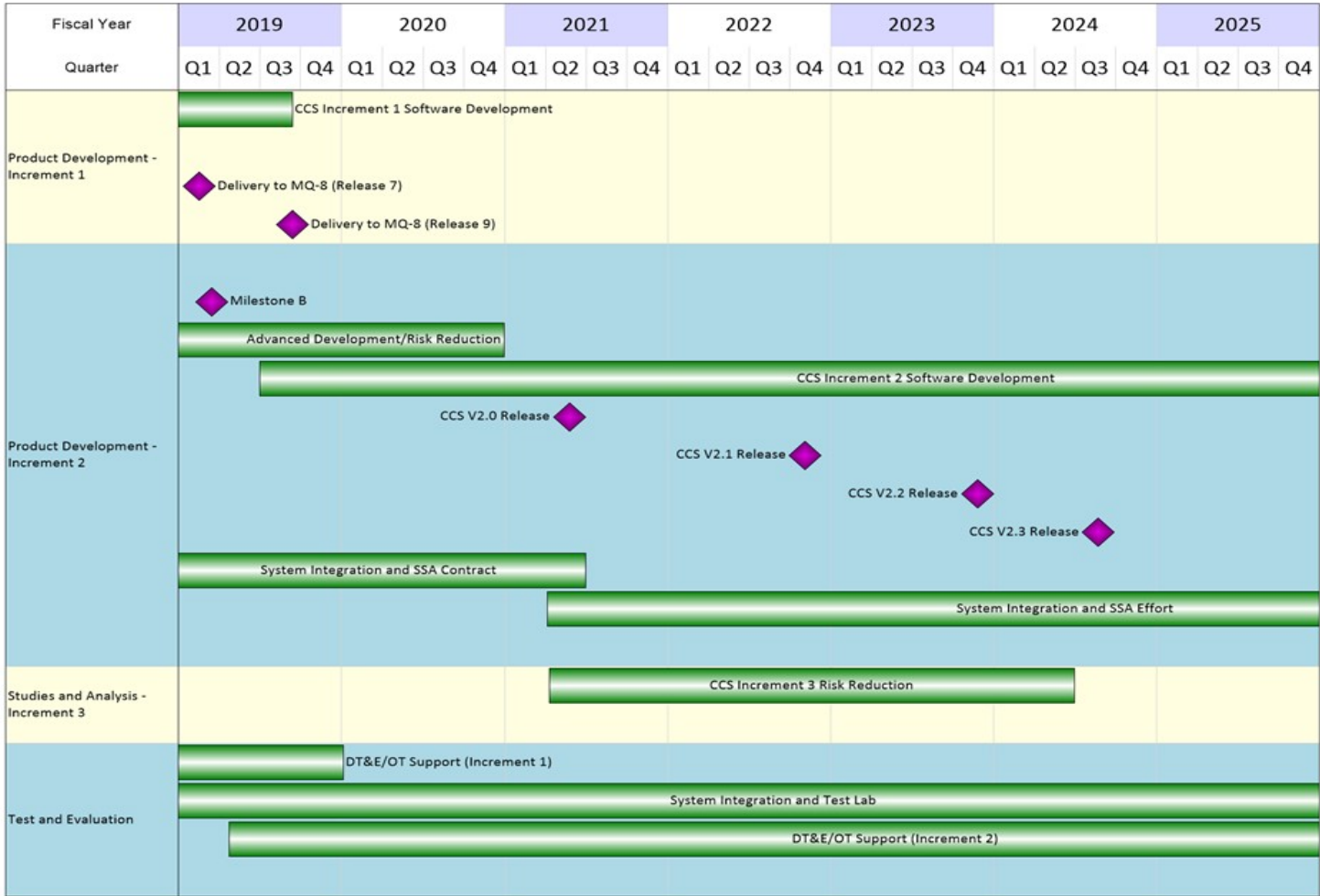
	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	84.593	24.235	40.446	62.098	-	62.098	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy **Date:** February 2020

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy		Date: February 2020
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Common Control System				
Acquisition Milestones: Milestones: Inc II Milestone B	1	2019	1	2019
Product Development: Increment I: CCS Increment I Software Development	1	2019	3	2019
Product Development: Increment I: Initial Delivery to MQ-8	1	2019	1	2019
Product Development: Increment I: Delivery to MQ-8	3	2019	3	2019
Product Development: Increment II: Advanced Development/Risk Reduction	1	2019	4	2020
Product Development: Increment II: CCS Program Software Integration/SSA Support	1	2019	2	2021
Product Development: Increment II: CCS Program Software Integration/SSA Follow-on Efforts	2	2021	4	2025
Product Development: Increment II: CCS Increment II Software Development	3	2019	4	2025
Product Development: Increment II: CCS V2.0 Release	2	2021	2	2021
Product Development: Increment II: CCS V2.1 Release	4	2022	4	2022
Product Development: Increment II: CCS V2.2 Release	4	2023	4	2023
Product Development: Increment II: CCS V2.3 Release	3	2024	3	2024
Product Development: Increment III: Increment III Risk Reduction	2	2021	2	2024
Test and Evaluation: DT&E/OT Support (Increment I)	1	2019	4	2019
Test and Evaluation: DT&E/OT Support (Increment II)	2	2019	4	2025
Test and Evaluation: System Integration and Test Laboratory	1	2019	4	2025