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**Department of Defense
Fiscal Year (FY) 2023 Budget Estimates**

April 2022



Navy

Justification Book Volume 1 of 1

Weapons Procurement, Navy

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The estimated cost of this report for the Department of the Navy (DON) is \$123,746.

The estimated total cost for supporting the DON budget justification material is approximately \$4,190,764 during the 2022 fiscal year. This includes \$88,845 in supplies and \$4,101,919 in labor.

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Navy • Budget Estimates FY 2023 • Procurement

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Department of Defense Appropriations Act, 2023

Weapons Procurement, Navy

For construction, procurement, production, modification, and modernization of missiles, torpedoes, other weapons, and related support equipment including spare parts, and accessories therefore; expansion of public and private plants, including the land necessary therefore, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, \$4,738,705,000 to remain available for obligation until September 30, 2025.

Fiscal Year (FY) 2023 Overseas Operations Costs funding accounted for in the Base Budget include:

- Combat or direct combat support expenses that discontinue once combat operations end at major contingency locations [\$6,594].
- In-theater and in-CONUS expenses that remain after combat operations cease and have previously been funded in Overseas Contingency Operations (OCO) [\$6,500].

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation -----	FY 2021 (Base + OCO) -----	FY 2022 Less Supplementals Enactment -----	FY 2022 Division B Division C P.L.117-43 Enactment* -----	FY 2022 Division B Division C P.L.117-70 Enactment** -----
Weapons Procurement, Navy	4,465,822	3,982,657		
Total Department of the Navy	4,465,822	3,982,657		

P-123PBP: FY 2023 President's Budget (Total Base Published Version)

*Includes enacted funding pursuant to the Extending Government Funding and Delivering Emergency Assistance Act (Public Law 117-43).

**Includes enacted funding pursuant to the Further Extending Government Funding Act (Public Law 117-70).

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation -----	FY 2022 Division A P.L. 117-86 Enactment*** -----	FY 2022 Division N P.L. 117-103 Enactment**** -----	FY 2022 Total Supplemental Enactment -----	FY 2022 Total Enactment -----
Weapons Procurement, Navy				3,982,657
Total Department of the Navy				3,982,657

P-123BPB: FY 2023 President's Budget (Total Base Published Version)

***Includes enacted funding pursuant to the Further Additional Extending Government Funding Act (Public Law 117-86).

****Includes enacted funding pursuant to the Ukraine Supplemental Appropriations Act (Public Law 117-103).

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Department of the Navy
FY 2023 President's Budget
Exhibit P-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation -----	FY 2023 Request -----
Weapons Procurement, Navy	4,738,705
Total Department of the Navy	4,738,705

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2021 (Base + OCO) -----	FY 2022 Less Supplementals Enactment -----	FY 2022 Division B Division C P.L.117-43 Enactment* -----	FY 2022 Division B Division B P.L.117-70 Enactment** -----
01. Ballistic Missiles	1,162,875	1,127,560		
02. Other Missiles	2,381,994	2,145,046		
03. Torpedoes and Related Equipment	564,138	378,721		
04. Other Weapons	214,762	175,411		
06. Spares and Repair Parts	142,053	155,919		
Total Weapons Procurement, Navy	4,465,822	3,982,657		

P-123BBP: FY 2023 President's Budget (Total Base Published Version)

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2022 Division A P.L. 117-86 Enactment*** -----	FY 2022 Division N P.L. 117-103 Enactment**** -----	FY 2022 Total Supplemental Enactment -----	FY 2022 Total Enactment -----
01. Ballistic Missiles				1,127,560
02. Other Missiles				2,145,046
03. Torpedoes and Related Equipment				378,721
04. Other Weapons				175,411
06. Spares and Repair Parts				155,919
Total Weapons Procurement, Navy				3,982,657

P-123BPB: FY 2023 President's Budget (Total Base Published Version)

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Department of the Navy
FY 2023 President's Budget
Exhibit P-1 FY 2023 President's Budget
Total Obligational Authority
(Dollars in Thousands)

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2023 Request -----
01. Ballistic Missiles	1,132,931
02. Other Missiles	2,889,745
03. Torpedoes and Related Equipment	400,200
04. Other Weapons	145,788
06. Spares and Repair Parts	170,041
Total Weapons Procurement, Navy	4,738,705

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 (Base + OCO)		FY 2022 Less Supplementals Enactment		FY 2022 Division B Division C P.L.117-43 Enactment*		FY 2022 Division B P.L.117-70 Enactment**		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ballistic Missiles											

Modification of Missiles											
1	Trident II Mods			1,155,600		1,120,241					U
Support Equipment & Facilities											
2	Missile Industrial Facilities	A		7,275		7,319					U
Total Ballistic Missiles				1,162,875		1,127,560					
Budget Activity 02: Other Missiles											

Strategic Missiles											
3	Tomahawk	A	122	224,685	70	139,983					U
Tactical Missiles											
4	AMRAAM	A	122	204,251							U
5	Sidewinder	A	240	104,502	152	78,606					U
6	Standard Missile	A	125	(503,011)	125	(598,826)					U
	Less: Advance Procurement (PY)			(-83,623)		(-83,512)					U
				419,388		515,314					
7	Standard Missile										
	Advance Procurement (CY)			66,716		45,357					U
	C (FY 2021 for FY 2022) (M)			(45,867)							
	C (FY 2021 for FY 2023) (M)			(20,849)							
	C (FY 2022 for FY 2023) (M)					(45,357)					

P-123BPB: FY 2023 President's Budget (Total Base Published Version)

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2022 Division A P.L. 117-86 Enactment***		FY 2022 Division N P.L. 117-103 Enactment****		FY 2022 Total Supplemental Enactment		FY 2022 Total Enactment		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Ballistic Missiles											

Modification of Missiles											
1	Trident II Mods								1,120,241		U
Support Equipment & Facilities											
2	Missile Industrial Facilities	A							7,319		U
Total Ballistic Missiles									1,127,560		
Budget Activity 02: Other Missiles											

Strategic Missiles											
3	Tomahawk	A						70	139,983		U
Tactical Missiles											
4	AMRAAM	A									U
5	Sidewinder	A						152	78,606		U
6	Standard Missile	A						125	(598,826)		U
	Less: Advance Procurement (PY)								(-83,512)		U
									515,314		
7	Standard Missile										
	Advance Procurement (CY)								45,357		U
	C (FY 2021 for FY 2022) (M)										
	C (FY 2021 for FY 2023) (M)										
	C (FY 2022 for FY 2023) (M)								(45,357)		

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2023 Request		S e c
			Quantity	Cost	
Budget Activity 01: Ballistic Missiles					

Modification of Missiles					
1	Trident II Mods			1,125,164	U
Support Equipment & Facilities					
2	Missile Industrial Facilities	A		7,767	U
Total Ballistic Missiles				1,132,931	
Budget Activity 02: Other Missiles					

Strategic Missiles					
3	Tomahawk	A	40	160,190	U
Tactical Missiles					
4	AMRAAM	A	337	335,900	U
5	Sidewinder	A	128	63,288	U
6	Standard Missile	A	125	(572,040)	U
	Less: Advance Procurement (PY)			(-82,917)	U
				489,123	
7	Standard Missile				
	Advance Procurement (CY)				U
	C (FY 2021 for FY 2022) (M)				
	C (FY 2021 for FY 2023) (M)				
	C (FY 2022 for FY 2023) (M)				

P-123PBP: FY 2023 President's Budget (Total Base Published Version)

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Department of the Navy
 FY 2023 President's Budget
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 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 (Base + OCO)		FY 2022 Less Supplementals Enactment		FY 2022 Division B Division C P.L.117-43 Enactment*		FY 2022 Division B P.L.117-70 Enactment**		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
8	JASSM	A									U
9	Small Diameter Bomb II		248	57,755	164	33,764					U
10	Ram	A	100	90,533	70	73,015					U
11	Joint Air Ground Missile (JAGM)	A	150	43,647	153	46,702					U
12	Hellfire	A	95	5,572	120	7,557					U
13	Aerial Targets	A		163,193		141,446					U
14	Drones And Decoys	A	12	19,956	18	30,321					U
15	Other Missile Support	A		3,501		3,474					U
16	LRASM	A	43	134,065	48	161,212					U
17	Naval Strike Missile (NSM)	A	15	31,610	32	52,377					U
Modification of Missiles											
18	Tomahawk Mods	A		143,563		172,074					U
19	ESSM	A	99	212,637	108	248,619					U
20	AARGM	A	16	123,650	54	109,835					U
21	Standard Missiles Mods	A		66,981		130,482					U
Support Equipment & Facilities											
22	Weapons Industrial Facilities	A		13,996		11,819					U
23	Fleet Satellite Comm Follow-On	A		52,401							U
24	DON PGM Transition Support	A		-67							U

P-123BPB: FY 2023 President's Budget (Total Base Published Version)

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Department of the Navy
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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2022 Division A P.L. 117-86 Enactment***		FY 2022 Division N P.L. 117-103 Enactment****		FY 2022 Total Supplemental Enactment		FY 2022 Total Enactment		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
8	JASSM	A									U
9	Small Diameter Bomb II								164	33,764	U
10	Ram	A							70	73,015	U
11	Joint Air Ground Missile (JAGM)	A							153	46,702	U
12	Hellfire	A							120	7,557	U
13	Aerial Targets	A								141,446	U
14	Drones And Decoys	A							18	30,321	U
15	Other Missile Support	A								3,474	U
16	LRASM	A							48	161,212	U
17	Naval Strike Missile (NSM)	A							32	52,377	U
Modification of Missiles											
18	Tomahawk Mods	A								172,074	U
19	ESSM	A							108	248,619	U
20	AARGM	A							54	109,835	U
21	Standard Missiles Mods	A								130,482	U
Support Equipment & Facilities											
22	Weapons Industrial Facilities	A								11,819	U
23	Fleet Satellite Comm Follow-On	A									U
24	DON PGM Transition Support	A									U

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Department of the Navy
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 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2023 Request		S e c
			Quantity	Cost	
----	-----	-----	-----	-----	-----
8	JASSM	A	31	58,481	U
9	Small Diameter Bomb II		481	108,317	U
10	Ram	A	100	92,131	U
11	Joint Air Ground Missile (JAGM)	A	293	78,395	U
12	Hellfire	A	110	6,603	U
13	Aerial Targets	A		183,222	U
14	Drones And Decoys	A	61	62,930	U
15	Other Missile Support	A		3,524	U
16	LRASM	A	60	226,022	U
17	Naval Strike Missile (NSM)	A	39	59,034	U
Modification of Missiles					
18	Tomahawk Mods	A		435,308	U
19	ESSM	A	136	282,035	U
20	AARGM	A	69	131,275	U
21	Standard Missiles Mods	A		71,198	U
Support Equipment & Facilities					
22	Weapons Industrial Facilities	A		1,976	U
23	Fleet Satellite Comm Follow-On	A			U
24	DON PGM Transition Support	A			U

P-123PBP: FY 2023 President's Budget (Total Base Published Version)

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 (Base + OCO)		FY 2022 Less Supplementals Enactment		FY 2022 Division B Division C P.L.117-43 Enactment*		FY 2022 Division B P.L.117-70 Enactment**		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Ordnance Support Equipment											
25	Ordnance Support Equipment	A		199,459		143,089					U
Total Other Missiles				2,381,994		2,145,046					
Budget Activity 03: Torpedoes and Related Equipment											
Torpedoes and Related Equip											
26	SSTD	A		5,811		4,545					U
27	MK-48 Torpedo	A	105	276,844	58	130,972					U
28	ASW Targets	A		13,833		13,630					U
Mod of Torpedoes and Related Equip											
29	MK-54 Torpedo Mods	A		103,441		94,168					U
30	MK-48 Torpedo ADCAP Mods	A		55,699		27,987					U
31	Maritime Mines	B		5,832		8,567					U
Support Equipment											
32	Torpedo Support Equipment	A		94,103		90,832					U
33	ASW Range Support	A		4,159		3,997					U
Destination Transportation											
34	First Destination Transportation	A		4,416		4,023					U
Total Torpedoes and Related Equipment				564,138		378,721					

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
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 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2022 Division A P.L. 117-86 Enactment***		FY 2022 Division N P.L. 117-103 Enactment****		FY 2022 Total Supplemental Enactment		FY 2022 Total Enactment		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Ordnance Support Equipment											
25	Ordnance Support Equipment	A								143,089	U
Total Other Missiles									2,145,046		
Budget Activity 03: Torpedoes and Related Equipment											
Torpedoes and Related Equip											
26	SSTD	A								4,545	U
27	MK-48 Torpedo	A						58		130,972	U
28	ASW Targets	A								13,630	U
Mod of Torpedoes and Related Equip											
29	MK-54 Torpedo Mods	A								94,168	U
30	MK-48 Torpedo ADCAP Mods	A								27,987	U
31	Maritime Mines	B								8,567	U
Support Equipment											
32	Torpedo Support Equipment	A								90,832	U
33	ASW Range Support	A								3,997	U
Destination Transportation											
34	First Destination Transportation	A								4,023	U
Total Torpedoes and Related Equipment									378,721		

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2023 Request		S e c
			Quantity	Cost	
	Ordnance Support Equipment				
25	Ordnance Support Equipment	A		40,793	U
Total Other Missiles				2,889,745	
Budget Activity 03: Torpedoes and Related Equipment					

	Torpedoes and Related Equip				
26	SSTD	A		3,789	U
27	MK-48 Torpedo	A	28	151,128	U
28	ASW Targets	A		14,403	U
Mod of Torpedoes and Related Equip					
29	MK-54 Torpedo Mods	A		106,772	U
30	MK-48 Torpedo ADCAP Mods	A		18,502	U
31	Maritime Mines	B		9,282	U
Support Equipment					
32	Torpedo Support Equipment	A		87,044	U
33	ASW Range Support	A		3,965	U
Destination Transportation					
34	First Destination Transportation	A		5,315	U
Total Torpedoes and Related Equipment				400,200	

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Department of the Navy
 FY 2023 President's Budget
 Exhibit P-1 FY 2023 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2021 (Base + OCO)		FY 2022 Less Supplementals Enactment		FY 2022 Division B Division C P.L.117-43 Enactment*		FY 2022 Division B P.L.117-70 Enactment**		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 04: Other Weapons											

Guns and Gun Mounts											
35	Small Arms and Weapons	A		12,530		12,461					U
Modification of Guns and Gun Mounts											
36	CIWS Mods	A		41,147		6,274					U
37	Coast Guard Weapons	A		43,150		45,958					U
38	Gun Mount Mods	A		102,068		93,775					U
39	LCS Module Weapons	B	32	4,253	14	2,121					U
40	Airborne Mine Neutralization Systems	A		6,662		14,822					U
Other											
41	Cancelled Account Adjustments	A		4,952							U
Total Other Weapons				214,762		175,411					
Budget Activity 06: Spares and Repair Parts											

Spares and Repair Parts											
42	Spares and Repair Parts	A		142,053		155,919					U
Total Spares and Repair Parts				142,053		155,919					
Total Weapons Procurement, Navy				4,465,822		3,982,657					

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Department of the Navy
 FY 2023 President's Budget
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 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2022 Division A P.L. 117-86 Enactment***		FY 2022 Division N P.L. 117-103 Enactment****		FY 2022 Total Supplemental Enactment		FY 2022 Total Enactment		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 04: Other Weapons											

Guns and Gun Mounts											
35	Small Arms and Weapons	A							12,461		U
Modification of Guns and Gun Mounts											
36	CIWS Mods	A							6,274		U
37	Coast Guard Weapons	A							45,958		U
38	Gun Mount Mods	A							93,775		U
39	LCS Module Weapons	B						14	2,121		U
40	Airborne Mine Neutralization Systems	A							14,822		U
Other											
41	Cancelled Account Adjustments	A									U
Total Other Weapons									175,411		
Budget Activity 06: Spares and Repair Parts											

Spares and Repair Parts											
42	Spares and Repair Parts	A							155,919		U
Total Spares and Repair Parts									155,919		
Total Weapons Procurement, Navy									3,982,657		

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Department of the Navy
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2023 Request		S e c
			Quantity	Cost	
Budget Activity 04: Other Weapons					

Guns and Gun Mounts					
35	Small Arms and Weapons	A		13,859	U
Modification of Guns and Gun Mounts					
36	CIWS Mods	A		2,655	U
37	Coast Guard Weapons	A		34,259	U
38	Gun Mount Mods	A		81,725	U
39	LCS Module Weapons	B	30	4,580	U
40	Airborne Mine Neutralization Systems	A		8,710	U
Other					
41	Cancelled Account Adjustments	A			U
Total Other Weapons				145,788	
Budget Activity 06: Spares and Repair Parts					

Spares and Repair Parts					
42	Spares and Repair Parts	A		170,041	U
Total Spares and Repair Parts				170,041	
Total Weapons Procurement, Navy				4,738,705	

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,776.585	1,155.600	1,120.241	1,125.164	0.000	1,125.164	1,230.301	1,613.423	2,429.699	2,884.836	2,176.384	24,512.233
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	10,776.585	1,155.600	1,120.241	1,125.164	0.000	1,125.164	1,230.301	1,613.423	2,429.699	2,884.836	2,176.384	24,512.233
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	10,776.585	1,155.600	1,120.241	1,125.164	0.000	1,125.164	1,230.301	1,613.423	2,429.699	2,884.836	2,176.384	24,512.233

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The TRIDENT II (D5) missiles will be carried on OHIO Class Fleet Ballistic Missile Submarines through FY2042 and will be the initial payload for the COLUMBIA Class Fleet Ballistic Missile Submarines' first eight hulls. The D5 Life Extension (D5LE) program is ensuring that the United States continues to maintain a highly survivable strategic deterrent well into the 21st century. The TRIDENT II missile (1) enhances fleet ballistic missile submarine survivability as it increases the sea launched ballistic missile range at full payload to exploit the total patrol area available to the TRIDENT submarine, (2) minimizes total weapon system costs as it has increased the sea launched ballistic missile payload to the level permitted by the size of the TRIDENT submarine launch tube, thereby allowing mission capability to be achieved with fewer submarines, and (3) has added an efficient hard target kill capability to the sea launched ballistic missiles. Safety critical D5LE missile electronics begin to exceed their qualification period by FY2039, and the D5LE program cannot be extended further. Several components are obsolete, out of production, and are no longer supported by industry.

Starting in FY2023 the TRIDENT II D5 Life Extension (D5LE2) program required to support COLUMBIA Class Submarine will initiate WPN activities to begin the detailed design and non-recurring engineering efforts critical for the Strategic Weapons Systems (SWS) subsystems (e.g. Missile, Guidance, Fire Control, Launcher, Navigation, etc.) to incorporate impacts to design driven by System Level requirement refinement that have been occurring in the Research, Development Test & Evaluation, Navy Line Item 0101221N, Project 2228 between FY20-22. D5LE2 begins the transition from RDT&EN System Level requirements setting and study activities to WPN subsystem level evaluations and redesign activities, and production/vendor engagement and startup/restart. These activities leverage the Missile and Guidance Technology RDT&E,N efforts to inform subsystem level design concepts. Design concepts and subsystem level requirement evaluation are critical to supporting the Strategic Weapon System (SWS) System Requirements Review (SRR) and subsystem SRRs.

The D5LE2 acquisition and funding strategy is directly modeled after the successful strategy utilized for the first major life extension of the D5 SWS (D5LE). Like D5LE, D5LE2 will be accomplished using the Strategic Systems Programs Alteration (SPALT) approach which incorporates updated and modernized designs into the existing D5 weapon system to address obsolescence issues and inventory shortages. This is possible due to the availability of a significant percentage of D5LE components which are still producible. Those items that can no longer be produced in the same fashion or that have older technologies that do not exist today, will be redesigned to address obsolescence and to remove constraints which prevent accessing existing margin in the system or drive long technology insertion timelines. D5LE2 WPN non-recurring efforts are for engineering activities or related manufacturing efforts applied to the TRIDENT II system to extend its useful military life while maintaining the current performance envelope in the face of a dynamic threat environment. The combination of constraining the major design elements of the SWS coupled with the decision to confirm the TRIDENT II as the weapon of choice for the COLUMBIA platform at its Milestone A and Milestone B decisions bounds the external interfaces and silhouette of the SWS makes modernization of the D5LE SWS as the most effective acquisition approach.

The TRIDENT II Mods Budget Line Item 1250 budget is broken out into three P-5 exhibits:

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		
<p>(1) The D5 Life Extension (D5LE) program procures missile electronic and guidance SPALT kits as well as other critical components required to support the extended SSBN hull life for a 14 OHIO Class SSBN TRIDENT II program.</p> <p>(2) The Operating and Support Costs program funds efforts associated with the sustainment of TRIDENT II (D5) missiles to include Warhead Components, Mk4B Shape Stable Nose Tip (SSNT), refreshes and replacement of D5 legacy tooling and test support equipment, Supportability Mods/Strategic Programs Alteration (SPALT) Insertion, system integration efforts, and replacement of aging rocket motors.</p> <p>(3) The D5 Life Extension II (D5LE2) activities begin the detailed design and non-recurring engineering necessary for Strategic Weapons Systems (SWS) subsystems (e.g. Missile, Guidance, Fire Control, Launcher, Navigation, etc.) critical to evaluate impacts to design driven by System Level requirement refinement. FY 2023 commences modernization activities associated with detailed D5LE2 design and begins the transition from RDT&E,N System Level requirements setting and study activities to WPN subsystem level evaluations and design activities, and production/vendor engagement and startup/restart. These activities leverage the Missile and Guidance Technology RDT&E,N efforts to inform subsystem level design concepts. Design concepts and subsystem level requirement evaluation are critical to supporting the Strategic Weapon System (SWS) System Requirements Review (SRR) and subsystem SRRs.</p> <p>D5 Life Extension Costs Include:</p> <p>Joint Fuze Sustainment: The Joint Fuze Sustainment Program produces parts procured by the National Nuclear Security Administration (NNSA) and the Navy to make an Arming, Fuzing, and Firing System (AF&F) in support of the National Defense Strategy. The Navy purchases eight components which are delivered as a kit to support the AF&F final delivery. There is a total of 832 AF&F kits being procured by the Navy. In May 2019, the National Nuclear Security Administration briefed members of the Nuclear Weapons Council that an issue within a base metal electrode (BME) capacitor in B61-12 and W88 Alt370 components did not meet reliability requirements. In conjunction with Strategic Systems Programs (SSP), NNSA pursued a re-spin of the circuit boards with new capacitors and the disposal and replacement of previously procured components affected by this issue. The delivery of AF&F components impacted by the capacitor issue have executed to the rebaselined schedule and delivered the First Production Unit in May 2021 as shown in the P5. SSP has shifted kit quantities to align with the new delivery schedule which supports shared utilization of NNSA and Department of Energy (DOE) production capacity. The kit quantities represent when all of the eight components are produced and are ready for assemblies into AF&Fs. The year to year unit costs fluctuation during production is a result of life of part buys, material buys and commercial off the shelf items being procured that year in addition to AF&F quantity changes. To provide more transparency and clarity to the Joint Fuze Sustainment budget, the budget requirement is now broken out into two categories, (1) Production Engineering/Support and (2) Material/Hardware Procurement. Production Engineering/Support consists of non-touch labor at the Department of Energy (DOE) Sandia National Laboratories, DOE Kansas City, and various industry partners. Additionally, the Production Engineering/Support category captures the required AF&F quantities. The Material/Hardware Procurement category captures the material costs plus all touch labor associated with procurement and manufacturing of the required AF&F kit components.</p> <p>Production Support: Funding supports D5LE Special Test Equipment (STE) and Special Mechanical Equipment (SME) Class 3 hardware repairs based on TRIDENT Alteration Directives (TADs) such as calibration services for embedded standards and gauges, repair of failed STE consoles and components. This equipment is used in the production, test, and assembly of Pre-DD250'd Missile and Missile Hardware repairs and allows SSP to meet OD42150 and OD56278 requirements to manage, maintain, and provide configuration control of approximately 20,500 Pre-DD250 line items. Also funded are (D5LE) system integration efforts, support for the new Test Missile Kits (TMK's) as well as requalification costs of new production lines for Reentry Body, and D5LE electronic assemblies transitioning from Sunnyvale, CA to Waterton, CO and Titusville, FL. Through FY22 funding also supported D5LE flight test instrumentation and analysis, and costs in support of and preparation for Commanders Evaluation Test (CET) and Demonstration and Shakedown Operation (DASO) operations. These costs included: Flight Test Management, Planning, & Instrumentation Support, Mission Operation & Data Acquisition Support, Post Mission Data Processing & Analysis, and Systems Maintenance. CET and DASO flights for D5LE are completed in FY2022 and transition to Follow-on Commander's Evaluation Test (FCETs) Flights which are funded with Operation and Maintenance, Navy funding beginning in FY2023.</p> <p>Guidance Hardware: Funding supports procurement and associated production support of sub-components necessary for a complete Guidance System (GS) which consists of an Inertial Measurement Unit (IMU) and an Electronics Assembly (EA). Within the IMU and EA there are numerous sub-components including the Guidance Circuit Card Assemblies (CCA), inertial sensor (Alternate Pendulous Integrating Gyroscopic Accelerometer (Alt-PIGA), and Interferometric Fiber Optic Gyros (IFOG). These sub-components are required to accomplish the Guidance Hardware Strategic Systems Programs Alterations (SPALT) of the Guidance System assemblies. The SPALT is accomplished at the Integrated Support Facility by upgrading MOD 0 (Zero) Guidance Systems IMU and EA with CCAs, Alt-PIGAs, and IFOGs, making them MOD 1 (One) Guidance Systems. Funding also supports the Guidance test equipment and test stations' refresh program that is used to identify poor performing and aging/obsolescent Guidance hardware</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		
<p>components. The refresh program updates test equipment and test stations to maintain station reliability and availability supporting Guidance test, repair, and production operations. The test equipment refresh program updates stations over a 3-year period every 8 years. FY2023 is the start of the next refresh/upgrade cycle that was last completed FY 2015-2017.</p> <p>Fleet Return Missile Electronic Strategic Systems Programs Alterations (SPALT) Kits: Funding provides for the procurement of the four Missile Electronics Packages and associated production support in order to extend the life of the D5 Missile to align with the OHIO Class life.</p> <p>Operating and Support Costs Include:</p> <p>Warhead Components: Funding supports the production of the W76-1/Mk4A Reentry Body assembly and associated support equipment including Reentry Body (RB) cabling and Reentry Body Shells. Includes Joint Test Assembly (JTA) production and Alternate Release Assembly (ARA) hardware production. Includes Extended Navy Test Bed (ENTB) production. Lastly, funding supports the Unique Identifier (UID) efforts that allow the Fire Control System to electrically distinguish between W76-1 and W76-2 warheads.</p> <p>The Mk4B Shape Stable Nose Tip (SSNT) Program: The Mk4B SSNT (formerly referenced as Mk4A SSNT) effort is converting Reentry Body forward shell assemblies (FSA) from legacy carbon composite nose tips to Mk4B Shape Stable Nose Tips in order to provide more consistent and predictable flight performance characteristics of the weapon system.</p> <p>Tooling, Test/Support Equipment: Funding provides for the refresh and/or replacement of aging test/evaluation equipment experiencing obsolescence. It funds production testing support for CCA module testers used by missile, guidance, and navigation to ensure continued operation of the twelve (12) current Teradyne testers, along with the fourteen (14) follow-on testers. This category also funds Inter-Facility Transportation Equipment refreshers that are used to transport missile motors. Funding also provides for procurement of initial and replenishment Support Equipment (SE) spare end items. This includes items such as guide rails, service unit items, equipment adapters, dollies, slings, circuit cards, digital millimeters, spectrum analyzers, oscilloscopes, signal generators, etc. Furthermore, funds procure follow on Support Equipment end items and spares to include reentry system S/RP, SSE electrical and mechanical S/RP, loading tube pads, missile body replenishment S/RP and Inter-Facility Use Equipment. Lastly, this category funds development, qualification, documentation, proofing, and production of hardware and software kits.</p> <p>Systems Integration/Planning: Funding provides for system component management and integration as well as master schedule oversight and planning, Age Assessment, and Cybersecurity efforts. Test Measurement Diagnostic Equipment Life Cycle Support efforts at NSWC Corona, Crane and Unified Industries Incorporated are also funded in this category.</p> <p>Supportability Modifications/SPALT Insertion: Funding provides for installation costs for missile Strategic Systems Programs Alterations (SPALTs), SPALTs are converting D5 missiles to D5LE missiles. These costs also fund missile processing efforts that include the hands-on and hands-off support needed to DD250 missiles. Support includes radiographic inspection, non-missile production related tasks for mechanics, technicians, production planners and controllers, along with missile system engineers.</p> <p>End of Production Missile and Guidance Costs: Funding provides for end of production spares as well as costs associated with shutting down production lines.</p> <p>Solid Rocket Motors (SRMs) and Post Boost Control Systems (PBCSs): Funding provides for the procurement of SRMs, PBCSs, and all associated costs including production requalification, HMX procurement, tooling, railcar support and production evaluation testing and static firing.</p> <p>Production Support/Missile Hardware: Funding supports the requalifying, reproducing, and procuring missile hardware energetic components including: Thru Bulkhead Initiators (TBI), Linear Ordnance System (LOS), Post Boost Control System (PBCS) Destruct, Flexible Linear Shape Charge (FLSC), Separation Linear Shape Charge (SLSC), and Third Stage Separation Charge Assembly (TSSCA) and includes Lot Acceptance Test (LAT) efforts conducted by NSWC Crane in support of Ordnance Production. The missile hardware energetic components are currently deployed beyond their service life of 25 years. Due to their limited service life and safety concerns associated with a manned platform, these energetic components need to be requalified, reproduced, and deployed.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		

D5 Life Extension 2 (D5LE2) Costs Include:

Flight Systems:

Missile Redesign: D5LE2 Missile subsystem efforts in FY2023 include: Missile Health and Testability Architecture design; Missile Model updates; Avionics design; Test Missile Kit, Structures, and controls concept design to include Nuclear Safety electronics; communications networks & protocols refinement; Equipment Section design efforts, and Nose Fairing design efforts. Additional efforts include production restart planning for pull-through designs from the legacy D5/D5LE system, including portions of the Post Boost Control System (PBCS).

Guidance Redesign: Strategic Guidance (Mk7 Mod 0) system efforts in FY2023 include evaluation of system level requirement flowdown and effects on subsystem concepts and designs. Additional activities include focused design, trades, and vendor engagement/selection for Strategic Guidance Mechanical components and inertial instruments including gimbals, stable members, shock mounts, connectors, torque motors, & slip rings some of which were last produced as a part of D5 decades ago.

Systems Engineering/Test & Evaluation:

System Engineering and Test & Evaluation efforts in FY2023 are focused mainly on the D5LE2 Missile subsystem level allocated requirements analysis, Concepts of Operations Modeling, defined subsystem level modeling, and design concept reports.

Systems Engineering: FY2023 effort will focus on Initial design of the following systems engineering areas: Technical program plans, CONOPS, initial functional architecture design (functional only), requirements (level 1), architecture and interface modeling, configuration and data management, and in support of a Common Parts Program.

Test and Evaluation: FY2023 efforts include SWS subsystem test requirements definitions and reviews, and design of enhanced test Concepts of Operation and facilitation plans.

Training Equipment: FY2023 efforts initiate evaluation of flowdown of subsystem requirement changes on the legacy D5/D5LE Strategic Weapons Interface Simulator (SWIS) and Segmented Missile Lab (SML) trainer hardware.

Ship Interface:

Fire Control: FY2023 efforts initiate subsystem evaluation of allocated system requirement flowdown to include effects on the legacy and modernized shipboard design. Initiates descriptive digital models of the D5LE2 iteration of the SWS Fire Control subsystem design.

Launcher: FY2023 efforts initiate subsystem evaluation of allocated system requirement flowdown to include effects on the legacy Launcher design. Launcher, as a pull through sub-system, evaluates changes in the interface between the modernized D5LE2 Missile and other modernized SWS components with pull-through components such as closures and gas generators as well as evaluates changes for underwater launch performance. Begins the porting of existing Launcher models into the D5LE2 digital engineering environment.

Navigation: FY2023 efforts initiate subsystem evaluation of allocated system requirement flowdown to include effects on the legacy and modernized Strategic Navigation design and sensors. Begins Navigation digital model design and integration into the D5LE2 digital environment.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		
<p>System Evaluation: FY2023 efforts include Integration and Test activities that focuses on building and curating the Descriptive System Model and early planning and infrastructure design for simulation-based and physical integration and testing. Plans, processes, and program integration developing engineering process documentation. Information and baseline management supporting the configuration management role for system level artifacts. Mission and System Assurance efforts as the system architecture is defined and the surety, safety, and cyber security processes are put into place.</p> <p>D5LE2 (P-5 set three) is a new start effort.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles

P-1 Line Item Number / Title:
1250 / TRIDENT II Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603561N, 0101221N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / TRIDENT II Mods - D5 Life Extension	P-5a, P-21		178	- / 4,919.600	- / 594.367	- / 575.432	- / 494.019	- / 0.000	- / 494.019
P-5	2 / TRIDENT II Mods -Operating and Support Costs	P-5a, P-21			- / 5,856.985	- / 561.233	- / 544.809	- / 565.890	- / 0.000	- / 565.890
P-5	3 / D5LE2 [D5LE2]				- / 0.000	- / 0.000	- / 0.000	- / 65.255	- / 0.000	- / 65.255
P-40	Total Gross/Weapon System Cost				- / 10,776.585	- / 1,155.600	- / 1,120.241	- / 1,125.164	- / 0.000	- / 1,125.164

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

Funding in the TRIDENT II Mods line is required to continue the procurement of TRIDENT II missiles and currently supports the life-extension of the D5 missile.

TRIDENT II Mods - D5 Life Extension Program P-5:

The FY2023 request of \$494.019 million for the D5 Life Extension (D5LE) Program procures missile electronic and guidance SPALT kits as well as other critical components required to support the extended SSBN hull life for a 14 OHIO Class SSBN TRIDENT II program. FY2023 funding also supports the production of the redesigned Guidance System and missile electronics packages, which must be replaced to support the extended service life of the OHIO Class Submarines.

Joint Fuze Sustainment decreases from FY2022 to FY2023 (-\$22.334M). Efforts have transitioned from low rate initial production to sustained full rate production on the components that are needed to assemble an Arming, Fuzing, and Firing System (AF&F) Kit. The kit quantities represent when all of the eight components are produced and are ready for assembly into AF&Fs. Fifty more AF&F kits are delivered in FY2023 and the cost decreases as component quantities being produced for the kits increase (-\$17.249M). Material costs at Sandia National Laboratories and Kansas City National Security Campus decrease (-\$5.085M) as long lead material buys complete and transition to annual material purchases and the Thermal Batteries and Application Specific Integrated Circuits (ASIC) wafers and packaging materials get delivered in FY2022.

Production Support Costs decreases from FY2022 to FY2023 (-\$28.852M). Commander's Evaluation Test (CET) Flights for D5LE are completed in FY2022 and transition to Follow-on Commander's Evaluation Test (FCETs) Flights which are funded with Operation and Maintenance, Navy funding. Additionally, decommissioning costs at Sunnyvale, CA decrease as Lockheed Martin continues to move efforts to Waterton, CO. and Free Onboard (FOB) destination freight charges and labor for hardware shipped from Sunnyvale and Fleet Ballistic Missile suppliers to government or Lockheed facilities decreases. Lastly, D5 equipment disposal efforts are winding down, which lower system integration efforts.

Guidance Hardware Costs overall increases from FY2022 to FY2023 (+\$-27.413M):

(Cost element 3.1.2) (-\$.405M) Interferometric Fiber Optic Gyroscope (IFOG) schedule based quantity reduction of 7 IFOGs, FY2023 is the final procurement year for the MOD 1 Guidance Sensors IFOGs. The decreased IFOG quantities being procured is due to FY2023 being the last year of procurements of the components as required totals of IFOGs to support Guidance system-level production of (Inertial Measurement Unit (IMU) and Electronic Assemblies (EA) are reached.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		
<p>(Cost element 3.1.3) (-\$4.823M) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) schedule based quantity reduction of 26 Alt-PIGAs. FY2023 is the final procurement year for the MOD 1 Guidance Sensors Alt-PIGAs. The decreased Alt-PIGA quantities being procured is due to FY2023 being the last year of procurements of the components as required totals of Alt-PIGAs to support Guidance system-level production of (Inertial Measurement Unit (IMU) and Electronic Assemblies (EA) are reached.</p> <p>(Cost element 3.1.4) (+\$14.941M) The Guidance Production Support funding includes all non-touch labor that supports production at the prime contractor, subcontractor, and component and subassembly factories. This includes engineering, quality, and program management at Draper, General Dynamics, Honeywell, Raytheon, Moog, and other sub-contractor factories and facilities. The Production Support budget line increases in FY2023 for three primary reasons:</p> <ol style="list-style-type: none"> 1. The Guidance System production at the Integrated Support Facility has been and will remain at max production rate between FY2019 - FY2024. 2. Guidance Production Support costs cover all issues that arise in production as well as associated implementation of solutions to those issues. In the past few years a few significant issues occurred in production, the largest two of which were <ol style="list-style-type: none"> a. The IFOG Integrated Optics Chip (IOC) issue, which required a new IOC vendor to be stood up and qualified, a new IFOG sense loop assembly (SLA) capability to be qualified, and an IFOG upgrade capability to be qualified at a new major subcontractor (Moog). In addition, the 700 IFOGs delivered to date, as well as the > than 150 Guidance Systems that had already been SPALTED with new IFOGS, require upgrade to the latest IFOG configuration. b. Standing up a second source for the immensely complex Alt-PIGA due to cost, schedule and quality issues at the sole source vendor. 3. Thirdly, Guidance production support continues to cover all major subcontractors and factories through shutdown, often requiring effort years after the components are scheduled to be delivered. Guidance System (GS) components require very long lead times for long lead material, assembly and test of complex sensors and other electrical components. The Guidance production support covers component requalification, re-procurement, and re-work, quality assessment, appropriate assembly level upgrades, and program management of these major subcontractors and factories. The production support needs to rapidly investigate and correct production and quality issues that are vital to delivering the MOD 1 Guidance System to the fleet on time and within budget, including when those issues arise after initial component procurement. <p>(Cost element 3.1.5) (+\$6.748M) The Guidance Hardware Strategic Systems Programs Alterations (SPALT) Assemblies funding provides for the touch labor for assembly of the Guidance System being SPALTed. The Guidance System SPALT is accomplished at the Integrated Support Facility by upgrading the MOD 0 (Zero) Guidance Systems Inertial Measurement Unit (IMU) and Electronic Assembly (EA) with Circuit Card Assemblies (CCA), Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) and Interferometric Fiber-Optic Gyro (Alt-PIGAs and (IFOG), making them MOD 1 (One) Guidance Systems. These costs cover specifically the touch labor and the required material for the conduct of the MOD 0 to MOD 1 SPALT. The touch labor associated with the SPALT of MOD 0 to MOD 1 Guidance System was previously contained in the CCA line (prior to FY22) as this is the effort required to install the new electronics (CCAs/Sensors) into the upgraded Guidance System. Since the CCA component procurement ended in FY 2021, this effort rolled into the Guidance Production Support line which appeared like a significant additional request. To provide better fidelity in FY2022, the increased Guidance Production Support was then further broken down by creating the new line "SPALT Assemblies" to show further detail into the touch labor associated with Guidance System production at the Integrated Support Facility that was previously captured within CCA line.</p> <p>(Cost element 3.1.6) (+\$10.952M) Test Equipment Upgrades, The test equipment and test stations that are used to identify poor performing and aging/obsolescent guidance hardware components are beginning a planned three-year refresh cycle beginning FY 2023. Guidance test and support stations are required to enable SPALT production of MK6 MOD 1 Guidance Systems to meet the Full Operational Capability (FOC) of MOD 1 by FY2025. Test stations will continue to be necessary after the completion of SPALT production, supporting the Guidance Repair program to ensure that fleet failures can be repaired and returned to fleet service so that Guidance fleet requirements can be met. Guidance test and support equipment are essential to maintaining the deployed Guidance Systems. Test stations are also vital to the Guidance Surveillance program that provides critical insight to guidance system performance at system and component level allowing the program to address potential issues before impacting the fleet and providing valuable insight into operation performance of the guidance system itself. The Guidance Program has used a targeted Test Equipment refresh program to address obsolescence and identified problems to keep issues from impacting production, repair and surveillance activities. The Test Equipment refresh program updates stations over a 3-year period every 8 years. FY2023 is the start of the next cycle and the last was completed FY 2015-2017. FY2023 efforts are focused on updates to Guidance System Test Station, Torque Motor Test Station, Resolver Test Station, and Slip Ring Test Station. These stations support both SPALT Production and future Repair Programs. Test stations that support flight test and integration test programs for surveillance and problem investigations are required and planned for in future years.</p>		

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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		
<p>Fleet Return Missile Electronic SPALT Kits decreases from FY2022 to FY2023 (-\$57.640M). Interlocks production ending in FY2022 (-\$56.448M), decreased production support as interlocks production goes away (-\$2.285). Missile Inverter unit cost 2% escalation adjustment increases total cost (+\$.463) and Command Sequencer unit cost 2% escalation adjustment increases total cost (+\$.630M).</p> <p>TRIDENT II Mods - Operating and Support Costs P-5:</p> <p>The FY2023 request of \$565.890 million for Operating and Support Costs funds efforts associated with the sustainment of TRIDENT II (D5) missiles to include Warhead Components, Mk4B Shape Stable Nose Tip (SSNT), refreshes and replacement of D5 legacy tooling and test support equipment, Supportability Mods/Strategic Programs Alteration (SPALT) Insertion, system integration efforts, and replacement of aging rocket motors.</p> <p>Warhead Components 2% escalation only</p> <p>Mk4B Shape Stable Nose Tip (SSNT) decreases from FY2022 to FY2023 (-\$4.558M) Updates and modifications to Reentry Body documentation (Weapon Specifications, Interface Control Drawings, product drawings, etc) complete in FY2022 and other program safety integration and SWS level system engineering support efforts decrease.</p> <p>Tooling, Test/Support Equipment increases from FY2022 to FY2023 (+\$1.480M). The scope of this effort fluctuates annually based upon specific tooling and test support equipment refreshes and procurement needs. In FY2023, planned tooling and test equipment refreshes include: Servo-actuator Assembly (SAA) Test Console (TC), Through Bulkhead Initiator TC, Pressure Transducer TC, Linear Ordnance System TC, SAA Flush and Fill TC, Circuit Card Assembly Shipboard Tester, Hydraulic TC, System X-ray for the PBCS Gas Generator, Primary Battery TC, and Drive Tractor. Beginning in FY2022 the funding out of cost element 1.4 (Containers) \$104K was realigned into this category and will procure shipping containers for post DD250 D5 Missile components, test instrumentation, and Mk4/Mk5 Reentry Bodies. Previously the Containers' funds were used to procure Test Missile Kit Transfer and Aerospike Protective Cap containers. These equipment containers have their own end item number and they are now purchased as part of the initial equipment procurement.</p> <p>Systems Integration and Planning: 2% escalation only</p> <p>Supportability Mods/SPALT Insertion: 2% escalation only</p> <p>EOP Missile/Guidance Costs: 2% escalation only</p> <p>Solid Rocket Motors and Post Boost Control System Costs: 2% Escalation in the SRM and HMX cost element categories and Post Boost Control System (cost element 2.2) (-\$3.892M) due to schedule based quantity change of minus 2, and Other (cost element 2.4) (+\$10.381M) due to: Propulsion Viability efforts that develop materials and processes to ensure the future viability of propulsion component production, Nose Fairing Jettison Motors, and Firing Unit SPALT efforts. FY2023 begins the start of SRM Block Requalification, which is required to address a critical material supplier change in motor insulation.</p> <p>Production Support/Missile Hardware increases from FY2022 to FY2023 (+10.330M). Due to the August 2020 California wild fire which engulfed the Santa Cruz facility, FY2022 ordnance production scope was reduced and funding was utilized for immediately required facility recovery efforts. Wild fire recovery efforts included an assessment of fire damage, evaluating the health of production capability, evaluating ordnance production inventory, and identifying a mitigation strategy to prevent further damage and return to planned ordnance production scope in FY2023. The increase from FY2022 to FY2023 represents ordnance production scope returning to its required state to support production requalification's which are required to reproduce and procure missile hardware energetic components that have limited life and were not intended to be supporting the fleet this long. The missile hardware energetic components are currently deployed beyond their service life of 25 years. Due to their limited service life and safety concerns associated with a manned platform, these energetic components need to be requalified, reproduced, and deployed.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 0101221N
Line Item MDAP/MAIS Code: N/A		

D5 Life Extension 2 (D5LE2) Program P-5:

The FY2023 request of \$62.255 million is the first year of WPN funding for Trident 2 Modernization (D5LE2) program efforts. The D5LE2 FY2023 WPN activities begin the detailed design and non-recurring engineering necessary for Strategic Weapons Systems (SWS) subsystems (e.g. Missile, Guidance, Fire Control, Launcher, Navigation, etc.) critical to incorporate the impacts to design that are driven by System Level requirement refinement which have been occurring in the Research, Development Test & Evaluation, Navy Line Item 0101221N, Project 2228 between FY20-22. FY2023 commences the D5LE2 transition from RDT&E,N System Level requirements setting and study activities to WPN subsystem level evaluations and design activities, and production/vendor engagement and startup/restart. These activities leverage the Missile and Guidance Technology RDT&E,N efforts to inform subsystem level design concepts. Design concepts and subsystem level requirement evaluation are critical to supporting the Strategic Weapon System (SWS) System Requirements Review (SRR) and subsystem SRRs.

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2				P-1 Line Item Number / Title: 1250 / TRIDENT II Mods			Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code: 178			
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				4,919.600	594.367	575.432	494.019	0.000	494.019
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				4,919.600	594.367	575.432	494.019	0.000	494.019
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				4,919.600	594.367	575.432	494.019	0.000	494.019
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - Joint Fuze Sustainment Cost																		
Recurring Cost																		
1.1.1) Production Engineering/Support ⁽¹⁾	-	-	184.241	1,085.345	29	31.475	357.719	128	45.788	160.331	178	28.539	-	-	0.000	160.331	178	28.539
1.1.2) Material/Hardware Procurement ⁽²⁾	-	-	31.820	-	-	28.310	-	-	31.709	-	-	26.624	-	-	0.000	-	-	26.624
<i>Subtotal: Recurring Cost</i>	-	-	<i>216.061</i>	-	-	<i>59.785</i>	-	-	<i>77.497</i>	-	-	<i>55.163</i>	-	-	<i>0.000</i>	-	-	<i>55.163</i>
<i>Subtotal: Hardware - Joint Fuze Sustainment Cost</i>	-	-	<i>216.061</i>	-	-	<i>59.785</i>	-	-	<i>77.497</i>	-	-	<i>55.163</i>	-	-	<i>0.000</i>	-	-	<i>55.163</i>
Hardware - Production Support Cost																		
Recurring Cost																		
2.1.1) Production Support ⁽³⁾	-	-	2,278.952	-	-	158.756	-	-	166.952	-	-	138.100	-	-	0.000	-	-	138.100
<i>Subtotal: Recurring Cost</i>	-	-	<i>2,278.952</i>	-	-	<i>158.756</i>	-	-	<i>166.952</i>	-	-	<i>138.100</i>	-	-	<i>0.000</i>	-	-	<i>138.100</i>
<i>Subtotal: Hardware - Production Support Cost</i>	-	-	<i>2,278.952</i>	-	-	<i>158.756</i>	-	-	<i>166.952</i>	-	-	<i>138.100</i>	-	-	<i>0.000</i>	-	-	<i>138.100</i>
Hardware - Guidance Hardware Cost																		
Recurring Cost																		
3.1.1) Circuit Card Assemblies (CCA's) ⁽⁴⁾	1,554.315	492	764.723	1,573.117	60	94.387	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2						P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code: 178							

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^{(†) (4)}	131.665	1,316	173.271	126.680	200	25.336	129.085	200	25.817	131.668	193	25.412	-	-	0.000	131.668	193	25.412
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^{(†) (5)}	231.770	1,275	295.507	213.991	220	47.078	218.055	220	47.972	222.418	194	43.149	-	-	0.000	222.418	194	43.149
3.1.4) Guidance Production Support ⁽⁶⁾	-	-	411.991	-	-	47.630	-	-	60.755	-	-	75.696	-	-	0.000	-	-	75.696
3.1.5) SPALT Assemblies ⁽⁷⁾	-	-	0.000	-	-	0.000	-	-	18.687	-	-	25.435	-	-	0.000	-	-	25.435
3.1.6) Test Equipment Upgrade ⁽⁸⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	10.952	-	-	0.000	-	-	10.952
<i>Subtotal: Recurring Cost</i>	-	-	1,645.492	-	-	214.431	-	-	153.231	-	-	180.644	-	-	0.000	-	-	180.644
<i>Subtotal: Hardware - Guidance Hardware Cost</i>	-	-	1,645.492	-	-	214.431	-	-	153.231	-	-	180.644	-	-	0.000	-	-	180.644
Hardware - Fleet Return Missile Electronic SPALT Kits Cost																		
Recurring Cost																		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(†)	632.061	196	123.884	667.333	45	30.030	677.333	51	34.544	690.879	50	34.544	-	-	0.000	690.879	50	34.544
4.1.2) Missile Inverter ^{(†) (9)}	863.548	115	99.308	912.480	25	22.812	926.160	25	23.154	944.683	25	23.617	-	-	0.000	944.683	25	23.617
4.1.3) Command Sequencer ^{(†) (10)}	680.980	100	68.098	721.632	19	13.711	732.465	43	31.496	747.114	43	32.126	-	-	0.000	747.114	43	32.126
4.1.4) Interlocks ^{(†) (11)}	1,196.095	200	239.219	1,263.952	42	53.086	1,282.909	44	56.448	-	-	0.000	-	-	0.000	-	-	0.000
4.1.5) Missile Production Support ⁽¹²⁾	-	-	248.586	-	-	41.756	-	-	32.110	-	-	29.825	-	-	0.000	-	-	29.825
<i>Subtotal: Recurring Cost</i>	-	-	779.095	-	-	161.395	-	-	177.752	-	-	120.112	-	-	0.000	-	-	120.112
<i>Subtotal: Hardware - Fleet Return Missile Electronic SPALT Kits Cost</i>	-	-	779.095	-	-	161.395	-	-	177.752	-	-	120.112	-	-	0.000	-	-	120.112
Gross/Weapon System Cost	-	-	4,919.600	-	-	594.367	-	-	575.432	-	-	494.019	-	-	0.000	-	-	494.019

(†) indicates the presence of a P-5a

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods	Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code: 178
<p>Footnotes:</p> <p>(1) Efforts have transitioned from low rate initial production to sustained full rate production on the components that are needed to assemble an Arming, Fuzing, and Firing System (AF&F) Kit. The kit quantities represent when all of the eight components are produced and are ready for assembly into AF&Fs. Fifty more AF&F kits are delivered in FY2023 and the cost decreases as component quantities being produced for the kits decrease (-\$17.249M).</p> <p>(2) Material costs at Sandia National Laboratories and Kansas City National Security Campus decrease (-\$5.085M) as long lead material buys complete and transition to annual material purchases and the Thermal Batteries and Application Specific Integrated Circuits (ASIC) wafers and packaging materials get delivered in FY2022.</p> <p>(3) Production Support Costs decreases from FY2022 to FY2023 (-\$28.852M). Commander's Evaluation Test (CET) Flights for D5LE are completed in FY2022 and transition to Follow-on Commander's Evaluation Test (FCETs) Flights which are funded with Operation and Maintenance, Navy funding. Additionally, decommissioning costs at Sunnyvale, CA decrease as Lockheed Martin continues to move efforts to Waterton, CO. and Free Onboard (FOB) destination freight charges and labor for hardware shipped from Sunnyvale and Fleet Ballistic Missile suppliers to government or Lockheed facilities decreases. Lastly, D5 equipment disposal efforts are winding down, which lower system integration efforts.</p> <p>(4) (Cost element 3.1.2) (-\$405M) Interferometric Fiber Optic Gyroscope (IFOG) schedule based quantity reduction of 7 IFOGs, FY2023 is the final procurement year for the MOD 1 Guidance Sensors IFOGs. The decreased IFOG quantities being procured is due to FY2023 being the last year of procurements of the components as required totals of IFOGs to support Guidance system-level production of (Inertial Measurement Unit (IMU) and Electronic Assemblies (EA) are reached.</p> <p>(5) (Cost element 3.1.3) (-\$4.823M) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) schedule based quantity reduction of 26 Alt-PIGAs. FY2023 is the final procurement year for the MOD 1 Guidance Sensors Alt-PIGAs. 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The touch labor associated with the SPALT of MOD 0 to MOD 1 Guidance System was previously contained in the CCA line (prior to FY22) as this is the effort required to install the new electronics (CCAs/Sensors) into the upgraded Guidance System. Since the CCA component procurement ended in FY 2021, this effort rolled into the Guidance Production Support line which appeared like a significant additional request. To provide better fidelity in FY2022, the increased Guidance Production Support was then further broken down by creating the new line "SPALT Assemblies" to show further detail into the touch labor associated with Guidance System production at the Integrated Support Facility that was previously captured within CCA line.</p> <p>(8) (Cost element 3.1.6) (+\$10.952M) Test Equipment Upgrades, The test equipment and test stations that are used to identify poor performing and aging/obsolescent guidance hardware components are beginning a planned three-year refresh cycle beginning FY 2023. Guidance test and support stations are required to enable SPALT production of MK6 MOD 1 Guidance Systems to meet the Full Operational Capability (FOC) of MOD 1 by FY2025. Test stations will continue to be necessary after the completion of SPALT production, supporting the Guidance Repair program to ensure that fleet failures can be repaired and returned to fleet service so that Guidance fleet requirements can be met. Guidance test and support equipment are essential to maintaining the deployed Guidance Systems. Test stations are also vital to the Guidance Surveillance program that provides critical insight to guidance system performance at system and component level allowing the program to address potential issues before impacting the fleet and</p>		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 178
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providing valuable insight into operation performance of the guidance system itself. The Guidance Program has used a targeted Test Equipment refresh program to address obsolescence and identified problems to keep issues from impacting production, repair and surveillance activities. The Test Equipment refresh program updates stations over a 3-year period every 8 years. FY2023 is the start of the next cycle and the last was completed FY 2015-2017. FY2023 efforts are focused on updates to Guidance System Test Station, Torque Motor Test Station, Resolver Test Station, and Slip Ring Test Station. These stations support both SPALT Production and future Repair Programs. Test stations that support flight test and integration test programs for surveillance and problem investigations are required and planned for in future years.

- (9) Missile Inverter unit cost 2% escalation adjustment increases total cost (+\$.463M).
- (10) Command Sequencer 2% escalation adjustment increases total cost (+\$.630M).
- (11) Interlocks production ending in FY2022 (-\$56.448M).
- (12) Decreased production support as interlocks production goes away (-\$2.285M).

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2			P-1 Line Item Number / Title: 1250 / TRIDENT II Mods					Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension			

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Production Engineering/ Support ^(f)		2021	Department of Energy (DOE) / Kanas City, MO	MIPR	SSP - Washington Navy Yard	Oct 2020	May 2021	29	1,085.345	Y		
1.1.1) Production Engineering/ Support ^(f)		2022	Department of Energy (DOE) / Kanas City, MO	MIPR	SSP - Washington Navy Yard	Oct 2021	May 2022	128	357.719	Y		
1.1.1) Production Engineering/ Support ^(f)		2023	Department of Energy (DOE) / Kanas City, MO	MIPR	SSP - Washington Navy Yard	Oct 2022	May 2023	178	160.331	Y		
3.1.1) Circuit Card Assemblies (CCA's) ^(f)		2018	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2018	Sep 2018	55	1,591.000	Y		
3.1.1) Circuit Card Assemblies (CCA's) ^(f)		2019	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2019	Sep 2019	62	1,515.000	Y		
3.1.1) Circuit Card Assemblies (CCA's) ^(f)		2020	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2020	Sep 2020	62	1,543.790	Y		
3.1.1) Circuit Card Assemblies (CCA's) ^(f)		2021	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2021	Sep 2021	60	1,573.117	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2017	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2017	Feb 2018	130	149.523	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2018	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2018	Feb 2019	185	125.000	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2019	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2019	Feb 2020	200	122.000	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2020	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2020	Feb 2021	200	124.320	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2021	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2021	Feb 2022	200	126.680	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2022	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2022	Feb 2023	200	129.085	Y		
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(f)		2023	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2023	Feb 2024	193	131.668	Y		
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2017	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2017	Jun 2018	125	261.664	Y		
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2018	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2018	Jun 2019	180	240.000	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2			P-1 Line Item Number / Title: 1250 / TRIDENT II Mods					Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2019	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2019	Jun 2020	200	231.000	Y		
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2020	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2020	Jun 2021	220	210.000	Y		
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2021	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2021	Jun 2022	220	213.991	Y		
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2022	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2022	Jun 2023	220	218.055	Y		
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ^(f)		2023	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2023	Jun 2024	194	222.418	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Nov 2017	33	607.394	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Nov 2018	40	618.925	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Nov 2019	40	630.700	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2019	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2018	Nov 2020	41	642.683	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2020	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2019	Nov 2021	42	654.881	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2021	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2020	Nov 2022	45	667.333	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2022	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2021	Nov 2023	51	677.333	Y		
4.1.1) Flight Control Electronic Assembly (FCEA) ^(f)		2023	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2022	Nov 2024	50	690.879	Y		
4.1.2) Missile Inverter ^(f)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Jan 2018	24	830.500	Y		
4.1.2) Missile Inverter ^(f)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Jan 2019	21	846.286	Y		
4.1.2) Missile Inverter ^(f)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Jan 2020	20	862.400	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
4.1.2) Missile Inverter ^(†)		2019	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2018	Jan 2021	25	878.760	Y		
4.1.2) Missile Inverter ^(†)		2020	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2019	Jan 2022	25	895.480	Y		
4.1.2) Missile Inverter ^(†)		2021	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2020	Jan 2023	25	912.480	Y		
4.1.2) Missile Inverter ^(†)		2022	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2021	Jan 2024	25	926.160	Y		
4.1.2) Missile Inverter ^(†)		2023	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2022	Jan 2025	25	944.683	Y		
4.1.3) Command Sequencer ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2018	24	656.833	Y		
4.1.3) Command Sequencer ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Feb 2019	19	669.316	Y		
4.1.3) Command Sequencer ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Feb 2020	19	682.000	Y		
4.1.3) Command Sequencer ^(†)		2019	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2018	Feb 2021	19	694.947	Y		
4.1.3) Command Sequencer ^(†)		2020	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2019	Feb 2022	19	708.158	Y		
4.1.3) Command Sequencer ^(†)		2021	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2020	Feb 2023	19	721.632	Y		
4.1.3) Command Sequencer ^(†)		2022	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2021	Feb 2024	43	732.465	Y		
4.1.3) Command Sequencer ^(†)		2023	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2022	Feb 2025	43	747.114	Y		
4.1.4) Interlocks ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Nov 2017	36	1,150.417	Y		
4.1.4) Interlocks ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Nov 2018	41	1,172.293	Y		
4.1.4) Interlocks ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Nov 2019	41	1,194.561	Y		
4.1.4) Interlocks ^(†)		2019	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2018	Nov 2020	41	1,217.244	Y		
4.1.4) Interlocks ^(†)		2020	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2019	Nov 2021	41	1,240.390	Y		
4.1.4) Interlocks ^(†)		2021	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2020	Nov 2022	42	1,263.952	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
4.1.4) Interlocks ^(†)		2022	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2021	Nov 2023	44	1,282.909	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016													Fiscal Year 2017													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016													Calendar Year 2017													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Production Engineering/Support ⁽¹⁾																																	
	1	2021	NAVY	29	0	29																							29				
	1	2022	NAVY	128	0	128																							128				
	1	2023	NAVY	178	0	178																							178				
3.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 313																																	
	2	2018	NAVY	55	0	55																							55				
	2	2019	NAVY	62	0	62																							62				
	2	2020	NAVY	62	0	62																							62				
	2	2021	NAVY	60	0	60																							60				
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ⁽⁴⁾																																	
Prior Years Deliveries: 601																																	
	3	2017	NAVY	130	0	130																							130				
	3	2018	NAVY	185	0	185																							185				
	3	2019	NAVY	200	0	200																							200				
	3	2020	NAVY	200	0	200																							200				
	3	2021	NAVY	200	0	200																							200				
	3	2022	NAVY	200	0	200																							200				
	3	2023	NAVY	193	0	193																							193				
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ⁽⁵⁾																																	
Prior Years Deliveries: 550																																	
	4	2017	NAVY	125	0	125																							125				
	4	2018	NAVY	180	0	180																							180				
	4	2019	NAVY	200	0	200																							200				
	4	2020	NAVY	220	0	220																							220				
	4	2021	NAVY	220	0	220																							220				
	4	2022	NAVY	220	0	220																							220				
	4	2023	NAVY	194	0	194																							194				
4.1.1) Flight Control Electronic Assembly (FCEA)																																	
	5	2016	NAVY	33	0	33																							33				
	5	2017	NAVY	40	0	40																							40				
	5	2018	NAVY	40	0	40																							40				
	5	2019	NAVY	41	0	41																							41				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2 **P-1 Line Item Number / Title:** 1250 / TRIDENT II Mods **Item Number / Title [DODIC]:** 1 / TRIDENT II Mods - D5 Life Extension

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016															Fiscal Year 2017												BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016															Calendar Year 2017												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
	5	2020	NAVY	42	0	42																									42			
	5	2021	NAVY	45	0	45																									45			
	6	2022	NAVY	51	0	51																									51			
	6	2023	NAVY	50	0	50																									50			
4.1.2) Missile Inverter ⁽⁹⁾																																		
	7	2016	NAVY	24	0	24		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24				
	7	2017	NAVY	21	0	21															A	-	-	-	-	-	-	-	-	-	21			
	7	2018	NAVY	20	0	20																									20			
	7	2019	NAVY	25	0	25																									25			
	7	2020	NAVY	25	0	25																									25			
	7	2021	NAVY	25	0	25																									25			
	8	2022	NAVY	25	0	25																									25			
	8	2023	NAVY	25	0	25																									25			
4.1.3) Command Sequencer ⁽¹⁰⁾																																		
	9	2016	NAVY	24	0	24		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24				
	9	2017	NAVY	19	0	19															A	-	-	-	-	-	-	-	-	-	19			
	9	2018	NAVY	19	0	19																									19			
	9	2019	NAVY	19	0	19																									19			
	9	2020	NAVY	19	0	19																									19			
	9	2021	NAVY	19	0	19																									19			
	10	2022	NAVY	43	0	43																									43			
	10	2023	NAVY	43	0	43																									43			
4.1.4) Interlocks ⁽¹¹⁾																																		
	11	2016	NAVY	36	0	36		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36				
	11	2017	NAVY	41	0	41															A	-	-	-	-	-	-	-	-	-	41			
	11	2018	NAVY	41	0	41																									41			
	11	2019	NAVY	41	0	41																									41			
	11	2020	NAVY	41	0	41																									41			
	11	2021	NAVY	42	0	42																									42			
	12	2022	NAVY	44	0	44																									44			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2 **P-1 Line Item Number / Title:** 1250 / TRIDENT II Mods **Item Number / Title [DODIC]:** 1 / TRIDENT II Mods - D5 Life Extension

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Production Engineering/Support⁽¹⁾																																	
1		2021	NAVY	29	0	29																							29				
1		2022	NAVY	128	0	128																							128				
1		2023	NAVY	178	0	178																							178				
3.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 313																																	
2		2018	NAVY	55	0	55											5	5	5	5	5	5	5	5	5	5	5	5	0				
2		2019	NAVY	62	0	62																						5	57				
2		2020	NAVY	62	0	62																							62				
2		2021	NAVY	60	0	60																							60				
3.1.2) Interferometric Fiber-Optic Gyro (IFOG)⁽⁴⁾																																	
Prior Years Deliveries: 601																																	
3		2017	NAVY	130	0	130	-	-	-	-	10	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	0					
3		2018	NAVY	185	0	185					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	67					
3		2019	NAVY	200	0	200																					A	200					
3		2020	NAVY	200	0	200																						200					
3		2021	NAVY	200	0	200																						200					
3		2022	NAVY	200	0	200																						200					
3		2023	NAVY	193	0	193																						193					
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA)⁽⁵⁾																																	
Prior Years Deliveries: 550																																	
4		2017	NAVY	125	0	125	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	11	11	11	11	11	11	0					
4		2018	NAVY	180	0	180					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	120					
4		2019	NAVY	200	0	200																					A	200					
4		2020	NAVY	220	0	220																						220					
4		2021	NAVY	220	0	220																						220					
4		2022	NAVY	220	0	220																						220					
4		2023	NAVY	194	0	194																						194					
4.1.1) Flight Control Electronic Assembly (FCEA)																																	
5		2016	NAVY	33	0	33	-	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0					
5		2017	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	4					
5		2018	NAVY	40	0	40					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40					
5		2019	NAVY	41	0	41															A	-	-	-	-	-	-	-	41				
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
							C	O	E	A	E	A	P	A	U	U	U	E	C	O	E	A	E	A	P	A	U	U	U	E			
							T	V	C	N	B	R	R	Y	N	L	G	P	T	V	C	N	B	R	R	Y	N	L	G	P			

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Exhibit P-21, Production Schedule: PB 2023 Navy																							Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension							

Cost Elements (Units in Each)					Fiscal Year 2018													Fiscal Year 2019													B A L A N C E								
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019																			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									
	5	2020	NAVY	42	0	42																																	42
	5	2021	NAVY	45	0	45																																	45
	6	2022	NAVY	51	0	51																																	51
	6	2023	NAVY	50	0	50																																	50
4.1.2) Missile Inverter ⁽⁹⁾																																							
	7	2016	NAVY	24	0	24	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2																0	
	7	2017	NAVY	21	0	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2					3		
	7	2018	NAVY	20	0	20		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20		
	7	2019	NAVY	25	0	25															A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25		
	7	2020	NAVY	25	0	25																																25	
	7	2021	NAVY	25	0	25																																25	
	8	2022	NAVY	25	0	25																																25	
	8	2023	NAVY	25	0	25																																25	
4.1.3) Command Sequencer ⁽¹⁰⁾																																							
	9	2016	NAVY	24	0	24	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2															0	
	9	2017	NAVY	19	0	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2					4		
	9	2018	NAVY	19	0	19		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19		
	9	2019	NAVY	19	0	19															A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	
	9	2020	NAVY	19	0	19																																19	
	9	2021	NAVY	19	0	19																																19	
	10	2022	NAVY	43	0	43																																43	
	10	2023	NAVY	43	0	43																																43	
4.1.4) Interlocks ⁽¹¹⁾																																							
	11	2016	NAVY	36	0	36	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3																0	
	11	2017	NAVY	41	0	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	4	4	4	4	4					4		
	11	2018	NAVY	41	0	41		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41		
	11	2019	NAVY	41	0	41															A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	
	11	2020	NAVY	41	0	41																																41	
	11	2021	NAVY	42	0	42																																42	
	12	2022	NAVY	44	0	44																																44	

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods	Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension
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Cost Elements (Units in Each)					Fiscal Year 2020														Fiscal Year 2021														BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020														Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) Production Engineering/Support ⁽¹⁾																																			
	1	2021	NAVY	29	0	29																								19					
	1	2022	NAVY	128	0	128																								128					
	1	2023	NAVY	178	0	178																								178					
3.1.1) Circuit Card Assemblies (CCA's)																																			
Prior Years Deliveries: 313																																			
	2	2018	NAVY	55	55	0																								0					
	2	2019	NAVY	62	5	57	5	5	5	5	5	5	5	5	6	6														0					
	2	2020	NAVY	62	0	62																								0					
	2	2021	NAVY	60	0	60																								0					
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ⁽⁴⁾																																			
Prior Years Deliveries: 601																																			
	3	2017	NAVY	130	130	0																								0					
	3	2018	NAVY	185	118	67	16	17	17	17																				0					
	3	2019	NAVY	200	0	200	-	-	-	-	17	17	17	17	17	17	17	16	16	16	16									0					
	3	2020	NAVY	200	0	200																								0					
	3	2021	NAVY	200	0	200																								0					
	3	2022	NAVY	200	0	200																								0					
	3	2023	NAVY	193	0	193																								0					
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ⁽⁵⁾																																			
Prior Years Deliveries: 550																																			
	4	2017	NAVY	125	125	0																								0					
	4	2018	NAVY	180	60	120	15	15	15	15	15	15	15	15																0					
	4	2019	NAVY	200	0	200	-	-	-	-																				0					
	4	2020	NAVY	220	0	220																								0					
	4	2021	NAVY	220	0	220																								0					
	4	2022	NAVY	220	0	220																								0					
	4	2023	NAVY	194	0	194																								0					
4.1.1) Flight Control Electronic Assembly (FCEA)																																			
	5	2016	NAVY	33	33	0																								0					
	5	2017	NAVY	40	36	4	4																							0					
	5	2018	NAVY	40	0	40	-	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0						
	5	2019	NAVY	41	0	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2 **P-1 Line Item Number / Title:** 1250 / TRIDENT II Mods **Item Number / Title [DODIC]:** 1 / TRIDENT II Mods - D5 Life Extension

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022													Fiscal Year 2023													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Production Engineering/Support⁽¹⁾																																	
	1	2021	NAVY	29	10	19	2	2	2	2	3	4	4																0				
	1	2022	NAVY	128	0	128	A -	-	-	-	-	-	-	10	10	10	10	11	11	11	11	11	11	11	11			0					
	1	2023	NAVY	178	0	178												A -	-	-	-	-	-	-	14	14	15	15	15	105			
3.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 313																																	
	2	2018	NAVY	55	55	0																						0					
	2	2019	NAVY	62	62	0																						0					
	2	2020	NAVY	62	62	0																						0					
	2	2021	NAVY	60	5	55	5	5	5	5	5	5	5	5	5	5	5											0					
3.1.2) Interferometric Fiber-Optic Gyro (IFOG)⁽⁴⁾																																	
Prior Years Deliveries: 601																																	
	3	2017	NAVY	130	130	0																						0					
	3	2018	NAVY	185	185	0																						0					
	3	2019	NAVY	200	200	0																						0					
	3	2020	NAVY	200	132	68	17	17	17	17																		0					
	3	2021	NAVY	200	0	200	-	-	-	-	17	17	17	17	17	17	17	17	16	16	16	16						0					
	3	2022	NAVY	200	0	200					A -	-	-	-	-	-	-	-	-	-	-	17	17	17	17	17	17	17	64				
	3	2023	NAVY	193	0	193																A -	-	-	-	-	-	-	193				
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA)⁽⁵⁾																																	
Prior Years Deliveries: 550																																	
	4	2017	NAVY	125	125	0																						0					
	4	2018	NAVY	180	180	0																						0					
	4	2019	NAVY	200	200	0																						0					
	4	2020	NAVY	220	72	148	18	18	18	18	19	19	19	19														0					
	4	2021	NAVY	220	0	220	-	-	-	-	-	-	-	-	18	18	18	18	18	18	18	18	19	19	19	19		0					
	4	2022	NAVY	220	0	220					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	18	18	148				
	4	2023	NAVY	194	0	194																A -	-	-	-	-	-	-	194				
4.1.1) Flight Control Electronic Assembly (FCEA)																																	
	5	2016	NAVY	33	33	0																						0					
	5	2017	NAVY	40	40	0																						0					
	5	2018	NAVY	40	40	0																						0					
	5	2019	NAVY	41	37	4	4																					0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2 **P-1 Line Item Number / Title:** 1250 / TRIDENT II Mods **Item Number / Title [DODIC]:** 1 / TRIDENT II Mods - D5 Life Extension

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2024													Fiscal Year 2025													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024													Calendar Year 2025													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Production Engineering/Support ⁽¹⁾																																	
	1	2021	NAVY	29	29	0																							0				
	1	2022	NAVY	128	128	0																							0				
	1	2023	NAVY	178	73	105	15	15	15	15	15	15	15															0					
3.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 313																																	
	2	2018	NAVY	55	55	0																						0					
	2	2019	NAVY	62	62	0																						0					
	2	2020	NAVY	62	62	0																						0					
	2	2021	NAVY	60	60	0																						0					
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ⁽⁴⁾																																	
Prior Years Deliveries: 601																																	
	3	2017	NAVY	130	130	0																						0					
	3	2018	NAVY	185	185	0																						0					
	3	2019	NAVY	200	200	0																						0					
	3	2020	NAVY	200	200	0																						0					
	3	2021	NAVY	200	200	0																						0					
	3	2022	NAVY	200	136	64	16	16	16	16																		0					
	3	2023	NAVY	193	0	193	-	-	-	-	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	0					
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ⁽⁵⁾																																	
Prior Years Deliveries: 550																																	
	4	2017	NAVY	125	125	0																						0					
	4	2018	NAVY	180	180	0																						0					
	4	2019	NAVY	200	200	0																						0					
	4	2020	NAVY	220	220	0																						0					
	4	2021	NAVY	220	220	0																						0					
	4	2022	NAVY	220	72	148	18	18	18	18	19	19	19	19														0					
	4	2023	NAVY	194	0	194	-	-	-	-	-	-	-	-	17	17	16	16	16	16	16	16	16	16	16	16	16	0					
4.1.1) Flight Control Electronic Assembly (FCEA)																																	
	5	2016	NAVY	33	33	0																						0					
	5	2017	NAVY	40	40	0																						0					
	5	2018	NAVY	40	40	0																						0					
	5	2019	NAVY	41	41	0																						0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2 **P-1 Line Item Number / Title:** 1250 / TRIDENT II Mods **Item Number / Title [DODIC]:** 1 / TRIDENT II Mods - D5 Life Extension

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2026													Fiscal Year 2027												BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026													Calendar Year 2027												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
1.1.1) Production Engineering/Support ⁽¹⁾																																
	1	2021	NAVY	29	29	0																							0			
	1	2022	NAVY	128	128	0																							0			
	1	2023	NAVY	178	178	0																							0			
3.1.1) Circuit Card Assemblies (CCA's)																																
Prior Years Deliveries: 313																																
	2	2018	NAVY	55	55	0																							0			
	2	2019	NAVY	62	62	0																							0			
	2	2020	NAVY	62	62	0																							0			
	2	2021	NAVY	60	60	0																							0			
3.1.2) Interferometric Fiber-Optic Gyro (IFOG) ⁽⁴⁾																																
Prior Years Deliveries: 601																																
	3	2017	NAVY	130	130	0																							0			
	3	2018	NAVY	185	185	0																							0			
	3	2019	NAVY	200	200	0																							0			
	3	2020	NAVY	200	200	0																							0			
	3	2021	NAVY	200	200	0																							0			
	3	2022	NAVY	200	200	0																							0			
	3	2023	NAVY	193	193	0																							0			
3.1.3) Alternate Pendulous Integrating Gyroscope Accelerometer (Alt-PIGA) ⁽⁵⁾																																
Prior Years Deliveries: 550																																
	4	2017	NAVY	125	125	0																							0			
	4	2018	NAVY	180	180	0																							0			
	4	2019	NAVY	200	200	0																							0			
	4	2020	NAVY	220	220	0																							0			
	4	2021	NAVY	220	220	0																							0			
	4	2022	NAVY	220	220	0																							0			
	4	2023	NAVY	194	194	0																							0			
4.1.1) Flight Control Electronic Assembly (FCEA)																																
	5	2016	NAVY	33	33	0																							0			
	5	2017	NAVY	40	40	0																							0			
	5	2018	NAVY	40	40	0																							0			
	5	2019	NAVY	41	41	0																							0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2 **P-1 Line Item Number / Title:** 1250 / TRIDENT II Mods **Item Number / Title [DODIC]:** 1 / TRIDENT II Mods - D5 Life Extension

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Department of Energy (DOE) - Kanas City, MO	29	200	300	9	1	6	7	9	1	6	7
2	Charles Stark Draper Laboratory, INC - Cambridge MA	32	50	83	9	4	7	11	9	4	7	11
3	Charles Stark Draper Laboratory, INC - Cambridge MA	120	144	336	9	4	12	16	9	4	12	16
4	Charles Stark Draper Laboratory, INC - Cambridge MA	96	108	288	9	4	16	20	9	4	16	20
5	Lockheed Martin - Sunnyvale, CA	12	36	72	9	1	24	25	9	1	24	25
6	Lockheed Martin - Waterton, CO	12	36	72	9	1	24	25	9	1	24	25
7	Lockheed Martin - Sunnyvale, CA	12	36	48	9	1	26	27	9	1	26	27
8	Lockheed Martin - Waterton, CO	12	36	48	9	1	26	27	9	1	26	27
9	Lockheed Martin - Sunnyvale, CA	12	36	72	9	1	27	28	9	1	27	28
10	Lockheed Martin - Waterton, CO	12	36	72	9	1	27	28	9	1	27	28
11	Lockheed Martin - Sunnyvale, CA	12	36	72	9	1	24	25	9	1	24	25
12	Lockheed Martin - Waterton, CO	12	36	72	9	1	24	25	9	1	24	25

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods	Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	5,856.985	561.233	544.809	565.890	0.000	565.890
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	5,856.985	561.233	544.809	565.890	0.000	565.890
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	5,856.985	561.233	544.809	565.890	0.000	565.890

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Support - Support Cost Cost																		
1.1) Warhead Components	-	-	1,663.101	-	-	68.810	-	-	73.529	-	-	74.999	-	-	0.000	-	-	74.999
1.2) Mk4B Shape Stable Nose Tip (SSNT) ⁽¹³⁾	-	-	20.067	-	-	29.272	-	-	35.393	-	-	30.835	-	-	0.000	-	-	30.835
1.3) Tooling, Test/ Support Equipment ⁽¹⁴⁾	-	-	571.232	-	-	71.002	-	-	73.974	-	-	75.454	-	-	0.000	-	-	75.454
1.4) Containers ⁽¹⁵⁾	-	-	3.875	-	-	0.102	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.5) System Integration & Planning	-	-	231.141	-	-	16.975	-	-	17.143	-	-	17.485	-	-	0.000	-	-	17.485
1.6) Supportability Mods/ SPALT Insertion	-	-	570.959	-	-	37.329	-	-	38.076	-	-	38.837	-	-	0.000	-	-	38.837
1.7) EOP Missile and Guidance Costs	-	-	38.107	-	-	2.318	-	-	2.364	-	-	2.412	-	-	0.000	-	-	2.412
Subtotal: Support - Support Cost Cost	-	-	3,098.482	-	-	225.808	-	-	240.479	-	-	240.022	-	-	0.000	-	-	240.022
Support - Solid Rocket Motors and PBCS Cost																		
2.1) Solid Rocket Motors ⁽¹⁷⁾	16,567.036	112	1,855.508	17,981.786	12	215.781	18,323.500	12	219.882	18,689.970	12	224.280	-	-	0.000	18,689.970	12	224.280
2.2) Post Boost Control System (PBCS) ^{(17) (16)}	2,020.297	118	238.395	2,170.000	14	30.380	2,211.214	14	30.957	2,255.438	12	27.065	-	-	0.000	2,255.438	12	27.065
2.3) HMX	-	-	165.285	-	-	14.652	-	-	16.051	-	-	16.372	-	-	0.000	-	-	16.372
2.4) Other ⁽¹⁷⁾	-	-	461.915	-	-	53.502	-	-	9.525	-	-	19.906	-	-	0.000	-	-	19.906

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods	Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - Solid Rocket Motors and PBCS Cost</i>	-	-	2,721.103	-	-	314.315	-	-	276.415	-	-	287.623	-	-	0.000	-	-	287.623
Support - New Start Cost																		
3.1) Additional Movement/Transport/Storage/Equip	-	-	37.400	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support - New Start Cost</i>	-	-	37.400	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - Production Support/Missile Hardware Cost																		
4.1) Production Support/ Missile Hardware ⁽¹⁸⁾	-	-	0.000	-	-	21.110	-	-	27.915	-	-	38.245	-	-	0.000	-	-	38.245
<i>Subtotal: Support - Production Support/Missile Hardware Cost</i>	-	-	0.000	-	-	21.110	-	-	27.915	-	-	38.245	-	-	0.000	-	-	38.245
Gross/Weapon System Cost	-	-	5,856.985	-	-	561.233	-	-	544.809	-	-	565.890	-	-	0.000	-	-	565.890

(t) indicates the presence of a P-5a

Footnotes:

⁽¹³⁾ Mk4B Shape Stable Nose Tip (SSNT) decreases from FY2022 to FY2023 (-\$4.558M) Updates and modifications to Reentry Body documentation (Weapon Specifications, Interface Control Drawings, product drawings, etc) complete in FY2022 and other program safety integration and SWS level system engineering support efforts decrease.

⁽¹⁴⁾ Tooling, Test/Support Equipment increases from FY2022 to FY2023 (+\$1.480M). The scope of this effort fluctuates annually based upon specific tooling and test support equipment refreshes and procurement needs. In FY2023, planned tooling and test equipment refreshes include: High Voltage Detonator (HVD) Test System, HVD Bridgewire, Servo-actuator Assembly (SAA) Test Console (TC), Through Bulkhead Initiator TC, Pressure Transducer TC, Linear Ordnance System TC, SAA Flush and Fill TC, Circuit Card Assembly Shipboard Tester, Hydraulic TC, System X-ray for the PBCS Gas Generator, Primary Battery TC, and Drive Tractor. Beginning in FY2022 the funding out of cost element 1.4 (Containers) \$104K was realigned into this category and will procure shipping containers for post DD250 D5 Missile components, test instrumentation, and Mk4/Mk5 Reentry Bodies. Previously the Containers' funds were used to procure Test Missile Kit Transfer and Aerospike Protective Cap containers. These equipment containers have their own end item number and they are now purchased as part of the initial equipment procurement.

⁽¹⁵⁾ Beginning in FY2022 the funding out of cost element 1.4 (Containers) \$104K was realigned into cost element 1.3 (Tooling, Test/Support Equipment) and will procure post DD250 D5 Missile components, test instrumentation, and Mk4/Mk5 Reentry Bodies shipping containers. Cost element 1.4 (Containers) procured Test Missile Kit Transfer and Aerospike Protective Cap containers. These equipment containers have their own end item number and they are now purchased as part of the initial equipment procurement.

⁽¹⁶⁾ Post Boost Control System schedule based quantity change of minus 2 (-\$3.892M).

⁽¹⁷⁾ Other (+\$10.381M) due to Propulsion Viability efforts that develop materials and processes to ensure the future viability of propulsion component production, Nose Fairing Jettison Motors, and Firing Unit SPALT efforts. FY2023 begins the start of Solid Rocket Motor Block Requalification, which is required to address a critical material supplier change in motor insulation.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods	Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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⁽¹⁸⁾ Production Support/Missile Hardware increases from FY2022 to FY2023 (+10.330M). Due to the August 2020 California wild fire which engulfed the Santa Cruz facility, FY2022 ordnance production scope was reduced and funding was utilized for immediately required facility recovery efforts. Wild fire recovery efforts included an assessment of fire damage, evaluating the health of production capability, evaluating ordnance production inventory, and identifying a mitigation strategy to prevent further damage and return to planned ordnance production scope in FY2023. The increase from FY2022 to FY2023 represents ordnance production scope returning to its required state to support production requalification's which are required to reproduce and procure missile hardware energetic components that have limited life and were not intended to be supporting the fleet this long. The missile hardware energetic components are currently deployed beyond their service life of 25 years. Due to their limited service life and safety concerns associated with a manned platform, these energetic components need to be requalified, reproduced, and deployed.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy										Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2				P-1 Line Item Number / Title: 1250 / TRIDENT II Mods				Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1) Solid Rocket Motor's ^(†)		2015	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2014	Feb 2018	12	16,066.750	Y		
2.1) Solid Rocket Motor's ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2019	12	16,366.750	Y		
2.1) Solid Rocket Motor's ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Feb 2020	12	16,677.750	Y		
2.1) Solid Rocket Motor's ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Feb 2021	12	16,994.571	Y		
2.1) Solid Rocket Motor's ^(†)		2019	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2018	Feb 2022	12	17,317.500	Y		
2.1) Solid Rocket Motor's ^(†)		2020	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2019	Feb 2023	12	17,646.500	Y		
2.1) Solid Rocket Motor's ^(†)		2021	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2020	Feb 2024	12	17,981.786	Y		
2.1) Solid Rocket Motor's ^(†)		2022	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2021	Feb 2025	12	18,323.500	Y		
2.1) Solid Rocket Motor's ^(†)		2023	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2022	Feb 2026	12	18,689.970	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2015	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2014	Feb 2018	12	1,976.167	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2019	12	1,975.083	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Feb 2020	12	2,012.583	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Feb 2021	14	2,050.857	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2019	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2018	Feb 2022	14	2,089.786	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2020	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2019	Feb 2023	14	2,129.500	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2021	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2020	Feb 2024	14	2,170.000	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2022	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2021	Feb 2025	14	2,211.214	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy							Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2			P-1 Line Item Number / Title: 1250 / TRIDENT II Mods				Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.2) Post Boost Control System (PBCS) ^(†)		2023	Lockheed Martin / Waterton, CO	Various	SSP - Washington Navy Yard	Nov 2022	Feb 2026	12	2,255.438	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2015														Fiscal Year 2016														BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015														Calendar Year 2016														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
2.1) Solid Rocket Motor's																																			
Prior Years Deliveries: 40																																			
	1	2015	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12						
	1	2016	NAVY	12	0	12																							12						
	1	2017	NAVY	12	0	12																							12						
	1	2018	NAVY	12	0	12																							12						
	1	2019	NAVY	12	0	12																							12						
	1	2020	NAVY	12	0	12																							12						
	1	2021	NAVY	12	0	12																							12						
	2	2022	NAVY	12	0	12																							12						
	2	2023	NAVY	12	0	12																							12						
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																			
Prior Years Deliveries: 40																																			
	3	2015	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12						
	3	2016	NAVY	12	0	12																							12						
	3	2017	NAVY	12	0	12																							12						
	3	2018	NAVY	14	0	14																							14						
	3	2019	NAVY	14	0	14																							14						
	3	2020	NAVY	14	0	14																							14						
	3	2021	NAVY	14	0	14																							14						
	4	2022	NAVY	14	0	14																							14						
	4	2023	NAVY	12	0	12																							12						
								O	N	D	J	F	M	A	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S					
								C	O	E	A	E	A	A	U	U	A	E	C	O	V	E	A	E	A	A	U	U	A	E					
								T	V	C	N	B	R	P	N	L	G	P	T	V	C	N	B	R	P	A	N	L	G	P					

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Exhibit P-21, Production Schedule: PB 2023 Navy																		Date: April 2022											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2												P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs							

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017														Fiscal Year 2018														BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017														Calendar Year 2018																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
2.1) Solid Rocket Motor's																																					
Prior Years Deliveries: 40																																					
	1	2015	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	4
	1	2016	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	1	2017	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	
	1	2018	NAVY	12	0	12																															12
	1	2019	NAVY	12	0	12																															12
	1	2020	NAVY	12	0	12																															12
	1	2021	NAVY	12	0	12																															12
	2	2022	NAVY	12	0	12																															12
	2	2023	NAVY	12	0	12																															12
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																					
Prior Years Deliveries: 40																																					
	3	2015	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	4	
	3	2016	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	3	2017	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	3	2018	NAVY	14	0	14																															14
	3	2019	NAVY	14	0	14																															14
	3	2020	NAVY	14	0	14																															14
	3	2021	NAVY	14	0	14																															14
	4	2022	NAVY	14	0	14																															14
	4	2023	NAVY	12	0	12																															12
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S							
							C	O	E	A	E	A	A	A	U	U	A	E	C	O	V	E	A	E	A	A	U	U	A	S							
							T	V	C	N	B	R	P	Y	N	L	G	P	T	V	C	N	B	R	P	Y	N	L	G	P							

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019															Fiscal Year 2020															BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019															Calendar Year 2020															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
2.1) Solid Rocket Motor's																																					
Prior Years Deliveries: 40																																					
1	2015	NAVY	12	8	4	1	1	1	1																									0			
1	2016	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1												0			
1	2017	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	4				
1	2018	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12				
1	2019	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12				
1	2020	NAVY	12	0	12																A	-	-	-	-	-	-	-	-	-	-	-	12				
1	2021	NAVY	12	0	12																													12			
2	2022	NAVY	12	0	12																													12			
2	2023	NAVY	12	0	12																													12			
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																					
Prior Years Deliveries: 40																																					
3	2015	NAVY	12	8	4	1	1	1	1																								0				
3	2016	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0				
3	2017	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4				
3	2018	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14				
3	2019	NAVY	14	0	14		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14				
3	2020	NAVY	14	0	14																A	-	-	-	-	-	-	-	-	-	-	-	-	14			
3	2021	NAVY	14	0	14																													14			
4	2022	NAVY	14	0	14																													14			
4	2023	NAVY	12	0	12																													12			
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S							
							C	O	E	A	E	A	A	A	U	U	A	S	O	N	D	J	F	M	A	M	J	J	A	S							
							T	V	C	N	B	R	P	Y	N	L	G	E	C	V	E	A	B	R	P	Y	N	L	A	S							

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021															Fiscal Year 2022															BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021															Calendar Year 2022															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
2.1) Solid Rocket Motor's																																					
Prior Years Deliveries: 40																																					
1	2015	NAVY	12	12	0																								0								
1	2016	NAVY	12	12	0																								0								
1	2017	NAVY	12	8	4	1	1	1	1																				0								
1	2018	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1								0								
1	2019	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	4								
1	2020	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12								
1	2021	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12								
2	2022	NAVY	12	0	12																A	-	-	-	-	-	-	-	12								
2	2023	NAVY	12	0	12																								12								
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																					
Prior Years Deliveries: 40																																					
3	2015	NAVY	12	12	0																								0								
3	2016	NAVY	12	12	0																								0								
3	2017	NAVY	12	8	4	1	1	1	1																				0								
3	2018	NAVY	14	0	14	-	-	-	-	1	1	1	1	1	1	1	1	1	1	2	2								0								
3	2019	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	1	1	1	1	4								
3	2020	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14								
3	2021	NAVY	14	0	14		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14								
4	2022	NAVY	14	0	14																A	-	-	-	-	-	-	-	-	14							
4	2023	NAVY	12	0	12																								12								
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023														Fiscal Year 2024														BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023														Calendar Year 2024														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
2.1) Solid Rocket Motor's																																			
Prior Years Deliveries: 40																																			
1		2015	NAVY	12	12	0																							0						
1		2016	NAVY	12	12	0																							0						
1		2017	NAVY	12	12	0																							0						
1		2018	NAVY	12	12	0																							0						
1		2019	NAVY	12	8	4	1	1	1	1																			0						
1		2020	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0						
1		2021	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4						
2		2022	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12						
2		2023	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12						
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																			
Prior Years Deliveries: 40																																			
3		2015	NAVY	12	12	0																						0							
3		2016	NAVY	12	12	0																						0							
3		2017	NAVY	12	12	0																						0							
3		2018	NAVY	14	14	0																						0							
3		2019	NAVY	14	10	4	1	1	1	1																		0							
3		2020	NAVY	14	0	14	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0							
3		2021	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4							
4		2022	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14						
4		2023	NAVY	12	0	12		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025														Fiscal Year 2026														BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025														Calendar Year 2026														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
2.1) Solid Rocket Motor's																																			
Prior Years Deliveries: 40																																			
1		2015	NAVY	12	12	0																							0						
1		2016	NAVY	12	12	0																							0						
1		2017	NAVY	12	12	0																							0						
1		2018	NAVY	12	12	0																							0						
1		2019	NAVY	12	12	0																							0						
1		2020	NAVY	12	12	0																							0						
1		2021	NAVY	12	8	4	1	1	1	1																			0						
2		2022	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0						
2		2023	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4						
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																			
Prior Years Deliveries: 40																																			
3		2015	NAVY	12	12	0																							0						
3		2016	NAVY	12	12	0																							0						
3		2017	NAVY	12	12	0																							0						
3		2018	NAVY	14	14	0																							0						
3		2019	NAVY	14	14	0																							0						
3		2020	NAVY	14	14	0																							0						
3		2021	NAVY	14	10	4	1	1	1	1																			0						
4		2022	NAVY	14	0	14	-	-	-	-	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0						
4		2023	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2027														Fiscal Year 2028														BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2026	BAL DUE AS OF 1 OCT	Calendar Year 2027														Calendar Year 2028														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
2.1) Solid Rocket Motor's																																			
Prior Years Deliveries: 40																																			
	1	2015	NAVY	12	12	0																							0						
	1	2016	NAVY	12	12	0																							0						
	1	2017	NAVY	12	12	0																							0						
	1	2018	NAVY	12	12	0																							0						
	1	2019	NAVY	12	12	0																							0						
	1	2020	NAVY	12	12	0																							0						
	1	2021	NAVY	12	12	0																							0						
	2	2022	NAVY	12	12	0																							0						
	2	2023	NAVY	12	8	4	1	1	1	1																			0						
2.2) Post Boost Control System (PBCS) ⁽¹⁶⁾																																			
Prior Years Deliveries: 40																																			
	3	2015	NAVY	12	12	0																							0						
	3	2016	NAVY	12	12	0																							0						
	3	2017	NAVY	12	12	0																							0						
	3	2018	NAVY	14	14	0																							0						
	3	2019	NAVY	14	14	0																							0						
	3	2020	NAVY	14	14	0																							0						
	3	2021	NAVY	14	14	0																							0						
	4	2022	NAVY	14	14	0																							0						
	4	2023	NAVY	12	8	4	1	1	1	1																			0						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Sunnyvale, CA	12	14	18	9	1	37	38	9	1	37	38
2	Lockheed Martin - Waterton, CO	12	14	18	0	1	37	38	9	1	37	38
3	Lockheed Martin - Sunnyvale, CA	12	14	18	9	1	37	38	9	1	37	38
4	Lockheed Martin - Waterton, CO	12	14	18	9	1	37	38	9	1	37	38

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2						P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						Item Number / Title [DODIC]: 3 / D5LE2 [D5LE2]						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO		FY 2023 Total	
Procurement Quantity (<i>Units in Each</i>)				-		-			-			-			-		-	
Gross/Weapon System Cost (<i>\$ in Millions</i>)				0.000		0.000			0.000			65.255			0.000		65.255	
Less PY Advance Procurement (<i>\$ in Millions</i>)				-		-			-			-			-		-	
Net Procurement (P-1) (<i>\$ in Millions</i>)				0.000		0.000			0.000			65.255			0.000		65.255	
Plus CY Advance Procurement (<i>\$ in Millions</i>)				-		-			-			-			-		-	
Total Obligation Authority (<i>\$ in Millions</i>)				0.000		0.000			0.000			65.255			0.000		65.255	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares (<i>\$ in Millions</i>)				-		-			-			-			-		-	
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)				-		-			-			-			-		-	
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Support - Flight Systems Cost																		
1.1) Missile Redesign ⁽¹⁹⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	16.899	-	-	0.000	-	-	16.899
1.2) Guidance Redesign ⁽²⁰⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	19.871	-	-	0.000	-	-	19.871
<i>Subtotal: Support - Flight Systems Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	36.770	-	-	0.000	-	-	36.770
Support - Systems Engineering/Test & Evaluation Cost																		
2.1) Systems Engineering ⁽²¹⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	13.312	-	-	0.000	-	-	13.312
2.2) Test and Evaluation ⁽²²⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.898	-	-	0.000	-	-	0.898
2.3) Training Equipment ⁽²³⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.042	-	-	0.000	-	-	0.042
<i>Subtotal: Support - Systems Engineering/Test & Evaluation Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	14.252	-	-	0.000	-	-	14.252
Support - Ship Interface Cost																		
3.1) Fire Control ⁽²⁴⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	8.842	-	-	0.000	-	-	8.842
3.2) Launcher ⁽²⁵⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.274	-	-	0.000	-	-	1.274
3.3) Navigation ⁽²⁶⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.232	-	-	0.000	-	-	1.232
<i>Subtotal: Support - Ship Interface Cost</i>	-	-	0.000	-	-	0.000	-	-	0.000	-	-	11.348	-	-	0.000	-	-	11.348
Support - System Evaluation Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2	P-1 Line Item Number / Title: 1250 / TRIDENT II Mods	Item Number / Title [DODIC]: 3 / D5LE2 [D5LE2]
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
4.1) System Evaluation (27)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	2.885	-	-	0.000	-	-	2.885
<i>Subtotal: Support - System Evaluation Cost</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>2.885</i>	-	-	<i>0.000</i>	-	-	<i>2.885</i>
Gross/Weapon System Cost	-	-	0.000	-	-	0.000	-	-	0.000	-	-	65.255	-	-	0.000	-	-	65.255

Footnotes:

- (19) Missile Redesign: D5LE2 Missile subsystem efforts in FY2023 include: Missile Health and Testability Architecture design; Missile Model updates; Avionics design; Test Missile Kit, Structures, and controls concept design to include Nuclear Safety electronics; communications networks & protocols refinement; Equipment Section design efforts, and Nose Fairing design efforts. Additional efforts include production restart planning for pull-through designs from the legacy D5/D5LE system, including portions of the Post Boost Control System (PBCS).
- (20) Guidance Redesign: Strategic Guidance (Mk7 Mod 0) system efforts in FY2023 include evaluation of system level requirement flowdown and effects on subsystem concepts and designs. Additional activities include focused design, trades, and vendor engagement/selection for Strategic Guidance Mechanical components and inertial instruments including gimbals, stable members, shock mounts, connectors, torque motors, & slip rings some of which were last produced as a part of D5 decades ago.
- (21) Systems Engineering: FY2023 effort will focus on Initial design of the following systems engineering areas: Technical program plans, CONOPS, initial functional architecture design (functional only), requirements (level 1), architecture and interface modeling, configuration and data management, and in support of a Common Parts Program.
- (22) Test and Evaluation: FY2023 efforts include SWS subsystem test requirements definitions and reviews, and design of enhanced test Concepts of Operation and facilitation plans.
- (23) Training Equipment: FY2023 efforts initiate evaluation of flowdown of subsystem requirement changes on the legacy D5/D5LE Strategic Weapons Interface Simulator (SWIS) and Segmented Missile Lab (SML) trainer hardware.
- (24) Fire Control: FY2023 efforts initiate subsystem evaluation of allocated system requirement flowdown to include effects on the legacy and modernized shipboard design. Initiates descriptive digital models of the D5LE2 iteration of the SWS Fire Control subsystem design.
- (25) Launcher: FY2023 efforts initiate subsystem evaluation of allocated system requirement flowdown to include effects on the legacy Launcher design. Launcher, as a pull through sub-system, evaluates changes in the interface between the modernized D5LE2 Missile and other modernized SWS components with pull-through components such as closures and gas generators as well as evaluates changes for underwater launch performance. Begins the porting of existing Launcher models into the D5LE2 digital engineering environment.
- (26) Navigation: FY2023 efforts initiate subsystem evaluation of allocated system requirement flowdown to include effects on the legacy and modernized Strategic Navigation design and sensors. Begins Navigation digital model design and integration into the D5LE2 digital environment.
- (27) System Evaluation: FY2023 efforts include Integration and Test activities that focuses on building and curating the Descriptive System Model and early planning and infrastructure design for simulation-based and physical integration and testing. Plans, processes, and program integration developing engineering process documentation. Information and baseline management supporting the configuration management role for system level artifacts. Mission and System Assurance efforts as the system architecture is defined and the surety, safety, and cyber security processes are put into place.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 3: Support Equipment & Facilities	P-1 Line Item Number / Title: 1350 / Missile Industrial Facilities
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	53.222	7.275	7.319	7.767	0.000	7.767	7.942	8.132	8.353	8.424	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	53.222	7.275	7.319	7.767	0.000	7.767	7.942	8.132	8.353	8.424	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	53.222	7.275	7.319	7.767	0.000	7.767	7.942	8.132	8.353	8.424	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funding for Missile Industrial Facilities provides for capital maintenance projects at Navy-owned Naval Industrial Reserve Ordnance Plants (NIROPs) at Sunnyvale and Santa Cruz, California; and Bacchus, Utah; in support of the Fleet Ballistic Missile program. The Sunnyvale, California facility consists of 49 acres of land and 10 buildings. The Santa Cruz, California facility consists of 271 acres of land and 29 buildings. The Bacchus, Utah, facility consists of 583 acres, over 130 buildings and over 13 miles of roads.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 3: Support Equipment & Facilities	P-1 Line Item Number / Title: 1350 / Missile Industrial Facilities
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
--	---	--

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Missile Industrial Facilities				- / 53.222	- / 7.275	- / 7.319	- / 7.767	- / 0.000	- / 7.767
P-40	Total Gross/Weapon System Cost				- / 53.222	- / 7.275	- / 7.319	- / 7.767	- / 0.000	- / 7.767

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The NIROP buildings are vital to D5 motor production and must be maintained in an operational state until the D5 missile retirement. Most buildings are already over 50 years old and have exceeded their useful life. Safety related maintenance projects were deferred when the Department of the Navy did not have a program of record to re-motor the D5 missile to support the missile's extended deployment. The Navy's decision to fund the re-motoring of D5 missiles means repairs and upgrades are necessary to ensure NIROP buildings are safe and properly maintained to support this significant extension of D5 motor procurements. Arms, Ammunition, and Explosive (AA&E) building physical and safety requirements as identified in the Naval Ordnance Support Series Activity continues to be the priority for these funds.

Strategic Systems Programs has assessed the criticality of all the NIROP planned projects and determined the FY23 funding must be utilized to address the backlog of explosive safety & security critical projects at the Bacchus, Utah NIROP facility. These projects address Explosive Safety Inspections findings from the 2019 Naval Ordnance Safety and Security Activity Explosives safety inspection and will allow SSP to be in compliance with the Arms, Ammunitions, and Explosive Safety & Security Requirements per NAVSEA OP5 Ammunition and Explosive Safety Ashore and DOD 5100.76 Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives directives.

FY23 projects at the Bacchus facility will complete lightning protection upgrades, apply hypalon earth cover at ten buildings, bury building electrical lines, harden the control house, upgrade door locks, install a perimeter radar and camera system, relocate required AA&E earth berms, create perimeter fencing and internal segregation to include a fenced receiving area, provide building surge protection, perform roof replacements on three buildings, replace building transformers and power in three buildings, run fiber line, demo and modify building CD7, provide lighting replacement in twelve buildings, convert deluge to wet pipe in six buildings, complete interior painting in three buildings, replace HVAC controls in three buildings, perform HVAC and building modifications in others, replace electrical distribution components replacements, install LED lighting in one building, replace the concrete approach and vacuum pump for one building, remove an above ground tank, and improve roads and parking lots.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 3	P-1 Line Item Number / Title: 1350 / Missile Industrial Facilities	Item Number / Title [DODIC]: 1 / Missile Industrial Facilities

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	53.222	7.275	7.319	7.767	0.000	7.767
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	53.222	7.275	7.319	7.767	0.000	7.767
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	53.222	7.275	7.319	7.767	0.000	7.767

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) Capital Maintenance	-	-	53.222	-	-	7.275	-	-	7.319	-	-	7.767	-	-	-	-	-	7.767
<i>Subtotal: Recurring Cost</i>	-	-	53.222	-	-	7.275	-	-	7.319	-	-	7.767	-	-	-	-	-	7.767
<i>Subtotal: Hardware Cost</i>	-	-	53.222	-	-	7.275	-	-	7.319	-	-	7.767	-	-	-	-	-	7.767
Gross/Weapon System Cost	-	-	53.222	-	-	7.275	-	-	7.319	-	-	7.767	-	-	0.000	-	-	7.767

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 1: Strategic Missiles	P-1 Line Item Number / Title: 2101 / Tomahawk
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	8,719	122	70	40	-	40	-	26	58	58	-	9,093
Gross/Weapon System Cost (<i>\$ in Millions</i>)	14,673.058	224.685	139.983	160.190	0.000	160.190	35.339	83.592	177.017	169.756	191.688	15,855.308
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	14,673.058	224.685	139.983	160.190	0.000	160.190	35.339	83.592	177.017	169.756	191.688	15,855.308
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	14,673.058	224.685	139.983	160.190	0.000	160.190	35.339	83.592	177.017	169.756	191.688	15,855.308

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	1,258.305	1,586.180	1,684.157	2,495.600	-	2,495.600	-	2,679.385	2,705.362	2,621.759	-	1,293.415
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Block V is a modernized TACTOM missile that includes Navigation Communications (NAVCOMMs) upgrade and Advanced Communication Package (ACP). These TACTOM upgrades consist of the Integrated Single Box Solution (ISBS) radio, two new antennas and associated cabling, a new mid-body cover, changes to the aft-body structure and aft-body cover, and installation of the ACP.

RGM/UGM-109E Tactical Tomahawk provides an attack capability against fixed and mobile targets, and can launch from both surface ships (RGM) and submarines (UGM).

The Block IV/V Tactical Tomahawk (TACTOM RGM/UGM-109E) preserves Tomahawk's long-range precision-strike capability while significantly increasing responsiveness and flexibility. TACTOM is capable of in-flight retargeting, the ability to loiter over the battlefield, in-flight missile health and status monitoring, and battle damage indication. Other Tomahawk Weapon System functionality includes rapid mission planning and execution via Global Positioning System (GPS) onboard the launch platform and improved anti-jam GPS.

Beginning in FY 2021, TACTOM Modernization costs moved to new BLI 2301, Tomahawk Mods.

Characteristics and dimensions (approximate):

Weight (with booster and capsule) (UGM-109): 4,300 pounds

Weight (with booster and canister) (RGM-109): 4,300 pounds

Length (with booster): 20.5 feet

Wing Span: 8.6 feet

Cruise Speed: High Subsonic

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy	Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 1: Strategic Missiles	P-1 Line Item Number / Title: 2101 / Tomahawk

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Tomahawk	P-5a, P-21		289	8,719 / 14,416.286	122 / 224.685	70 / 139.983	40 / 160.190	- / 0.000	40 / 160.190
P-3a	1 / TACTOM Modernization (Increase Capability and Extend Missile Service Life)			289	- / 256.772	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				8,719 / 14,673.058	122 / 224.685	70 / 139.983	40 / 160.190	- / 0.000	40 / 160.190

Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Tomahawk	P-5a, P-21		289	- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / TACTOM Modernization (Increase Capability and Extend Missile Service Life)			289	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 256.772
P-40	Total Gross/Weapon System Cost				- / 35.339	26 / 83.592	58 / 177.017	58 / 169.756	- / 191.688	9,093 / 15,855.308

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2023 funding supports the procurement of 40 new BLOCK V TACTOM. Additional quantities of BLOCK V TACTOM, totaling to the MSR of 90 per year through the FYDP, are budgeted for procurement under USMC (PMC 2101) and Army (RDT&E,A PE# 0604644A, PU MR1).
 FY 2023 funds re-design efforts for Digital Scene Matching Area Correlation (DSMAC), to address Diminishing Manufacturing Sources and Material Shortages (DMSMS)/parts obsolescence issues.
 FY 2023 also funds the procurement of the remaining legacy Mid-Body Range Safety Subsystem (MRSS) Kits, which enables the TACTOM Flight Test Program to continue through the FYDP.
 Beginning in FY 2021, TACTOM Modernization costs moved to new BLI 2301, Tomahawk Modifications.
 Increase from 2022 to 2023 due to reallocation of funds - details held at a higher classification.

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / O2 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Item Number / Title [DODIC]: 1 / Tomahawk
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 289

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	8,719	122	70	40	-	40
Gross/Weapon System Cost (\$ in Millions)	14,416.286	224.685	139.983	160.190	0.000	160.190
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	14,416.286	224.685	139.983	160.190	0.000	160.190
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	14,416.286	224.685	139.983	160.190	0.000	160.190

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	1,653.433	1,841.680	1,999.757	4,004.750	-	4,004.750

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)

Flyaway - TOTAL HARDWARE - MISSILE Cost																		
Recurring Cost																		
1.1.1) TACTICAL TOMAHAWK (VLS) ⁽¹⁾	1,109.318	3,376	3,745.057	1,586.180	122	193.514	1,684.157	70	117.891	1,822.025	40	72.881	-	-	0.000	1,822.025	40	72.881
1.1.2) TACTICAL TOMAHAWK (CLS)	883.216	1,078	952.107	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) TACTICAL TOMAHAWK (TTL)	1,088.385	65	70.745	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) REMANUFACTURE (BLOCK III)	-	-	592.217	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) PREVIOUS TOMAHAWK PRODUCTION	1,335.961	4,200	5,611.035	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.6) TACTICAL TOMAHAWK - CLASSIFIED ⁽²⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	26.943	-	-	0.000	-	-	26.943
<i>Subtotal: Recurring Cost</i>	-	-	10,971.161	-	-	193.514	-	-	117.891	-	-	99.824	-	-	0.000	-	-	99.824
<i>Subtotal: Flyaway - TOTAL HARDWARE - MISSILE Cost</i>	-	-	10,971.161	-	-	193.514	-	-	117.891	-	-	99.824	-	-	0.000	-	-	99.824

Hardware - TOTAL HARDWARE - MISSILE - OTHER COSTS Cost

Recurring Cost

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / O2 / 1							P-1 Line Item Number / Title: 2101 / Tomahawk						Item Number / Title [DODIC]: 1 / Tomahawk					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code: 289								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
2.1.1) CCLS CAPSULE RETRO KIT	-	-	26.300	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) CCLS SUBMARINE CAPSULES	352.786	1,078	380.303	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) MK 14 CANISTERS ^{(1) (3)}	74.614	3,821	285.099	174.320	122	21.267	177.800	70	12.446	189.350	40	7.574	-	-	0.000	189.350	40	7.574
2.1.4) OBSOLESCENCE ⁽⁴⁾	-	-	69.776	-	-	2.995	-	-	0.319	-	-	20.026	-	-	0.000	-	-	20.026
2.1.5) PRODUCTION LINE TRANSITION	-	-	20.162	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	781.640	-	-	24.262	-	-	12.765	-	-	27.600	-	-	0.000	-	-	27.600
<i>Subtotal: Hardware - TOTAL HARDWARE - MISSILE - OTHER COSTS Cost</i>	-	-	781.640	-	-	24.262	-	-	12.765	-	-	27.600	-	-	0.000	-	-	27.600
Support - TOTAL PROCUREMENT SUPPORT - MISSILE Cost																		
3.1) PRODUCT IMPROVEMENT	-	-	444.331	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.2) PRODUCTION ENGINEERING SUPPORT ⁽⁵⁾	-	-	798.369	-	-	2.890	-	-	2.584	-	-	2.395	-	-	0.000	-	-	2.395
3.3) SPECIAL TOOLING & TEST EQUIPMENT (ST & TE)	-	-	38.090	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.4) SYSTEMS ENGINEERING ⁽⁶⁾	-	-	434.977	-	-	3.140	-	-	2.483	-	-	1.955	-	-	0.000	-	-	1.955
<i>Subtotal: Support - TOTAL PROCUREMENT SUPPORT - MISSILE Cost</i>	-	-	1,715.767	-	-	6.030	-	-	5.067	-	-	4.350	-	-	0.000	-	-	4.350
Support - TOTAL FLEET SUPPORT - MISSILE Cost																		
4.1) DOCUMENTATION	-	-	32.257	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.2) SUPPORT EQUIPMENT ⁽⁷⁾	-	-	258.946	-	-	0.879	-	-	4.260	-	-	28.416	-	-	0.000	-	-	28.416
4.3) THEATER MISSION PLANNING CENTER	-	-	255.044	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.4) TRAINING EQUIPMENT	-	-	87.953	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1) EOQ	-	-	50.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.2) EOQ Credit	-	-	-50.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / O2 / 1						P-1 Line Item Number / Title: 2101 / Tomahawk						Item Number / Title [DODIC]: 1 / Tomahawk					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code: 289					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - TOTAL FLEET SUPPORT - MISSILE Cost</i>	-	-	634.200	-	-	0.879	-	-	4.260	-	-	28.416	-	-	0.000	-	-	28.416
Support - TOTAL SPARES & REPAIR PARTS Cost																		
6.1) TOMAHAWK INITIAL SPARES	-	-	313.518	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support - TOTAL SPARES & REPAIR PARTS Cost</i>	-	-	313.518	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	1,653.433	8,719	14,416.286	1,841.680	122	224.685	1,999.757	70	139.983	4,004.750	40	160.190	-	-	0.000	4,004.750	40	160.190

(t) indicates the presence of a P-5a

Footnotes:

- (1) Cost Element TACTICAL TOMAHAWK (VLS) - Production of 40 Block V Tomahawk AURs for FY 2023 is required as Tomahawk is a key element of the Navy's Offensive Missile Strategy. Minimum Sustainment Rate (MSR) for TACTOM production is 90 missiles per year. MSR is achieved through these Navy procurements and missile procurements by USMC (PMC 2101) and Army (RDT&E,A PE# 0604644A, PU MR1). Prior to FY23, new Navy AURs re-used warheads and MK-10 canisters from DEMIL'd BLK III missiles. In FY23, overall Navy AUR costs will continue to be lower than the unit cost for other services due to re-use of the remaining BLK III components, however some new warheads and MK10 canisters will need to be procured to provide the full Navy procurement quantity. Navy unit cost in FY 2023 is higher than in FY 2022 due to several factors, including a lower total quantity procured on the combined (Army, Navy, USMC) contract, the requirement to begin procuring MK10s and warheads in FY 2023, and greater than historical inflation rates for raw materials.
- (2) Cost Element TACTICAL TOMAHAWK - CLASSIFIED - Increase from 2022 to 2023 due to reallocation of funds, there is no cost increase - details held at a higher classification.
- (3) Cost Element MK 14 CANISTERS - FY 2023 funds the procurement of 40 MK 14 Canisters required to enable production of 40 Block V Tomahawk AURs. Unit cost assumes MSR (90 AURs) is achieved through these Navy procurements and missile procurements by USMC (PMC 2101) and Army (PE# 0604644A, PU MR1). MK14 Canisters are awarded via a NAVSEA-administered contract that includes canister procurements for multiple programs to achieve greater economies of scale. FY 2022 cost increased from PB22 request due to the requirement to procure an additional 10 MK14 canisters to maintain a 1:1 ratio with the quantity of TACTOM VLS procured, which was increased by 10 in the enacted FY 2022 budget.
- (4) Cost Element OBSOLESCENCE - Funding reflects required Production obsolescence mitigation including avionics, electrical, and structures bill of material development, and obsolescence ECP forecasting in order to support the extended end of service date. Efforts include identification of alternate materials, replacing obsolete parts with current technology in systems, weapons replaceable assemblies, their sub-assemblies, components and sub-components, logistical analysis and support, engineering drawing updates, new manufacturing tooling and test equipment. Funding increase in FY23 is to address critical Digital Scene Matching Area Correlation (DSMAC) Diminishing Manufacturing Sources and Material Shortages (DMSMS)/parts obsolescence redesign to enable the continued production of TACTOM BLK V AURs.
- (5) Cost Element PRODUCTION ENGINEERING SUPPORT - Production Engineering Support costs include warhead energetics, airframe engineering competencies, Production Acceptance Testing and integrated logistics support.
- (6) Cost Element SYSTEMS ENGINEERING - Systems Engineering costs include warhead energetics, airframe engineering competencies, Production Acceptance Testing and integrated logistics support.
- (7) Cost Element SUPPORT EQUIPMENT - FY 2023 funds the procurement of the remaining legacy Mid-Body Range Safety Subsystem (MRSS) Kits which reduces obsolescence risk. Procuring all of the kits in FY 2023 and costs \$7.8 million less than if procurements were spread over three years. The production lead time for flight test kits is 24 months and deliveries would begin in 2nd quarter, FY 2025 supporting flight test requirements through the remainder of the FYDP. Without procurements, no flight tests will be conducted beyond 1st quarter FY 2025 impacting IOC of MST and JMEWS variants, Army Mid-Range Capability (MRC) and USMC Long Range Fires (LRF) programs and preventing Tomahawk program TEMP-mandated reliability monitoring.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy							Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1			P-1 Line Item Number / Title: 2101 / Tomahawk				Item Number / Title [DODIC]: 1 / Tomahawk				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) TACTICAL TOMAHAWK (VLS) ^(†)		2020	Raytheon Missile System ⁽⁸⁾ / Tucson AZ	SS / FPIF	NAVAIR	Mar 2020	Apr 2022	90	1,822.989	Y		Mar 2019
1.1.1) TACTICAL TOMAHAWK (VLS) ^(†)		2021	Raytheon Missile System ⁽⁸⁾ / Tucson AZ	SS / FPIF	NAVAIR	Dec 2020	Jan 2023	122	1,586.180	Y		Mar 2019
1.1.1) TACTICAL TOMAHAWK (VLS) ^(†)		2022 ⁽⁹⁾	Raytheon Missile System ⁽⁸⁾ / Tucson AZ	SS / FPIF	NAVAIR	Mar 2022	Apr 2024	70	1,684.157	Y		Dec 2020
1.1.1) TACTICAL TOMAHAWK (VLS) ^(†)		2023	Raytheon Missile System ⁽⁸⁾ / Tucson AZ	SS / FPIF	NAVAIR	Dec 2022	Jan 2025	40	1,822.025	Y		Dec 2020
2.1.3) MK 14 CANISTERS ^(†)		2020	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Mar 2020	May 2021	90	167.333	Y		Aug 2018
2.1.3) MK 14 CANISTERS ^(†)		2021	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Jan 2021	May 2022	122	174.320	Y		Aug 2018
2.1.3) MK 14 CANISTERS ^(†)		2022	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Jun 2022	Oct 2023	70	177.800	Y		
2.1.3) MK 14 CANISTERS ^(†)		2023	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Jan 2023	May 2024	40	189.350	Y		

^(†) indicates the presence of a P-21

Footnotes:

⁽⁸⁾ MSR for TACTOM Production missiles is 90 when executing concurrently with the Recertification Program. Max Rate is inclusive of quantities on the Navy WPN BLI 2101, USMC PMC BLI 2101, Navy Recertification WPN BLI 2301 and Army RDT&E,A PE# 0604644A. Government Furnished Property limits max capacity to 450 per year; increases to 600 per year starting in FY 2024. Max production is directly affected by the obsolescence issues addressed in footnotes (4). Gaps in production deliveries are mitigated by concurrent production on recertification line, funded in WPN-2301.

⁽⁹⁾ FY22 / FRP 18 Contract Award was moved from December 2021 to March 2022 when Army funding was provided upon FY 2022 budget enactment, enabling contract award above MSR quantity.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Item Number / Title [DODIC]: 1 / Tomahawk
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) TACTICAL TOMAHAWK (VLS) ⁽¹⁾																															
Prior Years Deliveries: 3286																															
	1	2020	NAVY	90	0	90																							90		
	1	2021	NAVY	122	0	122																							122		
	1	2022	NAVY	70	0	70																							70		
	1	2023	NAVY	40	0	40																							40		
2.1.3) MK 14 CANISTERS ⁽³⁾																															
Prior Years Deliveries: 3731																															
	2	2020	NAVY	90	0	90																							53		
	2	2021	NAVY	122	0	122																							122		
	2	2022	NAVY	70	0	70																							70		
	2	2023	NAVY	40	0	40																							40		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Item Number / Title [DODIC]: 1 / Tomahawk
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023													BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) TACTICAL TOMAHAWK (VLS) ⁽¹⁾																																	
Prior Years Deliveries: 3286																																	
	1	2020	NAVY	90	0	90	-	-	-	-	-	-	14	19	19	19	19												0				
	1	2021	NAVY	122	0	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	22	22	22	9	9	9	9	0				
	1	2022	NAVY	70	0	70							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70				
	1	2023	NAVY	40	0	40														A -	-	-	-	-	-	-	-	-	40				
2.1.3) MK 14 CANISTERS ⁽³⁾																																	
Prior Years Deliveries: 3731																																	
	2	2020	NAVY	90	37	53	8	7	8	7	8	8	7																0				
	2	2021	NAVY	122	0	122	-	-	-	-	-	-	-	10	10	11	10	10	11	10	10	10	10	10					0				
	2	2022	NAVY	70	0	70								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70				
	2	2023	NAVY	40	0	40															A -	-	-	-	-	-	-	-	40				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Item Number / Title [DODIC]: 1 / Tomahawk
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Cost Elements <i>(Units in Each)</i>							Fiscal Year 2024														Fiscal Year 2025														BALANCE
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024														Calendar Year 2025														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) TACTICAL TOMAHAWK (VLS) ⁽¹⁾																																			
Prior Years Deliveries: 3286																																			
	1	2020	NAVY	90	90	0																												0	
	1	2021	NAVY	122	122	0																												0	
	1	2022	NAVY	70	0	70	-	-	-	-	-	-	1	10	10	10	10	10	10	9														0	
	1	2023	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	5			0		
2.1.3) MK 14 CANISTERS ⁽³⁾																																			
Prior Years Deliveries: 3731																																			
	2	2020	NAVY	90	90	0																												0	
	2	2021	NAVY	122	122	0																												0	
	2	2022	NAVY	70	0	70	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	4	3	3	3	4	3	3	4					0	
	2	2023	NAVY	40	0	40	-	-	-	-	-	-	-	3	3	4	3	3	4	3	3	4	3	3	4	M	A	J	J	A	S			0	
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S					
							C	O	E	A	E	A	A	A	U	U	U	E	C	O	V	E	A	E	A	A	U	U	A	S					
							T	V	C	N	B	R	R	Y	N	L	G	P	T	V	C	N	B	R	R	Y	N	L	G	P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Item Number / Title [DODIC]: 1 / Tomahawk
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Raytheon Missile System ⁽⁸⁾ - Tucson AZ	90	350	450	0	0	0	0	0	0	3	25	28
2	BAE - MINNEAPOLIS, MN	90	350	450	0	0	0	0	0	0	4	16	20

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽⁸⁾ MSR for TACTOM Production missiles is 90 when executing concurrently with the Recertification Program. Max Rate is inclusive of quantities on the Navy WPN BLI 2101, USMC PMC BLI 2101, Navy Recertification WPN BLI 2301 and Army RDT&E,A PE# 0604644A. Government Furnished Property limits max capacity to 450 per year; increases to 600 per year starting in FY 2024. Max production is directly affected by the obsolescence issues addressed in footnotes (4). Gaps in production deliveries are mitigated by concurrent production on recertification line, funded in WPN-2301.

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Modification Number / Title: 1 / TACTOM Modernization

ID Code (A=Service Ready, B=Not Service Ready) : _____ **MDAP/MAIS Code:** 289

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	256.772	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	256.772
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	256.772	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	256.772
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	256.772	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	256.772

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Tactical Tomahawk (TACTOM) provides an attack capability against fixed and mobile targets, and can be launched from both surface ships (RGM) and submarines (UGM). The TACTOM Modernization profile includes Recertification and Navigation Communication Modernization upgrades (NAVCOMMs).

Funding for Tomahawk Modernization beginning in FY 2021 is now budgeted in BLI 2301.

The TACTOM service life for RGM109E and UGM109E Block IV/V Tomahawk cruise missiles is 30 years with a 15-year deployment and recertification cycle. During the Recertification availability period, Block IV TACTOMS will undergo their 15-year service life extension activities, and then be updated to a modernized Block V configuration with the installation of a NAVCOMM kit.

Recertification is an ACAT II program to recertify the RGM109E and UGM109E Block IV/V Tomahawk cruise missiles service life subsequent to a 15-year deployment. Inventory objective is 3992. The yearly recertification profile will limit the missile backlog within the Fleet due to the expiration of life limiting components. The recertification contract will have six months of production lead-time prior to missile induction. Recertification activity includes the costs associated with the Raytheon labor, vendor recertification of specific components (i.e. mechanical and electrical components), recertification of the MK 45 submarine capsule, missile consumables, fuze recertification, Armed Firing Device (AFD) recertification, installation of Advanced Communication Package (ACP), shipping assets to and from weapon stations, and fuel. Recertification is planned to occur concurrently with installation of NAVCOMMs Modernization Kits, which will replace the existing Satellite Data Link Terminal (SDLT) radio and antenna.

The TACTOM NAVCOMMs upgrades consist of the Integrated Single Box Solution (ISBS) radio, two new antennas and associated cabling, a new mid-body cover, and changes to the aft-body structure and aft-body cover. The ISBS radio is replacing the existing SDLT, and two new antennas are added to replace the previous antenna. The changes to the missile are driven by the obsolescence of the SDLT hardware and the obsolescence of the UHF Demand Assigned Multiple Access (DAMA) communications infrastructure that is being phased out of service. NAVCOMM kits get installed in missiles during the Recertification availability.

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Exhibit P-3a, Individual Modification: PB 2023 Navy											Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1				P-1 Line Item Number / Title: 2101 / Tomahawk							Modification Number / Title: 1 / TACTOM Modernization			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code: 289							
Models of Systems Affected: TACTOM				Modification Type: Increase Capability and Extend Missile Service Life					Related RDT&E PEs: 0204229N					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Procurement														
Modification Item 1 of 2: Recertification														
A Kits														
Recurring														
1.1.1) Recertification Kits - NonOrganic ⁽¹⁰⁾	117 / 48.628	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	117 / 48.628		
Subtotal: Recurring	- / 48.628	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 48.628		
Subtotal: Recertification	117 / 48.628	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	117 / 48.628		
Modification Item 2 of 2: NAVCOMMs														
A Kits														
Recurring														
2.1.1) NAVCOMMs - NonOrganic ⁽¹¹⁾	273 / 66.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	273 / 66.098		
Subtotal: Recurring	- / 66.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 66.098		
Subtotal: NAVCOMMs	273 / 66.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	273 / 66.098		
Subtotal: Procurement, All Modification Items	- / 114.726	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 114.726		
Support (All Modification Items)														
3.1) Other Production Support- NAVCOMMs Modifications	- / 4.912	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 4.912		
3.2) Support Equipment- NAVCOMMs Modification	- / 8.785	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 8.785		
3.3) Integrated Logistics Support- NAVCOMMs Modification	- / 0.463	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.463		
3.4) Other Production Support- Recertification	- / 15.482	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 15.482		
3.5) Support Equipment- Recertification	- / 152.700	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 152.700		
3.6) Integrated Logistics Support- Recertification	- / 12.983	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 12.983		
3.7) MK-45 Support- Recertification	- / 18.728	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 18.728		
3.8) Recertification Line Stand-Up	- / 18.088	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 18.088		
Subtotal: Support	- / 102.141	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 102.141		
Installation														
Modification Item 1 of 2: Recertification	- / 34.729	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 34.729		
Modification Item 2 of 2: NAVCOMMs	- / 15.176	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 15.176		
Subtotal: Installation	- / 39.905	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 39.905		
Total														

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Exhibit P-3a, Individual Modification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Modification Number / Title: 1 / TACTOM Modernization
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 289

Models of Systems Affected: TACTOM	Modification Type: Increase Capability and Extend Missile Service Life	Related RDT&E PEs: 0204229N
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Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>	<i>Qty (Each) / Total Cost (\$ M)</i>
Total Cost (Procurement + Support + Installation)	256.772	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	256.772

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1 **P-1 Line Item Number / Title:** 2101 / Tomahawk **Modification Number / Title:** 1 / TACTOM Modernization

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 289

Modification Item 1 of 2: Recertification

Manufacturer Information

Manufacturer Name: RAYTHEON Company Manufacturer Location: TUCSON, AZ
 Administrative Leadtime (in Months): 6 Production Leadtime (in Months): 9

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor:: Installation Name: Recertification Kits

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	5 / 34.729	112 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	117 / 34.729
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 34.729	112 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	117 / 34.729

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	14	42	42	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117
Out	5	-	14	42	42	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	117	

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1	P-1 Line Item Number / Title: 2101 / Tomahawk	Modification Number / Title: 1 / TACTOM Modernization

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Modification Item 2 of 2: NAVCOMMs

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: TUCSON, AZ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 13

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor:: Installation Name: NAVCOMMs

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	29 / 5.176	178 / 0.000	66 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	273 / 5.176
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	29 / 5.176	178 / 0.000	66 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	273 / 5.176

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	29	48	24	54	52	48	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	273
Out	5	-	14	42	59	67	52	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	273

Footnotes:
⁽¹⁰⁾ Cost Element Recertification - Beginning in FY 2021, TACTOM Modifications moved from BLI 2101 to BLI 2301.
⁽¹¹⁾ Cost Element NAVCOMMs - Beginning in FY 2021, TACTOM Modifications moved from BLI 2101 to BLI 2301.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy								Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2206 / AMRAAM					

ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A			
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Line Item MDAP/MAIS Code: 185

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	3,087	122	-	337	-	337	282	267	76	73	217	4,461
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,126.778	204.251	0.000	335.900	0.000	335.900	285.401	269.078	85.545	84.685	227.024	4,618.662
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,126.778	204.251	0.000	335.900	0.000	335.900	285.401	269.078	85.545	84.685	227.024	4,618.662
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,126.778	204.251	0.000	335.900	0.000	335.900	285.401	269.078	85.545	84.685	227.024	4,618.662

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	8.617	6.632	6.848	-	6.848	5.892	5.989	-	-	-	33.978
Flyaway Unit Cost (<i>\$ in Thousands</i>)	953.673	1,659.287	-	990.415	-	990.415	1,004.369	999.513	1,096.013	1,128.699	1,044.346	991.394
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Advanced Medium Range Air-to-Air Missile (AMRAAM) is a joint Air Force/Navy, Acquisition Category 1C program with Air Force as lead service. AMRAAM is the premier all- weather, all-environment, radar guided missile with improved capabilities against very low and high-altitude targets in an electronic attack environment. The current AMRAAM AIM-120D variant delivers improved performance via Global Positioning System (GPS) aided navigation; two way datalink capability for enhanced aircrew survivability and improved network compatibility; and incorporates new guidance software that improves kinematic performance and weapon effectiveness.

Differences in Navy and Air Force All Up Round Unit Cost is the result of the variations in procurement of missile types by each service.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2206 / AMRAAM
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 185

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / AMRAAM	P-5a, P-21			3,087 / 3,126.778	122 / 204.251	- / 0.000	337 / 335.900	- / 0.000	337 / 335.900
P-40	Total Gross/Weapon System Cost				3,087 / 3,126.778	122 / 204.251	- / 0.000	337 / 335.900	- / 0.000	337 / 335.900

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2023 funding procures 337 AMRAAM missiles in support of warfighter requirements.

Funding is also provided for test and technical production support, procurement of training equipment and test equipment/test equipment upgrades to support the AMRAAM configurations. Additionally, funding is used to resolve production Diminishing Manufacturing Sources and Material Shortages, obsolescence issues, studies, bridge buys, life of type buys, supplier/parts replacement and qualification activities to preserve future production capabilities and capacities.

The AMRAAM Form, Fit, Function, Refresh (F3R) program experienced a 13 month schedule slip due to hardware integration issues resulting in a realignment of FY 2022 DoN funding. Subsequent to the realignment, Raytheon Missiles & Defense (RMD) has achieved a number of significant milestones and implemented a missed task burn down plan to mitigate impacts to the F3R program critical path schedule. Additionally, RMD has demonstrated improved forecast and backlog task completion while maintaining a six month schedule margin to meet the Joint Schedule Risk Assessment Full Configuration Audit date of Jan 2023. Although DoN has no FY 2022 funding to procure missiles on FY 2022 Lot 36, the production capacity is being fulfilled by USAF, DoN (FY2021 funding), and FMS allied partners resulting in a procurement quantity forecast in excess of 650 missiles. In summary, the program is confident in RMD's ability to produce the FY 2023 budgeted quantity of 337 missiles.

Due to AMRAAM inventories being critically low, the program will procure the maximum quantity of missiles with the provided funding in accordance with Title 10, US Code Section 2308 BUY-TO-BUDGET ACQUISITION.

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	3,087	122	-	337	-	337
Gross/Weapon System Cost (\$ in Millions)	3,126.778	204.251	0.000	335.900	0.000	335.900
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3,126.778	204.251	0.000	335.900	0.000	335.900
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3,126.778	204.251	0.000	335.900	0.000	335.900

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	8.617	6.632	6.848	-	6.848
Gross/Weapon System Unit Cost (\$ in Thousands)	1,012.886	1,674.189	-	996.736	-	996.736

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - MISSILE Cost																		
Recurring Cost																		
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†) (1)	668.510	2,626	1,755.507	1,108.350	99	109.727	-	-	-	926.136	337	312.108	-	-	-	926.136	337	312.108
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM) ^(†)	591.670	461	272.760	439.838	23	10.116	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) WARRANTY	-	-	36.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.4) DIMINISHING MANUFACTURING SOURCES (DMS) ⁽²⁾	-	-	272.006	-	-	72.974	-	-	-	-	-	12.927	-	-	-	-	-	12.927
1.1.5) TOOLING AND TEST EQUIPMENT	-	-	58.377	-	-	1.633	-	-	-	-	-	1.710	-	-	-	-	-	1.710
1.1.6) ENGINEERING CHANGE ORDERS (ECO) ⁽³⁾	-	-	35.423	-	-	0.596	-	-	-	-	-	1.587	-	-	-	-	-	1.587
<i>Subtotal: Recurring Cost</i>	-	-	2,430.193	-	-	195.046	-	-	-	-	-	328.332	-	-	-	-	-	328.332
<i>Subtotal: Flyaway - MISSILE Cost</i>	-	-	2,430.193	-	-	195.046	-	-	-	-	-	328.332	-	-	-	-	-	328.332
Flyaway - NONRECURRING and ANCILLARY EQUIPMENT Cost																		
Non Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
2.1.1) SPECIAL TOOLING AND TEST EQUIPMENT	-	-	93.514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) CONTAINERS (4)	-	-	7.204	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000
<i>Subtotal: Non Recurring Cost</i>	-	-	100.718	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000
<i>Subtotal: Flyaway - NONRECURRING and ANCILLARY EQUIPMENT Cost</i>	-	-	100.718	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000
Flyaway - PRODUCTION SUPPORT Cost																		
Recurring Cost																		
3.1.1) TEST SUPPORT	-	-	136.578	-	-	2.762	-	-	-	-	-	1.278	-	-	-	-	-	1.278
3.1.2) TECHNICAL SUPPORT	-	-	276.501	-	-	4.625	-	-	-	-	-	2.160	-	-	-	-	-	2.160
<i>Subtotal: Recurring Cost</i>	-	-	413.079	-	-	7.387	-	-	-	-	-	3.438	-	-	-	-	-	3.438
<i>Subtotal: Flyaway - PRODUCTION SUPPORT Cost</i>	-	-	413.079	-	-	7.387	-	-	-	-	-	3.438	-	-	-	-	-	3.438
Support - SUPPORT COST - FLEET Cost																		
4.1) PECULIAR SUPPORT EQUIPMENT	-	-	60.880	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) TRAINING EQUIPMENT (5)	-	-	39.569	-	-	0.823	-	-	-	-	-	1.765	-	-	-	-	-	1.765
4.3) INTEGRATED LOGISTICS SUPPORT (ILS)	-	-	82.339	-	-	0.995	-	-	-	-	-	0.365	-	-	-	-	-	0.365
<i>Subtotal: Support - SUPPORT COST - FLEET Cost</i>	-	-	182.788	-	-	1.818	-	-	-	-	-	2.130	-	-	-	-	-	2.130
Gross/Weapon System Cost	1,012.886	3,087	3,126.778	1,674.189	122	204.251	-	-	0.000	996.736	337	335.900	-	-	0.000	996.736	337	335.900

(t) indicates the presence of a P-5a

Footnotes:

(1) Unit cost calculations are based on combined procurement of Air Force, Navy and Foreign Military Sales (FMS) buys for each fiscal year. Unit cost is quantity dependent and changes in total quantity directly impact unit price for Air Force, Navy, and FMS.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(2) DMS funding is used to resolve production Diminishing Manufacturing Sources and Material Shortages ,obsolescence issues, studies, bridge buys, life of type buys, supplier/parts replacement and qualification activities to preserve future production capabilities and capacities. DMS funding in FY2023 includes procurement of the Application Specific Integrated Circuit (ASIC) chip.</p> <p>(3) Engineering Change Orders cost element provides funding to test and qualify class I engineering change proposals by the prime vendor into missile production. Fluctuations correspond directly with total cost of hardware procured.</p> <p>(4) Containers are required to maintain pace with quantities, ensure in-container reprogramming capability is maintained.</p> <p>(5) Training Equipment request includes funding for the AMRAAM Telemetry System (ATS) to replenish the stock of ATS kits the warfighter expends during AMRAAM live-fire missile training exercises and is based upon the projected number of ATS missile shots planned each year. The ATS enables the warfighter to measure the effectiveness of missile improvements while also becoming more proficient on the missile employment and tactics necessary to fully utilize missile capabilities.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2019	Raytheon Missile System ⁽⁶⁾ / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Dec 2019	Jul 2021	113	1,065.500	Y		Nov 2017
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)	✓	2019	Raytheon Missile System ⁽⁶⁾ / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Dec 2019	Jul 2021	1	1,065.500	Y		Nov 2017
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2020 ⁽⁷⁾	Raytheon Missile System ⁽⁶⁾ / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Mar 2021	Jan 2023	111	1,151.355	Y		Sep 2018
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2021 ⁽⁸⁾	Raytheon Missile System ⁽⁶⁾ / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Jul 2022	Jul 2024	99	1,108.350	Y		Sep 2018
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2023	Raytheon Missile System ⁽⁶⁾ / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Apr 2023	Apr 2025	337	926.136	Y		Sep 2021
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM) ^(†)		2019	Raytheon Missile System / Tucson AZ	SS / FPIF	EGLIN AFB, FL	Dec 2019	Jan 2022	51	529.392	Y		Nov 2017
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM) ^(†)		2020 ⁽⁹⁾	Raytheon Missile System / Tucson AZ	SS / FPIF	EGLIN AFB, FL	Mar 2021	Jul 2022	76	486.306	Y		Sep 2018
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM) ^(†)		2021 ⁽¹⁰⁾	Raytheon Missile System / Tucson AZ	SS / FPIF	EGLIN AFB, FL	Aug 2021	Oct 2023	23	439.838	Y		Sep 2018

^(†) indicates the presence of a P-21

Footnotes:

⁽⁶⁾ AIM-120 MSR is 400 missiles per year, consisting of USN, USAF, and approved FMS procurement with no less than 100 of a particular variant. FY 2023 max factory capacity enables production of 1,200 missiles per year. Due to Service specific guidance, differences exist between USAF and DoN Initial and Reorder Procurement Leadtimes within each Service's budget exhibits. Within the USAF (lead service) P-21 exhibit, the Initial Procurement Leadtime data is based on contract data for the budget year, while the Reorder Procurement Leadtime data is left blank. Within this DoN P-21 exhibit, Initial Procurement Leadtime data is based on first DoN missile procurement in FY 1989, while the Reorder Procurement Leadtime data is based on contract data for the budget year.

⁽⁷⁾ FY 2020 AUR funding: Thirty- nine AURs were procured on the FY 2020 Lot 34 production contract awarded in Mar 2021. Seventy -two AURs were procured on the FY 2021 Lot 35 production contract awarded in Jul 2021 per the Department of the Navy approved execution carryover plan.

⁽⁸⁾ FY 2021 AUR funding: Ninety-nine AURs will be procured on the FY 2022 Lot 36 production contract scheduled to award in Jul 2022 per the Department of the Navy approved execution carryover plan.

⁽⁹⁾ FY 2020 CATM funding: Forty-nine CATMs were procured on the FY 2020 Lot 34 production contract awarded in Mar 2021. Twenty-seven CATMs were procured on a contract awarded in Aug 2021 per the Department of the Navy approved execution carryover plan.

⁽¹⁰⁾ FY 2021 CATM funding: Twenty-three CATMs were procured on a contract awarded in Aug 2021 per the Department of the Navy approved execution carryover plan.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020														Fiscal Year 2021														BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020														Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾

Prior Years Deliveries: 2401																														
1	2019	NAVY	113	0	113			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-	98
1	2019	AF ^(‡)	188	0	188			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	-	-	142	
1	2019	FMS ^(‡)	434	0	434			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	-	360	
1	2019	Total	735	0	735			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	135	-	-	600	
✓ 1	2019	NAVY	1	0	1			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			0	
✓ 1	2019	AF ^(‡)	2	0	2			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2			0	
✓ 1	2019	Total	3	0	3			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	0	
1	2020	NAVY	111 ⁽¹¹⁾	0	111																								111	
1	2020	AF ^(‡)	96	0	96																								96	
1	2020	FMS ^(‡)	300	0	300																								300	
1	2020	Total	507	0	507																								507	
1	2021	NAVY	99 ⁽¹²⁾	0	99																								99	
1	2021	AF ^(‡)	196	0	196																								196	
1	2021	FMS ^(‡)	164	0	164																								164	
1	2021	Total	459	0	459																								459	
1	2023	NAVY	337	0	337																								337	
1	2023	AF ^(‡)	271	0	271																								271	
1	2023	FMS ^(‡)	364	0	364																								364	
1	2023	Total Base	972	0	972																								972	

1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM)

Prior Years Deliveries: 334																													
2	2019	NAVY	51	0	51			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	51
2	2020	NAVY	76 ⁽¹³⁾	0	76																								76
2	2021	NAVY	23 ⁽¹⁴⁾	0	23																								23
2	2021	AF ^(‡)	40	0	40																								40
2	2021	Total	63	0	63																								63

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023														BALANCE					
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																							
Prior Years Deliveries: 2401																																							
	1	2019	NAVY	113	15	98	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	68				0					
	1	2019	AF ^(‡)	188	46	142	-	-	-	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95				0					
	1	2019	FMS ^(‡)	434	74	360	-	-	-	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286				0					
	1	2019	Total	735	135	600	-	-	-	151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	449	-	-	-	-	0					
✓	1	2019	NAVY	1	1	0																												0					
✓	1	2019	AF ^(‡)	2	2	0																												0					
✓	1	2019	Total	3	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
	1	2020	NAVY	111 ⁽¹¹⁾	0	111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	32	-	-	18	-	-	54	
	1	2020	AF ^(‡)	96	0	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	-	-	24	-	-	24	-	-	24		
	1	2020	FMS ^(‡)	300	0	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	-	-	75	-	-	75	-	-	75		
	1	2020	Total	507	0	507	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106	-	-	131	-	-	117	-	-	153			
	1	2021	NAVY	99 ⁽¹²⁾	0	99																															99		
	1	2021	AF ^(‡)	196	0	196																															196		
	1	2021	FMS ^(‡)	164	0	164																															164		
	1	2021	Total	459	0	459																															459		
	1	2023	NAVY	337	0	337																															337		
	1	2023	AF ^(‡)	271	0	271																															271		
	1	2023	FMS ^(‡)	364	0	364																															364		
	1	2023	Total Base	972	0	972																															972		
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM)																																							
Prior Years Deliveries: 334																																							
	2	2019	NAVY	51	0	51	-	-	-	12	-	-	-	13	-	-	-	13	-	-	-	13														0			
	2	2020	NAVY	76 ⁽¹³⁾	0	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	13
	2	2021	NAVY	23 ⁽¹⁴⁾	0	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	
	2	2021	AF ^(‡)	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40		
	2	2021	Total	63	0	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P									

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2206 / AMRAAM **Item Number / Title [DODIC]:** 1 / AMRAAM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024													Fiscal Year 2025													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024													Calendar Year 2025													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 2401																																	
	1	2019	NAVY	113	113	0																							0				
	1	2019	AF (‡)	188	188	0																							0				
	1	2019	FMS (‡)	434	434	0																							0				
	1	2019	Total	735	735	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
✓	1	2019	NAVY	1	1	0																							0				
✓	1	2019	AF (‡)	2	2	0																							0				
✓	1	2019	Total	3	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2020	NAVY	111 ⁽¹¹⁾	57	54	18	-	-	18	-	-	18																0				
	1	2020	AF (‡)	96	72	24	24	-	-	-	-	-	-																0				
	1	2020	FMS (‡)	300	225	75	75	-	-	-	-	-	-																0				
	1	2020	Total	507	354	153	117	-	-	18	-	-	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2021	NAVY	99 ⁽¹²⁾	0	99	-	-	-	-	-	-	-	-	24	-	-	25	-	-	25	-	-	25					0				
	1	2021	AF (‡)	196	0	196	-	-	-	-	-	-	-	-	49	-	-	49	-	-	49	-	-	49					0				
	1	2021	FMS (‡)	164	0	164	-	-	-	-	-	-	-	-	41	-	-	41	-	-	41	-	-	41					0				
	1	2021	Total	459	0	459	-	-	-	-	-	-	-	114	-	-	115	-	-	115	-	-	115	-	-	115	-	-	0				
	1	2023	NAVY	337	0	337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	83	-	-	83	-	-	171				
	1	2023	AF (‡)	271	0	271	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	-	-	68	-	-	136				
	1	2023	FMS (‡)	364	0	364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91	-	-	91	-	-	182				
	1	2023	Total Base	972	0	972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241	-	-	242	-	-	489					
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM)																																	
Prior Years Deliveries: 334																																	
	2	2019	NAVY	51	51	0																							0				
	2	2020	NAVY	76 ⁽¹³⁾	63	13	13																						0				
	2	2021	NAVY	23 ⁽¹⁴⁾	0	23	6	-	-	8	-	-	9	-	-	-													0				
	2	2021	AF (‡)	40	0	40	10	-	-	10	-	-	10	-	-	10													0				
	2	2021	Total	63	0	63	16	-	-	18	-	-	19	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	0				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2206 / AMRAAM **Item Number / Title [DODIC]:** 1 / AMRAAM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2026													Fiscal Year 2027													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026													Calendar Year 2027													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 2401																																	
	1	2019	NAVY	113	113	0																							0				
	1	2019	AF (†)	188	188	0																							0				
	1	2019	FMS (†)	434	434	0																							0				
	1	2019	Total	735	735	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
✓	1	2019	NAVY	1	1	0																							0				
✓	1	2019	AF (†)	2	2	0																							0				
✓	1	2019	Total	3	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2020	NAVY	111 ⁽¹¹⁾	111	0																							0				
	1	2020	AF (†)	96	96	0																							0				
	1	2020	FMS (†)	300	300	0																							0				
	1	2020	Total	507	507	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2021	NAVY	99 ⁽¹²⁾	99	0																							0				
	1	2021	AF (†)	196	196	0																							0				
	1	2021	FMS (†)	164	164	0																							0				
	1	2021	Total	459	459	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2023	NAVY	337	166	171	85	-	86	-																			0				
	1	2023	AF (†)	271	135	136	68	-	-	68																			0				
	1	2023	FMS (†)	364	182	182	91	-	-	91																			0				
	1	2023	Total Base	972	483	489	244	-	86	159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM)																																	
Prior Years Deliveries: 334																																	
	2	2019	NAVY	51	51	0																							0				
	2	2020	NAVY	76 ⁽¹³⁾	76	0																							0				
	2	2021	NAVY	23 ⁽¹⁴⁾	23	0																							0				
	2	2021	AF (†)	40	40	0																							0				
	2	2021	Total	63	63	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2		P-1 Line Item Number / Title: 2206 / AMRAAM
		Item Number / Title [DODIC]: 1 / AMRAAM

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon Missile System ⁽⁶⁾ - Tucson, AZ	400	400	1,200	6	3	21	24	18	7	24	31
2	Raytheon Missile System - Tucson AZ	400	400	1,200	6	3	21	24	37	10	24	34

(†) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽⁶⁾ AIM-120 MSR is 400 missiles per year, consisting of USN, USAF, and approved FMS procurement with no less than 100 of a particular variant. FY 2023 max factory capacity enables production of 1,200 missiles per year. Due to Service specific guidance, differences exist between USAF and DoN Initial and Reorder Procurement Leadtimes within each Service's budget exhibits. Within the USAF (lead service) P-21 exhibit, the Initial Procurement Leadtime data is based on contract data for the budget year, while the Reorder Procurement Leadtime data is left blank. Within this DoN P-21 exhibit, Initial Procurement Leadtime data is based on first DoN missile procurement in FY 1989, while the Reorder Procurement Leadtime data is based on contract data for the budget year.

⁽¹¹⁾ FY 2020 AUR funding: Thirty-nine AURs were procured on the FY 2020 Lot 34 production contract awarded in Mar 2021 with delivery scheduled for Jan and Apr 2023. Seventy-two AURs were procured on the FY 2021 Lot 35 production contract awarded in Jul 2021 with a scheduled delivery from Jul 2023 to Apr 2024 per the Department of the Navy approved execution carryover plan.

⁽¹²⁾ FY 2021 AUR funding: Ninety-nine AURs will be procured on the FY 2022 Lot 36 production contract scheduled to award in Jul 2022 with a scheduled delivery from Jul 2024 to Apr 2025 per the Department of the Navy approved execution carryover plan.

⁽¹³⁾ FY 2020 CATM funding: Forty-nine CATMs were procured on the FY 2020 Lot 34 production contract awarded in Mar 2021 with a scheduled delivery of Jul 2022 and Oct 2022. Twenty-seven CATMs were procured on a contract awarded in Aug 2021 with a scheduled delivery of Jul 2023 and Oct 2023 per the Department of the Navy approved execution carryover plan.

⁽¹⁴⁾ FY 2021 CATM funding: Twenty-three CATMs were procured on a contract awarded in Aug 2021 with a scheduled delivery of Oct 2023 to Apr 2024 per the Department of the Navy approved execution carryover plan.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2209 / Sidewinder
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204162N, 0204138M	Other Related Program Elements: 0207161N, 0207161F, 0604319A
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Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	3,222	240	152	128	-	128	165	180	232	205	2,091	6,615
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,206.244	104.502	78.606	63.288	0.000	63.288	79.930	87.960	110.521	111.778	1,218.280	3,061.109
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,206.244	104.502	78.606	63.288	0.000	63.288	79.930	87.960	110.521	111.778	1,218.280	3,061.109
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,206.244	104.502	78.606	63.288	0.000	63.288	79.930	87.960	110.521	111.778	1,218.280	3,061.109

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	1.785	2.027	1.168	-	1.168	1.079	1.657	1.878	2.100	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	342,353.82	377,062.50	389,157.89	349,773.44	-	349,773.44	375,860.61	394,350.00	404,556.03	428,175.61	500,550.45	401,929.86
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AIM-9X Block II/II+ Sidewinder (AIM-9X Blk II/II+) continues the evolution of the AIM-9 series of missiles. This missile program delivers a launch and leave, air combat munition that uses passive Infrared (IR) energy to acquire and track enemy air targets and complements the radar guided Advanced Medium Range Air-to-Air Missile (AMRAAM). The missile provides fighter aircrew with the first shot, first kill opportunities that are essential for survival during air combat maneuvering in the visual arena. The AIM-9X delivers these opportunities with unmatched offensive and defensive capabilities against threats Within Visual Range (WVR), even when IR countermeasures are employed.

The AIM-9X also supports air superiority in the Beyond Visual Range (BVR) air-to-air battle. Anti-tamper features have been incorporated to protect improvements inherent in this design. The AIM-9X Block II missile provides the Joint Force with fighter aircraft lethality and survivability necessary to counter threats identified in the Chief of Naval Operations Guidance and the National Defense Strategy.

AIM-9X is a Post Milestone C, Acquisition Category IC joint service program led by the Department of the Navy (DoN). In June 2011, the Milestone Decision Authority (MDA) established the AIM-9X Block II missile program which was approved for entry at Milestone C for Low Rate Initial Production. The Block I program ended with section 2366 A/B certification and Acquisition Program Baseline (APB) for AIM-9X Block II approval on December 23, 2011. In August 2015, the program received approval for Full Rate Production (FRP), and the APB was re-established.

In December 2017, the program began to procure a third variant of the missile labeled the AIM-9X Block II PLUS (Block II+) to satisfy the requirements of the Joint Strike Fighter platform. This version of the missile is being produced on the same production line as the AIM-9X Block II missile. For contracting purposes, the nomenclature of the AIM-9X Block II missile is identified as AIM-9X-2 or AIM-9X-4 and the AIM-9X Block II+ missile is identified as AIM-9X-3 or AIM-9X-5. The AIM-9X-4/5 variant are the Systems Improvement Program (SIP) III configuration with upgraded hardware for obsolescence that will cut into Lot 21.

In February 2019, the AIM-9X Block II Sidewinder APB for DoN and United States Air Force (USAF) was revised to increase total missile procurements from 6,000 to 11,635 missiles and to extend missile procurements through 2035. The current APB quantity of 11,635 missiles is made up of 5,326 DoN missiles and 6,309 USAF missiles. This budget includes 1,289 Block I missiles (previously procured) in addition to 5,326 Block II missiles, for a total of 6,615 missiles.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2209 / Sidewinder

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204162N, 0204138M **Other Related Program Elements:** 0207161N, 0207161F, 0604319A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / SIDEWINDER BLOCK II	P-5a, P-21			3,222 / 1,206.244	225 / 104.502	152 / 71.242	128 / 55.537	- / 0.000	128 / 55.537
P-3a	1 / Inertial Measurement Unit (IMU) Obsolescence upgrade (Reliability)				- / 0.000	- / 0.000	- / 7.364	- / 7.751	- / 0.000	- / 7.751
P-40	Total Gross/Weapon System Cost				3,222 / 1,206.244	240 / 104.502	152 / 78.606	128 / 63.288	- / 0.000	128 / 63.288

Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / SIDEWINDER BLOCK II	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Inertial Measurement Unit (IMU) Obsolescence upgrade (Reliability)				- / 6.906	- / 6.124	- / 5.318	- / 12.633	- / 73.009	- / 119.105
P-40	Total Gross/Weapon System Cost				165 / 79.930	180 / 87.960	232 / 110.521	205 / 111.778	2,091 / 1,218.280	6,615 / 3,061.109

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.
 Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The FY 2023 budget provides funding to procure the ninth lot of Full Rate Production (FRP) AIM-9X Block II (Blk II) missiles, the seventh lot of AIM-9X Block II Plus (Blk II+) missiles. Additionally, FY 2023 continues procurement of upgraded Inertial Measurement Unit (IMU) Guidance Units (GUs).
 The program unit costs are based on quantities procured by the DoN, USAF and Foreign Military Sales customers. Total Program quantity by service includes a mix of All Up Round (AUR) missiles and Captive Air Training Missiles (CATMs).
 Note: Due to AIM-9X inventories being below the USN Total Munitions Requirement, the program will procure the maximum quantity of missiles with the provided funding in accordance with Title 10, US Code Section 2308 BUY-TO-BUDGET ACQUISITION.
 FY2021 quantities reflected on the P40 exhibit are constrained to 240. The correct quantity in FY2021 is 225, as displayed on the P5 exhibit. Additionally, To Complete has been updated on the P5 exhibit to reflect the correct quantity of 2106, so the total program quantity is correct.

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Exhibit P-5, Cost Analysis: PB 2023 Navy					Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2			P-1 Line Item Number / Title: 2209 / Sidewinder			Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II			
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	
Procurement Quantity (<i>Units in Each</i>)			3,222	225	152	128	-	128	
Gross/Weapon System Cost (<i>\$ in Millions</i>)			1,206.244	104.502	71.242	55.537	0.000	55.537	
Less PY Advance Procurement (<i>\$ in Millions</i>)			-	-	-	-	-	-	
Net Procurement (P-1) (<i>\$ in Millions</i>)			1,206.244	104.502	71.242	55.537	0.000	55.537	
Plus CY Advance Procurement (<i>\$ in Millions</i>)			-	-	-	-	-	-	
Total Obligation Authority (<i>\$ in Millions</i>)			1,206.244	104.502	71.242	55.537	0.000	55.537	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (<i>\$ in Millions</i>)			-	-	-	-	-	-	
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)			374,377.41	464,453.33	468,697.37	433,882.81	-	433,882.81	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway - MISSILE Cost																		
Recurring Cost																		
1.1.1) All Up Round - Block II ^(†) (1)	391,968.00	1,375	538.956	376,958.53	217	81.800	409,956.99	93	38.126	412,861.11	72	29.726	-	-	0.000	412,861.11	72	29.726
1.1.2) Captive Air Training Missile - Block II ^(†) (2)	213,204.17	480	102.338	-	-	0.000	242,882.35	51	12.387	200,791.67	48	9.638	-	-	0.000	200,791.67	48	9.638
1.1.3) All Up Round - Block II Plus ^(†) (3)	460,320.51	78	35.905	423,625.00	8	3.389	455,375.00	8	3.643	460,000.00	8	3.680	-	-	0.000	460,000.00	8	3.680
1.1.4) Engineering Change Orders - Block II ⁽⁴⁾	-	-	3.138	-	-	0.000	-	-	0.000	-	-	1.093	-	-	0.000	-	-	1.093
1.1.5) Diminishing Manufacturing Sources (DMS) ⁽⁵⁾	-	-	6.232	-	-	0.000	-	-	1.135	-	-	0.241	-	-	0.000	-	-	0.241
1.1.6) Government Cost (GFE & Testing) - Block II	-	-	0.613	-	-	0.103	-	-	0.098	-	-	0.018	-	-	0.000	-	-	0.018
<i>Subtotal: Recurring Cost</i>	-	-	687.182	-	-	85.292	-	-	55.389	-	-	44.396	-	-	0.000	-	-	44.396
<i>Subtotal: Flyaway - MISSILE Cost</i>	-	-	687.182	-	-	85.292	-	-	55.389	-	-	44.396	-	-	0.000	-	-	44.396
Flyaway - Prior Year Sidewinder Block 1 Cost																		
Recurring Cost																		
2.1.1) Prior Year Sidewinder Block 1	282,434.45	1,289	364.058	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2209 / Sidewinder						Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	364.058	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Prior Year Sidewinder Block 1 Cost</i>	-	-	364.058	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Flyaway - Nonrecurring and Ancillary Equip Cost																		
Non Recurring Cost																		
3.1.1) Special Tool & Test Equip (ST/STE) - Block II ⁽⁶⁾	-	-	16.642	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.2) Missile Containers - Block II ⁽⁷⁾	12,941.67	480	6.212	12,971.83	71	0.921	13,060.61	33	0.431	12,096.77	31	0.375	-	-	0.000	12,096.77	31	0.375
3.1.3) Nonrecurring Engineering - Block II	-	-	28.970	-	-	4.282	-	-	3.332	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	51.824	-	-	5.203	-	-	3.763	-	-	0.375	-	-	0.000	-	-	0.375
<i>Subtotal: Flyaway - Nonrecurring and Ancillary Equip Cost</i>	-	-	51.824	-	-	5.203	-	-	3.763	-	-	0.375	-	-	0.000	-	-	0.375
Support - Production Support Cost																		
4.1) Production Technical Support - Block II ⁽⁸⁾	-	-	21.711	-	-	2.766	-	-	2.120	-	-	3.210	-	-	0.000	-	-	3.210
<i>Subtotal: Support - Production Support Cost</i>	-	-	21.711	-	-	2.766	-	-	2.120	-	-	3.210	-	-	0.000	-	-	3.210
Support - Support Costs Cost																		
5.1) Peculiar Support Equipment - Block II ⁽⁹⁾	-	-	0.670	-	-	0.000	-	-	0.000	-	-	0.040	-	-	0.000	-	-	0.040
5.2) Training Support - Block II ⁽¹⁰⁾	-	-	0.247	-	-	0.047	-	-	0.101	-	-	0.042	-	-	0.000	-	-	0.042
5.3) Training Equipment - Block II ⁽¹¹⁾	-	-	14.445	-	-	1.690	-	-	1.432	-	-	1.461	-	-	0.000	-	-	1.461
5.4) Contract Support - Block II ⁽¹²⁾	-	-	9.317	-	-	0.381	-	-	0.506	-	-	1.419	-	-	0.000	-	-	1.419
5.5) Government In-House Support - Block II ⁽¹³⁾	-	-	56.790	-	-	9.123	-	-	7.931	-	-	4.594	-	-	0.000	-	-	4.594
<i>Subtotal: Support - Support Costs Cost</i>	-	-	81.469	-	-	11.241	-	-	9.970	-	-	7.556	-	-	0.000	-	-	7.556

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	374,377.41	3,222	1,206.244	464,453.33	225	104.502	468,697.37	152	71.242	433,882.81	128	55.537	-	-	0.000	433,882.81	128	55.537

Remarks:
[Flyaway]

(†) indicates the presence of a P-5a

Footnotes:

- (1) AUR Block II - (A) This budget exhibit represents only the US Navy portion of the total program procurement. This exhibit reflects a Navy unit cost that is congruent with the Air Force unit cost. Unit cost changes are heavily driven by total program quantity changes from year to year. The majority of parts are common between All Up Round (AUR) Block IIs, CATMs, and AUR Block II Plus. As a result, the overall quantities procured (between AUR Block II, AUR Block II Plus and CATMs) to include all customers (Navy, Air Force, and Foreign Military Sales) drive the unit cost. The unit cost increased from FY 2022 to FY 2023 due to lower quantity of missiles procured in FY 2023. (B) The cost estimate was updated beginning in FY 2021 to align with contracted unit price. As a result, in FY 2021 and out, costs that were previously reflected under the DMS (1.1.5) and Special Tooling and Test Equipment (ST/STE) (3.1.1) cost elements are now included in the missile unit costs reflected in AUR Blk II (1.1.1), CATMs (1.1.2), and AUR Blk II Plus (1.1.3). (C) DMS increases within the AUR unit cost from FY2022 to FY2023 due to the procurement of the Application-Specific Integrated Circuit (ASIC) chip, which is the new hardware SIP III processor. The additional FY2023 DMSMS funding within the unit cost covers the obsolete ASICs for only the Lot 23 (FY2023) production. The program is required to procure the FY2023 requirement because the DoD LOTB will not occur in time for FY2023/Lot 23 production. The DoD's life-of-type buy will cover the remaining years of production. The chips have a yield rate of 10%, which contributes to the increase in FY2023 requirement.
- (2) CATMs - This budget exhibit represents only the US Navy portion of the total program procurement. This exhibit reflects a Navy unit cost that is congruent with the Air Force unit cost. Unit cost changes are heavily driven by total program quantity changes from year to year. The majority of parts are common between All Up Round (AUR) Block IIs, CATMs, and AUR Block II Plus. As a result, the overall quantities procured (between AUR Block II, AUR Block II Plus and CATMs) to include all customers (Navy, Air Force, and Foreign Military Sales) drive the unit cost. The unit cost decreased from FY 2022 to FY 2023 due to total program quantity increase in CATMs for all customers (Navy, Air Force, and Foreign Military Sales) from 138 in FY2022 to 148 in FY2023.
- (3) AUR Block II Plus - See Footnote (1)
- (4) The Engineering Change Orders line provides funding to test and qualify engineering changes into missile production. The increase in FY 2023 is due to engineering changes associated with the System Improvement Program (SIP) III cut-in.
- (5) DMS provides funding to procure Life of Type Buys (LOTBs), as well as design, develop, test and qualify form/fit/function replacement components to the production missile as a result of changes in sub-vendor manufacturers. The cost estimate was updated beginning in FY 2021 to align with contracted unit price. As a result, in FY 2021 and out, contractor DMS costs that were previously reflected under DMS (1.1.5) are now included in the missile unit costs. DMS requirements funded by the program directly (not included in the missile cost) continue to be reflected in this DMS cost element.
- (6) The cost estimate was updated beginning in FY 2021 to align with contracted unit price. As a result, in FY 2021 and out, costs previously reflected under the ST/STE cost element are now included in the missile unit costs.
- (7) Containers are procured to ship missiles and are budgeted 1 container for every 4.1 missiles of each configuration, for each service separately (USN and USMC). Quantities are rounded up by 10% to ensure sufficient availability of containers for shipping.
- (8) The production tech support line includes funding to manage technical documentation, training development and delivery, production support, and management of government owned property, to support production of AIM-9X configurations. Funding increases from FY 2022 to FY 2023 due to increasing support requirements between lots.
- (9) The Peculiar Support Equipment line provides for calibration and procurement of government furnished gauges and equipment used to support missile production.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(10) The training support line provides technical publications and training manuals to fleet maintainers.</p> <p>(11) Training Equipment request includes funding for AIM-9X telemetry (TM) kits to replenish the stock of TM kits the warfighter expends during annual live-fire missile training exercises. The TM kit enables the warfighter to fully measure the effectiveness of weapon improvements while also becoming more proficient on the tactics and procedures necessary to employ the capabilities of the AIM-9X Block II missile. The requirement is based upon the projected number of TM shots planned each year. Training equipment increases from FY2022 to FY2023 due to inflation.</p> <p>(12) Contract support funding provided for program office support and System Improvement Program III development efforts to production. Funding increases from FY 2022 to FY 2023 due to increased demand in contractor support requirements.</p> <p>(13) The government in-house support line provides US Government Systems Engineering and Project Management support at Naval Air Warfare Centers for the production of the AIM-9X missile to ensure compliance with joint service developed cost, schedule and performance requirements. FY 2023 Government In House Support is specifically required for FRP 09 (Blk II) and FRP 07 (Blk II+) support activities.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) All Up Round - Block II ^(†)		2018	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Dec 2018	Sep 2020	141	362,420.77	Y		Mar 2017
1.1.1) All Up Round - Block II ^(†)		2019	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Apr 2019	Sep 2021	235	381,000.00	Y		Jan 2018
1.1.1) All Up Round - Block II ^(†)	✓	2019	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Apr 2019	Sep 2021	1	381,069.74	Y		Jan 2018
1.1.1) All Up Round - Block II ^(†)		2020	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2020	Aug 2022	227	371,117.00	Y		Jan 2019
1.1.1) All Up Round - Block II ^(†)	✓	2020	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2020	Aug 2022	92	371,117.00	Y		Jan 2019
1.1.1) All Up Round - Block II ^(†)		2021	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Jun 2021	Aug 2023	217	376,958.53	Y		Jan 2020
1.1.1) All Up Round - Block II ^(†)		2022	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2022	Aug 2024	93	409,956.99	Y		Jan 2021
1.1.1) All Up Round - Block II ^(†)		2023	Raytheon Missile Systems ⁽¹⁴⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2023	Aug 2025	72	412,861.11	Y		Jan 2022
1.1.2) Captive Air Training Missile - Block II ^(†)		2018	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Dec 2018	Sep 2020	41	196,195.12	Y		Mar 2017
1.1.2) Captive Air Training Missile - Block II ^(†)		2019	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Apr 2019	Sep 2021	75	209,333.33	Y		Jan 2018
1.1.2) Captive Air Training Missile - Block II ^(†)		2020	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2020	Aug 2022	75	202,066.67	Y		Jan 2019
1.1.2) Captive Air Training Missile - Block II ^(†)		2022	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2022	Aug 2024	51	242,882.35	Y		Jan 2021
1.1.2) Captive Air Training Missile - Block II ^(†)		2023	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2023	Aug 2025	48	200,791.67	Y		Jan 2022
1.1.3) All Up Round - Block II Plus ^(†)		2018	Raytheon Missile System ⁽¹⁶⁾ / Tucson, AZ	C / FPIF	NAVAIR	Dec 2018	Sep 2020	12	416,333.33	Y		Mar 2017
1.1.3) All Up Round - Block II Plus ^(†)		2019	Raytheon Missile System ⁽¹⁶⁾ / Tucson, AZ	C / FPIF	NAVAIR	Apr 2019	Sep 2021	8	399,500.00	Y		Jan 2018
1.1.3) All Up Round - Block II Plus ^(†)		2020	Raytheon Missile System ⁽¹⁶⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2020	Aug 2022	8	494,375.00	Y		Jan 2019
1.1.3) All Up Round - Block II Plus ^(†)		2021	Raytheon Missile System ⁽¹⁶⁾ / Tucson, AZ	C / FPIF	NAVAIR	Jun 2021	Aug 2023	8	423,625.00	Y		Jan 2020

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.3) All Up Round - Block II Plus ^(†)		2022	Raytheon Missile System ⁽¹⁶⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2022	Aug 2024	8	455,375.00	Y		Jan 2021
1.1.3) All Up Round - Block II Plus ^(†)		2023	Raytheon Missile System ⁽¹⁶⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2023	Aug 2025	8	460,000.00	Y		Jan 2022

^(†) indicates the presence of a P-21

Footnotes:
⁽¹⁴⁾ AUR BLK II
⁽¹⁵⁾ CATM
⁽¹⁶⁾ AUR BLK II PLUS

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round - Block II ⁽¹⁾																																	
Prior Years Deliveries: 679																																	
	1	2018	NAVY	141	0	141			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	129				
	1	2018	AF (‡)	183	0	183			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	167				
	1	2018	FMS (‡)	431	0	431			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	395				
	1	2018	Total	755	0	755			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64	691					
	1	2019	NAVY	235	0	235							A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	235				
	1	2019	AF (‡)	176	0	176						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	176				
	1	2019	FMS (‡)	190	0	190						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190				
	1	2019	Total	601	0	601						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	601					
✓	1	2019	NAVY	1	0	1						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				
	1	2020	NAVY	227	0	227																							227				
	1	2020	AF (‡)	303	0	303																							303				
	1	2020	FMS (‡)	199	0	199																							199				
	1	2020	Total	729	0	729																						729					
✓	1	2020	NAVY	92	0	92																							92				
	1	2021	NAVY	217	0	217																							217				
	1	2021	AF (‡)	187	0	187																							187				
	1	2021	FMS (‡)	84	0	84																							84				
	1	2021	Total	488	0	488																						488					
	1	2022	NAVY	93	0	93																							93				
	1	2022	AF (‡)	142	0	142																							142				
	1	2022	FMS (‡)	157	0	157																							157				
	1	2022	Total	392	0	392																						392					
	1	2023	NAVY	72	0	72																							72				
	1	2023	AF (‡)	167	0	167																							167				
	1	2023	FMS (‡)	100	0	100																							100				
	1	2023	Total Base	339	0	339																						339					

1.1.2) Captive Air Training Missile - Block II ⁽²⁾
Prior Years Deliveries: 289

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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Cost Elements <i>(Units in Each)</i>				Fiscal Year 2019														Fiscal Year 2020														BALANCE			
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019														Calendar Year 2020														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
2	2018	NAVY	41	0	41				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	38					
2	2018	AF (+)	64	0	64				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	58					
2	2018	FMS (+)	76	0	76				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	70					
2	2018	Total	181	0	181				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	166						
2	2019	NAVY	75	0	75									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75					
2	2019	AF (+)	15	0	15									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15					
2	2019	FMS (+)	34	0	34									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34					
2	2019	Total	124	0	124									-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	124					
2	2020	NAVY	75	0	75																									75					
2	2020	AF (+)	130	0	130																									130					
2	2020	FMS (+)	20	0	20																									20					
2	2020	Total	225	0	225																									225					
2	2022	NAVY	51	0	51																									51					
2	2022	AF (+)	80	0	80																									80					
2	2022	Total	131	0	131																									131					
2	2023	NAVY	48	0	48																									48					
2	2023	AF (+)	80	0	80																									80					
2	2023	FMS (+)	20	0	20																									20					
2	2023	Total	148	0	148																									148					

1.1.3) All Up Round - Block II Plus ⁽³⁾

Prior Years Deliveries: 50																															
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	
3	2018	NAVY	12	0	12																									1	11
3	2018	AF (+)	75	0	75																									7	68
3	2018	FMS (+)	73	0	73																									6	67
3	2018	Total	160	0	160																									14	146
3	2019	NAVY	8	0	8																									8	
3	2019	AF (+)	80	0	80																									80	
3	2019	FMS (+)	153	0	153																									153	
3	2019	Total	241	0	241																									241	
3	2020	NAVY	8	0	8																									8	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2209 / Sidewinder **Item Number / Title [DODIC]:** 1 / SIDEWINDER BLOCK II

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021													Fiscal Year 2022													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round - Block II ⁽¹⁾																																	
Prior Years Deliveries: 679																																	
	1	2018	NAVY	141	12	129	12	12	11	12	11	12	11	12	12	12	12													0			
	1	2018	AF (+)	183	16	167	16	15	15	15	15	15	15	15	15	15	16													0			
	1	2018	FMS (+)	431	36	395	36	36	36	36	36	36	36	35	36	36	36													0			
	1	2018	Total	755	64	691	64	63	62	63	62	63	62	62	63	63	64	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2019	NAVY	235	0	235	-	-	-	-	-	-	-	-	-	-	-	22	22	22	22	21	21	21	21	21	21	21	-	0			
	1	2019	AF (+)	176	0	176	-	-	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16	-	0				
	1	2019	FMS (+)	190	0	190	-	-	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16	16	15	15	0			
	1	2019	Total	601	0	601	-	-	-	-	-	-	-	-	-	-	54	54	54	54	53	53	53	53	53	53	53	52	15	0			
✓	1	2019	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	1												0				
	1	2020	NAVY	227	0	227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	187			
	1	2020	AF (+)	303	0	303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	25	253			
	1	2020	FMS (+)	199	0	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	165			
	1	2020	Total	729	0	729	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62	62	605				
✓	1	2020	NAVY	92	0	92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	76				
	1	2021	NAVY	217	0	217												A -	-	-	-	-	-	-	-	-	-	-	-	217			
	1	2021	AF (+)	187	0	187												A -	-	-	-	-	-	-	-	-	-	-	-	187			
	1	2021	FMS (+)	84	0	84												A -	-	-	-	-	-	-	-	-	-	-	-	84			
	1	2021	Total	488	0	488												-	-	-	-	-	-	-	-	-	-	-	488				
	1	2022	NAVY	93	0	93																					A -	-	-	93			
	1	2022	AF (+)	142	0	142																					A -	-	-	142			
	1	2022	FMS (+)	157	0	157																					A -	-	-	157			
	1	2022	Total	392	0	392																					-	-	-	392			
	1	2023	NAVY	72	0	72																								72			
	1	2023	AF (+)	167	0	167																								167			
	1	2023	FMS (+)	100	0	100																								100			
	1	2023	Total Base	339	0	339																							339				
1.1.2) Captive Air Training Missile - Block II ⁽²⁾																																	
Prior Years Deliveries: 289																																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2209 / Sidewinder **Item Number / Title [DODIC]:** 1 / SIDEWINDER BLOCK II

Cost Elements (Units in Each)					Fiscal Year 2021													Fiscal Year 2022													BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
2	2018	NAVY	41	3	38	3	3	3	4	4	3	3	4	4	4	3	3																	0
2	2018	AF (+)	64	6	58	5	6	5	5	6	5	5	6	5	5	5																	0	
2	2018	FMS (+)	76	6	70	7	6	7	6	6	6	7	6	7	6	6																0		
2	2018	Total	181	15	166	15	15	16	15	15	14	16	16	16	14	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
2	2019	NAVY	75	0	75	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	7	7	7	6	6	-				0		
2	2019	AF (+)	15	0	15	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	2	2	2	2	-				0		
2	2019	FMS (+)	34	0	34	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	2	2				0		
2	2019	Total	124	0	124	-	-	-	-	-	-	-	-	-	-	-	11	11	11	11	11	11	11	12	12	11	10	2	-	-	0			
2	2020	NAVY	75	0	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7		61			
2	2020	AF (+)	130	0	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11		108				
2	2020	FMS (+)	20	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2		16				
2	2020	Total	225	0	225	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20		185				
2	2022	NAVY	51	0	51																										51			
2	2022	AF (+)	80	0	80																										80			
2	2022	Total	131	0	131																										131			
2	2023	NAVY	48	0	48																										48			
2	2023	AF (+)	80	0	80																										80			
2	2023	FMS (+)	20	0	20																										20			
2	2023	Total	148	0	148																										148			
1.1.3) All Up Round - Block II Plus ⁽³⁾																																		
Prior Years Deliveries: 50																																		
3	2018	NAVY	12	1	11	1	1	1	1	1	1	1	1	1	1	1															0			
3	2018	AF (+)	75	7	68	7	7	6	6	6	6	6	6	6	6																0			
3	2018	FMS (+)	73	6	67	6	6	6	6	6	6	6	6	6	6	7															0			
3	2018	Total	160	14	146	14	14	13	13	13	13	13	13	13	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
3	2019	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	1	1	1	1	-					0			
3	2019	AF (+)	80	0	80	-	-	-	-	-	-	-	-	-	-	-	8	8	8	7	7	7	7	7	7	7					0			
3	2019	FMS (+)	153	0	153	-	-	-	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14	14	14	14	13				0			
3	2019	Total	241	0	241	-	-	-	-	-	-	-	-	-	-	-	23	23	22	22	21	22	22	22	22	22	20	-	-		0			
3	2020	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1		6				
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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Cost Elements <i>(Units in Each)</i>				Fiscal Year 2021												Fiscal Year 2022												BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N		J U L	A U G	S E P
	3	2020	AF (+)	11	0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	9	
	3	2020 Total		19	0	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	15		
	3	2021	NAVY	8	0	8								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8		
	3	2021	AF (+)	8	0	8								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8		
	3	2021	FMS (+)	66	0	66								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66		
	3	2021 Total		82	0	82								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82		
	3	2022	NAVY	8	0	8															A	-	-	-	-	-	-	-	8		
	3	2022	AF (+)	8	0	8															A	-	-	-	-	-	-	-	8		
	3	2022	FMS (+)	6	0	6															A	-	-	-	-	-	-	-	6		
	3	2022 Total		22	0	22															-	-	-	-	-	-	-	-	22		
	3	2023	NAVY	8	0	8																							8		
	3	2023	AF (+)	8	0	8																							8		
	3	2023	FMS (+)	56	0	56																							56		
	3	2023 Total		72	0	72																							72		

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2209 / Sidewinder **Item Number / Title [DODIC]:** 1 / SIDEWINDER BLOCK II

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023														Fiscal Year 2024														BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023														Calendar Year 2024														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) All Up Round - Block II ⁽¹⁾																																			
Prior Years Deliveries: 679																																			
	1	2018	NAVY	141	141	0																											0		
	1	2018	AF (‡)	183	183	0																											0		
	1	2018	FMS (‡)	431	431	0																											0		
	1	2018	Total	755	755	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2019	NAVY	235	235	0																											0		
	1	2019	AF (‡)	176	176	0																											0		
	1	2019	FMS (‡)	190	190	0																											0		
	1	2019	Total	601	601	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
✓	1	2019	NAVY	1	1	0																											0		
	1	2020	NAVY	227	40	187	19	19	19	19	19	19	18	18	18																		0		
	1	2020	AF (‡)	303	50	253	26	25	25	25	25	25	26	26	25																		0		
	1	2020	FMS (‡)	199	34	165	17	17	17	17	17	16	16	16	16																		0		
	1	2020	Total	729	124	605	62	61	61	61	61	60	60	60	60	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
✓	1	2020	NAVY	92	16	76	8	8	8	8	8	7	7	7	7																		0		
	1	2021	NAVY	217	0	217	-	-	-	-	-	-	-	-	-	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	0		
	1	2021	AF (‡)	187	0	187	-	-	-	-	-	-	-	-	-	16	16	16	16	16	16	16	16	15	15	15	15	15	15	15	15	15	0		
	1	2021	FMS (‡)	84	0	84	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	0			
	1	2021	Total	488	0	488	-	-	-	-	-	-	-	-	42	41	41	41	41	41	41	41	40	40	40	40	40	40	40	40	0				
	1	2022	NAVY	93	0	93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	77		
	1	2022	AF (‡)	142	0	142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	118			
	1	2022	FMS (‡)	157	0	157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	13	130			
	1	2022	Total	392	0	392	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	33	325				
	1	2023	NAVY	72	0	72																											72		
	1	2023	AF (‡)	167	0	167																											167		
	1	2023	FMS (‡)	100	0	100																											100		
	1	2023	Total Base	339	0	339																											339		
1.1.2) Captive Air Training Missile - Block II ⁽²⁾																																			
Prior Years Deliveries: 289																																			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023														Fiscal Year 2024														BALANCE				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023														Calendar Year 2024																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P								
2	2018	NAVY	41	41	0																																	0
2	2018	AF (+)	64	64	0																																0	
2	2018	FMS (+)	76	76	0																																0	
2	2018	Total	181	181	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
2	2019	NAVY	75	75	0																																0	
2	2019	AF (+)	15	15	0																																0	
2	2019	FMS (+)	34	34	0																																0	
2	2019	Total	124	124	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
2	2020	NAVY	75	14	61	7	6	6	6	6	6	6	6	6																						0		
2	2020	AF (+)	130	22	108	11	11	11	11	11	11	11	10	10																						0		
2	2020	FMS (+)	20	4	16	2	2	2	2	2	1	1	1	1																						0		
2	2020	Total	225	40	185	20	19	19	19	19	18	18	17	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
2	2022	NAVY	51	0	51	-	-	-	-	-	-	-	-	-																						41		
2	2022	AF (+)	80	0	80	-	-	-	-	-	-	-	-	-																						66		
2	2022	Total	131	0	131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	107			
2	2023	NAVY	48	0	48						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48			
2	2023	AF (+)	80	0	80						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80			
2	2023	FMS (+)	20	0	20						A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20			
2	2023	Total	148	0	148						-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	148			

1.1.3) All Up Round - Block II Plus ⁽³⁾

Prior Years Deliveries: 50																																		BALANCE				
3	2018	NAVY	12	12	0																																	0
3	2018	AF (+)	75	75	0																																	0
3	2018	FMS (+)	73	73	0																																0	
3	2018	Total	160	160	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
3	2019	NAVY	8	8	0																																0	
3	2019	AF (+)	80	80	0																																0	
3	2019	FMS (+)	153	153	0																																0	
3	2019	Total	241	241	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
3	2020	NAVY	8	2	6	-	1	1	-	1	1	-	-	1	1																						0	

O C C O	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2209 / Sidewinder **Item Number / Title [DODIC]:** 1 / SIDEWINDER BLOCK II

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025													Fiscal Year 2026													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025													Calendar Year 2026														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
1.1.1) All Up Round - Block II ⁽¹⁾																																		
Prior Years Deliveries: 679																																		
	1	2018	NAVY	141	141	0																												0
	1	2018	AF (‡)	183	183	0																												0
	1	2018	FMS (‡)	431	431	0																												0
	1	2018	Total	755	755	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2019	NAVY	235	235	0																												0
	1	2019	AF (‡)	176	176	0																												0
	1	2019	FMS (‡)	190	190	0																												0
	1	2019	Total	601	601	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
✓	1	2019	NAVY	1	1	0																												0
	1	2020	NAVY	227	227	0																												0
	1	2020	AF (‡)	303	303	0																												0
	1	2020	FMS (‡)	199	199	0																												0
	1	2020	Total	729	729	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
✓	1	2020	NAVY	92	92	0																												0
	1	2021	NAVY	217	217	0																												0
	1	2021	AF (‡)	187	187	0																												0
	1	2021	FMS (‡)	84	84	0																												0
	1	2021	Total	488	488	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2022	NAVY	93	16	77	8	8	8	8	8	8	7	7	7																			0
	1	2022	AF (‡)	142	24	118	12	12	12	12	12	12	12	11	11																			0
	1	2022	FMS (‡)	157	27	130	13	13	13	13	13	13	13	13	13																			0
	1	2022	Total	392	67	325	33	33	33	33	33	33	32	31	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2023	NAVY	72	0	72	-	-	-	-	-	-	-	-	-	7	7	7	6	6	6	6	6	6	5	5	5						0	
	1	2023	AF (‡)	167	0	167	-	-	-	-	-	-	-	-	-	14	14	14	14	14	14	14	14	14	14	13						0		
	1	2023	FMS (‡)	100	0	100	-	-	-	-	-	-	-	-	-	9	9	9	9	8	8	8	8	8	8	8						0		
	1	2023	Total Base	339	0	339	-	-	-	-	-	-	-	-	30	30	30	29	28	28	28	28	28	27	27	26	-	-	-	-	0			
1.1.2) Captive Air Training Missile - Block II ⁽²⁾																																		
Prior Years Deliveries: 289																																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon Missile Systems (14) - Tucson, AZ	300	600	1,400	0	9	13	22	0	6	29	35
2	Raytheon Missile System (15) - Tucson, AZ	300	600	1,400	0	9	16	25	0	6	29	35
3	Raytheon Missile System (16) - Tucson, AZ	300	600	1,400	0	5	19	24	0	6	29	35

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule. "A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

- (14) AUR BLK II
- (15) CATM
- (16) AUR BLK II PLUS

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Modification Number / Title: 1 / Inertial Measurement Unit (IMU) Obsolescence upgrade

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	7.364	7.751	0.000	7.751	6.906	6.124	5.318	12.633	73.009	119.105
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	7.364	7.751	0.000	7.751	6.906	6.124	5.318	12.633	73.009	119.105
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	7.364	7.751	0.000	7.751	6.906	6.124	5.318	12.633	73.009	119.105

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

AIM-9X BLK II is a within/beyond visual range (WVR/BVR), data-linked, infrared (IR) missile used by joint force air campaigns in all-weather, full spherical engagements to kill target sets employing sophisticated electronic attack, modern countermeasures, and advanced stealth technology.

This procurement of AIM-9X-4 Guidance Units (GUs) is to improve reliability and availability of missiles by replacing the obsolete AIM-9X-2 GU through retrofit by attrition. This will increase GU reliability beginning in 2024, with an improvement of up to 44% in the 2027-2037 timeframe. It will also reduce repair Turn Around Time for GU related failures from 270 days to as few as 14 days. By procuring upgraded GUs, it is also projected that 271 missiles will be preserved in the inventory from FY2022 to FY2026 as a result of this upgrade.

The AIM-9X-2 GU accounts for 95% of all missile failures, and this GU uses an obsolete, low-reliability mechanical Inertial Measurement Unit (IMU) that must be replaced in 80% of these failures. The upgraded AIM-9X-4 GU contains a Ring Laser Gyro that is not the same form or fit, which is why the entire GU must be replaced.

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Exhibit P-3a, Individual Modification: PB 2023 Navy										Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2209 / Sidewinder						Modification Number / Title: 1 / Inertial Measurement Unit (IMU) Obsolescence upgrade			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: AIM-9X-2				Modification Type: Reliability				Related RDT&E PEs: 0207161N					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> Inertial Measurement Unit (IMU) Obsolescence upgrade													
A Kits													
Recurring													
1.1.1) Guidance Unit - NonOrganic ⁽¹⁷⁾	- / -	- / -	57 / 7.364	48 / 7.751	- / -	48 / 7.751	42 / 6.906	38 / 6.124	34 / 5.318	80 / 12.633	467 / 73.009	766 / 119.105	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / 7.364	- / 7.751	- / -	- / 7.751	- / 6.906	- / 6.124	- / 5.318	- / 12.633	- / 73.009	- / 119.105	
<i>Subtotal: Inertial Measurement Unit (IMU) Obsolescence upgrade</i>	- / -	- / -	57 / 7.364	48 / 7.751	- / -	48 / 7.751	42 / 6.906	38 / 6.124	34 / 5.318	80 / 12.633	467 / 73.009	766 / 119.105	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / -	- / 7.364	- / 7.751	- / -	- / 7.751	- / 6.906	- / 6.124	- / 5.318	- / 12.633	- / 73.009	- / 119.105	
Installation													
<i>Modification Item 1 of 1:</i> Inertial Measurement Unit (IMU) Obsolescence upgrade													
<i>Subtotal: Installation</i>	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	
Total													
Total Cost (Procurement + Support + Installation)	0.000	0.000	7.364	7.751	0.000	7.751	6.906	6.124	5.318	12.633	73.009	119.105	

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Modification Number / Title: 1 / Inertial Measurement Unit (IMU) Obsolescence upgrade

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: Inertial Measurement Unit (IMU) Obsolescence upgrade

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: TUCSON, AZ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 24

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates		Mar 2022	Mar 2023	Mar 2024	Mar 2025	Mar 2026	Mar 2027
Delivery Dates		Mar 2024	Mar 2025	Mar 2026	Mar 2027	Mar 2028	Mar 2029

Installation Information

Method of Implementation: Depot modification:: Installation Name: Guidance Unit

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	43 / 0.000	14 / 0.000	- / -	- / -	0 / 0.000	57 / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	37 / 0.000	11 / 0.000	- / -	0 / 0.000	48 / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.000	10 / 0.000	0 / 0.000	42 / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	29 / 0.000	9 / 0.000	38 / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.000	34 / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	80 / 0.000	80 / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	467 / 0.000	467 / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	43 / 0.000	51 / 0.000	43 / 0.000	39 / 0.000	590 / 0.000	766 / -

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	14	14	14	13	12	12	11	11	11	10	10	10	10	10	9	590	766
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	14	14	14	13	12	12	11	11	11	10	10	10	10	10	9	590	766

Footnotes:
⁽¹⁷⁾ Installation occurs during missile repair at no additional cost. No additional support costs are required. Increase in unit cost from FY 2022 to FY 2023 is due procurement of lower quantity in FY 2023.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2234 / Standard Missile
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,056	125	125	125	-	125	125	155	195	144	793	2,843
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4,282.282	503.011	598.826	572.040	0.000	572.040	716.059	868.624	1,090.517	916.820	3,132.394	12,680.573
Less PY Advance Procurement (<i>\$ in Millions</i>)	83.789	83.623	83.512	82.917	-	82.917	-	147.994	186.714	-	-	668.549
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,198.493	419.388	515.314	489.123	0.000	489.123	716.059	720.630	903.803	916.820	3,132.394	12,012.024
Plus CY Advance Procurement (<i>\$ in Millions</i>)	221.768	66.716	45.357	-	-	-	206.905	127.803	-	-	-	668.549
Total Obligation Authority (<i>\$ in Millions</i>)	4,420.261	486.104	560.671	489.123	0.000	489.123	922.964	848.433	903.803	916.820	3,132.394	12,680.573

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	4,055.191	4,024.088	4,790.608	4,576.320	-	4,576.320	5,728.472	5,604.026	5,592.395	6,366.806	3,950.055	4,460.279

Description:

The SM-6 Block I/IA/IB provides an extended range engagement capability to provide the air superiority and the umbrella of protection for joint U.S. forces and allies against the full spectrum of manned-fixed and rotary-winged aircraft, unmanned aerial vehicles, and land attack and anti-ship cruise missiles in flight. This capability contributes significantly to the continuous protection of forward deployed ground maneuver forces as well as theater assets.

The SM-6 is the primary extended range air defense weapon for AEGIS cruisers and destroyers and potentially future combatants. SM-6 Block I/IA was approved for a five-year Multiyear Procurement (MYP) beginning in FY2019 and completing in FY2023. Advance Procurement information for this program is provided in exhibit 2234C. FY2023 is the last year of SM-6 BLK I MYP production. NAVSEA is planning to pursue a Multiyear procurement (MYP) beginning in FY 2024. Advanced Procurement information for this program is provided in exhibit 2234C.

Investment for increased production startup begins in FY2022 for the replication of special tooling and test equipment to support a combined SM-6 BLK IA/IB production capacity of 200 per year by FY2026 for SM-6 BLK IA.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2234 / Standard Missile

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 000

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / STANDARD MISSILE	P-5a, P-21			1,056 / 4,282.282	125 / 503.011	125 / 598.826	125 / 572.040	- / 0.000	125 / 572.040
P-40	Total Gross/Weapon System Cost				1,056 / 4,282.282	125 / 503.011	125 / 598.826	125 / 572.040	- / 0.000	125 / 572.040

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2022 enactment includes congressional rescission of \$16.148 million in FY 2021. However, the rescission is not reflected on the P-40. The impact of this rescission is reflected in the cost elements.

SM-6 BLKI/IA: FY2023 provides \$489.123M for SM-6 BLK I/IA including Advance Procurement. Procure 125 SM-6 BIK I and SM-6 Block IA missiles and canisters to support warfighter requirements as well as required support costs such as production engineering, Diminishing Manufacturing Sources (DMS), containers, fleet documentation, and install/checkout equipment. The budget reflects a funding profile for a five-year Multiyear Procurement that began in FY2019 and completes in FY2023. Advance Procurement information for SM-6 BLKI/IA is provided in exhibit 2234C (P10).

FE002 Production Start Up: FY2023 provides a total of \$78.650M to continue the effort for replication of special tooling and test equipment. FY2023 allocates a portion of what is required to increase SM-6 BLK IA/IB production capacity to 200 units per year by FY2026.

FE831 Production Engineering Support: FY2023 FE831 funds contract related engineering services efforts for SM-6 BLK I/IA.

FE958 is container production increase from \$470K to \$480K is required to support SM-6 BLKI/IA Multiyear procurement deliveries by providing shipping containers.

FE851 Diminishing Manufacturing Sources reduces from \$25.576M to 17.920M due to decreased requirement for obsolescence engineering and for finding and procuring replacement parts for items no longer able to procure, including life of type buys and certification of replacement vendors.

FE981 Fleet documentation increase from \$960K to \$979K will cover the incorporation of additional engineering change proposals (ECPs), waivers and deviations.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2		P-1 Line Item Number / Title: 2234 / Standard Missile
		Item Number / Title [DODIC]: 1 / STANDARD MISSILE

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)		1,056	125	125	125	-	125
Gross/Weapon System Cost (\$ in Millions)		4,282.282	503.011	598.826	572.040	0.000	572.040
Less PY Advance Procurement (\$ in Millions)		83.789	83.623	83.512	82.917	-	82.917
Net Procurement (P-1) (\$ in Millions)		4,198.493	419.388	515.314	489.123	0.000	489.123
Plus CY Advance Procurement (\$ in Millions)		221.768	66.716	45.357	-	-	-
Total Obligation Authority (\$ in Millions)		4,420.261	486.104	560.671	489.123	0.000	489.123
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (\$ in Millions)		-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)		4,055.191	4,024.088	4,790.608	4,576.320	-	4,576.320

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware - SM-6 Cost																		
Recurring Cost																		
1.1.1) FE002 SM-6 Block I All Up Round Missile ^(†)	2,773.075	681	1,888.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) FE002 SM-6 Block IA All Up Round Missile	-	-	345.841	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^{(†) (1)}	3,288.979	375	1,233.367	3,271.288	125	408.911	3,270.240	125	408.780	3,257.416	125	407.177	-	-	-	3,257.416	125	407.177
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^{(†) (2)}	242.896	1,056	256.498	281.600	125	35.200	287.232	125	35.904	292.976	125	36.622	-	-	-	292.976	125	36.622
1.1.7) FE002 Production Start Up	-	-	28.102	-	-	-	-	-	104.981	-	-	78.650	-	-	-	-	-	78.650
<i>Subtotal: Recurring Cost</i>	-	-	3,752.272	-	-	444.111	-	-	549.665	-	-	522.449	-	-	-	-	-	522.449
<i>Subtotal: Hardware - SM-6 Cost</i>	-	-	3,752.272	-	-	444.111	-	-	549.665	-	-	522.449	-	-	-	-	-	522.449
Support - SM-6 Cost Cost																		
2.1) FE831 SM-6 BLKI/IA Production Engineering/Support	-	-	276.403	-	-	27.379	-	-	26.976	-	-	28.303	-	-	-	-	-	28.303
2.3) FE851 SM-6 BLKI/IA Component Improvement	-	-	93.930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2234 / Standard Missile						Item Number / Title [DODIC]: 1 / STANDARD MISSILE					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
2.4) FE851 SM-6 BLKI/IA Diminishing Manufacturing Sources (DMS)	-	-	92.072	-	-	12.756	-	-	19.076	-	-	17.920	-	-	-	-	-	17.920
2.5) FE951 SM-6 BLKI/IA Tools and Test Equipment	-	-	13.968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.6) FE958 SM-6 BLKI/IA Containers	-	-	2.287	-	-	0.241	-	-	0.470	-	-	0.480	-	-	-	-	-	0.480
2.7) FE981 SM-6 BLKI/IA ILS/Fleet Documentation	-	-	7.832	-	-	0.697	-	-	0.960	-	-	0.979	-	-	-	-	-	0.979
2.8) FE971 SM-6 BLI/IA Install/Checkout Equip/ Training Material	-	-	42.415	-	-	1.679	-	-	1.679	-	-	1.909	-	-	-	-	-	1.909
<i>Subtotal: Support - SM-6 Cost Cost</i>	-	-	528.907	-	-	42.752	-	-	49.161	-	-	49.591	-	-	-	-	-	49.591
Support - Other Cost																		
3.1) WAXXX Acquisition Workforce Fund - 2009	-	-	1.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2) Enacted Rescissions	-	-	-	-	-	16.148	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Other Cost</i>	-	-	1.103	-	-	16.148	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	4,055.191	1,056	4,282.282	4,024.088	125	503.011	4,790.608	125	598.826	4,576.320	125	572.040	0.000	4,576.320	125	572.040	125	572.040

(t) indicates the presence of a P-5a

Footnotes:

(1) Line 1.1.3 SM-6 Block I/IA All Up Round Missiles provides the blended costs of the Block I and Block IA missiles. The Navy remains committed to procuring the maximum number of SM-6 Block IAs. The SM-6 Block IAs are more technologically advanced than the SM-6 Block I and therefore have higher unit cost. The budget reflects a funding profile for a five-year Multiyear Procurement beginning in FY 2019 and completing in FY 2023. Advance Procurement information is provided in exhibit 2234C.

(2) Canisters are not procured through the prime missile contractor and are not included in the Multiyear Procurement Contract. MK21 Mod 3 Canisters are procured for the SM-6 BLKI and MK 21 Mod 4 canisters are procured for the SM-6 BLKIA missiles.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) FE002 SM-6 Block I All Up Round Missile ^(†)		2017	Raytheon CO / Tucson AZ	SS / FP	NAVSEA	Mar 2017	Sep 2019	125	2,209.528	Y		Jan 2016
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)		2018 ⁽³⁾	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Sep 2018	Sep 2020	117	3,327.504	Y		Jan 2016
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)	✓	2018	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Sep 2018	Mar 2021	8	3,327.504	Y		Jan 2016
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)		2019	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Dec 2019	Jan 2022	125	3,297.352	Y		Oct 2017
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)		2020	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Apr 2020	Nov 2023	125	3,293.688	Y		Oct 2017
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)		2021	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Jun 2021	Nov 2024	125	3,271.288	Y		Oct 2017
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)		2022	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Mar 2022	Nov 2025	125	3,270.240	Y		Oct 2017
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ^(†)		2023	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Mar 2023	Nov 2026	125	3,257.416	Y		Oct 2017
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2017	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2017	May 2018	125	211.672	Y		Feb 2016
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2018	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2018	May 2019	117	216.342	Y		Feb 2016
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)	✓	2018	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2018	May 2019	8	264.500	Y		Feb 2016
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2019	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2019	May 2020	125	267.200	Y		Feb 2018
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2020	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2020	May 2021	125	268.800	Y		Feb 2018
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2021	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Dec 2020	Feb 2022	125	281.600	Y		Feb 2018
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2022	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Dec 2021	Feb 2023	125	287.232	Y		Feb 2018
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)		2023 ⁽⁴⁾	BAE / MINNEAPOLIS, MN	TBD	NAVSEA	May 2023	Jul 2024	125	292.976	N		Feb 2022

^(†) indicates the presence of a P-21

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE

Footnotes:
(3) Lines 1.1.3 AURs Delivery schedule reflects contracted delivery dates.
(4) This is an open competition, system did not allow for TBD in contract and location

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) FE002 SM-6 Block I All Up Round Missile																															
Prior Years Deliveries: 556																															
		1	2017	NAVY	125	0	125																							125	
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ⁽¹⁾																															
		2	2018	NAVY	117 ⁽⁵⁾	0	117																							117	
✓		2	2018	NAVY	8	0	8																							8	
		2	2019	NAVY	125	0	125																							125	
		2	2020	NAVY	125	0	125																							125	
		2	2021	NAVY	125	0	125																							125	
		2	2022	NAVY	125	0	125																							125	
		2	2023	NAVY	125	0	125																							125	
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ⁽²⁾																															
Prior Years Deliveries: 556																															
		3	2017	NAVY	125	0	125																							73	
		3	2018	NAVY	117	0	117																							117	
✓		3	2018	NAVY	8	0	8																							8	
		3	2019	NAVY	125	0	125																							125	
		3	2020	NAVY	125	0	125																							125	
		3	2021	NAVY	125	0	125																							125	
		3	2022	NAVY	125	0	125																							125	
		3	2023	NAVY	125	0	125																							125	
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) FE002 SM-6 Block I All Up Round Missile																																	
Prior Years Deliveries: 556																																	
	1	2017	NAVY	125	0	125	-	-	-	-	-	-	-	-	-	-	6	6	8	9	9	12	16	16	19	1	2	2	6	13			
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ⁽¹⁾																																	
	2	2018	NAVY	117 ⁽⁵⁾	0	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	106			
✓	2	2018	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8			
	2	2019	NAVY	125	0	125																								125			
	2	2020	NAVY	125	0	125																								125			
	2	2021	NAVY	125	0	125																								125			
	2	2022	NAVY	125	0	125																								125			
	2	2023	NAVY	125	0	125																								125			
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ⁽²⁾																																	
Prior Years Deliveries: 556																																	
	3	2017	NAVY	125	52	73	11	11	11	10	10	10	10																	0			
	3	2018	NAVY	117	0	117	-	-	-	-	-	-	-	10	9	9	9	10	10	10	10	10	10	10	10					0			
✓	3	2018	NAVY	8	0	8	-	-	-	-	-	-	-	1	1	2	1	1	2											0			
	3	2019	NAVY	125	0	125																								73			
	3	2020	NAVY	125	0	125																								125			
	3	2021	NAVY	125	0	125																								125			
	3	2022	NAVY	125	0	125																								125			
	3	2023	NAVY	125	0	125																								125			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021														Fiscal Year 2022														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) FE002 SM-6 Block I All Up Round Missile																																			
Prior Years Deliveries: 556																																			
		1	2017	NAVY		125	112	13	6	7																			0						
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ⁽¹⁾																																			
		2	2018	NAVY		117 ⁽⁵⁾	11	106	11	11	14	14	14	10	16	16													0						
✓		2	2018	NAVY		8	0	8	-	-	-	-	-	8															0						
		2	2019	NAVY		125	0	125	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	11	11	10	11	11	31					
		2	2020	NAVY		125	0	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125						
		2	2021	NAVY		125	0	125									A	-	-	-	-	-	-	-	-	-	-	-	125						
		2	2022	NAVY		125	0	125																					125						
		2	2023	NAVY		125	0	125																					125						
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ⁽²⁾																																			
Prior Years Deliveries: 556																																			
		3	2017	NAVY		125	125	0																					0						
		3	2018	NAVY		117	117	0																					0						
✓		3	2018	NAVY		8	8	0																					0						
		3	2019	NAVY		125	52	73	11	11	11	10	10	10	10														0						
		3	2020	NAVY		125	0	125	-	-	-	-	-	-	10	10	10	11	11	11	11	11	10	10	10	10			0						
		3	2021	NAVY		125	0	125																					40						
		3	2022	NAVY		125	0	125																					125						
		3	2023	NAVY		125	0	125																					125						
									O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023														Fiscal Year 2024												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023														Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) FE002 SM-6 Block I All Up Round Missile																																	
Prior Years Deliveries: 556																																	
	1	2017	NAVY	125	125	0																							0				
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ⁽¹⁾																																	
	2	2018	NAVY	117 ⁽⁵⁾	117	0																							0				
✓	2	2018	NAVY	8	8	0																							0				
	2	2019	NAVY	125	94	31	10	10	11																				0				
	2	2020	NAVY	125	0	125	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	11	11	10	10	11	10	11	11				
	2	2021	NAVY	125	0	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125				
	2	2022	NAVY	125	0	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125				
	2	2023	NAVY	125	0	125																							125				
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ⁽²⁾																																	
Prior Years Deliveries: 556																																	
	3	2017	NAVY	125	125	0																							0				
	3	2018	NAVY	117	117	0																							0				
✓	3	2018	NAVY	8	8	0																							0				
	3	2019	NAVY	125	125	0																							0				
	3	2020	NAVY	125	125	0																							0				
	3	2021	NAVY	125	85	40	10	10	10	10																			0				
	3	2022	NAVY	125	0	125	-	-	-	-	10	10	10	11	11	11	11	11	10	10	10	10							0				
	3	2023	NAVY	125	0	125																							95				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
1.1.1) FE002 SM-6 Block I All Up Round Missile																																
Prior Years Deliveries: 556																																
		1	2017	NAVY		125	125																							0		
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ⁽¹⁾																																
		2	2018	NAVY		117 ⁽⁵⁾	117																							0		
✓		2	2018	NAVY		8	8																							0		
		2	2019	NAVY		125	125																							0		
		2	2020	NAVY		125	114	11	11																					0		
		2	2021	NAVY		125	0	125	-	10	10	10	10	11	11	10	10	11	11											0		
		2	2022	NAVY		125	0	125	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	11	11	10	10	11	10	11	11	
		2	2023	NAVY		125	0	125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125		
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ⁽²⁾																																
Prior Years Deliveries: 556																																
		3	2017	NAVY		125	125																							0		
		3	2018	NAVY		117	117																							0		
✓		3	2018	NAVY		8	8																							0		
		3	2019	NAVY		125	125																							0		
		3	2020	NAVY		125	125																							0		
		3	2021	NAVY		125	125																							0		
		3	2022	NAVY		125	125																							0		
		3	2023	NAVY		125	30	95	11	11	11	11	11	10	10	10	10													0		
									O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2027												Fiscal Year 2028												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2026	BAL DUE AS OF 1 OCT	Calendar Year 2027												Calendar Year 2028												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) FE002 SM-6 Block I All Up Round Missile																															
Prior Years Deliveries: 556																															
	1	2017	NAVY	125	125	0																							0		
1.1.3) FE002 SM-6 Block I/IA All Up Round Missile ⁽¹⁾																															
	2	2018	NAVY	117 ⁽⁵⁾	117	0																							0		
✓	2	2018	NAVY	8	8	0																							0		
	2	2019	NAVY	125	125	0																							0		
	2	2020	NAVY	125	125	0																							0		
	2	2021	NAVY	125	125	0																							0		
	2	2022	NAVY	125	114	11	11																						0		
	2	2023	NAVY	125	0	125	-	10	10	10	10	11	11	10	10	11	10	11	11										0		
1.1.5) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ⁽²⁾																															
Prior Years Deliveries: 556																															
	3	2017	NAVY	125	125	0																							0		
	3	2018	NAVY	117	117	0																							0		
✓	3	2018	NAVY	8	8	0																							0		
	3	2019	NAVY	125	125	0																							0		
	3	2020	NAVY	125	125	0																							0		
	3	2021	NAVY	125	125	0																							0		
	3	2022	NAVY	125	125	0																							0		
	3	2023	NAVY	125	125	0																							0		

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2234 / Standard Missile	Item Number / Title [DODIC]: 1 / STANDARD MISSILE
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)									
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder					
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1		
1	Raytheon CO - Tucson AZ	125	125	125	3	3	23	26	3	3	24	27		
2	Raytheon CO - Tucson AZ	125	125	125	3	3	23	26	3	3	34	37		
3	BAE - MINNEAPOLIS, MN	125	125	125	3	8	14	22	3	8	14	22		

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽⁵⁾ All deliveries reflect contractual delivery dates, FY17/18 P0016 and MYP P00004

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2234 / Standard Missile
--	---

Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
---	--

Line Item MDAP/MAIS Code: 000

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	221.768	66.716	45.357	-	-	-	206.905	127.803	-	-	-	668.549
Net Procurement (P-1) (<i>\$ in Millions</i>)	221.768	66.716	45.357	-	-	-	206.905	127.803	-	-	-	668.549
Total Obligation Authority (<i>\$ in Millions</i>)	221.768	66.716	45.357	-	-	-	206.905	127.803	-	-	-	668.549

Description:

The SM-6 provides an extended range engagement capability to provide the air superiority and the umbrella of protection for joint U.S. forces and allies against the full spectrum of manned-fixed and rotary-winged aircraft, unmanned aerial vehicles, and land attack and anti-ship cruise missiles in flight. This capability contributes significantly to the continuous protection of forward deployed ground maneuver forces as well as theater rear assets. The SM-6 is the primary extended range air defense weapon for AEGIS cruisers and destroyers and potentially future combatants.

FY 2023 is the last year of a five year MYP. No AP funds are required.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2234 / Standard Missile
--	---

Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 000

Exhibits Schedule				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	1 / STANDARD MISSILE			1,056 / 221.768	125 / 66.716	125 / 45.357	125 / -	- / -	125 / -
P-40	Total Gross/Weapon System Cost			1,056 / 221.768	125 / 66.716	125 / 45.357	125 / -	- / -	125 / -

*Title represents the P-10 Title for Advance Procurement.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The budget reflects a funding profile for a five-year Multiyear Procurement beginning in FY 2019 and completing in FY 2023. The multiyear procurement contracts provide for the procurement of up to 625 Standard Missile-6 (SM-6) guided missiles. The use of Advanced Procurement provides Economic Order Quantity (EOQ) to reduce the cost of subcontractor effort, material, and components enabling greater production efficiencies and substantial cost savings.

FY23 is the last year of procurement for SM-6 BLK/IA All Up Rounds via the FY19-23 Multiyear Procurement (MYP) approved by National Defense Authorization Act for 2019, Division A, Title I, Section 125. The FY19-23 MYP contract realizes significant five-year savings (\$326M) over single-year procurement for the FY19-23 period. This funding has already been removed from the FYDP. MYP also allows for immediate obligation of funds after allocation without additional negotiation.

Funding covers EOQ in support of the FY 2019-2023 MYP contract. EOQ will fund the procurement of MK72 Booster, MK104 Dual Thrust Rocket Motors (DTRM) and Guidance Sections. Booster is a 26 month lead time due to the unique steel for the case and additional time for mating with a Thrust Vector Actuator (TVA). The DTRM has a 22 month lead time due to the specialty steel required for manufacturing. The guidance section takes 24 months to deliver due to the lead time in the specialty Circuit Card Assemblies.

The budget reflects a funding profile for a proposed Multiyear Procurement beginning FY 2024 for the SM-6 BLK IA AUR procurement. The multiyear procurement contract will provide for the procurement of up to 395 Standard Missile-6 BLK IA guided missiles. The use of Advanced Procurement provides Economic Order Quantity (EOQ) to reduce the cost of subcontractor effort, material, and components enabling greater production efficiencies and substantial cost savings.

SM-6 BLK IB will not be included in this MYP based on the fact that it will be in the LRIP phase.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2023 Navy					Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2			P-1 Line Item Number / Title: 2234 / Standard Missile			P-5 Number / Title: 1 / STANDARD MISSILE	
First System (2023) Award Date: January 2013		First System (2023) Completion Date: January 2013			Interval Between Systems: 0 Months		
STANDARD MISSILE		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2021 <i>(Each)</i>	FY 2022 <i>(Each)</i>	FY 2023 <i>(Each)</i>	
Quantity			1,056	125	125	125	
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>	FY 2022 <i>(\$ M)</i>	FY 2023 <i>(\$ M)</i>	
CFE							
FY20 EOQ		0	83.789	-	-	-	
FY21 EOQ		0	83.623	-	-	-	
FY22 EOQ		0	37.648	45.861	-	-	
FY23 EOQ		0	16.708	20.855	45.357	-	
<i>Total: CFE</i>			221.768	66.716	45.357	0.000	
Total Advance Procurement/Obligation Authority			221.768	66.716	45.357	-	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2023 Navy						Date: April 2022	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2			P-1 Line Item Number / Title: 2234 / Standard Missile			P-5 Number / Title: 1 / STANDARD MISSILE	
FY 2023							
Cost Elements	QPA (Each)	Production Leadtime (Months)	Unit Cost (\$ K)	Contract Forecast Date	2023 Qty (Each)	For FY	Total Cost Request (\$ M)
CFE							
FY20 EOQ	0						-
FY21 EOQ	0						-
FY22 EOQ	0						-
FY23 EOQ	0						-
<i>Total: CFE</i>							<i>0.000</i>
Total Advance Procurement/Obligation Authority							-

Description:
The Advance Procurement (AP) funding provides Economic Order Quantity (EOQ) to reduce the cost of subcontractor effort, material, and components enabling greater production efficiencies and substantial cost.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2236 / JASSM
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204162N	Other Related Program Elements: 0604786N, 0204167N
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	31	-	31	58	52	52	51	-	244
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	58.481	0.000	58.481	109.149	97.071	97.351	98.449	-	460.501
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	58.481	0.000	58.481	109.149	97.071	97.351	98.449	-	460.501
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	58.481	0.000	58.481	109.149	97.071	97.351	98.449	-	460.501

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	1,886K	-	1,886K	1,882K	1,867K	1,872K	1,930K	-	1,887K

Description:

U.S. Navy will procure an AGM-158C derived capability to enhance long range strike and existing OASuW capability.

The USN JASSM procurement line leverages USAF JASSM-ER and USN LRASM investments to procure a Navy AGM-158C variant. Minimal non-recurring engineering, primarily involving adapting strike software, mission planning software development and platform integration, is funded in PE 0604786N OASuW Development PU 3466. The hardware baseline is fully mature using all qualified and fielded components from the LRASM (AGM-158C family) production line.

The software activity funded in RDT&E,N will leverage the LRASM 1.1 software baseline, and focus on combining the C++ software, JASSM-ER range and strike capability, Beyond Line of Sight Weapons Data Link, advanced survivability, and LRASM OASuW capabilities into a Navy AGM-158C-3 baseline. Future efforts will expand both Navy strike and OASuW capabilities within this program.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles **P-1 Line Item Number / Title:** 2236 / JASSM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204162N **Other Related Program Elements:** 0604786N, 0204167N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>
P-5	1 / JASSM	P-5a, P-21			- / 0.000	- / 0.000	- / 0.000	31 / 58.481	- / 0.000	31 / 58.481
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	- / 0.000	31 / 58.481	- / 0.000	31 / 58.481

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2023 funding procures 31 Navy AGM-158C-3 missiles and associated production support. FY 2023 and out reflects the latest cost estimate for the procurement of an AGM-158 variant that provides the C++ software, Beyond Line of Sight Weapons Data Link, advanced survivability, and the JASSM-ER range and strike capability.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2236 / JASSM	Item Number / Title [DODIC]: 1 / JASSM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	31	-	31
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	0.000	58.481	0.000	58.481
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	0.000	58.481	0.000	58.481
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	0.000	58.481	0.000	58.481

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	1,886K	-	1,886K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - AGM-158 Cost																		
Recurring Cost																		
1.1.1) AGM-158 AUR ⁽¹⁾	-	-	-	-	-	-	-	-	-	1,750K	31	54.250	-	-	-	1,750K	31	54.250
1.1.2) Contractor ECO	-	-	-	-	-	-	-	-	-	-	-	1.232	-	-	-	-	-	1.232
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	55.482	-	-	-	-	-	55.482
<i>Subtotal: Hardware - AGM-158 Cost</i>	-	-	-	-	-	-	-	-	-	-	-	55.482	-	-	-	-	-	55.482
Hardware - Nonrecurring and Ancillary Equip Cost																		
Non Recurring Cost																		
2.1.1) NRE / Obsolescence ⁽²⁾	-	-	-	-	-	-	-	-	-	-	-	0.980	-	-	-	-	-	0.980
2.1.2) Tooling/ Production Facilitization ⁽³⁾	-	-	-	-	-	-	-	-	-	-	-	0.860	-	-	-	-	-	0.860
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.840	-	-	-	-	-	1.840
<i>Subtotal: Hardware - Nonrecurring and Ancillary Equip Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.840	-	-	-	-	-	1.840
Support Cost																		
3.1) Production Support ⁽⁴⁾	-	-	-	-	-	-	-	-	-	-	-	1.159	-	-	-	-	-	1.159
<i>Subtotal: Support Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.159	-	-	-	-	-	1.159

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2236 / JASSM						Item Number / Title [DODIC]: 1 / JASSM					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	0.000	-	-	0.000	-	-	0.000	1,886K	31	58.481	-	-	0.000	1,886K	31	58.481

(t) indicates the presence of a P-5a

Footnotes:

- (1) The Navy anticipates awarding 31 Navy AGM-158C-3 AURs in FY 2023. The unit cost reflects the latest cost estimate for the procurement of an AGM-158C variant that provides the C++ software, Beyond Line of Sight Weapons Data Link, advanced survivability, and the JASSM-ER range and strike capability.
- (2) NRE/Obsolescence will be used to provide prime contractor engineering to address emerging, Navy specific production issues and manage obsolescence through studies, bridge buys, life of type buys, supplier/parts replacement which include electronic components used commercially and qualification activities to preserve future production capabilities and capacity.
- (3) Tooling/Production Facilitization supports the tooling and test equipment required to support the AGM-158 production line quantities in FY23 and out. Funding also supports production capacity improvements.
- (4) Production support includes production engineering and standup of training and sustainment programs.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2236 / JASSM	Item Number / Title [DODIC]: 1 / JASSM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) AGM-158 AUR ^(†)		2023	Lockheed Martin Missiles and Fire Control / Troy, AL	SS / FPIF	Eglin AFB	Mar 2023	Aug 2025	31	1,750K	Y		Jul 2022

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2236 / JASSM	Item Number / Title [DODIC]: 1 / JASSM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023													Fiscal Year 2024													B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 2 2	BAL D U E A S O F 1 O C T	Calendar Year 2023													Calendar Year 2024													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) AGM-158 AUR ⁽¹⁾																																	
1	2023	NAVY		31	0	31																								31			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2236 / JASSM	Item Number / Title [DODIC]: 1 / JASSM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
1.1.1) AGM-158 AUR ⁽¹⁾																																
1	2023	NAVY		31	0	31	-	-	-	-	-	-	-	-	-	2	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	0
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2236 / JASSM	Item Number / Title [DODIC]: 1 / JASSM
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin Missiles and Fire Control - Troy, AL	40	210	210	0	6	29	35	0	6	29	35

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0204162N	Other Related Program Elements: 0604329N
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Line Item MDAP/MAIS Code: 439

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	1,301	248	164	481	-	481	487	389	394	389	1,147	5,000
Gross/Weapon System Cost <i>(\$ in Millions)</i>	220.690	57.755	33.764	108.317	0.000	108.317	102.635	89.364	91.847	92.496	263.371	1,060.239
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	220.690	57.755	33.764	108.317	0.000	108.317	102.635	89.364	91.847	92.496	263.371	1,060.239
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	220.690	57.755	33.764	108.317	0.000	108.317	102.635	89.364	91.847	92.496	263.371	1,060.239

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Dollars)</i>	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	169,631.05	232,883.06	205,878.05	225,191.27	-	225,191.27	210,749.49	229,727.51	233,114.21	237,778.92	229,617.26	212,047.80

Description:

Small Diameter Bomb Increment II (SDB II) is an ACAT 1C program providing the warfighter a capability to attack mobile targets in all weather. The Air Force (USAF) is the lead service. The SDB II increases joint lethality in contested environments. The SDB can strike a diverse set of targets inside an adversary's air and missile defense networks to destroy mobile platforms through the weather. With increased loadout, range, and munitions effect the network enabled SDBII enhances close combat lethality in complex terrain.

Threshold aircraft is the F-15E for the USAF and F-35B and F-35C for the Department of Navy (DON). Objective aircraft include the F/A-22, B-1, B2, F-117, F-16, B-52, Predator B, F/A-18 E/F. Milestone C was achieved June 2015.

The Acquisition Decision Memorandum was signed 4 June 2015. Lots 1 through 3 are Air Force only procurements; Lot 1 awarded 12 June 2015. SDB II will be integrated on F-35B and F-35C using BRU-61 (due to the cancellation of the Joint Miniature Munitions Bomb Rack contract), and on F/A-18 E/F using BRU-55. The F/A-18 E/F Initial Operational Capability (IOC) is planned for FY 2023; F-35 IOC is planned for FY 2025. The total planned SDB II procurement is 26,610 weapons; 21,610 for the AF and 5,000 for the DoN.

Funds may be used to resolve production DMS/MS/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement and qualification activities to preserve future production capabilities and capacities.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2238 / Small Diameter Bomb II (SDB II)

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0204162N **Other Related Program Elements:** 0604329N

Line Item MDAP/MAIS Code: 439

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Small Diameter Bomb II (SDB II)	P-5a, P-21			1,301 / 220.690	248 / 57.755	164 / 33.764	481 / 108.317	- / 0.000	481 / 108.317
P-40	Total Gross/Weapon System Cost				1,301 / 220.690	248 / 57.755	164 / 33.764	481 / 108.317	- / 0.000	481 / 108.317

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2023 funding continues procurement of SDB II All Up Rounds (AUR) to support warfighter requirements as well as containers, Government In-house (GIH) production support, software updates, and integrated logistics support.

Current contract for Production Lots/Service includes the following:

- FY 2015 Lot 1 - USAF (144)
- FY 2016 Lot 2 - USAF (250)
- FY 2017 Lot 3 - USAF (312)
- FY 2018 Lot 4 - USAF (660) / DoN (90)
- FY 2019 Lot 5 - USAF (1,260) / DoN (750)
- FY 2020 Lot 6 - USAF (747) / DoN (461)
- FY 2021 Lot 7 - USAF (674) / DoN (248)
- FY 2022 Lot 8 - USAF (976) / DoN (164)

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2		P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)
		Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	1,301	248	164	481	-	481
Gross/Weapon System Cost (\$ in Millions)	220.690	57.755	33.764	108.317	0.000	108.317
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	220.690	57.755	33.764	108.317	0.000	108.317
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	220.690	57.755	33.764	108.317	0.000	108.317

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	169,631.05	232,883.06	205,878.05	225,191.27	-	225,191.27

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - SDBII Cost																		
Recurring Cost																		
1.1.1) All Up Round (AUR) ^(†) (1)	141,023.06	1,301	183.471	199,000.00	248	49.352	183,803.00	164	30.144	208,099.79	481	100.096	-	-	-	208,099.79	481	100.096
Subtotal: Recurring Cost	-	-	183.471	-	-	49.352	-	-	30.144	-	-	100.096	-	-	-	-	-	100.096
Subtotal: Hardware - SDBII Cost	-	-	183.471	-	-	49.352	-	-	30.144	-	-	100.096	-	-	-	-	-	100.096
Hardware - Nonrecurring and Ancillary Equip Cost																		
Non Recurring Cost																		
2.1.1) Containers ⁽²⁾	-	-	5.847	-	-	1.324	-	-	0.910	-	-	2.657	-	-	-	-	-	2.657
Subtotal: Non Recurring Cost	-	-	5.847	-	-	1.324	-	-	0.910	-	-	2.657	-	-	-	-	-	2.657
Subtotal: Hardware - Nonrecurring and Ancillary Equip Cost	-	-	5.847	-	-	1.324	-	-	0.910	-	-	2.657	-	-	-	-	-	2.657
Support - Production Support Cost																		
3.1) Telemetry Instrumentation Kits ⁽³⁾	-	-	3.551	-	-	1.592	-	-	-	-	-	1.490	-	-	-	-	-	1.490
3.2) GIH Production Support ⁽⁴⁾	-	-	4.361	-	-	2.459	-	-	1.345	-	-	1.815	-	-	-	-	-	1.815
3.3) Software Updates ⁽⁵⁾	-	-	3.244	-	-	1.844	-	-	0.758	-	-	1.028	-	-	-	-	-	1.028
Subtotal: Support - Production Support Cost	-	-	11.156	-	-	5.895	-	-	2.103	-	-	4.333	-	-	-	-	-	4.333
Support - Fleet Support Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)	Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.1) Weapon Load Crew Trainers (WLCT)	-	-	2.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) Practical EOD Systems Trainers (PESTs)	-	-	0.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) Integrated Logistics Support (ILS) ⁽⁶⁾	-	-	4.452	-	-	1.184	-	-	0.607	-	-	1.231	-	-	-	-	-	1.231
4.4) Peculiar Support Equipment	-	-	12.302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Fleet Support Cost</i>	-	-	20.216	-	-	1.184	-	-	0.607	-	-	1.231	-	-	-	-	-	1.231
Gross/Weapon System Cost	169,631.05	1,301	220.690	232,883.06	248	57.755	205,878.05	164	33.764	225,191.27	481	108.317	-	-	0.000	225,191.27	481	108.317

(t) indicates the presence of a P-5a

Footnotes:

- (1) Changes in unit cost from FY 2022 to FY 2023 are a result of new contract award in FY 2023. FY 2022 is an option year to FY 2020 contract. The SDBII unit cost increases more than inflation from FY 2022 to FY 2023 and shows no decrease for increased quantity due to the introduction of the M-Code chips in FY 2023. FY 2023 and outyears unit cost are from the USAF Program Office Estimate. In FY 2022, in order to meet Minimum Sustaining Rate (MSR), quantity of 164 was procured. If quantities were reduced below 164, MSR would not have been met, driving increased unit cost and increased overall costs to both the Department of the Navy and Air Force.
- (2) Cost Element 2.1.1 (Containers) The Department of the Navy is buying two-place containers. One container is required for every two SDB II weapons and every two Weapon Load Crew Trainers.
- (3) Telemetry Instrumentation Kits (TIK) are required for annual Fleet training using Non-Combat Expenditure Allowance (NCEA) assets. FY 2022 TIK was reduced in order to meet the MSR for the All Up Round procurements. Increase from FY 2022 to FY 2023 reflects TIK required for annual Fleet training using NCEA assets.
- (4) Cost Element 3.1 Government In-House (GIH) Production support is government labor in support of the production of the All Up Round to include engineering and logistics. FY 2022 to FY 2023 increases more than inflation to support the large increase in production quantities from FY 2022 to FY 2023.
- (5) FY 2022 to FY 2023 increases more than inflation to support the large increase in production quantities from FY 2022 to FY 2023.
- (6) SDB II utilizes Interim Contractor Support (ICS) strategy to sustain SDB II systems prior to Material Support Date (MSD) in accordance with Financial Management Regulations. ICS is funded within procurement appropriation prior to MSD, which is scheduled Apr 2023. ICS includes logistics support for existing and newly procured SDB II systems and funds prime contractor logistics support, field service representative, repair of repairables, and mobile training teams. FY 2022 to FY 2023 increases more than inflation to support the large increase in production quantities from FY 2022 to FY 2023.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)	Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) All Up Round (AUR) ^(†)		2018 ⁽⁷⁾	Raytheon CO / Tucson AZ	C / FPIF	Eglin AFB, FL	Jan 2018	Nov 2020	90	114,455.56	Y		
1.1.1) All Up Round (AUR) ^(†)		2019 ⁽⁸⁾	Raytheon CO / Tucson AZ	C / FPIF	Eglin AFB, FL	Jan 2019	Feb 2021	750	103,038.67	Y		
1.1.1) All Up Round (AUR) ^(†)		2020 ⁽⁹⁾	Raytheon CO / Tucson AZ	C / FPIF	Eglin AFB, FL	Oct 2020	Apr 2022	461	198,944.00	Y		
1.1.1) All Up Round (AUR) ^(†)		2021 ⁽¹⁰⁾	Raytheon CO / Tucson AZ	C / FPIF	Eglin AFB, FL	Apr 2021	Oct 2022	248	199,000.00	Y		
1.1.1) All Up Round (AUR) ^(†)		2022 ⁽¹¹⁾	Raytheon CO / Tucson AZ	C / TBD	Eglin AFB, FL	Dec 2021	Jun 2023	164	183,803.00	Y		
1.1.1) All Up Round (AUR) ^(†)		2023 ⁽¹²⁾	Raytheon CO / Tucson AZ	C / TBD	Eglin AFB, FL	Jan 2023	Jul 2024	481	208,099.79	Y		

^(†) indicates the presence of a P-21

Footnotes:

- ⁽⁷⁾ Raytheon Missiles and Defense, Tucson, AZ is the prime contractor for this effort. FY 2018 is Lot 4; Lots 1-3 are Air Force only procurements. USAF Lot procurements delivered prior to Navy Lot deliveries.
- ⁽⁸⁾ Raytheon Missiles and Defense, Tucson, AZ is the prime contractor for this effort. FY 2019 is Lot 5; Lots 1-3 are Air Force only procurements. USAF Lot procurements delivered prior to Navy Lot deliveries.
- ⁽⁹⁾ Raytheon Missiles and Defense, Tucson, AZ is the prime contractor for this effort. FY 2020 is Lot 6; Lots 1-3 are Air Force only procurements.
- ⁽¹⁰⁾ Raytheon Missiles and Defense, Tucson, AZ is the prime contractor for this effort. FY 2021 is Lot 7; Lots 1-3 are Air Force only procurements.
- ⁽¹¹⁾ Raytheon Missiles and Defense, Tucson, AZ is the prime contractor for this effort. FY 2022 is Lot 8; Lots 1-3 are Air Force only procurements.
- ⁽¹²⁾ Raytheon Missiles and Defense, Tucson, AZ is the prime contractor for this effort. FY 2023 is Lot 9; Lots 1-3 are Air Force only procurements.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)	Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
	1	2018	NAVY	90 ⁽¹³⁾	0	90					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90					
	1	2018	AF ^(†)	570	0	570					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	570						
	1	2018	Total	660	0	660					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	660						
	1	2019	NAVY	750 ⁽¹⁴⁾	0	750															A -	-	-	-	-	-	750						
	1	2019	AF ^(†)	510	0	510															A -	-	-	-	-	-	510						
	1	2019	Total	1,260	0	1,260															-	-	-	-	-	-	1,260						
	1	2020	NAVY	461	0	461																					461						
	1	2020	AF ^(†)	747	0	747																					747						
	1	2020	Total	1,208	0	1,208																					1,208						
	1	2021	NAVY	248	0	248																					248						
	1	2021	AF ^(†)	743	0	743																					743						
	1	2021	Total	991	0	991																					991						
	1	2022	NAVY	164	0	164																					164						
	1	2022	AF ^(†)	976	0	976																					976						
	1	2022	Total	1,140	0	1,140																					1,140						
	1	2023	NAVY	481	0	481																					481						
	1	2023	AF ^(†)	761	0	761																					761						
	1	2023	Total	1,242	0	1,242																					1,242						

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2238 / Small Diameter Bomb II (SDB II) **Item Number / Title [DODIC]:** 1 / Small Diameter Bomb II (SDB II)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020													Fiscal Year 2021													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
1	2018	NAVY	90 ⁽¹³⁾	0	90	-	-	-	-	-	-	-	-	-	-	-	-	-	90	-	-	-	-	-	-	-	-	-	0				
1	2018	AF ^(†)	570	0	570	-	-	-	-	-	-	-	-	-	-	-	-	-	47	47	47	47	47	47	48	48	48	48	48				
1	2018	Total	660	0	660	-	-	-	-	-	-	-	-	-	-	-	-	-	137	47	47	47	47	47	48	48	48	48	48				
1	2019	NAVY	750 ⁽¹⁴⁾	0	750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	72	72	72	72	72	72	82	164			
1	2019	AF ^(†)	510	0	510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42	42	42	42	42	42	43	43	172			
1	2019	Total	1,260	0	1,260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114	114	114	114	114	114	115	125	336			
1	2020	NAVY	461	0	461														A -	-	-	-	-	-	-	-	-	-	-	461			
1	2020	AF ^(†)	747	0	747														A -	-	-	-	-	-	-	-	-	-	-	747			
1	2020	Total	1,208	0	1,208														-	-	-	-	-	-	-	-	-	-	-	1,208			
1	2021	NAVY	248	0	248																									248			
1	2021	AF ^(†)	743	0	743																									743			
1	2021	Total	991	0	991																									991			
1	2022	NAVY	164	0	164																									164			
1	2022	AF ^(†)	976	0	976																									976			
1	2022	Total	1,140	0	1,140																									1,140			
1	2023	NAVY	481	0	481																									481			
1	2023	AF ^(†)	761	0	761																									761			
1	2023	Total	1,242	0	1,242																									1,242			
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2238 / Small Diameter Bomb II (SDB II) **Item Number / Title [DODIC]:** 1 / Small Diameter Bomb II (SDB II)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022														Fiscal Year 2023												BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
1	2018	NAVY	90 ⁽¹³⁾	90	0	-																						0					
1	2018	AF ^(†)	570	522	48	48																						0					
1	2018	Total	660	612	48	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2019	NAVY	750 ⁽¹⁴⁾	586	164	82	82	-	-																			0					
1	2019	AF ^(†)	510	338	172	43	43	43	43																			0					
1	2019	Total	1,260	924	336	125	125	43	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2020	NAVY	461	0	461	-	-	-	-	-	-	40	38	38	38	38	38	38	38	38	38	39	40					0					
1	2020	AF ^(†)	747	0	747	-	-	-	-	-	-	62	62	62	62	62	62	62	62	62	63	63	63				0						
1	2020	Total	1,208	0	1,208	-	-	-	-	-	-	102	100	100	100	100	100	100	100	101	102	103	-	-	-	-	0						
1	2021	NAVY	248	0	248	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20	20	0					
1	2021	AF ^(†)	743	0	743	-	-	-	-	-	-	-	-	-	-	-	61	61	62	62	62	62	62	62	62	62	63	0					
1	2021	Total	991	0	991	-	-	-	-	-	-	-	-	-	-	-	81	81	82	82	82	82	82	82	82	84	85	0					
1	2022	NAVY	164	0	164			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	13	13	112					
1	2022	AF ^(†)	976	0	976			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82	81	81	81	651					
1	2022	Total	1,140	0	1,140			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95	94	94	94	763					
1	2023	NAVY	481	0	481																A -	-	-	-	-	-	-	481					
1	2023	AF ^(†)	761	0	761																A -	-	-	-	-	-	-	761					
1	2023	Total	1,242	0	1,242																-	-	-	-	-	-	-	1,242					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2238 / Small Diameter Bomb II (SDB II) **Item Number / Title [DODIC]:** 1 / Small Diameter Bomb II (SDB II)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024													Fiscal Year 2025													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024													Calendar Year 2025													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
	1	2018	NAVY	90 ⁽¹³⁾	90	0																						0					
	1	2018	AF ^(†)	570	570	0																						0					
	1	2018	Total	660	660	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2019	NAVY	750 ⁽¹⁴⁾	750	0																						0					
	1	2019	AF ^(†)	510	510	0																						0					
	1	2019	Total	1,260	1,260	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2020	NAVY	461	461	0																						0					
	1	2020	AF ^(†)	747	747	0																						0					
	1	2020	Total	1,208	1,208	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2021	NAVY	248	248	0																						0					
	1	2021	AF ^(†)	743	743	0																						0					
	1	2021	Total	991	991	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2022	NAVY	164	52	112	14	14	14	14	14	14	14															0					
	1	2022	AF ^(†)	976	325	651	81	81	81	81	81	82	82															0					
	1	2022	Total	1,140	377	763	95	95	95	95	95	96	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2023	NAVY	481	0	481	-	-	-	-	-	-	-	-	40	40	40	40	40	40	40	40	40	40	41			0					
	1	2023	AF ^(†)	761	0	761	-	-	-	-	-	-	-	-	64	64	64	64	64	63	63	63	63	63	63			0					
	1	2023	Total	1,242	0	1,242	-	-	-	-	-	-	-	-	104	104	104	104	104	103	103	103	103	103	104	-	-	0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)	Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon CO - Tucson AZ	1,140	1,925	2,119	0	4	18	22	0	4	18	22

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽¹³⁾ USAF Lot procurements delivered prior to Navy Lot deliveries.

⁽¹⁴⁾ USAF Lot procurements delivered prior to Navy Lot deliveries.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	2,033	100	70	100	-	100	120	120	120	120	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,537.289	90.533	73.015	92.131	0.000	92.131	114.639	117.251	120.277	121.506	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,537.289	90.533	73.015	92.131	0.000	92.131	114.639	117.251	120.277	121.506	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,537.289	90.533	73.015	92.131	0.000	92.131	114.639	117.251	120.277	121.506	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	756,167.73	905,330.00	1,043K	921,310.00	-	921,310.00	955,325.00	977,091.67	1,002K	1,013K	Continuing	Continuing

Description:

Description:
Rolling Airframe Missile (RAM) is a high fire-power missile system used to defeat Anti-Ship Cruise Missiles (ASCMs), as well as other airborne threats. RAM is a surface-to-air missile with passive dual-mode radio frequency/infrared (RF/IR) guidance and an active-optical proximity and contact fuse. RAM has minimal shipboard control systems and is autonomous after launch. The RAM Block 1 incorporated "all-the-way-homing" to improve performance against evolving passive and active ASCMs. The RAM Block 2 provides increased kinematic capability against highly maneuvering threats and improved RF detection against low probability of intercept threats. The RAM missile is fired from a RAM Guided Missile Launching System (GMLS) (MK-49), which holds 21 RAM rounds. RAM is also fired from the Close-In Weapon System (CIWS) SeaRAM Anti-Ship Missile Defense System (MK-15 MOD 31-33) which holds 11 rounds.

COOPERATIVE AGREEMENTS:

RAM is a cooperative program with the Federal Republic of Germany. The U.S. and Federal Republic of Germany cooperatively produce Block 2 missiles, launchers, and Ordnance Alterations (ORDALTs). The Block 2 production Memorandum of Understanding (MOU) was signed on 19 March 2013. Amendment 1 to the Block 2 Memorandum of Understanding (MOU) was signed 30 July 2019.

[P5 / EF008 BLK 2 GMRP ORDALTS]: Block 2 GMRP ORDALTs utilize common components from decommissioned Block 1A missiles. Deliveries have the same capabilities as new build Block 2. ORDALTs are bought to budget.

[P5 / EF850 Component Improvement/DMS]: Provides RAM Design Agent engineering and technical support for component replacement and improvement. The RAM Guided Missile Round Pack (GMRP) is a build to print missile that includes commercial-off-the-shelf hardware. Support includes the development/review/approval/verification of production engineering change proposals and obsolescence mitigation efforts. This support is required to ensure

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles		P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
that the build to print package continues to support the system performance specs as production matures. Funding also supports procurement of key components via Life of Type buys.		
[P5 / EF957 Containers]: Procures containers for transporting the GMRP and GMRP ORDALTS.		
[P5 / EF830 Production Support]: Provides contractor and government in-house critical engineering and technical support of the production line and production test equipment. Efforts include the technical investigation and resolution of production issues, control and maintenance of the technical data package, resolution of test equipment issues, configuration management, reliability assessments, and safety. Production support is an annual requirement which supports all on-going production.		
[P5 / EF860 Product Acceptance]: Funds field activity product acceptance efforts.		
[P5 / EF974 ILS]: Funds Integrated Logistics Support (ILS) efforts in support of production.		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Rolling Airframe Missile (RAM)	P-5a, P-21			2,033 / 1,537.289	100 / 90.533	70 / 73.015	100 / 92.131	- / 0.000	100 / 92.131
P-40	Total Gross/Weapon System Cost				2,033 / 1,537.289	100 / 90.533	70 / 73.015	100 / 92.131	- / 0.000	100 / 92.131

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 In FY 2023, the program plans to procure 100 RAM missiles and 3 Block 1 to Block 2 ORDALTs.

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (<i>Units in Each</i>)	2,033	100	70	100	-	100
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,537.289	90.533	73.015	92.131	0.000	92.131
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,537.289	90.533	73.015	92.131	0.000	92.131
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,537.289	90.533	73.015	92.131	0.000	92.131

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	756,167.73	905,330.00	1,043K	921,310.00	-	921,310.00

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - EF001 Block 1 Missile Cost																		
Recurring Cost																		
1.1.1) EF001 G&C	406,217.21	1,197	486.242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) EF001 Propulsion	14,114.29	140	1.976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) EF001 Safe and Arm Device	3,407.14	140	0.477	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.4) EF001 Ordnance Pack	26,600.00	140	3.724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) EF001 Warhead	11,221.43	140	1.571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.6) EF001 Canisters	46,371.43	140	6.492	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.7) EF001 Block 1 GMRP ORDALTS	216,706.67	450	97.518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	598.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF001 Block 1 Missile Cost</i>	-	-	598.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF002 Propulsion Cost																		
Recurring Cost																		
2.1.1) EF002 Propulsion	-	-	12.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	12.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF002 Propulsion Cost</i>	-	-	12.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF004 Safe and Arm Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)						Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Recurring Cost																		
3.1.1) EF004 Safe & Arm Device	-	-	2.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	2.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF004 Safe and Arm Cost</i>	-	-	2.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF005 Ordnance Pack Cost																		
Recurring Cost																		
4.1.1) EF005 Ordnance Pack	-	-	28.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	28.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF005 Ordnance Pack Cost</i>	-	-	28.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF006 Warhead Cost																		
Recurring Cost																		
5.1.1) EF006 Warhead	-	-	7.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	7.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF006 Warhead Cost</i>	-	-	7.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF007 Canister Cost																		
Recurring Cost																		
6.1.1) EF007 Canister	-	-	32.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	32.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF007 Canister Cost</i>	-	-	32.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF008 Block 2 Missile Cost																		
Recurring Cost																		
7.1.1) EF008 G&C ^(†)	535,155.50	836	447.390	547,214.39	100	54.721	651,285.71	70	45.590	597,990.00	100	59.799	-	-	-	597,990.00	100	59.799
7.1.2) EF008 Propulsion ^(†)	73,440.19	836	61.396	76,953.59	100	7.695	89,728.57	70	6.281	83,120.00	100	8.312	-	-	-	83,120.00	100	8.312
7.1.3) EF008 Safe and Arm Device ^(†)	8,583.63	831	7.133	6,215.00	100	0.622	7,209.00	70	0.505	6,750.00	100	0.675	-	-	-	6,750.00	100	0.675
7.1.4) EF008 Ordnance Pack ^(†)	49,320.68	711	35.067	48,992.00	100	4.899	56,971.43	70	3.988	52,960.00	100	5.296	-	-	-	52,960.00	100	5.296
7.1.5) EF008 Warhead ^{(†) (1)}	22,429.63	675	15.140	23,182.09	100	2.318	26,891.00	70	1.882	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
7.1.6) EF008 Canister ^(†)	51,503.59	836	43.057	55,183.88	100	5.518	64,012.28	70	4.481	59,860.00	100	5.986	-	-	-	59,860.00	100	5.986
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)	593,956.52	46	27.322	584,602.71	7	4.092	667,000.00	1	0.667	626,000.00	3	1.878	-	-	-	626,000.00	3	1.878
7.1.8) EF008 Telemeters ^(†)	32,618.56	97	3.164	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.1.9) EF008 Transportation	-	-	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>639.684</i>	-	-	<i>79.865</i>	-	-	<i>63.394</i>	-	-	<i>81.946</i>	-	-	-	-	-	<i>81.946</i>
Non Recurring Cost																		
7.2.1) EF008 BLK 2B HUM ^(†)	2,258K	1	2.258	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	<i>2.258</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - EF008 Block 2 Missile Cost</i>	-	-	<i>641.942</i>	-	-	<i>79.865</i>	-	-	<i>63.394</i>	-	-	<i>81.946</i>	-	-	-	-	-	<i>81.946</i>
Hardware - EF850 Component Improvement/DMS Cost																		
Recurring Cost																		
8.1.1) EF850 Component Improvement	-	-	74.941	-	-	1.279	-	-	1.305	-	-	1.388	-	-	-	-	-	1.388
8.1.2) EF850 Diminishing Manufacturing Sources ⁽²⁾	-	-	20.082	-	-	2.289	-	-	2.361	-	-	2.514	-	-	-	-	-	2.514
<i>Subtotal: Recurring Cost</i>	-	-	<i>95.023</i>	-	-	<i>3.568</i>	-	-	<i>3.666</i>	-	-	<i>3.902</i>	-	-	-	-	-	<i>3.902</i>
<i>Subtotal: Hardware - EF850 Component Improvement/ DMS Cost</i>	-	-	<i>95.023</i>	-	-	<i>3.568</i>	-	-	<i>3.666</i>	-	-	<i>3.902</i>	-	-	-	-	-	<i>3.902</i>
Hardware - EF957 Containers Cost																		
Recurring Cost																		
9.1.1) EF957 Container ^{(†) (3)}	9,263.38	467	4.326	12,660.02	36	0.456	12,913.00	37	0.478	13,170.73	35	0.461	-	-	-	13,170.73	35	0.461
<i>Subtotal: Recurring Cost</i>	-	-	<i>4.326</i>	-	-	<i>0.456</i>	-	-	<i>0.478</i>	-	-	<i>0.461</i>	-	-	-	-	-	<i>0.461</i>
<i>Subtotal: Hardware - EF957 Containers Cost</i>	-	-	<i>4.326</i>	-	-	<i>0.456</i>	-	-	<i>0.478</i>	-	-	<i>0.461</i>	-	-	-	-	-	<i>0.461</i>
Support - EF830 Production Support Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
10.1) EF830 Production Support Contractor Engineering	-	-	50.934	-	-	3.000	-	-	1.761	-	-	1.873	-	-	-	-	-	1.873
10.2) EF830 Production Support Gov In-House Engineering	-	-	49.072	-	-	2.597	-	-	2.649	-	-	2.816	-	-	-	-	-	2.816
<i>Subtotal: Support - EF830 Production Support Cost</i>	-	-	100.006	-	-	5.597	-	-	4.410	-	-	4.689	-	-	-	-	-	4.689
Support - EF860 Product Acceptance Cost																		
11.1) EF860 Product Acceptance	-	-	6.493	-	-	0.422	-	-	0.430	-	-	0.457	-	-	-	-	-	0.457
<i>Subtotal: Support - EF860 Product Acceptance Cost</i>	-	-	6.493	-	-	0.422	-	-	0.430	-	-	0.457	-	-	-	-	-	0.457
Support - EF950 Tool & Test Equipment Cost																		
12.1) EF950 Tool & Test Equipment	-	-	1.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - EF950 Tool & Test Equipment Cost</i>	-	-	1.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - EF974 ILS Cost																		
13.1) EF974 ILS	-	-	8.024	-	-	0.625	-	-	0.637	-	-	0.676	-	-	-	-	-	0.676
13.2) WAXXX Acquisition Workforce Fund 2009	-	-	0.347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - EF974 ILS Cost</i>	-	-	8.371	-	-	0.625	-	-	0.637	-	-	0.676	-	-	-	-	-	0.676
Gross/Weapon System Cost	756,167.73	2,033	1,537.289	905,330.00	100	90.533	1,043K	70	73.015	921,310.00	100	92.131	-	-	0.000	921,310.00	100	92.131

Remarks:

[Support Cost] Additional efforts required to support DMS is driving the increase in production support for updating the technical data package (TDP). Production support is an annual requirement which supports all on-going production and is independent of contract award quantities.

(†) indicates the presence of a P-5a

Footnotes:

- (1) In FY 2023, the program plans to procure 100 missiles and 0 new warheads. All 100 missiles will use warheads from decommissioned Block 0 missiles.
- (2) DMS reflects normal levels of manufacturing obsolescence associated with Field-Programmable Gate Arrays (FPGA), flash drives, capacitors, resistors, inductors, diodes, adhesives, chemicals (rocket motor), materials (potting, fiberglass, printed circuit cards, alloys), etc. RAM also has a requirement for long term storage making it susceptible to tin whiskers. Therefore, many components require unique tin-lead alloy or lead coating to prevent this phenomenon. These components historically have recurring short time frame obsolescence issues.
- (3) A container is required for every three GMRP and GMRP ORDALTs.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2			P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)					Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
7.1.1) EF008 G&C ^(†)		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2018	May 2020	120	525,973.57	Y		Feb 2016
7.1.1) EF008 G&C ^(†)		2019	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2019	Mar 2021	108	556,460.60	Y		Feb 2016
7.1.1) EF008 G&C ^(†)		2020	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2020	Mar 2022	120	536,484.71	Y		Feb 2018
7.1.1) EF008 G&C ^(†)		2021	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	100	547,214.39	Y		Feb 2018
7.1.1) EF008 G&C ^(†)		2022	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2022	May 2024	70	651,285.71	Y		Dec 2020
7.1.1) EF008 G&C ^(†)		2023	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2023	Mar 2025	100	597,990.00	Y		Dec 2020
7.1.2) EF008 Propulsion ^(†)		2012	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Jul 2012	Jul 2014	61	75,000.00	Y		Feb 2011
7.1.2) EF008 Propulsion ^(†)		2013	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Dec 2012	Dec 2014	61	76,278.69	Y		Feb 2011
7.1.2) EF008 Propulsion ^(†)		2014	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	83,151.52	Y		Feb 2013
7.1.2) EF008 Propulsion ^(†)		2015	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	68,606.49	Y		Feb 2013
7.1.2) EF008 Propulsion ^(†)		2016	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	78,723.03	Y		Feb 2015
7.1.2) EF008 Propulsion ^(†)		2017	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	66,332.00	Y		Feb 2015
7.1.2) EF008 Propulsion ^(†)		2018	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	May 2018	May 2020	120	73,973.57	Y		Feb 2016
7.1.2) EF008 Propulsion ^(†)		2019	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Mar 2019	Mar 2021	108	73,556.90	Y		Feb 2016
7.1.2) EF008 Propulsion ^(†)		2020	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Mar 2020	Mar 2022	120	71,991.67	Y		Feb 2018
7.1.2) EF008 Propulsion ^(†)		2021	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	100	76,953.59	Y		Feb 2018
7.1.2) EF008 Propulsion ^(†)		2022	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	May 2022	May 2024	70	89,728.57	Y		Dec 2020
7.1.2) EF008 Propulsion ^(†)		2023	Raytheon CO / Tuscon, AZ	SS / FFP	NAVSEA	Mar 2023	Mar 2025	100	83,120.00	Y		Dec 2020
7.1.3) EF008 Safe and Arm Device		2012	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jul 2012	Jul 2014	61	15,000.00	Y		Feb 2011
7.1.3) EF008 Safe and Arm Device		2013	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2012	Dec 2014	61	15,262.30	Y		Feb 2011
7.1.3) EF008 Safe and Arm Device		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	16,621.21	Y		Feb 2013
7.1.3) EF008 Safe and Arm Device		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	6,472.31	Y		Feb 2013
7.1.3) EF008 Safe and Arm Device		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	7,307.52	Y		Feb 2015
7.1.3) EF008 Safe and Arm Device		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	7,299.69	Y		Feb 2015
7.1.3) EF008 Safe and Arm Device		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2018	May 2020	115	6,000.00	Y		Feb 2016
7.1.3) EF008 Safe and Arm Device		2019	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2019	Mar 2021	108	6,000.00	Y		Feb 2016
7.1.3) EF008 Safe and Arm Device		2020	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2020	Mar 2022	120	6,125.00	Y		Feb 2018
7.1.3) EF008 Safe and Arm Device		2021	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	100	6,215.00	Y		Feb 2018
7.1.3) EF008 Safe and Arm Device		2022	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2022	May 2024	70	7,209.00	Y		Dec 2020
7.1.3) EF008 Safe and Arm Device		2023	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2023	Mar 2025	100	6,750.00	Y		Dec 2020

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
7.1.4) EF008 Ordnance Pack ^(†)		2012	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jul 2012	Jul 2014	61	48,000.00	Y		Feb 2011
7.1.4) EF008 Ordnance Pack ^(†)		2013	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2012	Dec 2014	61	48,819.67	Y		Feb 2011
7.1.4) EF008 Ordnance Pack ^(†)		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	53,212.12	Y		Feb 2013
7.1.4) EF008 Ordnance Pack ^(†)		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	47,247.87	Y		Feb 2013
7.1.4) EF008 Ordnance Pack ^(†)		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	54,022.22	Y		Feb 2015
7.1.4) EF008 Ordnance Pack ^(†)		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	50,433.07	Y		Feb 2015
7.1.4) EF008 Ordnance Pack ^(†)		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2018	May 2020	115	47,008.69	Y		Feb 2016
7.1.4) EF008 Ordnance Pack ^(†)		2019	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2019	Mar 2021	108	47,008.69	Y		Feb 2016
7.1.4) EF008 Ordnance Pack ^(†)		2021	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	100	48,992.00	Y		Feb 2018
7.1.4) EF008 Ordnance Pack ^(†)		2022	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2022	May 2024	70	56,971.43	Y		Dec 2020
7.1.4) EF008 Ordnance Pack ^(†)		2023	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2023	Mar 2025	100	52,960.00	Y		Dec 2020
7.1.5) EF008 Warhead		2012	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jul 2012	Jul 2014	61	14,508.20	Y		Feb 2011
7.1.5) EF008 Warhead		2013	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2012	Dec 2014	61	14,754.10	Y		Feb 2011
7.1.5) EF008 Warhead		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	16,075.76	Y		Feb 2013
7.1.5) EF008 Warhead		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	25,242.00	Y		Feb 2013
7.1.5) EF008 Warhead		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	28,765.76	Y		Feb 2015
7.1.5) EF008 Warhead		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	28,734.91	Y		Feb 2015
7.1.5) EF008 Warhead		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2018	May 2020	187	21,310.16	Y		Feb 2016
7.1.5) EF008 Warhead		2021	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	100	23,182.09	Y		Feb 2018
7.1.5) EF008 Warhead		2022	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2022	Mar 2024	70	26,891.00	Y		Dec 2020
7.1.6) EF008 Canister ^(†)		2012	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jul 2012	Jul 2014	61	60,000.00	Y		Feb 2011
7.1.6) EF008 Canister ^(†)		2013	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2012	Dec 2014	61	57,786.89	Y		Feb 2011
7.1.6) EF008 Canister ^(†)		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	66,515.15	Y		Feb 2013
7.1.6) EF008 Canister ^(†)		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	39,481.09	Y		Feb 2013
7.1.6) EF008 Canister ^(†)		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	44,887.43	Y		Feb 2015
7.1.6) EF008 Canister ^(†)		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	44,233.30	Y		Feb 2015
7.1.6) EF008 Canister ^(†)		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2018	May 2020	120	53,042.00	Y		Feb 2016
7.1.6) EF008 Canister ^(†)		2019	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2019	Mar 2021	108	53,000.00	Y		Feb 2016
7.1.6) EF008 Canister ^(†)		2020	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2020	Mar 2022	120	54,101.85	Y		Feb 2018

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
7.1.6) EF008 Canister ^(†)		2021	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	100	55,183.88	Y		Feb 2018
7.1.6) EF008 Canister ^(†)		2022	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2022	May 2024	70	64,012.28	Y		Dec 2020
7.1.6) EF008 Canister ^(†)		2023	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2023	Mar 2025	100	59,860.00	Y		Dec 2020
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)		2018	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	May 2018	May 2020	12	576,665.00	Y		Feb 2016
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)		2019	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Mar 2019	Mar 2021	9	680,000.00	Y		Feb 2017
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)		2020	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Mar 2020	Mar 2022	25	571,283.00	Y		Feb 2018
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)		2021	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Mar 2021	Mar 2023	7	584,602.71	Y		Feb 2018
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)		2022	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	May 2022	May 2024	1	667,000.00	Y		Dec 2020
7.1.7) EF008 BLK 2 GMRP ORDALTS ^(†)		2023	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Mar 2023	Mar 2025	3	626,000.00	Y		Dec 2020
7.1.8) EF008 Telemeters		2015	NAWC China Lake / China Lake, CA	WR	CA	Feb 2015	May 2016	35	25,992.00	Y		
7.1.8) EF008 Telemeters		2016	NAWC China Lake / China Lake, CA	WR	CA	Oct 2015	Jan 2017	24	31,250.00	Y		
7.1.8) EF008 Telemeters		2017	NAWC China Lake / China Lake, CA	WR	CA	Oct 2016	Jan 2018	33	41,000.00	Y		
7.2.1) EF008 BLK 2B HUM		2018	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	May 2018	May 2020	1	2,258K	Y		Feb 2016
9.1.1) EF957 Container		2014	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Feb 2015	Aug 2015	108	6,815.00	Y		Nov 2014
9.1.1) EF957 Container		2015	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Jul 2015	Jan 2016	93	6,967.74	Y		Nov 2014
9.1.1) EF957 Container		2018	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Jan 2018	Jul 2018	20	15,525.00	Y		Jun 2017
9.1.1) EF957 Container		2019	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Jul 2019	Jan 2020	48	10,875.00	Y		Jun 2017
9.1.1) EF957 Container		2020	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Jul 2020	Jan 2021	49	12,423.96	Y		Apr 2020
9.1.1) EF957 Container		2021	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Mar 2021	Sep 2021	36	12,660.02	Y		Jan 2021
9.1.1) EF957 Container		2022	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Apr 2022	Oct 2022	37	12,913.00	Y		Jan 2022
9.1.1) EF957 Container		2023	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Mar 2023	Sep 2023	35	13,170.73	Y		Jan 2023

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2012													Fiscal Year 2013													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2011	BAL DUE AS OF 1 OCT	Calendar Year 2012													Calendar Year 2013													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7.1.1) EF008 G&C																																	
Prior Years Deliveries: 488																																	
	1	2018	NAVY	120	0	120																							120				
	1	2019	NAVY	108	0	108																							108				
	1	2020	NAVY	120	0	120																							120				
	1	2021	NAVY	100	0	100																							100				
	1	2022	NAVY	70	0	70																							70				
	1	2023	NAVY	100 ⁽⁴⁾	0	100																							100				
7.1.2) EF008 Propulsion																																	
	2	2012	NAVY	61	0	61																							61				
	2	2013	NAVY	61	0	61																							61				
	2	2014	NAVY	66	0	66																							66				
	2	2015	NAVY	90	0	90																							90				
	2	2016	NAVY	90	0	90																							90				
	2	2017	NAVY	120	0	120																							120				
	2	2018	NAVY	120	0	120																							120				
	2	2019	NAVY	108	0	108																							108				
	2	2020	NAVY	120	0	120																							120				
	2	2021	NAVY	100	0	100																							100				
	2	2022	NAVY	70 ⁽⁵⁾	0	70																							70				
	2	2023	NAVY	100	0	100																							100				
7.1.4) EF008 Ordnance Pack																																	
	3	2012	NAVY	61	0	61																							61				
	3	2013	NAVY	61	0	61																							61				
	3	2014	NAVY	66	0	66																							66				
	3	2015	NAVY	90	0	90																							90				
	3	2016	NAVY	90	0	90																							90				
	3	2017	NAVY	120	0	120																							120				
	3	2018	NAVY	115	0	115																							115				
	3	2019	NAVY	108	0	108																							108				
	3	2021	NAVY	100	0	100																							100				
	3	2022	NAVY	70 ⁽⁶⁾	0	70																							70				
	3	2023	NAVY	100	0	100																							100				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2012													Fiscal Year 2013												BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2011	BAL DUE AS OF 1 OCT	Calendar Year 2012													Calendar Year 2013												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
7.1.6) EF008 Canister																																
	4	2012	NAVY	61	0	61																							61			
	4	2013	NAVY	61	0	61																							61			
	4	2014	NAVY	66	0	66																							66			
	4	2015	NAVY	90	0	90																							90			
	4	2016	NAVY	90	0	90																							90			
	4	2017	NAVY	120	0	120																							120			
	4	2018	NAVY	120	0	120																							120			
	4	2019	NAVY	108	0	108																							108			
	4	2020	NAVY	120	0	120																							120			
	4	2021	NAVY	100	0	100																							100			
	4	2022	NAVY	70 ⁽⁷⁾	0	70																							70			
	4	2023	NAVY	100	0	100																							100			
7.1.7) EF008 BLK 2 GMRP ORDALTS																																
	5	2018	NAVY	12	0	12																							12			
	5	2019	NAVY	9	0	9																							9			
	5	2020	NAVY	25	0	25																							25			
	5	2021	NAVY	7	0	7																							7			
	5	2022	NAVY	1 ⁽⁸⁾	0	1																							1			
	5	2023	NAVY	3	0	3																							3			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2014												Fiscal Year 2015												B A L A N C E	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 3	BAL D U E A S O F 1 O C T	Calendar Year 2014												Calendar Year 2015												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
7.1.1) EF008 G&C																															
Prior Years Deliveries: 488																															
1		2018	NAVY	120	0	120																						120			
1		2019	NAVY	108	0	108																						108			
1		2020	NAVY	120	0	120																						120			
1		2021	NAVY	100	0	100																						100			
1		2022	NAVY	70	0	70																						70			
1		2023	NAVY	100 ⁽⁴⁾	0	100																						100			
7.1.2) EF008 Propulsion																															
2		2012	NAVY	61	0	61	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	6			0			
2		2013	NAVY	61	0	61	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	11			
2		2014	NAVY	66	0	66									A	-	-	-	-	-	-	-	-	-	-	-	-	66			
2		2015	NAVY	90	0	90																						90			
2		2016	NAVY	90	0	90																						90			
2		2017	NAVY	120	0	120																						120			
2		2018	NAVY	120	0	120																						120			
2		2019	NAVY	108	0	108																						108			
2		2020	NAVY	120	0	120																						120			
2		2021	NAVY	100	0	100																						100			
2		2022	NAVY	70 ⁽⁵⁾	0	70																						70			
2		2023	NAVY	100	0	100																						100			
7.1.4) EF008 Ordnance Pack																															
3		2012	NAVY	61	0	61	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	6			0			
3		2013	NAVY	61	0	61	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	11			
3		2014	NAVY	66	0	66									A	-	-	-	-	-	-	-	-	-	-	-	-	66			
3		2015	NAVY	90	0	90																						90			
3		2016	NAVY	90	0	90																						90			
3		2017	NAVY	120	0	120																						120			
3		2018	NAVY	115	0	115																						115			
3		2019	NAVY	108	0	108																						108			
3		2021	NAVY	100	0	100																						100			
3		2022	NAVY	70 ⁽⁶⁾	0	70																						70			
3		2023	NAVY	100	0	100																						100			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2014													Fiscal Year 2015													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014													Calendar Year 2015													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7.1.6) EF008 Canister																																	
4		2012	NAVY	61	0	61	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	5	5	5	6				0
4		2013	NAVY	61	0	61	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	5	5	5	5	5	5	5	5	11
4		2014	NAVY	66	0	66									A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	
4		2015	NAVY	90	0	90																										90	
4		2016	NAVY	90	0	90																										90	
4		2017	NAVY	120	0	120																										120	
4		2018	NAVY	120	0	120																										120	
4		2019	NAVY	108	0	108																										108	
4		2020	NAVY	120	0	120																										120	
4		2021	NAVY	100	0	100																										100	
4		2022	NAVY	70 ⁽⁷⁾	0	70																										70	
4		2023	NAVY	100	0	100																										100	
7.1.7) EF008 BLK 2 GMRP ORDALTS																																	
5		2018	NAVY	12	0	12																										12	
5		2019	NAVY	9	0	9																										9	
5		2020	NAVY	25	0	25																										25	
5		2021	NAVY	7	0	7																										7	
5		2022	NAVY	1 ⁽⁸⁾	0	1																										1	
5		2023	NAVY	3	0	3																										3	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016													Fiscal Year 2017													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016													Calendar Year 2017													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7.1.1) EF008 G&C																																	
Prior Years Deliveries: 488																																	
	1	2018	NAVY	120	0	120																							120				
	1	2019	NAVY	108	0	108																							108				
	1	2020	NAVY	120	0	120																							120				
	1	2021	NAVY	100	0	100																							100				
	1	2022	NAVY	70	0	70																							70				
	1	2023	NAVY	100 ⁽⁴⁾	0	100																							100				
7.1.2) EF008 Propulsion																																	
	2	2012	NAVY	61	61	0																							0				
	2	2013	NAVY	61	50	11		5	6																				0				
	2	2014	NAVY	66	0	66	-	-	-	-	-	-	-	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	0				
	2	2015	NAVY	90	0	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	7	8	7	8	7	8	30				
	2	2016	NAVY	90	0	90				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90					
	2	2017	NAVY	120	0	120													A	-	-	-	-	-	-	-	-	120					
	2	2018	NAVY	120	0	120																						120					
	2	2019	NAVY	108	0	108																						108					
	2	2020	NAVY	120	0	120																						120					
	2	2021	NAVY	100	0	100																						100					
	2	2022	NAVY	70 ⁽⁵⁾	0	70																						70					
	2	2023	NAVY	100	0	100																						100					
7.1.4) EF008 Ordnance Pack																																	
	3	2012	NAVY	61	61	0																							0				
	3	2013	NAVY	61	50	11		5	6																				0				
	3	2014	NAVY	66	0	66	-	-	-	-	-	-	-	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	0				
	3	2015	NAVY	90	0	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	7	8	7	8	7	8	30				
	3	2016	NAVY	90	0	90				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90					
	3	2017	NAVY	120	0	120													A	-	-	-	-	-	-	-	-	120					
	3	2018	NAVY	115	0	115																						115					
	3	2019	NAVY	108	0	108																						108					
	3	2021	NAVY	100	0	100																						100					
	3	2022	NAVY	70 ⁽⁶⁾	0	70																						70					
	3	2023	NAVY	100	0	100																						100					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016													Fiscal Year 2017													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016													Calendar Year 2017													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7.1.6) EF008 Canister																																	
4		2012	NAVY	61	61	0																							0				
4		2013	NAVY	61	50	11	5	6																					0				
4		2014	NAVY	66	0	66	-	-	-	-	-	-	-	5	5	5	5	5	5	6	6	6	6	6	6	6		0					
4		2015	NAVY	90	0	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	7	8	7	8	7	8	30				
4		2016	NAVY	90	0	90			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90					
4		2017	NAVY	120	0	120													A	-	-	-	-	-	-	-	-	120					
4		2018	NAVY	120	0	120																						120					
4		2019	NAVY	108	0	108																						108					
4		2020	NAVY	120	0	120																						120					
4		2021	NAVY	100	0	100																						100					
4		2022	NAVY	70 ⁽⁷⁾	0	70																						70					
4		2023	NAVY	100	0	100																						100					
7.1.7) EF008 BLK 2 GMRP ORDALTS																																	
5		2018	NAVY	12	0	12																						12					
5		2019	NAVY	9	0	9																						9					
5		2020	NAVY	25	0	25																						25					
5		2021	NAVY	7	0	7																						7					
5		2022	NAVY	1 ⁽⁸⁾	0	1																						1					
5		2023	NAVY	3	0	3																						3					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018														Fiscal Year 2019														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
7.1.1) EF008 G&C																																			
Prior Years Deliveries: 488																																			
	1	2018	NAVY	120	0	120																							120						
	1	2019	NAVY	108	0	108																							108						
	1	2020	NAVY	120	0	120																							120						
	1	2021	NAVY	100	0	100																							100						
	1	2022	NAVY	70	0	70																							70						
	1	2023	NAVY	100 ⁽⁴⁾	0	100																							100						
7.1.2) EF008 Propulsion																																			
	2	2012	NAVY	61	61	0																							0						
	2	2013	NAVY	61	61	0																							0						
	2	2014	NAVY	66	66	0																							0						
	2	2015	NAVY	90	60	30	7	8	7	8																			0						
	2	2016	NAVY	90	0	90	-	-	7	8	7	8	7	8	7	8	7	8											0						
	2	2017	NAVY	120	0	120	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	20						
	2	2018	NAVY	120	0	120																							120						
	2	2019	NAVY	108	0	108																							108						
	2	2020	NAVY	120	0	120																							120						
	2	2021	NAVY	100	0	100																							100						
	2	2022	NAVY	70 ⁽⁵⁾	0	70																							70						
	2	2023	NAVY	100	0	100																							100						
7.1.4) EF008 Ordnance Pack																																			
	3	2012	NAVY	61	61	0																							0						
	3	2013	NAVY	61	61	0																							0						
	3	2014	NAVY	66	66	0																							0						
	3	2015	NAVY	90	60	30	7	8	7	8																			0						
	3	2016	NAVY	90	0	90	-	-	7	8	7	8	7	8	7	8	7	8											0						
	3	2017	NAVY	120	0	120	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	20						
	3	2018	NAVY	115	0	115																							115						
	3	2019	NAVY	108	0	108																							108						
	3	2021	NAVY	100	0	100																							100						
	3	2022	NAVY	70 ⁽⁶⁾	0	70																							70						
	3	2023	NAVY	100	0	100																							100						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018													Fiscal Year 2019													BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7.1.6) EF008 Canister																																	
4		2012	NAVY	61	61	0																									0		
4		2013	NAVY	61	61	0																									0		
4		2014	NAVY	66	66	0																									0		
4		2015	NAVY	90	60	30	7	8	7	8																					0		
4		2016	NAVY	90	0	90	-	-	7	8	7	8	7	8	7	8	7	8													0		
4		2017	NAVY	120	0	120	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	20		
4		2018	NAVY	120	0	120																									120		
4		2019	NAVY	108	0	108																									108		
4		2020	NAVY	120	0	120																									120		
4		2021	NAVY	100	0	100																									100		
4		2022	NAVY	70 ⁽⁷⁾	0	70																									70		
4		2023	NAVY	100	0	100																									100		
7.1.7) EF008 BLK 2 GMRP ORDALTS																																	
5		2018	NAVY	12	0	12																									12		
5		2019	NAVY	9	0	9																									9		
5		2020	NAVY	25	0	25																									25		
5		2021	NAVY	7	0	7																									7		
5		2022	NAVY	1 ⁽⁸⁾	0	1																									1		
5		2023	NAVY	3	0	3																									3		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020													Fiscal Year 2021													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
7.1.1) EF008 G&C																																	
Prior Years Deliveries: 488																																	
	1	2018	NAVY	120	0	120	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0				
	1	2019	NAVY	108	0	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	9	9	45			
	1	2020	NAVY	120	0	120																							120				
	1	2021	NAVY	100	0	100																							100				
	1	2022	NAVY	70	0	70																							70				
	1	2023	NAVY	100 ⁽⁴⁾	0	100																							100				
7.1.2) EF008 Propulsion																																	
	2	2012	NAVY	61	61	0																							0				
	2	2013	NAVY	61	61	0																							0				
	2	2014	NAVY	66	66	0																							0				
	2	2015	NAVY	90	90	0																							0				
	2	2016	NAVY	90	90	0																							0				
	2	2017	NAVY	120	100	20	10	10																					0				
	2	2018	NAVY	120	0	120	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0					
	2	2019	NAVY	108	0	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	9	9	45				
	2	2020	NAVY	120	0	120																							120				
	2	2021	NAVY	100	0	100																							100				
	2	2022	NAVY	70 ⁽⁵⁾	0	70																							70				
	2	2023	NAVY	100	0	100																							100				
7.1.4) EF008 Ordnance Pack																																	
	3	2012	NAVY	61	61	0																							0				
	3	2013	NAVY	61	61	0																							0				
	3	2014	NAVY	66	66	0																							0				
	3	2015	NAVY	90	90	0																							0				
	3	2016	NAVY	90	90	0																							0				
	3	2017	NAVY	120	100	20	10	10																					0				
	3	2018	NAVY	115	0	115	-	-	-	-	-	-	10	10	10	10	10	10	10	9	9	9	9	9	9	9	9	0					
	3	2019	NAVY	108	0	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	9	9	45				
	3	2021	NAVY	100	0	100																							100				
	3	2022	NAVY	70 ⁽⁶⁾	0	70																							70				
	3	2023	NAVY	100	0	100																							100				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements (Units in Each)						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
7.1.6) EF008 Canister																															
	4	2012	NAVY	61	61	0																							0		
	4	2013	NAVY	61	61	0																							0		
	4	2014	NAVY	66	66	0																							0		
	4	2015	NAVY	90	90	0																							0		
	4	2016	NAVY	90	90	0																							0		
	4	2017	NAVY	120	100	20	10	10																					0		
	4	2018	NAVY	120	0	120	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0		
	4	2019	NAVY	108	0	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	9	9	9	120		
	4	2020	NAVY	120	0	120								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120		
	4	2021	NAVY	100	0	100																A -	-	-	-	-	-	-	100		
	4	2022	NAVY	70 ⁽⁷⁾	0	70																						70			
	4	2023	NAVY	100	0	100																						100			
7.1.7) EF008 BLK 2 GMRP ORDALTS																															
	5	2018	NAVY	12	0	12	-	-	-	-	-	-	-	2	2	2	2	2	2										0		
	5	2019	NAVY	9	0	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	1			0		
	5	2020	NAVY	25	0	25								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25		
	5	2021	NAVY	7	0	7																A -	-	-	-	-	-	-	7		
	5	2022	NAVY	1 ⁽⁸⁾	0	1																						1			
	5	2023	NAVY	3	0	3																						3			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023										BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
7.1.1) EF008 G&C																															
Prior Years Deliveries: 488																															
	1	2018	NAVY	120	120	0																							0		
	1	2019	NAVY	108	63	45	9	9	9	9	9																		0		
	1	2020	NAVY	120	0	120	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10						0		
	1	2021	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	8	10	8	8	40
	1	2022	NAVY	70	0	70								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70		
	1	2023	NAVY	100 ⁽⁴⁾	0	100																	A -	-	-	-	-	-	-	100	
7.1.2) EF008 Propulsion																															
	2	2012	NAVY	61	61	0																							0		
	2	2013	NAVY	61	61	0																							0		
	2	2014	NAVY	66	66	0																							0		
	2	2015	NAVY	90	90	0																							0		
	2	2016	NAVY	90	90	0																							0		
	2	2017	NAVY	120	120	0																							0		
	2	2018	NAVY	120	120	0																							0		
	2	2019	NAVY	108	63	45	9	9	9	9	9																		0		
	2	2020	NAVY	120	0	120	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10					0		
	2	2021	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	8	10	8	8	40
	2	2022	NAVY	70 ⁽⁵⁾	0	70								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70		
	2	2023	NAVY	100	0	100																	A -	-	-	-	-	-	-	100	
7.1.4) EF008 Ordnance Pack																															
	3	2012	NAVY	61	61	0																							0		
	3	2013	NAVY	61	61	0																							0		
	3	2014	NAVY	66	66	0																							0		
	3	2015	NAVY	90	90	0																							0		
	3	2016	NAVY	90	90	0																							0		
	3	2017	NAVY	120	120	0																							0		
	3	2018	NAVY	115	115	0																							0		
	3	2019	NAVY	108	63	45	9	9	9	9	9																		0		
	3	2021	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	8	10	8	8	40
	3	2022	NAVY	70 ⁽⁶⁾	0	70								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70		
	3	2023	NAVY	100	0	100																		A -	-	-	-	-	-	100	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023										BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G
7.1.6) EF008 Canister																														
	4	2012	NAVY	61	61	0																							0	
	4	2013	NAVY	61	61	0																							0	
	4	2014	NAVY	66	66	0																							0	
	4	2015	NAVY	90	90	0																							0	
	4	2016	NAVY	90	90	0																							0	
	4	2017	NAVY	120	120	0																							0	
	4	2018	NAVY	120	120	0																							0	
	4	2019	NAVY	108	63	45	9	9	9	9	9																	0		
	4	2020	NAVY	120	0	120	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10					0		
	4	2021	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	10	8	10	8	40
	4	2022	NAVY	70 ⁽⁷⁾	0	70								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	
	4	2023	NAVY	100	0	100																	A	-	-	-	-	-	100	
7.1.7) EF008 BLK 2 GMRP ORDALTS																														
	5	2018	NAVY	12	12	0																							0	
	5	2019	NAVY	9	9	0																							0	
	5	2020	NAVY	25	0	25	-	-	-	-	-	6	6	6	6	1													0	
	5	2021	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	1			0	
	5	2022	NAVY	1 ⁽⁸⁾	0	1								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	5	2023	NAVY	3	0	3																	A	-	-	-	-	-	3	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024														Fiscal Year 2025										BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024														Calendar Year 2025										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
7.1.1) EF008 G&C																															
Prior Years Deliveries: 488																															
	1	2018	NAVY	120	120	0																						0			
	1	2019	NAVY	108	108	0																						0			
	1	2020	NAVY	120	120	0																						0			
	1	2021	NAVY	100	60	40	8	8	8	8	8																	0			
	1	2022	NAVY	70	0	70	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	5	5			0			
	1	2023	NAVY	100 ⁽⁴⁾	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	8	10	8	8	40	
7.1.2) EF008 Propulsion																															
	2	2012	NAVY	61	61	0																						0			
	2	2013	NAVY	61	61	0																						0			
	2	2014	NAVY	66	66	0																						0			
	2	2015	NAVY	90	90	0																						0			
	2	2016	NAVY	90	90	0																						0			
	2	2017	NAVY	120	120	0																						0			
	2	2018	NAVY	120	120	0																						0			
	2	2019	NAVY	108	108	0																						0			
	2	2020	NAVY	120	120	0																						0			
	2	2021	NAVY	100	60	40	8	8	8	8	8																	0			
	2	2022	NAVY	70 ⁽⁵⁾	0	70	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	5	5			0			
	2	2023	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	8	10	8	8	40	
7.1.4) EF008 Ordnance Pack																															
	3	2012	NAVY	61	61	0																						0			
	3	2013	NAVY	61	61	0																						0			
	3	2014	NAVY	66	66	0																						0			
	3	2015	NAVY	90	90	0																						0			
	3	2016	NAVY	90	90	0																						0			
	3	2017	NAVY	120	120	0																						0			
	3	2018	NAVY	115	115	0																						0			
	3	2019	NAVY	108	108	0																						0			
	3	2021	NAVY	100	60	40	8	8	8	8	8																	0			
	3	2022	NAVY	70 ⁽⁶⁾	0	70	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	5	5			0			
	3	2023	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	10	8	10	8	8	40	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2242 / Rolling Airframe Missile (RAM) **Item Number / Title [DODIC]:** 1 / Rolling Airframe Missile (RAM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
7.1.6) EF008 Canister																															
4		2012	NAVY	61	61	0																							0		
4		2013	NAVY	61	61	0																							0		
4		2014	NAVY	66	66	0																							0		
4		2015	NAVY	90	90	0																							0		
4		2016	NAVY	90	90	0																							0		
4		2017	NAVY	120	120	0																							0		
4		2018	NAVY	120	120	0																							0		
4		2019	NAVY	108	108	0																							0		
4		2020	NAVY	120	120	0																							0		
4		2021	NAVY	100	60	40	8	8	8	8	8																		0		
4		2022	NAVY	70 ⁽⁷⁾	0	70	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	5	5					0		
4		2023	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	10	8	10	8	40	
7.1.7) EF008 BLK 2 GMRP ORDALTS																															
5		2018	NAVY	12	12	0																							0		
5		2019	NAVY	9	9	0																							0		
5		2020	NAVY	25	25	0																							0		
5		2021	NAVY	7	7	0																							0		
5		2022	NAVY	1 ⁽⁸⁾	0	1	-	-	-	-	-	-	1																0		
5		2023	NAVY	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1						0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2026												Fiscal Year 2027												BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026												Calendar Year 2027												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
7.1.1) EF008 G&C																															
Prior Years Deliveries: 488																															
	1	2018	NAVY	120	120	0																							0		
	1	2019	NAVY	108	108	0																							0		
	1	2020	NAVY	120	120	0																							0		
	1	2021	NAVY	100	100	0																							0		
	1	2022	NAVY	70	70	0																							0		
	1	2023	NAVY	100 ⁽⁴⁾	60	40	8	8	8	8	8																		0		
7.1.2) EF008 Propulsion																															
	2	2012	NAVY	61	61	0																							0		
	2	2013	NAVY	61	61	0																							0		
	2	2014	NAVY	66	66	0																							0		
	2	2015	NAVY	90	90	0																							0		
	2	2016	NAVY	90	90	0																							0		
	2	2017	NAVY	120	120	0																							0		
	2	2018	NAVY	120	120	0																							0		
	2	2019	NAVY	108	108	0																							0		
	2	2020	NAVY	120	120	0																							0		
	2	2021	NAVY	100	100	0																							0		
	2	2022	NAVY	70 ⁽⁵⁾	70	0																							0		
	2	2023	NAVY	100	60	40	8	8	8	8	8																		0		
7.1.4) EF008 Ordnance Pack																															
	3	2012	NAVY	61	61	0																							0		
	3	2013	NAVY	61	61	0																							0		
	3	2014	NAVY	66	66	0																							0		
	3	2015	NAVY	90	90	0																							0		
	3	2016	NAVY	90	90	0																							0		
	3	2017	NAVY	120	120	0																							0		
	3	2018	NAVY	115	115	0																							0		
	3	2019	NAVY	108	108	0																							0		
	3	2021	NAVY	100	100	0																							0		
	3	2022	NAVY	70 ⁽⁶⁾	70	0																							0		
	3	2023	NAVY	100	60	40	8	8	8	8	8																		0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2026											Fiscal Year 2027											BALANCE			
OC	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026											Calendar Year 2027													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN		JUL	AUG	SEP
7.1.6) EF008 Canister																															
4		2012	NAVY		61	61																							0		
4		2013	NAVY		61	61																							0		
4		2014	NAVY		66	66																							0		
4		2015	NAVY		90	90																							0		
4		2016	NAVY		90	90																							0		
4		2017	NAVY		120	120																							0		
4		2018	NAVY		120	120																							0		
4		2019	NAVY		108	108																							0		
4		2020	NAVY		120	120																							0		
4		2021	NAVY		100	100																							0		
4		2022	NAVY		70 ⁽⁷⁾	70																							0		
4		2023	NAVY		100	60	40	8	8	8	8	8																	0		
7.1.7) EF008 BLK 2 GMRP ORDALTS																															
5		2018	NAVY		12	12																							0		
5		2019	NAVY		9	9																							0		
5		2020	NAVY		25	25																							0		
5		2021	NAVY		7	7																							0		
5		2022	NAVY		1 ⁽⁸⁾	1																							0		
5		2023	NAVY		3	3																							0		
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)	Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon CO - Tucson, AZ	100	240	360	0	3	24	27	0	3	24	27
2	Raytheon CO - Tucson, AZ	100	240	360	0	3	24	27	0	3	24	27
3	Raytheon CO - Tucson, AZ	100	240	360	0	3	24	27	0	3	24	27
4	Raytheon CO - Tucson, AZ	100	240	360	0	3	24	27	0	2	24	26
5	Raytheon CO - Tucson AZ	1	240	439	0	0	24	24	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

- ⁽⁴⁾ MSR Leverages Cooperative Program (Germany) and other Foreign Military Sales procurements.
- ⁽⁵⁾ MSR Leverages Cooperative Program (Germany) and other Foreign Military Sales procurements.
- ⁽⁶⁾ MSR Leverages Cooperative Program (Germany) and other Foreign Military Sales procurements.
- ⁽⁷⁾ MSR Leverages Cooperative Program (Germany) and other Foreign Military Sales procurements.
- ⁽⁸⁾ MSR assumes ORDALT procurement is in conjunction with procurement of a minimum 100 GMRP's.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	497	150	153	293	-	293	269	269	325	326	3,734	6,016
Gross/Weapon System Cost <i>(\$ in Millions)</i>	126.002	43.647	46.702	78.395	0.000	78.395	80.270	82.184	84.361	85.152	1,066.716	1,693.429
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	126.002	43.647	46.702	78.395	0.000	78.395	80.270	82.184	84.361	85.152	1,066.716	1,693.429
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	126.002	43.647	46.702	78.395	0.000	78.395	80.270	82.184	84.361	85.152	1,066.716	1,693.429

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	0.833	0.846	1.271	-	1.271	1.207	1.182	1.389	1.429	Continuing	Continuing
Flyaway Unit Cost <i>(\$ in Dollars)</i>	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	253,525.15	290,980.00	305,241.83	267,559.73	-	267,559.73	298,401.49	305,516.73	259,572.31	261,202.45	285,676.49	281,487.53

Description:

The Joint Air-to-Ground Missile (JAGM) is an air-launched missile system that will incorporate multi-mode seeker technology thus providing advanced Line-of-Sight and Beyond-Line-of-Sight precision fire and-forget seeker targeting capabilities resulting in increased lethality against soft, hardened, moving, stationary, land and maritime threats. JAGM improves the warfighter's capability in adverse weather, day or night, and in obscured/countermeasure environments. The JAGM Increment 1 system will replace aviation-launched, Tube-launched, Optically-tracked, Wire-guided (TOW) missile, and Helicopter Launched Fire-&-Forget (HELLFIRE) Missile Systems. JAGM is an Army-led joint program that addresses rotary wing and unmanned aerial vehicle requirements. The Department of The Navy threshold platform is the AH-1Z. The JAGM system includes missile, trainers, containers, support equipment, and software modifications to the M-299 launcher. Missile configurations include the JAGM Tactical Missile, Captive Air Training Missile and Air Training Missile. JAGM procurement funding supports the entire JAGM system to include resolution of obsolescence, safety, reliability, weapon integration activities, test sets, engineering services, facilitization, production ramp-up activities and production issues.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Joint Air Ground Missile (JAGM)	P-5a, P-21			497 / 126.002	150 / 43.647	153 / 46.702	293 / 78.395	- / 0.000	293 / 78.395
P-40	Total Gross/Weapon System Cost				497 / 126.002	150 / 43.647	153 / 46.702	293 / 78.395	- / 0.000	293 / 78.395

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2023 funding supports the procurement of 293 JAGM All Up Rounds (AURs), 7 Captive Air Training Missiles (CATMs), and production related engineering and logistics support.

The increase from previous years is in direct response to the initial fielding of JAGM on the AH-1Z. In order to meet initial requirements to equip the fleet and build up to the required inventory objective of 6,016 AURs, an increase from FY22 to FY23 is necessary. The decision to move from Low Rate Initial Production (LRIP) to Full Rate Production (FRP) will also occur in FY22, further driving the requested increase in procurement funding. In addition, the ramp up in quantities in FY23 supports the joint service quantities in order to meet the Minimum Sustaining Rate.

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Exhibit P-5, Cost Analysis: PB 2023 Navy											Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)					Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)				
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	
Procurement Quantity (Units in Each)				497		150		153		293		-		293	
Gross/Weapon System Cost (\$ in Millions)				126.002		43.647		46.702		78.395		0.000		78.395	
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-	
Net Procurement (P-1) (\$ in Millions)				126.002		43.647		46.702		78.395		0.000		78.395	
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-	
Total Obligation Authority (\$ in Millions)				126.002		43.647		46.702		78.395		0.000		78.395	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)				-		0.833		0.846		1.271		-		1.271	
Gross/Weapon System Unit Cost (\$ in Dollars)				253,525.15		290,980.00		305,241.83		267,559.73		-		267,559.73	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾	194,406.44	497	96.620	234,491.69	150	35.174	242,821.00	153	37.152	225,376.00	293	66.035	-	-	-	225,376.00	293	66.035
1.1.3) (JG301) Captive Air Training Missile ⁽²⁾	188,000.00	6	1.128	213,575.00	4	0.854	217,846.00	6	1.307	222,203.00	7	1.555	-	-	-	222,203.00	7	1.555
<i>Subtotal: Recurring Cost</i>	-	-	97.748	-	-	36.028	-	-	38.459	-	-	67.590	-	-	-	-	-	67.590
<i>Subtotal: Hardware Cost</i>	-	-	97.748	-	-	36.028	-	-	38.459	-	-	67.590	-	-	-	-	-	67.590
Support - JAGM Support Costs Cost																		
2.1) (JG860) Integrated Logistics Support	-	-	1.685	-	-	0.596	-	-	0.705	-	-	0.600	-	-	-	-	-	0.600
2.2) (JG850) Production Engineering Support	-	-	8.429	-	-	3.059	-	-	3.308	-	-	2.769	-	-	-	-	-	2.769
2.4) (JG851) Other Production Support, Army ⁽³⁾	-	-	14.191	-	-	2.522	-	-	2.692	-	-	4.731	-	-	-	-	-	4.731
2.5) (JG852) Other Production Support, Contractor ⁽⁴⁾	-	-	3.949	-	-	1.442	-	-	1.538	-	-	2.705	-	-	-	-	-	2.705
<i>Subtotal: Support - JAGM Support Costs Cost</i>	-	-	28.254	-	-	7.619	-	-	8.243	-	-	10.805	-	-	-	-	-	10.805
Gross/Weapon System Cost	253,525.15	497	126.002	290,980.00	150	43.647	305,241.83	153	46.702	267,559.73	293	78.395	-	-	0.000	267,559.73	293	78.395

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(†) indicates the presence of a P-5a</p> <p>Footnotes:</p> <p>(1) (JG010) All Up Round (AUR) unit cost is projected by the Army based on total procurement between all services, resulting in a fluctuation in unit cost from year to year. FY 2023 unit cost decreased due to an increase in total projected quantities across all services.</p> <p>(2) (JG301) Captive Air Training Missiles unit cost will fluctuate according to total procurement between all services.</p> <p>(3) (JG851) "Other Production Support, Army" is for a program management administrative fee for execution of JAGM production and deliveries. These costs include program office management costs, support of program reviews, travel, system safety and hazard analysis, public release and security activities, and configuration management. Funding fluctuates based on Army requirements and the total procurement buy per year. Increase in FY23 is due to an increase in the overall quantities being procured.</p> <p>(4) (JG852) "Other Production Support, Contractor" provides funding for the support fee for execution of JAGM production and deliveries. These costs may include resolution of obsolescence, end-of-life buys, safety, insensitive munitions, reliability, weapon integration activities, test sets, engineering changes, modifications, facilitation, logistics support and analysis, production ramp-up activities, and other production issues. Funding fluctuates based on Army requirements and the total procurement buy per year. Increase in FY23 is due to an increase in the overall quantities being procured.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2019	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Dec 2019	Apr 2022	91	223,569.00	Y		Aug 2018
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2020	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Mar 2021	May 2023	307	201,368.00	Y		Jun 2019
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2021	Lockheed Martin / Orlando, FL	SS / FPIF	Huntsville	May 2021	Mar 2024	150	234,491.69	Y		Jun 2019
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2022	Lockheed Martin / Orlando, FL	SS / FPIF	Huntsville	Sep 2022	Oct 2024	153	242,821.00	Y		Sep 2020
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2023	Lockheed Martin / Orlando, FL	SS / FPIF	Huntsville	Mar 2023	Jul 2025	293	225,376.00	Y		Sep 2020
1.1.3) (JG301) Captive Air Training Missile		2020	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Nov 2020	Aug 2022	6	188,042.00	Y		Jan 2019
1.1.3) (JG301) Captive Air Training Missile		2021	Lockheed Martin / Orlando, FL	SS / FPIF	Huntsville	May 2021	Sep 2023	4	213,575.00	Y		Jun 2019
1.1.3) (JG301) Captive Air Training Missile		2022	Lockheed Martin / Orlando, FL	SS / FPIF	Huntsville	May 2022	Sep 2024	6	217,846.00	Y		Sep 2020
1.1.3) (JG301) Captive Air Training Missile		2023	Lockheed Martin / Orlando, FL	SS / FPIF	Huntsville	Dec 2022	Apr 2025	7	222,203.00	Y		Sep 2020

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾																																
Prior Years Deliveries: 99																																
1	2019	NAVY		91	0	91			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91			
1	2019	ARMY ^(‡)		721	0	721			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	721			
1	2019	Total		812	0	812			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	812				
1	2020	NAVY		307	0	307																							307			
1	2020	ARMY ^(‡)		562	0	562																							562			
1	2020	Total		869	0	869																							869			
1	2021	NAVY		150	0	150																							150			
1	2021	ARMY ^(‡)		537	0	537																							537			
1	2021	Total		687	0	687																							687			
1	2022	NAVY		153	0	153																							153			
1	2022	ARMY ^(‡)		354	0	354																							354			
1	2022	Total		507	0	507																							507			
1	2023	NAVY		293	0	293																							293			
1	2023	ARMY ^(‡)		237	0	237																							237			
1	2023	Total		530	0	530																							530			
									O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2248 / Joint Air Ground Missile (JAGM) **Item Number / Title [DODIC]:** 1 / Joint Air Ground Missile (JAGM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 99																																	
1	2019	NAVY	91	0	91	-	-	-	-	-	-	8	7	8	7	7	7	7	8	8	8	8							0				
1	2019	ARMY ^(‡)	721	0	721	-	-	-	-	-	-	43	44	44	44	43	44	69	69	68	94	94	65						0				
1	2019	Total	812	0	812	-	-	-	-	-	-	51	51	52	51	50	51	76	77	76	102	102	73	-	-	-	-	0					
1	2020	NAVY	307	0	307	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	32	32	32	147				
1	2020	ARMY ^(‡)	562	0	562	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	66	68	68	268				
1	2020	Total	869	0	869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56	98	100	100	415					
1	2021	NAVY	150	0	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150				
1	2021	ARMY ^(‡)	537	0	537	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	537				
1	2021	Total	687	0	687	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	687				
1	2022	NAVY	153	0	153													A -	-	-	-	-	-	-	-	-	-	-	153				
1	2022	ARMY ^(‡)	354	0	354													A -	-	-	-	-	-	-	-	-	-	-	354				
1	2022	Total	507	0	507													-	-	-	-	-	-	-	-	-	-	-	507				
1	2023	NAVY	293	0	293																								293				
1	2023	ARMY ^(‡)	237	0	237																								237				
1	2023	Total	530	0	530																								530				
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024													Fiscal Year 2025													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024													Calendar Year 2025													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 99																																	
1	2019	NAVY	91	91	0																												0
1	2019	ARMY ^(‡)	721	721	0																												0
1	2019	Total	812	812	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2020	NAVY	307	160	147	31	29	29	29	29																						0	
1	2020	ARMY ^(‡)	562	294	268	68	68	64	68	-																						0	
1	2020	Total	869	454	415	99	97	93	97	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2021	NAVY	150	0	150	-	-	-	-	-	50	50	50	-	-	-	-															0	
1	2021	ARMY ^(‡)	537	0	537	-	-	-	-	-	47	59	59	109	109	109	45															0	
1	2021	Total	687	0	687	-	-	-	-	-	97	109	109	109	109	109	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1	2022	NAVY	153	0	153	-	-	-	-	-	-	-	-	-	-	-	-	13	13	13	13	13	13	13	13	13	12	12	12		0		
1	2022	ARMY ^(‡)	354	0	354	-	-	-	-	-	-	-	-	-	-	-	-	-	33	33	32	32	32	32	32	32	32	32	32		0		
1	2022	Total	507	0	507	-	-	-	-	-	-	-	-	-	-	-	-	13	46	46	45	45	45	45	45	45	44	44	44		0		
1	2023	NAVY	293	0	293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24	25		220		
1	2023	ARMY ^(‡)	237	0	237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		237		
1	2023	Total	530	0	530	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	24	25		457		
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2026													Fiscal Year 2027													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026													Calendar Year 2027													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 99																																	
1		2019	NAVY	91	91	0																											0
1		2019	ARMY ^(‡)	721	721	0																											0
1		2019	Total	812	812	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1		2020	NAVY	307	307	0																											0
1		2020	ARMY ^(‡)	562	562	0																											0
1		2020	Total	869	869	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1		2021	NAVY	150	150	0																											0
1		2021	ARMY ^(‡)	537	537	0																											0
1		2021	Total	687	687	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1		2022	NAVY	153	153	0																											0
1		2022	ARMY ^(‡)	354	354	0																											0
1		2022	Total	507	507	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
1		2023	NAVY	293	73	220	25	25	25	25	24	24	24	24	24																		0
1		2023	ARMY ^(‡)	237	0	237	-	-	-	32	32	32	32	56	53																		0
1		2023	Total	530	73	457	25	25	25	57	56	56	56	80	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Orlando, FL	600	1,200	1,200	5	12	24	36	5	12	24	36

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2254 / Hellfire
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	6,834	95	120	110	-	110	-	-	-	-	-	7,159
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,056.381	5.572	7.557	6.603	0.000	6.603	0.000	0.000	0.000	0.000	-	1,076.113
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,056.381	5.572	7.557	6.603	0.000	6.603	0.000	0.000	0.000	0.000	-	1,076.113
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,056.381	5.572	7.557	6.603	0.000	6.603	0.000	0.000	0.000	0.000	-	1,076.113

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	131,724.32	53,010.53	60,483.33	56,572.73	-	56,572.73	-	-	-	-	-	128,330.91
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	154,577.26	58,652.63	62,975.00	60,027.27	-	60,027.27	-	-	-	-	-	150,316.11

Description:

AGM-114 Hellfire is a family of laser guided missiles employed against point and moving targets by both rotary and fixed wing aircraft. The family of Hellfire missiles includes, but is not limited to, AGM-114B/K/K2/K2A/M/N/N-5/P/P+/Q/Q6 variants. These variants include shaped charge warheads for use against armored targets and blast fragmentation warheads for use against urban structures. The AGM-114N is a thermobaric blast fragmentation warhead that maintains the capability provided by the AGM-114M while adding a unique capability against confined compartmented spaces, a typical target type observed in current combat operations. Other variants include the K2A, which has a blast frag sleeve for use against soft-skinned tactical vehicles, the N5, which provides a trajectory shaping capability to increase endgame lethality against vertical structures, and the P/P+ variants, which include high altitude launch trajectories for use from fixed-wing aircraft. Additionally, the Q and Q6 variants have inert warheads, which are used for training on ranges that do not allow live warheads, and to preserve tactical missiles for use in combat. Conversions from one variant to another are done on an as needed basis.

Prior year funding includes Hellfire, Viper Strike, and Griffin.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2254 / Hellfire
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Hellfire Missile	P-5a, P-21			6,834 / 1,056.381	95 / 5.572	120 / 7.557	110 / 6.603	- / 0.000	110 / 6.603
P-40	Total Gross/Weapon System Cost				6,834 / 1,056.381	95 / 5.572	120 / 7.557	110 / 6.603	- / 0.000	110 / 6.603

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY2023 funding is for 110 ATM-114Q missiles to replenish inventory used for training requirements and associated engineering and logistics support. Baseline funding in the amount of \$6.603M is provided in support of Over-The-Horizon Demand.

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Exhibit P-5, Cost Analysis: PB 2023 Navy											Date: April 2022										
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2					P-1 Line Item Number / Title: 2254 / Hellfire						Item Number / Title [DODIC]: 1 / Hellfire Missile										
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:										
Resource Summary				Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
Procurement Quantity (Units in Each)				6,834			95			120			110			-			110		
Gross/Weapon System Cost (\$ in Millions)				1,056.381			5.572			7.557			6.603			0.000			6.603		
Less PY Advance Procurement (\$ in Millions)				-			-			-			-			-			-		
Net Procurement (P-1) (\$ in Millions)				1,056.381			5.572			7.557			6.603			0.000			6.603		
Plus CY Advance Procurement (\$ in Millions)				-			-			-			-			-			-		
Total Obligation Authority (\$ in Millions)				1,056.381			5.572			7.557			6.603			0.000			6.603		
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																					
Initial Spares (\$ in Millions)				-			-			-			-			-			-		
Gross/Weapon System Unit Cost (\$ in Dollars)				154,577.26			58,652.63			62,975.00			60,027.27			-			60,027.27		

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) F6010 Hellfire All-Up-Rounds (AURs)	135,013.35	5,992	809.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) F6300 Air Training Missiles ^(†) (1)	56,662.37	853	48.333	53,015.78	95	5.036	55,816.66	120	6.698	56,572.73	110	6.223	-	-	56,572.73	110	6.223	
1.1.3) F6420 Containers	-	-	2.264	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.1.4) Test Set Procurement	-	-	-	-	-	-	-	-	0.560	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	<i>859.597</i>	-	-	<i>5.036</i>	-	-	<i>7.258</i>	-	-	<i>6.223</i>	-	-	-	-	<i>6.223</i>	
<i>Subtotal: Flyaway Cost</i>	-	-	<i>859.597</i>	-	-	<i>5.036</i>	-	-	<i>7.258</i>	-	-	<i>6.223</i>	-	-	-	-	<i>6.223</i>	
Flyaway - Prior Year Flyaway Cost																		
Recurring Cost																		
2.1.1) Prior Year Flyaway ⁽²⁾	-	-	40.607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Recurring Cost</i>	-	-	<i>40.607</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Flyaway - Prior Year Flyaway Cost</i>	-	-	<i>40.607</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Support - Procurement Support Cost																		
3.1) F6240 Government Test Program	-	-	5.579	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Subtotal: Support - Procurement Support Cost</i>	-	-	<i>5.579</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2254 / Hellfire	Item Number / Title [DODIC]: 1 / Hellfire Missile

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support - Product Improvement Cost																		
4.1) F6310 Product Improvement Program	-	-	1.443	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) F6340 Hellfire Conversions	-	-	3.576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) F6820 Training Equipment/Test Equipment	-	-	30.009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Product Improvement Cost</i>	-	-	35.028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Production Engineering Cost																		
5.1) F6850 Production Engineering Support ⁽³⁾	-	-	104.366	-	-	0.293	-	-	0.197	-	-	0.225	-	-	-	-	-	0.225
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	104.366	-	-	0.293	-	-	0.197	-	-	0.225	-	-	-	-	-	0.225
Support - Integrated Logistics Cost																		
6.1) F6860 Integrated Logistics Support ⁽⁴⁾	-	-	11.204	-	-	0.243	-	-	0.102	-	-	0.155	-	-	-	-	-	0.155
<i>Subtotal: Support - Integrated Logistics Cost</i>	-	-	11.204	-	-	0.243	-	-	0.102	-	-	0.155	-	-	-	-	-	0.155
Gross/Weapon System Cost	154,577.26	6,834	1,056.381	58,652.63	95	5.572	62,975.00	120	7.557	60,027.27	110	6.603	-	-	0.000	60,027.27	110	6.603

(t) indicates the presence of a P-5a

Footnotes:

(1) Hellfire Missile unit costs will fluctuate according to total procurement between all services. PB23 Hellfire missile quantity for FY21 is actually 98 vice 95. Buy to budget allowed for three additional Hellfire Missiles to be procured with FY21 funding.

(2) Prior year costs include funding for Viper Strike and Griffin. Funding procured 140 Viper Strike and 130 Griffin missiles.

(3) PES increase above inflation from FY22 to FY23 due to additional support required for last year of planned production.

(4) ILS increase above inflation from FY22 to FY23 due to additional support required for last year of planned production.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2254 / Hellfire	Item Number / Title [DODIC]: 1 / Hellfire Missile
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) F6300 Air Training Missiles ^(†)	✓	2018 ⁽⁵⁾	Lockheed Martin ⁽⁶⁾ / Orlando, FL	C / FPIF	Huntsville	Sep 2018	Sep 2020	157	48,503.18	Y		Feb 2015
1.1.2) F6300 Air Training Missiles ^(†)	✓	2019 ⁽⁷⁾	Lockheed Martin ⁽⁶⁾ / Orlando, FL	C / FPIF	Huntsville	Sep 2019	Sep 2021	30	38,166.66	Y		May 2017
1.1.2) F6300 Air Training Missiles ^(†)	✓	2020	Lockheed Martin ⁽⁶⁾ / Orlando, FL	C / FPIF	Huntsville	Jul 2020	Jul 2022	29	50,672.09	Y		Jan 2019
1.1.2) F6300 Air Training Missiles ^(†)	✓	2021	Lockheed Martin ⁽⁶⁾ / Orlando, FL	C / FPIF	Huntsville	May 2021	May 2023	95	53,015.78	Y		Jan 2019
1.1.2) F6300 Air Training Missiles ^(†)		2022	Lockheed Martin ⁽⁶⁾ / Orlando, FL	SS / FPIF	Huntsville	May 2022	May 2024	120	55,816.66	Y		Sep 2020
1.1.2) F6300 Air Training Missiles ^(†)		2023	Lockheed Martin ⁽⁶⁾ / Orlando, FL	SS / FPIF	Huntsville	Apr 2023	Apr 2025	110	56,572.73	Y		Sep 2020

^(†) indicates the presence of a P-21

Footnotes:

⁽⁵⁾ Original contract awarded in September 2018. Additional QTY's were procured through buy to budget approved and awarded in May 2019 and July 2020. The additional QTY's are reflected on the delivery schedule in July 2022 and August 2022.

⁽⁶⁾ MSR is for Tri-Service Procurement of the Army, Navy and Air Force.

⁽⁷⁾ Original contract awarded in September 2019. Additional QTY's were procured through buy to budget approval and awarded in July 2020. The additional QTY's are reflected on the delivery schedule in July 2022.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2254 / Hellfire	Item Number / Title [DODIC]: 1 / Hellfire Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.2) F6300 Air Training Missiles ⁽¹⁾																															
Prior Years Deliveries: 637																															
✓	1	2018	NAVY	157	0	157																							157		
✓	1	2019	NAVY	30	0	30																							30		
✓	1	2020	NAVY	29	0	29																							29		
✓	1	2021	NAVY	95	0	95																							95		
	1	2022	NAVY	120	0	120																							120		
	1	2023	NAVY	110	0	110																							110		

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2254 / Hellfire **Item Number / Title [DODIC]:** 1 / Hellfire Missile

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE				
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
1.1.2) F6300 Air Training Missiles ⁽¹⁾																																		
Prior Years Deliveries: 637																																		
✓	1	2018	NAVY	157	0	157	-	-	-	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	8	8	9	9	9	9	-	57	
✓	1	2019	NAVY	30	0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	25	
✓	1	2020	NAVY	29	0	29																											29	
✓	1	2021	NAVY	95	0	95																											95	
	1	2022	NAVY	120	0	120																											120	
	1	2023	NAVY	110	0	110																												110
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2254 / Hellfire	Item Number / Title [DODIC]: 1 / Hellfire Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023													BALANCE			
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.2) F6300 Air Training Missiles ⁽¹⁾																																			
Prior Years Deliveries: 637																																			
✓	1	2018	NAVY	157	100	57	-	-	-	-	-	-	-	-	-	-	53	4																	0
✓	1	2019	NAVY	30	5	25	5	5	5	3	-	-	-	-	-	-	7																		0
✓	1	2020	NAVY	29	0	29	-	-	-	-	-	-	-	-	-	-	5	5	5	5	5	4													0
✓	1	2021	NAVY	95	0	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9	8	8	8	53	
	1	2022	NAVY	120	0	120											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120		
	1	2023	NAVY	110	0	110																											110		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2254 / Hellfire **Item Number / Title [DODIC]:** 1 / Hellfire Missile

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.2) F6300 Air Training Missiles ⁽¹⁾																															
Prior Years Deliveries: 637																															
✓	1	2018	NAVY	157	157	0																							0		
✓	1	2019	NAVY	30	30	0																							0		
✓	1	2020	NAVY	29	29	0																							0		
✓	1	2021	NAVY	95	42	53	8	8	8	8	7	7	7																0		
	1	2022	NAVY	120	0	120	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0		
	1	2023	NAVY	110	0	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	9	9	9	9	54		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2254 / Hellfire **Item Number / Title [DODIC]:** 1 / Hellfire Missile

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2026												Fiscal Year 2027												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026												Calendar Year 2027												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.2) F6300 Air Training Missiles ⁽¹⁾																															
Prior Years Deliveries: 637																															
✓	1	2018	NAVY	157	157	0																						0			
✓	1	2019	NAVY	30	30	0																						0			
✓	1	2020	NAVY	29	29	0																						0			
✓	1	2021	NAVY	95	95	0																						0			
	1	2022	NAVY	120	120	0																						0			
	1	2023	NAVY	110	56	54	9	9	9	9	9	9																0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2254 / Hellfire	Item Number / Title [DODIC]: 1 / Hellfire Missile
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Lockheed Martin ⁽⁶⁾ - Orlando, FL	1,200	6,000	8,000	0	0	0	0	0	0	6	24	30

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽⁶⁾ MSR is for Tri-Service Procurement of the Army, Navy and Air Force.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2280 / Aerial Targets
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
<i>Procurement Quantity (Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Cost (\$ in Millions)</i>	4,212.494	163.193	141.446	183.222	0.000	183.222	176.588	178.839	182.323	185.840	Continuing	Continuing
<i>Less PY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Net Procurement (P-1) (\$ in Millions)</i>	4,212.494	163.193	141.446	183.222	0.000	183.222	176.588	178.839	182.323	185.840	Continuing	Continuing
<i>Plus CY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	4,212.494	163.193	141.446	183.222	0.000	183.222	176.588	178.839	182.323	185.840	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

<i>Initial Spares (\$ in Millions)</i>	-	2.407	1.951	2.919	-	2.919	4.247	4.348	4.470	4.502	Continuing	Continuing
<i>Flyaway Unit Cost (\$ in Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Unit Cost (\$ in Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Aerial Targets program provides threat representative aerial targets for test and evaluation (T&E) and fleet training events. Assets procured under this line item are used to simulate and replicate currently fielded subsonic and supersonic Anti-Ship Cruise Missile (ASCM) threats. The threat representative targets are used to test and evaluate Navy ship self-defense systems currently in development, and are required for the successful completion of independent operational test and evaluation prior to fielding the systems to the fleet. Some variants are also used as fleet training assets to support fleet readiness. All assets procured by the Aerial Targets program are critical to evaluating combat and weapon system performance and improving fleet proficiency in counter-ASCM ship area and self defense missions. This program is composed of four primary components: (1) Subsonic Aerial Targets, (2) Supersonic Targets, (3) Full Scale Aerial Target (FSAT), and (4) Auxiliary/Augmenting Systems.

(1) Subsonic Aerial Targets

The Subsonic Aerial Targets (SSAT) portfolio is composed of production and sustainment programs that consist of the BQM-177A, BQM-34S, BQM-74E and other various aerial target programs. The BQM-177A SSAT provides dynamic, high subsonic, sea-skimming, Anti -Ship Cruise Missile threat emulation for fleet training and for the testing of USN ship self-defensive weapon systems and other surface-to-air systems. The BQM-177A is the replacement subsonic target for the BQM-74E. Funding is used for the procurement of the BQM-177A and to procure associated hardware and mission kits, avionics upgrade kits, modifications, Engineering Change Proposals (ECPs) and software upgrades as required. In FY 2020, BQM-177A procurement transitioned from Low Rate Initial Production (LRIP) to Full Rate Production (FRP) with a Navy acquisition objective of 675 targets. Full Operational Capability (FOC) was declared in February 2022. In FY 2022, the program will be in the process of preparing for FRP contract for Lots 4 through 7. The BQM-34S is a jet powered, high subsonic speed aerial target that provides a multitude of payloads for threat emulation. Funding efforts for the BQM-34S are for modifications to allow for continued utilization of current inventories as required to mitigate critical subsonic inventory shortfalls of the BQM-74E and BQM-177A to support Fleet Live-Fire training. These SSAT assets are recoverable and reused dependent on the objectives of each event. Funding may also be used to procure other subsonic targets in support of unique and emerging threat simulations.

(2) Supersonic Targets

The Supersonic targets acquisition program develops, modifies, and procures supersonic targets and boosters to replicate supersonic Anti-Ship Cruise Missile (ASCM) threats. This includes production of the non-recoverable GQM-163A Supersonic Sea Skimming Target (SSST) that is capable of speeds in excess of Mach 2.5 and cruise altitudes as low as 15 feet for the sea skimming regime and a climb to 52,000 feet for a high dive profile and capable of single-plane acceleration maneuvers up to 12g. The GQM-163A meets threat surrogate requirements for critical Test & Evaluation requirements of USN ship self-defense systems along with meeting fleet training Live Fire With a Purpose pre-deployment requirements. Funding is also used for Engineering Change Proposals, modifications, and software upgrades for current and follow-on supersonic targets, to help Supersonic targets keep pace with emerging threats.

(3) Full Scale Aerial Target (FSAT)

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles		P-1 Line Item Number / Title: 2280 / Aerial Targets
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>The QF-16 FSAT is an United States Air Force (USAF) led program providing 4th Generation full-scale threat representative targets. The QF-16 FSAT is a converted F-16 aircraft that provides programs with a supersonic, high altitude and remote controlled aerial target. This target has full command and control capability through normal flight envelopes. The QF-16 target presentations support aircraft and weapons system program testing and development to include the Joint Strike Fighter, AIM-9X Sidewinder Missile, AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM) and Standard Missile-6. As the number of F-16 aircraft available for aerial target conversion are decreasing, the USAF is looking into alternative courses of action for the next generation of full scale targets.</p> <p>(4) Auxiliary/Augmenting System Targets The Auxiliary/Augmenting Systems includes various procurements of target ground control systems required to safely operate all aerial targets and threat simulator(s) payloads that replicate electronic attack and active emitters found on current threat missiles. The Target Mission Support Systems program provides target control and scoring, location, and navigation of targets for fleet training and weapons systems test and evaluation. The Target Threat Simulation Program systems, installed on subsonic or supersonic targets as required, replicate various threats dependent upon the objectives of the test and evaluation event(s). When the target is destroyed, these assets are consumed and require replacement. As requirements to establish readiness capability increase, it is critical to maintain sufficient inventory of the Auxiliary/Augmenting Systems & Target Threat Simulation devices. Avionics equipment, common to all aerial targets, are also procured under Aux/Aug System Targets.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles **P-1 Line Item Number / Title:**
2280 / Aerial Targets

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Subsonic Aerial Targets	P-5a, P-21			- / 880.383	- / 57.323	- / 51.313	- / 65.183	- / 0.000	- / 65.183
P-5	3 / Supersonic Targets	P-5a, P-21			- / 824.060	- / 66.121	- / 49.537	- / 74.646	- / 0.000	- / 74.646
P-5	4 / Full Scale Aerial Target	P-5a			- / 3.670	- / 13.959	- / 13.716	- / 13.796	- / 0.000	- / 13.796
P-5	5 / Aux / Aug System Targets				- / 2,504.381	- / 25.790	- / 26.880	- / 29.597	- / 0.000	- / 29.597
P-40	Total Gross/Weapon System Cost				- / 4,212.494	- / 163.193	- / 141.446	- / 183.222	- / 0.000	- / 183.222

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Subsonic Aerial Targets
 FY 2023 funding supports the procurement of 55 BQM-177A Subsonic Aerial Targets (SSATs) to support forecasted test and evaluation and Fleet Live Fire With a Purpose training requirements, as well as associated kits, equipment, and support. Funds also support continued procurement/installation of avionics upgrade kits for modification to the BQM-177A, BQM-34S, and BQM-74E targets and other subsonic target hardware.

Supersonic Targets
 FY 2023 funding supports the procurement and production of GQM-163A Supersonic Sea Skimming Targets, boosters, target modifications, and associated support. FY 2022 funding is being held to be combined with FY 2023 funding to achieve better economies of scale to procure the maximum production capacity of 28 targets between both years. Combined procurement includes funds for GQM-163A targets for the Commander, SIXTH Fleet, Formidable Shield / Maritime Theater Missile Defense Forum at Sea Demonstration in support of advancing U.S. and NATO Integrated Air and Missile Defense maritime force interoperability and readiness. The program will leverage funds to modify and update existing legacy missiles into inert targets as a backfill solution to the AQM-37 high diver target to simulate supersonic Anti-Ship Cruise Missile (ASCM) threats. Funding also supports the Fin Actuator Control System (FACS) obsolescence to address production throughput and reliability issues affected by the aging FACS; deployable chaff system and outer mold line modifications in order to carry multiple payloads needed to meet DDG FLT-III T&E requirements.

Full Scale Aerial Targets
 FY 2023 funding is required for procurements, production, and modification of the Full Scale Aerial Target (FSAT) such as the QF-16 or next generation FSAT. Funds will support procurement of targets and associated support.

Auxiliary/Augmenting System Targets
 FY 2023 funding is required for Auxiliary/Augmenting Systems to continue production of various target command and control systems, scoring equipment, location, identification, and navigation equipment required to safely operate all aerial targets. The targets require production of various threat simulator(s) payloads that provide affordable high fidelity simulation environments of foreign threat electronic attack and threat radar emissions. Target threat simulation requires various electronic countermeasures equipment and active emitter augmentation equipment.

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Exhibit P-5, Cost Analysis: PB 2023 Navy											Date: April 2022						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2280 / Aerial Targets					Item Number / Title [DODIC]: 1 / Subsonic Aerial Targets						
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:						
Resource Summary				Prior Years		FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total			
Procurement Quantity (Units in Each)				-		-		-		-		-		-			
Gross/Weapon System Cost (\$ in Millions)				880.383		57.323		51.313		65.183		0.000		65.183			
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-			
Net Procurement (P-1) (\$ in Millions)				880.383		57.323		51.313		65.183		0.000		65.183			
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-			
Total Obligation Authority (\$ in Millions)				880.383		57.323		51.313		65.183		0.000		65.183			
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																	
Initial Spares (\$ in Millions)				-		-		-		-		-		-		-	
Gross/Weapon System Unit Cost (\$ in Thousands)				-		-		-		-		-		-		-	

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Subsonic Target Hardware Cost																		
Recurring Cost																		
1.1.1) EM031 BQM-177A ⁽¹⁾ (1)	774.092	130	100.632	806.070	47	37.885	783.346	48	37.601	838.760	55	46.132	-	-	0.000	838.760	55	46.132
1.1.2) EM441 Install/ Mission Kits ⁽²⁾	-	-	31.983	-	-	5.795	-	-	0.685	-	-	4.781	-	-	0.000	-	-	4.781
1.1.3) EM442 BQM-177A Other HW / Modifications ⁽³⁾	-	-	12.933	-	-	4.639	-	-	5.500	-	-	7.647	-	-	0.000	-	-	7.647
1.1.4) EM452 BQM 34/74 Target Modification	-	-	14.856	-	-	1.020	-	-	1.040	-	-	1.000	-	-	0.000	-	-	1.000
<i>Subtotal: Recurring Cost</i>	-	-	160.404	-	-	49.339	-	-	44.826	-	-	59.560	-	-	0.000	-	-	59.560
<i>Subtotal: Flyaway - Subsonic Target Hardware Cost</i>	-	-	160.404	-	-	49.339	-	-	44.826	-	-	59.560	-	-	0.000	-	-	59.560
Flyaway - Subsonic Targets Nonrecurring & Ancillary Equipment Cost																		
Non Recurring Cost																		
2.1.1) EM540 Technical Support	-	-	1.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	1.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Subsonic Targets Nonrecurring & Ancillary Equipment Cost</i>	-	-	1.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 1 / Subsonic Aerial Targets
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Subsonic Target Launch Hardware Cost																		
Recurring Cost																		
3.1.1) EM701 Subsonic Ground Equipment	-	-	23.971	-	-	2.522	-	-	0.919	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	23.971	-	-	2.522	-	-	0.919	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Subsonic Target Launch Hardware Cost</i>	-	-	23.971	-	-	2.522	-	-	0.919	-	-	0.000	-	-	0.000	-	-	0.000
Flyaway - Subsonic Prior Year/Not In Production Cost																		
Non Recurring Cost																		
4.1.1) Prior Year/Not In Production Cost Subsonic	-	-	668.340	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	668.340	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Subsonic Prior Year/Not In Production Cost</i>	-	-	668.340	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - Subsonic Production Support Cost																		
5.1) EM851 Subsonic Production Engineering Support	-	-	19.783	-	-	4.332	-	-	4.418	-	-	4.462	-	-	0.000	-	-	4.462
5.2) EM861 Subsonic Integrated Logistic Support	-	-	5.491	-	-	1.130	-	-	1.150	-	-	1.161	-	-	0.000	-	-	1.161
5.3) EM871 Publications, Training Materials and Equipment ⁽⁴⁾	-	-	0.967	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support - Subsonic Production Support Cost</i>	-	-	26.241	-	-	5.462	-	-	5.568	-	-	5.623	-	-	0.000	-	-	5.623
Gross/Weapon System Cost	-	-	880.383	-	-	57.323	-	-	51.313	-	-	65.183	-	-	0.000	-	-	65.183

(t) indicates the presence of a P-5a

Footnotes:

(1) EM031 BQM-177A: FY 2023 to be awarded on new FRP-4 base contract for the procurement of 55 BQM-177A Subsonic Targets. Unit cost increase is attributable to the incorporation of production related engineering changes, composite material increases, and costs associated with compliance with a FAR Clause 252.228-7001 Ground Flight Risk. FY 2022 unit cost reflects the procurement of 65 BQM-177A targets (48 USN / 17 FMS).

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 1 / Subsonic Aerial Targets
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(2) The EM441 Install/Mission Kits are required to support fleet training and acquisition program test and evaluation. Mission kit quantities and variants vary depending on test & evaluation and training requirements. Kits are not procured on a one for one basis with air vehicle quantities, but rather are procured in different configuration options and installed after delivery depending on the specific presentation requirement. Each production target requires at least one basic kit and can accommodate up to five different kits depending on the event. Prices range from a basic kit at ~\$40K (altimeter, transponder) to a complex kit (altimeter, transponder, telemetry, ECCM/ALE-47) at ~\$170K. Projected FY 2023 requirements account for the increased target procurement (55), an expenditure rate of 50, and Fleet training/ test operations of up to 150 presentations per year. FY 2023 includes funding to procure up to 15 ALE-47 with wingtip pods in support Air-to-Air weapons testing, as well as the APC-4 Infrared Plumer kit (~\$110K) and the MK-28 Flare kit (~\$50K) in support of aviation unit readiness flights. Mission kits procured prior to FY 2022 were for numerous kits supporting LRIP-1 through three airframes. Throughout initial operations of the LRIP platforms, mission kits were redesigned to accommodate changes to LRIP targets, modified to improve reliability and reduce maintenance requirements. As Engineering Change improvements were incorporated into the final Full Rate Production configuration, mission kits evolved to ensure easy integration of packages without field level modifications. The funding plan for FY 2021 and FY 2022 reflects this transition from LRIP to FRP. FY 2023 increase reflects a return to historical funding requirements post-FRP to ensure sufficient mission kits are available to meet fleet training, and test and evaluation threat representative presentation requirements.</p> <p>(3) EM442 BQM-177A Other Hardware and Modifications: Funding supports hardware procurements, modifications and other production improvements and Engineering Change Proposals (ECPs) to help subsonic targets keep pace with emerging threats. Funding increase supports shipboard launch operations hardware for fleet training which provides the capability/authorization to launch from additional ship classes, thus providing the Fleet with flexibility to meet Live Fire With a Purpose Training requirements, and provides more capability for open ocean training events. Additionally, funding will support modifications to drive affordability of target operations such as navigation, changeable radomes, flight data, and telemetry. The total cost may vary from year to year as it depends on the Warfighter and Training demands and costs of the modifications and engineering changes.</p> <p>(4) Publication, Training Materials and Equipment are being procured via the OEM Support Contract. All government Tech Pub updates, material or equipment support will be funded via the appropriate cost element and appropriation as required.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 1 / Subsonic Aerial Targets
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) EM031 BQM-177A ^(†)		2020 ⁽⁵⁾	Kratos / Sacramento, CA / Kratos	SS / FFP	NAVAIR	Sep 2020	Apr 2021	35	834.890	Y		Oct 2019
1.1.1) EM031 BQM-177A ^(†)		2021 ⁽⁶⁾	Kratos / Sacramento, CA / Kratos	SS / FFP	NAVAIR	Dec 2020	Mar 2022	47	806.070	Y		Oct 2019
1.1.1) EM031 BQM-177A ^(†)		2022 ⁽⁷⁾	Kratos / Sacramento, CA / Kratos	SS / FFP	NAVAIR	Dec 2021	Mar 2023	48	783.346	Y		Oct 2019
1.1.1) EM031 BQM-177A ^(†)		2023 ⁽⁸⁾	Kratos / Sacramento, CA / Kratos	SS / FFP	NAVAIR	Dec 2022	Mar 2024	55	838.760	Y		Aug 2021

^(†) indicates the presence of a P-21

Footnotes:

- ⁽⁵⁾ Full Rate Production (FRP) 1 is a new contract; base plus two pre-negotiated options for FRP-2 and FRP-3
- ⁽⁶⁾ FRP-2 is a pre-negotiated option in conjunction with FRP-1 contract
- ⁽⁷⁾ FRP-3 is a pre-negotiated option in conjunction with FRP-1 contract
- ⁽⁸⁾ FRP-4 will be a new contract; base plus three pre-negotiated options for FRP-5, FRP-6 and FRP-7

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2280 / Aerial Targets **Item Number / Title [DODIC]:** 1 / Subsonic Aerial Targets

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022												Fiscal Year 2023												BALANCE		
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
1.1.1) EM031 BQM-177A ⁽¹⁾																															
Prior Years Deliveries: 95																															
1		2020	NAVY	35	18	17	3	3	3	3	3	2																0			
1		2021	NAVY	47	0	47	-	-	-	-	-	4	4	4	4	4	4	4	4	5	3	4	3					0			
1		2022	NAVY	48	0	48			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	20		
1		2022	FMS ⁽²⁾	17	0	17			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17			
1		2022 Total	Total	65	0	65			-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	37			
1		2023	NAVY	55	0	55																A -	-	-	-	-	-	55			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 1 / Subsonic Aerial Targets
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) EM031 BQM-177A ⁽¹⁾																															
Prior Years Deliveries: 95																															
1		2020	NAVY	35	35	0																							0		
1		2021	NAVY	47	47	0																							0		
1		2022	NAVY	48	28	20	4	4	4	4	4																		0		
1		2022	FMS ^(*)	17	0	17	-	1	4	6	6																		0		
1		2022	Total	65	28	37	4	5	8	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2023	NAVY	55	0	55	-	-	-	-	-	4	4	4	4	4	5	5	5	5	5	5	5						0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 1 / Subsonic Aerial Targets
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Kratos / Sacramento, CA - Kratos	30	45	72	0	11	7	18	0	3	15	18

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule. "A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2		P-1 Line Item Number / Title: 2280 / Aerial Targets
		Item Number / Title [DODIC]: 3 / Supersonic Targets

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)		-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		824.060	66.121	49.537	74.646	0.000	74.646
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		824.060	66.121	49.537	74.646	0.000	74.646
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)		824.060	66.121	49.537	74.646	0.000	74.646
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (\$ in Millions)		-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)		-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Other Targets Hardware Cost																		
Recurring Cost																		
1.1.1) EM203 GQM-163A ⁽⁹⁾	2,916.814	156	455.023	3,081.467	14	43.141	2,831.386	10	28.314	2,831.386	18	50.965	-	-	0.000	2,831.386	18	50.965
1.1.2) EM204 GQM-163A Boosters ⁽¹⁰⁾	-	-	11.552	-	-	3.388	-	-	3.250	-	-	5.490	-	-	0.000	-	-	5.490
<i>Subtotal: Recurring Cost</i>	-	-	466.575	-	-	46.529	-	-	31.564	-	-	56.455	-	-	0.000	-	-	56.455
<i>Subtotal: Flyaway - Other Targets Hardware Cost</i>	-	-	466.575	-	-	46.529	-	-	31.564	-	-	56.455	-	-	0.000	-	-	56.455
Flyaway - Hardware-Other Targets Cost																		
Non Recurring Cost																		
2.1.1) EM443 Hardware Procurements / Modifications ⁽¹¹⁾	-	-	14.436	-	-	8.391	-	-	11.400	-	-	11.911	-	-	0.000	-	-	11.911
2.1.2) EM442 Install/ Mission Kits ⁽¹²⁾	-	-	29.432	-	-	5.383	-	-	3.375	-	-	3.600	-	-	0.000	-	-	3.600
<i>Subtotal: Non Recurring Cost</i>	-	-	43.868	-	-	13.774	-	-	14.775	-	-	15.511	-	-	0.000	-	-	15.511
<i>Subtotal: Flyaway - Hardware-Other Targets Cost</i>	-	-	43.868	-	-	13.774	-	-	14.775	-	-	15.511	-	-	0.000	-	-	15.511
Flyaway - Other Targets Launch Hardware Cost																		
Non Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / O2 / 2 **P-1 Line Item Number / Title:** 2280 / Aerial Targets **Item Number / Title [DODIC]:** 3 / Supersonic Targets

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
3.1.1) EM702 Ground Equipment	-	-	9.404	-	-	1.619	-	-	0.556	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	9.404	-	-	1.619	-	-	0.556	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Other Targets Launch Hardware Cost</i>	-	-	9.404	-	-	1.619	-	-	0.556	-	-	0.000	-	-	0.000	-	-	0.000
Flyaway - GQM-163A Long Lead Item Cost																		
Recurring Cost																		
4.1.1) Long Lead Credit ⁽¹³⁾	-	-	-6.008	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.2) Long Lead Components ⁽¹⁴⁾	-	-	5.745	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	-0.263	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - GQM-163A Long Lead Item Cost</i>	-	-	-0.263	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Flyaway - Other Targets FY06 and PRIOR Cost																		
Non Recurring Cost																		
5.1.1) Non Recurring Cost	-	-	250.054	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	250.054	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Flyaway - Other Targets FY06 and PRIOR Cost</i>	-	-	250.054	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support Cost																		
6.1) EM852 Production Engineering Support	-	-	41.422	-	-	2.591	-	-	2.642	-	-	2.680	-	-	0.000	-	-	2.680
6.2) EM853 NSWC WSMR ARAV Target Support (OCO Funds)	-	-	6.500	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.3) EM854 Hebrides/ Formidable Shield Exercises ⁽¹⁵⁾	-	-	6.500	-	-	1.608	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support Cost</i>	-	-	54.422	-	-	4.199	-	-	2.642	-	-	2.680	-	-	0.000	-	-	2.680
Gross/Weapon System Cost	-	-	824.060	-	-	66.121	-	-	49.537	-	-	74.646	-	-	0.000	-	-	74.646

Remarks:

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Supersonic Targets Set was previously identified as "other Targets". Name has been updated to more accurately reflect the target portfolio that this P-5 Set represents.		
(†) indicates the presence of a P-5a		
Footnotes:		
(9) EM203 GQM-163A: The program will combine FY 2022 and FY 2023 funding in a single full-rate production award to reduce unit cost and achieve better economies of scale. The unit cost of \$2.8M in FY 2022 and FY 2023 is based on the procurement of a combined total of 28 GQM-163A targets to be awarded in December 2022. This funding strategy mitigates production backlog caused by sub-vendor challenges and re-baselines the current delivery schedule. Cost savings realized from this funding strategy have been reinvested into the Aerial Targets program to address target modifications, reliability upgrades, and obsolescence issues needed to keep pace with emerging threats and support target presentation requirements of Navy acquisition program and the Fleet. Funding includes the procurement of GQM-163A targets for the Commander, SIXTH Fleet, Formidable Shield / Maritime Theater Missile Defense Forum at Sea Demonstration in support of advancing U.S. and NATO Integrated Air and Missile Defense maritime force interoperability and readiness		
(10) EM204 GQM-163A Boosters are broken out separately as they are not produced by the OEM and are contracted via different activities. Increase from FY 2022 to FY 2023 reflects increased quantities being procured.		
(11) EM443 Hardware Procurements / Modifications support engineering changes and other modifications necessary to ensure supersonic targets keep pace with emerging threats. The focus throughout the FYDP for the Supersonic targets is target capability improvements. Funding supports the modification of the AQM-37 follow-on effort which provides an interim solution for supersonic high diver target requirements; Fin Actuator Control System (FACS) obsolescence to address production throughput and reliability issues affected by the aging FACS; deployable chaff system; and outer mold line modifications in order to carry multiple payloads needed to meet DDG FLT-III T&E requirements. The cost and type of hardware modifications vary from each FY depending upon current threats, and fleet test and training requirements.		
(12) EM442 Install/Mission Kits: Mission kit quantities vary depending on acquisition program test and evaluation and fleet training presentation requirements and are not procured on a one for one basis with air vehicle quantities. The kit procurements are based on a projection of the user demand which is based on the mission profiles required for specific test objectives. Each type of kit is priced differently so the total costs of the kits is not a direct reflection on the quantity of kits being procured. The varying demand and cost of the mission kits accounts for the increases and decreases of this cost element from year to year.		
(13) Long Lead Credit was for Steel procurements that will now be procured annually with the FRP production lots, commencing in FY 2020.		
(14) Long Lead Credit was for Steel procurements that will now be procured annually with the FRP production lots, commencing in FY 2020.		
(15) Cost Code EM854 supports the GQM-163A target launch site activation in support of Formidable Shield ASD/Fleet Training Exercises in Hebrides, Scotland.		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) EM203 GQM-163A ^(†)		2017 ⁽¹⁶⁾	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Mar 2018	Mar 2021	24	2,645.333	Y		Dec 2016
1.1.1) EM203 GQM-163A ^(†)		2018 ⁽¹⁸⁾	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Jul 2018	Jul 2022	17	2,897.299	Y		Dec 2016
1.1.1) EM203 GQM-163A ^(†)		2019 ⁽¹⁹⁾	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Dec 2018	Mar 2023	14	3,045.286	Y		Dec 2016
1.1.1) EM203 GQM-163A ^(†)		2020 ⁽²⁰⁾	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Nov 2020	Oct 2023	16	3,005.085	Y		Aug 2019
1.1.1) EM203 GQM-163A ^(†)		2021 ⁽²¹⁾	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Feb 2021	Jun 2024	14	3,081.467	Y		Aug 2019
1.1.1) EM203 GQM-163A ^(†)		2022 ⁽²²⁾	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Dec 2022	Mar 2025	10	2,831.386	Y		Aug 2019
1.1.1) EM203 GQM-163A ^(†)		2023	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Dec 2022	Aug 2025	18	2,831.386	Y		Aug 2019

^(†) indicates the presence of a P-21

Footnotes:

⁽¹⁶⁾ FRP 11 includes a base contract plus pre-negotiated options for FRP12 and FRP13. Deliveries updated to reflect re-baseline schedule.

⁽¹⁷⁾ The maximum production rate is currently limited to 28 units due to the availability of Government Furnished Property (GFP) and OEM limitations. The program is exploring GFP alternatives in order to increase the maximum procurement rate to 32 units per year.

⁽¹⁸⁾ FRP 12 pre-negotiated option that is negotiated in conjunction with the FRP11 contract. Deliveries updated to reflect re-baseline schedule.

⁽¹⁹⁾ FRP 13 pre-negotiated option that is negotiated in conjunction with the FRP11 contract. Deliveries updated to reflect re-baseline schedule.

⁽²⁰⁾ FRP 14 new contract; includes a base plus three pre-negotiated options for FRP15, FRP16 and FRP17. Deliveries updated to reflect re-baseline schedule.

⁽²¹⁾ FRP 15 pre-negotiated option in conjunction with the FRP 14 contract to include Formidable Shield . Deliveries updated to reflect re-baseline schedule.

⁽²²⁾ FRP 16 pre-negotiated option in conjunction with the FRP 14 contract to include Formidable Shield. FRP-16 will combine FY22/23 funding in a single full-rate production award.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) EM203 GQM-163A ⁽⁹⁾																															
Prior Years Deliveries: 85																															
	1	2017	NAVY	24	0	24																						24			
	1	2018	NAVY	17	0	17																						17			
	1	2018	FMS ^(‡)	1	0	1																						1			
	1	2018	Total	18	0	18																						18			
	1	2019	NAVY	14	0	14																						14			
	1	2019	FMS ^(‡)	1	0	1																						1			
	1	2019	Total	15	0	15																						15			
	1	2020	NAVY	16	0	16																						16			
	1	2020	FMS ^(‡)	3	0	3																						3			
	1	2020	Total	19	0	19																						19			
	1	2021	NAVY	14	0	14																						14			
	1	2021	FMS ^(‡)	4	0	4																						4			
	1	2021	Total	18	0	18																						18			
	1	2022	NAVY	10	0	10																						10			
	1	2023	NAVY	18	0	18																						18			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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Cost Elements <i>(Units in Each)</i>				Fiscal Year 2020														Fiscal Year 2021												BALANCE					
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020														Calendar Year 2021														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P				
1.1.1) EM203 GQM-163A ⁽⁹⁾																																			
Prior Years Deliveries: 85																																			
	1	2017	NAVY	24	0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2	-	-	2	2	15
	1	2018	NAVY	17	0	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
	1	2018	FMS ^(‡)	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	1	2018	Total	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	
	1	2019	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14
	1	2019	FMS ^(‡)	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	1	2019	Total	15	0	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
	1	2020	NAVY	16	0	16																													16
	1	2020	FMS ^(‡)	3	0	3																													3
	1	2020	Total	19	0	19																													19
	1	2021	NAVY	14	0	14																													14
	1	2021	FMS ^(‡)	4	0	4																													4
	1	2021	Total	18	0	18																													18
	1	2022	NAVY	10	0	10																													10
	1	2023	NAVY	18	0	18																													18
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022													Fiscal Year 2023													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) EM203 GQM-163A ⁽⁹⁾																																	
Prior Years Deliveries: 85																																	
	1	2017	NAVY	24	9	15	-	-	-	-	6	3	2	2	2														0				
	1	2018	NAVY	17	0	17	-	-	-	-	-	-	-	-	-	2	2	2	3	2	2	2	2	-					0				
	1	2018	FMS ^(‡)	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1						0				
	1	2018	Total	18	0	18	-	-	-	-	-	-	-	-	2	2	2	3	2	2	2	2	1	-	-	-	-	-	0				
	1	2019	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	3	2	1	0			
	1	2019	FMS ^(‡)	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0				
	1	2019	Total	15	0	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	3	2	2	0			
	1	2020	NAVY	16	0	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16				
	1	2020	FMS ^(‡)	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3				
	1	2020	Total	19	0	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19				
	1	2021	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14				
	1	2021	FMS ^(‡)	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4				
	1	2021	Total	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18				
	1	2022	NAVY	10	0	10																							10				
	1	2023	NAVY	18	0	18																							18				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) EM203 GQM-163A ⁽⁹⁾																															
Prior Years Deliveries: 85																															
	1	2017	NAVY	24	24	0																							0		
	1	2018	NAVY	17	17	0																							0		
	1	2018	FMS ^(‡)	1	1	0																							0		
	1	2018	Total	18	18	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2019	NAVY	14	14	0																							0		
	1	2019	FMS ^(‡)	1	1	0																							0		
	1	2019	Total	15	15	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2020	NAVY	16	0	16	2	2	2	2	3	3	1	1															0		
	1	2020	FMS ^(‡)	3	0	3	-	-	-	-	-	-	1	2															0		
	1	2020	Total	19	0	19	2	2	2	2	3	3	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2021	NAVY	14	0	14	-	-	-	-	-	-	-	2	-	2	2	2	-	2	2	2							0		
	1	2021	FMS ^(‡)	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2						0			
	1	2021	Total	18	0	18	-	-	-	-	-	-	-	2	-	2	2	2	-	2	4	4	-	-	-	-	-	0			
	1	2022	NAVY	10	0	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2			0			
	1	2023	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	14			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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Cost Elements <i>(Units in Each)</i>							Fiscal Year 2026														Fiscal Year 2027														BALANCE
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026														Calendar Year 2027														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) EM203 GQM-163A ⁽⁹⁾																																			
Prior Years Deliveries: 85																																			
	1	2017	NAVY	24	24	0																							0						
	1	2018	NAVY	17	17	0																							0						
	1	2018	FMS ^(‡)	1	1	0																							0						
	1	2018	Total	18	18	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
	1	2019	NAVY	14	14	0																							0						
	1	2019	FMS ^(‡)	1	1	0																							0						
	1	2019	Total	15	15	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
	1	2020	NAVY	16	16	0																							0						
	1	2020	FMS ^(‡)	3	3	0																							0						
	1	2020	Total	19	19	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
	1	2021	NAVY	14	14	0																							0						
	1	2021	FMS ^(‡)	4	4	0																							0						
	1	2021	Total	18	18	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
	1	2022	NAVY	10	10	0																							0						
	1	2023	NAVY	18	4	14	2	3	3	3	3																		0						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Supersonic Targets
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	NORTHROP GRUMMAN INNOVATION SYSTEMS ⁽¹⁷⁾ - CHANDLER AZ	6	21	28	14	1	28	29	0	3	36	39

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽¹⁷⁾ The maximum production rate is currently limited to 28 units due to the availability of Government Furnished Property (GFP) and OEM limitations. The program is exploring GFP alternatives in order to increase the maximum procurement rate to 32 units per year.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 4 / Full Scale Aerial Target

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3.670	13.959	13.716	13.796	0.000	13.796
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3.670	13.959	13.716	13.796	0.000	13.796
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3.670	13.959	13.716	13.796	0.000	13.796

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Hardware Cost																		
Recurring Cost																		
1.1.1) EMA11 QF-16 FSAT Production ^(†) (23)	-	-	0.000	1,454.787	2	2.910	1,483.882	2	2.968	1,513.560	2	3.027	-	-	0.000	1,513.560	2	3.027
1.1.2) EMA12 QF-16 FSAT Hardware (24)	-	-	2.391	-	-	10.397	-	-	10.090	-	-	10.112	-	-	0.000	-	-	10.112
<i>Subtotal: Recurring Cost</i>	-	-	<i>2.391</i>	-	-	<i>13.307</i>	-	-	<i>13.058</i>	-	-	<i>13.139</i>	-	-	<i>0.000</i>	-	-	<i>13.139</i>
<i>Subtotal: Flyaway - Hardware Cost</i>	-	-	<i>2.391</i>	-	-	<i>13.307</i>	-	-	<i>13.058</i>	-	-	<i>13.139</i>	-	-	<i>0.000</i>	-	-	<i>13.139</i>
Support - Production Support Cost																		
2.1) EM890 Production Management	-	-	0.303	-	-	0.156	-	-	0.159	-	-	0.162	-	-	0.000	-	-	0.162
2.2) EM855 Production Engineering	-	-	0.976	-	-	0.496	-	-	0.499	-	-	0.495	-	-	0.000	-	-	0.495
<i>Subtotal: Support - Production Support Cost</i>	-	-	<i>1.279</i>	-	-	<i>0.652</i>	-	-	<i>0.658</i>	-	-	<i>0.657</i>	-	-	<i>0.000</i>	-	-	<i>0.657</i>
Gross/Weapon System Cost	-	-	3.670	-	-	13.959	-	-	13.716	-	-	13.796	-	-	0.000	-	-	13.796

(†) indicates the presence of a P-5a

Footnotes:

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 4 / Full Scale Aerial Target
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
<p>⁽²³⁾ EMA11 QF-16 Full Scale Aerial Target (FSAT): Unit cost is not indicative of true unit costs of one QF-16 target. The quantities and price purchased via contract varies per year and is based on the procurement agreement between the United States (US) Navy and the US Air Force (USAF). The total cost of the QF-16 target includes EMA12 QF-16 Hardware/ regeneration efforts as well.</p> <p>⁽²⁴⁾ EMA12 QF-16 Hardware: Funds the regeneration of drones and engines; including the parts and associated support. The regeneration costs can vary per year based on the amount of needed modernization, however, it is proportional to the number of units procured. This includes the costs of regeneration efforts at US Air Force AMARG and Edwards AFBs and is included in the total flyaway cost of the QF-16 targets.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 4 / Full Scale Aerial Target
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) EMA11 QF-16 FSAT Production		2021 ⁽²⁵⁾	BOEING INC ⁽²⁶⁾ / ST LOUIS, MO	SS / CPFF	Eglin AFB, FL	Nov 2021	Nov 2023	2	1,454.787	Y		Jun 2019
1.1.1) EMA11 QF-16 FSAT Production		2022 ⁽²⁷⁾	BOEING INC ⁽²⁶⁾ / ST LOUIS, MO	C / TBD	Eglin AFB, FL	Jun 2022	Jun 2024	2	1,483.882	Y		Jun 2019
1.1.1) EMA11 QF-16 FSAT Production		2023 ⁽²⁸⁾	BOEING INC ⁽²⁶⁾ / ST LOUIS, MO	C / TBD	Eglin AFB, FL	Jun 2023	Jun 2025	2	1,513.560	Y		Jun 2019

Footnotes:

- ⁽²⁵⁾ Lot 6
- ⁽²⁶⁾ Production rates are based on joint procurements between the United States Air Force and the United States Navy.
- ⁽²⁷⁾ Lot 7. Estimated award date.
- ⁽²⁸⁾ Lot 8. Estimated award date.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 5 / Aux / Aug System Targets

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	2,504.381	25.790	26.880	29.597	0.000	29.597
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	2,504.381	25.790	26.880	29.597	0.000	29.597
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	2,504.381	25.790	26.880	29.597	0.000	29.597

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway - Aux/Aug Sys Targets Hardware Cost																		
Recurring Cost																		
1.1.1) EM304 ECM/Emitter Equipment ⁽²⁹⁾	-	-	82.472	-	-	10.907	-	-	10.670	-	-	12.450	-	-	0.000	-	-	12.450
1.1.2) EM307 Target Common Avionics Equipment ⁽³⁰⁾	-	-	36.296	-	-	9.789	-	-	11.016	-	-	11.900	-	-	0.000	-	-	11.900
<i>Subtotal: Recurring Cost</i>	-	-	<i>118.768</i>	-	-	<i>20.696</i>	-	-	<i>21.686</i>	-	-	<i>24.350</i>	-	-	<i>0.000</i>	-	-	<i>24.350</i>
Non Recurring Cost																		
1.2.1) Prior Year No Longer Procured	-	-	334.305	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	<i>334.305</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>
<i>Subtotal: Flyaway - Aux/Aug Sys Targets Hardware Cost</i>	-	-	<i>453.073</i>	-	-	<i>20.696</i>	-	-	<i>21.686</i>	-	-	<i>24.350</i>	-	-	<i>0.000</i>	-	-	<i>24.350</i>
Flyaway - Aux/Aug Sys Targets FY06 and PRIOR Cost																		
Non Recurring Cost																		
2.1.1) Prior year costs no longer financed beyond 1995	-	-	1,992.884	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	<i>1,992.884</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>
<i>Subtotal: Flyaway - Aux/Aug Sys Targets FY06 and PRIOR Cost</i>	-	-	<i>1,992.884</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>	-	-	<i>0.000</i>

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 5 / Aux / Aug System Targets					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Support - Aux/Aug Sys Targets Support Cost																		
3.1) EM823 Training Equipment	-	-	2.520	-	-	0.204	-	-	0.208	-	-	0.210	-	-	0.000	-	-	0.210
3.2) EM853 Production Engineering Support	-	-	45.004	-	-	3.941	-	-	4.019	-	-	4.059	-	-	0.000	-	-	4.059
3.3) EM863 Integrated Logistics Support (ILS)	-	-	9.369	-	-	0.864	-	-	0.881	-	-	0.890	-	-	0.000	-	-	0.890
3.4) EM873 Documentation	-	-	1.531	-	-	0.085	-	-	0.086	-	-	0.088	-	-	0.000	-	-	0.088
<i>Subtotal: Support - Aux/Aug Sys Targets Support Cost</i>	-	-	58.424	-	-	5.094	-	-	5.194	-	-	5.247	-	-	0.000	-	-	5.247
Gross/Weapon System Cost	-	-	2,504.381	-	-	25.790	-	-	26.880	-	-	29.597	-	-	0.000	-	-	29.597

Footnotes:

- (29) EM304 ECM/Emitter Equipment increases throughout the FYDP to support Operational requirements of Target Threat Simulation Payloads to ensure Fleet readiness in keeping pace with emerging threats. Increases in FY 2023 includes the procurement of miniaturized payloads in support of Supersonic targets.
- (30) EM307 Target Common Avionics Equipment increase from FY 2022 to FY 2023 to support procurements of Aerial Target Mission Support Systems and address upgrades for the System for Navy Target Control (SNTC) Block 3C due to obsolescence issues which impacts the fleet's ability to successfully test the effectiveness of ship defense. Upgrades enable increased reporting rate and accuracy of tracking for both targets and surface combatants on the ranges to enable closer flight of targets to test close-in weapons systems safely.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2285 / Drones and Decoys
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204162N	Other Related Program Elements: 0604659N
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	12	18	61	-	61	155	80	81	80	263	750
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	19.956	30.321	62.930	0.000	62.930	139.726	82.693	85.025	85.610	241.799	748.060
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	19.956	30.321	62.930	0.000	62.930	139.726	82.693	85.025	85.610	241.799	748.060
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	19.956	30.321	62.930	0.000	62.930	139.726	82.693	85.025	85.610	241.799	748.060

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	1,663K	1,684K	1,032K	-	1,032K	901,458.06	1,034K	1,050K	1,070K	919,387.83	997,413.33

Description:

The Drones and Decoys Line Item (LI) supports the air-launched electronic warfare (EW) systems capability; through the integration of a Navy variant of the Miniature Air Launched Decoy (MALD). EW is an integral war-fighting effect supporting combatant commander integrated priorities, as well as Joint or Coalition operations. EW systems influence, deceive, disrupt, degrade, deny and destroy threats throughout the electromagnetic spectrum to airborne and air-launched systems and their operations. EW includes air-launched electronic attack (EA) as well as elements of electronic support (ES) and electronic protection (EP). EA provides self-protection capabilities to other weapon systems through active and passive measures that deceive threats to airborne and air-launched systems and their operations by using kinetic and non-kinetic means to defeat threats that rely on the electromagnetic spectrum, Radio Frequency (RF), Electro-Optical (EO), Infrared (IR). The ES capabilities support the collection, analysis, and dissemination of information related to the detection, geo-location, characterization, and identification of threats to airborne and air-launched systems and their operations. An air-launched EW system with stand-in capability increases the range and duration of EW systems while providing flexibility to commanders for employment.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2285 / Drones and Decoys

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** 0204162N **Other Related Program Elements:** 0604659N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Drones and Decoys	P-5a, P-21			- / 0.000	12 / 19.956	18 / 30.321	61 / 62.930	- / 0.000	61 / 62.930
P-40	Total Gross/Weapon System Cost				- / 0.000	12 / 19.956	18 / 30.321	61 / 62.930	- / 0.000	61 / 62.930

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
The FY 2022 enacted includes congressional rescissions of \$19.956M to FY 2021. However, these rescissions are not reflected on the P-40. Though not reflected, the correct quantity to complete is 275 and correct cost to complete is \$261.755M. Total procurement quantity of 750 and associated total cost of \$748.060M remains unchanged.

This BLI supports the Navy variant of the Miniature Air Launched Decoy (MALD). FY 2023 funding is for the procurement of 61 MALD-N's, containers, cables and associated support.

MALD is integral to realizing the National Defense Strategy of combat-credible military forces to deter war, protect the security of our nation and to enable the Joint Force to win should deterrence fail. The development and acquisition of MALD has been structured to be fielded at a pace relevant to maintain overmatch against long-term strategic competition. Specifically MALD directly contributes to building a more lethal force and is a critical enabler for joint lethality in contested environments; deterring adversaries from aggression and evolves innovative operational concepts.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2		P-1 Line Item Number / Title: 2285 / Drones and Decoys
		Item Number / Title [DODIC]: 1 / Drones and Decoys

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity <i>(Units in Each)</i>	-	12	18	61	-	61
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	19.956	30.321	62.930	0.000	62.930
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	19.956	30.321	62.930	0.000	62.930
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	19.956	30.321	62.930	0.000	62.930

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	1,663K	1,684K	1,032K	-	1,032K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) MALD Minature Air Launched Decoy ^(t) (1)	-	-	-	-	-	-	1,662K	18	29.915	1,017K	61	62.033	-	-	-	1,017K	61	62.033
1.1.2) Containers ^(t) (2)	-	-	-	-	-	-	10,284.00	18	0.185	10,490.00	61	0.640	-	-	-	10,490.00	61	0.640
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	30.100	-	-	62.673	-	-	-	-	-	62.673
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	30.100	-	-	62.673	-	-	-	-	-	62.673
Support Cost																		
2.1) GIH Production Support ⁽³⁾	-	-	-	-	-	-	-	-	0.221	-	-	0.257	-	-	-	-	-	0.257
2.2) FY 2022 Enacted Rescissions ⁽⁴⁾	-	-	-	-	-	19.956	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support Cost</i>	-	-	-	-	-	19.956	-	-	0.221	-	-	0.257	-	-	-	-	-	0.257
Gross/Weapon System Cost	-	-	0.000	1,663K	12	19.956	1,684K	18	30.321	1,032K	61	62.930	-	-	0.000	1,032K	61	62.930

^(t) indicates the presence of a P-5a

Footnotes:

⁽¹⁾ MALD: Unit Cost based on analysis of currently available cost data and contractor proposals. FY 2023 funding is for the procurement of 61 MALD-N's, containers, cables and associated support. FY 2021 funding of \$19.956M was rescinded in the FY 2022 enactment.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2285 / Drones and Decoys	Item Number / Title [DODIC]: 1 / Drones and Decoys
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
<p>(2) Containers: Ratio of containers to MALD is 1:1</p> <p>(3) GIH Production Support increases over inflation in FY 2023 as programs transitions from development into procurement with increased procurement quantities.</p> <p>(4) FY 2022 Enacted Rescissions: The FY 2022 enacted includes congressional rescissions of \$19.956M of FY 2021 funding. However, these rescissions are not reflected on the P-40. The impact of these rescissions are reflected in the other cost elements.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2285 / Drones and Decoys	Item Number / Title [DODIC]: 1 / Drones and Decoys
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MALD Minature Air Launched Decoy ^(†)		2022 ⁽⁵⁾	Raytheon CO / Tucson AZ	SS / FPIF	NAVAIR	Mar 2023	Dec 2024	18	1,662K	N	Jul 2022	Jul 2022
1.1.1) MALD Minature Air Launched Decoy ^(†)		2023 ⁽⁶⁾	Raytheon CO / Tucson AZ	SS / FPIF	NAVAIR	Mar 2023	Feb 2025	61	1,017K	N	Jul 2022	Jul 2022
1.1.2) Containers		2022 ⁽⁷⁾	TBD / TBD	TBD	NAVAIR	Mar 2023	Dec 2024	18	10,284.00	N	Jul 2022	Jul 2022
1.1.2) Containers		2023 ⁽⁸⁾	TBD / TBD	TBD	NAVAIR	Mar 2023	Feb 2025	61	10,490.00	N	May 2023	Jul 2022

^(†) indicates the presence of a P-21

Footnotes:

⁽⁵⁾ FY 2022 funds LRIP 1

⁽⁶⁾ FY 2023 funds LRIP 1

⁽⁷⁾ FY 2022 container contract will be awarded competitively via NAVAIR. FY 2022 funds LRIP 1

⁽⁸⁾ FY 2023 funds LRIP 1

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2285 / Drones and Decoys	Item Number / Title [DODIC]: 1 / Drones and Decoys
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MALD Minature Air Launched Decoy ⁽¹⁾																															
	1	2022	NAVY	18	0	18																								18	
	1	2023	NAVY	61	0	61																								61	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2285 / Drones and Decoys	Item Number / Title [DODIC]: 1 / Drones and Decoys
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MALD Minature Air Launched Decoy ⁽¹⁾																															
1		2022	NAVY	18	0	18	-	-	9	9																			0		
1		2023	NAVY	61	0	61	-	-	-	-	12	12	12	12	13														0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy									Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2285 / Drones and Decoys					Item Number / Title [DODIC]: 1 / Drones and Decoys			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon CO - Tucson AZ	30	480	480	0	6	19	25	0	2	19	21

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2290 / Other Missile Support
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	63.958	3.501	3.474	3.524	0.000	3.524	3.607	3.658	3.732	3.807	-	89.261
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	63.958	3.501	3.474	3.524	0.000	3.524	3.607	3.658	3.732	3.807	-	89.261
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	63.958	3.501	3.474	3.524	0.000	3.524	3.607	3.658	3.732	3.807	-	89.261

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MK-41 Vertical Launching System (VLS) is a surface combatant missile launching system designed to store, select, and launch various Standard Missile configurations, Tomahawk, Tactical Tomahawk, Evolved Seasparrow (ESSM) and Vertical Launch Anti-Submarine Rocket (ASROC) (VLA) missiles. The MK-41 VLS significantly improves missile capacity, flexibility, multi-mission capability, reaction time, rate of fire, and is designed to be adaptable to present and future weapon systems. Current configurations are: two 61 cell launchers (forward and aft) for 22 TICONDEROGA (CG 47) Class Cruisers beginning with CG-52, one 61 cell aft and one 29 cell launcher forward for 28 ARLEIGH BURKE (DDG 51) Class Destroyers, one 64 cell launcher aft and one 32 cell launcher forward for 34 DDG 51 FLT IIA ships.

[P5 / CANISTER EQUIPMENT]: Funds procurement and installation of canister and gas management hardware Engineering Change Proposals (ECPs) and Ordnance Alterations (ORDALTs).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2290 / Other Missile Support

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Other Missile Support				- / 63.958	- / 3.501	- / 3.474	- / 3.524	- / 0.000	- / 3.524
P-40	Total Gross/Weapon System Cost				- / 63.958	- / 3.501	- / 3.474	- / 3.524	- / 0.000	- / 3.524

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY23 funds are required for production support and Integrated Logistics Support (ILS) including: supply support, provisioning and technical documentation in support of weapon stations, All Up Round (AUR) facilities, and the fleet. Funds also provide for development and procurement of critical Engineering Change Proposals (ECP) and Ordnance Alterations (ORDALT) that improve reliability and implement safety upgrades for MK-41 VLS canisters and gas management hardware. Availability of upgraded canisters, canister hardware, and gas management hardware directly impacts fleet loadouts, operational availability, and safety.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2290 / Other Missile Support	Item Number / Title [DODIC]: 1 / Other Missile Support

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	63.958	3.501	3.474	3.524	0.000	3.524
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	63.958	3.501	3.474	3.524	0.000	3.524
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	63.958	3.501	3.474	3.524	0.000	3.524

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) CANISTER EQUIPMENT	-	-	50.572	-	-	1.404	-	-	1.425	-	-	1.445	-	-	-	-	-	1.445
<i>Subtotal: Recurring Cost</i>	-	-	<i>50.572</i>	-	-	<i>1.404</i>	-	-	<i>1.425</i>	-	-	<i>1.445</i>	-	-	<i>-</i>	-	-	<i>1.445</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>50.572</i>	-	-	<i>1.404</i>	-	-	<i>1.425</i>	-	-	<i>1.445</i>	-	-	<i>-</i>	-	-	<i>1.445</i>
Support Cost																		
2.1) ILS SUPPORT ⁽¹⁾	-	-	13.386	-	-	2.097	-	-	2.049	-	-	2.079	-	-	-	-	-	2.079
<i>Subtotal: Support Cost</i>	-	-	<i>13.386</i>	-	-	<i>2.097</i>	-	-	<i>2.049</i>	-	-	<i>2.079</i>	-	-	<i>-</i>	-	-	<i>2.079</i>
Gross/Weapon System Cost	-	-	63.958	-	-	3.501	-	-	3.474	-	-	3.524	-	-	0.000	-	-	3.524

Footnotes:
⁽¹⁾ Funds increased from FY 2022 to FY 2023. Additional funding will support Seal Beach, Yorktown with canister management. This would include on & offloads and gas management tasking.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2291 / LRASM
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0204167N	Other Related Program Elements: 0604786N
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	99	43	48	60	-	60	61	46	47	46	-	450
Gross/Weapon System Cost (<i>\$ in Millions</i>)	377.594	134.065	161.212	226.022	0.000	226.022	221.127	152.944	155.705	156.430	-	1,585.099
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	377.594	134.065	161.212	226.022	0.000	226.022	221.127	152.944	155.705	156.430	-	1,585.099
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	377.594	134.065	161.212	226.022	0.000	226.022	221.127	152.944	155.705	156.430	-	1,585.099

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	3,814K	3,118K	3,359K	3,767K	-	3,767K	3,625K	3,325K	3,313K	3,401K	-	3,522K

Description:

Long Range Anti-Ship Missile (LRASM) is Increment 1 of the Offensive Anti-Surface Warfare (OASuW) weapon development program. LRASM (AGM-158C) is a key air launched component of the Navy's overall Cruise Missile Strategy. The Department has transitioned the Defense Advanced Research Projects Agency (DARPA) / Office of Naval Research (ONR) LRASM demonstration design into a fielded weapon system which supports an increased offensive strike capability with an Early Operational Capability (EOC) for U.S. Air Force B-1 (Q1FY2019) and U.S. Navy F/A-18E/F (Q1FY2020). In response to U.S. Pacific Command Urgent Operation Need (UON) statement, LRASM provides the first increment of the next generation ASuW capabilities addressing the most urgent air-launched requirement, significantly reducing joint force warfighting risks, and positioning the Department to address evolving surface warfare threats. LRASM is integral to realizing the National Defense Strategy of combat-credible military forces to deter war, protect the security of our nation and to enable the Joint Force to win should deterrence fail. The development and acquisition of LRASM has been structured to be fielded at a pace relevant to maintain overmatch against long-term strategic competition. Specifically, LRASM directly contributes to building a more lethal force and is a critical enabler for joint lethality in contested environments; deterring adversaries from aggression; ensuring common domains remain open and maintaining favorable regional balances of power. LRASM shares a production line with the U.S. Air Force Joint Air-to-Surface Standoff Missile (JASSM). The Navy and Air Force jointly procure LRASMs via an Air Force contract that benefits from cost savings when aligned with JASSM procurements.

The U.S. Air Force procurement for LRASMs in FY 2017 through FY 2027 at the following quantities:

- FY 2017 - 19 (Lot 1)
- FY 2018 - 16 (1 unit was priced at and part of FY 2017 Lot 1 to achieve 20 total Air Force units in Lot 1; 15 units are with FY 2018 Lot 2 procurement)
- FY 2019 - 15 (Lot 3)
- FY 2020 - 0 (Lot 4)
- FY 2021 - 6 (Lot 5)
- FY 2022 - 0 (Lot 6)
- FY 2023 - 28 (Lot 7)
- FY 2024 - 20 (Lot 8)
- FY 2025 - 19 (Lot 9)
- FY 2026 - 24 (Lot 10)
- FY 2027 - 30 (Lot 11)

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2291 / LRASM

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** 0204167N **Other Related Program Elements:** 0604786N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LRASM	P-5a, P-21			99 / 377.594	43 / 134.065	48 / 161.212	60 / 226.022	- / 0.000	60 / 226.022
P-40	Total Gross/Weapon System Cost				99 / 377.594	43 / 134.065	48 / 161.212	60 / 226.022	- / 0.000	60 / 226.022

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2023 funding procures a total of 60 Long Range Anti-Ship Missiles (LRASM). FY 2023 funds efforts associated with filling Congressionally directed Operational Testing, which includes telemetry kit installations and test support. FY 2023 also funds procurement and installations of updated Weapon Data Link to satisfy compliance of NSA crypto modification mandate.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (<i>Units in Each</i>)				99	43	48	60	-	60
Gross/Weapon System Cost (<i>\$ in Millions</i>)				377.594	134.065	161.212	226.022	0.000	226.022
Less PY Advance Procurement (<i>\$ in Millions</i>)				-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)				377.594	134.065	161.212	226.022	0.000	226.022
Plus CY Advance Procurement (<i>\$ in Millions</i>)				-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)				377.594	134.065	161.212	226.022	0.000	226.022
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (<i>\$ in Millions</i>)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)				3,814K	3,118K	3,359K	3,767K	-	3,767K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - LRASM Cost																		
Recurring Cost																		
1.1.1) All Up Round (AUR) ^(†) (1)	3,555K	99	351.943	2,925K	43	125.782	2,925K	48	140.408	3,290K	60	197.381	-	-	-	3,290K	60	197.381
1.1.2) Containers	-	-	1.230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) Contractor ECO ⁽²⁾	-	-	-	-	-	-	-	-	1.400	-	-	1.970	-	-	-	-	-	1.970
<i>Subtotal: Recurring Cost</i>	-	-	353.173	-	-	125.782	-	-	141.808	-	-	199.351	-	-	-	-	-	199.351
<i>Subtotal: Hardware - LRASM Cost</i>	-	-	353.173	-	-	125.782	-	-	141.808	-	-	199.351	-	-	-	-	-	199.351
Hardware - Nonrecurring and Ancillary Equip Cost																		
Non Recurring Cost																		
2.1.1) Tooling	-	-	6.713	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) Telemetry Kits	-	-	7.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.3) Production Modifications ⁽³⁾	-	-	0.534	-	-	2.880	-	-	4.900	-	-	4.383	-	-	-	-	-	4.383
2.1.4) N/R ECP	-	-	7.983	-	-	3.732	-	-	4.965	-	-	0.554	-	-	-	-	-	0.554
<i>Subtotal: Non Recurring Cost</i>	-	-	22.230	-	-	6.612	-	-	9.865	-	-	4.937	-	-	-	-	-	4.937
<i>Subtotal: Hardware - Nonrecurring and Ancillary Equip Cost</i>	-	-	22.230	-	-	6.612	-	-	9.865	-	-	4.937	-	-	-	-	-	4.937
Support Cost																		
3.1) Production Support	-	-	2.191	-	-	1.671	-	-	1.946	-	-	1.953	-	-	-	-	-	1.953

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2291 / LRASM						Item Number / Title [DODIC]: 1 / LRASM					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
3.2) LRASM Operational Test Support ⁽⁴⁾	-	-	-	-	-	-	-	-	1.843	-	-	10.681	-	-	-	-	-	10.681
3.3) LRASM Telemetry Kit Integration ⁽⁵⁾	-	-	-	-	-	-	-	-	5.750	-	-	9.100	-	-	-	-	-	9.100
<i>Subtotal: Support Cost</i>	-	-	2.191	-	-	1.671	-	-	9.539	-	-	21.734	-	-	-	-	-	21.734
Gross/Weapon System Cost	3,814K	99	377.594	3,118K	43	134.065	3,359K	48	161.212	3,767K	60	226.022	-	-	0.000	3,767K	60	226.022

(t) indicates the presence of a P-5a

Footnotes:

- (1) FY 2020 and FY 2021 are a lower unit cost due to a combined increased overall AUR total quantity across those years with 135 units procured; USN - FY20/21, 60 units; USAF - FY21, 6 units; and FMS - FY21, 69 units. FY 2022 is a USN only AUR procurement and will be executed as an option to the FY 2020/2021 contract with the same unit cost. FY 2023 and beyond realize a stabilized unit cost due to reduced overall quantities with only USN & USAF procuring.
- (2) Contractor ECO set at 1% of AUR cost to account for predicted obsolescence or ECPs required to maintain producibility.
- (3) Procurement and installations of updated Weapon Data Link to satisfy compliance of NSA crypto modification mandate.
- (4) Government and contractor support for LRASM 1.1 capability Operational Test to include the first live fire test event to satisfy Congressional direction.
- (5) Incorporation of Telemetry Kits into AUR assets for utilization in LRASM 1.1 capability Operational Test events to satisfy Congressional direction.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) All Up Round (AUR) ^(†)		2018 ⁽⁶⁾	Lockheed Martin Missiles and Fire Control / Orlando, FL	SS / FPIF	Eglin AFB	Nov 2018	Sep 2020	34	3,572K	Y		Jun 2017
1.1.1) All Up Round (AUR) ^(†)		2019 ⁽⁷⁾	Lockheed Martin Missiles and Fire Control / Orlando, FL	SS / FPIF	Eglin AFB	Apr 2020	Dec 2021	34	3,652K	Y		Jan 2019
1.1.1) All Up Round (AUR) ^(†)		2020 ⁽⁸⁾	Lockheed Martin Missiles and Fire Control / Orlando, FL	SS / FFP	Eglin AFB	Feb 2021	Dec 2022	17	2,925K	Y		Feb 2020
1.1.1) All Up Round (AUR) ^(†)		2021 ⁽⁹⁾	Lockheed Martin Missiles and Fire Control / Orlando, FL	SS / FFP	Eglin AFB	Feb 2021	Mar 2023	43	2,925K	Y		Feb 2020
1.1.1) All Up Round (AUR) ^(†)		2022 ⁽¹⁰⁾	Lockheed Martin Missiles and Fire Control / Orlando, FL	SS / FFP	Eglin AFB	Nov 2021	Jun 2024	48	2,925K	Y		Mar 2021
1.1.1) All Up Round (AUR) ^(†)		2023 ⁽¹¹⁾	Lockheed Martin Missiles and Fire Control / Orlando, FL	SS / FFP	Eglin AFB	Feb 2023	Oct 2024	60	3,290K	N	Jan 2022	Mar 2022

^(†) indicates the presence of a P-21

Footnotes:

- ⁽⁶⁾ Award date represents actual for both U.S. Air Force and U.S. Navy procurements.
- ⁽⁷⁾ Award date represents actual for both U.S. Air Force and U.S. Navy procurements.
- ⁽⁸⁾ Award date represents U.S. Navy procurement. FY 2020 (Lot 4) AUR combined with FY 2021 (Lot 5) AUR award
- ⁽⁹⁾ Award date represents U.S. Air Force, U.S. Navy, and FMS procurement. USN FY 2020 (Lot 4) AUR combined with FY 2021 (Lot 5) AUR award
- ⁽¹⁰⁾ Award date represents a U.S. Navy only procurement. Lot 6 is an option exercise on the Lot 4/5 contract
- ⁽¹¹⁾ Award date represents both U.S. Air Force and U.S. Navy procurements

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) All Up Round (AUR) ⁽¹⁾																															
Prior Years Deliveries: 14																															
	1	2018	NAVY	34 ⁽¹²⁾	0	34		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	33		
	1	2018	AF ^(‡)	15	0	15		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15		
	1	2018	Total	49	0	49		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	48			
	1	2019	NAVY	34	0	34																							34		
	1	2019	AF ^(‡)	15	0	15																							15		
	1	2019	Total	49	0	49																							49		
	1	2020	NAVY	17	0	17																							17		
	1	2021	NAVY	43	0	43																							43		
	1	2021	AF ^(‡)	6	0	6																							6		
	1	2021	FMS ^(‡)	69	0	69																							69		
	1	2021	Total	118	0	118																							118		
	1	2022	NAVY	48	0	48																							48		
	1	2023	NAVY	60	0	60																							60		
	1	2023	AF ^(‡)	28	0	28																							28		
	1	2023	Total	88	0	88																							88		
								O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
								C	O	E	A	E	A	A	U	U	U	S	C	O	V	E	A	E	A	A	U	U	U	A	S
								T	V	C	N	B	R	R	Y	N	L	G	P	T	V	C	N	B	R	R	Y	N	L	G	P

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021													Fiscal Year 2022													BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
1.1.1) All Up Round (AUR) ⁽¹⁾																																		
Prior Years Deliveries: 14																																		
1	2018	NAVY		34 ⁽¹²⁾	1	33	1	2	4	4	4	4	4	4	4	4	2	-	-	-	-													0
1	2018	AF ^(‡)		15	0	15	-	-	-	-	-	-	-	-	-	-	1	4	4	4	2													0
1	2018	Total		49	1	48	1	2	4	4	4	4	4	4	4	4	3	4	4	4	2												0	
1	2019	NAVY		34	0	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	4	3	-	0	
1	2019	AF ^(‡)		15	0	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4		10	
1	2019	Total		49	0	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	4	4	4	10		
1	2020	NAVY		17	0	17																												17
1	2021	NAVY		43	0	43																												43
1	2021	AF ^(‡)		6	0	6																												6
1	2021	FMS ^(‡)		69	0	69																												69
1	2021	Total		118	0	118																												118
1	2022	NAVY		48	0	48																												48
1	2023	NAVY		60	0	60																												60
1	2023	AF ^(‡)		28	0	28																												28
1	2023	Total		88	0	88																												88
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2291 / LRASM **Item Number / Title [DODIC]:** 1 / LRASM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023													Fiscal Year 2024													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023													Calendar Year 2024													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 14																																	
	1	2018	NAVY	34 ⁽¹²⁾	34	0																							0				
	1	2018	AF ^(‡)	15	15	0																							0				
	1	2018	Total	49	49	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2019	NAVY	34	34	0	-	-																					0				
	1	2019	AF ^(‡)	15	5	10	5	5																					0				
	1	2019	Total	49	39	10	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2020	NAVY	17	0	17	-	-	5	5	5	2																	0				
	1	2021	NAVY	43	0	43	-	-	-	-	3	5	5	6	6	7	7	4	-	-	-	-	-	-	-	-	-	-	0				
	1	2021	AF ^(‡)	6	0	6	-	-	-	-	-	-	-	-	-	-	4	2	-	-	-	-	-	-	-	-	-	-	0				
	1	2021	FMS ^(‡)	69	0	69	-	-	-	-	-	-	-	-	-	-	-	6	9	9	10	10	10	10	5			0					
	1	2021	Total	118	0	118	-	-	-	-	3	5	5	6	6	7	7	8	8	9	9	10	10	10	5	-	-	0					
	1	2022	NAVY	48	0	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	8	8	9	18					
	1	2023	NAVY	60	0	60																						60					
	1	2023	AF ^(‡)	28	0	28																						28					
	1	2023	Total	88	0	88																						88					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) All Up Round (AUR) ⁽¹⁾																															
Prior Years Deliveries: 14																															
1		2018	NAVY	34 ⁽¹²⁾	34	0																							0		
1		2018	AF ^(‡)	15	15	0																							0		
1		2018	Total	49	49	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2019	NAVY	34	34	0																							0		
1		2019	AF ^(‡)	15	15	0																							0		
1		2019	Total	49	49	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2020	NAVY	17	17	0																							0		
1		2021	NAVY	43	43	0																							0		
1		2021	AF ^(‡)	6	6	0																							0		
1		2021	FMS ^(‡)	69	69	0																							0		
1		2021	Total	118	118	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2022	NAVY	48	30	18	9	9																					0		
1		2023	NAVY	60	0	60	8	8	8	8	10	10	-	-	-	-	-											0			
1		2023	AF ^(‡)	28	0	28	-	-	-	-	-	-	6	7	7	4	4											0			
1		2023	Total	88	0	88	8	8	8	8	10	10	6	7	7	4	4	-	-	-	-	-	-	-	-	-	-	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin Missiles and Fire Control - Orlando, FL	12	120	120	0	10	14	24	0	5	20	25

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule. "A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽¹²⁾ Air Force Lot 2 procurement is 15 units. Navy Lot 2 procurement is 35 units - 1 unit procured with FY 2019 dollars, 34 units procured with FY 2018 dollars.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	26	15	32	39	-	39	15	20	24	22	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	62.656	31.610	52.377	59.034	0.000	59.034	29.873	28.716	30.208	31.736	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	62.656	31.610	52.377	59.034	0.000	59.034	29.873	28.716	30.208	31.736	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	62.656	31.610	52.377	59.034	0.000	59.034	29.873	28.716	30.208	31.736	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	1.358	2.841	-	2.841	2.865	2.924	2.960	3.002	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	2,410K	2,107K	1,637K	1,514K	-	1,514K	1,992K	1,436K	1,259K	1,443K	Continuing	Continuing

Description:

The Naval Strike Missile(NSM) provides the Littoral Combat Ship (LCS)and Frigate, Guided Missile (FFG) ships with long range offensive strike capability against surface combatants. The OTH Weapon Systems (WS) consists of a Missile Launch System (MLS) and a complement of missiles.

-Missile Launch System components include: a Launch Mechanism, Operator Interface, and Fire Control System which are procured with Other Procurement, Navy (OPN) Funds.

-Missile components include a missile encased in a firing canister (encanistered missile). An encanistered missile consists of a flight vehicle that is mechanically and electrically connected within a weapon canister. The flight vehicle's major components are operationally joined, consisting of a warhead (explosive), propulsion system, guidance system, initiation system, and other components. The weapon canister is a mechanical structure with electrical interconnections that is used to support and restrain the flight vehicle during loading and unloading operations. The weapon canister allows the flight vehicle to mechanically and electrically connect to the Missile Launch System without being exposed to the environment.

Line item previously referred to as Littoral Combat Ship (LCS) Over the Horizon (OTH) Missile.

Other Related Budgets: PMC LI 2292, OPN LI 5231, RD TEN PE 0604756N/2070, OMN PE 0204228N BLI 1D4D/14D90

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2292 / Naval Strike Missile (NSM)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Naval Strike Missile	P-5a, P-21			26 / 62.656	15 / 31.610	32 / 52.377	39 / 59.034	- / 0.000	39 / 59.034
P-40	Total Gross/Weapon System Cost				26 / 62.656	15 / 31.610	32 / 52.377	39 / 59.034	- / 0.000	39 / 59.034

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Naval Strike Missile (NSM) funding is required to support Over The Horizon Weapon System program for Littoral Combat Ship (LCS) and Frigate, Guided Missile (FFG) Ships. The program provides a long-range anti-surface offensive capability to improve the ship's ability to defend against enemy surface ships.

Production Engineering Support - Original Equipment Manufacturer (OEM) funding supports: development of processes to ensure equipment quality and procedures to effectively operate and maintain its reliability; acquisition and cataloging of spare parts to maintain required system availability; managing the configuration baseline (hardware and software) and addressing parts obsolescence issues; acquisition and maintenance of production test equipment; participation in Configuration Control Boards (CCB); implementation of Engineering Change Proposals (ECPs) as needed; collection and analysis of production test metrics; implementation of a Quality Program Plan (QPP); maintenance of a Failure Analysis and Corrective Action Report Database (FRACAS). This is a time based support element that represents production engineering support over the procurement buy and not tied to quantity.

Engineering Support Government and Contractor funding supports: Computer Resources used to identify, plan, resource, and acquire facilities, hardware, software, documentation, manpower and personnel necessary for planning and management of mission critical systems. Government Product Support Management in compliance with the critical acquisition of Product Support Manager (PSM) in accordance with Section 805 of Public Law 111-84. Assist with Demilitarization (DEMIL)/disposal plans, Command Pass Coordinator (CPC), review of ECPs, Milestone Decision Authority (MDA) requirements, risk assessment, Curriculum Design, performance improvement, cost, manage Material Potentially Presenting an Explosive Hazards (MPPEH). Contract Program Management Office (PMO) Subject Management Experts(s) (SME(s)) provide direct support to the PMO by assisting the program manager with day-to-day acquisition and technical requirements. Develop Technical Manuals (revision of contractor provided manuals) and alignment with USN standards. Support OTH WS Integrated Product Teams, Program Management Reviews and Critical Reviews. System Engineering & Safety Block 1A review and approval. Participate in Production Readiness Reviews. Conduct assessment of production test data.

Major adjustments:

1.1.1) Navy and USMC will bundle NSM procurements in order to realize cost savings through stepladder pricing. FY 2022 decrease of -\$6.954 for delay of contract award. NSM procurement quantity decreased from 34 by -2 to 32. Unit cost decrease due to stepladder price adjustments after USMC and DON combined NSM procurements in FY 2022. Unit cost and quantity may fluctuate during the year of execution.

Due to a technical error P40 differs from the P5. P5 reflects accurate FY 2023(36), FY 2024(17), FY 2025(16), FY 2026(17) and FY 2027(18) quantities. Quantities will be corrected by next budget cycle. Unit costs remain consistent with stepladder pricing model.

2.1) Production Engineering Support provides for both DON and USMC. FY 2023 increase required to support additional DON (36) and USMC (115) NSM missile procurements.

2.2) Engineering Support Government and Contractor provides for both the DON and USMC. FY 2023 increase required to support DON (36) and USMC (115) NSM missile procurements.

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	26	15	32	39	-	39
Gross/Weapon System Cost (\$ in Millions)	62.656	31.610	52.377	59.034	0.000	59.034
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	62.656	31.610	52.377	59.034	0.000	59.034
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	62.656	31.610	52.377	59.034	0.000	59.034

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	1.358	2.841	-	2.841
Gross/Weapon System Unit Cost (\$ in Dollars)	2,410K	2,107K	1,637K	1,514K	-	1,514K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) Naval Strike Missile ⁽¹⁾ (1)	2,080K	26	54.067	1,854K	15	27.816	1,524K	32	48.782	1,516K	36	54.585	-	-	-	1,516K	36	54.585
<i>Subtotal: Recurring Cost</i>	-	-	54.067	-	-	27.816	-	-	48.782	-	-	54.585	-	-	-	-	-	54.585
<i>Subtotal: Hardware Cost</i>	-	-	54.067	-	-	27.816	-	-	48.782	-	-	54.585	-	-	-	-	-	54.585
Support Cost																		
2.1) Production Engineering Support - OEM ⁽²⁾	-	-	6.971	-	-	1.900	-	-	2.212	-	-	2.749	-	-	-	-	-	2.749
2.2) Engineering Support Government and Contractor ⁽³⁾	-	-	1.618	-	-	1.894	-	-	1.383	-	-	1.700	-	-	-	-	-	1.700
<i>Subtotal: Support Cost</i>	-	-	8.589	-	-	3.794	-	-	3.595	-	-	4.449	-	-	-	-	-	4.449
Gross/Weapon System Cost	2,410K	26	62.656	2,107K	15	31.610	1,637K	32	52.377	1,514K	39	59.034	-	-	0.000	1,514K	39	59.034

Remarks:

[Support Cost] Production Engineering Support - Original Equipment Manufacturer (OEM) funding supports: development of processes to ensure equipment quality and procedures to effectively operate and maintain its reliability; acquisition and cataloging of spare parts to maintain required system availability; managing the configuration baseline (hardware and software) and addressing parts obsolescence issues; acquisition and maintenance of production test equipment; participation in Configuration Control Boards (CCB); implementation of Engineering Change Proposals (ECPs) as needed; collection and analysis of production test metrics; implementation of a Quality Program Plan (QPP); maintenance of a Failure Analysis and Corrective Action Report Database (FRACAS). This is a time based support element that represents production engineering support over the procurement buy and not tied to quantity.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
<p>Engineering Support Government and Contractor funding supports: Computer Resources used to identify, plan, resource, and acquire facilities, hardware, software, documentation, manpower and personnel necessary for planning and management of mission critical systems. Government Product Support Management in compliance with the critical acquisition of Product Support Manager (PSM) in accordance with Section 805 of Public Law 111-84. Assist with Demilitarization (DEMIL)/disposal plans, Command Pass Coordinator (CPC), review of ECPs, Milestone Decision Authority (MDA) requirements, risk assessment, Curriculum Design, performance improvement, cost, manage Material Potentially Presenting an Explosive Hazards (MPPEH). Contract Program Management Office (PMO) Subject Management Experts(s) (SME(s)) provide direct support to the PMO by assisting the program manager with day-to-day acquisition and technical requirements. Develop Technical Manuals (revision of contractor provided manuals) and alignment with USN standards. Support OTH WS Integrated Product Teams, Program Management Reviews and Critical Reviews. System Engineering & Safety Block 1A review and approval. Participate in Production Readiness Reviews. Conduct assessment of production test data.</p> <p>(†) indicates the presence of a P-5a</p> <p>Footnotes:</p> <p>(1) FY 2021-FY 2027 unit costs based on stepladder pricing, which decreases with increased quantities. OTH missile procurement continues to support Fleet deployments. FY 2022 decrease due to -\$6.954 Congressional reduction for delay of contract award. NSM procurement quantity decreased from 34 by -2 to 32. Unit cost decrease due to stepladder price adjustments after USMC and DON combined NSM procurements in FY 2022. Due to a technical error P40 differs from the P5. P5 reflects accurate FY 2023(36), FY 2024(17), FY 2025(16), FY 2026(17) and FY 2027(18)quantities. Quantities will be corrected by next budget cycle. Unit costs remain consistent with stepladder pricing model.</p> <p>(2) Production Engineering Support provides for both the DON and USMC. FY 2023 increase required to support additional DON (36) and USMC (115) NSM missile procurements.</p> <p>(3) Engineering Support Government and Contractor provides for both the DON and USMC. FY 2023 increase required to support DON (36) and USMC (115) NSM missile procurements.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Naval Strike Missile ^(†)		2019	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	Dec 2018	Dec 2020	8	2,462K	Y		Feb 2017
1.1.1) Naval Strike Missile ^(†)		2020	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	Feb 2020	Feb 2022	18	1,909K	Y		Feb 2017
1.1.1) Naval Strike Missile ^(†)		2021	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	Mar 2021	Mar 2023	15	1,854K	Y		Feb 2017
1.1.1) Naval Strike Missile ^(†)		2022 ⁽⁴⁾	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	May 2022	May 2024	32	1,524K	Y		Feb 2017
1.1.1) Naval Strike Missile ^(†)		2023 ⁽⁵⁾	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	Dec 2022	Dec 2024	36	1,516K	Y		Feb 2017

^(†) indicates the presence of a P-21

Footnotes:

⁽⁴⁾ NSM procurements award immediately upon funds availability.

⁽⁵⁾ NSM procurements award immediately upon funds availability.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) Naval Strike Missile ⁽¹⁾																															
1		2019	NAVY	8	0	8																							8		
1		2020	NAVY	18	0	18																							18		
1		2021	NAVY	15	0	15																							15		
1		2022	NAVY	32	0	32																							32		
1		2023	NAVY	36	0	36																							36		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021													Fiscal Year 2022													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Naval Strike Missile ⁽¹⁾																																	
1		2019	NAVY	8	0	8	-	-	7	1																			0				
1		2020	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1		2021	NAVY	15	0	15																							15				
1		2022	NAVY	32	0	32																							32				
1		2023	NAVY	36	0	36																							36				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) Naval Strike Missile ⁽¹⁾																															
1		2019	NAVY	8	8	0																							0		
1		2020	NAVY	18	18	0																							0		
1		2021	NAVY	15	0	15	-	-	-	-	-	15																	0		
1		2022	NAVY	32	0	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	8				0		
1		2023	NAVY	36	0	36			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)	Item Number / Title [DODIC]: 1 / Naval Strike Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025														Fiscal Year 2026														BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025														Calendar Year 2026														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) Naval Strike Missile ⁽¹⁾																																			
1		2019	NAVY	8	8	0																								0					
1		2020	NAVY	18	18	0																								0					
1		2021	NAVY	15	15	0																								0					
1		2022	NAVY	32	32	0																								0					
1		2023	NAVY	36	0	36	-	-	24	12																				0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2		P-1 Line Item Number / Title: 2292 / Naval Strike Missile (NSM)
		Item Number / Title [DODIC]: 1 / Naval Strike Missile

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon CO - Tucson AZ			250	0	0	24	24	0	0	24	24

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles **P-1 Line Item Number / Title:** 2301 / Tomahawk Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Tactical Tomahawk (TACTOM) provides an attack capability against fixed and mobile targets, and can be launched from both surface ships (RGM) and submarines (UGM). The TACTOM Modernization profile includes Recertification, Navigation Communication Modernization upgrades (NAVCOMMs), Maritime Strike Tomahawk (MST), Military Code (M-CODE) and Joint Multiple Effects Warhead System (JMEWS). Initial procurement of TACTOM, as well as modification funds executed in FY 2020 and prior, are budgeted under BLI 2101.

The TACTOM service life for RGM109E and UGM109E Block IV/V Tomahawk cruise missiles is 30 years with a 15-year deployment and recertification cycle. During the Recertification availability period, Block IV TACTOMS will undergo their 15-year service life extension activities, and then updated to a modernized Block V configuration with the installation of a NAVCOMM kit.

Recertification is an ACAT II program to recertify the RGM109E and UGM109E Block IV/V Tomahawk cruise missiles service life subsequent to a 15-year deployment. Inventory objective is 3992. Recertification activity include the costs associated with the Raytheon labor, vendor recertification of specific components (i.e. mechanical and electrical components), recertification of the MK 45 submarine capsule, missile consumables, fuze recertification, Armed Firing Device (AFD) recertification, installation of Advanced Communication Package (ACP), shipping assets to and from weapon stations, and fuel. Recertification is planned to occur concurrently with installation of NAVCOMMs Modernization Kits, which will replace the existing SDLT radio and antenna.

The TACTOM NAVCOMMs upgrades consist of the Integrated Single Box Solution (ISBS) radio, two new antennas and associated cabling, a new mid-body cover, and changes to the aft-body structure and aft-body cover. The ISBS radio is replacing the existing Satellite Data Link Terminal (SDLT), and two new antennas are added to replace the previous antenna. The changes to the missile are driven by the obsolescence of the SDLT hardware and the obsolescence of the UHF Demand Assigned Multiple Access (DAMA) communications infrastructure that is being phased out of service.

MST is a Rapid Deployment Capability that includes seeker kit hardware, assemblies/subassemblies, packaging and storage. Seeker kit hardware procurement includes the sensors, nosecone, ULTRA processor, cooling pump and plumbing, bulkhead, power and signal harnesses, power supply, plumbing and electrical chase insulators, telemetry unit, wiring, hybrid homopolar permanent magnet generator, and Primary Power Interface Unit. Includes modifying existing missile infrastructure to accept/install seeker kit components and assemblies into a modernized Block V missile during the Recertification availability period.

M-CODE is an ACAT IV program that upgrades the TACTOM missile with the next generation, modernized Global Positioning System (GPS) capability. TACTOM M-CODE kits consist of new Anti-Jam GPS Receiver (AGR) hardware/software and installation of the upgrade kit into TACTOM Block V AURs. Fielding of M-Code equipped AURs, enable TACTOM to be compliant with Public Law 111-38, sec 913. M-CODE kits will be installed into modernized Block V missiles during the Recertification availability.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles		P-1 Line Item Number / Title: 2301 / Tomahawk Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

JMEWS is an ACAT III program to develop, produce and field a new warhead for the Block V Tomahawk Cruise Missile. JMEWS will greatly expand the land target set that the Tomahawk missile is capable of defeating, by combining the blast and fragmentation capabilities of the current warhead with a new penetration capability and improved mission planning. JMEWS will also be compliant with Insensitive Munitions requirements, which improve safety during transportation and storage on land and aboard ships and submarines. JMEWS program includes upgrades to the AUR missile, and upgrades to the Tactical Tomahawk Weapons Control System. Theatre Mission Planning Center program upgrades are required and will be completed as part of Other Procurement, Navy budget BLI 5253. JMEWS warheads will be installed into modernized Block V missiles during the Recertification availability.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles **P-1 Line Item Number / Title:** 2301 / Tomahawk Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / TACTOM NAVCOMMs Modernization and Recertification Kits (Increase Capability and Extend Missile Service Life)			289	- / 0.000	- / 143.563	- / 172.074	- / 435.308	- / 0.000	- / 435.308
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 143.563	- / 172.074	- / 435.308	- / 0.000	- / 435.308
Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / TACTOM NAVCOMMs Modernization and Recertification Kits (Increase Capability and Extend Missile Service Life)			289	- / 403.892	- / 412.658	- / 438.281	- / 440.911	- / 3,660.347	- / 6,107.034
P-40	Total Gross/Weapon System Cost				- / 403.892	- / 412.658	- / 438.281	- / 440.911	- / 3,660.347	- / 6,107.034

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2023 funding supports Recertification of 166 Block IV assets; and the installation of 166 NAVCOMM upgrade kits (procured in FY 2022) converting the end item into a Block V configuration. Funding also supports the procurement of 274 TACTOM NAVCOMMs modernization kits in FY 2023 to be installed in FY 2024 into the 274 missiles undergoing Recertification in FY 2024.
 FY 2023 funding includes the procurement of 72 Maritime Strike Tomahawk (MST) as a Rapid Deployment Capability which includes seeker kit hardware, assemblies/subassemblies, packaging and storage.
 FY 2023 funding includes JMEWS long lead energetics needed for FY24 quantities. These funds are required in FY23 to support the procurement of energetics material, enabling the production delivery schedule to meet the planned IOC date of 4QFY27.
 Increase from 2022 to 2023 due to a reallocation of funds, there is no cost increase - details held at a higher classification.

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 289

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Tactical Tomahawk (TACTOM) provides an attack capability against fixed and mobile targets, and can be launched from both surface ships (RGM) and submarines (UGM). The TACTOM Modernization profile includes Recertification, Navigation Communication Modernization upgrades (NAVCOMMs), Maritime Strike Tomahawk (MST), Military Code (M-CODE) and Joint Multiple Effects Warhead System (JMEWS). Initial procurement of TACTOM, as well as modification funds executed in FY 2020 and prior, are budgeted under BLI 2101.

The TACTOM service life for RGM109E and UGM109E Block IV/V Tomahawk cruise missiles is 30 years with a 15-year deployment and recertification cycle. During the Recertification availability period, Block IV TACTOMS will undergo their 15-year service life extension activities, and then be updated to a modernized Block V configuration with the installation of a NAVCOMM kit.

Recertification is an ACAT II program to recertify the RGM109E and UGM109E Block IV/V Tomahawk cruise missiles service life subsequent to a 15-year deployment. Inventory objective is 3992. The yearly recertification profile will limit the missile backlog within the Fleet due to the expiration of life limiting components. Recertification activity include the costs associated with the Raytheon labor, vendor recertification of specific components (i.e. mechanical and electrical components), recertification of the MK 45 submarine capsule, missile consumables, fuze recertification, Armed Firing Device (AFD) recertification, installation of Advanced Communication Package (ACP), shipping assets to and from weapon stations, and fuel. Recertification is planned to occur concurrently with installation of NAVCOMMs Modernization Kits, which will replace the existing SDLT radio and antenna.

The TACTOM NAVCOMMs upgrades consist of the Integrated Single Box Solution (ISBS) radio, two new antennas and associated cabling, a new mid-body cover, and changes to the aft-body structure and aft-body cover. The ISBS radio is replacing the existing Satellite Data Link Terminal (SDLT), and two new antennas are added to replace the previous antenna. The changes to the missile are driven by the obsolescence of the SDLT hardware and the obsolescence of the UHF Demand Assigned Multiple Access (DAMA) communications infrastructure that is being phased out of service.

MST is a Rapid Deployment Capability that includes seeker kit hardware, assemblies/subassemblies, packaging and storage. Seeker kit hardware procurement includes the sensors, nosecone, ULTRA processor, cooling pump and plumbing, bulkhead, power and signal harnesses, power supply, plumbing and electrical chase insulators, telemetry unit, wiring, hybrid homopolar permanent magnet generator, and Primary Power Interface Unit. Includes modifying existing missile infrastructure to accept/install seeker kit components and assemblies into a modernized Block V missile during the Recertification availability period.

M-CODE is an ACAT IV program that upgrades the TACTOM missile with the next generation, modernized Global Positioning System (GPS) capability. TACTOM M-CODE kits consist of new Anti-Jam GPS Receiver (AGR) hardware/software and installation of the upgrade kit into TACTOM Block V AURs. Fielding of M-Code equipped AURs, enable TACTOM to be compliant with Public Law 111-38, sec 913. M-CODE kits will be installed into modernized Block V missiles during the Recertification availability.

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code: 289

JMEWS is an ACAT III program to develop, produce and field a new warhead for the Block V Tomahawk Cruise Missile. JMEWS will greatly expand the land target set that the Tomahawk missile is capable of defeating, by combining the blast and fragmentation capabilities of the current warhead with a new penetration capability and improved mission planning. JMEWS will also be compliant with Insensitive Munitions requirements, which improve safety during transportation and storage on land and aboard ships and submarines. JMEWS program includes upgrades to the AUR missile, and upgrades to the Tactical Tomahawk Weapons Control System. Theatre Mission Planning Center program upgrades are required and will be completed as part of Other Procurement, Navy budget BLI 5253. JMEWS warheads will be installed into modernized Block V missiles during the Recertification availability.

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Models of Systems Affected: TACTOM	Modification Type: Increase Capability and Extend Missile Service Life	Related RDT&E PEs: 0204229N
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Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)

Procurement												
Modification Item 1 of 5: Recertification												
A Kits												
Recurring												
1.1.1) Recertification kits - NonOrganic ⁽¹⁾	- / -	156 / 41.665	156 / 34.792	166 / 36.851	- / -	166 / 36.851	274 / 59.584	260 / 57.444	260 / 58.389	260 / 59.124	2,343 / 508.070	3,875 / 855.919
Subtotal: Recurring	- / 0.000	- / 41.665	- / 34.792	- / 36.851	- / -	- / 36.851	- / 59.584	- / 57.444	- / 58.389	- / 59.124	- / 508.070	- / 855.919
Subtotal: Recertification	- / -	156 / 41.665	156 / 34.792	166 / 36.851	- / -	166 / 36.851	274 / 59.584	260 / 57.444	260 / 58.389	260 / 59.124	2,343 / 508.070	3,875 / 855.919
Modification Item 2 of 5: NAVCOMMs												
A Kits												
Recurring												
2.1.1) NAVCOMMs - NonOrganic ⁽²⁾	156 / 0.000	156 / 27.929	166 / 27.929	274 / 52.094	- / -	274 / 52.094	260 / 51.781	260 / 53.731	260 / 54.886	260 / 57.239	2,083 / 438.525	3,875 / 764.114
Subtotal: Recurring	- / 0.000	- / 27.929	- / 27.929	- / 52.094	- / -	- / 52.094	- / 51.781	- / 53.731	- / 54.886	- / 57.239	- / 438.525	- / 764.114
Subtotal: NAVCOMMs	156 / 0.000	156 / 27.929	166 / 27.929	274 / 52.094	- / -	274 / 52.094	260 / 51.781	260 / 53.731	260 / 54.886	260 / 57.239	2,083 / 438.525	3,875 / 764.114
Modification Item 3 of 5: MST												
A Kits												
Recurring												
3.1.1) MST - NonOrganic ⁽³⁾	- / -	11 / 19.595	24 / 40.721	72 / 98.784	- / -	72 / 98.784	51 / 70.487	50 / 68.272	52 / 70.374	54 / 73.271	988 / 1,187.063	1,302 / 1,628.567
Subtotal: Recurring	- / 0.000	- / 19.595	- / 40.721	- / 98.784	- / -	- / 98.784	- / 70.487	- / 68.272	- / 70.374	- / 73.271	- / 1,187.063	- / 1,628.567
Subtotal: MST	- / -	11 / 19.595	24 / 40.721	72 / 98.784	- / -	72 / 98.784	51 / 70.487	50 / 68.272	52 / 70.374	54 / 73.271	988 / 1,187.063	1,302 / 1,628.567
Modification Item 4 of 5: M-CODE-CAPABLE GPS USER EQUIPMENT (MGUE)												
A Kits												
Recurring												
4.1.1) M-CODE - NonOrganic	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 13.552	260 / 13.604	260 / 13.544	2,209 / 110.157	2,989 / 150.857
Subtotal: Recurring	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.552	- / 13.604	- / 13.544	- / 110.157	- / 150.857
Subtotal: M-CODE-CAPABLE GPS USER EQUIPMENT (MGUE)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 13.552	260 / 13.604	260 / 13.544	2,209 / 110.157	2,989 / 150.857
Modification Item 5 of 5: JMEWS												

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Exhibit P-3a, Individual Modification: PB 2023 Navy											Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3				P-1 Line Item Number / Title: 2301 / Tomahawk Mods					Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits				
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code: 289						
Models of Systems Affected: TACTOM				Modification Type: Increase Capability and Extend Missile Service Life				Related RDT&E PEs: 0204229N					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
A Kits													
Recurring													
5.1.1) JMEWS - NonOrganic ⁽⁴⁾	- / -	- / -	- / -	- / 1.406	- / -	- / 1.406	12 / 11.033	40 / 22.464	40 / 22.331	40 / 21.471	1,198 / 451.361	1,330 / 530.066	
<i>Subtotal: Recurring</i>	- / 0.000	- / -	- / -	- / 1.406	- / -	- / 1.406	- / 11.033	- / 22.464	- / 22.331	- / 21.471	- / 451.361	- / 530.066	
<i>Subtotal: JMEWS</i>	- / -	- / -	- / -	- / 1.406	- / -	- / 1.406	12 / 11.033	40 / 22.464	40 / 22.331	40 / 21.471	1,198 / 451.361	1,330 / 530.066	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 89.189	- / 103.442	- / 189.135	- / -	- / 189.135	- / 192.885	- / 215.463	- / 219.584	- / 224.649	- / 2,695.176	- / 3,929.523	
Support (All Modification Items)													
6.1) Other Production Support- NAVCOMMs Modifications ⁽⁵⁾	- / -	- / 2.337	- / 1.557	- / 1.588	- / -	- / 1.588	- / 1.620	- / 1.685	- / 1.787	- / 1.858	- / 17.097	- / 29.529	
6.2) Support Equipment- NAVCOMMs Modification ⁽⁶⁾	- / -	- / 2.023	- / 0.535	- / 0.546	- / -	- / 0.546	- / 0.568	- / 0.591	- / 0.615	- / 0.640	- / 5.211	- / 10.729	
6.3) Integrated Logistics Support- NAVCOMMs Modification ⁽⁷⁾	- / -	- / 0.993	- / 0.344	- / 0.351	- / -	- / 0.351	- / 0.400	- / 0.416	- / 0.433	- / 0.450	- / 3.348	- / 6.735	
6.4) Other Production Support- Recertification ⁽⁸⁾	- / -	- / 4.162	- / 9.545	- / 10.917	- / -	- / 10.917	- / 9.899	- / 11.977	- / 13.148	- / 11.303	- / 84.610	- / 155.561	
6.5) Support Equipment- Recertification ⁽⁹⁾	- / -	- / 0.505	- / 4.669	- / 53.036	- / -	- / 53.036	- / 0.480	- / 2.588	- / 2.655	- / 1.788	- / 15.109	- / 80.830	
6.6) Integrated Logistics Support- Recertification ⁽¹⁰⁾	- / -	- / 0.264	- / 0.769	- / 0.474	- / -	- / 0.474	- / 0.293	- / 0.305	- / 0.317	- / 0.330	- / 3.021	- / 5.773	
6.7) MK-45 Support- Recertification ⁽¹¹⁾	- / -	- / 1.652	- / 2.457	- / 3.025	- / -	- / 3.025	- / 1.635	- / 2.084	- / 2.196	- / 1.762	- / 15.109	- / 29.920	
6.8) Other Production Support- MST ⁽¹²⁾	- / -	- / -	- / 2.312	- / 19.205	- / -	- / 19.205	- / 0.858	- / 0.868	- / 0.892	- / 0.898	- / 7.184	- / 22.217	
6.9) Support Equipment- MST ⁽¹³⁾	- / -	- / -	- / 0.843	- / 8.820	- / -	- / 8.820	- / 1.731	- / 1.361	- / 1.399	- / 1.408	- / 11.268	- / 26.830	
6.10) Integrated Logistics Support-MST	- / -	- / -	- / 0.594	- / 0.659	- / -	- / 0.659	- / 0.773	- / 0.756	- / 0.778	- / 0.784	- / 6.269	- / 10.613	
6.11) Other Production Support-M-Code	- / -	- / -	- / -	- / -	- / -	- / -	- / 22.431	- / 0.519	- / 0.377	- / 0.617	- / 0.422	- / 24.366	
6.12) Other Production Support-JMEWS	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.285	- / 2.200	- / 2.572	- / 2.238	- / 3.652	- / 11.947	
6.13) Support Equipment - Classified ⁽¹⁴⁾	- / -	- / -	- / -	- / 110.417	- / -	- / 110.417	- / 104.342	- / 98.543	- / 115.638	- / 118.465	- / -	- / 547.405	
<i>Subtotal: Support</i>	- / 0.000	- / 11.936	- / 23.625	- / 199.038	- / -	- / 199.038	- / 146.315	- / 123.893	- / 142.807	- / 142.541	- / 172.300	- / 962.455	
Installation													
Modification Item 1 of 5: Recertification	- / 0.000	- / 37.257	- / 40.212	- / 42.042	- / 0.000	- / 42.042	- / 51.920	- / 55.324	- / 55.893	- / 55.744	- / 534.092	- / 872.484	
Modification Item 2 of 5: NAVCOMMs	- / 0.000	- / 5.181	- / 4.795	- / 5.093	- / 0.000	- / 5.093	- / 8.044	- / 7.938	- / 8.256	- / 8.586	- / 72.186	- / 120.079	
Modification Item 3 of 5: MST	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.728	- / 9.397	- / 9.397	- / 6.763	- / 123.047	- / 153.332	
Modification Item 4 of 5: M-CODE-CAPABLE GPS USER EQUIPMENT (MGUE)	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.264	- / 0.506	- / 2.270	- / 3.040	
Modification Item 5 of 5: JMEWS	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.643	- / 2.080	- / 2.122	- / 61.276	- / 66.121	

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Models of Systems Affected: TACTOM	Modification Type: Increase Capability and Extend Missile Service Life	Related RDT&E PEs: 0204229N
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Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Installation</i>	- / 0.000	- / 42.438	- / 45.007	- / 47.135	- / -	- / 47.135	- / 64.692	- / 73.302	- / 75.890	- / 73.721	- / 792.871	- / 1,215.056
Total												
Total Cost (Procurement + Support + Installation)	0.000	143.563	172.074	435.308	0.000	435.308	403.892	412.658	438.281	440.911	3,660.347	6,107.034

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMS Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Modification Item 1 of 5: Recertification

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: TUCSON, AZ
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Dec 2020	Dec 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025	Nov 2026
Delivery Dates	Dec 2021	Dec 2022	Nov 2023	Nov 2024	Nov 2025	Nov 2026	Nov 2027

Installation Information

Method of Implementation: Contractor:: Installation Name: Recertification kits

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	156 / 37.257	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	156 / 37.257
FY 2022	- / -	- / -	156 / 40.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	156 / 40.212
FY 2023	- / -	- / -	- / -	166 / 42.042	0 / 0.000	166 / 42.042	- / -	- / -	- / -	- / -	0 / 0.000	166 / 42.042
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	274 / 51.920	- / -	- / -	- / -	0 / 0.000	274 / 51.920
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 55.324	- / -	- / -	0 / 0.000	260 / 55.324
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 55.893	- / -	0 / 0.000	260 / 55.893
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 55.744	0 / 0.000	260 / 55.744
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,343 / 534.092	2,343 / 534.092
Total	- / -	156 / 37.257	156 / 40.212	166 / 42.042	0 / 0.000	166 / 42.042	274 / 51.920	260 / 55.324	260 / 55.893	260 / 55.744	2,343 / 534.092	3,875 / 872.484

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	78	78	39	39	39	39	41	42	41	42	69	69	68	68	65	65	65	65	65	65	65	65	65	65	65	65	2,343	3,875
Out	-	-	-	-	17	53	52	34	17	53	52	34	21	54	54	37	60	90	93	31	57	87	87	29	57	87	87	29	57	2,546	3,875

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Modification Item 2 of 5: NAVCOMMs

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: TUCSON, AZ
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 13

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Dec 2020	Dec 2021	Nov 2022	Nov 2023	Nov 2024	Nov 2025	Nov 2026
Delivery Dates	Jan 2022	Jan 2023	Dec 2023	Dec 2024	Dec 2025	Dec 2026	Dec 2027

Installation Information

Method of Implementation: Contractor:: Installation Name: NAVCOMMs

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	156 / 5.181	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	156 / 5.181
FY 2021	- / -	- / -	156 / 4.795	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	156 / 4.795
FY 2022	- / -	- / -	- / -	166 / 5.093	0 / 0.000	166 / 5.093	- / -	- / -	- / -	- / -	0 / 0.000	166 / 5.093
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	274 / 8.044	- / -	- / -	- / -	0 / 0.000	274 / 8.044
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 7.938	- / -	- / -	0 / 0.000	260 / 7.938
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 8.256	- / -	0 / 0.000	260 / 8.256
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 8.586	0 / 0.000	260 / 8.586
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 7.484	260 / 7.484
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,083 / 64.702	2,083 / 64.702
Total	- / -	156 / 5.181	156 / 4.795	166 / 5.093	0 / 0.000	166 / 5.093	274 / 8.044	260 / 7.938	260 / 8.256	260 / 8.586	2,343 / 72.186	3,875 / 120.079

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	78	78	39	39	39	39	41	42	41	42	69	69	68	68	65	65	65	65	65	65	65	65	65	65	65	65	2,343	3,875
Out	-	-	-	-	17	53	52	34	17	53	52	34	21	54	54	37	60	90	93	31	57	87	87	29	57	87	87	29	57	2,546	3,875

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMS Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Modification Item 3 of 5: MST

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: TUCSON, AZ
Administrative Leadtime (in Months): 11	Production Leadtime (in Months): 10

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Oct 2021	Mar 2022	Dec 2022	Dec 2023	Dec 2024	Dec 2025	Dec 2026
Delivery Dates	Nov 2023	Dec 2023	Aug 2024	Aug 2025	May 2026	May 2027	May 2028

Installation Information

Method of Implementation: Contractor:: Installation Name: MST

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	11 / 1.269	- / -	- / -	- / -	0 / 0.000	11 / 1.269
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	24 / 2.768	- / -	- / -	- / -	0 / 0.000	24 / 2.768
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.691	66 / 8.614	- / -	- / -	0 / 0.000	72 / 9.305
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.783	45 / 6.506	- / -	0 / 0.000	51 / 7.289
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 2.891	30 / 3.757	0 / 0.000	50 / 6.648
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 3.006	28 / 2.433	52 / 5.439
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 4.691	54 / 4.691
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	988 / 115.923	988 / 115.923
Total	- / -	- / -	- / -	- / -	- / -	- / -	41 / 4.728	72 / 9.397	65 / 9.397	54 / 6.763	1,070 / 123.047	1,302 / 153.332

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	12	13	18	18	18	18	18	18	15	14	15	15	12	12	1,070	1,302
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	12	12	19	18	18	18	12	18	18	15	14	15	15	12	1,082	1,302

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMS Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Modification Item 4 of 5: M-CODE-CAPABLE GPS USER EQUIPMENT (MGUE)

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: TUCSON, AZ
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 12

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates				Dec 2024	Dec 2025	Dec 2026	Dec 2027
Delivery Dates				Oct 2025	Oct 2026	Oct 2027	Oct 2028

Installation Information

Method of Implementation: Raytheon:: Installation Name: M-CODE

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 0.264	- / -	0 / 0.000	260 / 0.264
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 0.506	0 / 0.000	260 / 0.506
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 0.264	260 / 0.264
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,209 / 2.006	2,209 / 2.006
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	260 / 0.264	260 / 0.506	2,469 / 2.270	2,989 / 3.040

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65	65	65	65	65	65	65	65	2,469	2,989
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57	87	87	29	57	2,672	2,989

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMS Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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Modification Item 5 of 5: JMEWS

Manufacturer Information

Manufacturer Name: RAYTHEON Company	Manufacturer Location: Not Specified..
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 12

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates				Jun 2024	Dec 2025	Dec 2026	Dec 2027
Delivery Dates				Jun 2025	Dec 2026	Dec 2027	Dec 2028

Installation Information

Method of Implementation: Contractor:: Installation Name: JMEWS

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.643	- / -	- / -	0 / 0.000	12 / 0.643
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.080	- / -	0 / 0.000	40 / 2.080
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.122	0 / 0.000	40 / 2.122
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 2.411	40 / 2.411
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,198 / 58.865	1,198 / 58.865
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.643	40 / 2.080	40 / 2.122	1,238 / 61.276	1,330 / 66.121

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9	10	10	10	10	10	10	10	10	1,238	1,330
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	13	13	10	10	10	10	1,258	1,330

Footnotes:
 (1) Cost Element Recertification Kits - Entries for this Cost Code prior to FY 2021 are documented in BLI 2101. Learning curve, quantity variations affecting economy of scale, escalation rates, and costs related to equipment upgrades to prepare missile for Block V upgrades account for the variation in Recertification kit costs across the FYDP. Cost Element Recertification Installs - Induction schedule reflects a six-month production lead-time.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2301 / Tomahawk Mods	Modification Number / Title: 1 / TACTOM NAVCOMMs Modernization and Recertification Kits

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 289
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⁽²⁾ Cost Element NAVCOMMs - Beginning in FY 2021, this Cost Code moved from BLI 2101 to BLI 2301. FY 2021 Installation funding is associated with NAVCOMM Kits procured in FY 2020 with funds budgeted in BLI 2101. Learning curve, quantity variations affecting economy of scale, and escalation rates account for the variation in NAVCOMM kit costs across the FYDP. Production lead-time drives NAVCOMMs kit procurements to occur one year ahead of install into a recertified missile. NAVCOMMs kits are treated as Government Furnished Property (GFP) to recertification and have to be available for missile recertification prior to missile induction. Unit cost increase from FY 2022 to FY 2023 due to economy of scale effects; fewer Nav/Comms Kit components (Radios, Antennas) are being procured for new production TACTOMs, across all services, than in FY2022.

⁽³⁾ Cost Element MST Kits - FY 2023 is the third year of procurement, reduction in kit quantities from PB22 request is due to \$10M reduction in FY 2022 enactment. Increased cost is largely driven by sub-supplier component cost increases. MST kits are treated as GFP to recertification and must be available for missile recertification prior to missile induction.

⁽⁴⁾ Cost Element JMEWS Kits: Due to long lead time of 18 months on energetic fills, WPN funding required in FY 2023 to support Kit procurements starting in FY 2024.

⁽⁵⁾ Cost Element Other Production Support- NAVCOMMs - Unique government and contractor production support and recurring fixed costs that is required per lot of NAVCOMMs Modernization kit. Funding includes engineering support to include hardware repairs, software upgrades and crypto support.

⁽⁶⁾ Cost Element Support Equipment- NAVCOMMs - Includes unique support and test equipment required to support the integration of the NAVCOMMs Modernization Kits during recertification. Funding includes planning, resourcing and implementing management actions to acquire and support the equipment required to sustain and validate the NAVCOMMs capability/functionality ensuring that TACTOM is available to the warfighter when it is needed.

⁽⁷⁾ Cost Element Integrated Logistics Support- NAVCOMMs - Includes costs for support equipment management, computer resources support, training and training support, ILS program management, and packaging, handling, storage and transportation as associated with the NAVCOMMs Modernization Kit.

⁽⁸⁾ Cost Element Other Production Support- Recertification - Unique government and contractor production support and recurring fixed costs that are required per lot of recertification kit. Funding reflects required obsolescence mitigation including avionics, electrical, structures bill of material development, and obsolescence Engineering Change Proposal forecasting in order to support the extended end of service date. During recertification, missiles will not be under warranty and treated as Government Furnished Material (GFM). Therefore, funding also reflects replacement/repair damage to of components, components that fail testing, are damaged and other non-warranted items replaced at the cost of the Government. Funding increase in FY23 is due to the increase in quantities.

⁽⁹⁾ Cost Element Support Equipment- Recertification - Costs include modifications/procurement of unique support and test equipment required to enable/support the integration and test of the recertification kit. Funding includes the planning, resourcing, and implementing management actions to acquire and support the equipment required to sustain and validate the capability/functionality ensuring that the TACTOM is available to the warfighter when needed. FY23 increase in cost is to fund an obsolescence re-design of the Mid-Body Range Safety Sub-system (MRSS) Kits necessary to meet program test requirements.

⁽¹⁰⁾ Cost Element Integrated Logistics Support- Recertification - Costs include support equipment management, computer resources support, training and training support, ILS program management, and packaging, handling, storage and transportation as associated with the recertification kit.

⁽¹¹⁾ Cost Element MK-45 Support- Recertification - Funding is required to recertify and fund for Non-Recurring Engineering (NRE) associated with recertification and to address obsolescence related to extending the service life of the Composite Capsule Launching System (CCLS) barrels and associated hardware. Funding also reflects procurement of replacement Capsule Launching System (CLS) hardware, support for CLS test equipment parts, and associated CLS maintenance. Funding increase in FY23 is due to the increase in quantities.

⁽¹²⁾ Cost Element Other Production Support MST - Increase in FY 2023 is due to requirement to fund efforts to support updates on the RECERT line in order to begin MST Kit installation, and to complete non-recurring engineering in support of increased MST Kit procurement rates across the FYDP. The increased funding also supports updating the RECERT technical data package to accommodate MST Kits to begin installation on the production line including work instructions, test requirements documentation, drawings, process & article prove-ins, and first article inspections. Updates to MST Kit production required to support increased production rates across the FYDP include kit test requirement document updates, work flow procedures, production line station updates, and increased automation of MST Kit testing. Updates to the MST Kit Technical Data Package (TDP) as required to incorporate changes found during qualification testing, developmental and operational test, and learning from initial low rate production. During recertification, MST kits will not be under warranty and treated as Government Furnished Material (GFM), therefore funding also reflects initial capability set up for replacement/repair of damage to components that fail testing during recertification or in the fleet.

⁽¹³⁾ Cost Element Support Equipment-MST - Funding increase in FY23 is to perform engineering updates and procurement of MST Kit automated test equipment (ATE) and tooling in order to support increased Kit production rates across the FYDP. This includes adjusting work flow and procedures to support increased throughput.

⁽¹⁴⁾ Cost Element Support Equipment - Classified - Increase from 2022 to 2023 due to a reallocation of funds, there is no cost increase - details held at a higher classification.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles

P-1 Line Item Number / Title:
2307 / Evolved Sea Sparrow Missile (ESSM)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 197

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,076	99	108	136	-	136	146	280	286	293	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,596.166	212.637	248.619	282.035	0.000	282.035	308.103	542.367	555.245	562.940	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,596.166	212.637	248.619	282.035	0.000	282.035	308.103	542.367	555.245	562.940	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,596.166	212.637	248.619	282.035	0.000	282.035	308.103	542.367	555.245	562.940	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	1,483K	2,148K	2,302K	2,074K	-	2,074K	2,110K	1,937K	1,941K	1,921K	Continuing	Continuing

Description:

The Evolved SEASPARROW Missile (ESSM) Program is an international cooperative effort among twelve NATO SEASPARROW nations (Australia, Belgium, Canada, Denmark, Germany, Greece, Netherlands, Norway, Portugal, Spain, Turkey, and the U.S.) established to design, develop, test, produce and provide in-service support to a new and improved version of the SPARROW missile (RIM-7P) with the kinematic performance to defeat current and projected threats that possess low altitude, high velocity, and maneuvering characteristics beyond the engagement capabilities of the RIM-7P. ESSM consists of Blk 1 and Blk 2 missiles.

ESSM Blk 2 provides crucial defense battlespace and fire power against the fast, low altitude, highly maneuverable Anti-Ship Cruise Missile (ASCM) threat. ESSM Blk 2 upgrade replaces the largely obsolete guidance section with a dual mode Active/Semi-Active X-Band seeker capable of defeating future threat capabilities within the existing envelope, including: smaller signatures, increased raid sizes, and adverse environments including countermeasures. Threat types include: advanced ASCMs, Anti-Ship Ballistic Missiles, surface, and asymmetrical. Two ESSM Blk 2 Controlled Test Vehicle flight tests were successfully conducted in June 2017 onboard the Self Defense Test Ship at the Point Mugu Sea Range. Two Guided Test Vehicle (GTV) flight tests were completed, GTV-1 was completed in June 2018 and GTV-2 was completed in October 2018. Developmental and Operational Testing are being conducted throughout 2020 and into 2021 from AEGIS destroyers and the Self Defense Test Ship.

The ESSM Blk 2 Milestone C decision was successfully completed in Q2 FY 2019, supporting Initial Operational Capability of Functional implementation for AEGIS platforms scheduled for 2021 and SSDS platforms in 2025.

Production deliveries began in 2021 with Full Rate Production rounds delivering to the Fleet in 2025. IOC was successfully completed in December 2021.

Production Support (Producibility/Procurement, Security Infrastructure, Hardware Maintenance, and Configuration Management) for ESSM Blk 2 reflects the U.S. Share under the cooperative Memorandum of Understanding (MOU) with Consortium Partners. The US is responsible for approximately 45% of the missile production support under this approved MOU. While there is not a one-to-one relationship between yearly missile quantities and the amount of production support necessary for Blk2, an increase in missile quantity will drive some increase in production support.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles

P-1 Line Item Number / Title:
2307 / Evolved Sea Sparrow Missile (ESSM)

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 197

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Evolved Sea Sparrow Missile (ESSM)	P-5a, P-21			1,076 / 1,596.166	99 / 212.637	108 / 248.619	136 / 282.035	- / 0.000	136 / 282.035
P-40	Total Gross/Weapon System Cost				1,076 / 1,596.166	99 / 212.637	108 / 248.619	136 / 282.035	- / 0.000	136 / 282.035

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

Program was able to procure an additional 11 ESSM Blk 2 AURs in FY21 due to favorable negotiations for unit cost. The P-5 is updated to reflect actuals and does not match the P-40.

Increase in overall FY 2023 funding from FY 2022 is due to an increase in the procurement of ESSM Blk2 AURs. Increase or Decrease in the quantity of missiles does not always mean an increase or decrease in the total amount of overall missiles due to the Consortium quantities. FY23 AUR unit costs are based on current Government Cost Estimates.

FY 2023 funding decrease in MK852 Mod 0 Shipping containers due to a decrease in the procurement quantity from 31 in FY 2022 to 16 in FY 2023 to accommodate updated missile procurement and specific ship destination (4 missiles per canister and 1 missile per MK852 MOD 0). MK852 Mod 0 Shipping containers go to Ship Self Defense System (SSDS) to be loaded. Each ship is fully loaded with 16 ESSM Blk 2 AURs (containers).

FY 2023 funding increase in MK 25 MOD 1 Canisters due to an increase in the procurement quantity from 17 in FY 2022 to 30 in FY 2023 accommodate missile procurement and specific ship destination.

Increase in FY 2023 Obsolescence funding (\$10.6M) will be going towards designing out obsolete parts associated with the following: 1.) Side-Looking-Subsystem (SLS) Signal Processor (SP) Circuit Card Assembly (CCA), 2.)Form-Fit-Function (F3R) re-spins of the Dual Band Transceiver (DBT) Frequency Reference Unit (FRU), and 3.) F3R re-spins of the FRU Oscillator, Frequency Generator, and Radio Frequency (RF).

Increase in Test Equipment (\$7.9M) is being used to procure a Missile Simulator/IMIPS ESSM Blk 2 Inert Operation Missile (IOM) and a MK698 Upgrade. The IMIPS IOM contains no explosives and is used to simulate the missiles for testing with ships' combat systems. The MK698 upgrade will provide needed and necessary capability to successfully test and recertify the ESSM Block 2 missile at NMC/Seal Beach without the added delay and increased cost of returning rounds to the contractor Raytheon Missile Defense (RMD). This capability will allow for the efficient and effective testing of missiles offloaded from both the fleet and test events to ensure that rounds are quickly returned to the fleet as Combat Useable Assets (CUA). Currently, NMC/Seal Beach only has the ability to test and recertify ESSM Block 1 missiles with the existing MK698 equipment. Without the procurement of the MK698 upgrade, missile testing and recertification will be redirected to the contractor RMD at a higher cost and increased turnaround time. The cost of testing and recertification at NMC/Seal Beach is approximately \$5K per missile, while the cost at Raytheon is approximately \$25K per missile.

Increase in production support from FY 2022 to FY 2023 reflects the US share of the ESSM Blk 2 Production Memorandum of Understanding (MOU) estimate for FY 2023. The estimated amounts (phasing for the Production MOU) are based on the updated life-cycle cost estimate completed during MS C (March 2019).

FY23 Production Support details are below:

- 1.) Producibility/Procurement Support (\$11.545M): Government technical oversight on production and redesign engineering, reviews and approval of technical changes to the technical data packages and production drawings, and calibration/certification to test equipment used to support production. Support to keep the missile producible throughout the life of production and support to maintain producibility of the production line. Provide ordnance to the fleet to support the ordnance assessment (OA) program and evaluate the effects of aging energetics to continue safe use of the components through management of their service life.
- 2.) Security and Infrastructure Support (\$8.899M): Costs required for the shared (across multiple DOD missiles) production facility in Tucson, AZ.
- 3.) Configuration Management (\$570K): Support for the system performance per the Navy weapon specifications.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles		P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: 197		
<p>4.) Hardware/Maintenance Support (\$2.282M): Support for the IOM in the production line. FY23 support increases from FY22 above inflation to support the upcoming IOC in DEC 2021. The program will initiate ramp up activities to transition from Low-Rate Initial to Full Rate Production, with Production Readiness Reviews following an anticipated FRP decision in FY22, as well as preparation to initiate activities for prerequisite activities to meet production capacity ramp up to achieve required production quantities in FY25 and beyond.</p>		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3		P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)
		Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	1,076	99	108	136	-	136
Gross/Weapon System Cost (\$ in Millions)	1,596.166	212.637	248.619	282.035	0.000	282.035
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,596.166	212.637	248.619	282.035	0.000	282.035
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,596.166	212.637	248.619	282.035	0.000	282.035

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	1,483K	2,148K	2,302K	2,074K	-	2,074K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - MK25 QUADPACK CANISTERS Cost																		
Recurring Cost																		
1.1.1) MK 25 QUADPACK CANISTERS ⁽¹⁾	370,426.40	197	72.974	596,386.00	20	11.928	616,083.00	17	10.473	634,525.00	30	19.036	-	-	-	634,525.00	30	19.036
1.1.2) MK25 MOD 1 MK8 Bolts	-	-	0.271	-	-	0.636	-	-	0.499	-	-	0.812	-	-	-	-	-	0.812
1.1.3) MK 852 Mod 0 (Blk2 Shipping) ^{(1) (2)}	56,666.67	12	0.680	41,712.00	30	1.251	41,713.00	31	1.293	41,714.00	16	0.667	-	-	-	41,714.00	16	0.667
<i>Subtotal: Recurring Cost</i>	-	-	73.925	-	-	13.815	-	-	12.265	-	-	20.515	-	-	-	-	-	20.515
<i>Subtotal: Hardware - MK25 QUADPACK CANISTERS Cost</i>	-	-	73.925	-	-	13.815	-	-	12.265	-	-	20.515	-	-	-	-	-	20.515
Hardware - ESSM MISSILES Cost																		
Recurring Cost																		
2.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE ⁽¹⁾	876,463.10	542	475.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) MK 29 ALL UP ROUNDS MISSILE HARDWARE ⁽¹⁾	817,624.73	461	376.925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.3) MK 57 ALLUP ROUNDS MISSILE HARDWARE ⁽¹⁾	1,215K	30	36.455	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3						P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)						Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)					
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.1.4) MK 41 X-BAND ALL UP ROUNDS MISSILE HARDWARE	858,500.00	20	17.170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.5) ESSM BLOCK 2 ^(†) (3)	1,737K	126	218.918	1,577K	110	173.494	1,660K	108	179.231	1,615K	136	219.626	-	-	-	1,615K	136	219.626
2.1.6) WARHEAD COMPATIBLE TELEMETER	70,647.54	244	17.238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.7) Missile Obsolescence ⁽⁴⁾	-	-	3.131	-	-	1.043	-	-	3.686	-	-	10.604	-	-	-	-	-	10.604
<i>Subtotal: Recurring Cost</i>	-	-	1,144.880	-	-	174.537	-	-	182.917	-	-	230.230	-	-	-	-	-	230.230
<i>Subtotal: Hardware - ESSM MISSILES Cost</i>	-	-	1,144.880	-	-	174.537	-	-	182.917	-	-	230.230	-	-	-	-	-	230.230
Hardware - SHIPPING CONTAINERS Cost																		
Recurring Cost																		
3.1.1) CMBRE Procurement ^(†) (5)	-	-	-	154,151.00	20	3.083	-	-	-	-	-	-	-	-	-	-	-	-
3.1.2) CMBRE Adaptors ^(†)	-	-	-	91,800.00	20	1.836	-	-	-	-	-	-	-	-	-	-	-	-
3.1.3) CMBRE SPARES ^(†)	-	-	-	61,951.00	3	0.186	-	-	-	-	-	-	-	-	-	-	-	-
3.1.4) CMBRE Power Supply ^(†)	-	-	-	18,360.00	10	0.184	18,727.00	10	0.187	-	-	-	-	-	-	-	-	-
3.1.5) CMBRE Cables ^(†)	-	-	-	5,100.00	10	0.051	5,202.00	10	0.052	-	-	-	-	-	-	-	-	-
3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers ^(†)	56,000.00	10	0.560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.7) ROCKET MOTORS (SEASPARROW)	-	-	6.396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.8) Test Equipment ⁽⁶⁾	-	-	-	-	-	-	-	-	2.454	-	-	7.994	-	-	-	-	-	7.994
3.1.9) Production Capacity ⁽⁷⁾	-	-	-	-	-	-	-	-	31.420	-	-	-	-	-	-	-	-	-
3.1.10) ESSM SHIPPING CONTAINERS ^(†)	9,092.08	467	4.246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	11.202	-	-	5.340	-	-	34.113	-	-	7.994	-	-	-	-	-	7.994

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3						P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)						Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)					
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Hardware - SHIPPING CONTAINERS Cost</i>	-	-	11.202	-	-	5.340	-	-	34.113	-	-	7.994	-	-	-	-	-	7.994
Support Cost																		
4.1) PROCUREMENT SUPPORT	-	-	268.796	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) TOOLING AND TEST SUPPORT	-	-	42.734	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.3) DIMINISHING MANUFACTURING SERVICES	-	-	8.531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) PERFORMANCE CHARACTERIZATION	-	-	29.924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.5) ILS/FLEET DOCUMENTATION	-	-	4.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6) COMPONENT IMPROVEMENT/ECPS	-	-	12.150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.7) PRODUCIBILITY/ PROCUREMENT SUPPORT ⁽⁸⁾	-	-	-	-	-	9.675	-	-	9.869	-	-	11.545	-	-	-	-	-	11.545
4.8) SECURITY/ INFRASTRUCTURE SUPPORT ⁽⁹⁾	-	-	-	-	-	7.020	-	-	7.160	-	-	8.899	-	-	-	-	-	8.899
4.9) CONFIGURATION MANAGEMENT ⁽¹⁰⁾	-	-	-	-	-	0.450	-	-	0.459	-	-	0.570	-	-	-	-	-	0.570
4.10) HARDWARE/ MAINTENANCE SUPPORT ⁽¹¹⁾	-	-	-	-	-	1.800	-	-	1.836	-	-	2.282	-	-	-	-	-	2.282
<i>Subtotal: Support Cost</i>	-	-	366.159	-	-	18.945	-	-	19.324	-	-	23.296	-	-	-	-	-	23.296
Gross/Weapon System Cost	1,483K	1,076	1,596.166	2,148K	99	212.637	2,302K	108	248.619	2,074K	136	282.035	-	-	0.000	2,074K	136	282.035

(t) indicates the presence of a P-5a

Footnotes:

- (1) There are four (4) missiles per MK 25 Quadpack Canister. Unit prices were updated in FY 2022 & FY 2023 based upon the fully negotiated contract with options in FY 2022 & FY 2023.
- (2) There is one (1) missile per MK 852 Mod 0. MK852s are transport containers that go to Ship Self Defense System (SSDS) ships to be loaded. SSDS ships will be officially modified to take delivery of ESSM Blk 2 AURs in FY24.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)	Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>⁽³⁾ FY23 unit round costs are based on current Government estimates. FY21-23 negotiated unit cost will be based on finalized International and US quantities combined. International quantities used as basis for negotiating contract terms and conditions were finalized at the 112TH NATO SEASPARROW Project Steering Committee (NSPSC) in NOV20. Program was able to procure an additional 11 ESSM Blk 2 AURs in FY21 due to favorable negotiations for unit cost. The P-5 is updated to reflect actuals.</p> <p>⁽⁴⁾ FY 2023 Obsolescence funding will be going towards designing out obsolete parts associated with the following: 1.) Side-Looking-Subsystem (SLS) Signal Processor (SP) Circuit Card Assembly (CCA), 2.)Form-Fit-Function (F3R) re-spins of the Dual Band Transceiver (DBT) Frequency Reference Unit (FRU), and 3.)F3R re-spins of the FRU Oscillator, Frequency Generator, and Radio Frequency (RF).</p> <p>⁽⁵⁾ CMBRE requirement (power supply, and cables) ends in FY 2022. This was used to reprogram ESSM Blk 2 AURs in deployed locations.</p> <p>⁽⁶⁾ Test Equipment (\$7.9M) is being used to procure a Missile Simulator/IMIPS ESSM Blk 2 Inert Operation Missile (IOM) and a MK698 Upgrade. The IMIPS IOM contains no explosives and is used to simulate the missiles for testing with ships' combat systems. The MK698 upgrade will provide needed and necessary capability to successfully test and recertify the ESSM Block 2 missile at NMC/Seal Beach without the added delay and increased cost of returning rounds to the contractor Raytheon Missile Defense (RMD). This capability will allow for the efficient and effective testing of missiles offloaded from both the fleet and test events to ensure that rounds are quickly returned to the fleet as Combat Useable Assets (CUA). Currently, NMC/Seal Beach only has the ability to test and recertify ESSM Block 1 missiles with the existing MK698 equipment. Without the procurement of the MK698 upgrade, missile testing and recertification will be redirected to the contractor RMD at a higher cost and increased turnaround time. The cost of testing and recertification at NMC/Seal Beach is approximately \$5K per missile, while the cost at Raytheon is approximately \$25K per missile.</p> <p>⁽⁷⁾ Funding to be awarded to Raytheon to procure production line test equipment required to increase missile production capacity from 25 AURs to 45 AURs per month.</p> <p>⁽⁸⁾ Government technical oversight on production and redesign engineering, reviews and approval of technical changes to the technical data packages and production drawings, and calibration/certification to test equipment used to support production. Support to keep the missile producible throughout the life of production and support to maintain producibility of the production line. Provide ordnance to the fleet to support the ordnance assessment (OA) program and evaluate the effects of aging energetics to continue safe use of the components through management of their service life. Production Support (Producibility/Procurement, Security Infrastructure, Hardware Maintenance, and Configuration Management) for ESSM Blk 2 reflects the U.S. Share under the cooperative Memorandum of Understanding (MOU) with Consortium Partners. The US is responsible for approximately 45% of the missile production support under this approved MOU. While there is not a one-to-one relationship between yearly missile quantities and the amount of production support necessary for Blk2, an increase in missile quantity will generally drive some increase in production support.</p> <p>⁽⁹⁾ Costs required for the shared (across multiple missile families) production facility in Tucson, AZ. Previous submissions showed this funding in overall procurement support however the effort is now being broken out to show specific information on what support costs are being used for. Production Support (Producibility/Procurement, Security Infrastructure, Hardware Maintenance, and Configuration Management) for ESSM Blk 2 reflects the U.S. Share under the cooperative Memorandum of Understanding (MOU) with Consortium Partners. The US is responsible for approximately 45% of the missile production support under this approved MOU. While there is not a one-to-one relationship between yearly missile quantities and the amount of production support necessary for Blk2, an increase in missile quantity will generally drive some increase in production support.</p> <p>⁽¹⁰⁾ Support for the system performance per the Navy weapon specifications. Production Support (Producibility/Procurement, Security Infrastructure, Hardware Maintenance, and Configuration Management) for ESSM Blk 2 reflects the U.S. Share under the cooperative Memorandum of Understanding (MOU) with Consortium Partners. The US is responsible for approximately 45% of the missile production support under this approved MOU. While there is not a one-to-one relationship between yearly missile quantities and the amount of production support necessary for Blk2, an increase in missile quantity will generally drive some increase in production support.</p> <p>⁽¹¹⁾ Support for the Inert Operation Missile (IOM) in the production line. Production Support (Producibility/Procurement, Security Infrastructure, Hardware Maintenance, and Configuration Management) for ESSM Blk 2 reflects the U.S. Share under the cooperative Memorandum of Understanding (MOU) with Consortium Partners. The US is responsible for approximately 45% of the missile production support under this approved MOU. While there is not a one-to-one relationship between yearly missile quantities and the amount of production support necessary for Blk2, an increase in missile quantity will generally drive some increase in production support.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3			P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)					Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2016	BAE / ABERDEEN, SD	SS / FFP	NAVSEA	Mar 2016	Jun 2017	3	419,200.00	Y		Feb 2014
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2017	BAE / ABERDEEN, SD	SS / FFP	NAVSEA	May 2017	Aug 2018	19	374,064.00	Y		Feb 2015
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2018	BAE / ABERDEEN, SD	C / FFP	NAVSEA	Jul 2019	Oct 2020	11	480,000.00	Y		Feb 2016
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2019	BAE / ABERDEEN, SD	C / FFP	NAVSEA	Jul 2019	Oct 2020	11	489,600.00	Y		
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2020	BAE / ABERDEEN, SD	C / FFP	NAVSEA	Feb 2020	May 2021	8	608,798.00	Y		
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2021	BAE / ABERDEEN, SD	C / FFP	NAVSEA	Mar 2021	Jun 2022	20	596,386.00	Y		
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2022	BAE / ABERDEEN, SD	C / FFP	NAVSEA	Mar 2022	Jun 2023	17	616,083.00	Y		
1.1.1) MK 25 QUADPACK CANISTERS ^(†)		2023	BAE / ABERDEEN, SD	C / FFP	NAVSEA	Mar 2023	Jun 2024	30	634,525.00	Y		
1.1.3) MK 852 Mod 0 (Bik2 Shipping)		2018	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Aug 2019	Aug 2019	7	56,000.00	Y		Oct 2017
1.1.3) MK 852 Mod 0 (Bik2 Shipping)		2019	Raytheon CO / Tucson AZ	SS / FFP	NAVSEA	Aug 2019	Aug 2019	5	57,680.00	Y		Oct 2018
1.1.3) MK 852 Mod 0 (Bik2 Shipping)		2021	Raytheon CO / Tucson AZ	C / TBD	NAVSEA	Oct 2020	Oct 2020	30	41,712.00	N		
1.1.3) MK 852 Mod 0 (Bik2 Shipping)		2022	Raytheon CO / Tucson AZ	C / TBD	NAVSEA	Oct 2021	Oct 2021	31	41,713.00	N		
1.1.3) MK 852 Mod 0 (Bik2 Shipping)		2023	Raytheon CO / Tucson AZ	C / TBD	NAVSEA	Oct 2022	Oct 2022	16	41,714.00	N		
2.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE		2015	Raytheon CO ⁽¹²⁾ / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	Mar 2017	41	1,023K	Y		Oct 2013
2.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE		2016	Raytheon CO ⁽¹²⁾ / Tucson, AZ	SS / FFP	NAVSEA	Mar 2016	Mar 2018	12	1,038K	Y		Oct 2014
2.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE		2017	Raytheon CO ⁽¹²⁾ / Tucson, AZ	SS / FFP	NAVSEA	May 2017	May 2019	49	1,201K	Y		Oct 2015
2.1.2) MK 29 ALL UP ROUNDS MISSILE HARDWARE		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	Mar 2017	63	898,825.40	Y	Mar 2000	Jun 2013
2.1.2) MK 29 ALL UP ROUNDS MISSILE HARDWARE		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2016	Mar 2018	18	971,944.44	Y	Mar 2000	Jun 2014
2.1.3) MK 57 ALLUP ROUNDS MISSILE HARDWARE		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Oct 2016	Oct 2018	24	1,277K	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)	Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1.5) ESSM BLOCK 2 ^(†)		2018	Raytheon CO ⁽¹³⁾ / Tucson, AZ	SS / FFP	NAVSEA	Jul 2019	Jan 2021	31	1,748K	Y		Oct 2017
2.1.5) ESSM BLOCK 2 ^(†)		2019	Raytheon CO ⁽¹³⁾ / Tucson, AZ	SS / FFP	NAVSEA	Jul 2019	Jul 2021	45	1,728K	Y		Oct 2018
2.1.5) ESSM BLOCK 2 ^(†)		2020	Raytheon CO ⁽¹³⁾ / Tucson, AZ	SS / FPIF	NAVSEA	Oct 2019	Oct 2021	50	1,727K	Y		Oct 2019
2.1.5) ESSM BLOCK 2 ^(†)		2021	Raytheon CO ⁽¹³⁾ / Tucson, AZ	SS / FPIF	NAVSEA	Sep 2021	Sep 2023	110	1,577K	N	Oct 2020	
2.1.5) ESSM BLOCK 2 ^(†)		2022	Raytheon CO ⁽¹³⁾ / Tucson, AZ	SS / FPIF	NAVSEA	Nov 2021	Nov 2023	108	1,660K	N	Oct 2021	
2.1.5) ESSM BLOCK 2 ^(†)		2023	Raytheon CO ⁽¹³⁾ / Tucson, AZ	SS / FPIF	NAVSEA	Oct 2022	Oct 2024	136	1,615K	N	Oct 2022	
3.1.1) CMBRE Procurement		2021	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Nov 2020	Nov 2020	20	154,151.00	N		
3.1.2) CMBRE Adaptors		2021	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Nov 2020	Nov 2020	20	91,800.00	N		
3.1.3) CMBRE SPARES		2021	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Nov 2020	Nov 2020	3	61,951.00	N		
3.1.4) CMBRE Power Supply		2021	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Oct 2020	Oct 2020	10	18,360.00	N		
3.1.4) CMBRE Power Supply		2022	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Oct 2021	Oct 2021	10	18,727.00	N		
3.1.5) CMBRE Cables		2021	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Oct 2020	Oct 2020	10	5,100.00	N		
3.1.5) CMBRE Cables		2022	Northrop Grumman / Huntsville, Alabama	C / TBD	NAVAIR	Oct 2021	Oct 2021	10	5,202.00	N		
3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers ^(†)		2018	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Sep 2018	Sep 2019	10	56,000.00	Y		
3.1.10) ESSM SHIPPING CONTAINERS		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	May 2017	63	6,031.75	Y	Mar 2000	Oct 2014
3.1.10) ESSM SHIPPING CONTAINERS		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Feb 2019	18	6,166.67	Y	Mar 2000	Oct 2015

^(†) indicates the presence of a P-21

Footnotes:

⁽¹²⁾ ESSM is a cooperative effort among twelve NATO SEASPARROW nations which contributes to MSR.

⁽¹³⁾ FRP Test Equipment on contract- won't be available until after FY 2022. MSR Total Quantity includes Consortium. MSR, 1-8-5, and MAX quantities updated for FY 2022 based on experience from initial production and transition to production progress.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3 **P-1 Line Item Number / Title:** 2307 / Evolved Sea Sparrow Missile (ESSM) **Item Number / Title [DODIC]:** 1 / Evolved Sea Sparrow Missile (ESSM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK 25 QUADPACK CANISTERS ⁽¹⁾																															
Prior Years Deliveries: 145																															
	1	2016	NAVY	3	0	3	-	-	-	-	-	-	-	-	3															0	
	1	2017	NAVY	19	0	19								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	17
	1	2018	NAVY	11	0	11																								11	
	1	2019	NAVY	11	0	11																								11	
	1	2020	NAVY	8	0	8																								8	
	1	2021	NAVY	20	0	20																								20	
	1	2022	NAVY	17	0	17																								17	
	1	2023	NAVY	30	0	30																								30	
2.1.5) ESSM BLOCK 2 ⁽³⁾																															
	2	2018	NAVY	31	0	31																								31	
	2	2019	NAVY	45	0	45																								45	
	2	2020	NAVY	50	0	50																								50	
	2	2021	NAVY	110	0	110																								110	
	2	2022	NAVY	108	0	108																								108	
	2	2023	NAVY	136	0	136																								136	
3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers																															
	3	2018	NAVY	10	0	10																								A -	10
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)	Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019													Fiscal Year 2020													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 8	BAL DUE A S O F 1 O C T	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

1.1.1) MK 25 QUADPACK CANISTERS ⁽¹⁾

Prior Years Deliveries: 145																													
1	2016	NAVY	3	3	0																								0
1	2017	NAVY	19	2	17	2	2	2	2	2	3	2	2																0
1	2018	NAVY	11	0	11									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
1	2019	NAVY	11	0	11									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
1	2020	NAVY	8	0	8																								8
1	2021	NAVY	20	0	20																								20
1	2022	NAVY	17	0	17																								17
1	2023	NAVY	30	0	30																								30

2.1.5) ESSM BLOCK 2 ⁽³⁾

2	2018	NAVY	31	0	31									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31
2	2019	NAVY	45	0	45									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
2	2020	NAVY	50	0	50													A -	-	-	-	-	-	-	-	-	-	-	50
2	2021	NAVY	110	0	110																								110
2	2022	NAVY	108	0	108																								108
2	2023	NAVY	136	0	136																								136

3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers

3	2018	NAVY	10	0	10	-	-	-	-	-	-	-	-	-	-	-	-	5	5											0
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3 **P-1 Line Item Number / Title:** 2307 / Evolved Sea Sparrow Missile (ESSM) **Item Number / Title [DODIC]:** 1 / Evolved Sea Sparrow Missile (ESSM)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021													Fiscal Year 2022													BALANCE		
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) MK 25 QUADPACK CANISTERS ⁽¹⁾																																	
Prior Years Deliveries: 145																																	
1		2016	NAVY	3	3	0																						0					
1		2017	NAVY	19	19	0																						0					
1		2018	NAVY	11	0	11	1	-	-	3	3	3	1															0					
1		2019	NAVY	11	0	11	1	1	1	1	1	1	1	1	1	1												0					
1		2020	NAVY	8	0	8	-	-	-	-	-	-	1	-	-	-	1	2	2	1	1							0					
1		2021	NAVY	20	0	20					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	1	2	12			
1		2022	NAVY	17	0	17																						17					
1		2023	NAVY	30	0	30																						30					
2.1.5) ESSM BLOCK 2 ⁽³⁾																																	
2		2018	NAVY	31	0	31	-	-	-	4	-	-	-	-	-	-	-	-	-	23								0					
2		2019	NAVY	45	0	45	-	-	-	-	-	-	-	-	3	3	3	4	4	4	4	4	4	4	4	4	4	0					
2		2020	NAVY	50	0	50	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	5	5	0			
2		2021	NAVY	110	0	110											A	-	-	-	-	-	-	-	-	-	-	110					
2		2022	NAVY	108	0	108												A	-	-	-	-	-	-	-	-	-	108					
2		2023	NAVY	136	0	136																						136					
3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers																																	
3		2018	NAVY	10	10	0																						0					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3 **P-1 Line Item Number / Title:** 2307 / Evolved Sea Sparrow Missile (ESSM) **Item Number / Title [DODIC]:** 1 / Evolved Sea Sparrow Missile (ESSM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK 25 QUADPACK CANISTERS ⁽¹⁾																															
Prior Years Deliveries: 145																															
1	2016	NAVY		3	3	0																						0			
1	2017	NAVY		19	19	0																						0			
1	2018	NAVY		11	11	0																						0			
1	2019	NAVY		11	11	0																						0			
1	2020	NAVY		8	8	0																						0			
1	2021	NAVY		20	8	12	3	-	-	3	2	3	-	1														0			
1	2022	NAVY		17	0	17	-	-	-	-	-	-	-	1	-	-	4	4	4	4								0			
1	2023	NAVY		30	0	30						A	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	22	
2.1.5) ESSM BLOCK 2 ⁽³⁾																															
2	2018	NAVY		31	31	0																						0			
2	2019	NAVY		45	45	0																						0			
2	2020	NAVY		50	50	0																						0			
2	2021	NAVY		110	0	110	-	-	-	-	-	-	-	-	-	-	9	9	9	9	9	9	9	9	9	10	10	0			
2	2022	NAVY		108	0	108	-	-	-	-	-	-	-	-	-	-	-	-	9	9	9	9	9	9	9	9	9	9			
2	2023	NAVY		136	0	136	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	136			
3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers																															
3	2018	NAVY		10	10	0																						0			
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
							C	O	E	A	E	A	A	A	U	U	U	E	C	O	V	E	A	R	P	A	Y	U	U	A	S
							T	V	C	N	B	R	R	Y	N	L	G	P	T	V	C	N	B	R	R	Y	N	L	G	P	

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Exhibit P-21, Production Schedule: PB 2023 Navy														Date: April 2022															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3										P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)										Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)									

Cost Elements <i>(Units in Each)</i>							Fiscal Year 2025														Fiscal Year 2026														BALANCE
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025														Calendar Year 2026														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

1.1.1) MK 25 QUADPACK CANISTERS ⁽¹⁾

Prior Years Deliveries: 145																													
1	2016	NAVY	3	3	0																								0
1	2017	NAVY	19	19	0																								0
1	2018	NAVY	11	11	0																								0
1	2019	NAVY	11	11	0																								0
1	2020	NAVY	8	8	0																								0
1	2021	NAVY	20	20	0																								0
1	2022	NAVY	17	17	0																								0
1	2023	NAVY	30	8	22	2	4	4	4	2	2	2	2																0

2.1.5) ESSM BLOCK 2 ⁽³⁾

2	2018	NAVY	31	31	0																								0
2	2019	NAVY	45	45	0																								0
2	2020	NAVY	50	50	0																								0
2	2021	NAVY	110	110	0																								0
2	2022	NAVY	108	99	9	9																							0
2	2023	NAVY	136	0	136	10	10	10	12	12	10	12	12	12	12	12	12												0

3.1.6) MK 852 Mod 0 (BLK 2) Shipping Containers

3	2018	NAVY	10	10	0																								0
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)	Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	BAE - ABERDEEN, SD	45	48	72	0	5	15	20	5	5	15	20
2	Raytheon CO ⁽¹³⁾ - Tucson, AZ	144	144	300	8	2	24	26	2	2	24	26
3	Raytheon CO - Tucson AZ			TBD	0	0	0	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽¹³⁾ FRP Test Equipment on contract- won't be available until after FY 2022. MSR Total Quantity includes Consortium. MSR, 1-8-5, and MAX quantities updated for FY 2022 based on experience from initial production and transition to production progress.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles **P-1 Line Item Number / Title:** 2327 / AARGM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0205601N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	16	54	69	-	69	97	185	204	190	1,265	2,080
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,386.011	123.650	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	4,682.806
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,386.011	123.650	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	4,682.806
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,386.011	123.650	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	4,682.806

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	3.640	0.445	2.763	-	2.763	4.707	5.337	5.563	5.569	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	7,728K	2,034K	1,903K	-	1,903K	1,852K	1,459K	1,364K	1,483K	1,520K	2,251K

Description:

AGM-88E Advanced Anti-Radiation Guided Missile (AARGM) is an ACAT-1C acquisition program to upgrade the Legacy AGM-88 High Speed Anti-Radiation Missile (HARM) with multi-mode guidance and enhanced targeting capability. The AARGM program integrates multi-mode guidance (passive Anti-Radiation Homing (ARH)/active Millimeter Wave (MMW) Radar/Global Positioning system (GPS)/Inertial Navigation System) on the HARM AGM-88 missile. The AARGM weapon system capabilities include: active MMW terminal guidance, counter shutdown, expanded threat coverage, enhanced ARH receiver, Weapon Impact Assessment (WIA) transmission prior to detonation, GPS point-to-point weapon navigation, and weapon employment with impact avoidance zone/missile impact zones. AGM-88E AARGM production units possess the capability to engage targets in the Destruction of Enemy Air Defenses (DEAD) mission area. AARGM is a cooperative program between the Department of Defense of the United States of America and the Ministry of Defence of the Republic of Italy.

AGM-88G Advanced Anti-Radiation Guided Missile Extended Range (AARGM-ER) is an ACAT-1B program. The AARGM-ER program will integrate hardware and software upgrades to the AARGM missile guidance and control sections, a new rocket motor, Control Actuation System (CAS) into a new outer mold line able to be launched from FA-18 E/F, EA-18G and is compatible with F-35 internal bay platforms. AARGM-ER's capabilities will provide improved AARGM operational capabilities adding extended range, increased survivability and effectiveness against complex, new and emerging threats. AGM-88G AARGM-ER production units will prosecute Integrated Air Defense Systems (IADS) supporting Suppression of Enemy Air Defenses (SEAD)/DEAD missions.

The Procurement Quantity on the P-40 is reflective of AARGM-ER AUR Quantities only.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles **P-1 Line Item Number / Title:** 2327 / AARGM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0205601N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / AARGM (Added Capability)			368	- / 1,386.011	- / 78.992	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / AARGM-ER (Added Capability)			607	- / 0.000	- / 44.658	- / 109.835	- / 131.275	- / 0.000	- / 131.275
P-40	Total Gross/Weapon System Cost				- / 1,386.011	16 / 123.650	54 / 109.835	69 / 131.275	- / 0.000	69 / 131.275

Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / AARGM (Added Capability)			368	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,465.003
P-3a	2 / AARGM-ER (Added Capability)			607	- / 179.671	- / 269.832	- / 278.237	- / 281.751	- / 1,922.544	- / 3,217.803
P-40	Total Gross/Weapon System Cost				97 / 179.671	185 / 269.832	204 / 278.237	190 / 281.751	1,265 / 1,922.544	2,080 / 4,682.806

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY 2023 AGM-88G AARGM-ER funding supports the procurement of Low Rate Initial Production missiles (LRIP), Captive Air Training Missiles (CATMs), containers, Telemetry/Flight Termination System (TM/FTS), support equipment, engineering and logistics support, Engineering Change Orders, Special Tooling/Special Test Equipment (ST/STE), and Diminishing Manufacturing Sources (DMS).
 AGM-88G AARGM-ER AUR funding and quantities in FY 2023 are to support Full Operational Capability inventory objective and to stabilize the industrial base. A quantity of 69 missiles is planned to award on the LRIP 3 contract. The AARGM-ER LRIP 3 contract will be the first year without cost synergies with the AARGM (AGM-88E) program.
 AGM-88G AARGM-ER CATM funding and quantities in FY 2023 are to support fleet training. A quantity of 6 CATMs is planned to award on the LRIP 3 contract.
 AGM-88G AARGM-ER Container funding and quantities in FY 2023 align with AURs and CATMs to support Full Operational Capability inventory objective and to stabilize the industrial base. A quantity of 75 containers are planned to award on the LRIP 3 contract.
 TM/FTS funding and quantities in FY 2023 are to support the buildup of assets necessary to support NCEA allocations for training and testing. Telemetry Sections provide the data required to assess flight testing and provide the flight termination capability required for range safety during live firings.
 FY 2023 Support equipment funding includes Common Munitions Bit/Reprogramming Equipment (CMBRE) and unique support equipment.
 FY 2023 funding for Engineering Change Orders is required for Cost Improvement Initiatives (CII), safety, and engineering changes (ECPs) to reduce missile cost and improve producibility.
 FY 2023 Production Engineering Support funding is required as the program continues to ramp up to full rate production and nears completion of the development program.
 FY 2023 funding in Integrated Logistics Support (ILS) includes costs of maintenance, supply support, support equipment management, computer resources support, training and training support, ILS program management, Packaging, Handling, Storage and Transportation (PHS&T), and Dummy Air Training Missiles (DATMs).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles		P-1 Line Item Number / Title: 2327 / AARGM
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0205601N
Line Item MDAP/MAIS Code: N/A		
<p>FY 2023 funding for Special Tooling/Special Test Equipment (ST/STE) is required to support FY 2024 for AARGM-ER missile components and the fully assembled missile. ST/STE cost supports planning, building, installing, and replacing of ST/STE and production equipment for the common and new component hardware as the program continues to ramp up to meet full rate production capacity requirements.</p> <p>FY 2023 funding for DMS is required to support life-of-type buys due to obsolescent parts and components and other obsolescence issue resolutions. This will be the first year without the shared cost of DMS funding with the AARGM (AGM-88E) program.</p> <p>FY 2023 reduction since the prior President's Budget Submission is due to other miscellaneous/rate adjustments and the USMC deferring procurement until FY 2025 resulting from JSF integration delays. CATM and TM/FTS quantities were reduced in FY23 to prioritize procurement of AGM-88G AARGM-ER Installation Kits.</p> <p>FY 2023- FY 2026 unit cost assumes USAF concurrent procurement of 300 AGM-88G AARGM-ER AURs, which is reflected in USAF PE 0207328F.</p>		

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Exhibit P-3a, Individual Modification: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2327 / AARGM	Modification Number / Title: 1 / AARGM
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 368
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1,386.011	78.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,465.003
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1,386.011	78.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,465.003
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	1,386.011	78.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,465.003
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

AARGM is an ACAT-1C acquisition program to upgrade the Legacy AGM-88 HARM missile with multi-mode/multi-spectral guidance and enhanced targeting. Full-Rate Production (FRP) decision was granted on 4 September 2012. FRP Lot 10 awarded August 3, 2021 and deliveries commence in April 2023. FY21 is the last year of production for the AGM-88E.

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Exhibit P-3a, Individual Modification: PB 2023 Navy										Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3					P-1 Line Item Number / Title: 2327 / AARGM					Modification Number / Title: 1 / AARGM			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code: 368						
Models of Systems Affected: AGM-88E			Modification Type: Added Capability				Related RDT&E PEs: 0205601N						
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1: AARGM</i>													
A Kits													
Recurring													
1.1.1) ES010 AUR Installation Kits - Organic ⁽¹⁾	1,568 / 984.588	87 / 51.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,655 / 1,036.009	
1.1.2) ES990 Training Equipment (CATMs) - Organic	121 / 85.434	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	121 / 85.434	
<i>Subtotal: Recurring</i>	- / 1,070.022	- / 51.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1,121.443	
<i>Subtotal: AARGM</i>	1,689 / 1,070.022	87 / 51.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,776 / 1,121.443	
<i>Subtotal: Procurement, All Modification Items</i>	- / 1,070.022	- / 51.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1,121.443	
Support (All Modification Items)													
2.1) ES960 Containers	845 / 9.083	44 / 0.216	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	889 / 9.299	
2.2) Telemetry Sections	51 / 21.649	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 21.649	
2.3) ES970 Support Equipment	- / 8.901	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.901	
2.4) ES700 Engineering Change Orders	- / 144.428	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 144.428	
2.5) ES930 Production Engineering Support ⁽²⁾	- / 69.009	- / 13.859	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 82.868	
2.6) Non-Recurring Engineering	- / 14.111	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.111	
2.7) ES970 Integrated Logistics Support ⁽³⁾	- / 123.423	- / 3.810	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 127.233	
2.8) ES950 Other Production Support	- / 181.275	- / 6.279	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 87.554	
2.9) ES400 ST/STE for Production Facilitization	- / 143.578	- / 2.472	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 146.050	
2.10) ES260 Diminishing Manufacturing Sources (DMS) ⁽⁴⁾	- / 110.532	- / 0.935	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 111.467	
<i>Subtotal: Support</i>	- / 315.989	- / 27.571	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 343.560	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	1,386.011	78.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,465.003	

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Exhibit P-3a, Individual Modification: PB 2023 Navy					Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3			P-1 Line Item Number / Title: 2327 / AARGM			Modification Number / Title: 1 / AARGM	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code: 368		
Modification Item 1 of 1: AARGM							
Manufacturer Information							
Manufacturer Name: Northrup Grumman Corporation Defense Systems				Manufacturer Location: Northridge, CA			
Administrative Leadtime (<i>in Months</i>): 9				Production Leadtime (<i>in Months</i>): 20			
Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Aug 2021						
Delivery Dates	Apr 2023						

Footnotes:

- (1) Cost Element 1.1.1 AUR Installation kits budget reflects requirements and updates based on contract actuals and unit costs. FY 2021 is the final procurement lot for the AGM-88E AARGM as priority shifts to investment in the AGM-88G AARGM-ER program.
- (2) Cost Element 2.5 Production Engineering Support (PES) funding in FY2021 is to support final procurement of FRP-10 through completion of deliveries in 2nd QTR 2024.
- (3) Cost Element 2.7 Integrated Logistics Support (ILS) budget line supports costs of maintenance, supply support, support equipment management, computer resources support, training and training support, ILS program management, and Packaging, Handling, Storage and Transportation (PHS&T). Funding in FY 2021 to support final procurement of FRP-10 through completion of deliveries in 2nd QTR 2024.
- (4) 2.10 Diminishing Manufacturing Sources (DMSMS) Funding in FY21 is for final Life of Type buys to support baseline AARGM last production lot.

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Exhibit P-3a, Individual Modification: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2327 / AARGM	Modification Number / Title: 2 / AARGM-ER
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code: 607
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	44.658	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	3,217.803
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	44.658	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	3,217.803
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	44.658	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	3,217.803

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Advanced Anti-Radiation Guided Missile Extended Range (AARGM-ER) upgrade includes hardware and software improvements to AARGM's operational capabilities, including extended range, survivability, and effectiveness against complex, new and emerging threats. Planned Initial Operating Capability (IOC) is 4Q FY 2023. The AARGM-ER Low Rate Initial Production (LRIP) 1 awarded in 4Q FY 2021 with expected deliveries beginning in 4Q FY 2023. The AARGM-ER Low Rate Initial Production (LRIP) 2 awarded in 1Q FY 2022 with LRIP 3 expected to award in 1Q FY 2023.

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Exhibit P-3a, Individual Modification: PB 2023 Navy											Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3				P-1 Line Item Number / Title: 2327 / AARGM							Modification Number / Title: 2 / AARGM-ER		
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code: 607						
Models of Systems Affected: AGM-88G				Modification Type: Added Capability				Related RDT&E PEs: 0205601N					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1: AARGM-ER</i>													
A Kits													
Recurring													
1.1.1) ES010 AGM-88G Installation Kits - Organic ⁽⁵⁾	- / -	16 / 31.553	54 / 86.158	69 / 106.998	- / -	69 / 106.998	97 / 146.063	185 / 216.707	204 / 229.728	190 / 234.562	1,265 / 1,613.565	2,080 / 2,665.334	
1.1.2) ES990 Training Equipment (CATMs) - Organic ⁽⁶⁾	- / -	6 / 9.660	6 / 9.424	6 / 7.932	- / -	6 / 7.932	6 / 7.584	12 / 11.710	12 / 11.068	12 / 11.966	61 / 61.805	121 / 131.149	
<i>Subtotal: Recurring</i>	- / 0.000	- / 41.213	- / 95.582	- / 114.930	- / -	- / 114.930	- / 153.647	- / 228.417	- / 240.796	- / 246.528	- / 1,675.370	- / 2,796.483	
<i>Subtotal: AARGM-ER</i>	- / -	22 / 41.213	60 / 95.582	75 / 114.930	- / -	75 / 114.930	103 / 153.647	197 / 228.417	216 / 240.796	202 / 246.528	1,326 / 1,675.370	2,201 / 2,796.483	
<i>Subtotal: Procurement, All Modification Items</i>	- / 0.000	- / 41.213	- / 95.582	- / 114.930	- / -	- / 114.930	- / 153.647	- / 228.417	- / 240.796	- / 246.528	- / 1,675.370	- / 2,796.483	
Support (All Modification Items)													
2.1) ES960 Containers ⁽⁷⁾	- / -	22 / 0.660	60 / 1.835	75 / 2.340	- / -	75 / 2.340	103 / 3.285	197 / 6.426	216 / 7.348	202 / 7.055	1,326 / 51.845	2,201 / 80.794	
2.2) ES995 Telemetry Sections ⁽⁸⁾	- / -	- / -	8 / 4.584	8 / 4.685	- / -	8 / 4.685	8 / 4.774	8 / 4.864	8 / 4.957	8 / 5.051	77 / 49.229	125 / 78.144	
2.3) ES940 Support Equipment	- / -	- / 0.948	- / 1.268	- / 0.479	- / -	- / 0.479	- / 0.388	- / 0.755	- / 0.849	- / 0.807	- / 5.994	- / 11.488	
2.4) ES700 Engineering Change Orders ⁽⁹⁾	- / -	- / -	- / 0.521	- / 2.719	- / -	- / 2.719	- / 4.834	- / 6.959	- / 6.990	- / 6.526	- / 48.861	- / 77.410	
2.5) ES930 Production Engineering Support ⁽¹⁰⁾	- / -	- / 0.575	- / 2.415	- / 2.916	- / -	- / 2.916	- / 4.995	- / 7.322	- / 7.440	- / 7.581	- / 44.930	- / 78.174	
2.6) ES970 Integrated Logistics Support ⁽¹¹⁾	- / -	- / 0.618	- / 1.719	- / 1.124	- / -	- / 1.124	- / 1.142	- / 1.182	- / 1.094	- / 1.116	- / 19.085	- / 33.080	
2.7) ES050 ST/STE for Production Facilitization ⁽¹²⁾	- / -	- / 0.644	- / 1.791	- / 0.770	- / -	- / 0.770	- / 5.227	- / 5.000	- / 5.798	- / 4.063	- / 9.544	- / 32.837	
2.8) ES060 Diminishing Manufacturing Sources (DMS) ⁽¹³⁾	- / -	- / -	- / 0.120	- / 1.312	- / -	- / 1.312	- / 1.379	- / 2.907	- / 2.965	- / 3.024	- / 17.686	- / 29.393	
<i>Subtotal: Support</i>	- / 0.000	- / 3.445	- / 14.253	- / 16.345	- / -	- / 16.345	- / 26.024	- / 41.415	- / 37.441	- / 35.223	- / 247.174	- / 421.320	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	0.000	44.658	109.835	131.275	0.000	131.275	179.671	269.832	278.237	281.751	1,922.544	3,217.803	

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Exhibit P-3a, Individual Modification: PB 2023 Navy					Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3			P-1 Line Item Number / Title: 2327 / AARGM			Modification Number / Title: 2 / AARGM-ER	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code: 607		
Modification Item 1 of 1: AARGM-ER							
Manufacturer Information							
Manufacturer Name: Northrop Grumman Corporation Defense Systems ⁽¹⁴⁾					Manufacturer Location: Northridge, CA		
Administrative Leadtime (in Months): 3					Production Leadtime (in Months): 24		
Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Sep 2021	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025	Dec 2026
Delivery Dates	Sep 2023	Dec 2023	Dec 2024	Dec 2025	Dec 2026	Dec 2027	Dec 2028

Footnotes:

- ⁽⁵⁾ Cost Element 1.1.1 AGM-88G AARGM-ER Installation Kits unit cost changed due to USMC procurement phasing changes and inclusion of USAF procurement quantities in FY 2023 - FY 2026. The AARGM-ER LRIP 3 contract, planned to award 1QTR FY 2023, will be the first year without cost synergies with the AARGM (AGM-88E) program.
- ⁽⁶⁾ Cost Element 1.1.2 AGM-88G Training Equipment (CATMs) unit cost is correlated with AGM-88G AARGM-ER Installation Kit unit cost due to combined pricing of common hardware and have changed as a result of procurement phasing changes. CATM quantities were reduced in FY 2023 to prioritize procurement of AGM-88G AARGM-ER Installation Kits.
- ⁽⁷⁾ Cost Element 2.1 Containers are required one per AUR and one per CATM.
- ⁽⁸⁾ Cost Element 2.2 Telemetry Sections quantities were reduced in FY 2023 to prioritize the procurement of AGM-88G AARGM-ER Installation Kits.
- ⁽⁹⁾ Cost Element 2.4 Engineering change orders (ECO) increase in FY 2023 supports the qualification of additional material supply sources to mitigate risks driven by the elevated quantity of weapons to be built in production. Additionally, as the program moves from Development and into Full Rate Production a new production facility will be brought on line. This move from hand built units to an assembly line approach will drive changes to process, procedure and material approaches that will need to be resolved.
- ⁽¹⁰⁾ Cost Element 2.5 Production Engineering Support (PES) increases in FY 2023 as the program continues to ramp up to full rate production and nears completion of the development program.
- ⁽¹¹⁾ Cost Element 2.6 Integrated Logistics Support (ILS) includes costs of maintenance, supply support, support equipment management, computer resources support, training and training support, ILS program management, Packaging, Handling, Storage and Transportation (PHS&T), and Dummy Air Training Missiles (DATMs).
- ⁽¹²⁾ Cost Element 2.7 Special Tooling/Special Test Equipment (ST/STE) funding is for production facilitization that includes rate tooling for AARGM-ER new component hardware to meet production ramp. Production facilitization decreases in FY 2023 and out-year phasing was adjusted to account for USMC procurement phasing changes.
- ⁽¹³⁾ Cost Element 2.8 Diminishing Manufacturing Sources funding increases in FY 2023 as it is the first year without the concurrent production and obsolescence mitigation of the baseline AARGM program. The AARGM-ER program will be completely responsible for the purchase of Life-Of-Type Buys (LOTBs) and replacement of parts in varying quantities, inherited from AARGM Guidance and Control Section electronics, which have become obsolete. Funds are required to allow the program to buy LOTB parts and components as well as resolve other obsolescence issues, including updating circuit boards and electronics, which are required for production of AARGM-ER AURs and CATMs until replacement parts are qualified.
- ⁽¹⁴⁾ The program has negotiated to align deliveries to the baseline AARGM Trimester Schedule. All IOC assets and operational test assets will be delivered to meet IOC in September 2023, with remaining LRIP-1 deliveries continuing through December 2023.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles

P-1 Line Item Number / Title:
2356 / Standard Missiles Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	27.851	66.981	130.482	71.198	0.000	71.198	89.078	101.246	148.126	200.378	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	27.851	66.981	130.482	71.198	0.000	71.198	89.078	101.246	148.126	200.378	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	27.851	66.981	130.482	71.198	0.000	71.198	89.078	101.246	148.126	200.378	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

SM-2 BLK IIIAZ: The DDG 1000 Standard Missile Program of record plan is to procure SM-2 BLK IIIAZ modifications to support deployment of DDG 1000 Class Ships. This line item provides funds to procure SM-2 modification kits to support DDG 1000 Program. Funding includes modification kit installation in SM-2 BLK IIIA rounds. SM-2 BLK IIIA AEGIS missiles require hardware and software changes to be compatible with the new (non-AEGIS) DDG 1000 radar, combat system, X-band link and interrupted continuous wave illumination.

SM-2 BLK IIIC: On 3 November 2017, SM-2 BLK IIIC was designated an accelerated acquisition Maritime Accelerated Capabilities Office (MACO) program by the CNO and ASN(RDA), enabling procurement of a SM-2 medium range active capability beginning in FY2021. SM-2 BLK IIIC provides enhanced stream-raid performance against numerous threats via target resolution and missile/target pairing logic, over-the-horizon capability for increased depth of fire, enhanced capability against electronic attack and improved firepower due to decreased dependence on illuminators. Effort leverages to the maximum extent existing SM-2 inventory and common technology to provide an affordable mix of complimentary weapons to meet a broad range of mission requirements. The inventory objective is 1,000 units.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles **P-1 Line Item Number / Title:** 2356 / Standard Missiles Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Standard Missiles Mods	P-5a, P-21			- / 27.851	- / 66.981	- / 130.482	- / 71.198	- / 0.000	- / 71.198
P-40	Total Gross/Weapon System Cost				- / 27.851	- / 66.981	- / 130.482	- / 71.198	- / 0.000	- / 71.198

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The FY 2023 funding request was adjusted by \$2.089M to account for the availability of prior year execution balances.

SM-2 BLKIIC: The FY2023 budget provides \$71.198M for 20 units and support for the third year of procurement for SM-2 BLKIIC SM-2 medium range active capability. This program continues to be funded throughout the Future Years Defense Plan (FYDP).

Cost Element 2.1.4: FK971 Containers: Funds procurement and support of the containers used to transport missile hardware from the component manufacturer to the missile All Up Round facility. Containers are required to return hardware from disassembled missiles to the component manufacturer for rework and follow-on build up into new AURs. Funding is required to meet two-year lead-time for delivery of components to SM production line.

Cost Element 2.1.6: FK980 ILS/Fleet Documentation: Funds production of formal Fleet Firing Guidance and Fleet Handling Procedures with updates as required to reflect current doctrine, new missile variant capabilities and the changing threat. Also develops and updates the Capabilities and Liabilities (C&L) documentation as well as round requirement plans for delivery and on-load for AURs for firing events. An increase for SM-2 BLK IIC in FY2023 will incorporate lessons learned from the first two low rate initial productions.

Cost Element 2.1.7: FK850 Diminishing Manufacturing Resources (DMS): Provides funding for production engineering and life-type buys for missile components that are, or will be, no longer available through the prime contractor/ sub vendors. SM-2 BLK IIC program leverages three legacy programs (SM-2, SM-6, AMRAAM) that have been in production for more than 10 years and shares many of the same recurring obsolescence issues as the predecessor variants from which the design is derived. DMS in FY2023 is to procure additional SM-2 BLK IIC resources required to support round procurement, significant obsolescence as a result of the advanced age of components, and increased requirements due to SM-2 BLKIIC specific items, such as jet tab assemblies.

Cost Element 2.1.8: FK830 Production Engineering/Support: Provides field activity and contract production support for missile modification and delivery to include production engineering, design and analysis, quality and safety assurance, documentation, and production test support for SM-2 BLKIIC. SM-2 BLK IIC increases in FY2023 to incorporate lessons learned and investigate efficiencies.

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3				P-1 Line Item Number / Title: 2356 / Standard Missiles Mods			Item Number / Title [DODIC]: 1 / Standard Missiles Mods		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:			
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				27.851	66.981	130.482	71.198	0.000	71.198
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				27.851	66.981	130.482	71.198	0.000	71.198
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				27.851	66.981	130.482	71.198	0.000	71.198
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - HARDWARE Cost																		
Recurring Cost																		
1.1.1) FK007 SM-2 BLK IIIC ^(†) (1)	-	-	-	2,163K	20	43.259	1,949K	40	77.952	2,146K	20	42.910	-	-	-	2,146K	20	42.910
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ^(†) (2)	-	-	-	184,600.00	20	3.692	130,150.00	40	5.206	261,800.00	20	5.236	-	-	-	261,800.00	20	5.236
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ^(†) (3)	581,825.00	40	23.273	850,000.00	14	11.900	722,925.00	40	28.917	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	23.273	-	-	58.851	-	-	112.075	-	-	48.146	-	-	-	-	-	48.146
<i>Subtotal: Hardware - HARDWARE Cost</i>	-	-	23.273	-	-	58.851	-	-	112.075	-	-	48.146	-	-	-	-	-	48.146
Hardware - PRODUCTION Cost																		
Non Recurring Cost																		
2.1.1) FK830 SM-2 BLK IIIAZ PRODUCTION ENGINEERING/ SUPPORT	-	-	2.904	-	-	0.420	-	-	0.420	-	-	0.420	-	-	-	-	-	0.420
2.1.3) FK950 SM-2 TOOLS AND TEST EQUIPMENT	-	-	1.674	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.4) FK957 SM-2 CONTAINERS ⁽⁴⁾	-	-	-	-	-	0.565	-	-	1.153	-	-	1.763	-	-	-	-	-	1.763

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3						P-1 Line Item Number / Title: 2356 / Standard Missiles Mods						Item Number / Title [DODIC]: 1 / Standard Missiles Mods					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.1.6) FK980 SM-2 BLK IIIC ILS/FLEET DOCUMENTATION	-	-	-	-	-	0.510	-	-	0.720	-	-	0.734	-	-	-	-	-	0.734
2.1.7) FK850 DIMINISHING MANUFACTURING RESOURCES ⁽⁵⁾	-	-	-	-	-	-	-	-	8.283	-	-	12.085	-	-	-	-	-	12.085
2.1.8) FK830 SM-2 BLK IIIC PRODUCTION ENGINEERING/ SUPPORT	-	-	-	-	-	6.555	-	-	7.751	-	-	8.050	-	-	-	-	-	8.050
2.1.9) FK980 SM-2 BLK IIIAZ ILS/FLEET DOCUMENTATION	-	-	-	-	-	0.080	-	-	0.080	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	4.578	-	-	8.130	-	-	18.407	-	-	23.052	-	-	-	-	-	23.052
<i>Subtotal: Hardware - PRODUCTION Cost</i>	-	-	4.578	-	-	8.130	-	-	18.407	-	-	23.052	-	-	-	-	-	23.052
Gross/Weapon System Cost	-	-	27.851	-	-	66.981	-	-	130.482	-	-	71.198	-	-	0.000	-	-	71.198

(t) indicates the presence of a P-5a

Footnotes:

- (1) The exhibit unit cost includes SM-2 BLK IIIC variant-specific hardware and all legacy hardware. FY21-22 legacy hardware prices have been negotiated and are included in the exhibit unit cost. Final quantities pending contract award.
- (2) SM-2 BLK IIIC canister procurement unit cost increase from FY 22 to FY 23 is due to the start of a new base plus option year negotiated contract. FY 23 will be the first year of procuring new canisters vice using already fired refurbished canisters to reduce costs. There are currently no more fired canisters to refurbish supporting AUR production.
- (3) FY 2022 is the last year of BLK IIIAZ procurement
- (4) Containers increased above inflation from FY22 to FY23 due to the need to procure an extra container to have a spare to handle loss, damaged or destroyed containers.
- (5) DMS funds are vital in providing funding for production engineering to support component replacement investigations and life-type buys for missile components that are, or will be, no longer available through the prime contractor/sub vendors. SM-2 BLK IIIC leverages three legacy programs (SM-2, SM-6 and AMRAAM) that have been in production for more than ten years and shares many of the same recurring obsolescence issues as the predecessor variants from which the design is derived. DMS cases increase as the age of the design increases. Additionally, these cases increase in complexity as the design ages though the natural cycle of technology evolution. The DMS funding in FY23 is required to procure additional SM-2 BLK IIIC specific resources. This funding ensures the viability of continued production.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2356 / Standard Missiles Mods	Item Number / Title [DODIC]: 1 / Standard Missiles Mods
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) FK007 SM-2 BLK IIIC ^(†)		2021	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Jun 2021	Jun 2023	20	2,163K	Y		Jan 2018
1.1.1) FK007 SM-2 BLK IIIC ^(†)		2022	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Jun 2022	Aug 2024	40	1,949K	Y		Jan 2018
1.1.1) FK007 SM-2 BLK IIIC ^(†)		2023	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Mar 2023	May 2025	20	2,146K	Y		Oct 2022
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ^(†)		2021	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Aug 2021	Oct 2022	20	184,600.00	Y		Mar 2021
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ^(†)		2022	BAE / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2022	Jun 2023	40	130,150.00	Y		Oct 2021
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ^(†)		2023 ⁽⁶⁾	BAE / MINNEAPOLIS, MN	TBD	NAVSEA	Mar 2023	Jun 2024	20	261,800.00	Y		Feb 2022
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ^(†)		2017	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Aug 2017	Sep 2021	7	562,454.00	Y		Dec 2015
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ^(†)		2018 ⁽⁷⁾	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Dec 2018	Sep 2021	33	540,488.00	Y		Dec 2015
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ^(†)		2021 ⁽⁸⁾	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Dec 2021	Jun 2026	14	850,000.00	Y		Aug 2020
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ^(†)		2022 ⁽⁹⁾	Raytheon CO / Tucson AZ	SS / FPIF	NAVSEA	Dec 2021	Aug 2026	40	722,925.00	Y		Aug 2020

^(†) indicates the presence of a P-21

Footnotes:

⁽⁶⁾ Sole source Competitive award

⁽⁷⁾ Lines 1.1.1 - 1.1.3: P-21 Delivery schedule, reflects contracted delivery dates.

⁽⁸⁾ Current through P0002

⁽⁹⁾ Current through P0002

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2356 / Standard Missiles Mods	Item Number / Title [DODIC]: 1 / Standard Missiles Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) FK007 SM-2 BLK IIIC ⁽¹⁾																															
	1	2021	NAVY	20 ⁽¹⁰⁾	0	20																						20			
	1	2022	NAVY	40	0	40																						40			
	1	2023	NAVY	20	0	20																						20			
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ⁽²⁾																															
	2	2021	NAVY	20	0	20																						20			
	2	2022	NAVY	40	0	40																						40			
	2	2023	NAVY	20	0	20																						20			
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ⁽³⁾																															
	3	2017	NAVY	7	0	7																						7			
	3	2018	NAVY	33	0	33																						33			
	3	2021	NAVY	14	0	14																						14			
	3	2022	NAVY	40	0	40																						40			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2356 / Standard Missiles Mods	Item Number / Title [DODIC]: 1 / Standard Missiles Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
1.1.1) FK007 SM-2 BLK IIIC ⁽¹⁾																																		
	1	2021	NAVY	20 ⁽¹⁰⁾	0	20																												20
	1	2022	NAVY	40	0	40																												40
	1	2023	NAVY	20	0	20																												20
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ⁽²⁾																																		
	2	2021	NAVY	20	0	20																												20
	2	2022	NAVY	40	0	40																												40
	2	2023	NAVY	20	0	20																												20
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ⁽³⁾																																		
	3	2017	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	
	3	2018	NAVY	33	0	33			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	
	3	2021	NAVY	14	0	14																												14
	3	2022	NAVY	40	0	40																												40

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3 **P-1 Line Item Number / Title:** 2356 / Standard Missiles Mods **Item Number / Title [DODIC]:** 1 / Standard Missiles Mods

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021													Fiscal Year 2022													BALANCE		
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) FK007 SM-2 BLK IIIC ⁽¹⁾																																	
	1	2021	NAVY	20 ⁽¹⁰⁾	0	20																								20			
	1	2022	NAVY	40	0	40																								40			
	1	2023	NAVY	20	0	20																								20			
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ⁽²⁾																																	
	2	2021	NAVY	20	0	20																								20			
	2	2022	NAVY	40	0	40																								40			
	2	2023	NAVY	20	0	20																								20			
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ⁽³⁾																																	
	3	2017	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	3	2018	NAVY	33	0	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	3	2021	NAVY	14	0	14																							14				
	3	2022	NAVY	40	0	40																							40				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2356 / Standard Missiles Mods	Item Number / Title [DODIC]: 1 / Standard Missiles Mods
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2023														Fiscal Year 2024														BALANCE		
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023														Calendar Year 2024														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) FK007 SM-2 BLK IIIC ⁽¹⁾																																			
	1	2021	NAVY	20 ⁽¹⁰⁾	0	20	-	-	-	-	-	-	-	-	1	-	2	2	2	2	3	2	2	1	2	2	1					0			
	1	2022	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	32			
	1	2023	NAVY	20	0	20																										20			
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ⁽²⁾																																			
	2	2021	NAVY	20	0	20	2	2	1	2	2	1	2	2	1	2	2	1														0			
	2	2022	NAVY	40	0	40	-	-	-	-	-	-	-	-	4	4	2	4	4	2	4	4	2	4	4	4	2					0			
	2	2023	NAVY	20	0	20																										13			
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ⁽³⁾																																			
	3	2017	NAVY	7	7	0																										0			
	3	2018	NAVY	33	33	0																										0			
	3	2021	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14			
	3	2022	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2356 / Standard Missiles Mods	Item Number / Title [DODIC]: 1 / Standard Missiles Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) FK007 SM-2 BLK IIIC ⁽¹⁾																															
	1	2021	NAVY	20 ⁽¹⁰⁾	20	0																						0			
	1	2022	NAVY	40	8	32	2	4	4	2	4	4	2	4	4	2												0			
	1	2023	NAVY	20	0	20	-	-	-	-	-	-	-	1	-	-	-	-	5	-	-	7	-	-	7			0			
1.1.2) FK007 SM-2 BLK IIIC CANISTERS ⁽²⁾																															
	2	2021	NAVY	20	20	0																						0			
	2	2022	NAVY	40	40	0																						0			
	2	2023	NAVY	20	7	13	2	1	2	2	1	2	2	1														0			
1.1.3) FK007 SM-2 BLK IIIAZ MODIFICATION ⁽³⁾																															
	3	2017	NAVY	7	7	0																						0			
	3	2018	NAVY	33	33	0																						0			
	3	2021	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14			0			
	3	2022	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2356 / Standard Missiles Mods	Item Number / Title [DODIC]: 1 / Standard Missiles Mods
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon CO - Tucson AZ	20	20	120	3	3	24	27	3	3	24	27
2	BAE - MINNEAPOLIS, MN	20	20	120	3	8	14	22	3	8	14	22
3	Raytheon CO - Tucson AZ	7	50	75	3	3	36	39	3	3	30	33

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽¹⁰⁾ Reflects contractual delivery dates P000015

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities	P-1 Line Item Number / Title: 2420 / Weapons Industrial Facilities
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	363.651	13.996	11.819	1.976	0.000	1.976	2.033	2.090	2.158	2.163	-	399.886
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	363.651	13.996	11.819	1.976	0.000	1.976	2.033	2.090	2.158	2.163	-	399.886
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	363.651	13.996	11.819	1.976	0.000	1.976	2.033	2.090	2.158	2.163	-	399.886

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Weapons Industrial Facility (WIF) program supports the following NAVSEA Government-Owned Contractor Operated (GOCO) facilities; the active Naval Industrial Reserve Ordnance Plant (NIROP) Allegany Ballistics Laboratory (ABL), Rocket Center, WV, and inactive Naval Weapons Industrial Reserve Plant (NWIRP), Bedford, MA. The budget provides funding for NIROP ABL to recapitalize aging plant infrastructure; enable process improvement to reduce life cycle cost for manufacturing and production of weapon systems; resolve life, safety, and environmental issues; and enact immediate operational support of National Security needs. Capital-type rehabilitation projects at NIROP ABL support weapon systems such as Rolling Airframe Missile (RAM), Evolved Sea Sparrow Missile (ESSM), AIM-9X Sidewinder Missile, AIM-9M Sidewinder Missile, FMU-143 Penetrating Bomb Fuze System, Hellfire Missile, Guided Multiple-Launch Rocket System (GMLRS), Tomahawk GG and Trident GG.

[P5 / FU002 Capital Type Rehabilitation]: This program funds projects that eliminate environmental and safety deficiencies in compliance with local, state, and federal OSHA regulations. These regulations mandate requirements, which must be met if plant shuts down in order to avoid criminal liability, and severe financial penalties. The program also includes critical upgrades to maintain high liability areas such as fire and security systems, roofs, boilers, electrical distribution systems, bridge crane systems, and other structural repairs essential to maintain the industrial integrity of the plant.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities	P-1 Line Item Number / Title: 2420 / Weapons Industrial Facilities
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>
P-5	1 / Weapons Industrial Facilities				- / 363.651	- / 13.996	- / 11.819	- / 1.976	- / 0.000	- / 1.976
P-40	Total Gross/Weapon System Cost				- / 363.651	- / 13.996	- / 11.819	- / 1.976	- / 0.000	- / 1.976

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Funding for FY23 will support the replacement of a Inside Diameter/Outside Diameter (ID/OD) Grinder that is near the end of useful life. This grinder will be used to fabricate tooling that supports the manufacture of rocket motors and warheads.

Funding is required to address critical infrastructure issues. The plants have an average age of 45 years and lack of proper maintenance will limit capabilities to maintain scheduled production rates and overall productivity. Funding for FY23 replaces one unit of industrial equipment associated with energetics production and manufacturing for various product lines.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4	P-1 Line Item Number / Title: 2420 / Weapons Industrial Facilities	Item Number / Title [DODIC]: 1 / Weapons Industrial Facilities

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	363.651	13.996	11.819	1.976	0.000	1.976
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	363.651	13.996	11.819	1.976	0.000	1.976
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	363.651	13.996	11.819	1.976	0.000	1.976

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support Cost																		
1.2) FU002 Capital Type Rehabilitation	-	-	51.506	-	-	13.996	-	-	11.819	-	-	1.976	-	-	-	-	-	1.976
<i>Subtotal: Support Cost</i>	-	-	51.506	-	-	13.996	-	-	11.819	-	-	1.976	-	-	-	-	-	1.976
Support - Facilities Restoration Cost																		
2.1) FUCA1 Facilities Restoration (ABL)	-	-	216.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Facilities Restoration Cost</i>	-	-	216.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Government-Owned Contractor Operated (GOCO) Fac Cost																		
3.1) FU020 NWIRP MCGREGOR	-	-	95.940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Government-Owned Contractor Operated (GOCO) Fac Cost</i>	-	-	95.940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	363.651	-	-	13.996	-	-	11.819	-	-	1.976	-	-	0.000	-	-	1.976

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities	P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0303109N, 1203109N
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Line Item MDAP/MAIS Code: 345

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	2,263.640	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	2,316.041
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	2,263.640	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	2,316.041
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	2,263.640	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	2,316.041

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Mobile User Objective System (MUOS) provides a worldwide, multi-service population of mobile and fixed-site terminal users with ultra-high frequency (UHF), narrowband, and beyond line-of-sight satellite communications (SATCOM).

MUOS significantly increases performance and capacity in support of critical Combatant Command SATCOM priorities. MUOS is the replacement system for the UHF Follow-on (UFO) system, which is currently beyond its design life. MUOS consists of Space, Ground, and User Entry Segments.

The Space Segment consists of 5 geosynchronous satellites, one of which is an on-orbit spare, and provides both a legacy UHF payload, which is backward compatible with UFO, and a Wideband Code Division Multiple Access (WCDMA) payload, which provides 3G cellular-like capability.

The cost for MUOS Ground Segment upgrades varies depending on the complexity of software defects being addressed and unique configuration of hardware and software requirements being fielded at each of the 6 MUOS ground sites within each given year. The MUOS Ground Segment upgrades address cybersecurity and lifecycle management issues at each of the 6 MUOS ground sites.

The Ground Segment or System consists of four world-wide Radio Access Facilities (RAFTs) (Wahiawa, Hawaii; Northwest Chesapeake, Virginia; Niscemi, Italy; and Geraldton, Australia) and two Satellite Control Facilities (Port Hueneme, California and Schriever Air Force Base (AFB), Colorado). Each RAF includes three 60 ft. antennas, and over 50 equipment racks which house a total of 5,000 major hardware components and 250 software applications across the MUOS Program. The RAF in Hawaii includes a Network Management Facility (NMF). The RAFs in Hawaii and Virginia each include a Switching Facility (SF). All four RAFs and two Satellite Control Facilities are considered Ground Sites.

The User Entry Segment consists of the MUOS waveform that is ultimately integrated into MUOS-capable terminals. The MUOS legacy capability has been in operational use since 2012, and the WCDMA capability transitioned to Early Combatant Command Use in July 2016.

In addition to providing UHF SATCOM for the Department of Defense (DoD), the Navy has the overall responsibility to deliver the end-to-end (E2E) MUOS capability to the warfighter. This responsibility involves systems engineering, integration, and test management of all MUOS system of system activities, to include the integration of the MUOS waveform into MUOS-capable terminals and the subsequent terminal certification testing.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities		P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0303109N, 1203109N
Line Item MDAP/MAIS Code: 345		
<p>Based on the results of the Multi-Service Operational Test and Evaluation-2 (MOT&E-2) in June 2016, Director, Operational Test & Evaluation (DOT&E) assessed MUOS not operationally effective or suitable. As a result, the program addressed the findings and prepared for MOT&E-2B in FY19 and Full Operational Capability (FOC) in FY20. MOT&E-2B started in May 2019 and completed in August 2019. Navy declared MUOS Full Operational Capability October 2019.</p> <p>Beginning in FY17, MUOS's focus has been upgrading all four Radio Access Facilities and two Satellite Control Facilities to address ongoing cybersecurity threats, hardware and software obsolescence, and operational deficiency issues.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities

P-1 Line Item Number / Title:
2433 / Fleet Satellite Comm Follow-On

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0303109N, 1203109N

Line Item MDAP/MAIS Code: 345

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Fleet Satellite Comm Follow-On				- / 2,140.281	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / MUOS Upgrade (TBD)				- / 123.359	- / 52.401	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 2,263.640	- / 52.401	- / 0.000	- / 0.000	- / 0.000	- / 0.000

Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Fleet Satellite Comm Follow-On				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / MUOS Upgrade (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 175.760
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 2,316.041

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Starting in FY22 funding for the MUOS program has been transferred to the United States Space Force.

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4				P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On			Item Number / Title [DODIC]: 1 / Fleet Satellite Comm Follow-On		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:			
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				2,140.281	0.000	0.000	0.000	0.000	0.000
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				2,140.281	0.000	0.000	0.000	0.000	0.000
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				2,140.281	0.000	0.000	0.000	0.000	0.000
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
1.1.1) Ground System Updates	-	-	204.092	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	204.092	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Non Recurring Cost																		
1.2.1) Advance Procurement Prior Years (FY2001-2010)	-	-	118.858	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.2.2) Satellite Procurement (MUOS)	300,796.667	3	902.390	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	1,021.248	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Flyaway Cost	-	-	1,225.340	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware Cost																		
Non Recurring Cost																		
2.1.1) EELV Launch Vehicles (MUOS)	147,092.800	5	735.464	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	735.464	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware Cost	-	-	735.464	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support Cost																		
3.1) EELV Launch Vehicle Production	-	-	37.345	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.2) Satellite Production	-	-	142.132	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4						P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On						Item Number / Title [DODIC]: 1 / Fleet Satellite Comm Follow-On					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support Cost</i>	-	-	179.477	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	-	-	2,140.281	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-3a, Individual Modification: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4	P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On	Modification Number / Title: 1 / MUOS Upgrade
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	123.359	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	175.760
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	123.359	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	175.760
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	123.359	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	175.760

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Ground Upgrade Modification kits to correct functional and CYBER defects and address HW/SW obsolescence.

[MUOS Upgrade Mod Kits] Funding is for 2 Upgrade Mod Kit deployments for the 6 Ground sites in each fiscal year. Production upgrades of MUOS Mod Kits include defect resolution as well as addressing HW/SW obsolescence issues. Obsolete items being replaced in each fiscal year include DSN Gateway, High Assurance Internet Protocol Encryptors (HAIZE), back up tape drives/storage arrays, and Electromagnetic Interference (EMI) mitigation equipment.

[Tech Refresh] Funding is for engineering analysis of obsolete hardware and software required to determine the necessary upgrade options for HW/SW. Integration and testing of the upgrade options are being done to address system deficiencies.

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Exhibit P-3a, Individual Modification: PB 2023 Navy										Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4				P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On						Modification Number / Title: 1 / MUOS Upgrade			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> MUOS Upgrade													
B Kits													
Recurring													
1.1.1) MUOS Technical Insertion Upgrades - NonOrganic	36 / 38.763	18 / 14.658	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	54 / 53.421	
1.1.2) MUOS Upgrade Mod Kits - NonOrganic ⁽¹⁾	24 / 64.413	12 / 30.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 94.525	
<i>Subtotal: Recurring</i>	- / 103.176	- / 44.770	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 147.946	
<i>Subtotal: MUOS Upgrade</i>	60 / 103.176	30 / 44.770	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 147.946	
<i>Subtotal: Procurement, All Modification Items</i>	- / 103.176	- / 44.770	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 147.946	
Support (All Modification Items)													
2.1) Tech Refresh	- / 13.755	- / 5.201	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 18.956	
<i>Subtotal: Support</i>	- / 13.755	- / 5.201	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 18.956	
Installation													
<i>Modification Item 1 of 1:</i> MUOS Upgrade	- / 6.428	- / 2.430	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 8.858	
<i>Subtotal: Installation</i>	- / 6.428	- / 2.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 8.858	
Total													
Total Cost (Procurement + Support + Installation)	123.359	52.401	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	175.760	

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4	P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On	Modification Number / Title: 1 / MUOS Upgrade

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: MUOS Upgrade

Manufacturer Information

Manufacturer Name: General Dynamics Manufacturer Location: Scottsdale, AZ

Administrative Leadtime (in Months): 1 Production Leadtime (in Months): 2

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Nov 2020						
Delivery Dates	Jan 2021						

Installation Information

Method of Implementation: Method:: Installation Name: MUOS UPGRADE

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	60 / 6.428	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	60 / 6.428
FY 2021	- / -	30 / 2.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	30 / 2.430
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	60 / 6.428	30 / 2.430	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	90 / 8.858

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	60	-	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90
Out	60	-	10	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90

Footnotes:
 (1) 1. For the MUOS Upgrade Mod Kits, the quantity represents 6 MUOS ground sites which will each receive 2 MUOS Upgrade mod Kits for a total of 12. The 6 ground sites receiving upgrades are Wahiawa, HI; Northwest Chesapeake, VA; Niscemi, IT; Geraldton, AU; Port Hueneme, CA; and Schriever AFB, CO. 2. For the MUOS Upgrade Mod Kits, the unit cost varies each fiscal year due to the unique configuration of hardware and software requirements needed to address cybersecurity and lifecycle management issues at each of the 6 ground sites.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip

P-1 Line Item Number / Title:
3113 / Surface Ship Torpedo Def (SSTD)

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603506N, 0204228N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	51.919	5.811	4.545	3.789	0.000	3.789	4.694	4.640	5.418	5.515	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	51.919	5.811	4.545	3.789	0.000	3.789	4.694	4.640	5.418	5.515	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	51.919	5.811	4.545	3.789	0.000	3.789	4.694	4.640	5.418	5.515	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The FY 2023 funding request was reduced by \$0.502 million to account for the availability of prior year execution balances.

The Surface Ship Torpedo Defense (SSTD) family of systems includes Acoustic Device Countermeasures (ADCs), Countermeasure Anti-Torpedo (CAT), Torpedo Warning System (TWS) and the AN/SLQ-25 NIXIE program. The ADC is a 3-inch expendable torpedo countermeasure (CM) that provides an over-the-side soft-kill defense against threat torpedoes. This program provides ongoing production of countermeasure devices needed to sustain fleet inventories, improvements to enhance the readiness and effectiveness of countermeasure devices on all U.S. surface ships. The ADCs onboard ships are adequately stored in Ready and Deep Stowage Lockers also as a requirement for procurement to be installed in DDG, CG, and CVN ships.

TD010 - ADC HARDWARE: Procures surface ship ADCs. Quantity requirements determined by NMRP and shelf life of older units (reaching end of life). These requirements vary by ship type, location and operational posture.

TD020 - ADC READY STOWAGE LOCKER: Procure and install ready service and deep storage lockers to hold ADCs on surface ships.

TD830 - PRODUCTION ENGINEERING - In House: Funding provides specification preparation and validation, government prepared production acceptance procedures, production planning, Integrated Logistics Support (ILS) planning, coordination of government furnished information (GFI) and government furnished equipment (GFE), contract deliverable monitoring and prime contractor monitoring of cost/schedule performance. Also provides in- service engineering agent (ISEA) and technical direction agent (TDA) support for ADCs on surface ships.

TD900 - CONSULTING SERVICES: Funding under this cost code provides fair share of contractor support to the program office, including program, financial, acquisition, contract, administration and engineering management support.

TD905 - PRODUCTION ENGINEERING CONTRACTOR: Funding under this cost code provides for production engineering tasks performed by the hardware contractor.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment /
 BSA 1: Torpedoes and Related Equip **P-1 Line Item Number / Title:**
 3113 / Surface Ship Torpedo Def (SSTD)

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603506N, 0204228N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Surface Ship Torpedo Def (SSTD)	P-5a			- / 51.919	- / 5.811	- / 4.545	- / 3.789	- / 0.000	- / 3.789
P-40	Total Gross/Weapon System Cost				- / 51.919	- / 5.811	- / 4.545	- / 3.789	- / 0.000	- / 3.789

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY23 funding supports procurement of both surface ship Acoustic Device Countermeasures (ADCs) and Ready & Deep Stowage Lockers.

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1						P-1 Line Item Number / Title: 3113 / Surface Ship Torpedo Def (SSTD)						Item Number / Title [DODIC]: 1 / Surface Ship Torpedo Def (SSTD)						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				51.919		5.811		4.545		3.789		0.000		3.789				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				51.919		5.811		4.545		3.789		0.000		3.789				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				51.919		5.811		4.545		3.789		0.000		3.789				
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>																		
Initial Spares (\$ in Millions)				-		-		-		-		-		-		-		
Gross/Weapon System Unit Cost (\$ in Dollars)				-		-		-		-		-		-		-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) TD010 ADC ^(†) (1)	7,267.17	5,300	38.516	7,553.79	316	2.387	6,161.43	477	2.939	12,884.00	159	2.049	-	-	-	12,884.00	159	2.049
1.1.2) TD010 SYSTEMS ENG ⁽²⁾	-	-	-	-	-	-	-	-	-	-	-	0.174	-	-	-	-	-	0.174
1.1.3) TD020 Ready Stowage Locker ^(†)	131,551.72	29	3.815	137,821.88	7	0.965	140,578.32	10	1.406	143,389.88	10	1.434	-	-	-	143,389.88	10	1.434
<i>Subtotal: Recurring Cost</i>	-	-	42.331	-	-	3.352	-	-	4.345	-	-	3.657	-	-	-	-	-	3.657
Non Recurring Cost																		
1.2.1) TD010 ADC Non Recurring Costs ⁽³⁾	-	-	1.800	-	-	1.672	-	-	-	-	-	-	-	-	-	-	-	-
1.2.2) TD020 Ready Stow Lockers	-	-	1.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	3.000	-	-	1.672	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	45.331	-	-	5.024	-	-	4.345	-	-	3.657	-	-	-	-	-	3.657
Support Cost																		
2.1) TD830 PRODUCTION ENGINEERING IN-HOUSE	-	-	4.448	-	-	0.098	-	-	0.061	-	-	0.056	-	-	-	-	-	0.056

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3113 / Surface Ship Torpedo Def (SSTD)	Item Number / Title [DODIC]: 1 / Surface Ship Torpedo Def (SSTD)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.2) TD905 PRODUCTION ENG-- CONTRACTOR	-	-	0.621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.3) TD900 CONSULTING SERVICES	-	-	1.519	-	-	0.689	-	-	0.139	-	-	0.076	-	-	-	-	-	0.076
<i>Subtotal: Support Cost</i>	-	-	6.588	-	-	0.787	-	-	0.200	-	-	0.132	-	-	-	-	-	0.132
Gross/Weapon System Cost	-	-	51.919	-	-	5.811	-	-	4.545	-	-	3.789	-	-	0.000	-	-	3.789

(t) indicates the presence of a P-5a

Footnotes:

- (1) Increase in unit price FY22 to FY23 is due to actual contractor pricing for the new contract. Also funding reduction drove reduction of quantity. Funding reduction due to higher Department priorities.
- (2) TD010 Systems Engineering covers the contract service fees, engineering, and logistic efforts-including ECP labor and materials cost for ADC MK2 Mod 7 devices.
- (3) In FY 2021, the follow- on contract was not awarded due to negotiation issues. This effort will be awarded in FY22 and startup for NRE labor and materials are funded. Funds were already taken in FY23 because of this delay.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3113 / Surface Ship Torpedo Def (SSTD)	Item Number / Title [DODIC]: 1 / Surface Ship Torpedo Def (SSTD)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) TD010 ADC		2020	ULTRA / Braintree, MA	C / FFP	NUWC Keyport WA	May 2020	May 2021	598	6,622.07	Y		
1.1.1) TD010 ADC		2021	ULTRA / Braintree, MA	C / FFP	NUWC Keyport WA	May 2021	May 2022	316	7,553.79	Y		
1.1.1) TD010 ADC		2022	TBD / TBD	C / IDIQ	NUWC Keyport WA	May 2022	May 2023	477	6,161.43	Y		
1.1.1) TD010 ADC		2023	TBD / TBD	C / IDIQ	NUWC Keyport WA	May 2023	May 2024	159	12,884.00	Y		
1.1.3) TD020 Ready Stowage Locker		2019	Delphinus / Norfolk, VA	C / CPIF	NSWC Philadelphia	May 2019	May 2020	14	132,428.57	Y		
1.1.3) TD020 Ready Stowage Locker		2020	Delphinus / Norfolk, VA	C / CPIF	NSWC Philadelphia	May 2020	May 2021	9	131,222.20	Y		
1.1.3) TD020 Ready Stowage Locker		2021	QED Systems, Inc / Virginia Beach, VA	C / CPFF	NSWC Philadelphia	May 2021	May 2022	7	137,821.88	Y		
1.1.3) TD020 Ready Stowage Locker		2022	QED Systems, Inc / Virginia Beach, VA	C / CPFF	NSWC Philadelphia	May 2022	Oct 2022	10	140,578.32	Y		
1.1.3) TD020 Ready Stowage Locker		2023	Delphinus / Norfolk, VA	C / TBD	NSWC Philadelphia	May 2023	Oct 2023	10	143,389.88	Y		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment /
BSA 1: Torpedoes and Related Equip **P-1 Line Item Number / Title:**
3117 / MK-48 Torpedo

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	191	105	58	28	-	28	56	58	80	65	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	419.014	276.844	130.972	151.128	0.000	151.128	235.692	248.987	304.291	249.557	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	419.014	276.844	130.972	151.128	0.000	151.128	235.692	248.987	304.291	249.557	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	419.014	276.844	130.972	151.128	0.000	151.128	235.692	248.987	304.291	249.557	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	1.378	2.901	-	2.901	2.726	2.585	2.647	2.307	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	2,194K	2,637K	2,258K	5,397K	-	5,397K	4,209K	4,293K	3,804K	3,839K	Continuing	Continuing

Description:

FY23 budget request to procure 28 MK 48 MOD 7 All-Up Round (AUR) torpedoes, 8 Warhead Electronics and 7 Fuel Tank sections, and for the installation of 57 MK 48 MOD 7 torpedoes procured in prior years (2 from FY16 option, 18 from FY17 option, and 37 from FY18 option) per the P-21 G&C Section delivery schedule.

The MK 48 MOD 7 Heavyweight Torpedo is the U.S. Navy's submarine launched Anti-Submarine Warfare (ASW) and primary Anti-Surface Warfare (ASuW) weapon. The Heavyweight Torpedo provides the submarine force with an effective weapon against threat submarines and surface combatants to assist in achieving Sea Control and neutralizing or destroying threats to high value vessels. Torpedoes are the only proven weapon system that provides Navy control from the seabed to sea surface. Heavyweight AUR procurement is required to increase Warshot inventory to address increased Naval Munitions Requirement Process (NMRP) requirements gap.

[P5 / G5001 - MK 48 MOD 7 Hardware]: Funding under this cost code supports the award and execution of two competitive contracts for procurement of the MK 48 MOD 7 Torpedo Guidance and Control & Warhead Electronic Systems (WES) Sections, and Afterbody Tail Cone & Fuel Tank Sections. Items in this Cost Code include:

- Engineering Services / Engineering Change Proposals (ECPs) funds (1) studies (2) plans (3) design changes, and (4) implementation of design changes by the contractor(s), primarily due to obsolescence that occurs during the contract performance.
- Non-recurring Engineering (NRE) funding to resolve production issues including obsolescence. NRE funds (1) base contract year technology refresh due to obsolescence issues (2) production of Proof of Manufacturing (POM) units (3) first article testing (4) tooling (5) test equipment (6) procurement of technical data package updates, and (7) start-up costs for production contractors.
- Installation funding for government installation and integration of MK 48 MOD 7 Guidance and Control and Afterbody Tail Cone Sections assembled into an All-Up Round (AUR). Installation costs match procurement delivery timelines.
- Diminishing Manufacturing Sources (DMS) funds are provided to address obsolescence issues in the Guidance and Control (G&C)/WES and Afterbody/Tail Cone/Fuel Tank sections during the production cycle. The contractors will be required to procure and deliver DMS material for these obsolete components.

[P5 / G5002 - MK 48 TI-1 Hardware]: Funding under this cost code supports the award and execution of two contracts for procurement of a new MK 48 MOD 8 Torpedo Guidance and Control & Warhead Electronic Systems (WES) Section, and Afterbody Tail Cone and Fuel Tank Sections. MOD 8 supplies a new Guidance and Control (G&C) section including new Sonar Assembly (higher density array, transmitter, receiver), Guidance and Control Box (GCB), Tuning Box, and an Ethernet device switch. In addition, the MOD 8 will also feature a new Warhead Electronics System (WES) to support improved fuzing and the Improved Post Launch Communications System (IPLCS), which will replace the existing copper guidance wire with fiber optics. Improvements are needed in the presence of advanced countermeasures,

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip		P-1 Line Item Number / Title: 3117 / MK-48 Torpedo
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>shallow water, low Doppler targets, Very Shallow Water (VSW), and to improve fuzing and Anti-Surface Warfare (ASuW) performance. The MOD 8 G&C Section allows full fleet introduction of the APB 6 and to meet requirements of the MK 48 Improvements CDD (857-97-12). Other Items in this Cost Code include:</p> <ul style="list-style-type: none"> - Engineering services / Engineering Change Proposals (ECPs) funds (1)studies, (2)plans, (3)design changes, and (4)implementation of design changes by the contractor(s), primarily due to obsolescence that occurs during the contract performance. - Non-recurring Engineering (NRE) funding to resolve production issues including obsolescence. NRE funds (1) base contract year technology refresh due to obsolescence issues (2) production of Proof of Manufacturing (POM) units (3) first article testing (4) tooling (5) test equipment (6) procurement of technical data package updates, and (7) start-up costs for production contractors. - Installation funding for Government installation and integration of new MK 48 MOD 8 G&C and Afterbody Tail Cone Sections procured in prior years assembled into an MK 48 MOD 8 All-Up Round (AUR) Torpedo. Installation costs match procurement delivery timelines. - Diminishing Manufacturing Sources (DMS) funding provided to address obsolescence issues in the Mod 8 G&C and Afterbody/Tail Cone/Fuel Tank sections during the production cycle. The contractors will be required to procure and deliver DMS material for these obsolete components. <p>[P5 / G5004 - Torpedo Other Procurement Investment]: Funding under this cost code provides for additional Warhead electronics Warhead Electronics System (WES, Exploder, Sources and Sensors, and Cables) and Fuel Tanks in FY 2021 to FY 2027 utilizing a new FY21 competitive MK 48 MOD 7 G&C and (WES) contract in order to replace the Warshot Fuel Tanks and Warhead Sections in the war reserve which were used by the MK 48 MOD 7 Torpedo Program from FY 2016 to FY 2020 to assemble an All-Up Round Torpedo.</p> <p>[P5 / G5003 - Support and Ancillary Equipment]: Funding under this cost code provides procurement and maintenance of support, technology refresh of test equipment at Naval Undersea Warfare Centers (NUWC) Keyport (KPT) and Newport (NPT), and the contractor facility for assembly, testing and integration.</p> <p>[P5 / G5830 - Production Engineering]: Funding under this cost code provides for production tasks performed by NUWC NPT and KPT and includes review of contractor generated Engineering Change Proposals (ECPs), review and resolution of contractor failures and proposed corrective action, configuration management activities, contractor monitoring, risk analysis, technical problem resolution, software engineering, safety, integrated logistics support, environmental engineering, information systems, test equipment, software maintenance and updates, and refurbishment of notable test equipment to provide to the contractors. Funding maintains production specification in accordance with production processes, provides subject matter experts to support root cause analysis of failed contractor hardware, and monitors contractor defect and reduction processes to ensure deficiencies are effectively addressed. Funding is also provided for program office acquisition support.</p> <p>[P5 / G5840 - Quality Assurance]: Funding under this cost code provides for quality assurance (QA) tasks performed by NUWC Keyport (KPT) and Newport (NPT) including: QA review of the contractor and subcontractor data, review of documentation indicating conformity to product performance requirements, and review of objective quality evidence.</p> <p>[P5 / G5860 - Acceptance T&E]: Funding under this cost code provides for integration and production acceptance testing of prime contractor hardware sections in an MK 48 MOD 7 All-Up Round (AUR) Torpedo.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip **P-1 Line Item Number / Title:** 3117 / MK-48 Torpedo

ID Code (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / MK-48 Torpedo	P-5a, P-21			191 / 419.014	105 / 276.844	58 / 130.972	28 / 151.128	- / 0.000	28 / 151.128
P-40	Total Gross/Weapon System Cost				191 / 419.014	105 / 276.844	58 / 130.972	28 / 151.128	- / 0.000	28 / 151.128

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The FY 2023 funding request was adjusted by \$21.0M to account for the availability of prior year execution balances.

ITEM 1.1.1 and 1.1.2 Guidance & Control (G&C) section and Afterbody Body/Tail-Cone section: additional funding required for increase in QTY from 25 in FY22 to 28 in FY23.

ITEM 1.1.4 Installation: Additional funding requested in FY23 to support 57 MK48 AUR installations that are scheduled to be installed from prior year procurements per the P-21 G&C Section delivery schedule for G&C Section (2 from FY16, 18 from FY17, and 37 from FY18 options).

ITEM 3.1.1 and 3.1.2 Warhead Electronics / Fuel Tanks: Decreased funding due to reduction in quantities from FY22 to FY23. Warhead electronics (new WES, Exploder, Sources and Sensors, and Cables) and Fuel Tanks are being procured to replace the Warshot Fuel Tanks and Warhead Sections taken from war reserve that were used by the MK 48 MOD 7 Torpedo Program from FY 2016 to FY 2020 to assemble an All-Up Round Torpedo.

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	191	105	58	28	-	28
Gross/Weapon System Cost (\$ in Millions)	419.014	276.844	130.972	151.128	0.000	151.128
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	419.014	276.844	130.972	151.128	0.000	151.128
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	419.014	276.844	130.972	151.128	0.000	151.128

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	1.378	2.901	-	2.901
Gross/Weapon System Unit Cost (\$ in Dollars)	2,194K	2,637K	2,258K	5,397K	-	5,397K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - G5001 - MK 48 MOD 7 Hardware Cost																		
Recurring Cost																		
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾ (1)	589,989.53	191	112.688	1,147K	82	94.022	2,408K	25	60.206	2,510K	28	70.288	-	-	-	2,510K	28	70.288
1.1.2) Afterbody/Tail Cone ⁽¹⁾ (2)	829,921.47	191	158.515	1,021K	82	83.686	1,341K	25	33.536	1,385K	28	38.790	-	-	-	1,385K	28	38.790
1.1.3) Contractor Engineering Services / ECPs	-	-	63.196	-	-	12.222	-	-	10.385	-	-	9.761	-	-	-	-	-	9.761
1.1.4) Installation ⁽³⁾	-	-	-	-	-	-	-	-	1.002	-	-	7.280	-	-	-	-	-	7.280
1.1.5) Diminishing Manufacturing Sources	-	-	3.050	-	-	0.250	-	-	0.250	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Recurring Cost</i>	-	-	337.449	-	-	190.180	-	-	105.379	-	-	126.369	-	-	-	-	-	126.369
Non Recurring Cost																		
1.2.1) Non Recurring Engineering	-	-	31.645	-	-	63.992	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	31.645	-	-	63.992	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - G5001 - MK 48 MOD 7 Hardware Cost</i>	-	-	369.094	-	-	254.172	-	-	105.379	-	-	126.369	-	-	-	-	-	126.369
Hardware - G5004 - Torpedo Other Procurement Investment Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1							P-1 Line Item Number / Title: 3117 / MK-48 Torpedo						Item Number / Title [DODIC]: 1 / MK-48 Torpedo					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
3.1.1) Warhead Electronics ^(t) (4)	-	-	-	-	-	-	709,444.44	9	6.385	725,125.00	8	5.801	-	-	-	725,125.00	8	5.801
3.1.2) Fuel Tank War Reserve ^(t) (5)	-	-	-	188,218.75	32	6.023	243,888.89	9	2.195	252,000.00	7	1.764	-	-	-	252,000.00	7	1.764
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	6.023	-	-	8.580	-	-	7.565	-	-	-	-	-	7.565
<i>Subtotal: Hardware - G5004 - Torpedo Other Procurement Investment Cost</i>	-	-	-	-	-	6.023	-	-	8.580	-	-	7.565	-	-	-	-	-	7.565
Support - G5003 - Support and Ancillary Equipment Cost																		
4.1) Support and Ancillary Equipment	-	-	7.012	-	-	1.633	-	-	1.850	-	-	1.881	-	-	-	-	-	1.881
<i>Subtotal: Support - G5003 - Support and Ancillary Equipment Cost</i>	-	-	7.012	-	-	1.633	-	-	1.850	-	-	1.881	-	-	-	-	-	1.881
Support - G5830 - Production Engineering Cost																		
5.1) Production Engineering (In-House & Ctr)	-	-	28.228	-	-	7.218	-	-	7.280	-	-	7.324	-	-	-	-	-	7.324
<i>Subtotal: Support - G5830 - Production Engineering Cost</i>	-	-	28.228	-	-	7.218	-	-	7.280	-	-	7.324	-	-	-	-	-	7.324
Support - G5840 - Quality Assurance Cost																		
6.1) Quality Assurance	-	-	6.244	-	-	2.076	-	-	2.118	-	-	2.160	-	-	-	-	-	2.160
<i>Subtotal: Support - G5840 - Quality Assurance Cost</i>	-	-	6.244	-	-	2.076	-	-	2.118	-	-	2.160	-	-	-	-	-	2.160
Support - G5860 - Acceptance T&E Cost																		
7.1) Acceptance T&E	-	-	8.436	-	-	5.722	-	-	5.765	-	-	5.829	-	-	-	-	-	5.829
<i>Subtotal: Support - G5860 - Acceptance T&E Cost</i>	-	-	8.436	-	-	5.722	-	-	5.765	-	-	5.829	-	-	-	-	-	5.829
Gross/Weapon System Cost	2,194K	191	419.014	2,637K	105	276.844	2,258K	58	130.972	5,397K	28	151.128	-	-	0.000	5,397K	28	151.128

(t) indicates the presence of a P-5a

Footnotes:
 (1) ITEM 1.1.1 and 1.1.2 Guidance & Control (G&C) section and Afterbody Body/Tail-Cone section: additional funding required for increase in QTY from 25 in FY22 to 28 in FY23.
 (2) ITEM 1.1.1 and 1.1.2 Guidance & Control (G&C) section and Afterbody Body/Tail-Cone section: additional funding required for increase in QTY from 25 in FY22 to 28 in FY23.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>⁽³⁾ ITEM 1.1.4 Installation: Additional funding requested in FY23 to support 57 MK48 AUR installations that are scheduled to be installed from prior year procurements per the P-21 G&C Section delivery schedule for G&C Section (2 from FY16, 18 from FY17, and 37 from FY18 options).</p> <p>⁽⁴⁾ ITEM 3.1.1 and 3.1.2 Warhead Electronics / Fuel Tanks: Decreased funding due to reduction in quantities from FY22 to FY23. Warhead electronics (new WES, Exploder, Sources and Sensors, and Cables) and Fuel Tanks are being procured to replace the Warshot Fuel Tanks and Warhead Sections taken from war reserve that were used by the MK 48 MOD 7 Torpedo Program from FY 2016 to FY 2020 to assemble an All-Up Round Torpedo.</p> <p>⁽⁵⁾ ITEM 3.1.1 and 3.1.2 Warhead Electronics / Fuel Tanks: Decreased funding due to reduction in quantities from FY22 to FY23. Warhead electronics (new WES, Exploder, Sources and Sensors, and Cables) and Fuel Tanks are being procured to replace the Warshot Fuel Tanks and Warhead Sections taken from war reserve that were used by the MK 48 MOD 7 Torpedo Program from FY 2016 to FY 2020 to assemble an All-Up Round Torpedo.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Guidance & Control (G&C) Section ^(†)		2016	G&C Section LMS - FY16 ⁽⁶⁾ / Marion, MA	C / FFP	NAVSEA	May 2016	Apr 2022	8	1,418K	Y		May 2015
1.1.1) Guidance & Control (G&C) Section ^(†)		2017	G&C Section LMS - FY17 Option 1 ⁽⁷⁾ / Marion, MA	C / FFP	NAVSEA	Sep 2017	Nov 2022	18	600,930.00	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2018	G&C Section LMS - FY18 Option 2 ⁽⁸⁾ / Marion, MA	C / FFP	NAVSEA	Aug 2018	Jul 2023	41	591,036.44	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2019	G&C Section LMS - FY19 Option 3 / Marion, MA	C / FFP	NAVSEA	Jun 2019	Feb 2024	53	536,195.85	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2020	G&C Section LMS - FY20 Option 4 / Marion, MA	C / FFP	NAVSEA	Sep 2020	Dec 2024	71	533,436.62	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2021 ⁽⁹⁾	G&C Section LMS - FY21 Option 5 / Marion, MA	C / FFP	NAVSEA	Nov 2021	Oct 2025	82	1,147K	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2022	G&C Section + WES + Exploder Arming Device - LMS - FY22 Base Year / Marion, MA	SS / FFP	NAVSEA	Sep 2022	May 2026	25	2,408K	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2023	G&C Section + WES + Exploder Arming Device - LMS - FY23 Option 1 / Marion, MA	SS / FFP	NAVSEA	Jun 2023	Oct 2026	28	2,510K	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2016	Afterbody/Tail Cone Section SAIC - FY16 / Mclean, VA	C / FFP	NAVSEA	Sep 2016	Jun 2020	8	933,250.00	Y		Jul 2015
1.1.2) Afterbody/Tail Cone ^(†)		2017	Afterbody/Tail Cone Section SAIC - FY17 / Mclean, VA	C / FFP	NAVSEA	Sep 2017	Jul 2020	18	856,853.00	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2018	Afterbody/Tail Cone Section SAIC - FY18 / Mclean, VA	C / FFP	NAVSEA	Jun 2018	Feb 2021	41	803,054.22	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2019	Afterbody/Tail Cone Section SAIC - FY19 / Mclean, VA	C / FFP	NAVSEA	Sep 2019	Sep 2021	53	830,309.64	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2020	Afterbody/Tail Cone Section SAIC - FY20 / Mclean, VA	C / FFP	NAVSEA	Aug 2020	Sep 2022	71	826,690.14	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2021 ⁽¹⁰⁾	Afterbody/Tail Cone Section + Fuel Tank SAIC - FY21 Base / Reston, VA	C / FFP	NAVSEA	Nov 2021	Aug 2024	82	1,021K	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2022	Afterbody/Tail Cone Section + Fuel Tank SAIC - FY22 Option 1 / Reston, VA	C / FFP	NAVSEA	Aug 2022	Oct 2024	25	1,341K	Y		
1.1.2) Afterbody/Tail Cone ^(†)		2023	Afterbody/Tail Cone Section + Fuel Tank SAIC - FY23 Option 2 / Reston, VA	C / FFP	NAVSEA	Jun 2023	Aug 2025	28	1,385K	Y		
3.1.1) Warhead Electronics ^(†)		2022	WES + Exploder Arming Device - LMS - FY22 Base / Marion, VA	SS / FFP	NAVSEA	Sep 2022	May 2025	9	709,444.44	N		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1.1) Warhead Electronics ^(†)		2023	WES + Exploder Arming Device - LMS - FY23 Option 1 / Marion, VA	SS / FFP	NAVSEA	Jun 2023	Jun 2026	8	725,125.00	N		
3.1.2) Fuel Tank War Reserve ^(†)		2021	Fuel Tank - SAIC- FY21 Base / Reston, VA	C / FFP	NAVSEA	Nov 2021	Jan 2025	32	188,218.75	N		
3.1.2) Fuel Tank War Reserve ^(†)		2022	Fuel Tank - SAIC- FY22 Option 1 / Reston, VA	C / FFP	NAVSEA	Aug 2022	Apr 2025	9	243,888.89	N		
3.1.2) Fuel Tank War Reserve ^(†)		2023	Fuel Tank - SAIC- FY23 Option 2 / Reston, VA	C / FFP	NAVSEA	Jun 2023	Oct 2025	7	252,000.00	N		

^(†) indicates the presence of a P-21

Footnotes:

⁽⁶⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁷⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁸⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁹⁾ The FY 2021+ procurement unit price reflects acquiring new warheads electronic section and fuel tanks. Prior years procurement used War Reserve Fuel Tanks and warheads. The FY21 procurement will utilize existing MK48 MOD 4 warheads and add the MK 48 MOD 7 Warhead Electronic Section (WES) to minimize the procurement cost and meet the weapons performance requirements. The WES is priced into the G&C contract and the Fuel Tank is priced into the AB/TC contract.

⁽¹⁰⁾ The FY21 procurement unit price reflects acquiring new warheads electronic section and fuel tanks. Prior years procurement used War Reserve Fuel Tanks and warheads. The FY21 procurement will utilize existing MK48 MOD 4 warheads and add the MK 48 MOD 7 Warhead Electronic Section (WES) to minimize the procurement cost and meet the weapons performance requirements. The WES is priced into the G&C contract and the Fuel Tank is priced into the AB/TC contract.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018													Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾																																	
	1	2016	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8				
	2	2017	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18				
	3	2018	NAVY	41	0	41										A -	-	-	-	-	-	-	-	-	-	-	-	-	41				
	4	2019	NAVY	53	0	53																					A -	-	53				
	5	2020	NAVY	71	0	71																						71					
	6	2021	NAVY	82	0	82																						82					
	7	2022	NAVY	25	0	25																						25					
	8	2023	NAVY	28	0	28																						28					
1.1.2) Afterbody/Tail Cone ⁽²⁾																																	
	9	2016	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8					
	10	2017	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18					
	11	2018	NAVY	41	0	41										A -	-	-	-	-	-	-	-	-	-	-	-	41					
	12	2019	NAVY	53	0	53																						53					
	13	2020	NAVY	71	0	71																						71					
	14	2021	NAVY	82	0	82																						82					
	15	2022	NAVY	25	0	25																						25					
	16	2023	NAVY	28	0	28																						28					
3.1.1) Warhead Electronics ⁽⁴⁾																																	
	17	2022	NAVY	9	0	9																						9					
	18	2023	NAVY	8	0	8																						8					
3.1.2) Fuel Tank War Reserve ⁽⁵⁾																																	
	19	2021	NAVY	32	0	32																						32					
	20	2022	NAVY	9	0	9																						9					
	21	2023	NAVY	7	0	7																						7					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020													Fiscal Year 2021													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾																																	
	1	2016	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8					
	2	2017	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18					
	3	2018	NAVY	41	0	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41					
	4	2019	NAVY	53	0	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53					
	5	2020	NAVY	71	0	71																						71					
	6	2021	NAVY	82	0	82																						82					
	7	2022	NAVY	25	0	25																						25					
	8	2023	NAVY	28	0	28																						28					
1.1.2) Afterbody/Tail Cone ⁽²⁾																																	
	9	2016	NAVY	8	0	8	-	-	-	-	-	-	-	4	4													0					
	10	2017	NAVY	18	0	18	-	-	-	-	-	-	-	-	5	3	5	5										0					
	11	2018	NAVY	41	0	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	6	7	8	8	8		0					
	12	2019	NAVY	53	0	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	47					
	13	2020	NAVY	71	0	71																						71					
	14	2021	NAVY	82	0	82																						82					
	15	2022	NAVY	25	0	25																						25					
	16	2023	NAVY	28	0	28																						28					
3.1.1) Warhead Electronics ⁽⁴⁾																																	
	17	2022	NAVY	9	0	9																						9					
	18	2023	NAVY	8	0	8																						8					
3.1.2) Fuel Tank War Reserve ⁽⁵⁾																																	
	19	2021	NAVY	32	0	32																						32					
	20	2022	NAVY	9	0	9																						9					
	21	2023	NAVY	7	0	7																						7					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022													Fiscal Year 2023													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾																																	
	1	2016	NAVY	8	0	8	-	-	-	-	-	-	1	1	1	1	1	1	2											0			
	2	2017	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	14	4									0			
	3	2018	NAVY	41	0	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	15	14	4			
	4	2019	NAVY	53	0	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53			
	5	2020	NAVY	71	0	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71			
	6	2021	NAVY	82	0	82		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82			
	7	2022	NAVY	25	0	25												A	-	-	-	-	-	-	-	-	-	-	-	25			
	8	2023	NAVY	28	0	28																					A	-	-	-	28		
1.1.2) Afterbody/Tail Cone ⁽²⁾																																	
	9	2016	NAVY	8	8	0																								0			
	10	2017	NAVY	18	18	0																								0			
	11	2018	NAVY	41	41	0																								0			
	12	2019	NAVY	53	6	47	6	6	6	6	6	7	7	3																0			
	13	2020	NAVY	71	0	71	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	7	7	7	7	7	8		0			
	14	2021	NAVY	82	0	82		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82			
	15	2022	NAVY	25	0	25											A	-	-	-	-	-	-	-	-	-	-	-	-	25			
	16	2023	NAVY	28	0	28																					A	-	-	-	28		
3.1.1) Warhead Electronics ⁽⁴⁾																																	
	17	2022	NAVY	9	0	9												A	-	-	-	-	-	-	-	-	-	-	-	9			
	18	2023	NAVY	8	0	8																					A	-	-	-	8		
3.1.2) Fuel Tank War Reserve ⁽⁵⁾																																	
	19	2021	NAVY	32	0	32		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32			
	20	2022	NAVY	9	0	9												A	-	-	-	-	-	-	-	-	-	-	-	9			
	21	2023	NAVY	7	0	7																					A	-	-	-	7		
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
							C	O	E	A	E	A	A	A	U	U	A	E	C	O	V	E	A	E	A	A	U	U	A	S			
							T	V	C	N	B	R	P	Y	N	L	G	P	T	V	C	N	B	R	P	Y	N	L	G	P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3117 / MK-48 Torpedo **Item Number / Title [DODIC]:** 1 / MK-48 Torpedo

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2024													Fiscal Year 2025													BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024													Calendar Year 2025													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾																																	
	1	2016	NAVY	8	8	0																							0				
	2	2017	NAVY	18	18	0																							0				
	3	2018	NAVY	41	37	4	4																						0				
	4	2019	NAVY	53	0	53	-	-	-	-	6	6	6	5	5	5	5	5	5	5									0				
	5	2020	NAVY	71	0	71	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	8	7	7	7	7	0			
	6	2021	NAVY	82	0	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82				
	7	2022	NAVY	25	0	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25				
	8	2023	NAVY	28	0	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28				
1.1.2) Afterbody/Tail Cone ⁽²⁾																																	
	9	2016	NAVY	8	8	0																							0				
	10	2017	NAVY	18	18	0																							0				
	11	2018	NAVY	41	41	0																							0				
	12	2019	NAVY	53	53	0																							0				
	13	2020	NAVY	71	71	0																							0				
	14	2021	NAVY	82	0	82	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	2				0				
	15	2022	NAVY	25	0	25	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	3	2	2	2	0			
	16	2023	NAVY	28	0	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	26			
3.1.1) Warhead Electronics ⁽⁴⁾																																	
	17	2022	NAVY	9	0	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	4			
	18	2023	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8				
3.1.2) Fuel Tank War Reserve ⁽⁵⁾																																	
	19	2021	NAVY	32	0	32	-	-	-	-	-	-	-	-	-	-	-	-	-	10	17	5							0				
	20	2022	NAVY	9	0	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	3			
	21	2023	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2026												Fiscal Year 2027												BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026												Calendar Year 2027												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾																															
	1	2016	NAVY	8	8	0																						0			
	2	2017	NAVY	18	18	0																						0			
	3	2018	NAVY	41	41	0																						0			
	4	2019	NAVY	53	53	0																						0			
	5	2020	NAVY	71	71	0																						0			
	6	2021	NAVY	82	0	82	7	7	7	7	7	7	7	7	7	6	6											0			
	7	2022	NAVY	25	0	25	-	-	-	-	-	-	-	2	2	2	2	2	2	2	3	3	3					0			
	8	2023	NAVY	28	0	28	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	3	3	4	4	4	4	0	
1.1.2) Afterbody/Tail Cone ⁽²⁾																															
	9	2016	NAVY	8	8	0																						0			
	10	2017	NAVY	18	18	0																						0			
	11	2018	NAVY	41	41	0																						0			
	12	2019	NAVY	53	53	0																						0			
	13	2020	NAVY	71	71	0																						0			
	14	2021	NAVY	82	82	0																						0			
	15	2022	NAVY	25	25	0																						0			
	16	2023	NAVY	28	2	26	2	2	2	2	3	3	3	3	3	3	3											0			
3.1.1) Warhead Electronics ⁽⁴⁾																															
	17	2022	NAVY	9	5	4	1	1	1	1																		0			
	18	2023	NAVY	8	0	8	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1						0			
3.1.2) Fuel Tank War Reserve ⁽⁵⁾																															
	19	2021	NAVY	32	32	0																						0			
	20	2022	NAVY	9	6	3	1	1	1																			0			
	21	2023	NAVY	7	0	7	1	1	1	1	1	1	1															0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3117 / MK-48 Torpedo **Item Number / Title [DODIC]:** 1 / MK-48 Torpedo

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	G&C Section LMS - FY16 ⁽⁶⁾ - Marion, MA			50	0	0	71	71	0	0	0	0
2	G&C Section LMS - FY17 Option 1 ⁽⁷⁾ - Marion, MA			100	0	0	62	62	0	0	0	0
3	G&C Section LMS - FY18 Option 2 ⁽⁸⁾ - Marion, MA			100	0	0	59	59	0	0	0	0
4	G&C Section LMS - FY19 Option 3 - Marion, MA	41	69	100	0	0	56	56	0	0	48	48
5	G&C Section LMS - FY20 Option 4 - Marion, MA	41	69	100	0	0	51	51	0	0	0	0
6	G&C Section LMS - FY21 Option 5 - Marion, MA			TBD	0	0	47	47	0	0	0	0
7	G&C Section + WES + Exploder Arming Device - LMS - FY22 Base Year - Marion, MA			TBD	0	0	44	44	0	0	0	0
8	G&C Section + WES + Exploder Arming Device - LMS - FY23 Option 1 - Marion, MA			TBD	0	0	39	39	0	0	0	0
9	Afterbody/Tail Cone Section SAIC - FY16 - Mclean, VA			TBD	0	0	45	45	0	0	0	0
10	Afterbody/Tail Cone Section SAIC - FY17 - Mclean, VA			TBD	0	0	34	34	0	0	0	0
11	Afterbody/Tail Cone Section SAIC - FY18 - Mclean, VA			TBD	0	0	32	32	0	0	32	32
12	Afterbody/Tail Cone Section SAIC - FY19 - Mclean, VA			100	0	0	24	24	0	0	0	0
13	Afterbody/Tail Cone Section SAIC - FY20 - Mclean, VA			100	0	0	25	25	0	0	0	0
14	Afterbody/Tail Cone Section + Fuel Tank SAIC - FY21 Base - Reston, VA			TBD	0	0	33	33	0	0	0	0
15	Afterbody/Tail Cone Section + Fuel Tank SAIC - FY22 Option 1 - Reston, VA			TBD	0	0	26	26	0	0	0	0
16	Afterbody/Tail Cone Section + Fuel Tank SAIC - FY23 Option 2 - Reston, VA			TBD	0	0	26	26	0	0	0	0

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3117 / MK-48 Torpedo	Item Number / Title [DODIC]: 1 / MK-48 Torpedo
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
17	WES + Exploder Arming Device - LMS - FY22 Base - Marion, VA			TBD	0	0	32	32	0	0	26	26
18	WES + Exploder Arming Device - LMS - FY23 Option 1 - Marion, VA			TBD	0	0	36	36	0	0	0	0
19	Fuel Tank - SAIC- FY21 Base - Reston, VA			TBD	0	0	38	38	0	0	0	0
20	Fuel Tank - SAIC- FY22 Option 1 - Reston, VA			TBD	0	0	32	32	0	0	0	0
21	Fuel Tank - SAIC- FY23 Option 2 - Reston, VA			TBD	0	0	28	28	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

- ⁽⁶⁾ MSR and EOQ have not yet been determined by the contractor.
- ⁽⁷⁾ MSR and EOQ have not yet been determined by the contractor.
- ⁽⁸⁾ MSR and EOQ have not yet been determined by the contractor.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip

P-1 Line Item Number / Title:
3141 / ASW Targets

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	242.588	13.833	13.630	14.403	0.000	14.403	14.673	14.985	17.185	17.352	-	348.649
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	242.588	13.833	13.630	14.403	0.000	14.403	14.673	14.985	17.185	17.352	-	348.649
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	242.588	13.833	13.630	14.403	0.000	14.403	14.673	14.985	17.185	17.352	-	348.649

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY2023 funds are required for the procurement of MK-39 MOD 3 Expendable Mobile ASW Training Target (EMATT) for the purpose of providing basic open ocean sonar training and torpedo placement exercises by emulating threat submarines. Funding is also required for MK-30 Service Life Extension Program (SLEP) which extends the useful service life of MK-30 ASW Targets to meet annual fleet training requirements.

The MK-39 MOD 3 Expendable Mobile ASW Training Target (EMATT) is a small self-propelled underwater vehicle launched from fixed wing and rotary wing Anti-Submarine Warfare (ASW) aircraft and ASW surface ships for the purpose of providing basic open ocean sonar training and torpedo placement exercises. Its operation consists of a dynamic run trajectory that is actively controlled in depth and course with pre-programmable run maneuvers emulating threat submarines and is detectable by all current U.S. ASW Platforms.

The MK-30 is an ASW training target for Navy surface ships, submarines, and aircrafts that are capable of simulating submarine threats anticipated in the twenty-first century littoral warfare environment.

The MK-30 Service Life Extension Program (SLEP) extends the useful service life of MK-30 ASW Targets to meet annual fleet training requirements.

[P5 / TG002 - MK39 MOD 3 EMATT]: Funding under this cost code provides for the procurement of MK-39 MOD 3 EMATT vehicles and Non-Recurring Engineering (NRE). NRE funds the cost of Pre-Proof of Manufacturing (POM) units and POM units, first article testing, tooling and test equipment, procurement of technical data package updates, start-up costs, and other one-time costs for production contractors.

[P5 / TG007 - MK30 SLEP]: MK 30 MOD 1 Service Life Extension Program (SLEP) extends the MK 30 MOD 1 ASW Target Service Life to continue the use of MK 30 ASW Target until FY27. The SLEP efforts required include the replacement of critical navigation subsystems, power distribution subsystems, mechanical parts including replacement hull sections, and test equipment that are no longer procurable and/or can no longer be maintained or that needs updates for cyber vulnerabilities.

[P5 / TG832 - MK39 MOD 2/3 EMATT PROD ENG (IN-HOUSE)]: Funding under this cost code provides for production engineering tasks performed by NUWC NPT and KPT including EMATT program management support, systems engineering, and production engineering.

[P5 / TG842 - MK39 MOD 2/3 EMATT QUALITY ASSURANCE]: Funding under this cost code provides for quality assurance efforts in support of the EMATT program.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip		P-1 Line Item Number / Title: 3141 / ASW Targets
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
[P5 / TG862 - MK39MOD 2/3 EMATT ACCEPTANCE T&E]: Funding under this cost code provides for production acceptance of contractor hardware for the EMATT program.		
[P5 / TG900 - MK39 MOD 2/3 EMATT CONSULTING SERVICES]: Funding under this cost code provides for contractor support services at the program office.		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip **P-1 Line Item Number / Title:** 3141 / ASW Targets

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / ASW TARGETS	P-5a, P-21			- / 242.588	- / 13.833	- / 13.630	- / 14.403	- / 0.000	- / 14.403
P-40	Total Gross/Weapon System Cost				- / 242.588	- / 13.833	- / 13.630	- / 14.403	- / 0.000	- / 14.403

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY2023 funds are required for the procurement of MK-39 MOD 3 Expendable Mobile ASW Training Target (EMATT) for the purpose of providing basic open ocean sonar training and torpedo placement exercises by emulating threat submarines. Funding is also required for MK-30 Service Life Extension Program (SLEP) which extends the useful service life of MK-30 ASW Targets to meet annual fleet training requirements.

Hardware - TG002 - MK39 MOD 3 EMATT Cost
Recurring

Code 1.1.1) MK39 MOD 3 EMATTs - In FY23 the MK39 Mod 3 EMATTs increased to a quantity of 1,023 from a procurement quantity of 550 MK39 Mod 3 EMATT's in FY22. The increase in quantity is attribute to a lower unit price in FY23 from FY22 due to step ladder pricing and Non-Recurring Cost for procurement of Pre-POM units and POM units are in FY22 only for a new contract award.

Code 1.2.1) NON RECURRING COST - Funding decreases to \$0 in FY23 since there is not a requirement for NRE in FY23. In FY22 there was NRE of \$2.7M, which is required to support a new competitive contract for the procurement of Pre-POM and POM units for government testing, first article testing, tooling and test equipment, procurement of technical data package updates and start-up costs for the new MK39 Mod 3 EMATT production contract.

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1				P-1 Line Item Number / Title: 3141 / ASW Targets			Item Number / Title [DODIC]: 1 / ASW TARGETS		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:			
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				242.588	13.833	13.630	14.403	0.000	14.403
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				242.588	13.833	13.630	14.403	0.000	14.403
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				242.588	13.833	13.630	14.403	0.000	14.403
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - TG002 - MK39 MOD 3 EMATT Cost																		
Recurring Cost																		
1.1.1) MK39 MOD 3 EMATTs ⁽¹⁾ (1)	12,346.36	6,857	84.659	7,455.00	965	7.194	8,474.00	550	4.661	7,832.00	1,023	8.012	-	-	-	7,832.00	1,023	8.012
1.1.2) ENGINEERING SERVICES/ECP	-	-	7.782	-	-	0.606	-	-	0.620	-	-	0.646	-	-	-	-	-	0.646
1.1.3) MK39 MOD 2 EMATT TARGETS OPTION 2	6,357.27	1,100	6.993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	99.434	-	-	7.800	-	-	5.281	-	-	8.658	-	-	-	-	-	8.658
Non Recurring Cost																		
1.2.1) NON-RECURRING ⁽²⁾	-	-	4.210	-	-	-	-	-	2.666	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	4.210	-	-	-	-	-	2.666	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - TG002 - MK39 MOD 3 EMATT Cost</i>	-	-	103.644	-	-	7.800	-	-	7.947	-	-	8.658	-	-	-	-	-	8.658
Hardware - TG005 - MK30 MOD 2 PROCUREMENT Cost																		
Recurring Cost																		
2.1.1) MK30 MOD 2 TARGETS	-	-	52.759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) ENGINEERING COSTS	-	-	0.750	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	53.509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1						P-1 Line Item Number / Title: 3141 / ASW Targets						Item Number / Title [DODIC]: 1 / ASW TARGETS						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Hardware - TG005 - MK30 MOD 2 PROCUREMENT Cost</i>																		
-	-	53.509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - TG007 - MK30 SLEP Cost																		
Recurring Cost																		
3.1.1) MK30 SLEP	-	-	39.979	-	-	4.803	-	-	4.428	-	-	4.465	-	-	-	-	-	4.465
<i>Subtotal: Recurring Cost</i>																		
-	-	39.979	-	-	4.803	-	-	4.428	-	-	4.465	-	-	-	-	-	-	4.465
<i>Subtotal: Hardware - TG007 - MK30 SLEP Cost</i>																		
-	-	39.979	-	-	4.803	-	-	4.428	-	-	4.465	-	-	-	-	-	-	4.465
Support - TG015 - MK30 SUPPORT & TEST EQUIPMENT Cost																		
4.1) MK30 SUPPORT & TEST EQUIPMENT	-	-	1.122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - TG015 - MK30 SUPPORT & TEST EQUIPMENT Cost</i>																		
-	-	1.122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - TG832 - MK39 MOD 2/3 EMATT PROD ENG (IN-HOUSE) Cost																		
5.1) MK39 MOD 2/3 EMATT PROD ENG (IN-HOUSE)	-	-	18.778	-	-	0.720	-	-	0.735	-	-	0.750	-	-	-	-	-	0.750
<i>Subtotal: Support - TG832 - MK39 MOD 2/3 EMATT PROD ENG (IN-HOUSE) Cost</i>																		
-	-	18.778	-	-	0.720	-	-	0.735	-	-	0.750	-	-	-	-	-	-	0.750
Support - TG835 - MK30 MOD 2 PROD ENG (IN-HOUSE) Cost																		
6.1) MK30 MOD 2 PROD ENG (IN-HOUSE)	-	-	13.118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - TG835 - MK30 MOD 2 PROD ENG (IN-HOUSE) Cost</i>																		
-	-	13.118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - TG842 - MK39 MOD 2/3 EMATT QUALITY ASSURANCE Cost																		
7.1) MK39 MOD 2/3 EMATT QUALITY ASSURANCE	-	-	2.154	-	-	0.146	-	-	0.149	-	-	0.152	-	-	-	-	-	0.152
<i>Subtotal: Support - TG842 - MK39 MOD 2/3 EMATT QUALITY ASSURANCE Cost</i>																		
-	-	2.154	-	-	0.146	-	-	0.149	-	-	0.152	-	-	-	-	-	-	0.152
Support - TG862 - MK39MOD 2/3 EMATT ACCEPTANCE T&E Cost																		
8.1) MK39 MOD 2/3 EMATT ACCEPTANCE T&E	-	-	3.280	-	-	0.197	-	-	0.201	-	-	0.205	-	-	-	-	-	0.205

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3141 / ASW Targets	Item Number / Title [DODIC]: 1 / ASW TARGETS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - TG862 - MK39MOD 2/3 EMATT ACCEPTANCE T&E Cost</i>	-	-	3.280	-	-	0.197	-	-	0.201	-	-	0.205	-	-	-	-	-	0.205
Support - TG865 - MK30 MOD 2 ACCEPTANCE TESTING Cost																		
9.1) MK30 MOD 2 ACCEPTANCE TESTING	-	-	2.084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - TG865 - MK30 MOD 2 ACCEPTANCE TESTING Cost</i>	-	-	2.084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - TG900 - MK39 MOD 2/3 EMATT CONSULTING SERVICES Cost																		
10.1) MK39 MOD 2/3 EMATT CONSULTING SERVICES	-	-	4.920	-	-	0.167	-	-	0.170	-	-	0.173	-	-	-	-	-	0.173
<i>Subtotal: Support - TG900 - MK39 MOD 2/3 EMATT CONSULTING SERVICES Cost</i>	-	-	4.920	-	-	0.167	-	-	0.170	-	-	0.173	-	-	-	-	-	0.173
Gross/Weapon System Cost	-	-	242.588	-	-	13.833	-	-	13.630	-	-	14.403	-	-	0.000	-	-	14.403

(t) indicates the presence of a P-5a

Footnotes:

- (1) In FY23 the MK39 Mod 3 EMATTs increased to a quantity of 1,023 from a procurement quantity of 550 MK39 Mod 3 EMATT's in FY22. The increase in quantity results in a lower unit price in FY23 from FY22 due to step ladder pricing.
- (2) Funding decreases to \$0 in FY23 since there is not a requirement for NRE. In FY22 there was NRE of \$2.7M, which is required to support a new competitive contract for the procurement of Pre-POM and POM units for government testing, first article testing, tooling and test equipment, procurement of technical data package updates and start-up costs for the new MK39 Mod 3 EMATT production contract.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3141 / ASW Targets	Item Number / Title [DODIC]: 1 / ASW TARGETS
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MK39 MOD 3 EMATTs ^(†)		2017	LOCKHEED MARTIN/ SIPPICAN FY17 / Marion, MA	C / FFP	NUWC NEWPORT	Nov 2016	Feb 2018	715	6,999.00	Y		
1.1.1) MK39 MOD 3 EMATTs ^(†)		2018	LOCKHEED MARTIN/ SIPPICAN FY18 / Marion, MA	C / FFP	NUWC NEWPORT	Nov 2017	Jan 2019	1,017	6,925.00	Y		
1.1.1) MK39 MOD 3 EMATTs ^(†)		2019	LOCKHEED MARTIN/ SIPPICAN FY19/20 / Marion, MA	C / FFP	NUWC NEWPORT	Jan 2019	Nov 2020	1,019	7,097.00	Y		
1.1.1) MK39 MOD 3 EMATTs ^(†)		2020	LOCKHEED MARTIN/ SIPPICAN FY19/20 / Marion, MA	C / FFP	NUWC NEWPORT	Dec 2019	Feb 2022	964	7,273.86	Y		
1.1.1) MK39 MOD 3 EMATTs ^(†)		2021	LOCKHEED MARTIN/ SIPPICAN FY20/21 / Marion, MA	C / FFP	NUWC NEWPORT	Dec 2020	Jan 2023	965	7,455.00	Y		
1.1.1) MK39 MOD 3 EMATTs ^(†)		2022	LOCKHEED MARTIN/SIPPICAN FY22/23 / MARION, MA	C / FFP	NUWC NEWPORT	May 2022	Nov 2023	550	8,474.00	Y		
1.1.1) MK39 MOD 3 EMATTs ^(†)		2023	LOCKHEED MARTIN/SIPPICAN FY22/23 / MARION, MA	C / FFP	NUWC NEWPORT	May 2023	Jul 2024	1,023	7,832.00	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3141 / ASW Targets **Item Number / Title [DODIC]:** 1 / ASW TARGETS

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017													Fiscal Year 2018													BALANCE						
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
1.1.1) MK39 MOD 3 EMATTs ⁽¹⁾																																					
Prior Years Deliveries: 3142																																					
	1	2017	NAVY	715	0	715		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	208	-	-	250	-	-	-	257	0
	2	2018	NAVY	1,017	0	1,017																														1,017	
	3	2019	NAVY	1,019	0	1,019																															1,019
	3	2020	NAVY	964	0	964																															964
	4	2021	NAVY	965	0	965																															965
	5	2022	NAVY	550	0	550																															550
	5	2023	NAVY	1,023	0	1,023																															1,023
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3141 / ASW Targets **Item Number / Title [DODIC]:** 1 / ASW TARGETS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK39 MOD 3 EMATTS ⁽¹⁾																															
Prior Years Deliveries: 3142																															
	1	2017	NAVY	715	715	0																							0		
	2	2018	NAVY	1,017	0	1,017	-	-	-	333	-	-	-	333	-	-	-	351											0		
	3	2019	NAVY	1,019	0	1,019				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,019		
	3	2020	NAVY	964	0	964																						964			
	4	2021	NAVY	965	0	965																						965			
	5	2022	NAVY	550	0	550																						550			
	5	2023	NAVY	1,023	0	1,023																						1,023			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3141 / ASW Targets **Item Number / Title [DODIC]:** 1 / ASW TARGETS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021														Fiscal Year 2022														BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) MK39 MOD 3 EMATTS ⁽¹⁾																																			
Prior Years Deliveries: 3142																																			
1		2017	NAVY	715	715	0																											0		
2		2018	NAVY	1,017	1,017	0																											0		
3		2019	NAVY	1,019	0	1,019	-	333	-	333	-	-	-	353																		0			
3		2020	NAVY	964	0	964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	333	-	-	-	-	-	-	333	-		298			
4		2021	NAVY	965	0	965			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		965			
5		2022	NAVY	550	0	550																											550		
5		2023	NAVY	1,023	0	1,023																											1,023		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3141 / ASW Targets **Item Number / Title [DODIC]:** 1 / ASW TARGETS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T O 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK39 MOD 3 EMATTS ⁽¹⁾																															
Prior Years Deliveries: 3142																															
	1	2017	NAVY	715	715	0																							0		
	2	2018	NAVY	1,017	1,017	0																							0		
	3	2019	NAVY	1,019	1,019	0																							0		
	3	2020	NAVY	964	666	298	298																						0		
	4	2021	NAVY	965	0	965	-	-	-	321	-	322	-	322															0		
	5	2022	NAVY	550	0	550	-	-	-	-	-	-	-	-	-	-	-	275	-	-	-	-	275						0		
	5	2023	NAVY	1,023	0	1,023																							682		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1 **P-1 Line Item Number / Title:** 3141 / ASW Targets **Item Number / Title [DODIC]:** 1 / ASW TARGETS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK39 MOD 3 EMATTS ⁽¹⁾																															
Prior Years Deliveries: 3142																															
	1	2017	NAVY	715	715	0																						0			
	2	2018	NAVY	1,017	1,017	0																						0			
	3	2019	NAVY	1,019	1,019	0																						0			
	3	2020	NAVY	964	964	0																						0			
	4	2021	NAVY	965	965	0																						0			
	5	2022	NAVY	550	550	0																						0			
	5	2023	NAVY	1,023	341	682	-	341	-	-	-	341																0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1	P-1 Line Item Number / Title: 3141 / ASW Targets	Item Number / Title [DODIC]: 1 / ASW TARGETS
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	LOCKHEED MARTIN/ SIPPICAN FY17 - Marion, MA	300	1,000	1,800	0	0	21	21	0	0	15	15
2	LOCKHEED MARTIN/ SIPPICAN FY18 - Marion, MA	300	1,000	1,800	0	0	21	21	0	0	14	14
3	LOCKHEED MARTIN/ SIPPICAN FY19/20 - Marion, MA	300	1,000	1,800	0	0	25	25	0	0	22	22
4	LOCKHEED MARTIN/ SIPPICAN FY20/21 - Marion, MA	300	1,000	1,800	0	0	25	25	0	0	18	18
5	LOCKHEED MARTIN/ SIPPICAN FY22/23 - MARION, MA	300	1,000	1,800	0	0	18	18	0	0	14	14

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip

P-1 Line Item Number / Title:
3215 / MK-54 Torpedo Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	651	-	-	-	-	-	20	12	6	6	-	695
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,373.552	103.441	94.168	106.772	0.000	106.772	162.338	145.541	136.013	137.681	-	2,259.506
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,373.552	103.441	94.168	106.772	0.000	106.772	162.338	145.541	136.013	137.681	-	2,259.506
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,373.552	103.441	94.168	106.772	0.000	106.772	162.338	145.541	136.013	137.681	-	2,259.506

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	1.404	1.288	1.494	-	1.494	1.506	1.538	1.574	1.597	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	-	-	-	-	-	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	2,110K	-	-	-	-	-	8,117K	12,128K	22,669K	22,947K	-	3,251K

Description:

The MK 54 is an anti-submarine torpedo deployed from surface ships and ASW air platforms in littoral scenarios operating in shallow water acoustic and environmental conditions; effective in the presence of threat countermeasures and capable in deep water engagements. This line item procures MK 54 MOD 0 Torpedo Kits, MK 54 MOD 1 Torpedo Kits and High Altitude ASW Weapon Capability (HAAWC) Air Launch Accessory (ALA) Kits. The MK 54 MOD 0 LWT maximizes the use of Non-Developmental Item (NDI) technologies, incorporating the proven technologies from existing torpedo programs with state of the art Commercial-Off-The-Shelf (COTS) processors and is a modular upgrade to LWT Inventory. MK 54 MOD 1 builds on the MK 54 MOD 0 improvements to expand the torpedo's capability in shallow water littoral environment and also improves the torpedo's counter-countermeasure capability to allow higher effectiveness in current and future threat environments. The High Altitude Anti-Submarine Warfare Weapon Capability (HAAWC) provides the P-8A MPRA with the ability to release LWTs from high altitude to prosecute enemy submarine threats.

[P5 / F5104 MK-54 MOD 0]: Funding under this cost code provides for the procurement of MK-54 MOD 0 hardware kits. The MK-54 MOD 0 Kits contract includes Processor Group Assembly (PGA), Control Group Assembly (CGA), Inertial Measurements Unit (IMU), and afterbody components and cabling. The MK-54 MOD 0 Array Nose Assembly (ANA) kits contract consists of array receivers and transmitters. Both contracts were competitively awarded. Other Items funded under this Cost Code include:

- Engineering Services / Engineering Change Proposals (ECPs)
- Non-Recurring Engineering (NRE) funding for pre-Proof of Manufacturing (POM) units and POM units in the base year of a new contract, first article testing, tooling and test equipment, procurement of technical data package updates and startup costs for production contractors.
- Installation funding for government installation of the kits into All Up Rounds (AUR).
- Diminishing Manufacturing Sources (DMS) funding for the procurement of obsolete commercial material to avoid the redesign and requalification of the electronics during the production cycle.

[P5 / F5110 MK-54 MOD 1 HARDWARE]: Funding under this cost code provides for procurement of MK 54 MOD 1 hardware kits from two contractors. The MK 54 MOD 0 Kits contract provides the afterbody upgrade components, Inertial Measurement Unit (IMU) and Control Group Assembly (CGA) for the MK 54 MOD 1 Kit. The MK 54 MOD 1 Array contract provides the new 112 element array, receiver, transmitter, and Processor Group Assembly (PGA). Other items in this Cost Code include:

- Engineering Services / Engineering Change Proposals (ECP) funding for (1)studies, (2)plans, (3)design changes, and (4)implementation of design changes by the contractor; primarily due to obsolescence that occurs during the contract performance.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip		P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>- Non-Recurring Engineering (NRE) funding to produce Proof of Manufacturing (POM) units, first article testing, product improvement, tooling and test equipment, procurement of technical data package updates, and start-up costs for production contractors.</p> <p>- Installation funding for government installation of the kits into All Up Rounds(AUR).</p> <p>- Diminishing Manufacturing Sources (DMS) funding for the procurement of obsolete commercial material to avoid redesign and requalification of the electronics during the production cycle.</p> <p>[P5 / F5111 MK54 MOD 2]: Funding under this Cost Code provides for the procurement of MK 54 MOD 2 All-Up-Round (AUR). The MK 54 MOD 2 program leverages the sonar hardware improvements developed under the MOD 1 program and improves the lethality and speed of the LWT by upgrading the Warhead and Propulsion system to counter challenging near-peer adversary submarines that are faster and deeper diving. Other items funded under this cost code include:</p> <p>- Engineering Services / Engineering Change Proposals (ECP) funding for (1)studies, (2)plans, (3)design changes, and (4)implementation of design changes by the contractor; primarily due to obsolescence that occurs during the contract performance.</p> <p>[P5 / F5105 FLEET EXERCISE SYSTEMS]: Funding under this cost code provides for procurement of MK 54 Fleet Exercise Sections (FES) utilized during in-water acceptance testing of MK-54 kits, fleet exercises and developmental and operational testing.</p> <p>[P5 / F5109 HAAWC]: Funding under this cost code provides for procurement, Engineering Change Proposals (ECPs) and non-recurring engineering of the MK 54 High Altitude ASW Weapon Capability (HAAWC) for the P-8 aircraft. HAAWC is an Air-Launched Accessory (ALA) that allows for employment of the MK 54 outside the current P-8 air launch envelope. The nonrecurring cost sub-cost element is required for redesign due to obsolescence and qualification of new products or contractors and proof of manufacturing units for first article testing, as well as product improvement, value engineering, tooling, test equipment, procurement of technical data package updates, start-up costs, and other one-time costs in the first year of the production contract.</p> <p>[P5 / F5003 SUPPORT EQUIPMENT]: Funding under this cost code provides for procurement and maintenance of support and test equipment at Naval Undersea Warfare Centers (NUWC) Keyport and Newport, and the contractor facility for assembly, testing, and integration.</p> <p>[P5 / F5830 PRODUCTION ENGINEERING IN-HOUSE]: Funding under this cost code provides for production engineering tasks performed by NUWC Newport and Keyport and includes review of contractor generated ECPs, review and resolution of contractor failures and proposed corrective action, configuration management activities, contractor monitoring, risk analysis, technical problem resolution, software engineering, safety, integrated logistics support, environmental engineering, and information systems. Funding maintains production specification in accordance with production processes and provides subject matter experts to support root cause analysis of failed contractor hardware and monitor contractor defect resolution and reduction processes to ensure deficiencies are effectively addressed.</p> <p>[P5 / F5840 QUALITY ASSURANCE]: Funding under this cost code provides for quality assurance tasks performed by Naval Undersea Warfare Center (NUWC) Newport and Keyport including: conducting quality assurance reviews of the contractor and subcontractors, documentation indicating contractor conformity to product performance requirements, and review of objective quality evidence.</p> <p>[P5 / F5860 ACCEPT TEST & EVALUATION]: Funding under this cost code provides for government production acceptance test planning and conducting the production acceptance test program of contractor hardware, including in-water testing of the torpedoes on department ranges.</p> <p>[P5 / F5900 PRODUCTION ENGINEERING CONTRACTOR]: Funding under this cost code provides for contractor support to the program office.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip

P-1 Line Item Number / Title:
3215 / MK-54 Torpedo Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / MK-54 Torpedo Mods	P-5a, P-21			651 / 1,373.552	- / 103.441	- / 94.168	- / 106.772	- / 0.000	- / 106.772
P-40	Total Gross/Weapon System Cost				651 / 1,373.552	- / 103.441	- / 94.168	- / 106.772	- / 0.000	- / 106.772

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY23 program funding changes:

- COST CODE F5104 ITEM 1.1.3 MK 54 MOD 0 Kit Installation: FY23 funding requests supports 39 kits scheduled to be delivered and installed from prior year procurements (from FY20 option award) versus 102 kits budgeted in FY22.
- COST CODE F5110 ITEM 2.1.1 MK 54 MOD 1 Kit Procurement: Quantity in FY23 was reduced due to a one-time Non-Recurring Engineering (NRE) cost to support award of a new competitive MK54 MOD 0/1 Common Parts Contract. Unit cost increase in FY23 due to lower MK54 Mod 1 Kit procurement quantities from 91 in FY22 to 82 in FY23 based on budgeted stepladder pricing.
- COST CODE F5110 ITEM 2.2.1 MK 54 Non-Recurring Engineering (NRE): Funding increases to \$8.1M in FY23 since there was not a requirement for NRE in FY22. NRE is required to support the award of a new competitive MK 54 MOD 0 Kits Contract which provides the afterbody upgrade components, Inertial Measurements Unit (IMU) and Control Group Assembly (CGA) for the MK 54 MOD 1 Kit. Non-Recurring Engineering (NRE) funds the procurement of Proof Of Manufacturing units for the MK54 Mod 0/1 Common Afterbody for Design Verification Testing, first article testing, tooling and test equipment, design updates for obsolescence, and start-up costs for the new MK54 Mod 0/1 production contract. The new competitive contract will be managed by NUWC Keyport.
- COST CODE F5110 ITEM 2.1.3 MK 54 ENGINEERING SERVICES / ECPS FOR KITS: FY23 Engineering Services funding decreases from FY22 because the MOD 1 obsolescence redesign work is transitioning from design and build into testing effort in FY23. The funding level in FY23 for MK54 MOD 1 production engineering service/ECPs is the annualized contract engineering services support required.
- COST CODE F5110 ITEM 2.1.4 MK 54 MOD 1 INSTALLATION: FY23 funding requests supports 64 kits scheduled to be delivered and installed from prior year procurements (9 from FY20 option and 55 from FY21 option awards) versus 30 kit installs budgeted in FY22.
- COST CODE F5109 ITEM 7.1.1 HAAWC Kits: Increase for procurement of QTY 44 HAAWC Kits. There were no procurements in FY22.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2		P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods
		Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	651	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,373.552	103.441	94.168	106.772	0.000	106.772
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,373.552	103.441	94.168	106.772	0.000	106.772
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,373.552	103.441	94.168	106.772	0.000	106.772

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	1.404	1.288	1.494	-	1.494
Gross/Weapon System Unit Cost (\$ in Dollars)	2,110K	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - F5104 MK-54 MOD 0 Cost																		
Recurring Cost																		
1.1.1) MK-54 KITS - MOD 0 ⁽¹⁾	399,413.51	1,584	632.671	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) MK-54 ENGINEERING SERVICES/ECPS	-	-	36.888	-	-	2.607	-	-	2.658	-	-	2.122	-	-	-	-	-	2.122
1.1.3) MK-54 INSTALLATION INTO LEGACY TORPEDOS (1)	-	-	79.391	-	-	12.096	-	-	5.814	-	-	2.262	-	-	-	-	-	2.262
1.1.4) DIMINISHING MANUFACTURING SOURCES	-	-	2.624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) MK-54 Other	-	-	9.826	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	761.400	-	-	14.703	-	-	8.472	-	-	4.384	-	-	-	-	-	4.384
Non Recurring Cost																		
1.2.1) MK-54 NRE	-	-	29.625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	29.625	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5104 MK-54 MOD 0 Cost	-	-	791.025	-	-	14.703	-	-	8.472	-	-	4.384	-	-	-	-	-	4.384
Hardware - F5110 MK-54 MOD 1 HARDWARE Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.1.1) MK-54 KITS - MOD 1 ^(t) (2)	556,741.18	170	94.646	604,434.78	69	41.706	574,462.00	91	52.276	627,426.83	82	51.449	-	-	-	627,426.83	82	51.449
2.1.2) DIMINISHING MANUFACTURING SOURCES	-	-	3.790	-	-	2.334	-	-	2.381	-	-	2.428	-	-	-	-	-	2.428
2.1.3) MK-54 ENGINEERING SERVICES / ECPS FOR KITS ⁽³⁾	-	-	33.038	-	-	18.142	-	-	10.145	-	-	3.781	-	-	-	-	-	3.781
2.1.4) MK-54 MOD 1 INSTALLATION ⁽⁴⁾	-	-	5.494	-	-	1.624	-	-	1.539	-	-	3.480	-	-	-	-	-	3.480
<i>Subtotal: Recurring Cost</i>	-	-	136.968	-	-	63.806	-	-	66.341	-	-	61.138	-	-	-	-	-	61.138
Non Recurring Cost																		
2.2.1) MK-54 NRE ⁽⁵⁾	-	-	10.314	-	-	-	-	-	-	-	-	8.100	-	-	-	-	-	8.100
<i>Subtotal: Non Recurring Cost</i>	-	-	10.314	-	-	-	-	-	-	-	-	8.100	-	-	-	-	-	8.100
<i>Subtotal: Hardware - F5110 MK-54 MOD 1 HARDWARE Cost</i>	-	-	147.282	-	-	63.806	-	-	66.341	-	-	69.238	-	-	-	-	-	69.238
Hardware - F5105 FLEET EXERCISE SYSTEMS Cost																		
Recurring Cost																		
4.1.1) FLEET EXERCISE SYSTEMS ^(t)	154,322.58	62	9.568	96,900.00	6	0.581	98,838.00	6	0.593	100,815.00	6	0.605	-	-	-	100,815.00	6	0.605
<i>Subtotal: Recurring Cost</i>	-	-	9.568	-	-	0.581	-	-	0.593	-	-	0.605	-	-	-	-	-	0.605
<i>Subtotal: Hardware - F5105 FLEET EXERCISE SYSTEMS Cost</i>	-	-	9.568	-	-	0.581	-	-	0.593	-	-	0.605	-	-	-	-	-	0.605
Hardware - F5107 MK-54/ VLA KITS Cost																		
Recurring Cost																		
5.1.1) MK-54 / VLA KITS ^(t)	99,680.18	222	22.129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.2) MK-54 / VLA HARDWARE OBSOLESCENCE	-	-	1.343	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.3) MK-54 / VLA INSTALLATION	-	-	13.308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	36.780	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - F5107 MK-54/ VLA KITS Cost</i>	-	-	36.780	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2 **P-1 Line Item Number / Title:** 3215 / MK-54 Torpedo Mods **Item Number / Title [DODIC]:** 1 / MK-54 Torpedo Mods

ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - F5108 VLA COMPONENTS Cost																		
Recurring Cost																		
6.1.1) VLA COMPONENT SETS	2,255K	22	49.606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1.2) VLA ENGINEERING SVCS / ECPS	-	-	3.889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1.3) VLA CANISTERS	216,636.36	22	4.766	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6.1.4) VLA AUR BUILDUP / INSTALLATION	-	-	1.527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	59.788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - F5108 VLA COMPONENTS Cost</i>	-	-	59.788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5109 HAAWC Cost																		
Recurring Cost																		
7.1.1) HAAWC Kits ^(†) (6)	82,171.05	152	12.490	-	-	-	-	-	-	189,000.00	44	8.316	-	-	-	189,000.00	44	8.316
7.1.2) TM kits ^(†)	180,000.00	36	6.480	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.1.3) HAAWC Engineering Services/ ECPS	-	-	4.245	-	-	1.409	-	-	-	-	-	1.354	-	-	-	-	-	1.354
7.1.4) HAAWC ALA Containers	-	-	0.966	-	-	0.912	-	-	-	-	-	1.128	-	-	-	-	-	1.128
7.1.5) HAAWC All Up Round Containers	-	-	3.183	-	-	0.583	-	-	-	-	-	-	-	-	-	-	-	-
7.1.6) DIMINISHING MANUFACTURING SOURCES	-	-	0.620	-	-	0.260	-	-	-	-	-	0.286	-	-	-	-	-	0.286
7.1.7) HAAWC IN-HOUSE PRODUCTION ENGINEERING SUPPORT	-	-	5.024	-	-	2.302	-	-	-	-	-	2.456	-	-	-	-	-	2.456
<i>Subtotal: Recurring Cost</i>	-	-	33.008	-	-	5.466	-	-	-	-	-	13.540	-	-	-	-	-	13.540
<i>Subtotal: Hardware - F5109 HAAWC Cost</i>	-	-	33.008	-	-	5.466	-	-	-	-	-	13.540	-	-	-	-	-	13.540
Hardware - F5CA1 CONGRESSIONAL ADDS- TECHNOLOGY INSERTIONS Cost																		
Non Recurring Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
8.1.1) CONGRESSIONAL ADDS - TECHNOLOGY INSERTIONS	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - F5CA1 CONGRESSIONAL ADDS- TECHNOLOGY INSERTIONS Cost</i>	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5CA2 CONGRESSIONAL ADDS - TORPEDO TEST HARDWARE Cost																		
<i>Non Recurring Cost</i>																		
9.1.1) CONGRESSIONAL ADDS - TORPEDO TEST HARDWARE	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - F5CA2 CONGRESSIONAL ADDS - TORPEDO TEST HARDWARE Cost</i>	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5CA3 CONGRESSIONAL ADD Cost																		
<i>Non Recurring Cost</i>																		
10.1.1) INTELLIGENT GRAPHICS TORPEDO TEST SET TROUBLESHOOTING MAINTENERS AID	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - F5CA3 CONGRESSIONAL ADD Cost</i>	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5CA4 CONGRESSIONAL ADDS Cost																		
<i>Non Recurring Cost</i>																		
11.1.1) LIGHTWEIGHT TORPEDO PSU TEST EQUIPMENT MODERNIZATION	-	-	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods						
ID Code (A=Service Ready, B=Not Service Ready) :											MDAP/MAIS Code:							
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Non Recurring Cost</i>	-	-	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - F5CA4 CONGRESSIONAL ADDS Cost</i>	-	-	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - F5003 SUPPORT EQUIPMENT Cost																		
12.1) SUPPORT EQUIPMENT	-	-	26.493	-	-	1.875	-	-	1.913	-	-	1.951	-	-	-	-	-	1.951
<i>Subtotal: Support - F5003 SUPPORT EQUIPMENT Cost</i>	-	-	26.493	-	-	1.875	-	-	1.913	-	-	1.951	-	-	-	-	-	1.951
Support - F5830 PRODUCTION ENGINEERING IN-HOUSE Cost																		
13.1) PRODUCTION ENGINEERING IN-HOUSE ⁽⁷⁾	-	-	119.323	-	-	7.376	-	-	7.359	-	-	7.362	-	-	-	-	-	7.362
<i>Subtotal: Support - F5830 PRODUCTION ENGINEERING IN-HOUSE Cost</i>	-	-	119.323	-	-	7.376	-	-	7.359	-	-	7.362	-	-	-	-	-	7.362
Support - F5840 QUALITY ASSURANCE Cost																		
14.1) QUALITY ASSURANCE	-	-	47.263	-	-	4.852	-	-	4.797	-	-	4.892	-	-	-	-	-	4.892
<i>Subtotal: Support - F5840 QUALITY ASSURANCE Cost</i>	-	-	47.263	-	-	4.852	-	-	4.797	-	-	4.892	-	-	-	-	-	4.892
Support - F5860 ACCEPT TEST & EVALUATION Cost																		
15.1) ACCEPT TEST & EVALUATION	-	-	73.671	-	-	4.062	-	-	3.959	-	-	4.038	-	-	-	-	-	4.038
<i>Subtotal: Support - F5860 ACCEPT TEST & EVALUATION Cost</i>	-	-	73.671	-	-	4.062	-	-	3.959	-	-	4.038	-	-	-	-	-	4.038
Support - F5900 PRODUCTION ENGINEERING CONTRACTOR Cost																		
16.1) PRODUCTION ENGINEERING CONTRACTOR ⁽⁸⁾	-	-	12.966	-	-	0.720	-	-	0.734	-	-	0.762	-	-	-	-	-	0.762
<i>Subtotal: Support - F5900 PRODUCTION ENGINEERING CONTRACTOR Cost</i>	-	-	12.966	-	-	0.720	-	-	0.734	-	-	0.762	-	-	-	-	-	0.762
Support - WAXXX ACQUISITION WORKFORCE FUNDING - 2009 Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
17.1) ACQUISITION WORKFORCE FUNDING - 2009	-	-	0.287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - WAXXX ACQUISITION WORKFORCE FUNDING - 2009 Cost</i>	-	-	0.287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - F5103 FIELD SUPPORT OPERATIONS Cost																		
18.1) MK-46 MOD 5A (SW) SLEP KITS	-	-	1.561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - F5103 FIELD SUPPORT OPERATIONS Cost</i>	-	-	1.561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - F5106 MK-54 PLATFORM INTEGRATION Cost																		
19.1) MK-54 PLATFORM INTEGRATION	-	-	0.697	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - F5106 MK-54 PLATFORM INTEGRATION Cost</i>	-	-	0.697	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	2,110K	651	1,373.552	-	-	103.441	-	-	94.168	-	-	106.772	-	-	0.000	-	-	106.772

(t) indicates the presence of a P-5a

Footnotes:

- (1) ITEM 1.1.3 MK 54 MOD 0 Kit Installation: FY23 funding requests supports 39 kits scheduled to be delivered and installed from prior year procurements (from FY20 option award) versus 102 kits budgeted in FY22.
- (2) F5110 ITEM 2.1.1 MK 54 MOD 1 Kit Procurement: Quantity in FY23 was reduced due to a one-time Non-Recurring Engineering (NRE) cost to support award of a new competitive MK 54 MOD 0/1 Common Parts Contract. Unit cost increase in FY23 due to lower MK 54 Mod 1 Kit procurement quantities from 91 in FY22 to 82 in FY23 based on budgeted stepladder pricing.
- (3) ITEM 2.1.3 MK 54 ENGINEERING SERVICES / ECPS FOR KITS: FY23 Engineering Services funding decreases from FY22 because the MOD 1 obsolescence redesign work is transitioning from design and build into testing effort in FY23. The funding level in FY23 for MK 54 MOD 1 production engineering service/ECPs is the annualized contract engineering services support required.
- (4) ITEM 2.1.4 MK 54 MOD 1 INSTALLATION: Funding provides for government installation of the MK54 Mod 1 Kits and Afterbodies into All Up Rounds (AUR) as shown on the P-21. Installation occurs one month after delivery and the installation is budgeted for in the year the installation is planned to occur. FY23 funding requests supports 64 kits scheduled to be delivered and installed from prior year procurements (9 from FY20 option and 55 from FY21 option awards) versus 30 kit installs budgeted in FY22.
- (5) ITEM 2.2.1 MK 54 Non-Recurring Engineering (NRE): Funding increases to \$8.1M in FY23 since there was not a requirement for NRE in FY22. NRE is required to support the award of a new competitive MK 54 MOD 0 Kits Contract which provides the afterbody upgrade components, Inertial Measurements Unit (IMU) and Control Group Assembly (CGA) for the MK 54 MOD 1 Kit. Non-Recurring Engineering (NRE) funds the procurement of Proof Of Manufacturing units for the MK 54 Mod 0/1 Common Afterbody for Design Verification Testing, first article testing, tooling and test equipment, design updates for obsolescence, and start-up costs for the new MK 54 Mod 0/1 production contract. The new competitive contract will be managed by NUWC Keyport.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
<p>(6) ITEM 7.1.1 HAAWC Kits: Increase for procurement of QTY 44 HAAWC Kits. there were no procurements in FY22.</p> <p>(7) The FY23 funding request is slightly above inflation due to additional hours required to support the new sole source contract award to Progeny and a new Common Parts competitive contract award.</p> <p>(8) The FY23 funding request is slightly higher than inflation due to additional hours required for Program Office support of the new sole source contract award to Progeny and a new Common Parts competitive award.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy										Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2				P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods				Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MK-54 KITS - MOD 0 ^(†)		2013	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	C / FFP	NAVSEA	Sep 2013	Jul 2018	150	311,000.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2014	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	C / FFP	NAVSEA	Aug 2014	Sep 2019	214	256,532.71	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2015	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	C / FFP	NAVSEA	Aug 2015	Apr 2020	100	325,000.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2016	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	C / FFP	NAVSEA	Aug 2016	Jul 2020	78	292,367.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2017	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	C / FFP	NAVSEA	Aug 2017	Oct 2020	116	304,732.76	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2018	RAYTHEON /ULTRA / PORTSMOUTH, RI / BRAINTREE, MA	C / FFP	NAVSEA	Aug 2018	Feb 2021	104	335,625.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2019	RAYTHEON /ULTRA / PORTSMOUTH, RI / BRAINTREE, MA	C / FFP	NAVSEA	Jul 2019	Jul 2021	66	371,969.70	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2020	RAYTHEON /ULTRA / PORTSMOUTH, RI / BRAINTREE, MA	C / FFP	NAVSEA	Jul 2020	Jul 2022	43	372,116.28	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2014	PROGENY/RAYTHEON - FY14 / MANASSAS VA/PORTSMOUTH, RI	SS / FFP	NAVSEA	Jul 2016	Jan 2018	40	510,000.00	Y		Jun 2014
2.1.1) MK-54 KITS - MOD 1 ^(†)		2016	PROGENY / RAYTHEON - FY16 / MANASSAS VA /PORTSMOUTH,RI	SS / FFP	NAVSEA	Jul 2016	Nov 2018	40	525,000.00	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2017	PROGENY/RAYTHEON - FY17 / MANASSAS VA/PORTSMOUTH,RI	SS / FFP	NAVSEA	Aug 2018	Jan 2020	30	533,000.00	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2018	PROGENY/RAYTHEON- FY18 / MANASSAS VA / Portsmouth RI	SS / FFP	NAVSEA	Aug 2018	Jan 2021	30	615,733.33	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2020	PROGENY/RAYTHEON - FY20 / MANASSAS VA / Portsmouth RI	SS / FFP	NAVSEA	Dec 2019	Jan 2022	30	626,133.33	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2021	PROGENY/Raytheon - FY21 / MANASSAS VA / Portsmouth RI	SS / FFP	NAVSEA / KPT	Dec 2020	Jan 2023	69	604,434.78	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2022	PROGENY/Raytheon - FY22 / MANASSAS VA / TBD	SS / FFP	NAVSEA / KPT	Dec 2021	Jan 2024	91	574,462.00	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2023	PROGENY/CTR TBD - FY23 / MANASSAS VA / TBD	SS / FFP	NAVSEA / KPT	Feb 2023	Mar 2025	82	627,426.83	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2015	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC,KPT	Jan 2015	Jan 2016	6	88,000.00	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2016	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Jan 2016	Jan 2017	6	89,000.00	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
4.1.1) FLEET EXERCISE SYSTEMS		2017	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2017	Sep 2018	6	90,000.00	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2018	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2018	Sep 2019	2	91,666.67	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2019	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2019	Sep 2020	6	93,333.33	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2020	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2020	Sep 2021	6	95,000.00	Y		
4.1.1) FLEET EXERCISE SYSTEMS	✓	2020	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2020	Sep 2021	6	0.00	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2021	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2021	Sep 2022	6	96,900.00	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2022	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2022	Sep 2023	6	98,838.00	Y		
4.1.1) FLEET EXERCISE SYSTEMS		2023	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Sep 2023	Sep 2024	6	100,815.00	Y		
5.1.1) MK-54 / VLA KITS		2016	LOCKHEED MARTIN / OWEGO NY	SS / FP	NAVSUP, WSS	Jul 2016	Nov 2017	32	48,968.75	Y		
5.1.1) MK-54 / VLA KITS		2017	LOCKHEED MARTIN / AKRON OH	SS / FFP	NAVSUP, WSS	Jul 2017	Nov 2018	40	49,750.00	Y		
7.1.1) HAAWC Kits ^(†)		2019	BOEING INC FY19 / ST LOUIS, MO	SS / FP	NAVSEA	Jan 2019	Jul 2021	117	52,012.00	Y		
7.1.1) HAAWC Kits ^(†)		2020	BOEING INC / ST LOUIS, MO	SS / FFP	NAVSEA	May 2022	Mar 2024	35	183,000.00	Y		
7.1.1) HAAWC Kits ^(†)		2023	BOEING INC / ST LOUIS, MO	SS / FFP	NAVSEA	May 2023	Mar 2025	44	189,000.00	Y		
7.1.2) TM kits		2019	FY19 BOEING INC. / ST LOUIS, MO	C / FFP	NAVSEA	Nov 2019	Nov 2020	36	180,000.00	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2 **P-1 Line Item Number / Title:** 3215 / MK-54 Torpedo Mods **Item Number / Title [DODIC]:** 1 / MK-54 Torpedo Mods

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2013												Fiscal Year 2014												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	Calendar Year 2013												Calendar Year 2014												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK-54 KITS - MOD 0																															
Prior Years Deliveries: 713																															
	1	2013	NAVY	150	0	150																							150		
	1	2014	NAVY	214	0	214																							214		
	2	2015	NAVY	100	0	100																							100		
	4	2016	NAVY	78	0	78																							78		
	4	2017	NAVY	116	0	116																							116		
	3	2018	NAVY	104	0	104																							104		
	3	2019	NAVY	66	0	66																							66		
	3	2020	NAVY	43	0	43																							43		
2.1.1) MK-54 KITS - MOD 1 ⁽²⁾																															
	5	2014	NAVY	40	0	40																							40		
	6	2016	NAVY	40	0	40																							40		
	7	2017	NAVY	30	0	30																							30		
	8	2018	NAVY	30	0	30																							30		
	9	2020	NAVY	30	0	30																							30		
	10	2021	NAVY	69	0	69																							69		
	11	2022	NAVY	91	0	91																							91		
	12	2023	NAVY	82	0	82																							82		
7.1.1) HAAWC Kits ⁽⁶⁾																															
	13	2019	NAVY	117	0	117																							117		
	14	2020	NAVY	35	0	35																							35		
	14	2023	NAVY	44	0	44																							44		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2015													Fiscal Year 2016													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015													Calendar Year 2016													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) MK-54 KITS - MOD 0																																	
Prior Years Deliveries: 713																																	
	1	2013	NAVY	150	0	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150					
	1	2014	NAVY	214	0	214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	214					
	2	2015	NAVY	100	0	100											A -	-	-	-	-	-	-	-	-	-	-	100					
	4	2016	NAVY	78	0	78																				A -	-	78					
	4	2017	NAVY	116	0	116																					116						
	3	2018	NAVY	104	0	104																					104						
	3	2019	NAVY	66	0	66																					66						
	3	2020	NAVY	43	0	43																					43						
2.1.1) MK-54 KITS - MOD 1 ⁽²⁾																																	
	5	2014	NAVY	40	0	40																				A -	-	40					
	6	2016	NAVY	40	0	40																				A -	-	40					
	7	2017	NAVY	30	0	30																					30						
	8	2018	NAVY	30	0	30																					30						
	9	2020	NAVY	30	0	30																					30						
	10	2021	NAVY	69	0	69																					69						
	11	2022	NAVY	91	0	91																					91						
	12	2023	NAVY	82	0	82																					82						
7.1.1) HAAWC Kits ⁽⁶⁾																																	
	13	2019	NAVY	117	0	117																					117						
	14	2020	NAVY	35	0	35																					35						
	14	2023	NAVY	44	0	44																					44						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2017													Fiscal Year 2018													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) MK-54 KITS - MOD 0																																	
Prior Years Deliveries: 713																																	
	1	2013	NAVY	150	0	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	29	1	89		
	1	2014	NAVY	214	0	214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	214		
	2	2015	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100		
	4	2016	NAVY	78	0	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78		
	4	2017	NAVY	116	0	116											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	116		
	3	2018	NAVY	104	0	104																									104		
	3	2019	NAVY	66	0	66																									66		
	3	2020	NAVY	43	0	43																									43		
2.1.1) MK-54 KITS - MOD 1 ⁽²⁾																																	
	5	2014	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4		
	6	2016	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40		
	7	2017	NAVY	30	0	30																									30		
	8	2018	NAVY	30	0	30																									30		
	9	2020	NAVY	30	0	30																									30		
	10	2021	NAVY	69	0	69																									69		
	11	2022	NAVY	91	0	91																									91		
	12	2023	NAVY	82	0	82																									82		
7.1.1) HAAWC Kits ⁽⁶⁾																																	
	13	2019	NAVY	117	0	117																									117		
	14	2020	NAVY	35	0	35																									35		
	14	2023	NAVY	44	0	44																									44		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

1.1.1) MK-54 KITS - MOD 0

Prior Years Deliveries: 713																													
1	2013	NAVY	150	61	89	9	20	21	13	13	13																		0
1	2014	NAVY	214	0	214	-	-	-	-	-	-	-	-	-	-	30	30	30	31	31	31	31							0
2	2015	NAVY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	30	30	10			0
4	2016	NAVY	78	0	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	30	28		0
4	2017	NAVY	116	0	116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		116
3	2018	NAVY	104	0	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		104
3	2019	NAVY	66	0	66										A -	-	-	-	-	-	-	-	-	-	-	-	-		66
3	2020	NAVY	43	0	43																					A -	-		43

2.1.1) MK-54 KITS - MOD 1 ⁽²⁾

5	2014	NAVY	40	36	4	4																							0
6	2016	NAVY	40	0	40	-	4	4	4	4	4	4	4	4	4														0
7	2017	NAVY	30	0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	3	3	3	3	3	3	3		8
8	2018	NAVY	30	0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		30
9	2020	NAVY	30	0	30													A -	-	-	-	-	-	-	-	-	-		30
10	2021	NAVY	69	0	69																								69
11	2022	NAVY	91	0	91																								91
12	2023	NAVY	82	0	82																								82

7.1.1) HAAWC Kits ⁽⁶⁾

13	2019	NAVY	117	0	117					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		117
14	2020	NAVY	35	0	35																								35
14	2023	NAVY	44	0	44																								44

O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021														Fiscal Year 2022														BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) MK-54 KITS - MOD 0																																			
Prior Years Deliveries: 713																																			
	1	2013	NAVY	150	150	0																							0						
	1	2014	NAVY	214	214	0																							0						
	2	2015	NAVY	100	100	0																							0						
	4	2016	NAVY	78	78	0																							0						
	4	2017	NAVY	116	0	116	30	30	28	28																			0						
	3	2018	NAVY	104	0	104	-	-	-	-	9	9	9	9	9	9	10	9	8	8	8	7							0						
	3	2019	NAVY	66	0	66	-	-	-	-	-	-	-	-	4	4	5	5	6	6	6	6	6	6	6	6	6	6	0						
	3	2020	NAVY	43	0	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	6	33					
2.1.1) MK-54 KITS - MOD 1 ⁽²⁾																																			
	5	2014	NAVY	40	40	0																							0						
	6	2016	NAVY	40	40	0																							0						
	7	2017	NAVY	30	22	8	3	3	2																				0						
	8	2018	NAVY	30	0	30	-	-	-	2	2	2	3	3	3	3	3	-	3	3	3								0						
	9	2020	NAVY	30	0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	3	-	3	3	3	9					
	10	2021	NAVY	69	0	69			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69						
	11	2022	NAVY	91	0	91														A -	-	-	-	-	-	-	-	-	91						
	12	2023	NAVY	82	0	82																							82						
7.1.1) HAAWC Kits ⁽⁶⁾																																			
	13	2019	NAVY	117	0	117	-	-	-	-	-	-	-	-	-	14	15	15	15	15	15	15	15	15	13				0						
	14	2020	NAVY	35	0	35																					A -	-	-	35					
	14	2023	NAVY	44	0	44																							44						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2 **P-1 Line Item Number / Title:** 3215 / MK-54 Torpedo Mods **Item Number / Title [DODIC]:** 1 / MK-54 Torpedo Mods

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK-54 KITS - MOD 0																															
Prior Years Deliveries: 713																															
	1	2013	NAVY	150	150	0																						0			
	1	2014	NAVY	214	214	0																						0			
	2	2015	NAVY	100	100	0																						0			
	4	2016	NAVY	78	78	0																						0			
	4	2017	NAVY	116	116	0																						0			
	3	2018	NAVY	104	104	0																						0			
	3	2019	NAVY	66	66	0																						0			
	3	2020	NAVY	43	10	33	5	5	5	5	5	4	4															0			
2.1.1) MK-54 KITS - MOD 1 ⁽²⁾																															
	5	2014	NAVY	40	40	0																						0			
	6	2016	NAVY	40	40	0																						0			
	7	2017	NAVY	30	30	0																						0			
	8	2018	NAVY	30	30	0																						0			
	9	2020	NAVY	30	21	9	3	3	3																			0			
	10	2021	NAVY	69	0	69	-	-	-	6	6	6	6	6	6	6	7	-	7	7								0			
	11	2022	NAVY	91	0	91	-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	8	8	8	8	8	18			
	12	2023	NAVY	82	0	82				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82			
7.1.1) HAAWC Kits ⁽⁶⁾																															
	13	2019	NAVY	117	117	0																						0			
	14	2020	NAVY	35	0	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	14			
	14	2023	NAVY	44	0	44							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2025												Fiscal Year 2026												BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	Calendar Year 2025												Calendar Year 2026												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) MK-54 KITS - MOD 0																															
Prior Years Deliveries: 713																															
	1	2013	NAVY	150	150	0																						0			
	1	2014	NAVY	214	214	0																						0			
	2	2015	NAVY	100	100	0																						0			
	4	2016	NAVY	78	78	0																						0			
	4	2017	NAVY	116	116	0																						0			
	3	2018	NAVY	104	104	0																						0			
	3	2019	NAVY	66	66	0																						0			
	3	2020	NAVY	43	43	0																						0			
2.1.1) MK-54 KITS - MOD 1 ⁽²⁾																															
	5	2014	NAVY	40	40	0																						0			
	6	2016	NAVY	40	40	0																						0			
	7	2017	NAVY	30	30	0																						0			
	8	2018	NAVY	30	30	0																						0			
	9	2020	NAVY	30	30	0																						0			
	10	2021	NAVY	69	69	0																						0			
	11	2022	NAVY	91	73	18	4	5	9																			0			
	12	2023	NAVY	82	0	82	-	-	-	-	-	7	7	7	7	7	7	7	7	7	7	7	6	6			0				
7.1.1) HAAWC Kits ⁽⁶⁾																															
	13	2019	NAVY	117	117	0																						0			
	14	2020	NAVY	35	21	14	3	3	3	3	2																	0			
	14	2023	NAVY	44	0	44	-	-	-	-	-	4	4	4	4	4	4	4	4	4	3	3	3	3				0			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2 **P-1 Line Item Number / Title:** 3215 / MK-54 Torpedo Mods **Item Number / Title [DODIC]:** 1 / MK-54 Torpedo Mods

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	RAYTHEON/NORTHROP GRUMMAN - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	120	216	312	0	0	41	41	0	0	23	23
2	RAYTHEON/NORTHROP GRUMMAN - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS,MD	120	216	312	0	0	0	0	0	0	24	24
3	RAYTHEON /ULTRA - PORTSMOUTH, RI / BRAINTREE, MA	120	216	312	0	0	21	21	0	0	24	24
4	RAYTHEON/NORTHROP GRUMMAN. - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	120	216	312	0	0	28	28	0	0	24	24
5	PROGENY/RAYTHEON - FY14 - MANASSAS VA/ PORTSMOUTH, RI			TBD	0	0	18	18	0	0	18	18
6	PROGENY / RAYTHEON - FY16 - MANASSAS VA / PORTSMOUTH,RI			TBD	0	0	28	28	0	0	28	28
7	PROGENY/RAYTHEON - FY17 - MANASSAS VA/ PORTSMOUTH,RI			TBD	0	0	17	17	0	0	17	17
8	PROGENY/RAYTHEON- FY18 - MANASSAS VA / Portsmouth RI	24	51	TBD	0	0	29	29	0	0	29	29
9	PROGENY/RAYTHEON - FY20 - MANASSAS VA / Portsmouth RI	24	51	TBD	0	0	25	25	0	0	25	25
10	PROGENY/Raytheon - FY21 - MANASSAS VA / Portsmouth RI	24	51	200	0	0	25	25	0	0	25	25
11	PROGENY/Raytheon - FY22 - MANASSAS VA / TBD			TBD	0	0	25	25	0	0	25	25
12	PROGENY/CTR TBD - FY23 - MANASSAS VA / TBD			TBD	0	0	25	25	0	0	0	0
13	BOEING INC FY19 - ST LOUIS, MO			TBD	0	0	30	30	0	0	9	9

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Exhibit P-21, Production Schedule: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
14	BOEING INC - ST LOUIS, MO			TBD	0	0	22	22	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip

P-1 Line Item Number / Title:
3225 / MK-48 Torpedo ADCAP Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	58	-	-	-	-	-	-	-	-	-	-	58
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,304.305	55.699	27.987	18.502	0.000	18.502	19.862	61.631	62.181	63.152	-	1,613.319
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,304.305	55.699	27.987	18.502	0.000	18.502	19.862	61.631	62.181	63.152	-	1,613.319
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,304.305	55.699	27.987	18.502	0.000	18.502	19.862	61.631	62.181	63.152	-	1,613.319

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	1.398	0.244	-	-	-	-	-	-	-	-	1.642
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	-	-	-	-	-	-	-	-	-	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	22,488K	-	-	-	-	-	-	-	-	-	-	27,816K

Description:

FY23 funding request is for the acceptance testing, production engineering support, and installation of 59 MK48 MOD 7 Common Broadband Advanced Sonar System (CBASS) kits procured in prior years (55 from FY19 option and 4 from FY20) for Heavyweight Torpedo upgrades.

The CBASS torpedo kit consists of three major components: Guidance & Control Box (GCB), a Broadband Sonar Analog Receiver (BSAR), and preamplifier. Procurement of GCB continues from Mods in production since FY 2002 and procurement of the BSAR began in FY 2004. The BSAR is a CBASS specific item, which consists of a preamplifier, receiver, and interfacing hardware that provides the capability to transmit and receive over a wide frequency band; taking advantage of broadband signal processing techniques. This provides for improvements in advanced threat countermeasures (CMs) capabilities.

[P5 / D1001 Hardware]: Funding under this cost code provides for the procurement of CBASS hardware kits from the contractor.

- Engineering Services / Engineering Change Proposals (ECP) funding for (1)studies, (2)plans, (3)design changes, and (4)implementation of design changes by the contractor; primarily due to obsolescence that occurs during the contract performance.
- Non-Recurring Engineering (NRE) funding to resolve production issues, including obsolescence. Non-Recurring Engineering (NRE) funds the procurement of Proof of Manufacturing (POM) units for government testing, first article testing, tooling and test equipment, procurement of technical data package updates, and start-up costs for the production contract.
- Installation funding for government installation of kits procured in prior years. The installation includes required upgrades to convert the MK 48 MOD 6 Torpedo into a MK 48 MOD 7 Torpedo. The pre-amp, guidance control box, EMI filter, and Broadband Sonar Analog Receiver (BSAR) are installed at the government Intermediate Maintenance Activity.
- Diminishing Manufacturing Sources (DMS) funds are provided to procure electronic parts, which are declared obsolete by the original equipment manufacturing. This is done to avoid the cost of an expensive redesign in the CBASS kit during execution of the production contract. The contractor will be required to procure, deliver, and store the MK 48 Mod 7 DMS material for these obsolete components.

[P5 / D1002 - MK 48 MOD 8 Hardware]: This cost code provides for the procurement of the MK 48 MOD 8 Guidance & (G&C) Section upgrade, which will supply a new G&C section, including new Sonar Assembly (higher density array, transmitter, receiver), Guidance and Control Box (GCB), Tuning Box, and an Ethernet device switch. In addition to the G&C section, the MOD 8 upgrade will also feature a new Warhead Electronics System (WES) to support improved fuzing and the Improved Post Launch Communications System (IPLCS), which will replace the existing copper guidance wire with fiber optics. Improvements are needed in the presence of advanced countermeasures, shallow water, low Doppler targets, Very Shallow Water (VSW), improved fuzing and Anti Surface Warfare (ASuW) performance. MK 48 MOD 8 upgrade allows full fleet introduction of the APB-6 and to meet requirements of MK 48 Improvements CDD (857-97-12). Other Items in this Cost Code include:

- Engineering services / Engineering Change Proposals (ECPs) funding for (1)studies, (2)plans, (3)design changes, and (4)implementation of design changes by the contractor(s), primarily due to obsolescence that occurs during the

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip		P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>contract performance.</p> <p>- Diminishing Manufacturing Sources (DMS) funds are provided to procure electronic parts, which are declared obsolete by the original equipment manufacturing. This is done to avoid the cost of an expensive redesign in the MK 48 MOD 8 kit during execution of the production contract. The contractor will be required to procure, deliver, and store the MK 48 MOD 8 DMS material for these obsolete components.</p> <p>[P5 / D1003 - Support and Ancillary Equipment]: Funding under this cost code provides procurement and maintenance of support and test equipment at Naval Undersea Warfare Centers (NUWC) Keyport and the contractor facility for assembly, testing, and integration.</p> <p>[P5 / D1830 - Production Engineering (Contractor & In-House)]: Production Engineering (Contractor & In-House): Funding under this cost code provides for production tasks performed by NUWC NPT and KPT and includes review of contractor generated Engineering Change Proposals (ECP), review and resolution of contractor failures and proposed corrective action, configuration management activities, contractor monitoring, risk analysis, technical problem resolution, software engineering, safety, integrated logistics support, environmental engineering, and information systems. Funding maintains production specification in accordance with production processes, provides subject matter experts to support root cause analysis of failed contractor hardware, and monitor contractor defect reduction processes to ensure deficiencies are effectively addressed. Funding is also provided for program office acquisition support.</p> <p>[P5 / D1840 - Quality Assurance]: Funding under this cost code provides for quality assurance (QA) tasks performed by NUWC DIV KPT and NPT including: QA review of the contractor and subcontractor's data, review of the documentation indicating conformity to product performance requirements, and review of objective quality evidence.</p> <p>[P5 / D1860 - Acceptance T&E (Contractor & In-House)]: Funding under this cost code provides for Government production acceptance testing of contractor hardware.</p> <p>[P5 / D1CA1 - Congressional Add - Obsolescence]: Funding under this cost code provides for production engineering tasks associated with MK-48 hardware obsolescence.</p> <p>[P5 / D1CA2 - Congressional Add - Tech Insert]: Funding under this cost code provides for production engineering tasks associated with a technology refresh for the MK-48 sonar array and signal processor cards.</p> <p>[P5 / D1CA3 - Congressional Add - ASW Enhancements]: Funding under this cost code provides for production engineering tasks associated with a technology refresh for the MK-48 sonar array.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip

P-1 Line Item Number / Title:
3225 / MK-48 Torpedo ADCAP Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / MK-48 Torpedo ADCAP Mods	P-5a, P-21			58 / 1,304.305	- / 55.699	- / 27.987	- / 18.502	- / 0.000	- / 18.502
P-40	Total Gross/Weapon System Cost				58 / 1,304.305	- / 55.699	- / 27.987	- / 18.502	- / 0.000	- / 18.502

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY23 Program Changes:

The FY 2023 funding request was adjusted by \$2.0M to account for the availability of prior year execution balances.

D1001: CBASS Kits 1.1.2: No procurement funding required in FY23, FY22 is the last year of CBASS kits procurements.

D1001 Engineering Services 1.1.3: FY23 funding request decreases from FY22 to support contractor engineering services and ECPs due to FY22 Prior Year Carryover.

D1001 CBASS Installation 1.1.4: FY23 funding requests supports 59 kits scheduled to be delivered and installed from prior year procurements (55 from FY19 option and 4 from FY20 option awards) versus 56 kits installed in FY22.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2		P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods
		Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	58	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,304.305	55.699	27.987	18.502	0.000	18.502
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,304.305	55.699	27.987	18.502	0.000	18.502
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,304.305	55.699	27.987	18.502	0.000	18.502

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	1.398	0.244	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	22,488K	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - D1001 Hardware Cost																		
Recurring Cost																		
1.1.1) ADCAP Mod Kits	-	-	228.988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) CBASS Kits ⁽¹⁾	283,909.09	1,111	315.423	346,558.82	34	11.783	374,800.00	20	7.496	-	-	-	-	-	-	-	-	-
1.1.3) CBASS Engineering Services/ ECPs ⁽²⁾	-	-	44.350	-	-	4.864	-	-	2.360	-	-	1.103	-	-	-	-	-	1.103
1.1.4) CBASS Installation ⁽³⁾	-	-	52.044	-	-	5.310	-	-	3.360	-	-	3.599	-	-	-	-	-	3.599
1.1.5) Diminishing Manufacturing Sources	-	-	1.722	-	-	0.206	-	-	0.210	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	642.527	-	-	22.163	-	-	13.426	-	-	4.702	-	-	-	-	-	4.702
Non Recurring Cost																		
1.2.1) CBASS NRE	-	-	50.497	-	-	18.407	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	50.497	-	-	18.407	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware - D1001 Hardware Cost</i>	-	-	693.024	-	-	40.570	-	-	13.426	-	-	4.702	-	-	-	-	-	4.702
Support - D1003 - Support and Ancillary Equipment Cost																		
3.1) Support & Ancillary Equipment	-	-	58.162	-	-	1.718	-	-	1.752	-	-	1.420	-	-	-	-	-	1.420

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods						Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - D1003 - Support and Ancillary Equipment Cost</i>																		
	-	-	58.162	-	-	1.718	-	-	1.752	-	-	1.420	-	-	-	-	-	1.420
Support - D1830 - Production Engineering (Contractor & In-House) Cost																		
4.1) Production Engineering (Contractor & In-House)	-	-	308.132	-	-	7.436	-	-	6.809	-	-	6.533	-	-	-	-	-	6.533
<i>Subtotal: Support - D1830 - Production Engineering (Contractor & In-House) Cost</i>																		
	-	-	308.132	-	-	7.436	-	-	6.809	-	-	6.533	-	-	-	-	-	6.533
Support - D1840 - Quality Assurance Cost																		
5.1) Quality Assurance (In-House)	-	-	31.616	-	-	3.006	-	-	3.011	-	-	2.911	-	-	-	-	-	2.911
<i>Subtotal: Support - D1840 - Quality Assurance Cost</i>																		
	-	-	31.616	-	-	3.006	-	-	3.011	-	-	2.911	-	-	-	-	-	2.911
Support - D1860 - Acceptance T&E (Contractor & In-House) Cost																		
6.1) Acceptance T&E (Contractor & In-House)	-	-	194.271	-	-	2.969	-	-	2.989	-	-	2.936	-	-	-	-	-	2.936
<i>Subtotal: Support - D1860 - Acceptance T&E (Contractor & In-House) Cost</i>																		
	-	-	194.271	-	-	2.969	-	-	2.989	-	-	2.936	-	-	-	-	-	2.936
Support - D1CA1 - Congressional Add - Obsolescence Cost																		
7.1) Congressional Add - Obsolescence	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - D1CA1 - Congressional Add - Obsolescence Cost</i>																		
	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - D1CA2 - Congressional Add - Tech Insert Cost																		
8.1) Congressional Add - Tech Insertion	-	-	2.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - D1CA2 - Congressional Add - Tech Insert Cost</i>																		
	-	-	2.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - D1CA3 - Congressional Add - ASW Enhancements Cost																		
9.1) Congressional Add - ASW Enhancements	-	-	6.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - D1CA3 - Congressional Add - ASW Enhancements Cost</i>																		
	-	-	6.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	22,488K	58	1,304.305	-	-	55.699	-	-	27.987	-	-	18.502	-	-	0.000	-	-	18.502

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

(†) indicates the presence of a P-5a

Footnotes:

- (1) ITEM 1.1.2 CBASS Kits: No procurement funding required in FY23, FY22 is the last year of CBASS kits procurements.
- (2) ITEM 1.1.3 CBASS Engineering Services/ECPs: FY23 funding request decreases from FY22 to support contractor engineering services and ECPs due to FY22 Prior Year Carryover.
- (3) ITEM 1.1.4 CBASS Installation: FY23 funding requests supports 59 kits scheduled to be delivered and installed from prior year procurements (55 kits from FY19 option and 4 kits from FY20 option awards) versus 56 kits installed in FY22.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) CBASS Kits ^(†)		2018	LOCKHEED MARTIN/SIPPICAN FY18 Option / Marion, MA	C / FFP	NAVSEA	Aug 2018	Jul 2021	53	204,193.00	Y		
1.1.2) CBASS Kits ^(†)		2019	LOCKHEED MARTIN/SIPPICAN FY19 Option / Marion, MA	C / FFP	NAVSEA	Jun 2019	Jul 2022	79	205,964.00	Y		
1.1.2) CBASS Kits ^(†)		2020	LOCKHEED MARTIN/SIPPICAN FY20 Option / Marion, MA	C / FFP	NAVSEA	Sep 2020	Jun 2023	54	231,462.96	Y		
1.1.2) CBASS Kits ^(†)		2021 ⁽⁴⁾	LOCKHEED MARTIN SIPPICAN / FY21 Option / Marion, MA	C / FFP	NAVSEA	Nov 2021	Jun 2024	34	346,558.82	Y		
1.1.2) CBASS Kits ^(†)		2022 ⁽⁵⁾	LOCKHEED MARTIN SIPPICAN / FY22 Base Year / Marion, MA	SS / FFP	NAVSEA	Sep 2022	Jun 2025	20	374,800.00	Y		

^(†) indicates the presence of a P-21

Footnotes:

⁽⁴⁾ A new competitive contract awards in FY21. Longer lead time due to delivery of Proof of Manufacturing (POM) units prior to FRP.

⁽⁵⁾ FY22 Unit Price is in the same stair step pricing as FY21, so the increase in FY22 unit price is due to inflation of 2%.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												B A L A N C E	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.2) CBASS Kits ⁽¹⁾																															
Prior Years Deliveries: 925																															
1		2018	NAVY	53	0	53																							53		
2		2019	NAVY	79	0	79																							79		
3		2020	NAVY	54	0	54																							54		
4		2021	NAVY	34	0	34																							34		
5		2022	NAVY	20	0	20																							20		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2 **P-1 Line Item Number / Title:** 3225 / MK-48 Torpedo ADCAP Mods **Item Number / Title [DODIC]:** 1 / MK-48 Torpedo ADCAP Mods

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020													Fiscal Year 2021													BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.2) CBASS Kits ⁽¹⁾																																	
Prior Years Deliveries: 925																																	
	1	2018	NAVY	53	0	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	9	9	32	
	2	2019	NAVY	79	0	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	
	3	2020	NAVY	54	0	54													A	-	-	-	-	-	-	-	-	-	-	-	54		
	4	2021	NAVY	34	0	34																									34		
	5	2022	NAVY	20	0	20																									20		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022												Fiscal Year 2023												B A L A N C E	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 2 1	BAL D U E A S O F 1 O C T	Calendar Year 2022												Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.2) CBASS Kits ⁽¹⁾																															
Prior Years Deliveries: 925																															
1		2018	NAVY	53	21	32	3	3	3	4	4	4	3	4	4															0	
2		2019	NAVY	79	0	79	-	-	-	-	-	-	-	-	-	8	8	8	7	6	6	6	6	6	6	6	6	6	0		
3		2020	NAVY	54	0	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	50	
4		2021	NAVY	34	0	34		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34		
5		2022	NAVY	20	0	20												A	-	-	-	-	-	-	-	-	-	-	20		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024														Fiscal Year 2025										BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024														Calendar Year 2025										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.2) CBASS Kits ⁽¹⁾																															
Prior Years Deliveries: 925																															
1		2018	NAVY	53	53	0																							0		
2		2019	NAVY	79	79	0																							0		
3		2020	NAVY	54	4	50	6	6	6	6	6	6	7	7															0		
4		2021	NAVY	34	0	34	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	4				0		
5		2022	NAVY	20	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	2	10		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
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Cost Elements <i>(Units in Each)</i>							Fiscal Year 2026														Fiscal Year 2027														BALANCE
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	Calendar Year 2026														Calendar Year 2027														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.2) CBASS Kits ⁽¹⁾																																			
Prior Years Deliveries: 925																																			
	1	2018	NAVY	53	53	0																						0							
	2	2019	NAVY	79	79	0																						0							
	3	2020	NAVY	54	54	0																						0							
	4	2021	NAVY	34	34	0																						0							
	5	2022	NAVY	20	10	10	2	2	2	2	2																	0							
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	LOCKHEED MARTIN/ SIPPICAN FY18 Option - Marion, MA	30	50	90	0	0	35	35	0	0	35	35
2	LOCKHEED MARTIN/ SIPPICAN FY19 Option - Marion, MA	30	50	90	0	0	37	37	0	0	37	37
3	LOCKHEED MARTIN/ SIPPICAN FY20 Option - Marion, MA	30	50	90	0	0	28	28	0	0	33	33
4	LOCKHEED MARTIN SIPPICAN / FY21 Option - Marion, MA			TBD	0	0	31	31	0	0	31	31
5	LOCKHEED MARTIN SIPPICAN / FY22 Base Year - Marion, MA			TBD	0	0	33	33	0	0	33	33

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip	P-1 Line Item Number / Title: 3231 / Maritime Mines
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	81.070	5.832	8.567	9.282	0.000	9.282	45.229	46.551	47.479	48.330	-	292.340
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	81.070	5.832	8.567	9.282	0.000	9.282	45.229	46.551	47.479	48.330	-	292.340
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	81.070	5.832	8.567	9.282	0.000	9.282	45.229	46.551	47.479	48.330	-	292.340

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This funding procures all naval mines for use as anti-surface ship or anti-submarine subsurface weapons. The Naval mining capability consists of the Quickstrike (QS) family of mines, the MK 67 Submarine Launched Mobile Mine (SLMM), the MK 68 Clandestine Delivered Mine (CDM), and the Hammerhead Encapsulated Effector.

QS is a family of shallow water, aircraft laid mines used against surface and subsurface targets. The QS family of mines has 3 variants based on size - the MK 62, MK 63, and MK 65. The MK 62 and MK 63 (500 lb. and 1000 lb., respectively) QS are created by adding mine hardware to the MK 82 and MK 83 general purpose bombs. The MK 65 (2400 lb.) QS consists entirely of hardware designed for use as a mine. The MOD 0, 1, and 3 variants utilize various Target Detecting Devices (TDD). The QS MOD 3 utilizes a TDD MK 71, which is a software-programmable device capable of being programmed to optimize detection of new threats. For the QS MK 62 and 63, the QS MOD 3 Kit consists of the TDD MK 71, MK 75 Safety and Arming (S&A) device, MK 176 battery, MK 163 TDD Adapter Ring, and miscellaneous hardware. For the QS MK 65, the MOD 3 Kit consists of the TDD MK 71, the existing S&A device, the existing batteries (MK 131 or 132), MK 157 TDD Adapter, and miscellaneous hardware. Additional support hardware for the QS MK 62/63/65 MOD 3 includes MK 650 Test Set and MK 11 Programmer.

Several aerial delivery improvements are in development to support capabilities required by a JEONS. This includes adding GPS-guided, powered and glide flight gear to the QS series to reduce risk to delivery aircraft by introducing precision placement and standoff range. This effort includes development and execution of the Quickstrike-Extended Range (QS-ER) mines.

The MK 68 CDM uses existing MK 67 SLMM components to provide a mine delivered by unmanned maritime platforms. The CDM program uses an incremental approach to improve capability and to align with delivery platform availability. The first increment replicates the MK 67 SLMM capability. The second increment provides a remote control capability and incorporates the MK 71 TDD used on the QS MOD 3.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip **P-1 Line Item Number / Title:** 3231 / Maritime Mines

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Quickstrike Mine				- / 81.070	- / 5.317	- / 8.466	- / 8.779	- / 0.000	- / 8.779
P-5	3 / Quickstrike Extended Range				- / 0.000	- / 0.515	- / 0.101	- / 0.503	- / 0.000	- / 0.503
P-40	Total Gross/Weapon System Cost				- / 81.070	- / 5.832	- / 8.567	- / 9.282	- / 0.000	- / 9.282

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The FY 2023 funding request was reduced by \$0.152 million to account for the availability of prior year execution balances.

FY 2023 funding supports QS MOD 3 and CDM Increment 2 hardware procurements toward the inventory objective. This funding also includes QS-ER procurement of miscellaneous support equipment, such as handling gear and interface adapters. This equipment will be required to support testing and will be transitioned to fleet assets upon initial delivery.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3231 / Maritime Mines	Item Number / Title [DODIC]: 1 / Quickstrike Mine

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				81.070	5.317	8.466	8.779	0.000	8.779
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				81.070	5.317	8.466	8.779	0.000	8.779
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				81.070	5.317	8.466	8.779	0.000	8.779
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) TDD MK-71	-	-	32.001	-	-	1.818	-	-	1.699	-	-	1.853	-	-	0.000	-	-	1.853
1.1.2) MK-65 Mod Kit	-	-	4.298	-	-	0.475	-	-	0.485	-	-	0.494	-	-	0.000	-	-	0.494
1.1.3) MK-62/63 Mod Kit	-	-	17.898	-	-	1.846	-	-	1.683	-	-	1.703	-	-	0.000	-	-	1.703
1.1.4) Support Equipment	-	-	6.564	-	-	0.367	-	-	0.374	-	-	0.382	-	-	0.000	-	-	0.382
1.1.5) Clandestine Delivered Mine (CDM)	-	-	4.538	-	-	0.000	-	-	3.150	-	-	3.264	-	-	0.000	-	-	3.264
1.1.6) Production ECP (HW/SW)	-	-	1.856	-	-	0.088	-	-	0.090	-	-	0.092	-	-	0.000	-	-	0.092
<i>Subtotal: Recurring Cost</i>	-	-	67.155	-	-	4.594	-	-	7.481	-	-	7.788	-	-	0.000	-	-	7.788
Subtotal: Hardware Cost	-	-	67.155	-	-	4.594	-	-	7.481	-	-	7.788	-	-	0.000	-	-	7.788
Support Cost																		
2.1) Production Engineering	-	-	12.972	-	-	0.601	-	-	0.863	-	-	0.867	-	-	0.000	-	-	0.867
2.2) Integrated Logistics Support	-	-	0.943	-	-	0.122	-	-	0.122	-	-	0.124	-	-	0.000	-	-	0.124
<i>Subtotal: Support Cost</i>	-	-	13.915	-	-	0.723	-	-	0.985	-	-	0.991	-	-	0.000	-	-	0.991
Gross/Weapon System Cost	-	-	81.070	-	-	5.317	-	-	8.466	-	-	8.779	-	-	0.000	-	-	8.779

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3231 / Maritime Mines	Item Number / Title [DODIC]: 3 / Quickstrike Extended Range

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	0.000	0.515	0.101	0.503	0.000	0.503
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.515	0.101	0.503	0.000	0.503
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.515	0.101	0.503	0.000	0.503

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.3) Support Equipment ⁽¹⁾	-	-	0.000	-	-	0.515	-	-	0.101	-	-	0.503	-	-	0.000	-	-	0.503
Subtotal: Recurring Cost	-	-	0.000	-	-	0.515	-	-	0.101	-	-	0.503	-	-	0.000	-	-	0.503
Subtotal: Hardware Cost	-	-	0.000	-	-	0.515	-	-	0.101	-	-	0.503	-	-	0.000	-	-	0.503
Gross/Weapon System Cost	-	-	0.000	-	-	0.515	-	-	0.101	-	-	0.503	-	-	0.000	-	-	0.503

Footnotes:

⁽¹⁾ Funding supports the procurement of miscellaneous Quickstrike Extended Range support equipment, such as handling gear and interface adapters. This equipment will be required to support testing and will be transitioned to fleet assets upon initial delivery.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	717.506	94.103	90.832	87.044	0.000	87.044	113.932	119.340	120.675	124.795	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	717.506	94.103	90.832	87.044	0.000	87.044	113.932	119.340	120.675	124.795	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	717.506	94.103	90.832	87.044	0.000	87.044	113.932	119.340	120.675	124.795	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Torpedo Support Equipment account procures various 4T material and associated torpedo components required to maintain weapons for Surface Ships, Submarines, Fixed Wing, and Rotary Wing to achieve a posture sufficient to provide Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASUW) readiness. This line also supports fleet exercise weapons for conducting training maneuvers and maintaining warshot inventories in an operational ready-for-issue (RFI) status in support of combat ready deployment by ASW forces.

After a torpedo is fired during a training exercise, it is recovered and all expendable components such as batteries, cables, and igniters (as well as various accessories required for air-launched torpedoes) must be replaced. These items, as well as components such as exercise heads, fuel tanks, and exhaust valves may be used more than one time, but they are worn out in service and are procured each fiscal year in quantities dependent upon the fleet training requirements and tempo of operations. The torpedoes requiring support are the MK 46 MOD 5A(SW), MK 48 MODs 6 (legacy and ACOT), MK 48 MOD 7, MK 54 MOD 0/1 , and the Vertical Launch Anti-Submarine Rocket (VLA).

[P5 / F8001 - LWT SUPPORT EQUIPMENT]: LIGHTWEIGHT (LWT) Support Equipment procures 4T components to support:

- (1) Exercise torpedo builds for Fleet Proficiency Surface Command Course and Tactical Development firings
- (2) Warshot torpedo maintenance to sustain the fleet with an inventory of RFI warshot torpedoes as they come due for maintenance
- (3) Assembly of new production MK-54 Warshots
- (4) Vertical Launch Anti-Submarine Rocket (ASROC) (VLA) Warshot and Exercise missile assemblies
- (5) Various air launch frame assemblies to support Fleet loadout. LWT 4T Components include the following: seawater batteries, pressure cylinders, thermal batteries, fuel shutoff valves, gas generator assemblies, igniters, containers, lanyard start assemblies, electrical initiators, suspension bands, VLA assembly kits, and propeller baffles.

[P5 / F8002 LIGHTWEIGHT OTHER EQUIPMENT INVESTMENT]: Procures, installs, and supports Engineering Change Proposal/Ordnance Alteration (ECP/ORDALT) material required for support and test equipment and to retrofit torpedoes and 4T components to the latest RFI configuration.

[P5 / F8830 LIGHTWEIGHT PRODUCTION ENGINEERING - IN HOUSE]: Provides for production support services at Naval Undersea Warfare Center (NUWC) Divisions Keyport/Newport (KPT/NPT) including program planning, funds management, budgeting, data management, acquisition engineering, software management, Integrated Logistics Support (ILS) and Government-Furnished Equipment (GFE) management, training equipment and configuration management.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment		P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>[P5 / F8840 - LIGHTWEIGHT QUALITY ASSURANCE]: Provides material costs associated with failure analysis and site investigations for torpedo system component failures, product quality assurance (QA), and critical unique firing tests.</p> <p>[P5 / F8860 - LIGHTWEIGHT ACCEPTANCE TEST AND EVALUATION]: Provides support for acceptance testing of LWT 4T components.</p> <p>[P5 / F8900 - LIGHTWEIGHT PRODUCTION ENGINEERING - CONTRACTOR]: Provides for production support services including program planning, funds management, budgeting, and data management.</p> <p>[P5 - 2 / F8003 LIGHTWEIGHT RECOVERABLE EXERCISE TORPEDO (REXTORP)]: Provides for the procurement of MK-54 REXTORPs. REXTORPs provide a reusable exercise inert torpedo shape for fixed wing, rotary, and surface launched platforms in support of Fleet ASW training and readiness.</p> <p>[P5 - 3 / F8100 - HEAVYWEIGHT EXERCISE AND EXPENDABLES AND COMPONENT REPLACEMENT]: Procures 4T components to support: (1) exercise torpedo builds for fleet proficiency in the submarine and surface command course and tactical development firings; (2) warshot torpedo maintenance to sustain the fleet with an inventory of RFI warshot torpedoes as they come due for maintenance; and (3) assembly of modernized MK 48 MOD 7 components back to an All-Up-Round (AUR) configuration, either exercise or warshot. HWT 4T components include the following: wire coils, flex hoses, Otto Fuel, igniters, propellant, A-cables, A-cable inserts, A-cable receptacles, cylinder barrels, exercise fuel tanks, containers, and chamber and valves.</p> <p>[P5 - 3 / F8101 - HEAVYWEIGHT OTHER EQUIPMENT INVESTMENT]: Procure modernized Automatic Test Equipment (ATE) to perform full-up automatic comprehensive system testing of all Torpedo MK 48 variants in an All-Up-Round (AUR) torpedo configuration. Support numerous additional testing evolutions, including factory acceptance testing, proofing, periodic maintenance, group testing, and weapon turnaround/conversion activities.</p> <p>[P5 - 3 / F8843 - HEAVYWEIGHT QUALITY ASSURANCE]: Provides material costs associated with failure analysis and site investigations for torpedo system component failures and product QA and critical unique firing tests.</p> <p>[P5 - 3 / F8833 - HEAVYWEIGHT PRODUCTION ENGINEERING - IN HOUSE]: Provides for production support services at NUWC Divisions KPT/NPT including program planning, funds management, budgeting, data management, acquisition engineering, software management, ILS, and GFE management, training equipment, and configuration management.</p> <p>[P5 - 3 / F8863 - HEAVY WEIGHT ACCEPTANCE TEST AND EVALUATION]: Provides support for acceptance testing of HWT 4T components.</p> <p>[P5 - 3 / F8893 - HEAVYWEIGHT PRODUCTION ENGINEERING - CONTRACTOR]: Provides for production support services including program planning, funds management, budgeting, and data management.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment

P-1 Line Item Number / Title:
3301 / Torpedo Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Lightweight Torpedo Support Equipment	P-5a, P-21			- / 203.551	- / 32.322	- / 32.382	- / 33.293	- / 0.000	- / 33.293
P-5	2 / Recoverable Exercise Torpedo				- / 12.706	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-5	3 / Heavyweight Torpedo Support Equipment	P-5a, P-21			- / 501.249	- / 61.781	- / 58.450	- / 53.751	- / 0.000	- / 53.751
P-40	Total Gross/Weapon System Cost				- / 717.506	- / 94.103	- / 90.832	- / 87.044	- / 0.000	- / 87.044

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY23 Program Changes:

The FY 2023 funding request was adjusted by \$2.995M to account for the availability of prior year execution balances.

F8001: Additional funding for increase quantity of MK 28 Air Stabilizer.

F8100: Funding reduced from FY22 to FY23 due to completion of Replacement Warshot Afterbody procurements in FY22.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			203.551	32.322	32.382	33.293	0.000	33.293
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			203.551	32.322	32.382	33.293	0.000	33.293
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			203.551	32.322	32.382	33.293	0.000	33.293
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (\$ in Millions)			-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - F8001 - LWT SUPPORT EQUIPMENT Cost																		
Recurring Cost																		
1.1.1) F8001 MK46 Maintenance Kits	329.82	285	0.094	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) F8001 MK 54 Turnaround Kits (CWQB) ^(†)	119.67	3,025	0.362	108.75	400	0.044	110.92	400	0.044	113.14	400	0.045	-	-	0.000	113.14	400	0.045
1.1.3) F8001 MK54 Maintenance Kits (BWLW) ^(†)	452.86	1,135	0.514	467.96	200	0.094	477.32	200	0.095	486.87	200	0.097	-	-	0.000	486.87	200	0.097
1.1.4) F8001 MK54 Pinger Kits (BWLX) ^(†)	46.91	2,430	0.114	52.21	400	0.021	53.26	400	0.021	54.32	400	0.022	-	-	0.000	54.32	400	0.022
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA) ^(†)	1,798.25	3,435	6.177	1,759.65	400	0.704	1,794.84	400	0.718	1,830.74	400	0.732	-	-	0.000	1,830.74	400	0.732
1.1.6) F8001 Propeller Baffles (CWRJ) ^(†)	286.05	2,587	0.740	241.41	200	0.048	246.24	200	0.049	251.16	200	0.050	-	-	0.000	251.16	200	0.050
1.1.7) F8001 Thermal Battery (5W15) ^(†)	2,395.82	2,630	6.301	1,611.52	400	0.645	1,643.75	400	0.658	1,676.62	400	0.671	-	-	0.000	1,676.62	400	0.671
1.1.8) F8001 Battery, TDS (MK 54) (CWRP) ^(†)	184.67	2,675	0.494	195.54	400	0.078	199.45	400	0.080	203.44	400	0.081	-	-	0.000	203.44	400	0.081

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ) ^(†)	211.43	1,750	0.370	218.28	400	0.087	222.65	400	0.089	227.10	400	0.091	-	-	0.000	227.10	400	0.091
1.1.10) F8001 MK54 Igniter (TH04) ^(†)	772.50	3,200	2.472	801.05	400	0.320	817.07	400	0.327	833.41	400	0.333	-	-	0.000	833.41	400	0.333
1.1.11) F8001 MK54 BSS Bags	24,125.00	16	0.386	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.12) MJ21 - Electric Initiator ^(†)	1,581.25	800	1.265	1,535.00	400	0.614	1,565.00	400	0.626	1,595.00	400	0.638	-	-	0.000	1,595.00	400	0.638
1.1.13) F8001 Generator Assembly, Gas (5W20) ^(†)	12,346.72	1,096	13.532	11,106.67	200	2.221	11,335.00	200	2.267	11,560.00	200	2.312	-	-	0.000	11,560.00	200	2.312
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41) ^(†)	-	-	0.000	780.00	400	0.312	795.56	400	0.318	811.11	400	0.324	-	-	0.000	811.11	400	0.324
1.1.15) F8001 Pressure Cylinder, Warshot (YW09) ^(†)	-	-	0.000	1,066.67	300	0.320	1,090.00	300	0.327	1,110.00	300	0.333	-	-	0.000	1,110.00	300	0.333
1.1.16) F8001 Pressure Cylinder, Exercise (TW58) ^(†)	-	-	0.000	1,179.17	240	0.283	1,200.00	240	0.288	1,225.00	240	0.294	-	-	0.000	1,225.00	240	0.294
1.1.17) F8001 MK46 Seawater Batteries	1,162.50	400	0.465	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.18) F8001 MK31 Stabilizer (QW47) ^(†)	1,920.00	400	0.768	1,960.00	400	0.784	1,997.50	400	0.799	2,037.50	400	0.815	-	-	0.000	2,037.50	400	0.815
1.1.19) F8001 VLA Reassembly Kits ^(†)	-	-	0.000	2,900.00	30	0.087	2,966.67	30	0.089	3,033.33	30	0.091	-	-	0.000	3,033.33	30	0.091
1.1.20) F8001 VLA Thermal Battery (CWEC)	-	-	0.381	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.21) F8001 VLA Impulse Cartridge (MT99) ^(†)	-	-	0.000	1,000.00	50	0.050	1,020.00	50	0.051	1,040.00	50	0.052	-	-	0.000	1,040.00	50	0.052
1.1.22) F8001 MK792/0 Universal AUR Container	-	-	1.781	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.23) F8001 Universal REXTORP Containers	-	-	3.273	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.24) F8001 Sonobuoys ^(†)	-	-	0.000	2,854.17	48	0.137	2,916.67	48	0.140	2,958.33	48	0.142	-	-	0.000	2,958.33	48	0.142
1.1.25) F8001 SWT Target Procurement	-	-	0.630	-	-	0.078	-	-	0.080	-	-	0.082	-	-	0.000	-	-	0.082
1.1.26) F8001 VLA Telemetry Kits ^(†)	103,312.50	32	3.306	106,500.00	4	0.426	108,750.00	4	0.435	110,750.00	4	0.443	-	-	0.000	110,750.00	4	0.443
1.1.27) F8001 Suspension Bands (T107) ^(†)	2,365.45	2,252	5.327	2,437.78	400	0.975	2,486.67	400	0.995	2,537.78	400	1.015	-	-	0.000	2,537.78	400	1.015
1.1.28) F8001 Otto Fuel Reclamation	-	-	5.179	-	-	0.462	-	-	0.471	-	-	0.480	-	-	0.000	-	-	0.480
1.1.29) F8001 VLA Refurbishment Kits ^(†)	632,714.29	77	48.719	491,818.18	22	10.820	495,545.45	22	10.902	506,636.36	22	11.146	-	-	0.000	506,636.36	22	11.146
1.1.30) F8001 MK 28 Stabilizer (TA68) ^(†)	4,584.19	1,075	4.928	4,813.33	300	1.444	4,910.00	319	1.566	5,007.79	385	1.928	-	-	0.000	5,007.79	385	1.928
<i>Subtotal: Recurring Cost</i>	-	-	107.578	-	-	21.054	-	-	21.435	-	-	22.217	-	-	0.000	-	-	22.217
<i>Subtotal: Hardware - F8001 - LWT SUPPORT EQUIPMENT Cost</i>	-	-	107.578	-	-	21.054	-	-	21.435	-	-	22.217	-	-	0.000	-	-	22.217
Hardware - F8002 LIGHTWEIGHT OTHER EQUIPMENT INVESTMENT Cost																		
<i>Recurring Cost</i>																		
2.1.1) F8002 Lightweight Other Equipment Investment	-	-	44.806	-	-	6.586	-	-	6.171	-	-	6.205	-	-	0.000	-	-	6.205
<i>Subtotal: Recurring Cost</i>	-	-	44.806	-	-	6.586	-	-	6.171	-	-	6.205	-	-	0.000	-	-	6.205
<i>Subtotal: Hardware - F8002 LIGHTWEIGHT OTHER EQUIPMENT INVESTMENT Cost</i>	-	-	44.806	-	-	6.586	-	-	6.171	-	-	6.205	-	-	0.000	-	-	6.205
Support - F8830 LIGHTWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost																		
3.1) F8830 Lightweight Production Engineering (In House)	-	-	40.963	-	-	4.089	-	-	4.171	-	-	4.254	-	-	0.000	-	-	4.254
<i>Subtotal: Support - F8830 LIGHTWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost</i>	-	-	40.963	-	-	4.089	-	-	4.171	-	-	4.254	-	-	0.000	-	-	4.254
Support - F8840 - LIGHTWEIGHT QUALITY ASSURANCE Cost																		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
4.1) F8840 Lightweight Quality Assurance	-	-	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support - F8840 - LIGHTWEIGHT QUALITY ASSURANCE Cost</i>	-	-	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Support - F8860 - LIGHTWEIGHT ACCEPTANCE TEST AND EVALUATION Cost</i>																		
5.1) F8860 Lightweight Acceptance Test and Evaluation	-	-	6.118	-	-	0.281	-	-	0.287	-	-	0.292	-	-	0.000	-	-	0.292
<i>Subtotal: Support - F8860 - LIGHTWEIGHT ACCEPTANCE TEST AND EVALUATION Cost</i>	-	-	6.118	-	-	0.281	-	-	0.287	-	-	0.292	-	-	0.000	-	-	0.292
<i>Support - F8900 - LIGHTWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost</i>																		
6.1) F8900 Lightweight Production Engineering - Contractor	-	-	3.789	-	-	0.312	-	-	0.318	-	-	0.325	-	-	0.000	-	-	0.325
<i>Subtotal: Support - F8900 - LIGHTWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost</i>	-	-	3.789	-	-	0.312	-	-	0.318	-	-	0.325	-	-	0.000	-	-	0.325
Gross/Weapon System Cost	-	-	203.551	-	-	32.322	-	-	32.382	-	-	33.293	-	-	0.000	-	-	33.293

Remarks:

[Hardware] 4T material is consumed by the Fleet and IMAs each year, and must be replaced to maintain required inventory levels (2 year stock level). If funds are marked due to contract award delays, the next years funding is not adequate to replenish material consumed in the year prior, resulting in reduced inventory putting future torpedo builds at risk. All production deliveries, Fleet training, and Warshot maintenance builds depend on 4T material being readily available.

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2020	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	May 2020	Oct 2020	400	107.50	Y		
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2021	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	Sep 2021	Feb 2022	400	108.75	Y		
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2022	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	May 2022	Oct 2022	400	110.92	Y		
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2023	TBD / NAVSUP, GLS	C / FFP	NAVSUP	Apr 2023	Oct 2023	400	113.14	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2020	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	May 2020	Oct 2020	200	460.00	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2021	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	Sep 2021	Sep 2021	200	467.96	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2022	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	Jun 2022	Jun 2022	200	477.32	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2023	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	May 2023	May 2023	200	486.87	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2020	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	May 2020	Oct 2020	400	50.00	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2021	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	Sep 2021	Sep 2021	400	52.21	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2022	CMO Industries INC / Buffalo, MN	C / FFP	NAVSUP	May 2022	May 2022	400	53.26	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2023	TBD / TBD	C / FFP	NAVSUP	Apr 2023	Oct 2023	400	54.32	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)	✓	2020	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Aug 2020	Feb 2021	400	0.00	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2021	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Jul 2021	Jan 2022	400	1,759.65	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2022	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Nov 2021	May 2022	400	1,794.84	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2023	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Apr 2023	Oct 2023	400	1,830.74	Y		
1.1.6) F8001 Propeller Baffles (CWRJ)		2020	Electro Mechanical Specialists / Norwich, CT	C / FFP	NAVSUP	Aug 2020	Mar 2021	200	235.00	Y		
1.1.6) F8001 Propeller Baffles (CWRJ)		2021	Electro Mechanical Specialists / Norwich, CT	C / FFP	NAVSUP	Sep 2021	Apr 2022	200	241.41	Y		
1.1.6) F8001 Propeller Baffles (CWRJ)		2022	Electro Mechanical Specialists / Norwich, CT	C / IDIQ	NAVSUP	Jun 2022	Jan 2023	200	246.24	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.6) F8001 Propeller Baffles (CWRJ)		2023	TBD / TBD	C / IDIQ	NAVSUP	Jun 2023	Dec 2023	200	251.16	Y		
1.1.7) F8001 Thermal Battery (5W15)		2020	ADVANCED THERMAL BATTERIES, INC / COCKEYSVILLE, MD	C / FFP	NAVSUP-WSS	Dec 2019	May 2020	400	1,580.00	Y		
1.1.7) F8001 Thermal Battery (5W15)		2021	ADVANCED THERMAL BATTERIES / NAVSUP, LOC	C / FFP	NAVSUP	Sep 2021	Mar 2022	400	1,611.52	Y		
1.1.7) F8001 Thermal Battery (5W15)		2022	ADVANCED THERMAL BATTERIES / NAVSUP, LOC	C / FFP	NAVSUP	Feb 2022	Aug 2022	400	1,643.75	Y		
1.1.7) F8001 Thermal Battery (5W15)		2023	TBD / TBD	C / FFP	NAVSUP	May 2023	Oct 2023	400	1,676.62	Y		
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2020	Airtronics / Tucson, AZ	C / FFP	NAVSUP	May 2020	Oct 2020	400	192.50	Y		
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2021	Airtronics / Tucson, AZ	C / FFP	NAVSUP	Jul 2021	Dec 2021	400	195.54	Y		
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2022	Airtronics / Tucson, AZ	C / FFP	NAVSUP	Jan 2022	Jun 2022	400	199.45	Y		
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2023	TBD / TBD	C / FFP	NAVSUP	May 2023	Nov 2023	400	203.44	Y		
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2020	Airtronics / Tucson, AZ	C / FFP	NAVSUP	Apr 2020	Oct 2020	400	215.00	Y		
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2021	Airtronics / Tucson, AZ	C / FFP	NAVSUP	Jul 2021	Jan 2022	400	218.28	Y		
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2022	Airtronics / Tucson, AZ	C / FFP	NAVSUP	Jan 2022	Jul 2022	400	222.65	Y		
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2023	TBD / TBD	C / FFP	NAVSUP	Apr 2023	Oct 2023	400	227.10	Y		
1.1.10) F8001 MK54 Igniter (TH04)		2020	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP-WSS	Aug 2020	Feb 2021	400	785.00	Y		
1.1.10) F8001 MK54 Igniter (TH04)		2021	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP	Sep 2021	Mar 2022	400	801.05	Y		
1.1.10) F8001 MK54 Igniter (TH04)		2022	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP	Feb 2022	Aug 2022	400	817.07	Y		
1.1.10) F8001 MK54 Igniter (TH04)		2023	TBD / TBD	C / FFP	NAVSUP	Jun 2023	Dec 2023	400	833.41	Y		
1.1.12) MJ21 - Electric Initiator		2020	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP	Aug 2020	Feb 2021	400	1,505.00	Y		
1.1.12) MJ21 - Electric Initiator		2021	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP	Jul 2021	Jan 2022	400	1,535.00	Y		
1.1.12) MJ21 - Electric Initiator		2022	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP	May 2022	Nov 2022	400	1,565.00	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.12) MJ21 - Electric Initiator		2023	TBD / TBD	C / FFP	NAVSUP	May 2023	Nov 2023	400	1,595.00	Y		
1.1.13) F8001 Generator Assembly, Gas (5W20)		2020	GEN DYNAMICS, RENTON, WA / NUWC, KEYPORT	C / FFP	NAVSUP	May 2020	Mar 2021	200	10,890.00	Y		
1.1.13) F8001 Generator Assembly, Gas (5W20)		2021	GEN DYNAMICS, RENTON, WA / NUWC, KEYPORT	C / FFP	NAVSUP	Jul 2021	May 2022	200	11,106.67	Y		
1.1.13) F8001 Generator Assembly, Gas (5W20)		2022	GEN DYNAMICS, RENTON, WA / NUWC, KEYPORT	C / FFP	NAVSUP	May 2022	Mar 2023	200	11,335.00	Y		
1.1.13) F8001 Generator Assembly, Gas (5W20)		2023	GEN DYNAMICS, RENTON, WA / NUWC, KEYPORT	C / FFP	NAVSUP	May 2023	Mar 2024	200	11,560.00	Y		
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2021	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Apr 2022	Sep 2022	400	780.00	Y		
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2022	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2022	Oct 2022	400	795.56	Y		
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2023	Oct 2023	400	811.11	Y		
1.1.15) F8001 Pressure Cylinder, Warshot (YW09)		2021	Cartridge Actuated Devices/ NAVSUP, GLS / Fairfield, NJ	C / FFP	NAVSUP	May 2021	Nov 2021	300	1,066.67	Y		
1.1.15) F8001 Pressure Cylinder, Warshot (YW09)		2022	Cartridge Actuated Devices/ NAVSUP, GLS / Fairfield, NJ	C / FFP	NAVSUP	May 2022	Nov 2022	300	1,090.00	Y		
1.1.15) F8001 Pressure Cylinder, Warshot (YW09)		2023	Cartridge Actuated Devices/ NAVSUP, GLS / Fairfield, NJ	C / FFP	NAVSUP	May 2023	Nov 2023	300	1,110.00	Y		
1.1.16) F8001 Pressure Cylinder, Exercise (TW58)		2021	Cartridge Actuated Devices -2 / Fairfield, NJ	C / FFP	NAVSUP	Sep 2021	Feb 2022	240	1,179.17	Y		
1.1.16) F8001 Pressure Cylinder, Exercise (TW58)		2022	Cartridge Actuated Devices -2 / Fairfield, NJ	C / FFP	NAVSUP	Jun 2022	Nov 2022	240	1,200.00	Y		
1.1.16) F8001 Pressure Cylinder, Exercise (TW58)		2023	Cartridge Actuated Devices -2 / Fairfield, NJ	C / FFP	NAVSUP	Jun 2023	Nov 2023	240	1,225.00	Y		
1.1.18) F8001 MK31 Stabilizer (QW47)		2020	UNITED TEREX INC, NOR PA / FAIRVIEW VILLAGE, PA/NUWC, KEYPORT	C / FFP	NAVSUP	Aug 2020	Feb 2021	400	1,920.00	Y		
1.1.18) F8001 MK31 Stabilizer (QW47)		2021	UNITED TEREX INC, NOR PA / FAIRVIEW VILLAGE, PA/NUWC, KEYPORT	C / FFP	NAVSUP	Apr 2022	Oct 2022	400	1,960.00	Y		
1.1.18) F8001 MK31 Stabilizer (QW47)		2022	UNITED TEREX INC, NOR PA / FAIRVIEW VILLAGE, PA/NUWC, KEYPORT	C / FFP	NAVSUP	May 2022	Nov 2022	400	1,997.50	Y		
1.1.18) F8001 MK31 Stabilizer (QW47)		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2023	Nov 2023	400	2,037.50	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.19) F8001 VLA Reassembly Kits		2021	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2022	Oct 2022	30	2,900.00	Y		
1.1.19) F8001 VLA Reassembly Kits		2022	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Jun 2022	Nov 2022	30	2,966.67	Y		
1.1.19) F8001 VLA Reassembly Kits		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2023	Oct 2023	30	3,033.33	Y		
1.1.21) F8001 VLA Impulse Cartridge (MT99)		2021	TBD / TBD	C / IDIQ	NAVSUP	Mar 2022	Sep 2022	50	1,000.00	Y		
1.1.21) F8001 VLA Impulse Cartridge (MT99)		2022	TBD / TBD	C / IDIQ	NAVSUP	May 2022	Nov 2022	50	1,020.00	Y		
1.1.21) F8001 VLA Impulse Cartridge (MT99)		2023	TBD / TBD	C / IDIQ	NAVSUP	Apr 2023	Oct 2023	50	1,040.00	Y		
1.1.24) F8001 Sonobuoys		2021	UNDERSEA SENSOR SYSTEMS INC / COLUMBIA CITY, IN	C / FFP	NUWC, KEYPORT	May 2021	Nov 2021	48	2,854.17	Y		
1.1.24) F8001 Sonobuoys		2022	UNDERSEA SENSOR SYSTEMS INC / COLUMBIA CITY, IN	C / FFP	NUWC, KEYPORT	Apr 2022	Oct 2022	48	2,916.67	Y		
1.1.24) F8001 Sonobuoys		2023	UNKNOWN / TBD	C / FFP	NUWC, KEYPORT	Apr 2023	Oct 2023	48	2,958.33	Y		
1.1.26) F8001 VLA Telemetry Kits		2021	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Jun 2021	Dec 2021	4	106,500.00	Y		
1.1.26) F8001 VLA Telemetry Kits		2022	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Jun 2022	Dec 2022	4	108,750.00	Y		
1.1.26) F8001 VLA Telemetry Kits		2023	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Jun 2023	Dec 2023	4	110,750.00	Y		
1.1.27) F8001 Suspension Bands (T107)		2021	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Apr 2022	Sep 2022	400	2,437.78	Y		
1.1.27) F8001 Suspension Bands (T107)		2022	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2022	Oct 2022	400	2,486.67	Y		
1.1.27) F8001 Suspension Bands (T107)		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2023	Oct 2023	400	2,537.78	Y		
1.1.29) F8001 VLA Refurbishment Kits ^(†)		2019	LOCKHEED MARTIN / Akron, OH	SS / FFP	NAVSUP	Jul 2020	Feb 2022	22	555,227.27	Y		
1.1.29) F8001 VLA Refurbishment Kits ^(†)		2021	LOCKHEED MARTIN / Akron, OH	SS / FFP	NAVSUP	Mar 2021	Jul 2022	22	491,818.18	Y		
1.1.29) F8001 VLA Refurbishment Kits ^(†)		2022	LOCKHEED MARTIN / Akron, OH	SS / FFP	NAVSUP	Jun 2022	Jan 2024	22	495,545.45	Y		
1.1.29) F8001 VLA Refurbishment Kits		2023	LOCKHEED MARTIN / Akron, OH	SS / FFP	NAVSUP	Jun 2023	Jan 2025	22	506,636.36	Y		
1.1.30) F8001 MK 28 Stabilizer (TA68)		2021	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	May 2022	Nov 2022	300	4,813.33	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy							Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment				Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.30) F8001 MK 28 Stabilizer (TA68)		2022	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Jun 2022	Dec 2022	319	4,910.00	Y		
1.1.30) F8001 MK 28 Stabilizer (TA68)		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Apr 2023	Oct 2023	385	5,007.79	Y		

^(t) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3										P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment										Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022												Fiscal Year 2023												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
1.1.29) F8001 VLA Refurbishment Kits																															
Prior Years Deliveries: 55																															
	1	2019	NAVY	22	0	22	-	-	-	-	11	-	11																0		
	1	2021	NAVY	22	0	22	-	-	-	-	-	-	-	-	11	11													0		
	1	2022	NAVY	22	0	22								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022									
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3										P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment										Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P

1.1.29) F8001 VLA Refurbishment Kits																																			
Prior Years Deliveries: 55																																			
1	2019	NAVY	22	22	0																														0
1	2021	NAVY	22	22	0																														0
1	2022	NAVY	22	0	22	-	-	-	11	11																									0
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3		P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment
		Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	LOCKHEED MARTIN - Akron, OH	11	22	33	0	0	19	19	0	0	16	16

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment			Item Number / Title [DODIC]: 2 / Recoverable Exercise Torpedo		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:		
Resource Summary			Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (<i>Units in Each</i>)			-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)			12.706	0.000	0.000	0.000	0.000	0.000
Less PY Advance Procurement (<i>\$ in Millions</i>)			-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)			12.706	0.000	0.000	0.000	0.000	0.000
Plus CY Advance Procurement (<i>\$ in Millions</i>)			-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)			12.706	0.000	0.000	0.000	0.000	0.000
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (<i>\$ in Millions</i>)			-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - F8003 LIGHTWEIGHT RECOVERABLE EXERCISE TORPEDO (REXTORP) Cost																		
Recurring Cost																		
1.1.1) Lightweight REXTORP Bodies / Assembly & Test	46,794.24	243	11.371	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) Lightweight REXTORP Fire Control Modules / Assembly & Test	4,959.02	122	0.605	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) Lightweight REXTORP Containers / Assembly & Test	10,428.57	70	0.730	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	12.706	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - F8003 LIGHTWEIGHT RECOVERABLE EXERCISE TORPEDO (REXTORP) Cost</i>	-	-	12.706	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	-	-	12.706	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				501.249	61.781	58.450	53.751	0.000	53.751
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				501.249	61.781	58.450	53.751	0.000	53.751
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				501.249	61.781	58.450	53.751	0.000	53.751
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - F8100 - HEAVYWEIGHT EXERCISE AND EXPENDABLES AND COMPONENT REPLACEMENT Cost																		
Recurring Cost																		
1.1.1) F8100 Guidance and Control Assembly	311,829.79	47	14.656	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) F8100 MK 62-1 A-Cable (CWFP) ^(†)	5,555.56	720	4.000	4,108.00	250	1.027	4,188.00	250	1.047	4,270.77	325	1.388	-	-	0.000	4,270.77	325	1.388
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE) ^(†)	263.30	5,750	1.514	276.00	250	0.069	284.00	250	0.071	289.23	325	0.094	-	-	0.000	289.23	325	0.094
1.1.4) F8100 MK 62-1 A-Cable Receptacle (CWLD) ^(†)	12,246.67	300	3.674	2,040.00	250	0.510	2,080.00	250	0.520	2,123.08	325	0.690	-	-	0.000	2,123.08	325	0.690
1.1.5) F8100 Flex Hose (Improved) (CWQC) ^(†)	4,717.81	2,920	13.776	2,616.84	475	1.243	2,670.00	475	1.268	2,721.90	525	1.429	-	-	0.000	2,721.90	525	1.429
1.1.6) F8100 Strong Flex Hose (WW97) ^(†)	1,630.10	1,030	1.679	1,580.00	250	0.395	1,612.00	250	0.403	1,646.15	325	0.535	-	-	0.000	1,646.15	325	0.535
1.1.7) F8100 Igniter (TH01) ^(†)	892.07	5,170	4.612	754.67	750	0.566	770.32	775	0.597	786.25	800	0.629	-	-	0.000	786.25	800	0.629
1.1.8) F8100 Propellant (WW98) ^(†)	2,558.49	5,300	13.560	1,920.00	750	1.440	1,958.71	775	1.518	1,998.75	800	1.599	-	-	0.000	1,998.75	800	1.599

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3		P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.9) F8100 Scuttle Valve (SW94) ^(†)	912.12	330	0.301	1,083.33	36	0.039	1,111.11	36	0.040	1,138.89	36	0.041	-	-	0.000	1,138.89	36	0.041
1.1.10) F8100 Sub Wire Coil (TW92) ^(†)	6,501.96	5,600	36.411	4,241.33	750	3.181	4,326.45	775	3.353	4,412.50	800	3.530	-	-	0.000	4,412.50	800	3.530
1.1.11) F8100 Torpedo Wire Coil (SW83) ^(†)	11,622.90	3,100	36.031	6,570.67	750	4.928	6,703.23	775	5.195	6,836.25	800	5.469	-	-	0.000	6,836.25	800	5.469
1.1.12) F8100 OTTO Fuel - Moser Plant Warm	-	-	7.600	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.13) F8100 Otto Fuel	-	-	53.154	-	-	7.308	-	-	7.454	-	-	7.603	-	-	0.000	-	-	7.603
1.1.14) F8100 Crossover Batteries (CWRG) ^(†)	3,169.19	5,225	16.559	2,860.00	750	2.145	2,917.42	775	2.261	2,975.00	800	2.380	-	-	0.000	2,975.00	800	2.380
1.1.15) F8100 Sonobuoys	2,185.19	486	1.062	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.16) F8100 A/B Dampening Material	-	-	1.016	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.17) F8100 SWT Target Procurement	-	-	0.528	-	-	0.066	-	-	0.067	-	-	0.068	-	-	0.000	-	-	0.068
1.1.18) F8100 ORDALTS	-	-	4.362	-	-	0.447	-	-	0.456	-	-	0.465	-	-	0.000	-	-	0.465
1.1.19) F8100 Deep Proofer Kits 1	4,236.84	570	2.415	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.20) F8100 Deep Proofer Kits 2	4,462.22	450	2.008	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.21) F8100 Short Wire Coils (CWRT)	3,984.38	1,600	6.375	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.22) F8100 Replacement Nose Arrays	229,520.00	50	11.476	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.23) F8100 WES Expansion Box ^(†)	-	-	3.410	-	-	0.000	15,426.09	230	3.548	15,734.78	230	3.619	-	-	0.000	15,734.78	230	3.619
1.1.24) F8100 Replacement Warshot Afterbodies ^{(†) (1)}	-	-	0.000	1,027K	15	15.409	1,290K	5	6.449	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	240.179	-	-	38.773	-	-	34.247	-	-	29.539	-	-	0.000	-	-	29.539
<i>Subtotal: Hardware - F8100 - HEAVYWEIGHT</i>	-	-	240.179	-	-	38.773	-	-	34.247	-	-	29.539	-	-	0.000	-	-	29.539

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>EXERCISE AND EXPENDABLES AND COMPONENT REPLACEMENT Cost</i>																		
Hardware - F8101 - HEAVYWEIGHT OTHER EQUIPMENT INVESTMENT Cost																		
Recurring Cost																		
2.1.1) Heavyweight Other Equipment Investment	-	-	170.675	-	-	15.043	-	-	16.079	-	-	15.936	-	-	0.000	-	-	15.936
<i>Subtotal: Recurring Cost</i>	-	-	170.675	-	-	15.043	-	-	16.079	-	-	15.936	-	-	0.000	-	-	15.936
<i>Subtotal: Hardware - F8101 - HEAVYWEIGHT OTHER EQUIPMENT INVESTMENT Cost</i>	-	-	170.675	-	-	15.043	-	-	16.079	-	-	15.936	-	-	0.000	-	-	15.936
Support - F8843 - HEAVYWEIGHT QUALITY ASSURANCE Cost																		
3.1) Heavyweight Quality Assurance	-	-	2.842	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support - F8843 - HEAVYWEIGHT QUALITY ASSURANCE Cost</i>	-	-	2.842	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - F8833 - HEAVYWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost																		
4.1) Heavyweight Production Engineering (In-House)	-	-	65.093	-	-	6.138	-	-	6.260	-	-	6.375	-	-	0.000	-	-	6.375
<i>Subtotal: Support - F8833 - HEAVYWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost</i>	-	-	65.093	-	-	6.138	-	-	6.260	-	-	6.375	-	-	0.000	-	-	6.375
Support - F8863 - HEAVY WEIGHT ACCEPTANCE TEST AND EVALUATION Cost																		
5.1) Heavyweight Acceptance Test and Evaluation	-	-	9.228	-	-	0.891	-	-	0.909	-	-	0.927	-	-	0.000	-	-	0.927
<i>Subtotal: Support - F8863 - HEAVY WEIGHT ACCEPTANCE TEST AND EVALUATION Cost</i>	-	-	9.228	-	-	0.891	-	-	0.909	-	-	0.927	-	-	0.000	-	-	0.927
Support - F8893 - HEAVYWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost																		
6.1) Heavyweight Production Engineering - Contractor	-	-	13.232	-	-	0.936	-	-	0.955	-	-	0.974	-	-	0.000	-	-	0.974

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - F8893 - HEAVYWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost</i>	-	-	13.232	-	-	0.936	-	-	0.955	-	-	0.974	-	-	0.000	-	-	0.974
Gross/Weapon System Cost	-	-	501.249	-	-	61.781	-	-	58.450	-	-	53.751	-	-	0.000	-	-	53.751

Remarks:

[Hardware] 4T material is consumed by the Fleet and IMAs each year, and must be replaced to maintain required inventory levels (2 year stock level). If funds are marked due to contract award delays, the next years funding is not adequate to replenish material consumed in the year prior, resulting in reduced inventory putting future torpedo builds at risk. All production deliveries, Fleet training, and Warshot maintenance builds depend on 4T material being readily available.

(t) indicates the presence of a P-5a

Footnotes:

(1) F8100: Funding reduced in FY23 due to ending Warshot afterbody procurements

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2021	DCX-CHOL / Chatsworth, CA	C / FFP	NAVSUP	Sep 2021	Apr 2022	250	4,108.00	Y		
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2022	DCX-CHOL / Chatsworth, CA	C / FFP	NAVSUP	Jul 2022	Feb 2023	250	4,188.00	Y		
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2023	Unknown / TBD	C / FFP	NAVSUP	Apr 2023	Nov 2023	325	4,270.77	Y		
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE)		2021	TE Connectivity Seacon Phoenix Inc / ASHAWAY, RI	C / FFP	NAVSUP	Sep 2021	Feb 2022	250	276.00	Y		
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE)		2022	TBD / TBD	C / FFP	NAVSUP	Jul 2022	Dec 2022	250	284.00	Y		
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE)		2023	TBD / TBD	C / FFP	NAVSUP	Apr 2023	Sep 2023	325	289.23	Y		
1.1.4) F8100 MK 62-1 A-Cable Receptacle (CWLD)		2021	TE Connectivity Seacon / ASHAWAY, RI	C / FFP	NAVSUP	Sep 2021	Feb 2022	250	2,040.00	Y		
1.1.4) F8100 MK 62-1 A-Cable Receptacle (CWLD)		2022	TBD / TBD	C / FFP	NAVSUP	May 2022	Oct 2022	250	2,080.00	Y		
1.1.4) F8100 MK 62-1 A-Cable Receptacle (CWLD)		2023	TBD / TBD	C / FFP	NAVSUP	Apr 2023	Sep 2023	325	2,123.08	Y		
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2021	TBD / TBD	C / FFP	NAVSUP	Jul 2022	Jan 2023	475	2,616.84	Y		
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2022	TBD / TBD	C / FFP	NAVSUP	Aug 2022	Feb 2023	475	2,670.00	Y		
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2023	TBD / TBD	C / FFP	NAVSUP	Apr 2023	Oct 2023	525	2,721.90	Y		
1.1.6) F8100 Strong Flex Hose (WW97)		2021	TBD / TBD	C / FFP	NAVSUP	Apr 2022	Oct 2022	250	1,580.00	Y		
1.1.6) F8100 Strong Flex Hose (WW97)		2022	TBD / TBD	C / FFP	NAVSUP	May 2022	Nov 2022	250	1,612.00	Y		
1.1.6) F8100 Strong Flex Hose (WW97)		2023	TBD / TBD	C / FFP	NAVSUP	Apr 2023	Oct 2023	325	1,646.15	Y		
1.1.7) F8100 Igniter (TH01)		2021	Ametek Ameron LLC / Maine	C / FFP	NAVSUP	Sep 2021	Feb 2022	750	754.67	Y		
1.1.7) F8100 Igniter (TH01)		2022	TBD / TBD	C / FFP	NAVSUP	Jun 2022	Nov 2022	775	770.32	Y		
1.1.7) F8100 Igniter (TH01)		2023	TBD / TBD	C / FFP	NAVSUP	Jun 2023	Nov 2023	800	786.25	Y		
1.1.8) F8100 Propellant (WW98)		2021	TBD / TBD	C / FFP	NAVSUP	May 2022	Nov 2022	750	1,920.00	Y		
1.1.8) F8100 Propellant (WW98)		2022	TBD / TBD	C / FFP	NAVSUP	Jul 2022	Jan 2023	775	1,958.71	Y		
1.1.8) F8100 Propellant (WW98)		2023	TBD / TBD	C / FFP	NAVSUP	May 2023	Nov 2023	800	1,998.75	Y		
1.1.9) F8100 Scuttle Valve (SW94)		2021	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Jun 2022	Nov 2022	36	1,083.33	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.9) F8100 Scuttle Valve (SW94)		2022	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Jul 2022	Dec 2022	36	1,111.11	Y		
1.1.9) F8100 Scuttle Valve (SW94)		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Apr 2023	Sep 2023	36	1,138.89	Y		
1.1.10) F8100 Sub Wire Coil (TW92)		2020	Entwistle Company / Hudson, MA	C / FFP	NAVSUP	Aug 2020	Jan 2021	700	4,158.57	Y		
1.1.10) F8100 Sub Wire Coil (TW92)		2021	Entwistle Company / Hudson, MA	C / FFP	NAVSUP	Jul 2021	Dec 2021	750	4,241.33	Y		
1.1.10) F8100 Sub Wire Coil (TW92)		2022	Entwistle Company / Hudson, MA	C / FFP	NAVSUP	Jul 2022	Dec 2022	775	4,326.45	Y		
1.1.10) F8100 Sub Wire Coil (TW92)		2023	TBD / TBD	C / FFP	NAVSUP	Jun 2023	Jan 2024	800	4,412.50	Y		
1.1.11) F8100 Torpedo Wire Coil (SW83)		2020	ENTWISTLE / HUDSON, MA	C / FFP	NAVSUP	Aug 2020	Jan 2021	700	6,441.43	Y		
1.1.11) F8100 Torpedo Wire Coil (SW83)		2021	ENTWISTLE / HUDSON, MA	C / FFP	NAVSUP	Jul 2021	Dec 2021	750	6,570.67	Y		
1.1.11) F8100 Torpedo Wire Coil (SW83)		2022	TBD / TBD	C / FFP	NAVSUP	Jun 2022	Dec 2022	775	6,703.23	Y		
1.1.11) F8100 Torpedo Wire Coil (SW83)		2023	TBD / TBD	C / FFP	NAVSUP	Jun 2023	Dec 2023	800	6,836.25	Y		
1.1.14) F8100 Crossover Batteries (CWRG)		2020	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Aug 2020	Jan 2021	700	2,802.86	Y		
1.1.14) F8100 Crossover Batteries (CWRG)		2021	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Sep 2021	Feb 2022	750	2,860.00	Y		
1.1.14) F8100 Crossover Batteries (CWRG)		2022	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP	Jun 2022	Nov 2022	775	2,917.42	Y		
1.1.14) F8100 Crossover Batteries (CWRG)		2023	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP	Apr 2023	Sep 2023	800	2,975.00	Y		
1.1.23) F8100 WES Expansion Box		2022	Locheed Martin Sippican Inc / Marion, MA	C / FFP	NAVSEA	Jun 2022	Jun 2023	230	15,426.09	Y		
1.1.23) F8100 WES Expansion Box		2023	Locheed Martin Sippican Inc / Marion, MA	C / FFP	NAVSEA	Jun 2023	Jun 2024	230	15,734.78	Y		
1.1.24) F8100 Replacement Warshot Afterbodies ^(†)		2021	SAIC / Bedford, IN	C / FFP	NAVSEA	Sep 2021	Sep 2024	15	1,027K	Y		
1.1.24) F8100 Replacement Warshot Afterbodies ^(†)		2022	SAIC / Bedford, IN	C / FFP	NAVSEA	Jul 2022	Jul 2025	5	1,290K	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3		P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment
		Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020												Fiscal Year 2021												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P

1.1.24) F8100 Replacement Warshot Afterbodies ⁽¹⁾																															
1	2021	NAVY	15	0	15																									A -	15
1	2022	NAVY	5	0	5																										5

						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3										P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment										Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

1.1.24) F8100 Replacement Warshot Afterbodies ⁽¹⁾																													
1	2021	NAVY		15	0	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
1	2022	NAVY		5	0	5																							5

							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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UNCLASSIFIED

Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3										P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment										Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024											Fiscal Year 2025											BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024											Calendar Year 2025											
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N		J U L

1.1.24) F8100 Replacement Warshot Afterbodies ⁽¹⁾																																
1	2021	NAVY	15	0	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1	2022	NAVY	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	0	

						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P
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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment	Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	SAIC - Bedford, IN			100	0	0	36	36	0	0	17	17

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment	P-1 Line Item Number / Title: 3302 / ASW Range Support
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	63.499	4.159	3.997	3.965	0.000	3.965	4.024	4.074	4.157	4.239	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	63.499	4.159	3.997	3.965	0.000	3.965	4.024	4.074	4.157	4.239	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	63.499	4.159	3.997	3.965	0.000	3.965	4.024	4.074	4.157	4.239	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Anti-Submarine Warfare (ASW) Range program provides test and training tracking equipment for both Contiguous United States (CONUS) and Outside Contiguous United States (OCONUS). This equipment is used for ground truth tracking of participants during Fleet training exercises and torpedo firings and directly supports reconstruction and analysis for Undersea Warfare (USW) proficiency assessment and test, evaluation & analysis. The infrastructure supported includes: Southern California Offshore Range (SCORE), Barking Sands Tactical Underwater Range/Barking Sands Underwater Range Extension (BARSTUR/BSURE), Pacific Northwest Range Complex (Dabob and Nanoose), Atlantic Undersea Test and Evaluation Center (AUTEK), Portable Offshore Training Range (POTR), Portable Undersea Training Range (PUTR) and other portable capabilities abroad in support of Forward Deployed Naval Forces (FDFN) training requirements.

The Underwater Tracking Range Equipment (UTRE) Program provides pinger systems for tracking on the Navy's Undersea Fleet Training and Test & Evaluation Ranges. The program provides equipment, installation, and upgrading and modernization of UTRE systems for fleet exercises at the Atlantic Undersea Test & Evaluation Center (AUTEK), Southern California Offshore Range Extension (SCORE) and Barking Sands Tactical Underwater Range (BARSTUR) training ranges. In addition, this budget is for production engineering and product improvement efforts for the tracking instrumentation the Navy's underwater readiness training. The MK28 Service Weapon Target Test (SWTT) provides the Navy the capability to test the explosive train of torpedoes and the reliability of the torpedo warhead. The funding is for equipment, installation, and upgrading and modernization of MK28 systems. This funding is associated with Replenishment Spares JCRF4 ASW Range Support (J3302) for the UTRE and MK28 Programs.

[P5 /]: The Underwater Tracking Range Equipment (UTRE) Program provides pinger systems for tracking on the Navy's Undersea Fleet Training and Test & Evaluation Ranges. The program provides equipment, installation, and upgrading and modernization of UTRE systems for fleet exercises at the Atlantic Undersea Test & Evaluation Center (AUTEK), Southern California Offshore Range Extension (SCORE) and Barking Sands Tactical Underwater Range (BARSTUR) training ranges. In addition, this budget is for production engineering and product improvement efforts for the tracking instrumentation the Navy's underwater readiness training. The MK28 Service Weapon Target Test (SWTT) provides the Navy the capability to test the explosive train of torpedoes and the reliability of the torpedo warhead. The funding is for equipment, installation, and upgrading and modernization of MK28 systems. This funding is associated with Replenishment Spares JCRF4 ASW Range Support (J3302) for the UTRE and MK28 Programs.

[P5 / F4001 - UTRE/PINGER EXERCISE EQUIPMENT]: Underwater tracking equipment is placed in weapons and other underwater vehicles for tracking during training and Test and Evaluation (T&E) exercises, and to ensure safe operation and movement of all craft and weapons on fixed and portable ranges for the Underwater Tracking Range Equipment (UTRE)/Pinger program. Funding is used to procure equipment for T&E exercises in addition to improvement and modernization projects.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment		P-1 Line Item Number / Title: 3302 / ASW Range Support
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>[P5 / F4006 - STATIONARY TARGET EQUIPMENT MK28]: The stationary target equipment includes the MK 28 Targets and all equipment used for conducting Service Weapons Tests (SWT) on in-service and advanced war-shot torpedoes. The SWT is the only test the Navy has to verify the explosive train of lightweight and heavyweight torpedoes. Funding is used to procure target systems and equipment for SWT in addition to improvement and modernization projects.</p> <p>[P5 / Support]: Funding for production engineering and product improvement.</p> <p>[P5 / F4830 - PRODUCTION ENGINEERING - UTRE]: Funds for production engineering efforts performed by a field activity or contractor during the production phase of these projects.</p> <p>[P5 / F4850 - PRODUCT IMPROVEMENT - UTRE]: Product improvement for fixed and portable range and fleet equipment.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment **P-1 Line Item Number / Title:** 3302 / ASW Range Support

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / ASW Range Support [F4001]				- / 63.499	- / 4.159	- / 3.997	- / 3.965	- / 0.000	- / 3.965
P-40	Total Gross/Weapon System Cost				- / 63.499	- / 4.159	- / 3.997	- / 3.965	- / 0.000	- / 3.965

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The Anti-Submarine Warfare (ASW) Range program provides underwater tracking equipment and fleet equipment for use on underwater fixed and portable ranges and for equipment for the Mk28 Service Weapon Target Test.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3	P-1 Line Item Number / Title: 3302 / ASW Range Support	Item Number / Title [DODIC]: 1 / ASW Range Support [F4001]

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	63.499	4.159	3.997	3.965	0.000	3.965
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	63.499	4.159	3.997	3.965	0.000	3.965
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	63.499	4.159	3.997	3.965	0.000	3.965

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) F4001 - UTRE/ PINGER EXERCISE EQUIPMENT	-	-	30.793	-	-	2.219	-	-	1.914	-	-	1.792	-	-	-	-	-	1.792
1.1.2) F4006 - STATIONARY TARGET EQUIPMENT MK28	-	-	19.467	-	-	1.240	-	-	1.325	-	-	1.405	-	-	-	-	-	1.405
<i>Subtotal: Recurring Cost</i>	-	-	50.260	-	-	3.459	-	-	3.239	-	-	3.197	-	-	-	-	-	3.197
<i>Subtotal: Hardware Cost</i>	-	-	50.260	-	-	3.459	-	-	3.239	-	-	3.197	-	-	-	-	-	3.197
Support Cost																		
2.1) F4830 - PRODUCTION ENGINEERING - UTRE	-	-	7.092	-	-	0.350	-	-	0.379	-	-	0.384	-	-	-	-	-	0.384
2.2) F4850 - PRODUCT IMPROVEMENT - UTRE	-	-	6.147	-	-	0.350	-	-	0.379	-	-	0.384	-	-	-	-	-	0.384
<i>Subtotal: Support Cost</i>	-	-	13.239	-	-	0.700	-	-	0.758	-	-	0.768	-	-	-	-	-	0.768
Gross/Weapon System Cost	-	-	63.499	-	-	4.159	-	-	3.997	-	-	3.965	-	-	0.000	-	-	3.965

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 4: Destination Transportation

P-1 Line Item Number / Title:
2410 / First Destination Transportation

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	37.325	4.416	4.023	5.315	0.000	5.315	5.384	5.222	5.360	5.410	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	37.325	4.416	4.023	5.315	0.000	5.315	5.384	5.222	5.360	5.410	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	37.325	4.416	4.023	5.315	0.000	5.315	5.384	5.222	5.360	5.410	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

First Destination Transportation (FDT) delivers material from a procurement source to the first point of use or storage which may be in the Continental United States or overseas. The procurement source may be a supplier outside of the Department of Defense (DoD) supply system or a DoD activity which fabricates new material. FDT also includes transportation from point of origin to point of use or storage when Navy-owned material or equipment is provided to a contractor incident to a Research and Development project or a system/equipment acquisition or modification.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 4: Destination Transportation

P-1 Line Item Number / Title:
2410 / First Destination Transportation

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / FIRST DESTINATION TRANSPORTATION (FDT)				- / 37.325	- / 4.416	- / 4.023	- / 5.315	- / 0.000	- / 5.315
P-40	Total Gross/Weapon System Cost				- / 37.325	- / 4.416	- / 4.023	- / 5.315	- / 0.000	- / 5.315

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
FY 2023 funds are required for transportation costs for shipments of WPN-procured weapons related equipment and material to the first point of use or storage, or as Government Furnished Equipment/ Government Furnished Material (GFE/GFM) provided to a contractor incident to a WPN-funded system/equipment acquisition or modification. Increases from FY22 to FY23 due to increased transportation costs associated with the trucking industry as well as a shortage of truck operators.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 4	P-1 Line Item Number / Title: 2410 / First Destination Transportation	Item Number / Title [DODIC]: 1 / FIRST DESTINATION TRANSPORTATION (FDT)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	37.325	4.416	4.023	5.315	0.000	5.315
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	37.325	4.416	4.023	5.315	0.000	5.315
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	37.325	4.416	4.023	5.315	0.000	5.315

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Support Cost																		
1.1) First Destination Transportation-NAVSUP	-	-	11.034	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.2) First Destination Transportation - NAVAIR (1)	-	-	12.041	-	-	1.750	-	-	1.497	-	-	2.040	-	-	-	-	-	2.040
1.3) First Destination Transportation - NAVSEA	-	-	6.264	-	-	0.952	-	-	0.959	-	-	1.016	-	-	-	-	-	1.016
1.4) First Destination Transportation - SSP (2)	-	-	7.986	-	-	1.714	-	-	1.567	-	-	2.259	-	-	-	-	-	2.259
<i>Subtotal: Support Cost</i>	-	-	37.325	-	-	4.416	-	-	4.023	-	-	5.315	-	-	-	-	-	5.315
Gross/Weapon System Cost	-	-	37.325	-	-	4.416	-	-	4.023	-	-	5.315	-	-	0.000	-	-	5.315

Footnotes:

(1) FY23 increases slightly above inflation. Rising freight costs have been a problem since 2020. Trucking companies began offering huge wage increases to attract drivers to the industry. The lack of drivers has since been complicated by a semi-conductor shortage keeping new trucks from coming on the market, which has raised maintenance costs for existing fleets. The domino effect of the lack of drivers, along with the semi-conductor shortages and newer trucks on the road, has required prudent planning and budgeting for higher shipping costs in the coming years. This has resulted in higher than typical inflation costs for shipping.

(2) FY22 to FY23 increases \$692K. SSP's First Destination Transportation budget increases from FY22 to FY23 due to increased transportation costs associated with the trucking industry as well as a shortage of truck operators. In addition to trucking transportation rates, rail transportation rates for first and second stage rocket motors have increased. This increase funds the shipments based on known quantities of planned Guidance Systems and First and Second Stage Rocket Motors movements as well as items on the ordnance exception list where it is a requirement to use a Transportation Account Code.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 1: Guns and Gun Mounts	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	135.673	12.530	12.461	13.859	0.000	13.859	15.931	15.851	16.260	16.443	-	239.008
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	135.673	12.530	12.461	13.859	0.000	13.859	15.931	15.851	16.260	16.443	-	239.008
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	135.673	12.530	12.461	13.859	0.000	13.859	15.931	15.851	16.260	16.443	-	239.008

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.037	-	-	-	-	-	-	-	-	-	0.037
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY 2023 funding includes \$13.859M for Base Budget Requirements in support of the National Defense Strategy.

This line item provides for initial procurement of weapons as well as the modernization, standardization, and stock replenishment of service-common Small Arms weapons (caliber .50 and below) including required gun mounts, optics, visual augmentation systems, and associated equipment to support Navy-wide training and combat missions worldwide.

This line item meets service-common Small Arms inventory objectives for US Navy forces including the Naval Special Warfare, Naval Expeditionary Combat Command, Naval Construction Units, Marine Corps Security Force Battalion and Master at Arms.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 1: Guns and Gun Mounts

P-1 Line Item Number / Title:
4129 / Small Arms and Weapons

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / EXPEDITIONARY WARFARE	P-5a			- / 61.317	- / 6.701	- / 9.378	- / 8.061	- / 0.000	- / 8.061
P-5	2 / SURFACE WARFARE	P-5a			- / 65.049	- / 5.829	- / 3.083	- / 5.798	- / 0.000	- / 5.798
P-5	3 / STRATEGIC SYSTEMS PROGRAMS (SSP)	P-5a			- / 9.307	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 135.673	- / 12.530	- / 12.461	- / 13.859	- / 0.000	- / 13.859

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
Funding of \$13.859M in FY 2023 supports meeting service-common Small Arms inventory objectives, associated transportation, and production engineering for all US Navy forces including Naval Special Warfare and Naval Expeditionary Combat Command. Funding supports all service-common Small Arms weapons systems including pistols, rifles, shotguns, machine guns, grenade launchers, mortars, rocket launchers, gun mounts, optics, visual augmentation systems and associated equipment.

The FY 2022 enactment includes congressional rescission of \$0.931 million in FY 2021. However, the rescission is not reflected on the P-40. The impact of these rescissions are reflected in the other cost elements.

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 1 / EXPEDITIONARY WARFARE
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	61.317	6.701	9.378	8.061	0.000	8.061
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	61.317	6.701	9.378	8.061	0.000	8.061
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	61.317	6.701	9.378	8.061	0.000	8.061

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - EXPEDITIONARY WARFARE Cost																		
Recurring Cost																		
1.1.1) SSAM/MK50 ^(†)	555,333.33	9	4.998	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) MK48 ^(†)	8,729.41	85	0.742	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) MK48 REFURB ^(†)	5,942.86	35	0.208	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) M107 .50 CAL SNIPER RIFLE ^(†)	12,500.00	2	0.025	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.6) M11 9MM PISTOL ^(†)	700.00	40	0.028	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.7) M9 9MM PISTOL ^(†)	6,855.63	284	1.947	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.8) MK44 7.62MM MINIGUN ^(†)	1,218K	2	2.436	-	-	0.000	73,800.00	6	0.443	-	-	0.000	-	-	0.000	-	-	0.000
1.1.9) MK44 REFURB ^(†)	40,666.67	3	0.122	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.10) EXPEDITIONARY MOUNTS ^(†)	2,750.00	40	0.110	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.11) MK-19 MOD 3 40MM GMG ^(†)	17,222.22	9	0.155	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.12) M4A1 5.56MM CARBINE ^(†)	6,435.06	1,586	10.206	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1						P-1 Line Item Number / Title: 4129 / Small Arms and Weapons						Item Number / Title [DODIC]: 1 / EXPEDITIONARY WARFARE						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.13) M240B 7.62MM MG ^(†)	60,984.62	130	7.928	-	-	0.000	9,000.00	50	0.450	-	-	0.000	-	-	0.000	-	-	0.000
1.1.14) M2A1 ^(†)	14,418.88	339	4.888	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.15) M2A1 COMPONENTS	-	-	7.277	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.16) M18 SERVICE PISTOL ^(†)	200.00	4,100	0.820	200.00	3,000	0.600	200.00	4,248	0.850	-	-	0.000	-	-	0.000	-	-	0.000
1.1.17) M224 60MM MORTAR ^(†)	76,458.33	48	3.670	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.18) M252 81MM MORTAR ^(†)	50,454.55	55	2.775	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.20) M3E1 Carl Gustaf ^(†)	64,741.94	124	8.028	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.21) M3E1 20mm sub caliber adapter ^(†)	6,811.11	90	0.613	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.22) ASR/ MRAD .300 PRC/ Mk22 ^(†)	12,000.00	90	1.080	-	-	0.000	12,000.00	81	0.972	-	-	0.000	-	-	0.000	-	-	0.000
1.1.23) URG 14.5	-	-	0.163	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.25) CROWS II ^(†) (1)	-	-	0.000	340,000.00	9	3.060	272,222.00	20	5.444	350,000.00	14	4.900	-	-	0.000	350,000.00	14	4.900
1.1.26) FCS13RE (MAAWS) ^(†)	-	-	0.000	-	-	0.000	28,000.00	31	0.868	28,000.00	13	0.364	-	-	0.000	28,000.00	13	0.364
1.1.27) MORTAR, 60MM, M8A1, BASEPLATE ^(†)	-	-	0.000	-	-	0.000	6,567.00	35	0.230	-	-	0.000	-	-	0.000	-	-	0.000
1.1.28) SU-289/ VCOG/SCO ^(†)	-	-	0.000	1,450.00	534	0.774	-	-	0.000	1,500.00	665	0.998	-	-	0.000	1,500.00	665	0.998
1.1.29) CREW SERVED WEAPON OPTIC/ MMO ^(†)	-	-	0.000	-	-	0.000	-	-	0.000	3,100.00	563	1.745	-	-	0.000	3,100.00	563	1.745
1.1.30) SU-251 NVGs ^(†)	-	-	0.000	25,000.00	16	0.400	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.31) SU-255 Small Arms Optics ^(†)	-	-	0.000	30,000.00	29	0.870	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	58.219	-	-	5.704	-	-	9.257	-	-	8.007	-	-	0.000	-	-	8.007

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 1 / EXPEDITIONARY WARFARE
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Hardware - EXPEDITIONARY WARFARE Cost</i>	-	-	58.219	-	-	5.704	-	-	9.257	-	-	8.007	-	-	0.000	-	-	8.007
Hardware - TRANSPORTATION ACCOUNT CODE (TAC) Cost																		
Recurring Cost																		
2.1.1) SMALL ARMS TAC	-	-	0.404	-	-	0.050	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.052
<i>Subtotal: Recurring Cost</i>	-	-	0.404	-	-	0.050	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.052
<i>Subtotal: Hardware - TRANSPORTATION ACCOUNT CODE (TAC) Cost</i>	-	-	0.404	-	-	0.050	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.052
Hardware - ENACTED RESCISSION Cost																		
Recurring Cost																		
3.1.1) ENACTED RESCISSION ⁽²⁾	-	-	0.000	-	-	0.931	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	0.000	-	-	0.931	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - ENACTED RESCISSION Cost</i>	-	-	0.000	-	-	0.931	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - EXPEDITIONARY WARFARE Cost																		
4.1) Production Engineering	-	-	1.056	-	-	0.016	-	-	0.071	-	-	0.002	-	-	0.000	-	-	0.002
4.2) 14.5 URG KIT ^(t)	780.00	2,100	1.638	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Support - EXPEDITIONARY WARFARE Cost</i>	-	-	2.694	-	-	0.016	-	-	0.071	-	-	0.002	-	-	0.000	-	-	0.002
Gross/Weapon System Cost	-	-	61.317	-	-	6.701	-	-	9.378	-	-	8.061	-	-	0.000	-	-	8.061

(t) indicates the presence of a P-5a

Footnotes:

(1) CROWS II (for JLTV); overall requirement of 85 total CROWS II systems has been reduced due to a reduction by NAVSPECWARCOM in the platforms they will be mounted on. New overall requirement is 60 systems total. New spread is reflected in the exhibit.

(2) The FY 2022 enactment includes congressional rescission of \$0.931 million in FY 2021. However, the rescission is not reflected on the P-40. The impact of these rescissions are reflected in the other cost elements.

UNCLASSIFIED

Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 1 / EXPEDITIONARY WARFARE
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) SSAM/MK50		2017	Kongsberg / Johnstown, PA	C / FFP	PICATINNY	May 2017	Jun 2017	3	555,333.33	N		Jan 2017
1.1.1) SSAM/MK50		2018	Kongsberg / Johnstown, PA	C / FFP	PICATINNY	Mar 2018	Aug 2018	6	555,333.33	N		Jan 2018
1.1.2) MK48		2017	FN / Columbia, SC	C / IDDQ	NSWC CRANE	Apr 2017	Sep 2017	25	8,075.00	N		Jan 2017
1.1.2) MK48		2018	FN / Columbia, SC	C / IDDQ	NSWC CRANE	Apr 2018	Sep 2018	60	9,000.00	N		Jan 2018
1.1.3) MK48 REFURB		2017	FN / Columbia, SC	WR	NSWC CRANE	Jun 2017	Nov 2017	35	5,930.00	N		
1.1.4) M107 .50 CAL SNIPER RIFLE		2017	BARRETT / Murfreesboro, TN	C / IDDQ	NSWC CRANE	Jun 2017	Jun 2017	2	12,500.00	N		Oct 2016
1.1.6) M11 9MM PISTOL		2017	SIGARMS / Exeter, NH	C / FFP	TACOM LCMC	Jun 2017	Jan 2018	40	700.00	N		Oct 2016
1.1.7) M9 9MM PISTOL		2016	BERETTA / ACCOKEEK, MD	C / FFP	ROCK ISLAND ARSENAL	Jun 2016	Oct 2016	284	685.00	N		Jan 2016
1.1.8) MK44 7.62MM MINIGUN		2017	DILLON / SCOTTSDALE, AZ	C / FFP	NSWC CRANE	Mar 2017	Jul 2017	2	72,500.00	N		Jan 2016
1.1.9) MK44 REFURB		2017	NSWC / CRANE, IN	WR	NSWC CRANE	Mar 2017	Aug 2017	3	40,800.00	N		
1.1.10) EXPEDITIONARY MOUNTS		2017	FRASER / LEXINGTON, MI	C / IDIQ	NSWC CRANE	Jun 2017	Jul 2017	40	2,748.00	N		Jan 2017
1.1.11) MK-19 MOD 3 40MM GMG		2017	FN / COLUMBIA, SC	C / IDIQ	PICATINNY	Jun 2017	Jun 2019	9	17,206.00	N		Oct 2016
1.1.12) M4A1 5.56MM CARBINE		2016	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	Mar 2016	Apr 2017	374	1,451.00	N		Oct 2015
1.1.12) M4A1 5.56MM CARBINE		2017	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	Aug 2017	Sep 2018	262	1,451.00	N		May 2017
1.1.12) M4A1 5.56MM CARBINE		2019	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	Mar 2020	Apr 2021	750	1,451.00	N		Oct 2018
1.1.12) M4A1 5.56MM CARBINE		2020	COLT / HARTFORD, CT	C / TBD	TACOM LCMC	Oct 2019	Nov 2020	200	750.00	N		
1.1.13) M240B 7.62MM MG		2016	FN / COLUMBIA, SC	C / IDIQ	TACOM LCMC	Dec 2015	Jan 2018	73	86,000.00	N		Oct 2015
1.1.13) M240B 7.62MM MG		2017	FN / COLUMBIA, SC	C / IDIQ	TACOM LCMC	Jun 2017	Jul 2019	57	86,000.00	N		Oct 2016
1.1.14) M2A1		2017	US Ordnance / McCarran, NV	C / FFP	PICATINNY	Dec 2017	Dec 2018	146	14,975.00	N		Oct 2017
1.1.14) M2A1		2018	US Ordnance / McCarran, NV	C / FFP	PICATINNY	Dec 2017	Dec 2018	95	14,000.00	N		Oct 2017
1.1.14) M2A1		2019	US Ordnance / McCarran, NV	C / FFP	PICATINNY	Oct 2018	Oct 2019	48	14,000.00	N		
1.1.14) M2A1		2020	US Ordnance / McCarran, NV	C / TBD	PICATINNY	Mar 2020	Mar 2021	50	14,000.00	N		
1.1.16) M18 SERVICE PISTOL		2019	SIGARMS / EXTER, NH	C / FFP	PICATINNY	Dec 2018	Dec 2018	2,100	200.00	N		Oct 2018
1.1.16) M18 SERVICE PISTOL		2020	SIGARMS / EXTER, NH	C / FFP	PICATINNY	Mar 2020	Mar 2020	2,000	200.00	N		
1.1.16) M18 SERVICE PISTOL		2021	SIGARMS / EXTER, NH	C / TBD	PICATINNY	Mar 2021	Mar 2021	3,000	200.00	N		
1.1.17) M224 60MM MORTAR		2018	Connectec Co. Inc / Irvin, CA	C / IDIQ	PICATINNY	Jan 2018	Jan 2018	1	144,000.00	Y		Oct 2017
1.1.17) M224 60MM MORTAR		2019	Connectec Co. Inc / Irvin, CA	C / IDIQ	PICATINNY	Jan 2019	Jan 2019	25	144,000.00	Y		Oct 2018
1.1.17) M224 60MM MORTAR	✓	2019	Connectec Co. Inc / Irvin, CA	C / IDIQ	PICATINNY	Jan 2019	Jan 2019	22	70,000.00	N		Oct 2018
1.1.18) M252 81MM MORTAR		2018	Connectec Co. Inc / Irvin, CA	C / FFP	PICATINNY	Jan 2018	Jan 2018	25	51,000.00	Y		Oct 2017
1.1.18) M252 81MM MORTAR	✓	2018	Connectec Co. Inc / Irvin, CA	C / FFP	PICATINNY	Jan 2018	Jan 2018	30	50,000.00	Y		Oct 2017
1.1.20) M3E1 Carl Gustaf		2019	Saab Bofors Dynamics / Sweden	C / FFP	PICATINNY	Dec 2018	Jun 2019	64	72,000.00	Y		
1.1.20) M3E1 Carl Gustaf		2020	Saab Bofors Dynamics / Sweden	C / FFP	PICATINNY	Dec 2019	Jun 2020	60	57,000.00	Y		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 1 / EXPEDITIONARY WARFARE
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.21) M3E1 20mm sub caliber adapter		2020	Saab Bofors Dynamics / Sweden	C / FFP	PICATINNY	Mar 2020	Sep 2021	90	6,813.00	N	Jan 2022	
1.1.22) ASR/MRAD .300 PRC/ Mk22		2020	Barrett Manufacturing / Murfreesboro, TN	C / FFP	PICATINNY	May 2020	Nov 2021	90	12,000.00	N		
1.1.22) ASR/MRAD .300 PRC/ Mk22		2022	Barrett Manufacturing / Murfreesboro, TN	C / TBD	** NO PCO **	Oct 2021	Apr 2023	81	12,000.00	N		
1.1.25) CROWS II		2021	KONGSBERG / Jonhstown, PA	C / FFP	PICATINNY NJ	Oct 2020	Apr 2022	9	340,000.00	N		
1.1.25) CROWS II		2022	KONGSBERG / Jonhstown, PA	C / FFP	PICATINNY NJ	Apr 2022	Oct 2023	20	272,222.00	N		
1.1.25) CROWS II		2023	KONGSBERG / Jonhstown, PA	C / FFP	PICATINNY NJ	Apr 2023	Oct 2024	14	350,000.00	N		
1.1.26) FCS13RE (MAAWS)		2022	AIMPOINT AB / Malmö, Sweden	MIPR	DLA, Philadelphia, PA	Jun 2022	Jun 2022	31	28,000.00	Y		
1.1.26) FCS13RE (MAAWS)		2023	AIMPOINT AB / Malmö, Sweden	MIPR	DLA, Philadelphia, PA	Apr 2023	Apr 2023	13	28,000.00	Y		
1.1.27) MORTAR, 60MM, M8A1, BASEPLATE		2022	GENERAL DYNAMICS / GARLAND, TX	MIPR	DLA	Jul 2022	Jul 2022	35	6,567.00	Y		
1.1.28) SU-289/VCOG/SCO		2021	TRIJICON / Wixom, MI	MIPR	Quantico, VA	Jan 2021	Jul 2022	534	1,450.00	N		
1.1.28) SU-289/VCOG/SCO		2023	TRIJICON / Wixom, MI	MIPR	Quantico, VA	Jan 2023	Jul 2024	665	1,500.00	N		
1.1.29) CREW SERVED WEAPON OPTIC/ MMO		2023	TRIJICON / Wixom, MI	C / IDIQ	PICATINNY, NJ	Jan 2023	Jul 2023	563	3,100.00	N		
1.1.30) SU-251 NVGs		2021	ELBIT SYSTEMS OF AMERICA / ROANOKE, VA	C / FFP	Roanoke, VA	Jul 2021	Jul 2021	16	25,000.00	Y		
1.1.31) SU-255 Small Arms Optics		2021	FLIR SYSTEMS INC / FREEPORT, PA	C / FFP	MECHANICSBURG, PA	Aug 2021	Aug 2021	29	30,000.00	Y		
4.2) 14.5 URG KIT		2020	DANIEL DEFENSE / Black Creek, GA	C / FFP	PICATINNY	Jan 2020	Jul 2021	2,100	780.00	N		

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 2 / SURFACE WARFARE
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	65.049	5.829	3.083	5.798	0.000	5.798
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	65.049	5.829	3.083	5.798	0.000	5.798
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	65.049	5.829	3.083	5.798	0.000	5.798

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - SURFACE WARFARE Cost																		
Recurring Cost																		
1.1.1) MK44 REFURB ^(†)	41,000.00	1	0.041	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) M590A1 12 GAUGE SHOTGUN ^(†)	500.00	4,000	2.000	500.00	2,504	1.252	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) M4A1 5.56MM CARBINE ^(†)	3,043.03	2,045	6.223	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) M240B 7.62MM MG ^(†)	75,653.74	361	27.311	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) M9 9MM PISTOL ^(†)	9,717.39	230	2.235	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.6) M2HB REFURB/M2A1 QCB CONVO KITS ^(†)	5,072.20	277	1.405	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.7) M2A1 COMPONENTS	27,275.68	555	15.138	-	-	0.000	14,000.00	45	0.630	-	-	0.000	-	-	0.000	-	-	0.000
1.1.8) M18 SERVICE PISTOL ^(†)	200.00	39,900	7.980	200.00	9,000	1.800	200.00	8,000	1.600	-	-	0.000	-	-	0.000	-	-	0.000
1.1.10) M320A1 40MM GRENADE LAUNCHER ^(†)	-	-	0.000	2,000.00	687	1.374	2,000.00	400	0.800	2,000.00	100	0.200	-	-	0.000	2,000.00	100	0.200
1.1.12) SU-289/VCOG/SCO ^(†)	-	-	0.000	1,450.00	750	1.088	-	-	0.000	1,500.00	595	0.893	-	-	0.000	1,500.00	595	0.893

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Exhibit P-5, Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 2 / SURFACE WARFARE
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.13 Crew Served Weapons Optics MMO ^(†)	-	-	0.000	3,100.00	85	0.264	-	-	0.000	3,100.00	1,500	4.650	-	-	0.000	3,100.00	1,500	4.650
<i>Subtotal: Recurring Cost</i>	-	-	62.333	-	-	5.778	-	-	3.030	-	-	5.743	-	-	0.000	-	-	5.743
<i>Subtotal: Hardware - SURFACE WARFARE Cost</i>	-	-	62.333	-	-	5.778	-	-	3.030	-	-	5.743	-	-	0.000	-	-	5.743
Hardware - TRANSPORTATION ACCOUNT CODE (TAC) Cost																		
Recurring Cost																		
2.1.1) SMALL ARMS TAC	-	-	0.300	-	-	0.050	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.052
<i>Subtotal: Recurring Cost</i>	-	-	0.300	-	-	0.050	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.052
<i>Subtotal: Hardware - TRANSPORTATION ACCOUNT CODE (TAC) Cost</i>	-	-	0.300	-	-	0.050	-	-	0.050	-	-	0.052	-	-	0.000	-	-	0.052
Support - SURFACE WARFARE Cost																		
3.1) PRODUCTION ENGINEERING	-	-	2.416	-	-	0.001	-	-	0.003	-	-	0.003	-	-	0.000	-	-	0.003
<i>Subtotal: Support - SURFACE WARFARE Cost</i>	-	-	2.416	-	-	0.001	-	-	0.003	-	-	0.003	-	-	0.000	-	-	0.003
Gross/Weapon System Cost	-	-	65.049	-	-	5.829	-	-	3.083	-	-	5.798	-	-	0.000	-	-	5.798

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 2 / SURFACE WARFARE
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MK44 REFURB		2017	FN / Columbia, SC	WR	NSWC CRANE	Mar 2017	Mar 2017	1	40,800.00	N		
1.1.2) M590A1 12 GAUGE SHOTGUN		2020	MOSSBERG / NEW HAVEN, CT	C / FFP	PICATINNY	Oct 2019	Jan 2020	4,000	500.00	N		
1.1.2) M590A1 12 GAUGE SHOTGUN		2021	MOSSBERG / NEW HAVEN, CT	C / FFP	PICATINNY	Oct 2020	Jan 2021	2,504	500.00	N		
1.1.3) M4A1 5.56MM CARBINE		2016	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	May 2017	Jun 2018	345	4,236.43	N		Oct 2016
1.1.3) M4A1 5.56MM CARBINE		2018	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	Jan 2018	Feb 2019	1,000	4,236.43	N		Oct 2017
1.1.3) M4A1 5.56MM CARBINE		2019	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	Jan 2019	Feb 2020	500	750.00	N		Oct 2018
1.1.3) M4A1 5.56MM CARBINE		2020	COLT / HARTFORD, CT	C / FFP	TACOM LCMC	Oct 2019	Nov 2020	200	750.00	N		
1.1.4) M240B 7.62MM MG		2016	FN / COLUMBIA, SC	C / IDIQ	TACOM LCMC	Dec 2015	Jan 2018	192	75,635.74	N		Oct 2015
1.1.4) M240B 7.62MM MG		2017	FN / COLUMBIA, SC	C / IDIQ	PICATINNY	Jun 2017	Jul 2019	169	75,635.74	N		Oct 2016
1.1.5) M9 9MM PISTOL		2016	BERETTA / ACCOKEEK, MD	C / FFP	TACOM LCMC	Jun 2016	Oct 2016	230	9,717.39	N		Jan 2016
1.1.6) M2HB REFURB/M2A1 QCB CONVO KITS		2017	NSWC / CRANE, IN	WR	NSWC CRANE	Jun 2017	Oct 2017	277	5,073.00	N		
1.1.8) M18 SERVICE PISTOL		2018	SIGARMS / Exeter, NH	C / FFP	PICATINNY	Dec 2017	Dec 2017	14,000	200.00	N		Oct 2017
1.1.8) M18 SERVICE PISTOL		2019	SIGARMS / Exeter, NH	C / FFP	PICATINNY	Dec 2018	Dec 2018	12,900	200.00	N		Oct 2018
1.1.8) M18 SERVICE PISTOL		2020	SIGARMS / Exeter, NH	C / FFP	PICATINNY	Dec 2019	Dec 2019	13,000	200.00	N		Oct 2019
1.1.8) M18 SERVICE PISTOL		2021	SIGARMS / Exeter, NH	C / FFP	PICATINNY	Jul 2021	Jul 2021	9,000	200.00	N		Oct 2020
1.1.8) M18 SERVICE PISTOL		2022	SIGARMS / Exeter, NH	C / FFP	PICATINNY	Apr 2022	Apr 2022	8,000	200.00	N		Oct 2021
1.1.10) M320A1 40MM GRENADE LAUNCHER		2021	CAPCO, LLC / Grand Junction, CO	C / FFP	PICATINNY	Jul 2021	Jan 2023	687	2,000.00	N	Aug 2023	
1.1.10) M320A1 40MM GRENADE LAUNCHER		2022	CAPCO, LLC / Grand Junction, CO	C / FFP	PICATINNY	Oct 2021	Apr 2023	400	2,000.00	N	Apr 2023	
1.1.10) M320A1 40MM GRENADE LAUNCHER		2023	CAPCO, LLC / Grand Junction, CO	C / FFP	PICATINNY	Oct 2022	Apr 2024	100	2,000.00	N		
1.1.12) SU-289/VCOG/SCO		2021	TRIJICON / Wixom, MI	MIPR	Quantico, VA	Jan 2021	Jul 2022	750	1,450.00	N		
1.1.12) SU-289/VCOG/SCO		2023	TRIJICON / Wixom, MI	MIPR	Quantico, VA	Jan 2023	Jul 2024	595	1,500.00	N		
1.1.13) Crew Served Weapons Optics MMO		2021	TRIJICON / Wixom, MI	C / IDIQ	PICATINNY, NJ	Jan 2021	Jul 2022	85	3,100.00	N		
1.1.13) Crew Served Weapons Optics MMO		2023	TRIJICON / Wixom, MI	C / IDIQ	PICATINNY, NJ	Jan 2023	Jul 2024	1,500	3,100.00	N		

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 3 / STRATEGIC SYSTEMS PROGRAMS (SSP)

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				9.307	0.000	0.000	0.000	0.000	0.000
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				9.307	0.000	0.000	0.000	0.000	0.000
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				9.307	0.000	0.000	0.000	0.000	0.000
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - STRATEGIC SYSTEMS PROGRAMS Cost																		
Recurring Cost																		
1.1.1) M4A1 Suppressor ^(†)	1,120.19	1,040	1.165	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) M4A1 Accessories	-	-	0.196	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) AN/PVQ-31B (RCOM4) ^(†)	888.83	1,889	1.679	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) AN/PEQ-16 ^(†)	1,856.54	1,889	3.507	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) M240B Machine Gun Accessories	-	-	0.091	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.6) M9A1 Pistol Accessories/ Components	-	-	0.020	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.7) AN/PVS-14 ^(†)	3,752.84	352	1.321	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.8) AN/PVS-14 Conversion Kits	-	-	0.039	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.9) AN/PAS-13G (V) ¹ (†)	8,158.23	158	1.289	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	9.307	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - STRATEGIC SYSTEMS PROGRAMS Cost</i>	-	-	9.307	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1	P-1 Line Item Number / Title: 4129 / Small Arms and Weapons	Item Number / Title [DODIC]: 3 / STRATEGIC SYSTEMS PROGRAMS (SSP)
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	9.307	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 1			P-1 Line Item Number / Title: 4129 / Small Arms and Weapons					Item Number / Title [DODIC]: 3 / STRATEGIC SYSTEMS PROGRAMS (SSP)				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) M4A1 Suppressor		2017	USMC / Quantico, VA	MIPR	Quantico, VA	May 2017	Jan 2019	1,040	1,120.19	N		
1.1.3) AN/PVQ-31B (RCOM4)		2016	USMC / Quantico, VA	MIPR	Quantico, VA	Jun 2016	Jun 2017	849	872.79	N		
1.1.3) AN/PVQ-31B (RCOM4)		2017	USMC / Quantico, VA	MIPR	Quantico, VA	May 2017	May 2018	1,040	902.03	N		
1.1.4) AN/PEQ-16		2016	USMC / Quantico, VA	MIPR	Quantico, VA	Jun 2016	Jun 2017	849	1,836.74	N		
1.1.4) AN/PEQ-16		2017	USMC / Quantico, VA	MIPR	Quantico, VA	May 2017	May 2018	1,040	1,873.08	N		
1.1.7) AN/PVS-14		2017	USMC / Quantico, VA	MIPR	Quantico, VA	May 2017	May 2018	352	3,752.72	N		
1.1.9) AN/PAS-13G (V) 1		2017	USMC / Quantico, VA	MIPR	Quantico, VA	May 2017	May 2018	158	8,160.31	N		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts

P-1 Line Item Number / Title:
4205 / Close-In Wpns Sys (CIWS) Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,800.411	41.147	6.274	2.655	0.000	2.655	28.982	16.933	17.460	17.467	2.144	1,933.473
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,800.411	41.147	6.274	2.655	0.000	2.655	28.982	16.933	17.460	17.467	2.144	1,933.473
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,800.411	41.147	6.274	2.655	0.000	2.655	28.982	16.933	17.460	17.467	2.144	1,933.473

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Phalanx Close-In Weapon System (CIWS) is an autonomous combat system that searches, detects, tracks (radar and electro-optic), and engages threats with a 20mm Gatling gun capable of firing 4,500 tungsten penetrator rounds per minute. Integral to ship self-defense and the anti-air warfare "defense-in-depth" concept, CIWS provides terminal defense against anti-ship missiles and high-speed aircraft penetrating other fleet defenses. Phalanx CIWS can operate autonomously or be integrated with a ship's combat system.

The Block 1B configuration provides further defense against asymmetric threats such as small, fast surface craft, low slow-flying fixed and rotary-winged aircraft, and unmanned aerial vehicles through the addition of an integrated Forward-Looking Infra-Red (FLIR) sensor. Block 1B also incorporates an Optimized Gun Barrel (OGB) for tighter ordnance dispersion. Enhanced Lethality Cartridges (ELC) can be used with the OGB for improved target penetration.

The CIWS SeaRAM is a CIWS Phalanx Block 1B with the 20mm Gatling gun removed and replaced by an eleven round guide that utilizes the Rolling Airframe Missile (RAM) Block 1A or Block 2 missiles for extended Anti-Ship Missile coverage. The resulting system is designated MK 15 Mod 31/32 CIWS SeaRAM and shares a minimum of 85% hardware and software commonality of the CIWS Phalanx system. CIWS SeaRAM is installed on select LCS class ships and ROTA based Guided Missile Destroyers (DDGs).

The CIWS RAM Defense Capability (CRDC) is fielded aboard select Nimitz Class Carriers (CVN).

[DT6IN/DT8IN]: Installation funding includes all planning and execution requirements for ship installations. Planning efforts include Design Service Allocation (DSA) efforts associated with the planning yard ship checks, Ship Installation Drawing (SID) development and Ship Selected Record (SSR) updates. Execution efforts include installation on-site support, shipyard support services, installation material procurement, and Alteration Installation Team (AIT) efforts.

[P5 / DT001 CIWS BLOCK 1B]: This budget provides for procurement/install of CRDC (CIWS RAM Defense Capability) to improve Terminal Self Defense Capability. The CRDC is fielded aboard select Nimitz Class CVN. In future years, this budget will provide for terminal defense capability on LHA/LHD Class Ships. This line provides for Hardware procurement, installation hardware and labor for AIT, In Service Engineering Agent (ISEA), contractor support and Integrated Logistics Support (ILS). Additionally, this budget provides for development and fielding of future Engineering Change Proposals (ECPs) and Ordnance Alterations (ORDALTS).

In FY23 this budget supports ECPs and ORDALT efforts.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts **P-1 Line Item Number / Title:** 4205 / Close-In Wpns Sys (CIWS) Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Close-In Wpns Sys (CIWS) Mods				- / 476.970	- / 32.147	- / 6.274	- / 2.655	- / 0.000	- / 2.655
P-3a	1 / Block 1B Baseline 2 Radar Upgrades (ECP/ORDALT)				- / 187.359	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / CIWS Block 1 B (Phalanx CIWS Block 1)				- / 1,136.082	- / 9.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	Total Gross/Weapon System Cost				- / 1,800.411	- / 41.147	- / 6.274	- / 2.655	- / 0.000	- / 2.655

Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Close-In Wpns Sys (CIWS) Mods				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Block 1B Baseline 2 Radar Upgrades (ECP/ORDALT)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 187.359
P-3a	2 / CIWS Block 1 B (Phalanx CIWS Block 1)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,145.082
P-40	Total Gross/Weapon System Cost				- / 28.982	- / 16.933	- / 17.460	- / 17.467	- / 2.144	- / 1,933.473

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

There are 248 U.S. (USN/USCG) shipboard systems, 4 trainers, 3 Engineering Development Module (EDM)/Periodic Conformance Inspection (PCI) mounts procured in the Program of Record.

In prior years, this line provided for CRDC hardware procurement, installation hardware and labor for AIT, In Service Engineering Agent (ISEA), contractor support and initial Integrated Logistics Support (ILS). This budget provides for development and fielding of future Engineering Change Proposals (ECPs) and Ordnance Alterations (ORDALT).

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2		P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods
		Item Number / Title [DODIC]: 1 / Close-In Wpns Sys (CIWS) Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	476.970	32.147	6.274	2.655	0.000	2.655
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	476.970	32.147	6.274	2.655	0.000	2.655
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	476.970	32.147	6.274	2.655	0.000	2.655

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - DT001 CIWS BLOCK 1B Cost																		
Recurring Cost																		
1.1.1) Trainer Installation	74,250.00	4	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) ECP/ORDALT (1)	-	-	45.950	-	-	7.305	-	-	3.238	-	-	2.655	-	-	0.000	-	-	2.655
1.1.3) TRAINER UPGRADE/ CONVERSION	1,908K	4	7.633	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) TRAINER	1,916K	4	7.666	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) BLOCK 1B RM&A ROADMAP (2)	-	-	100.968	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.6) GRAY RADOMES	-	-	1.880	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.7) PRODUCTION ENGINEERING (3)	-	-	125.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.8) Sensor Upgrades (4)	-	-	110.489	-	-	24.842	-	-	3.036	-	-	0.000	-	-	0.000	-	-	0.000
1.1.9) SeaRAM ROTA DDG	-	-	65.760	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.10) CG Modernization	-	-	10.900	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	<i>476.970</i>	-	-	<i>32.147</i>	-	-	<i>6.274</i>	-	-	<i>2.655</i>	-	-	<i>0.000</i>	-	-	<i>2.655</i>
<i>Subtotal: Hardware - DT001 CIWS BLOCK 1B Cost</i>	-	-	<i>476.970</i>	-	-	<i>32.147</i>	-	-	<i>6.274</i>	-	-	<i>2.655</i>	-	-	<i>0.000</i>	-	-	<i>2.655</i>

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Exhibit P-5, Cost Analysis: PB 2023 Navy												Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods						Item Number / Title [DODIC]: 1 / Close-In Wpns Sys (CIWS) Mods					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	-	-	476.970	-	-	32.147	-	-	6.274	-	-	2.655	-	-	0.000	-	-	2.655

Footnotes:

- (1) In FY21 program received \$4M for Phalanx SEARAM Weapons Computer Control Upgrade to address obsolescence of key components.
- (2) Block 1B RM&A procurements cancelled.
- (3) Production Engineering efforts associated with RM&A procurements cancelled.
- (4) 1.1.8 Sensor Upgrades - The CIWS RAM Defense Capability (CRDC) is fielded aboard select CVN 68 NIMITZ class. In future years, this line will provide for terminal defense capability on Landing Helicopter Assault/Landing Helicopter Dock Class ships. This line provides for hardware procurement, installation hardware and labor for AIT, ISEA, contractor support and initial ILS support.

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Exhibit P-3a, Individual Modification: PB 2023 Navy	Date: April 2022
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods	Modification Number / Title: 1 / Block 1B Baseline 2 Radar Upgrades
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	187.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	187.359
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	187.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	187.359
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	187.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	187.359

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The CIWS Block 1B Baseline 2 Radar Upgrade (RUG) Kit is required for CGs, CVNs, DDGs, LCCs, LHAs, LHDs, LPDs, LSDs and WMSLs platforms. The CIWS Block 1B Baseline 2 RUG kit is new state of the art digital radar that provides improved performance and increased reliability. It mitigates 200 obsolete components inherent in the existing analog radar by introducing advanced COTS-based signal processing coupled with new low noise signal source. It provides a 2x sensitivity increase along with expanded Doppler (velocity) coverage required for detection and tracking of advanced ASCM and asymmetric threats, provides a 10% increase in system level reliability and provides a 15% reduction in sailor man-hours required for CIWS planned system maintenance.

FY 2016 was the last year of procurement for Radar Upgrade (RUG) Kits.

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Exhibit P-3a, Individual Modification: PB 2023 Navy										Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods						Modification Number / Title: 1 / Block 1B Baseline 2 Radar Upgrades			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: CIWS Block 1B Block 1B Baseline 2 Radar Upgrades				Modification Type: ECP/ORDALT				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> Block 1B Baseline 2 Radar Upgrades													
B Kits													
Recurring													
1.1.1) Block 1B Baseline 2 Radar Upgrades - Organic	259 / 187.359	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	259 / 187.359	
<i>Subtotal: Recurring</i>	- / 187.359	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 187.359	
<i>Subtotal: Block 1B Baseline 2 Radar Upgrades</i>	259 / 187.359	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	259 / 187.359	
<i>Subtotal: Procurement, All Modification Items</i>	- / 187.359	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 187.359	
Installation													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
Total													
Total Cost (Procurement + Support + Installation)	187.359	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	187.359	

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Exhibit P-3a, Individual Modification: PB 2023 Navy					Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods			Modification Number / Title: 1 / Block 1B Baseline 2 Radar Upgrades	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Modification Item 1 of 1: Block 1B Baseline 2 Radar Upgrades							
Manufacturer Information							
Manufacturer Name: Raytheon CO				Manufacturer Location: Louisville KY			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 12			
Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates							
Delivery Dates							

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods	Modification Number / Title: 2 / CIWS Block 1 B

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,136.082	9.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,145.082
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,136.082	9.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,145.082
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,136.082	9.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,145.082

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Block 1B mount includes the addition of a thermal imager, an automatic acquisition video tracker, and stabilization system for the tracker. The upgrade is essential to provide the Fleet capability against small high speed surface threats and low speed air threats.

[CIWS Block 1B] Installation schedule reflects the installation of the CIWS Block 1B and the modification kits CIWS Block 1B conversion upgrade. These 2 cost elements are incorporated into the mount at the factory and the complete mount is installed. It also includes eight SeaRAM installations for Rota-based DDGs (in FY19-FY21) procured under separate budget line items. The budget also provides for the Design Service Allocation (DSA) efforts associated with the planning yard ship checks, Ship Installation Drawing (SID) development, installation on-site support and Ship Selected Record (SSR) updates.

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Exhibit P-3a, Individual Modification: PB 2023 Navy										Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods						Modification Number / Title: 2 / CIWS Block 1 B			
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Models of Systems Affected: DT001 CIWS Block 1B CIWS Block 1B				Modification Type: Phalanx CIWS Block 1				Related RDT&E PEs:					
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Procurement													
<i>Modification Item 1 of 1:</i> CIWS Block 1 B													
B Kits													
Non-Recurring													
1.1.1) CIWS Block 1B - NonOrganic	239 / 505.717	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	239 / 505.717	
1.1.2) Modifications Kits CIWS Block 1B Conversion and Upgrade - Organic	- / 1464.686	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1464.686	
<i>Subtotal: Non-Recurring</i>	- / 970.403	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 970.403	
<i>Subtotal: CIWS Block 1 B</i>	239 / 970.403	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	239 / 970.403	
<i>Subtotal: Procurement, All Modification Items</i>	- / 970.403	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 970.403	
Installation													
<i>Modification Item 1 of 1:</i> CIWS Block 1 B	- / 165.679	- / 9.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 174.679	
<i>Subtotal: Installation</i>	- / 165.679	- / 9.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 174.679	
Total													
Total Cost (Procurement + Support + Installation)	1,136.082	9.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,145.082	

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Exhibit P-3a, Individual Modification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods	Modification Number / Title: 2 / CIWS Block 1 B
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: CIWS Block 1 B

Manufacturer Information

Manufacturer Name: Raytheon Co	Manufacturer Location: Louisville KY
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Administrative Leadtime (in Months): 0	Production Leadtime (in Months): 26
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Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Jun 2021						
Delivery Dates	Aug 2023						

Installation Information

Method of Implementation: Non-Recurring:: Installation Name: BKits

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	245 / 165.679	2 / 9.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	247 / 174.679
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	245 / 165.679	2 / 9.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	247 / 174.679

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	236	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	236	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts

P-1 Line Item Number / Title:
4206 / Coast Guard Weapons

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	260.283	43.150	45.958	34.259	0.000	34.259	56.292	54.665	50.579	51.283	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	260.283	43.150	45.958	34.259	0.000	34.259	56.292	54.665	50.579	51.283	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	260.283	43.150	45.958	34.259	0.000	34.259	56.292	54.665	50.579	51.283	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.634	0.630	0.722	-	0.722	0.734	0.751	0.768	0.778	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Coast Guard Weapons line funds the gun weapon systems of the Navy-Type/Navy-Owned Coast Guard Combat System Suite for the United States Coast Guard (USCG) cutters under the Coast Guard Surface Acquisition Program. Under inter-service agreement (delineated in OPNAVINST 4000.79(Series)), Department of Navy (DON) plans, programs, and budgets for specific Navy military equipment, systems and logistic support requirements for Coast Guard units to ensure the Coast Guard is prepared to execute naval warfare tasks in consonance with US Navy units. Ship construction and installation costs are funded under the Department of Homeland Security appropriation.

The Combat System Suite including weapons and sensors will be aligned with future naval ship building programs to support commonality among the two Service's systems and meet National Fleet objectives. The Combat System Suite must compliment and integrate with Navy Combat Systems. The suite is an appropriate balance of equipment to ensure the Coast Guard is prepared to accomplish the assigned Naval Operational Capabilities in concert with US Navy units.

The 57mm MK 110 Gun is the primary weapon system of the Offshore Patrol Cutter (OPC) and National Security Cutter (NSC), and the MK160 Gun Control System is a required gun control component for each 57mm MK 110 gun mount. The MK 38 Machine Gun System is the primary weapon system of the Fast Response Cutter (FRC), Polar Security Cutter (PSC) and Medium Range Endurance Cutters (WMEC) and secondary AT/FP weapon system for the Offshore Patrol Cutter (OPC). These weapon systems, as well as their integration with the combat systems and sensors of each supported hull, are critical to their self-defense and offensive capabilities. These weapon systems, as well as their integration with the combat systems and sensors of each supported hull, are critical to their self-defense and offensive capabilities.

[P5 / CG002 MK 110 GUN]: Provides the 57mm MK 110 gun to engage surface threats, independently or in cooperation with other forces, achieving mission kill on high-speed coastal patrol craft beyond small and intermediate caliber gunfire effective range. Includes gun mount, equipment procurement, recurring engineering, and ILS support for the United States Coast Guard National Security Cutter (NSC), aka the Maritime Security Cutter, Large (WMSL), and the Offshore Patrol Cutter (OPC), aka the Maritime Security Cutter, Medium (WMSM), in accordance with OPNAVINST 4000.79(Series) and the Naval Operational Capabilities (NOC) document.

[P5 / CG003 MK 160 GCS]: Provides the MK 160 Gun Computer System (GCS) including equipment procurement, production support, systems engineering, data, and software and test support for the National Security Cutter (NSC), aka the Maritime Security Cutter, Large (WMSL), and the Offshore Patrol Cutter (OPC), aka the Maritime Security Cutter, Medium (WMSM). The MK 160 GCS is required to plan and direct surface threat engagements including the capability to fire warning shots, disabling fire and achieve mission kill against these threats in accordance with National Fleet Policy, OPNAVINST 4000.79(Series), and the Naval Operational Capabilities (NOC) document.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts		P-1 Line Item Number / Title: 4206 / Coast Guard Weapons
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>[P5 / CG004 MK 38 MACHINE GUN SYSTEMS]: Provides the MK 38 Mod 2/3 Machine Gun System (MGS) to plan and engage surface threats, achieving missions kill on high speed patrol craft beyond minor caliber gunfire effective range in accordance with OPNAVINST 4000.79(Series) and the NOC. The MK 38 Mod 3 (vice Mod 2), which began production in FY 2015, permits greater effective range, greater range of elevation to engage air targets, and an improved Toplite electro-optical (EO) system. The MK 38 MGS provides shipboard self-defense against small boat threats and is the main gun of the Fast Response Cutter (FRC), aka Patrol Coastal Cutter (WPC), the Polar Security Cutter (PSC), aka the Maritime Security Cutter, Polar (WMSP), and the WMEC 270' classes and secondary gun mount for the Offshore Patrol Cutter (OPC), aka the Maritime Security Cutter, Medium (WMSM). Includes the MK 38 gun mount, Toplite optical sight, M242 cannon, and ancillary components, recurring engineering, outfitting spares, and integrated logistics support (ILS). The MK 38 MGS for the OPC Class will include a 7.62mm MK 52 MOD 0 Coaxial Automatic Gun (COAX ORDALT) for Anti-terrorism / Force Protection (AT/FP) missions in narrow waterways and in-port.</p> <p>[P5 / CG005 GUN WEAPON SYSTEM INTEGRATION]: Ensures successful integration and system interoperability of Navy type equipment that affects the gun weapon systems of USCG National Security Cutter (NSC), aka the Maritime Security Cutter, Large (WMSL), the Offshore Patrol Cutter (OPC), aka the Maritime Security Cutter, Medium (WMSM), the Polar Security Cutter (PSC), aka the Maritime Security Cutter, Polar (WMSP), and Fast Response Cutters (FRCs). Includes gun weapon system integration support for the OPC ATHENA Control, Correlation & Display (CCD) System which provides target queuing for Gun Weapon System engagements.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts

P-1 Line Item Number / Title:
4206 / Coast Guard Weapons

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Coast Guard Weapons	P-5a, P-21			- / 260.283	- / 43.150	- / 45.958	- / 34.259	- / 0.000	- / 34.259
P-40	Total Gross/Weapon System Cost				- / 260.283	- / 43.150	- / 45.958	- / 34.259	- / 0.000	- / 34.259

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

The FY 2023 funding request was adjusted by \$13.071M to account for the availability of prior year execution balances.

Funding and inter-service agreements are used to procure Navy-Type/Navy-Owned (NT/NO) combat systems, support equipment, Integrated Logistics Support (ILS), certification, test and production support for USCG National Security Cutter (NSC), aka the Maritime Security Cutter, Large (WMSL), the Offshore Patrol Cutter (OPC) Class, aka the Maritime Security Cutter, Medium (WMSM) and the Polar Security Cutter (PSC), aka the Maritime Security Cutter, Polar (WMSP), Fast Response Cutter (FRC), aka the Patrol Coastal Cutter (WPC), and the 270' Medium Endurance Cutter (WMEC) modernization effort being constructed under the Coast Guard's Surface Acquisition Program. Funding also supports C4I systems and associated logistic support for the Offshore Patrol Cutter. These efforts are ongoing.

FY 2023 funds the following Coast Guard Weapon items for USCG cutters: procurement of 57mm MK 110 Guns and associated ILS; procurement of MK 160 Gun Computer Systems and associated support; procurement of MK 38 Machine Gun Systems, associated spares/equipment, MK 38 Upgrade to attach a 7.62mm MK 52 Mod 0 Coaxial Gun and CUAS kits, and associated ILS support; provide integration of Gun Weapon Systems with Combat Systems and Sensors (Gun Weapon System Integration) for all supported hull classes; procure and integrate the ATHENA Control, Correlation & Display (CCD) System on WMSMs, which provides target queuing for Gun Weapon System engagements.

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4206 / Coast Guard Weapons			Item Number / Title [DODIC]: 1 / Coast Guard Weapons		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:		
Resource Summary			Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)			-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)			260.283	43.150	45.958	34.259	0.000	34.259
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			260.283	43.150	45.958	34.259	0.000	34.259
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)			260.283	43.150	45.958	34.259	0.000	34.259
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (\$ in Millions)			-	0.634	0.630	0.722	-	0.722
Gross/Weapon System Unit Cost (\$ in Dollars)			-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - CG002 MK 110 GUN Cost																		
Recurring Cost																		
1.1.1) 57MM GUN ^(†) (1)	8,599K	13	111.782	9,370K	2	18.740	9,427K	2	18.854	9,546K	1	9.546	-	-	-	9,546K	1	9.546
1.1.2) INTEGRATED LOGISTICS SUPPORT ⁽²⁾	-	-	19.380	-	-	3.395	-	-	3.354	-	-	3.454	-	-	-	-	-	3.454
<i>Subtotal: Recurring Cost</i>	-	-	131.162	-	-	22.135	-	-	22.208	-	-	13.000	-	-	-	-	-	13.000
<i>Subtotal: Hardware - CG002 MK 110 GUN Cost</i>	-	-	131.162	-	-	22.135	-	-	22.208	-	-	13.000	-	-	-	-	-	13.000
Hardware - CG003 MK 160 GCS Cost																		
Recurring Cost																		
2.1.1) SYSTEM ENGINEERING SUPPORT	-	-	1.340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) PRODUCTION SUPPORT	-	-	3.748	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.3) DATA	-	-	1.277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.4) SOFTWARE & TEST SUPPORT	-	-	1.927	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.5) ANCILLARY EQUIPMENT ^(†)	522,500.00	2	1.045	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.6) GUN COMPUTER SYSTEM ^(†) (3)	1,587K	10	15.873	1,624K	2	3.248	1,634K	2	3.268	1,250K	2	2.500	-	-	-	1,250K	2	2.500

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Exhibit P-5, Cost Analysis: PB 2023 Navy													Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4206 / Coast Guard Weapons						Item Number / Title [DODIC]: 1 / Coast Guard Weapons						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
2.1.7) MK160 GCS SOFTWARE UPDATE OPC	-	-	2.548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.1.8) INTEGRATED LOGISTICS SUPPORT ⁽⁴⁾	-	-	2.456	-	-	0.704	-	-	0.734	-	-	2.199	-	-	-	-	-	2.199
2.1.9) WMSL MK160 57MM GUN AMMO UPDATES ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	-	1.750	-	-	-	-	-	1.750
<i>Subtotal: Recurring Cost</i>	-	-	30.214	-	-	3.952	-	-	4.002	-	-	6.449	-	-	-	-	-	6.449
<i>Subtotal: Hardware - CG003 MK 160 GCS Cost</i>	-	-	30.214	-	-	3.952	-	-	4.002	-	-	6.449	-	-	-	-	-	6.449
Hardware - CG004 MK 38 MACHINE GUN SYSTEMS Cost																		
Recurring Cost																		
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†) ⁽⁶⁾	1,046K	55	57.536	1,327K	6	7.962	1,335K	6	8.009	-	-	-	-	-	-	-	-	-
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†) ⁽⁷⁾	1,273K	5	6.366	-	-	-	1,335K	2	2.670	-	-	-	-	-	-	-	-	-
3.1.3) MACHINE GUN SYSTEM EQUIPMENT WMEC ^(†) ⁽⁸⁾	1,302K	1	1.302	1,327K	1	1.327	1,335K	2	2.670	-	-	-	-	-	-	-	-	-
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ^(†) ⁽⁹⁾	-	-	-	-	-	-	-	-	-	3,250K	2	6.500	-	-	-	3,250K	2	6.500
3.1.5) MK38 COAXIAL GUN & CUAS UPGRADE ⁽¹⁰⁾	-	-	0.833	-	-	0.428	-	-	0.582	-	-	0.763	-	-	-	-	-	0.763
3.1.6) INTEGRATED LOGISTICS SUPPORT FRC ⁽¹¹⁾	-	-	15.046	-	-	2.466	-	-	2.514	-	-	2.308	-	-	-	-	-	2.308
3.1.7) INTEGRATED LOGISTICS SUPPORT OPC ⁽¹²⁾	-	-	1.782	-	-	0.822	-	-	0.838	-	-	0.760	-	-	-	-	-	0.760

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4206 / Coast Guard Weapons	Item Number / Title [DODIC]: 1 / Coast Guard Weapons

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
3.1.8) INTEGRATED LOGISTICS SUPPORT WMEC ⁽¹³⁾	-	-	0.390	-	-	0.390	-	-	0.761	-	-	0.715	-	-	-	-	-	0.715
3.1.9) INTEGRATED LOGISTICS SUPPORT PSC ⁽¹⁴⁾	-	-	-	-	-	-	-	-	-	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Recurring Cost</i>	-	-	83.255	-	-	13.395	-	-	18.044	-	-	11.296	-	-	-	-	-	11.296
<i>Subtotal: Hardware - CG004 MK 38 MACHINE GUN SYSTEMS Cost</i>	-	-	83.255	-	-	13.395	-	-	18.044	-	-	11.296	-	-	-	-	-	11.296
<i>Support - CG005 GUN WEAPON SYSTEM INTEGRATION Cost</i>																		
4.1) Gun Weapon System Integration ⁽¹⁵⁾	-	-	15.652	-	-	3.668	-	-	1.704	-	-	3.514	-	-	-	-	-	3.514
<i>Subtotal: Support - CG005 GUN WEAPON SYSTEM INTEGRATION Cost</i>	-	-	15.652	-	-	3.668	-	-	1.704	-	-	3.514	-	-	-	-	-	3.514
Gross/Weapon System Cost	-	-	260.283	-	-	43.150	-	-	45.958	-	-	34.259	-	-	0.000	-	-	34.259

(t) indicates the presence of a P-5a

Footnotes:

- (1) Reduction of one OPC MK 110 Gun in FY23 to avoid procuring ahead of in yard need date schedules.
- (2) FY23 increase is attributed to first of kind installs on new NSC and OPC class ships.
- (3) FY2023 unit cost reduction attributed to transition from MOD 1 to MOD 2 and new competitive contract award.
- (4) Increase in FY2023 attributed to first of kind installs on new NSC and OPC class ships.
- (5) FY2023 addition includes the fair share funds required to develop MK160 software updates for the NSC class to allow use of a new line of TP and PD ammunition. The new ammunition will be approximately 35% of previous OEM costs, resulting in significant future cost savings. The new MK160 software configuration will have range tables & ballistic models included for all new rounds, and will confirm with live fire testing. It requires replacement of the Gun Control Panel and Gun Control Computer with newer operating systems.
- (6) Reduced MK 38 MGS FRC quantity from 6 in FY22 to 0 in FY23 due to the availability of prior year execution balances.
- (7) Reduced MK 38 MGS OPC quantity from 2 in FY22 to 0 in FY23 due to the availability of prior year execution balances.
- (8) Reduced MK 38 MGS WMEC quantity from 2 in FY22 to 0 in FY23 due to the availability of prior year execution balances.
- (9) New USCG Polar Security Cutter class surface acquisition program requirement to procure MK 38 Machine Gun Systems (Arctic capable). MK 38 will fulfill the capability requirements of Anti-Terrorism/Force Protection and Surface Warfare by providing the ability to fire warning and disabling shots against surface targets and engage low-slow flying aircraft and UAVs achieving mission kills out to effective gunfire range.
- (10) Increase in FY2023 attributed to addition of CUAS capability backfits on in service USCG cutters.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4206 / Coast Guard Weapons	Item Number / Title [DODIC]: 1 / Coast Guard Weapons
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	
<p>(11) Decrease in FY2023 attributed to fair share cost across four USCG surface acquisition programs (FRC, OPC, WMEC and PSC) vice the previous three.</p> <p>(12) Decrease in FY2023 attributed to fair share cost across four USCG surface acquisition programs (FRC, OPC, WMEC and PSC) vice the previous three.</p> <p>(13) Decrease in FY2023 attributed to fair share cost across four USCG surface acquisition programs (FRC, OPC, WMEC and PSC) vice the previous three.</p> <p>(14) New FY2023 Integrated Logistics Support Cost Element required when USCG Polar Security Cutter surface acquisition begins.</p> <p>(15) Cost increase in FY2023 attributed to first of kind installs, testing and evaluation on NSC, OPC and PSC class cutters.</p>		

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4206 / Coast Guard Weapons					Item Number / Title [DODIC]: 1 / Coast Guard Weapons				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) 57MM GUN ^(†)		2013	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Sep 2014	Sep 2016	1	8,600K	Y		Jun 2010
1.1.1) 57MM GUN ^(†)		2015	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Oct 2015	Oct 2017	1	8,097K	Y		Oct 2013
1.1.1) 57MM GUN ^(†)		2016	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Dec 2015	Dec 2017	1	8,528K	Y		Oct 2013
1.1.1) 57MM GUN ^(†)		2017	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Aug 2017	Aug 2019	2	8,490K	Y		Aug 2016
1.1.1) 57MM GUN ^(†)		2018	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Jun 2018	Jun 2020	2	8,855K	Y		Aug 2016
1.1.1) 57MM GUN ^(†)		2019 ⁽¹⁶⁾	BAE SYSTEMS / MINNEAPOLIS, MN	C / FFP	NAVSEA	Jun 2019	Sep 2021	2	9,023K	Y		Aug 2016
1.1.1) 57MM GUN ^(†)		2020 ⁽¹⁷⁾	BAE SYSTEMS / MINNEAPOLIS, MN	C / FFP	NAVSEA	Sep 2020	Dec 2022	2	9,195K	Y		Aug 2016
1.1.1) 57MM GUN ^(†)		2021 ⁽¹⁸⁾	BAE SYSTEMS / MINNEAPOLIS, MN	C / FFP	NAVSEA	Sep 2021	Dec 2023	2	9,370K	Y		Nov 2020
1.1.1) 57MM GUN ^(†)		2022 ⁽¹⁹⁾	BAE SYSTEMS / MINNEAPOLIS, MN	C / FFP	NAVSEA	May 2022	Aug 2024	2	9,427K	Y		Nov 2020
1.1.1) 57MM GUN ^(†)		2023 ⁽²⁰⁾	BAE SYSTEMS / MINNEAPOLIS, MN	C / FFP	NAVSEA	May 2023	Aug 2025	1	9,546K	N		Nov 2020
2.1.5) ANCILLARY EQUIPMENT		2016	US Army Contracting Command / Picatinny Arsenal, NJ	MIPR	Picatinny, NJ	Aug 2016	Aug 2017	2	522,500.00	Y		Mar 2016
2.1.6) GUN COMPUTER SYSTEM		2017	LOCKHEED MARTIN / MANASSAS, VA	C / FFP	NAVSEA	Mar 2017	Dec 2017	1	1,506K	Y		Jan 2016
2.1.6) GUN COMPUTER SYSTEM		2018	LOCKHEED MARTIN / MANASSAS, VA	C / FFP	NAVSEA	Mar 2018	Dec 2018	3	1,535K	Y		Jan 2016
2.1.6) GUN COMPUTER SYSTEM		2019 ⁽²¹⁾	LOCKHEED MARTIN / MANASSAS, VA	C / FFP	NAVSEA	Jun 2019	Dec 2020	3	1,564K	Y		Jan 2016
2.1.6) GUN COMPUTER SYSTEM		2020 ⁽²²⁾	LOCKHEED MARTIN / MANASSAS, VA	C / FFP	NAVSEA	Jul 2020	Jan 2022	2	1,594K	Y		Jan 2016
2.1.6) GUN COMPUTER SYSTEM		2021 ⁽²³⁾	LOCKHEED MARTIN / MANASSAS, VA	C / FFP	NAVSEA	May 2021	Nov 2022	2	1,624K	Y		Jan 2016
2.1.6) GUN COMPUTER SYSTEM		2022 ⁽²⁴⁾	DRS LAUREL TECHNOLOGIES / UNKNOWN	C / FFP	NAVSEA	Jun 2022	Dec 2023	2	1,634K	Y		May 2019
2.1.6) GUN COMPUTER SYSTEM		2023 ⁽²⁵⁾	DRS LAUREL TECHNOLOGIES / UNKNOWN	C / FP	NAVSEA	Jun 2023	Dec 2024	2	1,250K	N		May 2019
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2015	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Oct 2015	Oct 2016	4	1,185K	Y		Aug 2015
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2017	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Sep 2017	Sep 2018	1	1,230K	Y		Aug 2016
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2018	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2018	Jun 2019	11	1,254K	Y		Aug 2016
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2019	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2019	Jun 2020	6	1,278K	Y		Aug 2016

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy							Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4206 / Coast Guard Weapons				Item Number / Title [DODIC]: 1 / Coast Guard Weapons					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2020	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2020	Jun 2021	6	1,302K	Y		Aug 2016
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2021	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Sep 2021	Sep 2022	6	1,327K	Y		Aug 2016
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)		2022	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2022	Jun 2023	6	1,335K	Y		Dec 2021
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†)		2017	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Mar 2017	Mar 2018	1	1,230K	Y		Aug 2015
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†)		2018	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2018	Jun 2019	1	1,254K	Y		Aug 2015
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†)		2019	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2019	Jun 2020	1	1,278K	Y		Aug 2015
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†)		2020	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2020	Jun 2021	2	1,302K	Y		Aug 2015
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†)		2022	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2022	Jun 2023	2	1,335K	Y		Dec 2021
3.1.3) MACHINE GUN SYSTEM EQUIPMENT WMEC		2020	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2020	Jun 2021	1	1,302K	Y		Aug 2016
3.1.3) MACHINE GUN SYSTEM EQUIPMENT WMEC		2021	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Sep 2021	Sep 2022	1	1,327K	Y		Aug 2016
3.1.3) MACHINE GUN SYSTEM EQUIPMENT WMEC		2022	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jun 2022	Jun 2023	2	1,335K	Y		Dec 2021
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ^(†)		2023	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Jul 2023	Dec 2024	2	3,250K	N		

^(†) indicates the presence of a P-21

Footnotes:

- ⁽¹⁶⁾ 27 month manufacturing lead time.
- ⁽¹⁷⁾ 27 month manufacturing lead time.
- ⁽¹⁸⁾ 27 month manufacturing lead time.
- ⁽¹⁹⁾ 27 month manufacturing lead time.
- ⁽²⁰⁾ 27 month manufacturing lead time.
- ⁽²¹⁾ Manufacturing lead time will be 18 months.
- ⁽²²⁾ Manufacturing lead time will be 18 months.
- ⁽²³⁾ Manufacturing lead time will be 18 months.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4206 / Coast Guard Weapons	Item Number / Title [DODIC]: 1 / Coast Guard Weapons

⁽²⁴⁾ Manufacturing lead time will be 18 months.

⁽²⁵⁾ Manufacturing lead time will be 18 months.

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2 **P-1 Line Item Number / Title:** 4206 / Coast Guard Weapons **Item Number / Title [DODIC]:** 1 / Coast Guard Weapons

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2016													Fiscal Year 2017													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016													Calendar Year 2017														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				
1.1.1) 57MM GUN ⁽¹⁾																																		
Prior Years Deliveries: 2																																		
	1	2013	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	1	2015	NAVY	1	0	1	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	1	2016	NAVY	1	0	1				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
	1	2017	NAVY	2	0	2																								A -	-	-	2	
	1	2018	NAVY	2	0	2																											2	
	1	2019	NAVY	2	0	2																											2	
	1	2020	NAVY	2	0	2																											2	
	1	2021	NAVY	2	0	2																											2	
	1	2022	NAVY	2	0	2																											2	
	1	2023	NAVY	1	0	1																											1	
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ⁽⁶⁾																																		
Prior Years Deliveries: 27																																		
	2	2015	NAVY	4	0	4	A -	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	-	1	-	-	0		
	2	2017	NAVY	1	0	1																								A -	-	1		
	2	2018	NAVY	11	0	11																											11	
	2	2019	NAVY	6	0	6																											6	
	2	2020	NAVY	6	0	6																											6	
	2	2021	NAVY	6	0	6																											6	
	2	2022	NAVY	6	0	6																											6	
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ⁽⁷⁾																																		
	3	2017	NAVY	1	0	1																								A -	-	-	-	1
	3	2018	NAVY	1	0	1																											1	
	3	2019	NAVY	1 ⁽²⁶⁾	0	1																											1	
	3	2020	NAVY	2	0	2																											2	
	3	2022	NAVY	2	0	2																											2	
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ⁽⁹⁾																																		
	4	2023	NAVY	2	0	2																											2	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2 **P-1 Line Item Number / Title:** 4206 / Coast Guard Weapons **Item Number / Title [DODIC]:** 1 / Coast Guard Weapons

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018														Fiscal Year 2019														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018														Calendar Year 2019														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) 57MM GUN ⁽¹⁾																																			
Prior Years Deliveries: 2																																			
	1	2013	NAVY	1	1	0																							0						
	1	2015	NAVY	1	0	1		1																					0						
	1	2016	NAVY	1	0	1		-	-	1																			0						
	1	2017	NAVY	2	0	2		-	-	-																	1		1						
	1	2018	NAVY	2	0	2									A	-	-	-	-	-	-	-	-	-	-	-	-	-	2						
	1	2019	NAVY	2	0	2																					A	-	2						
	1	2020	NAVY	2	0	2																						2							
	1	2021	NAVY	2	0	2																						2							
	1	2022	NAVY	2	0	2																						2							
	1	2023	NAVY	1	0	1																						1							
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ⁽⁶⁾																																			
Prior Years Deliveries: 27																																			
	2	2015	NAVY	4	4	0																						0							
	2	2017	NAVY	1	0	1		-	-	-	-	-	-	-	-	-	1											0							
	2	2018	NAVY	11	0	11									A	-	-	-	-	-	-	-	-	-	-	-	1	-	9						
	2	2019	NAVY	6	0	6																				A	-	6							
	2	2020	NAVY	6	0	6																						6							
	2	2021	NAVY	6	0	6																						6							
	2	2022	NAVY	6	0	6																						6							
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ⁽⁷⁾																																			
	3	2017	NAVY	1	0	1		-	-	-	-	-	1															0							
	3	2018	NAVY	1	0	1									A	-	-	-	-	-	-	-	-	-	-	-	1		0						
	3	2019	NAVY	1 ⁽²⁶⁾	0	1																				A	-	1	1						
	3	2020	NAVY	2	0	2																						2							
	3	2022	NAVY	2	0	2																						2							
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ⁽⁹⁾																																			
	4	2023	NAVY	2	0	2																						2							
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2 **P-1 Line Item Number / Title:** 4206 / Coast Guard Weapons **Item Number / Title [DODIC]:** 1 / Coast Guard Weapons

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020													Fiscal Year 2021													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) 57MM GUN ⁽¹⁾																																	
Prior Years Deliveries: 2																																	
1		2013	NAVY	1	1	0																						0					
1		2015	NAVY	1	1	0																						0					
1		2016	NAVY	1	1	0																						0					
1		2017	NAVY	2	1	1	-	1																				0					
1		2018	NAVY	2	0	2	-	-	-	-	-	-	-	1	-	-	1											0					
1		2019	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1					
1		2020	NAVY	2	0	2											A -	-	-	-	-	-	-	-	-	-	-	2					
1		2021	NAVY	2	0	2																					A -	2					
1		2022	NAVY	2	0	2																						2					
1		2023	NAVY	1	0	1																						1					
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ⁽⁶⁾																																	
Prior Years Deliveries: 27																																	
2		2015	NAVY	4	4	0																						0					
2		2017	NAVY	1	1	0																						0					
2		2018	NAVY	11	2	9	1	-	1	-	1	1	1	-	-	1	-	1	-	1	-	-	-	-	-	-	1	0					
2		2019	NAVY	6	0	6	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1	-	1		0					
2		2020	NAVY	6	0	6								A -	-	-	-	-	-	-	-	-	-	-	-	1	-	4					
2		2021	NAVY	6	0	6																				A -	6						
2		2022	NAVY	6	0	6																					6						
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ⁽⁷⁾																																	
3		2017	NAVY	1	1	0																						0					
3		2018	NAVY	1	1	0																						0					
3		2019	NAVY	1 ⁽²⁶⁾	0	1	-	-	-	-	-	-	-	1														0					
3		2020	NAVY	2	0	2								A -	-	-	-	-	-	-	-	-	-	-	-	-	2	0					
3		2022	NAVY	2	0	2																						2					
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ⁽⁹⁾																																	
4		2023	NAVY	2	0	2																						2					
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4206 / Coast Guard Weapons	Item Number / Title [DODIC]: 1 / Coast Guard Weapons
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023										BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
1.1.1) 57MM GUN ⁽¹⁾																															
Prior Years Deliveries: 2																															
	1	2013	NAVY	1	1	0																							0		
	1	2015	NAVY	1	1	0																							0		
	1	2016	NAVY	1	1	0																							0		
	1	2017	NAVY	2	2	0																							0		
	1	2018	NAVY	2	2	0																							0		
	1	2019	NAVY	2	1	1	-	-	1																				0		
	1	2020	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1						0			
	1	2021	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
	1	2022	NAVY	2	0	2									A -	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
	1	2023	NAVY	1	0	1																					A -	-	1		
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ⁽⁶⁾																															
Prior Years Deliveries: 27																															
	2	2015	NAVY	4	4	0																						0			
	2	2017	NAVY	1	1	0																						0			
	2	2018	NAVY	11	11	0																						0			
	2	2019	NAVY	6	6	0																						0			
	2	2020	NAVY	6	2	4	1	-	1	-	1	-	1															0			
	2	2021	NAVY	6	0	6	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	1	-	1	-	0			
	2	2022	NAVY	6	0	6									A -	-	-	-	-	-	-	-	-	-	-	-	1	-	4		
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ⁽⁷⁾																															
	3	2017	NAVY	1	1	0																						0			
	3	2018	NAVY	1	1	0																						0			
	3	2019	NAVY	1 ⁽²⁶⁾	1	0																						0			
	3	2020	NAVY	2	2	0																						0			
	3	2022	NAVY	2	0	2									A -	-	-	-	-	-	-	-	-	-	-	-	2	0			
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ⁽⁹⁾																															
	4	2023	NAVY	2	0	2																					A -	-	2		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2 **P-1 Line Item Number / Title:** 4206 / Coast Guard Weapons **Item Number / Title [DODIC]:** 1 / Coast Guard Weapons

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024													Fiscal Year 2025													BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024													Calendar Year 2025													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) 57MM GUN ⁽¹⁾																																	
Prior Years Deliveries: 2																																	
1		2013	NAVY	1	1	0																							0				
1		2015	NAVY	1	1	0																							0				
1		2016	NAVY	1	1	0																							0				
1		2017	NAVY	2	2	0																							0				
1		2018	NAVY	2	2	0																							0				
1		2019	NAVY	2	2	0																							0				
1		2020	NAVY	2	2	0																							0				
1		2021	NAVY	2	0	2	-	-	1	-	-	1																	0				
1		2022	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	1	-	-	1										0				
1		2023	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ⁽⁶⁾																																	
Prior Years Deliveries: 27																																	
2		2015	NAVY	4	4	0																							0				
2		2017	NAVY	1	1	0																							0				
2		2018	NAVY	11	11	0																							0				
2		2019	NAVY	6	6	0																							0				
2		2020	NAVY	6	6	0																							0				
2		2021	NAVY	6	6	0																							0				
2		2022	NAVY	6	2	4	1	-	1	-	1	-	1	-	1														0				
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ⁽⁷⁾																																	
3		2017	NAVY	1	1	0																							0				
3		2018	NAVY	1	1	0																							0				
3		2019	NAVY	1 ⁽²⁶⁾	1	0																							0				
3		2020	NAVY	2	2	0																							0				
3		2022	NAVY	2	2	0																							0				
3.1.4) MACHINE GUN SYSTEM EQUIPMENT PSC ⁽⁹⁾																																	
4		2023	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4206 / Coast Guard Weapons	Item Number / Title [DODIC]: 1 / Coast Guard Weapons
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	BAE SYSTEMS - MINNEAPOLIS, MN	1	2	4	9	3	30	33	3	3	24	27
2	BAE SYSTEMS - MINNEAPOLIS, MN	10	24	60	6	3	18	21	3	3	12	15
3	BAE SYSTEMS - MINNEAPOLIS, MN	10	24	60	6	3	18	21	3	3	12	15
4	BAE SYSTEMS - MINNEAPOLIS, MN	10	24	TBD	6	3	17	20	6	3	17	20

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽²⁶⁾ Dates associated with this purchase in P5-a not yet provided

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts	P-1 Line Item Number / Title: 4217 / Gun Mount Mods
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
--	---	--

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	785.409	102.068	93.775	81.725	0.000	81.725	82.483	82.242	84.466	85.151	-	1,397.319
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	785.409	102.068	93.775	81.725	0.000	81.725	82.483	82.242	84.466	85.151	-	1,397.319
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	785.409	102.068	93.775	81.725	0.000	81.725	82.483	82.242	84.466	85.151	-	1,397.319

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	3.437	3.417	3.917	-	3.917	3.978	4.065	4.159	4.219	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Gun Mount Mods supports various types of Gun Weapon Systems, sub-system modifications and upgrade requirements.

[P5 / E5002 MEDIUM CALIBER GUN MODS]: Medium Caliber Gun Mounts (MK110 57mm) installed on United States Coast Guard (USCG) Maritime Security Cutters, Large (WMSL), and USCG Maritime Security Cutters, Medium (WMSM) as well as land based training/test units. The gun mounts provide an anti-surface warfare and anti-air warfare capability for outfitted ships. Funds procure Ordnance Alterations (ORDALT kits), and provide Integrated Logistics Support (ILS) and production engineering for system improvements that affect safety, reliability and maintainability.

[P5 / E5006 MINOR CALIBER GUN MODS]: Minor Caliber Gun Mounts (MK38 MOD or MK46 MOD) are installed on Amphibious Assault Ships (AS), Aircraft Carrier (nuclear propulsion) (CVN), Guided Missile Cruisers, (CG), Destroyer Designated Guided ships (DDG), Littoral Combat Ships (LCS), Landing Ship Dock amphibious assault ships (LSD), Landing Helicopter Assault ships (LHA), Landing Helicopter Dock amphibious assault ships (LHD), Landing Platform Dock amphibious transport ship (LPD), Patrol Crafts Coastal (PC), Amphibious Command Ships (LCC), MK VI Patrol Boats and land based training/test units. The gun mounts provide an anti-surface warfare and anti-air warfare capability for outfitted ships. Funds procure gun weapon system, ordnance alteration (ORDALT), and conversion kits. Funds also deliver integrated logistics support (ILS), production engineering, and installations for system improvements that affect safety, cybersecurity, reliability, and maintainability. USN Fleet population of 25mm MK 38 Machine Gun System (MGS) consists of MOD 2 and MOD 3 variants. The MOD 2 will be converted to the MOD 3 to receive obsolescence, cybersecurity, and Counter Unmanned Aerial System (C-UAS) capability upgrades. DDG 51 Flight IIA and Flight III Destroyers will receive the new 30mm MK 38 MOD 4 Gun Weapon System (GWS), which is integrated with the AEGIS combat system for greater lethality and accuracy in the execution of C-UAS and Counter Unmanned Surface Vehicles (C-USV) operations.

[P5 / E5011 MAJOR CALIBER GUN MODS]: The 5-Inch MK45 MOD Gun Mounts are automated, lightweight, single-barrel gun mounts that provide an anti-surface warfare, anti-air warfare, and naval surface fire support capability for outfitted ships. The MK45 is installed on CG47 and DDG51 Class surface ships and land based training/test units. Funds procure ORDALTs kits, and provide ILS and production engineering for system improvements that affect safety, reliability and maintainability.

[P5 / E5CON BALLISTIC SHIELDING]: Crew Served Weapon Systems (CSWS) Advanced Ballistic Shielding (ABS) - Advanced Ballistic Shielding will be procured and installed onboard Aircraft Carrier (nuclear propulsion) (CVN), providing ballistic protection for Crew Served Weapon Systems. Funds are used for ship checks, Ship Installation Drawings (SID), procure materials, shipboard M2200 Shielding Kits, and production engineering for system improvements that affect safety, reliability, and maintainability.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts **P-1 Line Item Number / Title:** 4217 / Gun Mount Mods

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Gun Mount Mods				- / 270.826	- / 82.328	- / 87.123	- / 81.325	- / 0.000	- / 81.325
P-3a	1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS (TBD)				- / 514.583	- / 19.740	- / 6.652	- / 0.400	- / 0.000	- / 0.400
P-40	Total Gross/Weapon System Cost				- / 785.409	- / 102.068	- / 93.775	- / 81.725	- / 0.000	- / 81.725

Exhibits Schedule					FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Gun Mount Mods				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 541.375
P-40	Total Gross/Weapon System Cost				- / 82.483	- / 82.242	- / 84.466	- / 85.151	- / -	- / 1,397.319

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY2023 E5002 MEDIUM CALIBER GUN MODS 1.1.1) MEDIUM CALIBER KIT: Cost increase from FY22 to FY23 attributed to additional Medium Caliber Kit requirements to address obsolescence and reliability in increased number of in-service gun mounts.

E5006 MINOR CALIBER GUN MODS MK38: The USN will stop procuring new MK38 MOD 3 MGS (MK38 GUN KITS) after FY22. Future MK38 MOD 3 MGS will be created by refurbishing and upgrading 25mm MK 38 MOD 2 MGS. New cost elements are established to reflect this fielding change in FY23: 2.1.1 - MK38 COAX ORDALT KIT, 2.1.2 - MK38 COAX ORDALT KIT INSTALL, 2.1.3 - MK38 MOD 3 CONVERSION KIT, 2.1.4 - MK38 MOD 3 CONVERSION KIT FWD FIT INSTALL, and 2.1.5 - MK38 MOD 3 CONVERSION KIT BACKFIT INSTALL. Prior MK 38 MOD 3 MGS (MK38 Gun Kit) supporting cost elements will terminate in FY22: 2.1.7 MK 38 UPGRADE KITS, 2.1.8 MK38 UPGRADE KIT INSTALL, and 2.1.10 MK38 BACKFIT KIT.

Cost elements for MK38 MOD 4 Gun Weapon System (GWS), MK38 MOD 4 GWS Install Planning, and MK 38 MOD 4 GWS Installation have been added under E5006 MINOR CALIBER GUN MODS to support procurements of the MK 38 MOD 4 GWS and installations on DDG 51 Flight IIA and Flight III Destroyers.

FY2023 E5006 MINOR CALIBER GUN MODS 2.1.1) MK38 COAX ORDALT KIT: This cost element procures the 7.62mm Coaxial Automatic Gun Ordnance Alteration Kit (COAX ORDALT KIT). This upgrade is required for full Counter Unmanned Aerial System (C-UAS) capability. The C-UAS capability is a critical and urgent ship self-defense capability per Joint Urgent Operational Need Statement CC-0558 (JUONS CC-0558).

FY2023 E5006 MINOR CALIBER GUN MODS 2.1.2) MK38 COAX ORDALT KIT INSTALL: This cost element installs the COAX ORDALT KITs procured under cost element 2.1.1 MK38 COAX ORDALT KIT.

FY2023 E5006 MINOR CALIBER GUN MODS 2.1.3) MK38 MOD 3 CONVERSION KIT: This cost element procures kits to convert fielded MK 38 MOD 2 MGS units to MK 38 MOD 3 with C-UAS and cybersecurity upgrades. This funds procurement in FY23 of QTY 34 MK 38 MOD 3 conversion kits with C-UAS upgrade (unit cost \$385K) that will be installed in FY24 and FY25. The procurement and installation quantities are based on an 18 month production lead time and ship availability schedules. This effort supports procurement quantities to support seventeen (17) ships.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts		P-1 Line Item Number / Title: 4217 / Gun Mount Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>FY2023 E5006 MINOR CALIBER GUN MODS 2.1.4) MK38 MOD 3 CONVERSION KIT FWD FIT INSTALL: This cost element refurbishes and upgrades a 25mm MK 38 MOD 2 MGS by installing a MK 38 MOD 3 CONVERSION KIT. The newly created MK 38 MOD 3 is installed on a new ship as a forward fit.</p> <p>FY2023 E5006 MINOR CALIBER GUN MODS 2.1.5) MK38 MOD 3 CONVERSION KIT BACKFIT INSTALL: This cost element refurbishes and upgrades a 25mm MK 38 MOD 2 MGS by installing a MK 38 MOD 3 CONVERSION KIT. The newly created MK 38 MOD 3 is installed on a ship, which previously had a MK 38 MOD 2 MGS. This refers to the upgrade from MK 38 MOD 2 to MOD 3 of an existing mount on an in-service ship. In FY23, Cost Element 2.1.5 [MK38 MOD 3 CONVERSION KIT BACKFIT INSTALL] funds installation of QTY 13 MOD 3 conversion kits to upgrade MK 38 MOD 2 mounts on six (6) ships, these kits are procured in FY22 under Cost Element 2.1.10 [MK38 BACKFIT KIT]. This effort supports procurement quantities to support six (6) ships.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.6) MK38 GUN KITS ILS/TEST/PRODUCTION SUPT: Increase from FY22 to FY23 due to addition of MK 38 MOD 4 GWS, which requires significant increase in logistics and production support leading up to first installation of the Initial Operational Capability (IOC) in FY25.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.9) MK38 UPGRADE LOGISTICS SUPT: This cost element funds development of integrated logistics support certification, ship change directive development, technical manual updates, provisioning support, and other logistics efforts required to support the system while installed onboard a ship.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.11) TECH REFRESH: Increase from FY22 to FY23 due to development of MK38 MOD 4 engineering change proposals in support of first Initial Operational Capability system installations in FY25.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.12) MK 38 MOD 4 GWS: Cost to procure MK 38 MOD 4 GWS. This cost element funds the procurement of QTY eleven (11) MK 38 MOD 4 GWS (unit cost \$3.088K) in FY23 to achieve IOC in FY25. Funding is required in FY23 due to a ~2 year lead time from contract award to system checkout on the target ship in FY25. This lead time consists of 18 months production, 1 month mount preparation, 3 months installation, and 1 month sea trial. One (1) of the eleven (11) mounts is a land-based Fleet support asset that would be installed at the MK 38 In-service Engineering Agent's site. This mount needs to be ordered in FY23 to leave enough time for 18 months production, 2 months installation, 1 month land-based test and checkout by FY25. This effort supports fielding of critical C-UAS and C-USV capability to five (5) DDG 51 ships.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.13) MK 38 MOD 4 GWS INSTALL PLANNING: Cost to conduct installation planning to field MK 38 MOD 4 GWS on DDG 51 ships. Installation planning includes development of installation drawings and topside analysis. This cost element funds all efforts required to plan the installations of the gun systems on their respective ships. This includes development of a ship installation drawing package, which is required to start 22 months before installation and takes 7.5 months to develop, since it involves ship checks and extensive safety and engineering analysis. This effort supports fielding of critical C-UAS and C-USV capability to five (5) DDG 51 ships.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.15) MK46 GWS KITS: Cost increase from FY22 to FY23 attributed to additional MK46 GWS Kit requirements to address obsolescence and reliability in increased number of in-service gun mounts.</p> <p>FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.16) MK46 GWS KIT INSTALL increase is attributed to additional MK46 Kit installation requirements due to the increased number of MK46 in-service Gun Weapon Systems (GWS). The number of in-service MK46 GWS's within the fleet increased with the addition of DDG 1000 (1), LCS (1), and LPD 17 (3) ships, which require additional Installation Kits and associated installation efforts to address fleet obsolescence and software issues.</p> <p>FY 2023 E5011 MAJOR CALIBER GUN MODS 3.1.1) MK45 MOD 1, 2, & 4 KITS: Cost increase from FY22 to FY23 attributed to additional Major Caliber Kit requirements to address obsolescence and reliability in increased number of in-service gun mounts.</p>		

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Exhibit P-5, Cost Analysis: PB 2023 Navy						Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4217 / Gun Mount Mods			Item Number / Title [DODIC]: 1 / Gun Mount Mods		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:			
Resource Summary				Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				270.826	82.328	87.123	81.325	0.000	81.325
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				270.826	82.328	87.123	81.325	0.000	81.325
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				270.826	82.328	87.123	81.325	0.000	81.325
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)				-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - E5002 MEDIUM CALIBER GUN MODS Cost																		
Recurring Cost																		
1.1.1) MEDIUM CALIBER KITS ⁽¹⁾	-	-	18.312	-	-	3.708	-	-	3.842	-	-	3.998	-	-	0.000	-	-	3.998
1.1.2) MEDIUM CALIBER GUN	-	-	22.021	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	40.333	-	-	3.708	-	-	3.842	-	-	3.998	-	-	0.000	-	-	3.998
<i>Subtotal: Hardware - E5002 MEDIUM CALIBER GUN MODS Cost</i>	-	-	40.333	-	-	3.708	-	-	3.842	-	-	3.998	-	-	0.000	-	-	3.998
Hardware - E5006 MINOR CALIBER GUN MODS Cost																		
Recurring Cost																		
2.1.1) MK38 COAX ORDALT KIT ⁽²⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	2.624	-	-	0.000	-	-	2.624
2.1.2) MK38 COAX ORDALT KIT INSTALL ⁽³⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.044	-	-	0.000	-	-	0.044
2.1.3) MK38 MOD 3 CONVERSION KIT ⁽⁴⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	13.090	-	-	0.000	-	-	13.090
2.1.5) MK38 MOD 3 CONVERSION KIT BACKFIT INSTALL ⁽⁵⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.373	-	-	0.000	-	-	1.373
2.1.6) MK38 GUN KITS ILS / TEST /	-	-	35.604	-	-	4.402	-	-	3.311	-	-	4.650	-	-	0.000	-	-	4.650

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Item Number / Title [DODIC]: 1 / Gun Mount Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
PRODUCTION SUPT (Surface Warfare) ⁽⁶⁾																		
2.1.7) MK38 UPGRADE KITS ⁽⁷⁾	-	-	41.647	-	-	0.000	-	-	13.188	-	-	0.000	-	-	0.000	-	-	0.000
2.1.8) MK38 UPGRADE KIT INSTALL ⁽⁸⁾	-	-	10.100	-	-	1.800	-	-	4.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.9) MK38 UPGRADE LOGISTICS SUPT ⁽⁹⁾	-	-	14.208	-	-	0.420	-	-	1.451	-	-	1.480	-	-	0.000	-	-	1.480
2.1.10) MK38 BACKFIT KIT	-	-	12.534	-	-	8.365	-	-	16.249	-	-	0.000	-	-	0.000	-	-	0.000
2.1.11) MK38 TECH REFRESH ⁽¹⁰⁾	-	-	2.112	-	-	3.265	-	-	3.919	-	-	4.569	-	-	0.000	-	-	4.569
2.1.12) MK38 MOD 4 GWS ⁽¹¹⁾	-	-	11.600	-	-	0.000	-	-	0.000	-	-	33.968	-	-	0.000	-	-	33.968
2.1.13) MK38 MOD 4 GWS INSTALL PLANNING ⁽¹²⁾	-	-	0.431	-	-	0.501	-	-	0.000	-	-	1.925	-	-	0.000	-	-	1.925
2.1.14) MK38 MOD 4 GWS INSTALLATION	-	-	0.000	-	-	0.000	-	-	3.120	-	-	0.000	-	-	0.000	-	-	0.000
2.1.15) MK46 GWS KITS ⁽¹³⁾	-	-	20.530	-	-	2.750	-	-	3.363	-	-	3.553	-	-	0.000	-	-	3.553
2.1.16) MK46 GWS KIT INSTALL ⁽¹⁴⁾	-	-	2.996	-	-	0.684	-	-	0.754	-	-	0.826	-	-	0.000	-	-	0.826
<i>Subtotal: Recurring Cost</i>	-	-	151.762	-	-	22.187	-	-	49.355	-	-	68.102	-	-	0.000	-	-	68.102
<i>Subtotal: Hardware - E5006 MINOR CALIBER GUN MODS Cost</i>	-	-	151.762	-	-	22.187	-	-	49.355	-	-	68.102	-	-	0.000	-	-	68.102
<i>Hardware - E5011 MAJOR CALIBER GUN MODS Cost</i>																		
<i>Recurring Cost</i>																		
3.1.1) MK45 MOD 1, 2 & 4 KITS ⁽¹⁵⁾	-	-	50.871	-	-	5.882	-	-	5.784	-	-	6.083	-	-	0.000	-	-	6.083
3.1.2) MK45 MOD 1, 2 & 4 INSTALL / ILS / PROD SUPT	-	-	27.860	-	-	3.142	-	-	3.142	-	-	3.142	-	-	0.000	-	-	3.142
3.1.3) MK45 GM CG MOD	-	-	0.000	-	-	14.309	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	78.731	-	-	23.333	-	-	8.926	-	-	9.225	-	-	0.000	-	-	9.225

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Item Number / Title [DODIC]: 1 / Gun Mount Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Hardware - E5011 MAJOR CALIBER GUN MODS Cost</i>	-	-	78.731	-	-	23.333	-	-	8.926	-	-	9.225	-	-	0.000	-	-	9.225
Hardware - E5CON BALLISTIC SHIELDING Cost																		
Non Recurring Cost																		
4.1.1) BALLISTIC SHIELDING HARDWARE/ INSTALLATION	-	-	0.000	-	-	33.100	-	-	25.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Non Recurring Cost</i>	-	-	0.000	-	-	33.100	-	-	25.000	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - E5CON BALLISTIC SHIELDING Cost</i>	-	-	0.000	-	-	33.100	-	-	25.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	-	-	270.826	-	-	82.328	-	-	87.123	-	-	81.325	-	-	0.000	-	-	81.325

Footnotes:

- (1) FY2023 E5002 MEDIUM CALIBER GUN MODS 1.1.1) MEDIUM CALIBER KIT: Cost increase from FY22 to FY23 attributed to additional Medium Caliber Kit requirements to address obsolescence and reliability in increased number of in-service gun mounts.
- (2) FY2023 E5006 MINOR CALIBER GUN MODS 2.1.1) MK38 COAX ORDALT KIT: This new cost element procures the 7.62mm Coaxial Automatic Gun Ordnance Alteration Kit (COAX ORDALT KIT). This upgrade is required for full Counter Unmanned Aerial System (C-UAS) capability. The C-UAS capability is a critical and urgent ship self-defense capability per Joint Urgent Operational Need Statement CC-0558 (JUONS CC-0558).
- (3) FY2023 E5006 MINOR CALIBER GUN MODS 2.1.2) MK38 COAX ORDALT KIT INSTALL: This new cost element installs the COAX ORDALT KITS procured under cost element 2.1.1 MK38 COAX ORDALT KIT.
- (4) FY2023 E5006 MINOR CALIBER GUN MODS 2.1.3) MK38 MOD 3 CONVERSION KIT: This new cost element procures kits to convert fielded MK 38 MOD 2 MGS units to MK 38 MOD 3 with C-UAS and cybersecurity upgrades. This funds procurement in FY23 of QTY 34 MK 38 MOD 3 conversion kits with C-UAS upgrade (unit cost \$385K) that will be installed in FY24 and FY25. The procurement and installation quantities are based on an 18 month production lead time and ship availability schedules. This effort supports procurement quantities to support seventeen (17) ships.
- (5) FY2023 E5006 MINOR CALIBER GUN MODS 2.1.5) MK38 MOD 3 CONVERSION KIT BACKFIT INSTALL: This new cost element refurbishes and upgrades a 25mm MK 38 MOD 2 MGS by installing a MK 38 MOD 3 CONVERSION KIT. The newly created MK 38 MOD 3 is installed on a ship, which previously had a MK 38 MOD 2 MGS. This refers to the upgrade from MK 38 MOD 2 to MOD 3 of an existing mount on an in-service ship. In FY23, Cost Element 2.1.5 [MK38 MOD 3 CONVERSION KIT BACKFIT INSTALL] funds installation of QTY 13 MOD 3 conversion kits to upgrade MK 38 MOD 2 mounts on six (6) ships, these kits are procured in FY22 under Cost Element 2.1.10 [MK38 BACKFIT KIT]. This effort supports procurement quantities to support six (6) ships.
- (6) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.6) MK38 GUN KITS ILS/TEST/PRODUCTION SUPT: Increase from FY22 to FY23 due to addition of MK 38 MOD 4 GWS, which requires significant increase in logistics and production support leading up to first installation of the Initial Operational Capability (IOC) in FY25. FY21 cost increase due to simultaneous installations on three aircraft carriers - CVN 78, CVN 71, CVN 69.
- (7) E5006 MINOR CALIBER GUN MODS 2.1.7) MK38 UPGRADE KITS: Procurement of COAX ORDALT Kits were deferred in FY21 due to the installation and logistics cost increase to accommodate the simultaneous installations on CVN 78, CVN 71, and CVN 69.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Item Number / Title [DODIC]: 1 / Gun Mount Mods
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
<p>(8) E5006 MINOR CALIBER GUN MODS 2.1.8) MK38 UPGRADE KIT INSTALL: FY21 cost decrease attributed to ship availability changes.</p> <p>(9) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.9) MK38 UPGRADE LOGISTICS SUPT: This cost element funds development of integrated logistics support certification, ship change directive development, technical manual updates, provisioning support, and other logistics efforts required to support the system while installed onboard a ship.</p> <p>(10) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.11) TECH REFRESH: Increase from FY22 to FY23 due to development of MK38 MOD 4 engineering change proposals in support of first Initial Operational Capability system installations in FY25. FY21 increase due to emergent obsolescence engineering costs associated with MK 38 MOD 3 MGS.</p> <p>(11) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.12) MK 38 MOD 4 GWS: Increase from FY22 to FY23 due to procurement of MK 38 MOD 4 GWS. This cost element funds the procurement of QTY eleven (11) MK 38 MOD 4 GWS (unit cost \$3.088K) in FY23 to achieve IOC in FY25. Funding is required in FY23 due to a ~2 year lead time from contract award to system checkout on the target ship in FY25. This lead time consists of 18 months production, 1 month mount preparation, 3 months installation, and 1 month sea trial. One (1) of the eleven (11) mounts is a land-based Fleet support asset that would be installed at the MK 38 In-service Engineering Agent's site. This mount needs to be ordered in FY23 to leave enough time for 18 months production, 2 months installation, 1 month land-based test and checkout by FY25. This effort supports fielding of critical C-UAS and C-USV capability to five (5) DDG 51 ships.</p> <p>(12) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.13) MK 38 MOD 4 GWS INSTALL PLANNING: Increase from FY22 to FY23 due to conducting installation planning to field MK 38 MOD 4 GWS on DDG 51 ships. Installation planning includes development of installation drawings and topside analysis. This cost element funds all efforts required to plan the installations of the gun systems on their respective ships. This includes development of a ship installation drawing package, which is required to start 22 months before installation and takes 7.5 months to develop, since it involves ship checks and extensive safety and engineering analysis. This effort supports fielding of critical C-UAS and C-USV capability to five (5) DDG 51 ships.</p> <p>(13) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.15) MK46 GWS KITS: Cost increase from FY22 to FY23 attributed to additional MK46 GWS Kit requirements to address obsolescence and reliability in increased number of in-service gun mounts.</p> <p>(14) FY 2023 E5006 MINOR CALIBER GUN MODS 2.1.16) MK46 GWS KIT INSTALL increase is attributed to additional MK46 Kit installation requirements due to the increased number of MK46 in-service Gun Weapon Systems (GWS). The number of in-service MK46 GWS's within the fleet increased with the addition of DDG 1000 (1), LCS (1), and LPD 17 (3) ships, which require additional Installation Kits and associated installation efforts to address fleet obsolescence and software issues.</p> <p>(15) FY 2023 E5011 MAJOR CALIBER GUN MODS 3.1.1) MK45 MOD 1, 2, & 4 KITS: Cost increase from FY22 to FY23 attributed to additional Major Caliber Kit requirements to address obsolescence and reliability in increased number of in-service gun mounts.</p>		

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	514.583	19.740	6.652	0.400	0.000	0.400	0.000	0.000	0.000	0.000	0.000	541.375
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	514.583	19.740	6.652	0.400	0.000	0.400	0.000	0.000	0.000	0.000	0.000	541.375
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	514.583	19.740	6.652	0.400	0.000	0.400	0.000	0.000	0.000	0.000	0.000	541.375

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Minor Caliber Gun Mounts (MK38 MOD or MK46 MOD) for United States Navy ships (USN) are installed on AS, CVN, CG, DDG, LCS, LPD, LSD, LHA, LHD, PC, LCC, MK VI Patrol Boats and land based training/test units. The gun mounts provide an anti-surface warfare and anti-air warfare capability for outfitted ships. Funds procure ORDALTs kits, and provide ILS and production engineering for system improvements that affect safety, cybersecurity reliability and maintainability.

[MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard]

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Exhibit P-3a, Individual Modification: PB 2023 Navy											Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4217 / Gun Mount Mods							Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS			
ID Code (A=Service Ready, B=Not Service Ready) :								MDAP/MAIS Code:						
Models of Systems Affected: [No Model Specified]				Modification Type: TBD				Related RDT&E PEs:						
Financial Plan	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total		
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)		
Procurement														
<i>Modification Item 1 of 1:</i> E5006 MINOR CALIBER GUN MODS MK38 GUN KITS														
B Kits														
Recurring														
1.1.1) MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard - NonOrganic ⁽¹⁶⁾	271 / 232.626	4 / 7.080	4 / 6.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	279 / 245.958		
1.1.2) MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Large Deck - NonOrganic ⁽¹⁷⁾	52 / 68.713	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	52 / 68.713		
1.1.3) MINOR CAL. GUN MODS MK38 GUN KITS (Expeditionary Warfare) - NonOrganic	10 / 11.966	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 11.966		
<i>Subtotal: Recurring</i>	- / 313.305	- / 7.080	- / 6.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 326.637		
<i>Subtotal: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS</i>	333 / 313.305	4 / 7.080	4 / 6.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	341 / 326.637		
<i>Subtotal: Procurement, All Modification Items</i>	- / 313.305	- / 7.080	- / 6.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 326.637		
Installation														
<i>Modification Item 1 of 1:</i> E5006 MINOR CALIBER GUN MODS MK38 GUN KITS	- / 201.278	- / 12.660	- / 0.400	- / 0.400	- / 0.000	- / 0.400	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 214.738		
<i>Subtotal: Installation</i>	- / 201.278	- / 12.660	- / 0.400	- / 0.400	- / -	- / 0.400	- / -	- / -	- / -	- / -	- / 0.000	- / 214.738		
Total														
Total Cost (Procurement + Support + Installation)	514.583	19.740	6.652	0.400	0.000	0.400	0.000	0.000	0.000	0.000	0.000	541.375		

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

Manufacturer Information

Manufacturer Name: BAE SYSTEMS	Manufacturer Location: Minneapolis, MN
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Contract Dates	Jun 2021	May 2022	May 2023	Jun 2024	May 2025	May 2026	
Delivery Dates	Jun 2022	May 2023	May 2024	Jun 2025	May 2026	May 2027	

Installation Information

Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	278 / 137.435	2 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	280 / 137.635
FY 2021	- / -	- / -	4 / 0.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.400
FY 2022	- / -	- / -	- / -	4 / 0.400	0 / 0.000	4 / 0.400	- / -	- / -	- / -	- / -	0 / 0.000	4 / 0.400
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	278 / 137.435	2 / 0.200	4 / 0.400	4 / 0.400	0 / 0.000	4 / 0.400	- / -	- / -	- / -	- / -	0 / 0.000	288 / 138.435

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	278	-	2	-	-	-	-	4	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	278	-	-	-	2	-	-	-	4	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

Installation Information

Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Large Deck

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	43 / 59.061	9 / 12.460	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	52 / 71.521
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	43 / 59.061	9 / 12.460	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	52 / 71.521

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	43	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	39	4	-	-	-	-	-	4	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MODS MK38 GUN KITS (Expeditionary Warfare)

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	10 / 4.782	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 4.782
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

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Exhibit P-3a, Individual Modification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

Installation Information

Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MODS MK38 GUN KITS (Expeditionary Warfare)

Installation Cost	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	10 / 4.782	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	10 / 4.782

Installation Schedule

	PYS	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10

Footnotes:
 (16) Increased FY21 MK38 Gun Kit costs attributed to new FY21 contract award and reduced quantity of mounts. Increased FY21 standard deck installation quantities attributed to ship availability schedule ships. FY22 standard deck installation cost decrease attributed to modification of new construction DDG 51 design, that resulted in reduced ship alteration and installation costs.
 (17) Installations for large deck include CVN installations. CVN installation costs are higher than the amphibious ships due to longer cable runs, larger sponsons, and floating crane requirements. Increased FY21 Large deck installation quantities attributed to ship availability schedule ships.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts **P-1 Line Item Number / Title:** 4221 / LCS Module Weapons

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	292	32	14	30	-	30	18	12	10	10	-	418
Gross/Weapon System Cost (<i>\$ in Millions</i>)	35.734	4.253	2.121	4.580	0.000	4.580	3.257	2.454	2.257	2.249	64.663	121.568
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	35.734	4.253	2.121	4.580	0.000	4.580	3.257	2.454	2.257	2.249	64.663	121.568
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	35.734	4.253	2.121	4.580	0.000	4.580	3.257	2.454	2.257	2.249	64.663	121.568

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	122,376.71	132,906.25	151,500.00	152,666.67	-	152,666.67	180,944.44	204,500.00	225,700.00	224,900.00	-	290,832.54

Description:

Longbow Hellfire missiles provide Littoral Combat Ship (LCS) firepower to counter enemy high speed, agile surface craft executing swarm tactics. LCS equipped with the Surface Warfare Mission Package (SUW MP) will employ these missiles while escorting High Value Units (HVUs) through choke points and other strategic waterways or while conducting littoral operations.

Other Related Budgets: BLIs: OPN 1603 LCS SUW Mission Modules, RDT&E 0603596N LCS Mission Modules

[P5 / Longbow Hellfire Missile]: The Longbow Hellfire missile is a fire and forget, millimeter-wave seeker missile for autonomous engagement. The Navy procures replacement in kind missiles from the Army inventory, completes shipboard modifications and certifications to deliver to the Fleet.

[P5 / Consulting Services]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts **P-1 Line Item Number / Title:** 4221 / LCS Module Weapons

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LCS Module Weapons	P-5a, P-21			292 / 35.734	32 / 4.253	14 / 2.121	30 / 4.580	- / 0.000	30 / 4.580
P-40	Total Gross/Weapon System Cost				292 / 35.734	32 / 4.253	14 / 2.121	30 / 4.580	- / 0.000	30 / 4.580

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The FY 2023 procurements of Longbow Hellfire missiles supports LCS SUW Division Ships deploying in FY 2025. The Navy's inventory objective is 845 missiles.

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Exhibit P-5, Cost Analysis: PB 2023 Navy					Date: April 2022			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4221 / LCS Module Weapons			Item Number / Title [DODIC]: 1 / LCS Module Weapons		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:				
Resource Summary			Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (<i>Units in Each</i>)			292	32	14	30	-	30
Gross/Weapon System Cost (<i>\$ in Millions</i>)			35.734	4.253	2.121	4.580	0.000	4.580
Less PY Advance Procurement (<i>\$ in Millions</i>)			-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)			35.734	4.253	2.121	4.580	0.000	4.580
Plus CY Advance Procurement (<i>\$ in Millions</i>)			-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)			35.734	4.253	2.121	4.580	0.000	4.580
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>								
Initial Spares (<i>\$ in Millions</i>)			-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)			122,376.71	132,906.25	151,500.00	152,666.67	-	152,666.67

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) Longbow Hellfire Missile ^(t)	117,126.71	292	34.201	122,281.25	32	3.913	124,845.45	14	1.748	127,345.45	30	3.820	-	-	-	127,345.45	30	3.820
1.1.2) Ordnance Handling Equipment	-	-	-	-	-	-	-	-	-	-	-	0.448	-	-	-	-	-	0.448
<i>Subtotal: Recurring Cost</i>	-	-	34.201	-	-	3.913	-	-	1.748	-	-	4.268	-	-	-	-	-	4.268
<i>Subtotal: Hardware Cost</i>	-	-	34.201	-	-	3.913	-	-	1.748	-	-	4.268	-	-	-	-	-	4.268
Support Cost																		
2.1) Consulting Services	-	-	1.533	-	-	0.340	-	-	0.373	-	-	0.312	-	-	-	-	-	0.312
<i>Subtotal: Support Cost</i>	-	-	1.533	-	-	0.340	-	-	0.373	-	-	0.312	-	-	-	-	-	0.312
Gross/Weapon System Cost	122,376.71	292	35.734	132,906.25	32	4.253	151,500.00	14	2.121	152,666.67	30	4.580	-	-	0.000	152,666.67	30	4.580

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4221 / LCS Module Weapons	Item Number / Title [DODIC]: 1 / LCS Module Weapons
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Longbow Hellfire Missile ^(†)		2019	US Army / Huntsville, AL	MIPR	JAMS PO Huntsville	May 2019	Apr 2020	90	117,490.91	Y		
1.1.1) Longbow Hellfire Missile ^(†)	✓	2020	US Army / Huntsville, AL	MIPR	JAMS PO Huntsville	Mar 2020	Feb 2021	90	119,583.00	Y		
1.1.1) Longbow Hellfire Missile ^(†)		2021	US Army / Huntsville, AL	MIPR	JAMS PO Huntsville	Dec 2020	Nov 2021	32	122,281.25	Y		
1.1.1) Longbow Hellfire Missile ^(†)		2022	US Army / Huntsville, AL	MIPR	JAMS PO Huntsville	Dec 2021	Nov 2022	14	124,845.45	Y		
1.1.1) Longbow Hellfire Missile ^(†)		2023	US Army / Huntsville, AL	MIPR	JAMS PO Huntsville	Mar 2023	Feb 2024	30	127,345.45	Y		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4221 / LCS Module Weapons	Item Number / Title [DODIC]: 1 / LCS Module Weapons
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021													Fiscal Year 2022													BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.1) Longbow Hellfire Missile																																	
Prior Years Deliveries: 112																																	
	1	2019	NAVY	90	80	10	10																						0				
✓	1	2020	NAVY	90	0	90	-	-	-	-	16	16	16	16	16	10													0				
	1	2021	NAVY	32	0	32			A -	-	-	-	-	-	-	-	-	-	-	16	16								0				
	1	2022	NAVY	14	0	14														A -	-	-	-	-	-	-	-	-	14				
	1	2023	NAVY	30	0	30																						30					
									O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2023 Navy								Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4221 / LCS Module Weapons				Item Number / Title [DODIC]: 1 / LCS Module Weapons				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	US Army - Huntsville, AL	10	110	168	0	0	11	11	0	0	11	11

"A" in the Delivery Schedule indicates the Contract Award Date.
Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts **P-1 Line Item Number / Title:** 4225 / Airborne Mine Neutralization Systems

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	176.370	6.662	14.822	8.710	0.000	8.710	14.338	11.634	10.552	10.636	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	176.370	6.662	14.822	8.710	0.000	8.710	14.338	11.634	10.552	10.636	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	176.370	6.662	14.822	8.710	0.000	8.710	14.338	11.634	10.552	10.636	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	0.177	0.244	0.255	-	0.255	0.145	0.102	0.104	0.106	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airborne Mine Countermeasures (AMCM) Equipment is currently deployed on MH-53E and MH-60S helicopters to counter the threat of sea mines. The equipment is divided into three categories -- minesweeping, minehunting, and mine neutralization. (1) Minesweeping is performed by mechanical or influence sweeps. In mechanical sweeping, the mine mooring is severed by the sweep gear allowing the mine to float to the surface where it is destroyed. In influence sweeping, a magnetic or acoustic field, which simulates the magnetic/acoustic signature of a ship, is introduced into the water. This field causes the mine mechanism to actuate. (2) In minehunting, the objective is to locate, identify, and classify mine-like objects (usually by means of high-resolution sonar). (3) Finally, in mine neutralization, previously identified/classified mine-like objects are re-acquired and neutralized using explosive devices.

[P5 / ARCHERFISH Destructor]: AN/ASQ-235 - Airborne Mine Neutralization System (AMNS) will provide the MH-60S helicopter with the capability to neutralize proud and moored mines using an expendable mine neutralization device. The system will be deployed from the MH-60S helicopter as part of the Littoral Combat Ship (LCS) Mine Countermeasure (MCM) Mission Package or Vessels of Opportunity (VOO). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). AMNS procurements are funded with OPN for the AMNS combat system and WPN for the AMNS Archerfish destructor.

[P5 - 2 / SEAFOX Neutralizer]: SEAFOX neutralizers are used from the AN/ASQ-232, Airborne Mine Neutralization System - SEAFOX (AMNS-SF), the AN/SLQ-60, Surface Mine Neutralization System - SEAFOX (SMNS-SF). Airborne combat systems are deployed from the MH-53E SEA DRAGON helicopters. Surface combat systems are deployed from the MCM-1 Avenger Class ships.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts **P-1 Line Item Number / Title:** 4225 / Airborne Mine Neutralization Systems

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / ARCHERFISH Mine Neutralization Combat Rounds	P-5a, P-21			- / 119.571	- / 5.396	- / 13.533	- / 7.740	- / 0.000	- / 7.740
P-5	2 / SEAFOX Mine Neutralization Combat Rounds	P-5a			- / 56.799	- / 1.266	- / 1.289	- / 0.970	- / 0.000	- / 0.970
P-40	Total Gross/Weapon System Cost				- / 176.370	- / 6.662	- / 14.822	- / 8.710	- / 0.000	- / 8.710

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 The FY 2023 funding request was adjusted by \$3.389M to account for the availability of prior year execution balances.

 FY 2023 funding supports the procurement of 22 Archerfish destructors and associated engineering, integrated logistics support, and support equipment to support deployment inventory objective requirements.

 In FY 2023, SEAFOX support costs are required to procure Inert and Training support equipment in support of the SEAFOX system. The increase in funding for support costs will be used to develop a demilitarization and disposal plan in preparation for ship decommissioning.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems	Item Number / Title [DODIC]: 1 / ARCHERFISH Mine Neutralization Combat Rounds

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	119.571	5.396	13.533	7.740	0.000	7.740
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	119.571	5.396	13.533	7.740	0.000	7.740
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	119.571	5.396	13.533	7.740	0.000	7.740

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - ARCHERFISH Destructor Cost																		
Recurring Cost																		
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destructor ^{(†) (1)}	156,933.33	600	94.160	161,148.15	27	4.351	138,055.56	90	12.425	300,454.54	22	6.610	-	-	0.000	300,454.54	22	6.610
<i>Subtotal: Recurring Cost</i>	-	-	94.160	-	-	4.351	-	-	12.425	-	-	6.610	-	-	0.000	-	-	6.610
<i>Subtotal: Hardware - ARCHERFISH Destructor Cost</i>	-	-	94.160	-	-	4.351	-	-	12.425	-	-	6.610	-	-	0.000	-	-	6.610
Support Cost																		
2.1) Production Engineering	-	-	12.352	-	-	0.271	-	-	0.497	-	-	0.507	-	-	0.000	-	-	0.507
2.2) ILS/PUBS/Tech Data	-	-	9.154	-	-	0.186	-	-	0.223	-	-	0.227	-	-	0.000	-	-	0.227
2.3) Support Equipment	-	-	3.905	-	-	0.588	-	-	0.388	-	-	0.396	-	-	0.000	-	-	0.396
<i>Subtotal: Support Cost</i>	-	-	25.411	-	-	1.045	-	-	1.108	-	-	1.130	-	-	0.000	-	-	1.130
Gross/Weapon System Cost	-	-	119.571	-	-	5.396	-	-	13.533	-	-	7.740	-	-	0.000	-	-	7.740

Remarks:

[Hardware] FY 2023 funding supports the procurement of 22 Archerfish destructors and associated engineering, integrated logistics support, and support equipment to support the deployment inventory objective requirements.

[Support Cost] Increases from FY 2022 to FY 2023 are associated with increased material costs and future economic uncertainty associated with the COVID-19 global pandemic.

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems	Item Number / Title [DODIC]: 1 / ARCHERFISH Mine Neutralization Combat Rounds
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

(t) indicates the presence of a P-5a

Footnotes:

(1) The AMNS WPN unit cost increase from FY 2022 to FY 2023 reflects prices as negotiated in BAE Contract awarded in August 2020. Destructor price increased prior to award due to increased material costs and future economic uncertainty associated with the COVID-19 global pandemic. Unit costs in FY 2023 are based on stepladder pricing for destructor procurement. Destructor was previously referred to as neutralizer.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy							Date: April 2022					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems				Item Number / Title [DODIC]: 1 / ARCHERFISH Mine Neutralization Combat Rounds					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destroyer ^(†)		2019	BAE / Portsmouth, UK	SS / FP	NAVSEA	Aug 2020	Aug 2022	63	144,211.94	Y		Aug 2019
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destroyer ^(†)		2020	BAE / Portsmouth, UK	SS / FP	NAVSEA	Aug 2020	Aug 2022	38	148,736.84	Y		Aug 2019
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destroyer ^(†)		2021	BAE / Portsmouth, UK	SS / FP	NAVSEA	Jun 2021	Jun 2023	27	161,148.15	Y		Aug 2019
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destroyer ^(†)		2022	BAE / Portsmouth, UK	SS / FP	NAVSEA	Jun 2022	Jun 2024	90	138,055.56	Y		Aug 2019
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destroyer ^(†)		2023	BAE / Portsmouth, UK	SS / FP	NAVSEA	Jun 2023	Jun 2025	22	300,454.54	Y		Aug 2019

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2023 Navy															Date: April 2022														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2										P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems										Item Number / Title [DODIC]: 1 / ARCHERFISH Mine Neutralization Combat Rounds									

Cost Elements <i>(Units in Each)</i>							Fiscal Year 2024														Fiscal Year 2025														BALANCE
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024														Calendar Year 2025														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) AN/ASQ-235 - AMNS - MH-60S Destroyer ⁽¹⁾																																			
Prior Years Deliveries: 499																																			
1		2019	NAVY	63	63	0																							0						
1		2020	NAVY	38	38	0																							0						
1		2021	NAVY	27	27	0																							0						
1		2022	NAVY	90	0	90	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10					0							
1		2023	NAVY	22	0	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0							
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2		P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems
		Item Number / Title [DODIC]: 1 / ARCHERFISH Mine Neutralization Combat Rounds

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2023	1-8-5 For 2023	MAX For 2023	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	BAE - Portsmouth, UK	25	480	1,440	0	9	24	33	0	9	24	33

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2		P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems
		Item Number / Title [DODIC]: 2 / SEAFOX Mine Neutralization Combat Rounds

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	56.799	1.266	1.289	0.970	0.000	0.970
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	56.799	1.266	1.289	0.970	0.000	0.970
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	56.799	1.266	1.289	0.970	0.000	0.970

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2021			FY 2022			FY 2023 Base			FY 2023 OCO			FY 2023 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware - SEAFOX Neutralizer Cost																		
Recurring Cost																		
1.1.1) SEAFOX Neutralizer	87,681.02	511	44.805	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) SEAFOX Refurbishment Upgrade Rounds	25,000.00	72	1.800	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) Battery Replacement ^(t)	8,379.08	153	1.282	9,300.00	40	0.372	9,500.00	50	0.475	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Recurring Cost</i>	-	-	47.887	-	-	0.372	-	-	0.475	-	-	0.000	-	-	0.000	-	-	0.000
<i>Subtotal: Hardware - SEAFOX Neutralizer Cost</i>	-	-	47.887	-	-	0.372	-	-	0.475	-	-	0.000	-	-	0.000	-	-	0.000
Support Cost																		
2.1) Production Engineering	-	-	3.879	-	-	0.221	-	-	0.218	-	-	0.235	-	-	0.000	-	-	0.235
2.2) ILS/PUBS/Tech Data	-	-	2.948	-	-	0.293	-	-	0.291	-	-	0.322	-	-	0.000	-	-	0.322
2.3) Support Equipment ⁽²⁾	-	-	2.085	-	-	0.380	-	-	0.305	-	-	0.413	-	-	0.000	-	-	0.413
<i>Subtotal: Support Cost</i>	-	-	8.912	-	-	0.894	-	-	0.814	-	-	0.970	-	-	0.000	-	-	0.970
Gross/Weapon System Cost	-	-	56.799	-	-	1.266	-	-	1.289	-	-	0.970	-	-	0.000	-	-	0.970

^(t) indicates the presence of a P-5a

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Exhibit P-5, Cost Analysis: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems	Item Number / Title [DODIC]: 2 / SEAFOX Mine Neutralization Combat Rounds
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Footnotes:

⁽²⁾ In FY 2023, support costs are required to procure Inert and Training support equipment in support of the SEAFOX system. The increase in funding will be used to develop a demilitarization and disposal plan in preparation for ship decommissioning.

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Exhibit P-5a, Procurement History and Planning: PB 2023 Navy							Date: April 2022				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems				Item Number / Title [DODIC]: 2 / SEAFOX Mine Neutralization Combat Rounds				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.3) Battery Replacement		2019	NSWC Indian Head / Indian Head MD	WR	NAVSEA	Dec 2018	Jun 2019	70	8,500.00	Y		
1.1.3) Battery Replacement		2020	NSWC Indian Head / Indian Head MD	WR	NAVSEA	Mar 2020	Sep 2020	33	8,700.00	N		
1.1.3) Battery Replacement		2021	NSWC Indian Head / Indian Head MD	WR	NAVSEA	Mar 2021	Sep 2021	40	9,300.00	N		
1.1.3) Battery Replacement		2022	NSWC Indian Head / Indian Head MD	WR	NAVSEA	Mar 2022	Sep 2022	50	9,500.00	N		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 4: Other **P-1 Line Item Number / Title:** 4500 / Cancelled Account Adjustments

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	4.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	4.952
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	4.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	4.952
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	4.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	4.952

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line finances cancelled account adjustments.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts	P-1 Line Item Number / Title: 6120 / Spares and Repair Parts
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	142.053	155.919	170.041	0.000	170.041	169.975	172.236	174.315	176.378	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	142.053	155.919	170.041	0.000	170.041	169.975	172.236	174.315	176.378	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	142.053	155.919	170.041	0.000	170.041	169.975	172.236	174.315	176.378	Continuing	Continuing

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Weapons Procurement, Navy (WPN-6) budget line item (BLI) is made up of three budget sub-line items (SUBLIs): SUBLI (20) Initial Spares, SUBLI (30) Outfitting Spares, and SUBLI (90) Vendor Direct/ Replenishment spares. Initial spares are components, assemblies, and sub-assemblies that are provided and stocked on active ships, shore sites, and expeditionary units as spare parts for newly fielded weapon systems. Vendor Direct spares are both consumable and repairable parts that are required to replenish stocks for use in maintenance, overhaul, and repair of equipment. Outfitting spares are spare parts that the Navy Supply System has bought in to respond to meet fleet requisitions for newly installed and/or modernized systems. Together they provide for all WPN-6 Spares funding in support of (1) Navy surface ordnance, which consists of all guns, associated equipment (hoists, shields, etc.), and related material support necessary to support fleet readiness capabilities, (2) Anti-Submarine Warfare (ASW) weapons and support equipment, and (3) NAVAIR managed air-launched weapons and associated equipment. Additionally, outfitting spares funding is required for the initial outfitting and repair of expendable item parts, such as guided missile components, and non-recoverable target drone components to address damage incurred while in flight, damage incurred during recovery operations, and for control and telemetry equipment.

Navy surface ordnance guns, equipment, and materials consist of the following:

- Naval Strike Missile (NSM)
- Small Arms and Weapons
- Gun Mount Modifications
- Airborne Mine Neutralization Systems
- Standard Missile
- Rolling Airframe Missile (RAM)
- Evolved Sea Sparrow Missile (ESSM)
- 6T COG (Underwater Mines & Components)
- Close-In Weapons System (CIWS)
- Coast Guard Weapons (MK-110, MK-160 Gun Control System, MK-38 Machine Gun System)

ASW weapons and support equipment consist of the following:

- MK-54 Torpedo
- MK-48 Torpedo

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<ul style="list-style-type: none">- ASW Range Support Program (Underwater Tracking Range Equipment (UTRE) Program & MK28 Service Weapon Target Test (SWTT) Program)- MK-39 MOD 3 Expendable Mobile ASW (EMATT)- MK-48 Common Broadband Advanced Sonar System (CBASS) Kits <p>NAVAIR-managed air-launched weapons consist of the following:</p> <ul style="list-style-type: none">- Anti-ship, anti-radar, anti-armor, air-to-air, and air-to-surface weapons including Advanced Anti-Radiation Guided Missile (AARGM, AARGM-ER)- High Speed Anti-Radiation Missile (HARM)- Harpoon (air/surface/sub-surface)- Hellfire, Joint Standoff Weapons (JSOW)- Air-to-Surface Guided Missiles (AGM-65)- Long Range Anti-Ship Missile (LRASM)- Airborne Intercept Missile (AIM-7, AIM-9, AIM-120)- Standard Land Attack Missiles (SLAM-ER)- Small Diameter Bomb Increment (SDB II)- Joint Air-to-Ground Missiles (JAGM)- Miniature Air-Launched Decoy (MALD)- Other air-launched guided weapons that fall under special access program control.		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts

P-1 Line Item Number / Title:
6120 / Spares and Repair Parts

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-18	WPN spares				- / -	- / 142.053	- / 155.919	- / 170.041	- / -	- / 170.041
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 142.053	- / 155.919	- / 170.041	- / 0.000	- / 170.041

Title represents the P-18 Title for Spares.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:

FY 2023 funding request was reduced by \$1.661 million to account for the availability of prior year execution balances.

The FY23 WPN Spares funding will maintain operational availability of new and existing spares and repair parts for systems fielded to the operational warfighters. In addition, it will increase the ability to provide onboard repair parts, interim depot spares, and installation and checkout spares in order to sustain the Navy's mission readiness and information dominance posture.

Initial Spares

FY2023 Program Increase Justifications:

2206 / AMRAAM (Initial): Increase of \$0.216 million supports the procurement of Telemetry and Missile/CATM Spares needed at the Depot for necessary repairs to achieve sufficient Operational Mission Capability.

2248 / JAGM (Initial) - Increase of \$0.425 million supports depot sparing requirements at the Prime Contractor Depot and at the USN Fleet All Up Round (AUR) Depot at NAWMU-1 Guam. The DoN Future Readiness Initiative supports establishment of an AUR Depot at NAWMU-1 to increase material availability and readiness in the INDOPACOM Area of Responsibility. These additional spares support the standup of NAWMU-1 for JAGM maintenance capability.

2280 / Aerial Targets (Initial): Increase of \$0.968 million procures spares to support the production increase of 10 additional BQM-177A targets in FY23 that will support Fleet Training and Weapon System Testing.

2292 / Spares for Naval Strike Missile (NSM, previously known as LCS OTH Missile) (Initial): Increase of \$1.483 million due to the procurement of spares to support the increase in quantity for DoN Naval Strike Missile from 32 to 36 units in FY23.

2327 / AARGM (Initial): Increase of \$2.318 million procures initial sparing requirements for the AARGM Extended Range Missile Depot standup to support planned IDIQ repairs as this weapon approaches operational capability.

3117W / Spares for MK-48 (Initial): Increase of \$1.523 million due to increased unit cost and quantity for guidance and control sections for MK-48 Mod 7 hardware in FY23.

3215 / Spares for WPN MK-54 Torpedo Mods (Initial): Increase of \$0.206 million to support the procurement of spares for MK-54 Mod 1 Hardware.

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>4206 / Coast Guard Weapons (Initial): Increase of \$.092 million attributed to increased number of in-service MK160 Fire Control System (FCS), MK110 Gun Mounts, and MK38 Gun Weapon Systems installed aboard growing number of new construction US Coast Guard Navy Type and Navy Owned (NTNO) cutters.</p> <p>4217W / Gun Mount Mods (Initial): Increase of \$0.50 million attributed to an increased number of in-service MK110 Gun Mounts and MK38 Gun Weapon Systems installed aboard new construction US Coast Guard Navy Type, Navy Owned (NTNO) cutters and US Navy ships. Increase supports additional spares required for installation of COAX ORDALT and MOD 3 Conversion Kits on aging MK 38 MOD 2 MGS population in the USN Fleet.</p> <p>4225 / Spares for Airborne Mine Neutralization Systems (Initial): Increase of \$0.011 million due to initial purchasing AN/AQS/232A MK62 SeaFox batteries due to system aging. Additional funds will ensure that 5th Fleet operational readiness will be met and maintained at the levels required to meet applicable operational demands.</p> <p>Replenishment Spares</p> <p>FY2023 Program Increase Justifications:</p> <p>2242 / Spares for Rolling Airframe Missile (RAM) (Replen): Increase of \$3.075 million due to additional spares required to support increase in procurement quantity of RAM Block 2 Missiles from 70 in FY22 to 100 in FY23.</p> <p>2307 / Spares for Evolved Sea Sparrow Missile (ESSM) (Replen): Increase of \$1.212 million to procure spares for ESSM Block 2 Missiles AURs which increased in quantity from 108 in FY22 to 136 in FY23.</p> <p>9203 / Spares for NAVAIR (Replen): Increase of \$2.897 million is associated with the procurement of additional spares in support of multiple programs. LRASM increase supports All Up Round (AUR) Lot 7 procurement requirements. AARGM increase procures one additional Guidance Section spare, three additional Control Section spares, and 15 additional replenishment spares to support AUR and section repairs for the Fleet. SDB increase is due to AUR procurement increasing from 180 in FY22 to 461 in FY23. These replenishment spares are critical enablers for air launched weapons undergoing Maintenance, Repair, and Overhaul in order to return them to an operational condition.</p> <p>3141 / Spares for ASW Targets (Replen): Increase of \$0.469 million to procure Spares for MK39 Mod 3 Expendable Mobile ASW Training Target (EMATT) which increased in procurement quantity from 550 in FY22 to 1,023 in FY23.</p> <p>3215 / Spares for MK-54 Torpedo Mods (Replen): \$0.248 million increase due to an increase in quantity of procurements for High Altitude ASW Weapon Capability (HAAWC) Air Launch Accessory (ALA) Kits from 0 in FY22 to 44 in FY23.</p> <p>3302 / Spares for ASW Range Support (Replen): Increase of \$0.147 million funding due to an increase in Underwater Tracking Range Equipment (UTRE) and MK-28 Service Weapon Test (SWT) Program test systems.</p> <p>6231 / Spares for 6T COG (Replen): Increase of \$0.569M million supports the procurement of spares for Quickstrike (QS) MOD 3, MK-68 Clandestine Delivered Mine (CDM) Increment 2, and Quickstrike Extended Range (QS-ER) mine hardware.</p> <p>4206 / Spares for Coast Guard Weapons (Replen): Increase of \$.027 million attributed to increased number of in-service MK160 Fire Control System (FCS), MK110 Gun Mounts and MK38 Gun Weapon Systems installed aboard US Coast Guard Navy Type, Navy Owned (NTNO) cutters, fielding more assets to keep pace with operational requirements.</p>		

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Exhibit P-40, Budget Line Item Justification: PB 2023 Navy		Date: April 2022
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

4217W / Spares for Gun Mount Mods (Replen): Increase of \$0.750 million due to increased number of MK-46 Gun Weapon Systems, MK-38 (MOD3 MGS) Gun Weapon Systems, MK-45 Gun Mounts, and MK-110 Gun Mounts, prolonged service life of current assets, fielding more assets to keep pace with operational requirements.

4225 / Spares for Airborne Mine Neutralization Systems (Replen): Increase of \$0.166 million to procure ARCHERFISH AN/ASQ-235 - AMNS - MH-60S Destructor Spares to support deployment inventory objective requirements.

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Exhibit P-18, Initial and Replenishment Spare and Repair Parts Justification: PB 2023 Navy					Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 06 / 1		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts			Title: WPN spares		
End Item Line Item Number / Name [MDAP/MAIS]	Prior Years (\$ M)	FY 2021 (\$ M)	FY 2022 (\$ M)	FY 2023 Base (\$ M)	FY 2023 OCO (\$ M)	FY 2023 Total (\$ M)	
Initial							
BA 02 - Other Missiles							
2206 / AMRAAM	-	8.617	6.632	6.848	-	6.848	
2209 / Sidewinder	-	1.785	2.027	1.168	-	1.168	
2248 / Joint Air Ground Missile (JAGM)	-	0.833	0.846	1.271	-	1.271	
2280 / Aerial Targets	-	2.407	1.951	2.919	-	2.919	
2292 / Naval Strike Missile (NSM)	-	-	1.358	2.841	-	2.841	
2327 / AARGM	-	3.640	0.445	2.763	-	2.763	
BA 03 - Torpedoes and Related Equipment							
3117 / MK-48 Torpedo	-	-	1.378	2.901	-	2.901	
3215 / MK-54 Torpedo Mods	-	1.404	1.288	1.494	-	1.494	
3225 / MK-48 Torpedo ADCAP Mods	-	1.398	0.244	0.000	-	0.000	
BA 04 - Other Weapons							
4129 / Small Arms and Weapons	-	0.037	-	0.000	-	0.000	
4206 / Coast Guard Weapons	-	0.634	0.630	0.722	-	0.722	
4217 / Gun Mount Mods	-	3.437	3.417	3.917	-	3.917	
4225 / Airborne Mine Neutralization Systems	-	0.177	0.244	0.255	-	0.255	
Subtotal: Initial	-	24.369	20.460	27.099	-	27.099	
Replenishment							
BA 02 - Other Missiles							
2101 / Tomahawk	-	19.572	38.391	37.475	-	37.475	
2234 / Standard Missile	-	33.835	37.696	37.299	-	37.299	
2242 / Rolling Airframe Missile (RAM)	-	4.474	10.858	13.933	-	13.933	
2280 / Aerial Targets	-	9.987	3.466	3.430	-	3.430	
2307 / Evolved Sea Sparrow Missile (ESSM)	-	8.143	7.831	9.043	-	9.043	
2326 / Harpoon Mods	-	2.659	-	0.000	-	0.000	
9203 / Spares for NAVAIR	-	16.258	13.453	16.350	-	16.350	
BA 03 - Torpedoes and Related Equipment							
3141 / ASW Targets	-	1.668	1.339	1.808	-	1.808	
3215 / MK-54 Torpedo Mods	-	1.703	1.616	1.864	-	1.864	
3225 / MK-48 Torpedo ADCAP Mods	-	0.472	0.616	0.575	-	0.575	
3302 / ASW Range Support	-	0.553	0.510	0.657	-	0.657	

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Exhibit P-18, Initial and Replenishment Spare and Repair Parts Justification: PB 2023 Navy					Date: April 2022		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 06 / 1		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts			Title: WPN spares		
End Item Line Item Number / Name [MDAP/MAIS]	Prior Years (\$ M)	FY 2021 (\$ M)	FY 2022 (\$ M)	FY 2023 Base (\$ M)	FY 2023 OCO (\$ M)	FY 2023 Total (\$ M)	
6231 / 6T COG	-	6.843	6.813	7.382	-	7.382	
BA 04 - Other Weapons							
4129 / Small Arms and Weapons	-	0.336	0.591	0.205	-	0.205	
4205 / Close-In Wpns Sys (CIWS) Mods	-	1.902	0.704	0.403	-	0.403	
4206 / Coast Guard Weapons	-	0.175	0.179	0.206	-	0.206	
4217 / Gun Mount Mods	-	7.861	10.363	11.113	-	11.113	
4225 / Airborne Mine Neutralization Systems	-	1.243	1.033	1.199	-	1.199	
Subtotal: Replenishment	-	117.684	135.459	142.942	-	142.942	
Total Cost (Initial + Replenishment)	-	142.053	155.919	170.041	-	170.041	

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