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

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604727N / <i>JNT Standoff Weapon Systems</i>
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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
Total Program Element	899.563	15.745	30.351	0.000	-	0.000	-	-	-	-	-	-
2068: <i>Joint Standoff Weapon (JSOW)</i>	899.563	15.745	30.351	0.000	-	0.000	-	-	-	-	-	-

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 766

A. Mission Description and Budget Item Justification

The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night, and adverse weather conditions. JSOW enhances aircraft survivability by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy led joint Navy/Air Force program. JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces, weight, and dimension considerations, JSOW is compatible with Air Force and North Atlantic Treaty Organization aircraft.

The JSOW Unitary (AGM-154C-1) variant includes a Network Enabled Weapon moving maritime target capability. The AGM-154C-1 capability enables the weapon to be integrated with the network and attack sea moving maritime targets via real-time pre-and post-launch targeting updates. JSOW will continue to conduct analysis and development of solutions to system integration challenges, and continual enhancement of warfighter effectiveness in the employment of the JSOW weapon system. The FY 2019 funding included the integration of new functionality into the joint mission planning systems and precision guided munitions planning system. JSOW C-1 Initial Operational Capability was achieved in June 2016. JSOW C-1 Full Operational Capability was achieved in August 2017.

JSOW Extend Range development has been removed from the program roadmap. JSOW cryptographic modernization efforts continue and enable the weapon to comply with NSA mandated upgrades.

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	16.225	73.744	99.759	-	99.759
Current President's Budget	15.745	30.351	0.000	-	0.000
Total Adjustments	-0.480	-43.393	-99.759	-	-99.759
• Congressional General Reductions	-	-3.949			
• Congressional Directed Reductions	-	-39.444			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.005	0.000			
• SBIR/STTR Transfer	-0.475	0.000			
• Program Adjustments	0.000	0.000	-99.759	-	-99.759
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

FY 2022 funding decreases due to removal of JSOW ER development and completion of JSOW cryptographic modernization effort.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy										Date: May 2021		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604727N / JNT Standoff Weapon Systems				Project (Number/Name) 2068 / Joint Standoff Weapon (JSOW)			
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
2068: Joint Standoff Weapon (JSOW)	899.563	15.745	30.351	0.000	-	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 766												

A. Mission Description and Budget Item Justification

The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night, and adverse weather conditions. JSOW enhances aircraft survivability by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy led joint Navy/Air Force program. JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces, weight, and dimension considerations, JSOW is compatible with Air Force and North Atlantic Treaty Organization aircraft.

JSOW Extend Range development has been removed from the program roadmap. JSOW cryptographic modernization efforts enable the weapon to comply with NSA mandated upgrades.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: JSOW ER	3.594	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
Description: The Navy has decided not to pursue JSOW ER capability.					
FY 2021 Plans: N/A					
FY 2022 Base Plans: N/A					
FY 2022 OCO Plans: N/A					
Title: JSOW Mission Planning Systems	12.151	30.351	0.000	0.000	0.000
Articles:	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604727N / JNT Standoff Weapon Systems	Project (Number/Name) 2068 / Joint Standoff Weapon (JSOW)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>Description: JSOW program development efforts include new mission planning functionality required for Network Enabled Weapon (NEW) moving target capability for the JSOW-C-1.</p> <p>FY 2021 Plans: FY 2021 will continue to execute NSA mandated Crypto Modernization updates to communications software. FY 2021 also continues legacy JSOW C-1 efforts include JSOW baseline C-1 integration and interoperability path forward; continued network interoperability efforts for JSOW C-1; continue software improvement efforts; continue efforts to migrate JSOW mission planning software from the contractor owned Common Weapon Planning Environment (CWPE) to the Government owned Precision Guidance Mission Planning System (PGMPS) common component.</p> <p>FY 2022 Base Plans: N/A</p> <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: The FY 2021 to FY 2022 decrease of \$30.351M is due to completion of JSOW C-1 NSA mandated Crypto Modernization updates to communications software.</p>					
Accomplishments/Planned Programs Subtotals	15.745	30.351	0.000	0.000	0.000

<p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p> <p>D. Acquisition Strategy JSOW C-1 Initial Operational Capability was achieved in June 2016. JSOW C-1 Full Operational Capability was achieved in August 2017. The program focus has transitioned to sustainment with limited investment in mandated upgrades to communications equipment and a continuing upgrade effort for mission planning software.</p>
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy											Date: May 2021				
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0604727N / JNT Standoff Weapon Syst ems					Project (Number/Name) 2068 / Joint Standoff Weapon (JSOW)				

Product Development (\$ in Millions)				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			
JSOW Prior Year Prod Dev no longer funded in the FYDP	SS/CPIF	Various : Various	803.876	0.000		0.000		0.000		-		0.000	-	-	-
JSOW C-1 Communications Software updates	SS/CPFF	Raytheon Missile Systems : Tucson, AZ	0.000	13.392	Aug 2020	9.672	Jul 2021	0.000		-		0.000	-	-	-
JSOW Crypto Modernization	SS/CPFF	Rockwell Collins : Cedar Rapids, IA	0.000	1.407	Apr 2021	8.088	Apr 2021	0.000		-		0.000	-	-	-
JSOW Crypto Modernization	TBD	various : various	0.000	0.000		3.431	Jun 2021	0.000		-		0.000	-	-	-
Subtotal			803.876	14.799		21.191		0.000		-		0.000	-	-	N/A

Remarks

JSOW C-1 Communications Software updates with Raytheon Missiles Systems supports NSA mandated Crypto Modernization updates to communications software. FY 2021 is the last year of development funding for JSOW, funding will be used through FY 2022 to complete Crypto Modernization updates and JSOW development efforts.

Support (\$ in Millions)				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			
JSOW Software Development	SS/CPFF	Various : Various	7.245	0.403	Jun 2020	0.600	Jun 2021	0.000		-		0.000	-	-	-
JSOW Government Support	WR	NAWCWD : China Lake, CA	0.000	0.031	Jun 2020	6.450	Dec 2021	0.000		-		0.000	-	-	-
JSOW Support	WR	Various : Various	8.018	0.067	Sep 2020	2.110	Mar 2021	0.000		-		0.000	-	-	-
JSOW ER Government Support	WR	NAWCWD : China Lake, CA	0.000	0.220	Nov 2019	0.000		0.000		-		0.000	-	-	-
JSOW ER TACNET	SS/CPIF	Wyle Laboratories : Huntsville, AL	0.000	0.020	Mar 2020	0.000		0.000		-		0.000	-	-	-
Subtotal			15.263	0.741		9.160		0.000		-		0.000	-	-	N/A

Remarks

FY 2021 funds government support through FY 2022 to complete NSA mandated CM effort

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
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JOINT STANDOFF WEAPON	FY 2020				FY 2021				FY 2022			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Acquisition Milestones												
	JSOW C-1 Development											
	Mission Planning Updates											
			Crypto Modernization Efforts									

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

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Joint Standoff Weapon				
Acquisition Milestones: JSOW C-1 Development	1	2020	4	2022
Acquisition Milestones: Mission Planning Updates	1	2020	4	2022
Acquisition Milestones: Cyrpto Modernization Efforts	3	2020	4	2022