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

<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 0204575N / <i>Elect Warfare Readiness Supt</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	174.907	64.264	71.143	56.791	-	56.791	80.333	74.556	71.991	73.431	Continuing	Continuing
2263: <i>Information Warfare System</i>	157.305	45.188	30.591	37.089	-	37.089	55.513	52.095	50.542	51.553	Continuing	Continuing
2958: <i>Cyberspace Activities</i>	0.000	0.000	29.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.000
3426: <i>Maritime Cyber</i>	17.602	19.076	11.552	19.702	-	19.702	24.820	22.461	21.449	21.878	Continuing	Continuing

**Note**

Starting in FY21, funds for project 2958 realigned to PE 0305251N, a Cyberspace Operations Forces and Force Support PE.

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

Information Warfare Systems (2263) - This budget item funds: research and development (R&D) activities; vulnerability analysis and reverse engineering of emerging threats and targets; specialized technical, engineering and management capabilities; program office and program management support contracts, engineering support, modeling and simulation, administrative and security personnel; a classified administrative network that provides the capability to track and manage the Command's projects, contracts, and financials with appropriate security mechanisms to protect the information and data; focused radio frequency (RF) collection missions to expose potential vulnerabilities and identify new signals of interest for future countermeasure development; operation, sustainment and support of Development Network environment(s) and test environment enabling USN and USCC requirements; identification, development and testing of electronic attack countermeasures; Configuration Management Authority, delegated from Commander, TENTH Fleet, which reviews, validates, publishes, and maintains the standard for signal-specific software for tactical Navy RF collectors; support facilities and apparatus at various locations; logistics support costs associated with R&D activities. (Additional details held at a higher classification).

Cyberspace Activities (2958) - Starting in FY21, funds for project code 2958 PE 0204575N realigned to PE 0305251N, a Cyberspace Operations Forces and Force Support Program Element.

Maritime Cyber (3426) - This budget item funds: research and development activities; intelligence analysis and linguistic support; reverse engineering and vulnerability assessment; radio frequency (RF) testing; program office support; Agile development operations expertise and training. (Additional details held at a higher classification).

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2021 Navy	<b>Date:</b> February 2020
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<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 0204575N / <i>Elect Warfare Readiness Supt</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Previous President's Budget	66.889	82.325	116.872	-	116.872
Current President's Budget	64.264	71.143	56.791	-	56.791
Total Adjustments	-2.625	-11.182	-60.081	-	-60.081
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-11.182			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.050	0.000			
• SBIR/STTR Transfer	-2.575	0.000			
• Program Adjustments	0.000	0.000	-60.081	-	-60.081
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

**Change Summary Explanation**

The FY2021 funding request for PE 0204575N was decreased by \$60.081 million, program adjustments are as follows:

- The FY2021 funding request was reduced by \$6.081 million to account for the availability of prior year execution balances.
- The FY2021 funding request was reduced by \$54.0 million due to realignments, of which \$43.0 million was realigned from PE 0204575N to PE 0305251N.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 1319 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>				<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2263: <i>Information Warfare System</i>	157.305	45.188	30.591	37.089	-	37.089	55.513	52.095	50.542	51.553	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

Information Warfare (IW) develops a deep understanding of potential adversaries and systems, identifies vulnerabilities, and conducts research and development efforts that lead to delivery of effects in support of Fleet Operations Plans. It uses iterative, flexible, and adaptive processes that leverage intelligence, operations, and acquisition authorities for projects and deliverables. IW delivers capabilities at all classification levels that deny, degrade, deceive, disrupt, or destroy the ability to find and target systems and platforms. These deliverables contribute to tactical, operational, and strategic options available to Fleet and Combatant Commanders.

Funds provided for vulnerability analysis and reverse engineering of emerging threats and targets; program office and program management support; engineering support, modeling and simulation; administrative and security personnel; specialized technical, engineering and management capabilities; Funds support focused radio frequency (RF) collection missions to expose potential vulnerabilities and identify new signals for future countermeasure development. Funds also support operation, sustainment, and support of development network environment(s) and test environment; identification, development and testing of electronic attack countermeasures; classified administrative network which provides the capability to track and manage projects, contracts, and financials with security mechanisms to protect the information and data; and all support facilities and apparatus at various locations, including Logistics support costs. (Additional details held at a higher classification)

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Title:</b> Electronic Warfare / Information and Computer Network Operations (IO & CNO) and Countermeasure Capability Research & Development	45.188	30.591	37.089	0.000	37.089
<b>Articles:</b>	-	-	-	-	-
<b>FY 2020 Plans:</b> Investments will continue in intelligence discovery from terrestrial locations and afloat systems to identify adversary vulnerabilities and build Information Warfare (IW) capabilities - Equipment upgrades, mission, and maintenance OCONUS - Conduct target development afloat missions after identification of new signals - Validate newly developed software to all afloat forces - Maintain the database with all signal descriptor files for targets - Develop, test, and field tactical electronic attack options based on requirements and priorities to individual platforms					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<ul style="list-style-type: none"> <li>- Complete study to determine feasibility of expanding an existing IW technique against a more general set of targets in the same and other frequency bands. (Additional details held at a higher classification)</li> <li>- Reconstitute a robust modeling and simulation capability that supports analysis, development and testing of IW capabilities throughout their lifecycle, beginning with physics and engineering models.</li> <li>- Advancements in reverse engineering and vulnerability analysis using joint project support expertise.</li> <li>- Tactical Research Target Development (TRTD) remoted operations and develop machine learning algorithms to analyze the remotely collected plans to data.</li> <li>- Deliver technical data package for antennae modifications for ships</li> <li>- Provide communications connectivity to OCONUS site for remote operations and data analysis.</li> <li>- Begin to provide advanced 5G specification analysis, open5G Hardware/Software (HW/SW) support. Smart probe continuation and protocol stack, techniques, and platform development.</li> <li>- Develop advanced propagation models for frequencies below High Frequency (HF)</li> <li>- Conduct feasibility and scoping study for cyber effects development.</li> <li>- Develop a prototype data-mining tool to aid in the discovery and prioritization of hardware and software vulnerabilities.</li> </ul> <p>(Additional details held at a higher classification)</p> <p><b><i>FY 2021 Base Plans:</i></b> Investments in intelligence discovery from terrestrial locations and afloat systems, with the intent of identifying adversary vulnerabilities and building Information Warfare (IW) capabilities.</p> <ul style="list-style-type: none"> <li>- OCONUS site equipment upgrades; mission and maintenance activities continue.</li> <li>- Target conduct development afloat missions after identification of new signals.</li> <li>- Validate newly developed software for all afloat forces</li> <li>- Maintain the database with all signal descriptor files for targets</li> <li>- Develop, test, and field tactical electronic attack options based on requirements and priorities to individual platforms.</li> <li>- Advancements in reverse engineering and vulnerability analysis using joint project expertise.</li> <li>- Begin integration of new acquisitions into Tactical Research Target Development (TRTD) collection suites and eventual deployment on multiple platforms, cross service platforms and terrestrial sites.</li> <li>- Expand development work to prototype testing and evaluation.</li> <li>- Develop advanced propagation models for frequencies below High Frequency (HF)</li> <li>- Complete development work and prototype testing and evaluation.</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
- Work on a prototype data-mining tool to aid in the discovery and prioritization of hardware and software vulnerabilities. - Provide prototype code, integration, and documentation. (Additional details held at a higher classification)  <b>FY 2021 OCO Plans:</b> N/A  <b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> FY21 increase of \$6.498 million is due to further development and engineering of hardware and equipment for prototype data-mining tools and Tactical Research Target Development (TRTD) activities.  The FY 2021 funding request was reduced by \$2.500 million to account for the availability of prior year execution balances.					
<b>Accomplishments/Planned Programs Subtotals</b>	45.188	30.591	37.089	0.000	37.089

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

Projects under this program are designated non-ACAT.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2021 Navy</b>											<b>Date:</b> February 2020				
<b>Appropriation/Budget Activity</b> 1319 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>					<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>				

<b>Product Development (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Development(1)	Various	Classified : Classified	45.104	11.787	Oct 2018	5.342	Oct 2019	4.074	Oct 2020	-		4.074	Continuing	Continuing	Continuing
Engineering & Development	MIPR	JHU APL : Various	15.167	0.661	Oct 2018	1.312	Oct 2019	0.651	Oct 2020	-		0.651	Continuing	Continuing	Continuing
Development	WR	NRL : Washington, DC	22.592	3.381	Oct 2018	3.120	Oct 2019	4.750	Oct 2020	-		4.750	Continuing	Continuing	Continuing
Support Development	C/FFP	CWG-6 : Ft. Meade	0.000	1.167	Oct 2018	0.500	Oct 2019	1.200	Oct 2020	-		1.200	Continuing	Continuing	Continuing
System Engineering	C/CPFF	SAIC : Wash D.C.	0.000	0.500	Feb 2019	0.744	Nov 2019	0.753	Nov 2020	-		0.753	Continuing	Continuing	Continuing
General Development(1)	Various	Classified : Classified	0.000	1.800	Oct 2018	0.000		2.500	Oct 2020	-		2.500	Continuing	Continuing	Continuing
Technical Data	C/FFP	Various : Various	0.755	1.430	Oct 2018	1.157	Oct 2019	1.350	Oct 2020	-		1.350	Continuing	Continuing	Continuing
Software Development	WR	NRL : Washington, DC	0.000	0.650	Oct 2018	0.650	Oct 2019	0.650	Oct 2020	-		0.650	Continuing	Continuing	Continuing
Hardware/Equipment	Various	DLA, NSA, NAVAIR, GSA : Various	6.893	2.846	Oct 2018	3.250	Oct 2019	5.636	Oct 2020	-		5.636	Continuing	Continuing	Continuing
System Engineering	WR	NRL : Washington, DC	20.903	0.650	Oct 2018	0.650	Oct 2019	0.700	Oct 2020	-		0.700	Continuing	Continuing	Continuing
Engineering(1)	Various	Classified : Classified	10.956	2.417	Oct 2018	2.500	Oct 2019	4.787	Oct 2020	-		4.787	Continuing	Continuing	Continuing
Software Development(1)	Various	Classified : Classified	2.943	1.334	Oct 2018	0.627	Oct 2019	0.891	Oct 2020	-		0.891	Continuing	Continuing	Continuing
Program	C/CPFF	OakleaSimpon : Ft. Meade	0.237	0.523	Oct 2018	0.523	Oct 2019	0.540	Oct 2020	-		0.540	Continuing	Continuing	Continuing
<b>Subtotal</b>			125.550	29.146		20.375		28.482		-		28.482	Continuing	Continuing	N/A

**Remarks**

1-Due to classification category, will not be on GENSER classified exhibits.

<b>Support (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Software	WR	NRL : Wash DC	1.095	0.143	Nov 2018	0.143	Nov 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Software	WR	NAVWAR : San Diego CA	2.121	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2021 Navy</b>											<b>Date:</b> February 2020				
<b>Appropriation/Budget Activity</b> 1319 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>					<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>				

<b>Support (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Studies/Analysis	WR	NPS : Monterey CA	0.800	0.053	Nov 2018	0.340	Nov 2019	0.500	Nov 2020	-		0.500	Continuing	Continuing	Continuing
Program Support - ASEP	MIPR	Army : Ft. Detrick MD	4.600	1.607	Oct 2018	2.351	Oct 2019	2.200	Oct 2020	-		2.200	Continuing	Continuing	Continuing
Software Support	MIPR	JHU APL : Various	0.000	0.733	May 2019	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Support	WR	NIWC LANT : VA	0.000	0.600	Jan 2019	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Support	C/CPFF	CMU SEI : Pittsburgh PA	0.000	2.700	Feb 2019	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
General Engineering Support	C/CPFF	PSU ARL : Pittsburgh PA	0.000	0.000		1.000	Oct 2019	1.000	Oct 2020	-		1.000	Continuing	Continuing	Continuing
General Engineering Support(1)	C/CPFF	Classified : Classified	0.000	0.400	Nov 2018	0.524	Nov 2019	0.537	Nov 2020	-		0.537	Continuing	Continuing	Continuing
Test & Evaluation	C/CPFF	PSU ARL : Pittsburgh PA	0.000	0.000		0.000		1.000	Oct 2020	-		1.000	Continuing	Continuing	Continuing
Studies/Analysis	C/FFP	Various : Various	0.000	0.500	Oct 2018	0.750	Oct 2019	0.000		-		0.000	Continuing	Continuing	Continuing
Development Support	C/CPFF	SNS One : Maryland	0.000	1.430	Oct 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Development Support	C/CPFF	MITRE : McLean, VA	0.000	0.200	Oct 2018	0.400	Oct 2019	0.400	Oct 2020	-		0.400	Continuing	Continuing	Continuing
Logistics	Various	NAVFAC : MIDLANT VA	0.461	0.132	Oct 2018	0.111	Oct 2019	0.120	Oct 2020	-		0.120	Continuing	Continuing	Continuing
<b>Subtotal</b>			9.077	8.498		5.619		5.757		-		5.757	Continuing	Continuing	N/A

**Remarks**

1-Due to classification category, will not be on GENSER classified exhibits.

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Mod & Sim(1)	Various	Classified : Classified	5.702	2.822	Oct 2018	0.850	Oct 2019	1.090	Oct 2020	-		1.090	Continuing	Continuing	Continuing
Operational Test & Evaluation	Various	Various : Various	0.782	1.052	Oct 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			6.484	3.874		0.850		1.090		-		1.090	Continuing	Continuing	N/A

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

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>
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<b>Test and Evaluation (\$ in Millions)</b>				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			

**Remarks**  
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<b>Management Services (\$ in Millions)</b>				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 Services	Various	Classified : Classified	16.194	3.670	Oct 2018	3.747	Oct 2019	1.760	Oct 2020	-		1.760	Continuing	Continuing	Continuing
<b>Subtotal</b>			16.194	3.670		3.747		1.760		-		1.760	Continuing	Continuing	N/A

**Remarks**  
1-Due to classification category, will not be on GENSER classified exhibits.

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	
	<b>Project Cost Totals</b>		157.305	45.188	30.591	37.089	-	37.089	Continuing	Continuing

**Remarks**

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

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>
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Proj 2263	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
<b>Information Warfare System Activities</b>																												
Quarterly Program Review													QPR 1															
Aperture upgrades																												
SPOONMAN Implementation			◆																									
Fleet Integration																												
UHF																												
Ku-Band																												
VIRTUOSO Testing Integration																												
ESE Activites																												
NPS Activities																												
DevOps Support																												
Program Management																												
Modeling and Simulation																												
Development Work													ATO Sustainment/Continous Monitoring															
													System Engineering															
Hardware Upgrades																												
Logistic support																												
ASEP																												
Studys																												
Test & Evaluation																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2263</b>				
Information Warfare System Activities: Quarterly Program Review: QPR	1	2019	4	2025
Information Warfare System Activities: Aperture upgrades: Aperture upgrades	1	2019	4	2019
Information Warfare System Activities: SPOONMAN Implementation: SPOONMAN Implementation	3	2019	3	2019
Information Warfare System Activities: Fleet Integration: UHF	1	2019	4	2019
Information Warfare System Activities: Fleet Integration: Ku-Band	2	2019	4	2019
Information Warfare System Activities: VIRTUOSO Testing Integration: VIRTUOSO Testing Integration	1	2019	4	2019
Information Warfare System Activities: ESE Activites: ESE Activites	1	2019	4	2025
Information Warfare System Activities: NPS Activities: NPS WR obligation	1	2019	4	2025
Information Warfare System Activities: DevOps Support: DevOps Support	1	2019	4	2024
Information Warfare System Activities: Program Management: Program Management Support	1	2019	4	2025
Information Warfare System Activities: Modeling and Simulation: Modelling and Simulation	1	2019	4	2025
Information Warfare System Activities: Development Work: ATO Sustainment/ Continous Monitoring	1	2019	4	2025
Information Warfare System Activities: Development Work: System Engineering	1	2019	4	2025
Information Warfare System Activities: Development Work: Special Development	2	2019	4	2025
Information Warfare System Activities: Development Work: Software Development and support	1	2019	4	2025
Information Warfare System Activities: Hardware Upgrades: Hardware Upgrades	1	2019	4	2025
Information Warfare System Activities: Logistic support: Logistic support	1	2019	4	2025

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2263 / <i>Information Warfare System</i>

<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Information Warfare System Activities: ASEP: ASEP	1	2019	4	2025
Information Warfare System Activities: Studys: Studies and analysis	1	2019	4	2025
Information Warfare System Activities: Test & Evaluation: Tests and Evaluations	1	2019	4	2025

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

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2958 / <i>Cyberspace Activities</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
2958: <i>Cyberspace Activities</i>	0.000	0.000	29.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.000
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Note**  
Starting in FY21, funds realigned to PE 0305251N.

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

Navy is developing foundational tools in support of the Cyber Mission Force in accordance with requirements, guidance, and previous work completed. (Additional details held at a higher classification)  
 Funding provided for the following:

- Cyberspace support facilities, infrastructure lease and fit-up of additional space
- Program office, program management, engineering, administrative, and security support
- Specialized Cyberspace technical, engineering, and management capabilities
- Expand Cyberspace Activities development network and network support
- Cyberspace hardware and software reverse engineering
- Research and Development (R&D) activities
- Cyberspace tool development
- Cyberspace activity logistics support costs

Starting in FY21, funds for project code 2958 PE 0204575N realigned to PE 0305251N, a Cyberspace Operations Forces and Force Support PE.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<b>Title:</b> Cyberspace Activities	0.000	29.000	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>FY 2020 Plans:</b>					
- Contract with several technical companies to conduct and deliver Development and Operations (DEVOPS) as a service.					
- Deliver specific, well-defined tools to operational cyber mission forces.					
- Modify delivered tools for use on a specific network.					
- Sustain foundational tools.					
- Conduct vulnerability analysis.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2958 / <i>Cyberspace Activities</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
- Apply configuration management principles to software development and delivery. (Additional details held at a higher classification)					
<b><i>FY 2021 Base Plans:</i></b> N/A					
<b><i>FY 2021 OCO Plans:</i></b> N/A					
<b><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i></b> FY 2020 to FY 2021 decrease due to funds realigned into PE 0305251N.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	29.000	0.000	0.000	0.000

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

This project is designated non-ACAT.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2021 Navy</b>											<b>Date:</b> February 2020				
<b>Appropriation/Budget Activity</b> 1319 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>					<b>Project (Number/Name)</b> 2958 / <i>Cyberspace Activities</i>				

<b>Product Development (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Support Development	C/FFP	CWG-6 : Maryland	0.000	0.000		0.912	Oct 2019	0.000		-		0.000	0.000	0.912	-
Support Development	WR	NIWC PAC : San Diego	0.000	0.000		1.300	Oct 2019	0.000		-		0.000	0.000	1.300	-
Support Development	C/CPFF	INL : Idaho	0.000	0.000		3.473	Oct 2019	0.000		-		0.000	0.000	3.473	-
General Engineering	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		2.300	Oct 2019	0.000		-		0.000	0.000	2.300	-
Hardware & Software Engineering(1)	C/CPFF	Classified : Classified	0.000	0.000		1.200	Oct 2019	0.000		-		0.000	0.000	1.200	-
Development(1)	Various	Classified : Classified	0.000	0.000		4.524	Oct 2019	0.000		-		0.000	0.000	4.524	-
Engineering	C/CPFF	JHU APL : Not Specified	0.000	0.000		1.200	Oct 2019	0.000		-		0.000	0.000	1.200	-
System Engineering	WR	NRL : Washington DC	0.000	0.000		0.500	Oct 2019	0.000		-		0.000	0.000	0.500	-
<b>Subtotal</b>			0.000	0.000		15.409		0.000		-		0.000	0.000	15.409	N/A

**Remarks**

1-Due to classification category, will not be on GENSER classified exhibits.

<b>Support (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Program Infrastructure Support	C/FFP	CWG-6 : Maryland	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Software Support	MIPR	JHU APL : Not Specified	0.000	0.000		1.000	Oct 2019	0.000		-		0.000	0.000	1.000	-
Software Support	WR	NIWC LANT : Virginia	0.000	0.000		0.618	Oct 2019	0.000		-		0.000	0.000	0.618	-
Hardware & Software Development	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		1.175	Oct 2019	0.000		-		0.000	0.000	1.175	-
General Engineering	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		1.600	Oct 2019	0.000		-		0.000	0.000	1.600	-

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

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2958 / <i>Cyberspace Activities</i>
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<b>Support (\$ in Millions)</b>				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			
Studies & Analysis	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.600	Oct 2019	0.000		-		0.000	0.000	0.600	-
Software Support	C/CPFF	CMU SEI : Pennsylvania	0.000	0.000		5.343	Oct 2019	0.000		-		0.000	0.000	5.343	-
Development Support	C/CPFF	SNS One : Maryland	0.000	0.000		1.458	Oct 2019	0.000		-		0.000	0.000	1.458	-
Development Support	C/FFP	CWG-6 : Maryland	0.000	0.000		0.062	Oct 2019	0.000		-		0.000	0.000	0.062	-
<b>Subtotal</b>			0.000	0.000		11.856		0.000		-		0.000	0.000	11.856	N/A

<b>Test and Evaluation (\$ in Millions)</b>				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			
Mod, Sim, and Testing	Various	Various : Florida/Utah	0.000	0.000		0.203	Oct 2019	0.000		-		0.000	0.000	0.203	-
Testing & Evaluation	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
<b>Subtotal</b>			0.000	0.000		0.203		0.000		-		0.000	0.000	0.203	N/A

<b>Management Services (\$ in Millions)</b>				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 Services(1)	Various	Classified : Classified	0.000	0.000		1.532	Oct 2019	0.000		-		0.000	0.000	1.532	-
<b>Subtotal</b>			0.000	0.000		1.532		0.000		-		0.000	0.000	1.532	N/A

**Remarks**  
1-Due to classification category, will not be on GENSER classified exhibits.



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

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2958 / <i>Cyberspace Activities</i>
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Proj 2958	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Remote DEVOPS					_____																											
<b>Cyberspace Additions Activities</b>																																
Tech Refresh																																
Hardware																																
Software Support																																
Software Engineering																																
DEVOPS Networks Support																																
Engineering																																
Cyber Foundry Development & Enhancements					_____																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 2958 / <i>Cyberspace Activities</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 2958</b>				
Remote DEVOPS: Remote DEVOPS	1	2020	4	2020
Cyberspace Additions Activities: Engineering: Hardware	1	2020	4	2020
Cyberspace Additions Activities: Engineering: Software Support	1	2020	4	2020
Cyberspace Additions Activities: Engineering: Software Engineering	1	2020	4	2020
Cyberspace Additions Activities: Engineering: DEVOPS Networks Support	1	2020	4	2020
Cyberspace Additions Activities: Engineering: Engineering	1	2020	4	2020
Cyberspace Additions Activities: Engineering: Modeling & simulation	1	2020	4	2020
Cyberspace Additions Activities: Cyber Foundry Development & Enhancements: Cyber Foundry Development & Enhancements	1	2020	4	2020

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 1319 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>				<b>Project (Number/Name)</b> 3426 / <i>Maritime Cyber</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3426: <i>Maritime Cyber</i>	17.602	19.076	11.552	19.702	-	19.702	24.820	22.461	21.449	21.878	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

For effective and efficient Information Warfare (IW) software development and constant professional development, software developers require a dynamic and agile workspace and equipment that keeps pace with emerging technology. Development and testing networks at all classifications are required. Driven by intelligence analysis, vulnerability identification and reverse engineering in a laboratory environment that makes use of virtual, emulated and live systems is the necessary first step to developing any capability. Agile development processes deliver usable capabilities after short "Sprint" cycles. Capabilities are tested in controlled environments ranging from a lab to Fleet exercises and demonstrations. (Additional details held at a higher classification).

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Title:</b> Maritime Cyber	19.076	11.552	19.702	0.000	19.702
<b>Articles:</b>	-	-	-	-	-
<b>FY 2020 Plans:</b>					
<ul style="list-style-type: none"> <li>- Conduct reverse engineering and a series of integrated Demonstrations (i-Demos) that integrate and build upon discrete capabilities towards an end-to-end cyber effect.</li> <li>- Coordinate increased intelligence collection and processing.</li> <li>- Interleave individually developed techniques and approaches into a cohesive framework for follow-on tool development.</li> <li>- Continue rapid "Sprints" to facilitate engineering and operational understanding of adversary capabilities and techniques.</li> <li>- Continue research into future option for Title 10 network and alignment with the Unified Platform.</li> </ul> (Additional details held at a higher classification).					
<b>FY 2021 Base Plans:</b>					
<ul style="list-style-type: none"> <li>- Develop software tools against known vulnerabilities.</li> <li>- Develop and test a new Measurement and Signature Intelligence (MASINT) capability for use by operational forces.</li> <li>- Establish processes, develop the needed skillset, and identify additional requirements to conduct cyber surveillance and reconnaissance.</li> <li>- Conduct Early Operational Capability (EOC) assessments with a defined path toward an ACAT Program of Record.</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 3426 / <i>Maritime Cyber</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<p>- Conduct intelligence support, research, analysis, software capability development and reverse engineering. (Additional details held at a higher classification).</p> <p><b>FY 2021 OCO Plans:</b> N/A</p> <p><b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> FY 2021 increase of \$8.150 million supports increased operational testing against vulnerabilities, the development and testing of a new Measurement and Signature Intelligence (MASINT) collection device, and codify a process for conducting service-related cyber surveillance and reconnaissance. (Additional details held at a higher classification).</p> <p>The FY 2021 funding request was reduced by \$3.581 million to account for the availability of prior year execution balances.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	19.076	11.552	19.702	0.000	19.702

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

Projects are designated non-ACAT. Defense Acquisition Program Models described in Department of Defense Instruction (DoDI) 5000.2 and guidance are the starting basis used with tailored approaches for the unique character of the product being acquired or the need for accelerated acquisition to streamline acquisition processes as appropriate.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2021 Navy</b>											<b>Date: February 2020</b>				
<b>Appropriation/Budget Activity</b> 1319 / 7						<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>					<b>Project (Number/Name)</b> 3426 / <i>Maritime Cyber</i>				

<b>Product Development (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Primary Hardware Development(1)	Various	Classified : Classified	8.400	0.000	Nov 2018	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
System Engineering	Various	APL, DOE, NRL, INL : Various	4.923	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Software Development	C/CPFF	iCR : Washington DC	0.000	1.778	Mar 2019	1.697	Nov 2019	2.074	Nov 2020	-		2.074	Continuing	Continuing	Continuing
Software Development(1)	Various	Classified : Classified	0.000	0.225	Nov 2018	0.675	Nov 2019	2.342	Nov 2020	-		2.342	Continuing	Continuing	Continuing
Software Development	C/CPFF	DGL : Virginia	0.000	0.575	Nov 2018	0.000	Nov 2019	0.000	Nov 2020	-		0.000	Continuing	Continuing	Continuing
Software Development	Various	Various : Various	0.000	0.353	Nov 2018	0.000	Nov 2019	1.250	Nov 2020	-		1.250	Continuing	Continuing	Continuing
<b>Subtotal</b>			13.323	2.931		2.372		5.666		-		5.666	Continuing	Continuing	N/A

**Remarks**

1-Due to classification category, will not be on GENSER classified exhibits.

<b>Support (\$ in Millions)</b>				<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>			
Program	Various	Various : Various	0.288	0.000	Nov 2018	0.301	Nov 2019	3.380	Nov 2020	-		3.380	Continuing	Continuing	Continuing
Studies & Analysis	WR	NPS : Monterey CA	3.991	0.680	Nov 2018	0.199	Nov 2019	0.680	Nov 2020	-		0.680	Continuing	Continuing	Continuing
Development Support	C/CPFF	iCR : Washington DC	0.000	1.037	Nov 2018	0.000	Nov 2019	2.666	Nov 2020	-		2.666	Continuing	Continuing	Continuing
Development Support	WR	NAVSEA : Maryland	0.000	0.175	Nov 2018	0.130	Nov 2019	0.134	Nov 2020	-		0.134	Continuing	Continuing	Continuing
Development Support	C/CPFF	INL : Idaho	0.000	2.251	Nov 2018	3.500	Nov 2019	3.577	Nov 2020	-		3.577	Continuing	Continuing	Continuing
Development Support	C/CPFF	JHU APL : Various	0.000	1.597	Nov 2018	0.750	Nov 2019	1.163	Nov 2020	-		1.163	Continuing	Continuing	Continuing
Development Support	MIPR	NSA : Maryland	0.000	9.995	Nov 2018	4.100	Nov 2019	1.236	Nov 2020	-		1.236	Continuing	Continuing	Continuing
Development Support	Various	LANL : Not Specified	0.000	0.410	Nov 2018	0.200	Nov 2019	1.200	Nov 2020	-		1.200	Continuing	Continuing	Continuing
<b>Subtotal</b>			4.279	16.145		9.180		14.036		-		14.036	Continuing	Continuing	N/A

	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Project Cost Totals</b>		17.602	19.076	11.552	19.702	-	19.702	Continuing	Continuing	N/A



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

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 3426 / <i>Maritime Cyber</i>
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Proj 3426	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Product Development: Primary Hardware Phase 1																												
Product Development: Primary Hardware Phase 2																												
Product Development: Systems Engineering																												
Studies & Analysis: Reports																												
Program Support																												
Software Development and Support																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Navy		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204575N / <i>Elect Warfare Readiness Supt</i>	<b>Project (Number/Name)</b> 3426 / <i>Maritime Cyber</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3426</b>				
Product Development: Primary Hardware Phase 1: Product Development: Primary Hardware Phase 1	1	2019	1	2019
Product Development: Primary Hardware Phase 2: Product Development: Primary Hardware Phase 2	2	2019	4	2025
Product Development: Systems Engineering: Product Development: Systems Engineering	1	2019	4	2025
Studies & Analysis: Reports: Studies & Analysis Reports	1	2019	4	2025
Program Support: Support	1	2019	4	2025
Software Development and Support: Software Development	1	2019	4	2025