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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2022 Navy **Date:** May 2021

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 7: Operational Systems Development</i>					<b>R-1 Program Element (Number/Name)</b> PE 0305205N / <i>UAS Integration &amp; Interoperability</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	108.828	37.740	61.235	9.797	-	9.797	-	-	-	-	-	-
3379: <i>Common Control System</i>	108.828	37.740	61.235	9.797	-	9.797	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

Project 3379: Common Control System (CCS) budget profile supports 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 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. CCS is integrated with legacy UxS Platforms' defined hardware, processors and networks.

The CCS requirements are documented in an approved and validated Information Systems Initial Capabilities Document (IS-ICD) and in approved Requirement Definition Packages (RDPs). CCS offers a low cost test and integration alternative for platform suitability determination across a broad spectrum of UxS capability. CCS is also developing affordable, scalable capabilities that are exportable to UxS platforms in the following areas: cyber security/ resiliency, interoperability solutions (across multiple architectures), multi-level security, executive control, autonomy and artificial intelligence/ machine learning.

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: CCS will deliver a UAS baseline of VM and MM software built to the full SAE UCS standard to support emerging requirements. Increment I development activities completed in FY 2019. 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), which provides software maintenance and support such as monthly cybersecurity patches and Correction of Deficiencies. 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

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department-level Total Ownership Costs for unmanned Ground Control Systems. The CCS Acquisition Strategy will be revised going forward in FY21 to align with the UxS Campaign Plan to focus on executive control, automation, artificial intelligence, machine learning for UxS systems and continuing to reduce barriers to integration of Government owned software services.

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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	40.446	62.098	58.418	-	58.418
Current President's Budget	37.740	61.235	9.797	-	9.797
Total Adjustments	-2.706	-0.863	-48.621	-	-48.621
• Congressional General Reductions	-	-0.863			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.453	0.000			
• SBIR/STTR Transfer	-1.253	0.000			
• Program Adjustments	0.000	0.000	-47.378	-	-47.378
• Rate/Misc Adjustments	0.000	0.000	-1.243	-	-1.243

**Change Summary Explanation**

FY 2022 budget request was reduced by \$7.910M since the FY 2021 President's Budget submission to account for the availability of prior year execution, reduced by \$1.243M for Other Rate/Misc Adjustments (MISC), and reduced by \$39.468M for the following:

- 1.) The determination that existing Navy systems meet several CCS Mission Management/Mission Planning (MM/MP) requirements,
- 2.) Development of a CCS common hardware solution is no longer necessary due to advances in networks and COTS hardware,
- 3.) Navy's decision to switch the MQ-25 Ground Control Station (GCS) from the MD-5 A/B to the MD-5 C/D/E GCS, which does not require CCS for the initial fielding.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2022 Navy **Date:** May 2021

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305205N / UAS Integration & Interoperability	<b>Project (Number/Name)</b> 3379 / Common Control System
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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
3379: Common Control System	108.828	37.740	61.235	9.797	-	9.797	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

Common Control System (CCS) budget profile supports 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) /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 capabilities 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 and MQ-8 Fire Scout in FY 2019. Increment I development activities completed in FY 2019. 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), which provides monthly cybersecurity patches and Correction of Deficiencies. 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. The CCS Acquisition Strategy will be revised going forward in FY21 to align with the UxS Campaign Plan to focus on executive control, automation, artificial intelligence and machine learning for UxS systems.

Decreases from FY21 to FY22 are due to:

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Navy	<b>Date:</b> May 2021
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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305205N / UAS Integration & Interoperability	<b>Project (Number/Name)</b> 3379 / Common Control System
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- 1.) The determination that existing Navy systems meet several CCS Mission Management/Mission Planning (MM/MP) requirements,
- 2.) Development of a CCS common hardware solution is no longer necessary due to advances in networks and COTS hardware,
- 3.) Navy's decision to switch the MQ-25 Ground Control Station (GCS) from the MD-5 A/B to the MD-5 C/D/E GCS, which does not require CCS for the initial fielding.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<b>Title:</b> Increment II	37.740	13.235	9.797	0.000	9.797
<b>Articles:</b>	-	-	-	-	-
<p><b>Description:</b> 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-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><b>FY 2021 Plans:</b> 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 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; including seeking interoperability opportunities with other Navy and DoD programs. Integration and test support for CCS platforms will continue. Release of CCS V2.0 software.</p> <p><b>FY 2022 Base Plans:</b> 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. Development efforts support the CNO's Unmanned Campaign Plan including key focus areas related to Model-Based System Engineering, interoperability throughout the Navy and DoD, autonomy, artificial intelligence /machine learning, manned-unmanned teaming, cyber defense and continuing to reduce barriers to integration of Government owned software services. This includes incremental deliveries of both the Integrated Cyber Model (ICM) to detect/address cyber attacks during mission execution and the CCS Common Presentation Layer, the</p>					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
prerequisite for control of multiple dissimilar UxS vehicles from a single control station. Integration and test support will continue.  <b>FY 2022 OCO Plans:</b> N/A  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Decreases from FY 2021 to FY 2022 are due to: 1.) The determination that existing Navy systems meet several CCS CCS Increment II Mission Management/ Mission Planning (MM/MP) requirements, 2.) Development of a CCS Increment III (common hardware) solution is no longer necessary due to advances in networks and COTS hardware, 3.) Navy's decision to switch the MQ-25 Ground Control Station (GCS) from the MD-5 A/B to the MD-5 C/D/E GCS, which does not require CCS for the initial fielding.					
<b>Title:</b> MQ-25 FY21  <b>Articles:</b>	0.000	48.000	0.000	0.000	0.000
<b>Description:</b> \$48M CCS FY21 funding realigned to PMA-268(MQ-25) during execution due to: 1) \$35.1M cost avoidance realized by fielding Minotaur with CCS and deferring the program's Inc. III study. 2) \$9.1M platform integration savings due to the Navy's decision to switch the MQ-25 Ground Control Station (GCS) from the MD-5 A/B to the MD-5 C/D/E GCS. 3) \$3.7M Systems Integration Support (Gov't/Contractor).  <b>FY 2021 Plans:</b> 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.  <b>FY 2022 Base Plans:</b> N/A  <b>FY 2022 OCO Plans:</b>	-	-	-	-	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
N/A					
<b><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i></b>					
\$48M CCS FY21 funding realigned to PMA-268(MQ-25) during execution due to:					
1) \$35.1M cost avoidance realized by fielding Minotaur with CCS and deferring the program's Inc. III study.					
2) \$9.1M platform integration savings due to the Navy's decision to switch the MQ-25 Ground Control Station (GCS) from the MD-5 A/B to the MD-5 C/D/E GCS.					
3) \$3.7M Systems Integration Support (Gov't/Contractor).					
Actual FY21 funds executed within the CCS Program of Record = \$13.235					
<b>Accomplishments/Planned Programs Subtotals</b>	37.740	61.235	9.797	0.000	9.797

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPN/4250: Common Control System	0.792	1.189	1.470	-	1.470	-	-	-	-	-	-

**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 be integrated into platform ground control systems that 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. 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 FY 2019.

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<p>CCS will be provided to additional follow-on UxS platforms to further reduce enterprise Total Ownership Cost for Ground Control Systems. CCS leverages existing government-owned products and will employ competitive procurement vehicles.</p> <p>ASN (RDA) designated CCS Increment II as an ACAT II program on December 1, 2017. PEO(U&amp;W) issued ADM 5000 Ser PEO(U&amp;W)/18-119 dated September 11, 2018 approving the CCS Increment II Acquisition Strategy. PEO(U&amp;W) issued ADM 5000 Ser PEO(U&amp;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. A Key Performance Parameter for all future Navy Unmanned Systems to use CCS was approved by OPNAV N9 08 JAN 2020. RDP for CCS interoperability signed by OPNAV N98 on 23 JUL 20. CCS was reaffirmed as the Navy's Modular Open Systems Architecture (MOSA) control software solution for all Navy Unmanned Systems (UxS), DEC 2020. OPNAV N9 further highlighted their commitment to CCS as defined in the UxS Campaign Plan on 17 MAR 21.</p>		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy** **Date:** May 2021

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<b>Product Development (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Primary Software Development (Increment I)	C/CPFF	Raytheon : Dulles, VA	44.177	0.000		0.000		0.000		-		0.000	-	-	-
Primary Software Development - Software Services (Increment II)	C/CPFF	TBD : TBD	0.000	0.000		0.000	Nov 2020	2.000	Nov 2021	-		2.000	-	-	-
Primary Software Development - Software Services (Increment II)	C/CPFF	Northop Grumman : Rancho Bernardo, CA	4.647	8.387	Apr 2020	0.000	Mar 2021	0.000		-		0.000	-	-	-
Primary Software Development - Software Services (Increment II)	C/CPFF	Raytheon : Dulles, VA	0.000	2.364	Jul 2020	0.000	Jan 2021	0.000		-		0.000	-	-	-
Advanced Development	WR	NAWC-WD : China Lake, CA	7.279	1.060	Nov 2019	0.235	Nov 2021	0.235	Nov 2021	-		0.235	-	-	-
Software Cyber Modeling	C/CPFF	JHU APL : Baltimore, MD	2.000	2.599	Jan 2020	0.350	Jul 2021	0.365	Jul 2022	-		0.365	-	-	-
Architecture Development	C/CPFF	SEI : Hanscom, MA	1.355	0.000		0.000		0.000		-		0.000	-	-	-
Architecture Development	C/CPFF	NRL : Washington, DC	2.330	0.000		0.000		0.000		-		0.000	-	-	-
Architecture Development	Various	Various : Various	3.605	1.000	Mar 2020	0.165	Mar 2021	0.100	Mar 2022	-		0.100	-	-	-
SSA - Software Integration	C/CPFF	Raytheon : Dulles, VA	7.128	9.929	Jan 2020	0.000		0.000		-		0.000	-	-	-
SSA - Software Integration	C/CPFF	NIWC : San Diego, CA	0.000	1.690	Mar 2020	4.900	Nov 2020	3.498	Nov 2021	-		3.498	-	-	-
MQ-25 MIPR NSMA	TBD	NSMA : Washington, DC	0.000	0.000		48.000	May 2021	0.000		-		0.000	-	-	-
<b>Subtotal</b>			72.521	27.029		53.650		6.198		-		6.198	-	-	N/A

**Remarks**  
 FY21 plan updated to actuals due to realignment of \$48M to MQ-25 MIPR NSMA Cost Element.  
 The FY22 primary software development contracts support the CNO's UxS Campaign plan. The performing activity and location are currently TBD because of the competitive contracting strategy.

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<b>Support (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Systems Engineering	WR	NAWC-AD : Pax River, MD	14.459	3.922	Nov 2019	3.650	Nov 2020	1.025	Nov 2021	-		1.025	-	-	-
Lead Systems Engineering and Integration	WR	NAWC-WD : Pt Mugu, CA	2.995	0.000		0.000		0.000		-		0.000	-	-	-
Systems Engineering	C/CPFF	Engility : Pax River, MD	0.756	0.000		0.000		0.000		-		0.000	-	-	-
Systems Engineering Integration Test	C/CPFF	Booz Allen : Pax River, MD	2.714	0.350	Feb 2020	0.000	Feb 2021	0.000		-		0.000	-	-	-
Systems Engineering Study	C/CPFF	CNA : Alexandria, VA	0.800	0.000		0.000		0.000		-		0.000	-	-	-
Systems Engineering	Various	Various : Various	1.666	0.000		0.000		0.000		-		0.000	-	-	-
Systems Engineering Technical Agent	C/CPFF	DCS Corporation : Alexandria, VA	6.967	3.209	Nov 2019	0.000		0.000		-		0.000	-	-	-
Systems Engineering Technical Agent Follow On	C/CPFF	DCS Corporation : Alexandria, VA	0.000	0.600	Sep 2020	1.700	Nov 2020	1.250	Nov 2021	-		1.250	-	-	-
Systems Engineering	C/CPFF	PSE : San Diego, CA	0.000	0.650	Mar 2020	1.100	Nov 2020	0.822	Nov 2021	-		0.822	-	-	-
<b>Subtotal</b>			30.357	8.731		6.450		3.097		-		3.097	-	-	N/A

**Remarks**  
 FY21 plan updated to actuals due to realignment of \$48M to MQ-25 MIPR NSMA Cost Element.  
 FY22 activities continue the development of the CCS architecture and requirements in support of the CNO's UxS Campaign Plan.

<b>Test and Evaluation (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
DT&E/OT	WR	NAWC-AD : Pax River, MD	1.712	0.482	Nov 2019	0.351	Nov 2020	0.150	Nov 2021	-		0.150	-	-	-
DT&E	WR	NAWC-WD : Pt Mugu, CA	0.730	0.000		0.000		0.000		-		0.000	-	-	-
DT&E/OT	C/CPFF	BAE : Rancho Bernardo, CA	1.750	0.799	May 2020	0.000		0.000		-		0.000	-	-	-

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<b>Test and Evaluation (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
<b>Subtotal</b>			4.192	1.281		0.351		0.150		-		0.150	-	-	N/A

**Remarks**  
 FY21 plan updated to actuals due to realignment of \$48M to MQ-25 MIPR NSMA Cost Element.  
 FY22 Test and Evaluation efforts support DT/OT events for the integration and test of CCS Increment II software services support, MQ-8 Fire Scout and additional UxS platforms.

<b>Management Services (\$ in Millions)</b>				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	1.213	0.237	Nov 2019	0.351	Nov 2020	0.121	Nov 2021	-		0.121	-	-	-
Program Management Support	C/CPFF	Ausley Associates : Lexington Park, MD	0.545	0.462	May 2020	0.433	May 2021	0.231	May 2022	-		0.231	-	-	-
<b>Subtotal</b>			1.758	0.699		0.784		0.352		-		0.352	-	-	N/A

**Remarks**  
 FY21 plan updated to actuals due to realignment of \$48M to MQ-25 MIPR NSMA Cost Element.  
 Decrease from FY21-FY22 of \$0.230M to Program Management and \$0.202M Program Management Support a result of alt-GCS decision.

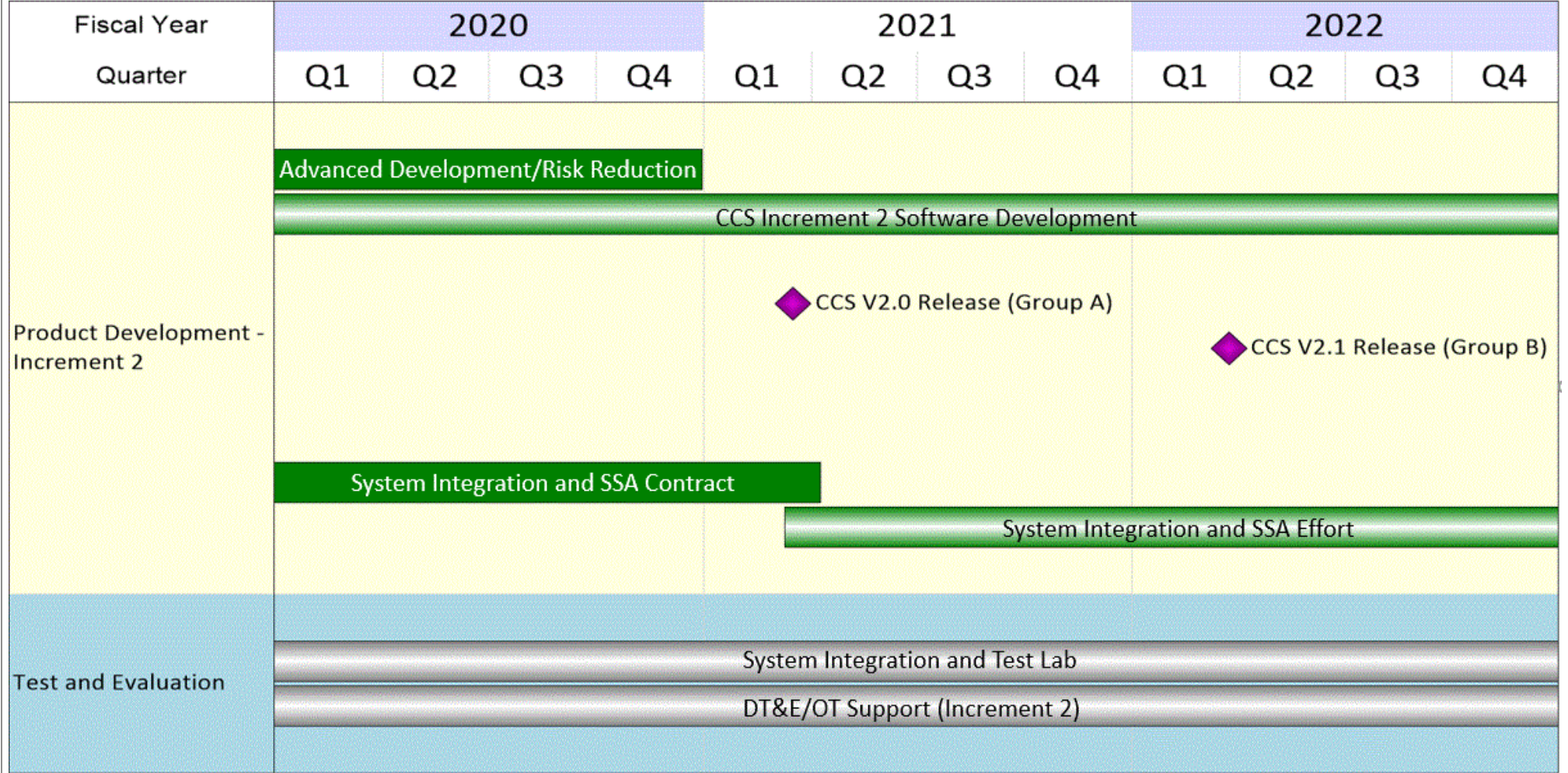
	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	108.828	37.740	61.235	9.797	-	9.797	-	-	N/A

**Remarks**

**UNCLASSIFIED**

**Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy** **Date:** May 2021

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305205N / UAS Integration & Interoperability	<b>Project (Number/Name)</b> 3379 / Common Control System
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**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2022 Navy</b>		<b>Date: May 2021</b>
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0305205N / <i>UAS Integration &amp; Interoperability</i>	<b>Project (Number/Name)</b> 3379 / <i>Common Control System</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Common Control System</i></b>				
Product Development: Increment II: Advanced Development/Risk Reduction	1	2020	4	2020
Product Development: Increment II: CCS Program Software Integration/SSA Support	1	2020	2	2021
Product Development: Increment II: CCS Program Software Integration/SSA Follow-on Efforts	2	2021	4	2022
Product Development: Increment II: CCS Increment II Software Development	1	2020	4	2022
Product Development: Increment II: CCS V2.0 Release	2	2021	2	2021
Test and Evaluation: DT&E/OT Support (Increment II)	1	2020	4	2022
Test and Evaluation: System Integration and Test Laboratory	1	2020	4	2022