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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 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605867N / (U)SEW SURVEILLANCE/RECONNAISSANCE SUPPORT
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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	0.000	0.000	8.402	8.559	-	8.559	8.729	8.909	9.087	9.269	Continuing	Continuing
1034: <i>TAC SAT Recon Office</i>	0.000	0.000	8.402	8.559	-	8.559	8.729	8.909	9.087	9.269	Continuing	Continuing

Note

Efforts previously funded in FY19 under PE 1206867N, SEW Surveillance/Reconnaissance Support. Beginning in FY20 funding is under PE 0605867N Space & Elec War Surv/Recon.

A. Mission Description and Budget Item Justification

(U) Link Crimson (Navy Tactical Exploitation of National Capabilities (TENCAP)) is a congressionally directed program to rapidly develop (12-18 months) systems, processes, and training that leverages and exploits National Technical Means (NTM) and Intelligence Community (IC) resources to meet fleet tactical warfighting gaps. This is done through innovative research and development of capabilities aligned with Navy Programs of Record (PoR), while influencing national systems support and development. These efforts include advanced sensors, platform and ground processing, and integrated national-to-tactical information fusion capabilities. Link Crimson supports all Navy mission areas, including Anti-Submarine Warfare (ASW), Integrated Air and Missile Defense, Mine Warfare (MIW), Power projection/Precision Strike, Maritime Domain Awareness (MDA), and Intelligence, Surveillance, and Reconnaissance (ISR), in support of the Navy's Information Dominance pillars: Assured Command and Control (AC2), Battlespace Awareness (BA) and Integrated Fires (IF).

(U) This program is funded under Budget Activity 6 because it supports the operations and installations required for general research and development. Program baseline addresses research and development on specific capabilities to support these mission areas such as signals collection and exploitation, acoustic and electronic signal detection, countering Unmanned Air Systems, Processing, Exploitation, and Dissemination (PED) processes, Commercial Maritime Navigation Radar (CMNR) detection and exploitation, open-ocean surveillance, and hostile threat geo-location. Link Crimson fields both prototypes to demonstrate new capabilities in real world environments in coordination with operational users, and develops warfighting capabilities for insertion into Navy, joint, and national agency programs of record. Additional detailed information is available at higher levels of classification.

(U) Project 1034: Established to exploit all National and Service sensor systems to improve tactical support to Fleet operational commanders. Project also supports equipment upgrades, training and Fleet exercises which provide the venue for testing modifications to existing programs.

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B. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	0.000	8.402	8.565	-	8.565
Current President's Budget	0.000	8.402	8.559	-	8.559
Total Adjustments	0.000	0.000	-0.006	-	-0.006
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	-0.006	-	-0.006

Change Summary Explanation

Technical: Not applicable.
Schedule: Not applicable.

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Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605867N / (U)SEW SURVEILLANCE/ RECONNAISSANCE SUPPORT				Project (Number/Name) 1034 / TAC SAT Recon Office			
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
1034: TAC SAT Recon Office	0.000	0.000	8.402	8.559	-	8.559	8.729	8.909	9.087	9.269	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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(U) Project 1034: Established to exploit all National and Service sensor systems to improve tactical support to Fleet operational commanders. Project also supports equipment upgrades, training and Fleet exercises which provide the venue for testing modifications to existing programs.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Assured Command and Control	0.000	0.627	0.621	0.000	0.621
Articles:	-	-	-	-	-
Description: The Navy must assure its ability to command and control forces. This requires capabilities that enable commanders to rapidly and with certainty: 1) exchange orders and responses with subordinates; 2) understand the disposition of friendly and adversarial forces, as well as uninvolved/neutral elements in the area of operations; 3) have access to target quality intelligence at the right time to conduct strikes as part of the joint force; and 4) assess the result of those strikes. Sensing the environment, understanding our adversaries, and operating and defending our communications and networked systems are inextricably linked to the assurance of C2.					

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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>FY 2020 Plans: Additional details with respect to this line item are held at a higher classification.</p> <p>FY 2021 Base Plans: N/A</p> <p>FY 2021 OCO Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: Minimal decrease in funding from FY 2020 - FY2021.</p>					
<p>Title: Battlespace Awareness</p> <p align="right">Articles:</p>	0.000	5.737	5.900	0.000	5.900
<p>Description: This is the traditional mission of the Navy's Information Warfare and the constituent components of meteorology, oceanography, intelligence, cryptology, communications, networks, space, and electronic warfare (EW). It includes: 1) persistent surveillance of the maritime and information battlespace; 2) knowledge of how to employ existing and emerging collection capabilities to great effectiveness to gather critical intelligence; 3) penetrating knowledge of the capabilities and intent of our adversaries to hold our successful operations at risk; and 4) expertise within the electromagnetic spectrum. Automation in data extraction and alignment and machine learning algorithms can significantly enhance the human analyst's ability to achieve battlespace awareness in the face of vast data repositories and numerous collection platforms/opportunities.</p>	-	-	-	-	-
<p>FY 2020 Plans: Additional details with respect to this line item are held at a higher classification.</p> <p>FY 2021 Base Plans: N/A</p> <p>FY 2021 OCO Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: The increase of \$163K will allow Navy TENCAP the ability to expand our capabilities in the area of Battle Space Awareness and better influence NTM requirements.</p>					
<p>Title: Integrated Fires</p>	0.000	2.038	2.038	0.000	2.038

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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
<i>Articles:</i>	-	-	-	-	-
<p>Description: Integration of the right combination of kinetic and/or non-kinetic fires to achieve the desired effect on the target and on the adversary's decision calculus requires: 1) in-depth understanding of the adversary's centers of gravity and vulnerabilities; 2) the right fidelity of the target's location, movement, and window of vulnerability; 3) commander's confidence that the weapon is postured to achieve the desired effect; and 4) the ability to provide this information to the weapon system(s) and weapon release authority(ies) before the target can employ effective defensive measures.</p> <p>FY 2020 Plans: Additional details with respect to this line item are held at a higher classification.</p> <p>FY 2021 Base Plans: N/A</p> <p>FY 2021 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	0.000	8.402	8.559	0.000	8.559

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

N/A

Remarks

D. Acquisition Strategy

Not applicable