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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 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604850N / SSN(X)
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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	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing
2368: <i>SSN(X) Class Submarine Development</i>	0.000	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing

Note

Note: This Program Element (PE) and Project is a new start, and is a realignment/reduction from PE 0604558N/Project 1947, which is used exclusively for Virginia Class Submarines. Amounts in years beyond FY21 will be adjusted and programmed commensurate with updated requirements as they become defined in future budget submissions.

A. Mission Description and Budget Item Justification

The U.S. Navy must produce and maintain a submarine fleet that is of sufficient capability to protect America from current and future threats. SSN(X) is required to maintain a submarine force structure, and will be designed to counter the emerging threat posed by near peer adversary competition for undersea supremacy. Unlike the VIRGINIA Class Submarine, which was designed for multi-mission dominance in the littoral, SSN(X) will be designed for greater transit speed under increased stealth conditions in all ocean environments, and carry a larger inventory of weapons and diverse payloads. While SSN(X) will be designed to retain multi-mission capability and sustained combat presence in denied waters, renewed priority of the anti-submarine warfare (ASW) mission against sophisticated threats in greater numbers will influence the design trade space. SSN(X) will be required to defend against threat UUVs, and coordinate with a larger contingent of off-hull vehicles, sensors, and friendly forces. The primary goal of the SSN(X) program element will be to evaluate a broad range of submarine technologies, sensors, and combat system components required to produce an affordable platform which supports these mission requirements.

B. Program Change Summary (\$ in Millions)

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	1.000	-	1.000
Total Adjustments	0.000	0.000	1.000	-	1.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	1.000	-	1.000

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Change Summary Explanation

This Program Element and Project are being established to officially start the SSN(X) Class Submarine Program Development.

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

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604850N / SSN(X)	Project (Number/Name) 2368 / SSN(X) Class Submarine Development
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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
2368: SSN(X) Class Submarine Development	0.000	0.000	0.000	1.000	-	1.000	1.000	1.000	1.000	1.000	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project encompasses Navy RDT&E efforts required to design the next SSN to replace the VIRGINIA Class Submarine.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: SSN(X) Class Submarine Development	0.000	0.000	1.000	0.000	1.000
Articles:	-	-	-	-	-
Description: N/A					
FY 2020 Plans: N/A					
FY 2021 Base Plans: - Develop requirements for the SSN(X) Program. - Conduct advanced technology development in the areas of speed, stealth, and survivability. - Conduct cost versus operational effectiveness trade studies for the core acoustic sensor suite as a function of limitations posed on the ship hull form. - Generate trade studies for ocean interface concepts. - Evaluate Concept of Operations platform for submarine mission areas.					
FY 2021 OCO Plans: N/A					
FY 2020 to FY 2021 Increase/Decrease Statement: FY21 increase is due to the establishment of the SSN(X) Class Submarine Development Program.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	1.000	0.000	1.000

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

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy		Date: February 2020
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C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

Utilize work requests for government warfare center initial concept and trade studies in FY21 to assist with requirements definition. Begin industry based engagement to inform, develop, and prepare for competitively awarded contracts. Additional R&D efforts will be performed by Navy laboratories, shipyards, private industry, and University Affiliated Research Centers.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy												Date: February 2020			
Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0604850N / SSN(X)				Project (Number/Name) 2368 / SSN(X) Class Submarine Development							
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
Component Development	WR	NSWC: Carderock, MD : Not Specified	0.000	0.000		0.000		0.750	Oct 2020	-		0.750	Continuing	Continuing	Continuing
Component Development	WR	NUWC: Newport, RI : Not Specified	0.000	0.000		0.000		0.250	Oct 2020	-		0.250	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		1.000		-		1.000	Continuing	Continuing	N/A
			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			0.000	0.000		0.000		1.000		-		1.000	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy		Date: February 2020
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604850N / SSN(X)	Project (Number/Name) 2368 / SSN(X) Class Submarine Development

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Proj 2368																												
Requirements Definitization																												
Concept Studies & System Definition																												
Research, Development, and Prototyping for Lead Ship Design																												
Component Design and Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy		Date: February 2020
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604850N / SSN(X)	Project (Number/Name) 2368 / SSN(X) Class Submarine Development

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2368				
Requirements Definitization	1	2021	4	2022
Concept Studies & System Definition	1	2021	4	2022
Research, Development, and Prototyping for Lead Ship Design	1	2021	4	2025
Component Design and Development	1	2021	4	2025