UNCLASSIFIED

Department of Defense
Fiscal Year (FY) 2024 Budget Estimates

March 2023

Navy

Justification Book Volume 3 of 5

Other Procurement, Navy

Budget Activity 03

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Other Procurement, Navy

For procurement, production, and modernization of support equipment and materials not otherwise provided for, Navy ordnance (except ordnance for new aircraft, new ships, and ships authorized for conversion); the purchase of passenger motor vehicles for replacement only; 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, $14,535,257,000, to remain available for obligation until September 30, 2026, of which $1,027,000 shall be available for the Navy Reserve and the Marine Corps Reserve: Provided, That such funds are also available for the maintenance, repair, and modernization of ships.

Fiscal Year (FY) 2024 Overseas Operations Costs funding accounted for in the Base budget total [$46,435,000].

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Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N BA Summary

(Dollars in Thousands)

Appropriation: **Other Procurement, Navy**	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
Budget Activity					
01. Ships support equipment	4,267,668	4,714,192		4,714,192	5,776,998
02. Communications and electronics equipment	3,281,303	3,299,809		3,299,809	3,967,071
03. Aviation support equipment	737,556	957,476		957,476	924,487
04. Ordnance support equipment	1,043,088	1,209,869		1,209,869	1,256,530
05. Civil engineering support equipment	156,510	159,226		159,226	183,019
06. Supply support equipment	690,832	651,632		651,632	699,764
07. Personnel and command support equipment	502,251	564,073	2,170	566,243	611,488
08. Spares and repair parts	445,621	582,313		582,313	1,115,900
Total Other Procurement, Navy	**11,124,829**	**12,138,590**	**2,170**	**12,140,760**	**14,535,257**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 01: Ships support equipment									
Ship Propulsion Equipment									
1	Surface Power Equipment	A	U	0	41,414	0	46,478		
Generators									
2	Surface Combatant HM&E	A	U	0	78,054	0	74,585		
Navigation Equipment									
3	Other Navigation Equipment	A	U	0	72,300	0	87,800		
Other Shipboard Equipment									
4	Sub Periscope, Imaging and Supt Equip Prog	A	U	0	209,792	0	261,011		
5	DDG Mod	A	U	0	535,667	0	744,341		
6	Firefighting Equipment	A	U	0	13,970	0	18,552		
7	Command and Control Switchboard	A	U	0	2,194	0	2,406		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 01: Ships support equipment							
Ship Propulsion Equipment							
1	Surface Power Equipment	A	U	0	46,478	0	14,003
Generators							
2	Surface Combatant HM&E	A	U	0	74,585	0	105,441
Navigation Equipment							
3	Other Navigation Equipment	A	U	0	87,800	0	110,286
Other Shipboard Equipment							
4	Sub Periscope, Imaging and Supt Equip Prog	A	U	0	261,011	0	262,951
5	DDG Mod	A	U	0	744,341	0	628,532
6	Firefighting Equipment	A	U	0	18,552	0	34,782
7	Command and Control Switchboard	A	U	0	2,406	0	2,458

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
8	LHA/LHD Midlife	A	U	0	119,428	0	38,200		
9	LCC 19/20 Extended Service Life Program	A	U	0	1,401	0	20,028		
10	Pollution Control Equipment	B	U	0	15,659	0	11,607		
11	Submarine Support Equipment	A	U	0	88,284	0	116,575		
12	Virginia Class Support Equipment	A	U	0	22,669	0	32,300		
13	LCS Class Support Equipment		U	0	9,640	0	22,238		
14	Submarine Batteries		U	0	21,834	0	24,137		
15	LPD Class Support Equipment		U	0	22,093	0	53,350		
16	DDG 1000 Class Support Equipment	A	U	0	71,561	0	314,333		
17	Strategic Platform Support Equip	A	U	0	12,256	0	13,504		
18	DSSP Equipment	A	U	0	3,282	0	3,660		
19	CG Modernization	A	U	0	138,926	0	59,054		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
8	LHA/LHD Midlife	A	U	0	38,200	0	104,369
9	LCC 19/20 Extended Service Life Program	A	U	0	20,028	0	10,529
10	Pollution Control Equipment	B	U	0	11,607	0	23,272
11	Submarine Support Equipment	A	U	0	116,575	0	112,526
12	Virginia Class Support Equipment	A	U	0	32,300	0	32,076
13	LCS Class Support Equipment		U	0	22,238	0	18,832
14	Submarine Batteries		U	0	24,137	0	28,221
15	LPD Class Support Equipment		U	0	53,350	0	91,890
16	DDG 1000 Class Support Equipment	A	U	0	314,333	0	232,124
17	Strategic Platform Support Equip	A	U	0	13,504	0	25,058
18	DSSP Equipment	A	U	0	3,660	0	4,623
19	CG Modernization	A	U	0	59,054		

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
20	LCAC	A	U	0	21,314	0	17,452		
21	Underwater EOD Equipment		U	0	24,146	0	35,417		
22	Items Less Than $5 Million	A	U	0	86,045	0	60,812		
23	Chemical Warfare Detectors	A	U	0	2,429	0	3,202		
Reactor Plant Equipment									
24	Ship Maintenance, Repair and Modernization	A	U	0	1,307,651	0	1,642,532		
25	Reactor Power Units	A	U	0	3,270	0	4,690		
26	Reactor Components	A	U	0	438,729	0	408,989		
Ocean Engineering									
27	Diving and Salvage Equipment	A	U	0	10,772	0	11,773		
Small Boats									
28	Standard Boats	A	U	0	135,226	0	88,562		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
20	LCAC	A	U	0	17,452	0	10,794
21	Underwater EOD Equipment		U	0	35,417	0	19,549
22	Items Less Than $5 Million	A	U	0	60,812	0	86,001
23	Chemical Warfare Detectors	A	U	0	3,202	0	3,288
Reactor Plant Equipment							
24	Ship Maintenance, Repair and Modernization	A	U	0	1,642,532	0	2,746,313
25	Reactor Power Units	A	U	0	4,690	0	2,016
26	Reactor Components	A	U	0	408,989	0	390,148
Ocean Engineering							
27	Diving and Salvage Equipment	A	U	0	11,773	0	18,086
Small Boats							
28	Standard Boats	A	U	0	88,562	0	74,963

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Production Facilities Equipment									
29	Operating Forces Ipe	A	U	0	460,822	0	174,743		
Other Ship Support									
30	LCS Common Mission Modules Equipment		U	0	63,501	0	54,883		
31	LCS MCM Mission Modules		U	0	30,119	0	92,495		
32	LCS ASW Mission Modules		U	0	1,565	0	3,594		
33	LCS SUW Mission Modules		U	0	3,395	0	5,100		
34	LCS In-Service Modernization	A	U	0	153,726	0	116,026		
35	Small & Medium UUV	A	U	0	44,534	0	49,763		
Logistic Support									
36	LSD Midlife & Modernization		U						
Total Ships support equipment					**4,267,668**		**4,714,192**		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Production Facilities Equipment							
29	Operating Forces Ipe	A	U	0	174,743	0	187,495
Other Ship Support							
30	LCS Common Mission Modules Equipment		U	0	54,883	0	49,060
31	LCS MCM Mission Modules		U	0	92,495	0	93,961
32	LCS ASW Mission Modules		U	0	3,594		
33	LCS SUW Mission Modules		U	0	5,100	0	12,102
34	LCS In-Service Modernization	A	U	0	116,026	0	171,704
35	Small & Medium UUV	A	U	0	49,763	0	61,951
Logistic Support							
36	LSD Midlife & Modernization		U			0	7,594
Total Ships support equipment					**4,714,192**		**5,776,998**

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 02: Communications and electronics equipment									
Ship Sonars									
37	SPQ-9B Radar	A	U	0	14,209	0	12,063		
38	AN/SQQ-89 Surf ASW Combat System	A	U	0	126,871	0	140,157		
39	SSN Acoustic Equipment	A	U	0	379,492	0	446,653		
40	Undersea Warfare Support Equipment	A	U	0	13,965	0	17,424		
ASW Electronic Equipment									
41	Submarine Acoustic Warfare System	A	U	0	24,578	0	31,708		
42	SSTD	A	U	0	11,010	0	14,325		
43	Fixed Surveillance System	A	U	0	363,651	0	266,228		
44	SURTASS	A	U	0	67,500	0	25,030		
Electronic Warfare Equipment									

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 02: Communications and electronics equipment							
Ship Sonars							
37	SPQ-9B Radar	A	U	0	12,063	0	7,267
38	AN/SQQ-89 Surf ASW Combat System	A	U	0	140,157	0	138,065
39	SSN Acoustic Equipment	A	U	0	446,653	0	463,577
40	Undersea Warfare Support Equipment	A	U	0	17,424	0	23,452
ASW Electronic Equipment							
41	Submarine Acoustic Warfare System	A	U	0	31,708	0	46,726
42	SSTD	A	U	0	14,325	0	14,560
43	Fixed Surveillance System	A	U	0	266,228	0	420,069
44	SURTASS	A	U	0	25,030	0	33,910
Electronic Warfare Equipment							

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
45	AN/SLQ-32	A	U	0	313,817	0	292,417		
Reconnaissance Equipment									
46	Shipboard IW Exploit	A	U	0	261,735	0	289,974		
47	Automated Identification System (AIS)		U	0	3,777	0	2,487		
Other Ship Electronic Equipment									
48	Cooperative Engagement Capability	B	U	0	24,641	0	33,200		
49	Naval Tactical Command Support System (NTCSS)	A	U	0	14,439	0	19,038		
50	ATDLS	A	U	0	100,888	0	73,675		
51	Navy Command and Control System (NCCS)		U	0	4,242	0	3,435		
52	Minesweeping System Replacement	A	U	0	15,640	0	16,336		
53	Shallow Water MCM	B	U	0	5,610				
54	Navstar GPS Receivers (SPACE)	A	U	0	33,097	0	30,439		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
45	AN/SLQ-32	A	U	0	292,417	0	329,513
Reconnaissance Equipment							
46	Shipboard IW Exploit	A	U	0	289,974	0	379,230
47	Automated Identification System (AIS)		U	0	2,487	0	4,082
Other Ship Electronic Equipment							
48	Cooperative Engagement Capability	B	U	0	33,200	0	37,677
49	Naval Tactical Command Support System (NTCSS)	A	U	0	19,038	0	15,374
50	ATDLS	A	U	0	73,675	0	50,148
51	Navy Command and Control System (NCCS)		U	0	3,435	0	3,918
52	Minesweeping System Replacement	A	U	0	16,336	0	16,814
53	Shallow Water MCM	B	U				
54	Navstar GPS Receivers (SPACE)	A	U	0	30,439	0	37,319

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
55	American Forces Radio and TV Service	A	U	0	2,513	0	2,724		
56	Strategic Platform Support Equip	A	U	0	4,823	0	6,266		
Aviation Electronic Equipment									
57	Ashore ATC Equipment	A	U	0	82,510	0	89,396		
58	Afloat ATC Equipment	A	U	0	61,502	0	79,591		
59	ID Systems	A	U	0	46,918	0	59,226		
60	Joint Precision Approach And Landing System (		U	0	35,386	0	8,186		
61	Naval Mission Planning Systems	A	U	0	16,777	0	25,092		
Other Shore Electronic Equipment									
62	Maritime Integrated Broadcast System		U	0	1,760	0	3,520		
63	Tactical/Mobile C4I Systems	A	U	0	18,790	0	27,434		
64	DCGS-N	A	U	0	16,691	0	15,606		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
55	American Forces Radio and TV Service	A	U	0	2,724	0	2,750
56	Strategic Platform Support Equip	A	U	0	6,266	0	6,437
Aviation Electronic Equipment							
57	Ashore ATC Equipment	A	U	0	89,396	0	89,237
58	Afloat ATC Equipment	A	U	0	79,591	0	90,487
59	ID Systems	A	U	0	59,226	0	59,234
60	Joint Precision Approach And Landing System (		U	0	8,186	0	3,343
61	Naval Mission Planning Systems	A	U	0	25,092	0	39,180
Other Shore Electronic Equipment							
62	Maritime Integrated Broadcast System		U	0	3,520	0	6,994
63	Tactical/Mobile C4I Systems	A	U	0	27,434	0	52,026
64	DCGS-N	A	U	0	15,606	0	16,579

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Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
65	CANES		U	0	412,002	0	402,550		
66	RADIAC	A	U	0	7,828	0	7,647		
67	CANES-Intell		U	0	51,593	0	48,665		
68	GPETE	A	U	0	23,930	0	23,479		
69	MASF		U	0	8,795	0	11,792		
70	Integ Combat System Test Facility	A	U	0	5,829	0	6,053		
71	EMI Control Instrumentation	A	U	0	3,925	0	4,219		
72	Items Less Than $5 Million	A	U	0	87,475	0	88,951		
73	In-Service Radars and Sensors	A	U						
Shipboard Communications									
74	Battle Force Tactical Network	A	U						
75	Shipboard Tactical Communications	A	U	0	43,212	0	36,941		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
65	CANES		U	0	402,550	0	467,587
66	RADIAC	A	U	0	7,647	0	16,475
67	CANES-Intell		U	0	48,665	0	48,207
68	GPETE	A	U	0	23,479	0	25,761
69	MASF		U	0	11,792	0	16,475
70	Integ Combat System Test Facility	A	U	0	6,053	0	6,345
71	EMI Control Instrumentation	A	U	0	4,219	0	4,282
72	Items Less Than $5 Million	A	U	0	88,951		
73	In-Service Radars and Sensors	A	U			0	255,256
Shipboard Communications							
74	Battle Force Tactical Network	A	U			0	74,180
75	Shipboard Tactical Communications	A	U	0	36,941	0	29,776

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Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
76	Ship Communications Automation	A	U	0	90,073	0	101,691		
77	Communications Items Under $5M	A	U	0	44,447	0	54,140		
	Submarine Communications								
78	Submarine Broadcast Support	A	U	0	47,579	0	91,150		
79	Submarine Communication Equipment	A	U	0	64,642	0	74,569		
	Satellite Communications								
80	Satellite Communications Systems	A	U	0	30,136	0	39,827		
81	Navy Multiband Terminal (NMT)		U	0	34,723	0	24,586		
	Shore Communications								
82	Joint Communications Support Element (JCSE)	A	U	0	2,651	0	2,651		
	Cryptographic Equipment								
83	Info Systems Security Program (ISSP)	A	U	0	145,311	0	156,034		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
76	Ship Communications Automation	A	U	0	101,691	0	96,916
77	Communications Items Under $5M	A	U	0	54,140	0	14,107
	Submarine Communications						
78	Submarine Broadcast Support	A	U	0	91,150	0	73,791
79	Submarine Communication Equipment	A	U	0	74,569	0	83,178
	Satellite Communications						
80	Satellite Communications Systems	A	U	0	39,827	0	72,871
81	Navy Multiband Terminal (NMT)		U	0	24,586	0	37,921
	Shore Communications						
82	Joint Communications Support Element (JCSE)	A	U	0	2,651	0	5,065
	Cryptographic Equipment						
83	Info Systems Security Program (ISSP)	A	U	0	156,034	0	154,890

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(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
84	MIO Intel Exploitation Team	A	U	0	977	0	1,055		
	Cryptologic Equipment								
85	Cryptologic Communications Equip	A	U	0	17,809	0	28,832		
	Other Electronic Support								
86	Coast Guard Equipment	A	U	0	81,464	0	63,347		
	Drug Interdiction Support								
87	Other Drug Interdiction Support	A	U	0	10,070				
	Total Communications and electronics equipment				**3,281,303**		**3,299,809**		
	Budget Activity 03: Aviation support equipment								
	Sonobuoys								
88	Sonobuoys - All Types	A	U	0	296,871	0	303,520		
	Aircraft Support Equipment								
89	Minotaur	A	U	0	4,963	0	5,247		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
84	MIO Intel Exploitation Team	A	U	0	1,055	0	1,079
	Cryptologic Equipment						
85	Cryptologic Communications Equip	A	U	0	28,832	0	17,483
	Other Electronic Support						
86	Coast Guard Equipment	A	U	0	63,347	0	77,458
	Drug Interdiction Support						
87	Other Drug Interdiction Support	A	U				
	Total Communications and electronics equipment				**3,299,809**		**3,967,071**
	Budget Activity 03: Aviation support equipment						
	Sonobuoys						
88	Sonobuoys - All Types	A	U	0	303,520	0	311,177
	Aircraft Support Equipment						
89	Minotaur	A	U	0	5,247	0	5,396

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
90	Weapons Range Support Equipment	A	U	0	87,748	0	106,209		
91	Aircraft Support Equipment	A	U	0	176,387	0	272,044		
92	Advanced Arresting Gear (AAG)	A	U	0	22,265	0	13,544		
93	Electromagnetic Aircraft Launch System (EMALS	A	U			0	18,594		
94	Meteorological Equipment	A	U	0	13,687	0	15,175		
95	Legacy Airborne MCM	A	U	0	4,443	0	4,689		
96	Lamps Equipment		U	0	1,470	0	1,610		
97	Aviation Support Equipment	A	U	0	62,496	0	82,118		
98	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	U	0	67,226	0	134,726		
99	Architect & Cap for Autonomy in Nav Enter (AR	A	U						
Total Aviation support equipment					**737,556**		**957,476**		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
90	Weapons Range Support Equipment	A	U	0	106,209	0	147,556
91	Aircraft Support Equipment	A	U	0	272,044	0	162,273
92	Advanced Arresting Gear (AAG)	A	U	0	13,544	0	11,930
93	Electromagnetic Aircraft Launch System (EMALS	A	U	0	18,594	0	17,836
94	Meteorological Equipment	A	U	0	15,175	0	19,703
95	Legacy Airborne MCM	A	U	0	4,689	0	12,202
96	Lamps Equipment		U	0	1,610		
97	Aviation Support Equipment	A	U	0	82,118	0	82,115
98	UMCS-Unman Carrier Aviation(UCA)Mission Cntrl	A	U	0	134,726	0	152,687
99	Architect & Cap for Autonomy in Nav Enter (AR	A	U			0	1,612
Total Aviation support equipment					**957,476**		**924,487**

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 04: Ordnance support equipment									
Ship Gun System Equipment									
100	Ship Gun Systems Equipment	A	U	0	5,536	0	5,902		
Ship Missile Systems Equipment									
101	Harpoon Support Equipment	A	U	0	204	0	217		
102	Ship Missile Support Equipment	A	U	0	221,463	0	276,632		
103	Tomahawk Support Equipment	A	U	0	87,147	0	92,270		
FBM Support Equipment									
104	Strategic Missile Systems Equip	A	U	0	276,430	0	279,430		
ASW Support Equipment									
105	SSN Combat Control Systems	A	U	0	128,117	0	128,874		
106	ASW Support Equipment	A	U	0	26,852	0	35,720		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 04: Ordnance support equipment							
Ship Gun System Equipment							
100	Ship Gun Systems Equipment	A	U	0	5,902	0	6,404
Ship Missile Systems Equipment							
101	Harpoon Support Equipment	A	U	0	217	0	227
102	Ship Missile Support Equipment	A	U	0	276,632	0	294,511
103	Tomahawk Support Equipment	A	U	0	92,270	0	92,432
FBM Support Equipment							
104	Strategic Missile Systems Equip	A	U	0	279,430	0	325,318
ASW Support Equipment							
105	SSN Combat Control Systems	A	U	0	128,874	0	133,063
106	ASW Support Equipment	A	U	0	35,720	0	27,469

Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Other Ordnance Support Equipment									
107	Explosive Ordnance Disposal Equip	B	U	0	1,721	0	14,336		
108	Items Less Than $5 Million	A	U	0	6,997	0	5,938		
Other Expendable Ordnance									
109	Anti-Ship Missile Decoy System	A	U	0	76,994	0	86,264		
110	Submarine Training Device Mods	A	U	0	75,813	0	80,591		
111	Surface Training Equipment	A	U	0	135,814	0	203,695		
Total Ordnance support equipment					**1,043,088**		**1,209,869**		
Budget Activity 05: Civil engineering support equipment									
Civil Engineering Support Equipment									
112	Passenger Carrying Vehicles	A	U	0	4,290	0	4,799		
113	General Purpose Trucks	A	U	0	2,805	0	2,542		
114	Construction & Maintenance Equip	A	U	0	51,477	0	50,001		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Other Ordnance Support Equipment							
107	Explosive Ordnance Disposal Equip	B	U	0	14,336	0	27,864
108	Items Less Than $5 Million	A	U	0	5,938	0	6,171
Other Expendable Ordnance							
109	Anti-Ship Missile Decoy System	A	U	0	86,264	0	56,630
110	Submarine Training Device Mods	A	U	0	80,591	0	76,954
111	Surface Training Equipment	A	U	0	203,695	0	209,487
Total Ordnance support equipment					**1,209,869**		**1,256,530**
Budget Activity 05: Civil engineering support equipment							
Civil Engineering Support Equipment							
112	Passenger Carrying Vehicles	A	U	0	4,799	0	3,827
113	General Purpose Trucks	A	U	0	2,542	0	4,570
114	Construction & Maintenance Equip	A	U	0	50,001	0	56,829

Department of the Navy
FY 2024 President's Budget
Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
115	Fire Fighting Equipment	A	U	0	15,084	0	16,305		
116	Tactical Vehicles	B	U	0	24,900	0	26,276		
117	Amphibious Equipment	A	U						
118	Pollution Control Equipment	A	U	0	5,369	0	2,840		
119	Items less than $5 Million	A	U	0	51,420	0	55,200		
120	Physical Security Vehicles	A	U	0	1,165	0	1,263		
Total Civil engineering support equipment					**156,510**		**159,226**		
Budget Activity 06: Supply support equipment									
Supply Support Equipment									
121	Supply Equipment	A	U	0	24,697	0	32,338		
122	First Destination Transportation	A	U	0	5,385	0	6,255		
123	Special Purpose Supply Systems	A	U	0	660,750	0	613,039		
Total Supply support equipment					**690,832**		**651,632**		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

Department of the Navy
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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
115	Fire Fighting Equipment	A	U	0	16,305	0	16,583
116	Tactical Vehicles	B	U	0	26,276	0	24,236
117	Amphibious Equipment	A	U			0	4,504
118	Pollution Control Equipment	A	U	0	2,840	0	3,898
119	Items less than $5 Million	A	U	0	55,200	0	67,286
120	Physical Security Vehicles	A	U	0	1,263	0	1,286
Total Civil engineering support equipment					**159,226**		**183,019**
Budget Activity 06: Supply support equipment							
Supply Support Equipment							
121	Supply Equipment	A	U	0	32,338	0	33,258
122	First Destination Transportation	A	U	0	6,255	0	6,977
123	Special Purpose Supply Systems	A	U	0	613,039	0	659,529
Total Supply support equipment					**651,632**		**699,764**

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1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 07: Personnel and command support equipment									
Training Devices									
124	Training Support Equipment	A	U	0	3,202	0	1,285		
125	Training and Education Equipment	A	U	0	58,823	0	44,618		
Command Support Equipment									
126	Command Support Equipment	A	U	0	30,387	0	38,774		
127	Medical Support Equipment	A	U	0	14,346	0	25,325		
129	Naval MIP Support Equipment	A	U	0	2,887	0	6,077		
130	Operating Forces Support Equipment	A	U	0	12,815	0	13,784		
131	C4ISR Equipment	A	U	0	6,324	0	6,497		
132	Environmental Support Equipment	A	U	0	25,098	0	36,592		
133	Physical Security Equipment	A	U	0	107,448	0	107,372		

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 07: Personnel and command support equipment							
Training Devices							
124	Training Support Equipment	A	U	0	1,285	0	2,083
125	Training and Education Equipment	A	U	0	44,618	0	106,542
Command Support Equipment							
126	Command Support Equipment	A	U	0	38,774	0	44,448
127	Medical Support Equipment	A	U	0	25,325	0	12,529
129	Naval MIP Support Equipment	A	U	0	6,077	0	5,408
130	Operating Forces Support Equipment	A	U	0	13,784	0	12,105
131	C4ISR Equipment	A	U	0	6,497	0	7,670
132	Environmental Support Equipment	A	U	0	36,592	0	52,597
133	Physical Security Equipment	A	U	0	107,372	0	108,901

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
134	Enterprise Information Technology	A	U	0	31,709	0	29,407		
Productivity Programs									
137	Judgment Fund Reimbursement	A	U	0	3				
Other									
138	Cancelled Account Adjustments	A	U	0	251				
139	Next Generation Enterprise Service	A	U	0	175,041	0	201,314		
140	Cyberspace Activities	A	U	0	12,859	0	5,018		
141	Cyber Mission Forces	A	U			0	17,115		
Classified Programs									
999	Classified Programs		U		21,058		30,895		2,170
Total Personnel and command support equipment					**502,251**		**564,073**		**2,170**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
134	Enterprise Information Technology	A	U	0	29,407	0	42,154
Productivity Programs							
137	Judgment Fund Reimbursement	A	U				
Other							
138	Cancelled Account Adjustments	A	U				
139	Next Generation Enterprise Service	A	U	0	201,314	0	177,585
140	Cyberspace Activities	A	U	0	5,018	0	23,176
141	Cyber Mission Forces	A	U	0	17,115		
Classified Programs							
999	Classified Programs		U		33,065		16,290
Total Personnel and command support equipment					**566,243**		**611,488**

Department of the Navy
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1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2022 Actuals		FY 2023 Less Supplementals Enacted		FY 2023 Supplementals Enacted	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost	Quantity	Cost*
Budget Activity 08: Spares and repair parts									
Spares and Repair Parts									
142	Spares and Repair Parts	A	U	0	445,621	0	582,313		
143	VIRGINIA Class (VACL) Spares and Repair parts	A	U						
Total Spares and repair parts					**445,621**		**582,313**		
Total Other Procurement, Navy					**11,124,829**		**12,138,590**		**2,170**

*Includes enacted funding in the Ukraine Supplemental Appropriation Act, 2023 (Division B of Public Law 117-180) and Additional Ukraine Supplemental Appropriation Act, 2023 (Division M of Public Law 117-328).

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Total Obligational Authority
1810N Detail

(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy			FY 2023 Total Enacted		FY 2024 Request	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost	Quantity	Cost
Budget Activity 08: Spares and repair parts							
Spares and Repair Parts							
142	Spares and Repair Parts	A	U	0	582,313	0	645,900
143	VIRGINIA Class (VACL) Spares and Repair parts	A	U			0	470,000
Total Spares and repair parts					**582,313**		**1,115,900**
Total Other Procurement, Navy					**12,140,760**		**14,535,257**

Department of Defense
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Total Obligational Authority
DoD Component Summary
(Dollars in Thousands)

Appropriation Summary	FY 2023 Overseas Operations Costs (OOC)*	FY 2024 Overseas Operations Costs (OOC)*
Other Procurement, Navy	69,277	46,435
Total Department of the Navy	**69,277**	**46,435**
Grand Total Department of Defense	**69,277**	**46,435**

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

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

Appropriation Summary	FY 2023 Overseas Operations Costs (OOC)*	FY 2024 Overseas Operations Costs (OOC)*
Other Procurement, Navy	69,277	46,435
Total Department of the Navy	**69,277**	**46,435**

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

Department of the Navy
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Exhibit P-1 FY 2024 President's Budget
Total Obligational Authority
1810N BA Summary
(Dollars in Thousands)

Appropriation: **Other Procurement, Navy**	**FY 2023 Overseas Operations Costs (OOC)***	**FY 2024 Overseas Operations Costs (OOC)***
Budget Activity		
02. Communications and electronics equipment	54,995	
03. Aviation support equipment	11,052	46,435
07. Personnel and command support equipment	3,230	
Total Other Procurement, Navy	**69,277**	**46,435**

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

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1810N Detail
(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy				FY 2023 Overseas Operations Costs (OOC)		FY 2024 Overseas Operations Costs (OOC)	
Line No	Item Nomenclature	Ident Code	Sec	Quantity	Cost*	Quantity	Cost*
Budget Activity 02: Communications and electronics equipment							
ASW Electronic Equipment							
43	Fixed Surveillance System	A	U	0	54,995		
Total Communications and electronics equipment				**0**	**54,995**		
Budget Activity 03: Aviation support equipment							
Sonobuoys							
88	Sonobuoys - All Types	A	U	0	11,052	0	10,206
Aircraft Support Equipment							
91	Aircraft Support Equipment	A	U			0	36,229
Total Aviation support equipment				**0**	**11,052**	**0**	**46,435**
Budget Activity 07: Personnel and command support equipment							
Command Support Equipment							
126	Command Support Equipment	A	U	0	3,230		
Total Personnel and command support equipment				**0**	**3,230**		

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

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Total Obligational Authority
1810N Detail
(Dollars in Thousands)

Appropriation: 1810 Other Procurement, Navy

Line No	Item Nomenclature	Ident Code	Sec	FY 2023 Overseas Operations Costs (OOC) Quantity	FY 2023 Overseas Operations Costs (OOC) Cost*	FY 2024 Overseas Operations Costs (OOC) Quantity	FY 2024 Overseas Operations Costs (OOC) Cost*
	Total Other Procurement, Navy			0	69,277	0	46,435

*FY 2023 and FY 2024 Overseas Operations Costs (OOC) numbers are a subset of the baseline submission.

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Appropriation 1810N: Other Procurement, Navy

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Appropriation 1810N: Other Procurement, Navy

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Maritime Integrated Broadcast System	2900	62	02	10	Volume 2 - 497
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Tactical/Mobile C4I Systems	2906	63	02	10	Volume 2 - 501
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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 1: Sonobuoys	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,743.115	296.871	303.520	311.177	0.000	311.177	296.267	304.427	289.022	306.543	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,743.115	296.871	303.520	311.177	0.000	311.177	296.267	304.427	289.022	306.543	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,743.115**	**296.871**	**303.520**	**311.177**	**0.000**	**311.177**	**296.267**	**304.427**	**289.022**	**306.543**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Sonobuoys are air launched expendable, electro-mechanical sensors designed to relay underwater sounds associated with ships and submarines to remote processors, critical to U.S. Navy Air Anti-Submarine Warfare (ASW) mission to achieve maritime supremacy against near peer threats. Sonobuoys, by type, are procured in quantity based on Fleet demand and to support combat stock levels set by modeling conducted as part of the annual Navy's Munitions Requirements Process (NMRP). The Sonobuoy program buys-to-budget based on actual fleet usage, forecasted usage and best negotiated pricing across each sonobuoy type. The annual NMRP model estimates inventory requirements for combat stock and all usage requirements for readiness, current operations and squadron training/test. Sonobuoys currently support the P-8, P-3 and H-60 platforms.

[P5 / Sonobuoys, All Types]: As of FY24, unit costs for sonobuoy variants under the new competitive contract are estimated in accordance with an Independent Government Cost Estimate (IGCE) based on historical unit prices, establishing new vendor base, learning curves, inflation, supply chain disruptions; delivery orders will be competed each year in accordance with contract construct.

[P5 / AN/SSQ-36 (BT) QZ001]: The AN/SSQ-36 Bathythermograph (BT) is a bathythermograph sonobuoy used to provide a vertical temperature profile of the ocean with respect to depth. The data is transmitted to aircraft to assist in the selection of hydrophone depths and tactics for localizing and tracking submarines and long-range forecasts of acoustic conditions in the ocean.

[P5 / AN/SSQ-53 (DIFAR) QZ002]: The AN/SSQ-53 Directional Frequency Analysis and Recording (DIFAR) is a passive directional sonobuoy which provides acoustic target localization.

[P5 / AN/SSQ-62 (DICASS) QZ004]: The AN/SSQ-62F Directional Command Active Sonobuoy System (DICASS) is a commandable, active acoustic directional sonobuoy that provides target bearing and range information.

[P5 / AN/SSQ-101 (Multi-static Coherent Receiver) QZ006]: The AN/SSQ-101B Air Deployable Active Receiver (ADAR) is a commandable passive acoustic sonobuoy with a horizontal planar array. It is part of the family of multi-static active sensor systems.

[P5 / AN/SSQ-125/125A (Multi-static Coherent Source) QZ010]: The AN/SSQ-125/125A Multi-static Active Coherent (MAC) Source is a commandable coherent active search sensor. It is part of the family of multi-static active sensor systems.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 1: Sonobuoys	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 / Sonobuoys, All Types	P-5a, P-21			- / 2,743.115	- / 296.871	- / 303.520	- / 311.177	- / 0.000	- / 311.177
P-40	**Total Gross/Weapon System Cost**				**- / 2,743.115**	**- / 296.871**	**- / 303.520**	**- / 311.177**	**- / 0.000**	**- / 311.177**

*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 level of sonobuoy procurement funding directly enables the Navy's overall Anti-submarine Warfare (ASW) mission readiness. The Air ASW program buys-to-budget based on actual fleet usage, fleet forecasted usage, and best negotiated pricing across all sonobuoy types. This funding profile does not meet minimum inventory requirements for the entire family of air delivered acoustic sensors within the Future Years Defense Program (FYDP). This is the result of an increase in actual operational expenditures, budget constraints, and an increase in the Total Munitions Requirement (TMR). The Air ASW community continues to use passive capability combined with an increase in the more capable Multi-static Active Coherent (MAC) wide area search Concept of Operations (CONOPS), which uses the AN/ SSQ-101 and AN/SSQ-125 family of systems. While the transition to MAC requires the procurement of more sophisticated sonobuoys, the resulting wide area search capability is more efficient and effective. The MAC capability provides the foundational Air ASW acoustic search capability for the P-8 Poseidon, and increasing the inventory of MAC sonobuoys is required to support the combatant commander's ASW mission execution requirements. This funding profile allows the Navy to prioritize and meet current operational forward presence requirements while building fleet commander deployment readiness levels in the ASW mission area.

NOTES:
1. As of FY24, program transitions from sole source Joint Venture contract with ERAPSCO to a competitive multiple award contract with Sparton, Undersea Sensor Systems, Inc. (USSI) and Lockheed Martin. Sonobuoy vendors will each produce a single sonobuoy variant instead of either the lower or upper unit only. For the new competitive contract, unit costs are likely to increase. Future unit costs are estimated using an Independent Government Cost Estimate (IGCE) based on historical unit prices, establishment of a new vendor base, sonobuoy re-qualifications, future production learning curves, and supply chain challenges. Delivery orders will be competed each year in accordance with contract construct. Independent design qualification currently in process by each vendor. As vendors transition to unique Sonobuoy design, a prime-sub teaming arrangement may be required to ensure production line stability and meet USN procurement requirements.

2. Program buys-to-budget. New multiple award contract does not have maximum quantity limitations; ceiling is based on number of available vendors per buoy variant and price points based on quantity procured. Program seeks to achieve economies of scale by utilizing both Other Procurement, Navy (OPN) funds and Foreign Military Sales (FMS) funds. Maximum quantity procurement helps keep the unit cost down for all Sonobouy variants and stabilizes vendor base.

3. In FY24, under the new MADOC contract, the set-up of new production line begins for AN/SSQ-36B, AN/SSQ-53G, AN/SSQ-62F sonobuoys, procuring quantities at minimum procurement levels to meet global floor requirements. Program intends to increase inventory of AN/SSQ-101 and AN/SSQ-125 MAC buoys (to include procurement of legacy 125 buoys) in FY24 in preparation of the set-up of the new production line for AN/SSQ-101 and AN/SSQ-125 MAC buoys beginning in FY25. Procurement of fewer quantities will result in increased unit costs. Future contract does not have maximum quantity limitations and ceiling is based on number of available vendors per buoy variant and price points to stabilize vendor base.

OOC:
FY 2022 includes $0M in OOC execution.
FY 2023 includes $11.052M in OOC enacted budget.
FY 2024 includes $10.206M for the OOC budget request.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types	**Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,743.115	296.871	303.520	311.177	0.000	311.177
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,743.115	296.871	303.520	311.177	0.000	311.177
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,743.115**	**296.871**	**303.520**	**311.177**	**0.000**	**311.177**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - Sonobuoys (Common) Cost																		
Recurring Cost																		
1.1.1) AN/SSQ-36 (BT) QZ001(†) (1)	572.58	42,953	24.594	500.46	6,289	3.147	511.49	7,073	3.618	535.99	1,711	0.917	-	-	-	535.99	1,711	0.917
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†) (2)	778.73	1,012,112	788.160	823.69	123,467	101.699	846.49	144,447	122.273	888.81	140,759	125.108	-	-	-	888.81	140,759	125.108
1.1.3) AN/SSQ-62 (DICASS) QZ004(†) (3)	1,667.82	148,036	246.898	1,750.27	24,881	43.548	1,749.17	24,000	41.980	1,819.14	25,958	47.221	-	-	-	1,819.14	25,958	47.221
Subtotal: Recurring Cost	-	-	*1,059.652*	-	-	*148.394*	-	-	*167.871*	-	-	*173.246*	-	-	-	-	-	*173.246*
Subtotal: Hardware - Sonobuoys (Common) Cost	**-**	**-**	***1,059.652***	**-**	**-**	***148.394***	**-**	**-**	***167.871***	**-**	**-**	***173.246***	**-**	**-**	**-**	**-**	**-**	***173.246***
Hardware - Sonobuoys (Multistatic) Cost																		
Recurring Cost																		
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†) (4)	3,457.09	100,325	346.833	4,179.29	25,514	106.630	4,488.70	23,366	104.883	4,802.90	8,102	38.913	-	-	-	4,802.90	8,102	38.913
2.1.2) AN/ SSQ-125/125A (Multi-static Coherent Source) QZ010(†) (5)	4,744.03	110,648	524.917	9,063.59	3,555	32.221	9,132.13	2,294	20.949	7,366.05	12,082	88.997	-	-	-	7,366.05	12,082	88.997
Subtotal: Recurring Cost	-	-	*871.750*	-	-	*138.851*	-	-	*125.832*	-	-	*127.910*	-	-	-	-	-	*127.910*
Subtotal: Hardware - Sonobuoys (Multistatic) Cost	**-**	**-**	***871.750***	**-**	**-**	***138.851***	**-**	**-**	***125.832***	**-**	**-**	***127.910***	**-**	**-**	**-**	**-**	**-**	***127.910***
Hardware - Sonobuoys (Other) Cost																		

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	P-1 Line Item Number / Title: 4048 / Sonobuoys - All Types	Item Number / Title [DODIC]: 1 / Sonobuoys, All Types
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) SUS MK84 QZ012	286.50	20,454	5.860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*5.860*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Sonobuoys (Other) Cost	**-**	**-**	***5.860***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - Acceptance Testing Cost																		
Recurring Cost																		
4.1.1) Common QZ860	-	-	30.516	-	-	2.779	-	-	2.835	-	-	2.892	-	-	-	-	-	2.892
4.1.2) Multi-static QZ860	-	-	21.104	-	-	2.547	-	-	2.597	-	-	2.651	-	-	-	-	-	2.651
4.1.3) Other QZ860	-	-	0.152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*51.772*	-	-	*5.326*	-	-	*5.432*	-	-	*5.543*	-	-	-	-	-	*5.543*
Subtotal: Hardware - Acceptance Testing Cost	**-**	**-**	***51.772***	**-**	**-**	***5.326***	**-**	**-**	***5.432***	**-**	**-**	***5.543***	**-**	**-**	**-**	**-**	**-**	***5.543***
Hardware - Prior Years Cost																		
Non Recurring Cost																		
5.1.1) Prior Years	-	-	708.043	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	*708.043*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Prior Years Cost	**-**	**-**	***708.043***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Support - Production Engineering Cost																		
6.1) Common QZ830	-	-	27.677	-	-	2.163	-	-	2.204	-	-	2.254	-	-	-	-	-	2.254
6.2) Multi-static QZ830	-	-	18.233	-	-	2.137	-	-	2.181	-	-	2.224	-	-	-	-	-	2.224
6.3) Other QZ830	-	-	0.128	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Production Engineering Cost	**-**	**-**	***46.038***	**-**	**-**	***4.300***	**-**	**-**	***4.385***	**-**	**-**	***4.478***	**-**	**-**	**-**	**-**	**-**	***4.478***
Gross/Weapon System Cost	**-**	**-**	**2,743.115**	**-**	**-**	**296.871**	**-**	**-**	**303.520**	**-**	**-**	**311.177**	**-**	**-**	**0.000**	**-**	**-**	**311.177**

Remarks:
[Hardware] Actual quantities between the various sonobuoy types may adjust for Fleet requirements. Hardware funds may be realigned to support necessary Engineering Investigations and production Engineering Change Proposals. Year-to-year increases to sonobuoy unit costs are a result of the JV dissolution at FY23 end. FY24 marks the standup of competitive contract construct whereby each vendor is required to produce a single sonobuoy variant, as well as dividing procurement quantities amongst multiple vendors. Buoy qualification, production line stand-up, learning curves, inflation and supply chain issues will impact unit costs.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	P-1 Line Item Number / Title: 4048 / Sonobuoys - All Types	Item Number / Title [DODIC]: 1 / Sonobuoys, All Types
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

[Hardware] Sonobuoys under prior subheads are not included in Prior Years amount.

(†) indicates the presence of a P-5a

Footnotes:

(1) As of FY24, program transitions from sole source Joint Venture contract with ERAPSCO to a competitive multiple award contract. Sonobuoy vendors will each produce a single sonobuoy variant instead of either the lower or upper unit only. For the new competitive contract, unit costs for AN/SSQ-36B are likely to increase and will be procured to global floor level. Future unit costs are estimated using an Independent Government Cost Estimate (IGCE) based on historical unit prices, establishment of a new vendor base, sonobuoy re-qualifications, future production learning curves, and supply chain challenges. Delivery orders will be competed each year in accordance with contract construct. Baseline funding in the amount of $73K is provided in support of Non-Enduring Operations.

(2) Program buys to budget. FY24 multiple award contract does not have maximum quantity limitations; ceiling is based on number of available vendors per buoy variant and price points based on quantity procured. Program seeks to achieve economies of scale by utilizing both Other Procurement, Navy (OPN) funds and Foreign Military Sales (FMS) funds. Maximum quantity procurement helps keep the unit cost down for all Sonobouy variants and stabilizes vendor base. FY25 AN/SSQ-53G unit cost increases as a result of 2 vendors splitting production quantities, which decreases EOQ (economical ordering quantities); unit cost increase accounts for new production line standup, learning curves, supply chain demands for each vendor. Baseline funding in the amount of $859K is provided in support of Non-Enduring Operations.

(3) FY25 AN/SSQ-62F unit cost increases as a result of 2 vendors splitting production quantities, which decreases EOQ; unit cost increase accounts for new production line standup, learning curves, supply chain demands for each vendor. Baseline funding in the amount of $1,624K is provided in support of Non-Enduring Operations.

(4) FY25 AN/SSQ-101B unit costs increase in conjunction with procurement of minimum quantity to ensure production line requirements are met. FY26 marks standup of 101B production line for multiple vendors, resulting in lower quantities procured and increased unit cost. FY26 101B unit cost increase results from new production line stand up of second vendor; vendors required to split production quantities, reducing EOQ. FY27 marks multiple vendors for all buoy variants. Baseline funding in the amount of $2,390K is provided in support of Non-Enduring Operations.

(5) FY24 AN/SSQ-125 unit cost decreases due to program procuring much higher quantities at lower price point from sole vendor while competitive vendor base stabilizes. Baseline funding in the amount of $5,260K is provided in support of Non-Enduring Operations.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	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) AN/SSQ-36 (BT) QZ001		2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	2,304	544.72	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001	✓	2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	677	544.72	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001		2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	7,253	464.49	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001	✓	2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	62	464.49	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001		2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	5,865	490.65	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001	✓	2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	424	490.65	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001		2022	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2021	Dec 2022	6,289	500.46	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001		2023	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2022	Dec 2023	7,073	511.49	Y		Aug 2017
1.1.1) AN/SSQ-36 (BT) QZ001		2024	VARIOUS (6) / VARIOUS	C / IDIQ	NAVAIR	Dec 2023	Dec 2024	1,711	535.99	Y		Dec 2021
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)		2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	69,388	832.01	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)	✓	2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	18,244	832.01	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)		2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	126,858	791.07	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)	✓	2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	1,302	791.07	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)		2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	119,568	825.96	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)	✓	2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	3,816	825.96	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)		2022	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2021	Dec 2022	123,467	823.69	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)		2023	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2022	Dec 2023	144,447	846.49	Y		Aug 2017
1.1.2) AN/SSQ-53 (DIFAR) QZ002(†)		2024	VARIOUS / VARIOUS	C / IDIQ	NAVAIR	Dec 2023	Dec 2024	140,759	888.81	Y		Dec 2021
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)		2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	23,051	1,605.51	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)	✓	2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	1,449	1,605.51	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)		2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	22,553	1,644.00	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)	✓	2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	96	1,644.00	Y		Aug 2017

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	P-1 Line Item Number / Title: 4048 / Sonobuoys - All Types	Item Number / Title [DODIC]: 1 / Sonobuoys, All Types

Cost Elements	OCO	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
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)		2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	19,905	1,675.72	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)	✓	2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	2,550	1,675.72	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)		2022	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2021	Dec 2022	24,881	1,750.27	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)		2023	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2022	Dec 2023	24,000	1,749.17	Y		Aug 2017
1.1.3) AN/SSQ-62 (DICASS) QZ004(†)		2024	VARIOUS / VARIOUS	C / IDIQ	NAVAIR	Dec 2023	Dec 2024	25,958	1,819.14	Y		Dec 2021
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)		2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	14,414	3,043.05	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)	✓	2019	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Jul 2019	Jul 2020	76	3,043.05	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)		2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	17,123	2,962.25	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)	✓	2020	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Mar 2020	Mar 2021	236	2,962.25	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)		2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	15,059	3,448.55	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)	✓	2021	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2020	Dec 2021	2,526	3,448.55	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)		2022	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2021	Dec 2022	25,514	4,179.29	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)		2023	ERAPSCO / Columbia City IN	SS / IDIQ	NAVAIR	Dec 2022	Dec 2023	23,366	4,488.70	Y		Aug 2017
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006(†)		2024	VARIOUS / VARIOUS	C / IDIQ	NAVAIR	Dec 2023	Dec 2024	8,102	4,802.90	Y		Dec 2021
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)		2019	Various (7) / Various	C / FFP	NAVAIR	Dec 2018	Dec 2019	9,479	7,380.22	Y		Aug 2017
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)	✓	2019	Various (7) / Various	C / FFP	NAVAIR	Dec 2018	Dec 2019	55	7,380.22	Y		Aug 2017
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)		2020	Various (7) / Various	C / FFP	NAVAIR	Jul 2020	Jul 2021	25,100	4,502.98	Y		Aug 2019

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	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
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)	✓	2020	Various (7) / Various	C / FFP	NAVAIR	Jul 2020	Jul 2021	219	4,502.98	Y		Aug 2019
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)		2021	Various (7) / Various	C / FFP	NAVAIR	Dec 2020	Dec 2021	19,032	4,124.80	Y		Aug 2017
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)	✓	2021	Various (7) / Various	C / FFP	NAVAIR	Dec 2020	Dec 2021	2,973	4,124.80	Y		Aug 2017
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)		2022	Various (7) / Various	C / FFP	NAVAIR	Dec 2021	Dec 2022	3,555	9,063.59	Y		Aug 2017
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)		2023	Various (7) / Various	C / FFP	NAVAIR	Dec 2022	Dec 2023	2,294	9,132.13	Y		Aug 2017
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010(†)		2024	VARIOUS / VARIOUS	C / IDIQ	NAVAIR	Dec 2023	Dec 2024	12,082	7,366.05	Y		Dec 2021

(†) indicates the presence of a P-21

Footnotes:

(6) Annual Production Rates for the three new vendors (Sparton/USSI/Lockheed Martin) under the new competitive multiple award contract has not yet to be determined; bouy qualifiaction in process.

(7) The AN/SSQ-125A sonobuoy contract vendor is Lockheed Martin, Manassas VA.

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
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Cost Elements (Units in Thousands)							Fiscal Year 2019												Fiscal Year 2020													
							Calendar Year 2019												Calendar Year 2020													
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	BALANCE
1.1.2) AN/SSQ-53 (DIFAR) QZ002 (2)																																
Prior Years Deliveries: 672936																																
	1	2019	NAVY	69.388	.000	69.388										A -	-	-	-	-	-	-	-	-	-	-	3.053	8.000	8.300	50.035
✓	1	2019	NAVY	18.244	.000	18.244										A -	-	-	-	-	-	-	-	-	-	-	1.000	1.500	2.250	13.494
	1	2020	NAVY	126.858	.000	126.858																		A -	-	-	-	-	-	-	126.858
✓	1	2020	NAVY	1.302	.000	1.302																		A -	-	-	-	-	-	-	1.302
	1	2021	NAVY	119.568	.000	119.568																									119.568
✓	1	2021	NAVY	3.816	.000	3.816																									3.816
	1	2022	NAVY	123.467	.000	123.467																									123.467
	1	2023	NAVY	144.447	.000	144.447																									144.447
	2	2024	NAVY	140.759	.000	140.759																									140.759
1.1.3) AN/SSQ-62 (DICASS) QZ004 (3)																																
Prior Years Deliveries: 78432																																
	3	2019	NAVY	23.051	.000	23.051										A -	-	-	-	-	-	-	-	-	-	-	2.563	2.561	2.561	15.366
✓	3	2019	NAVY	1.449	.000	1.449										A -	-	-	-	-	-	-	-	-	-	-	.161	.161	.161	.966
	3	2020	NAVY	22.553	.000	22.553																		A -	-	-	-	-	-	-	22.553
✓	3	2020	NAVY	.096	.000	.096																		A -	-	-	-	-	-	-	.096
	3	2021	NAVY	19.905	.000	19.905																									19.905
✓	3	2021	NAVY	2.550	.000	2.550																									2.550
	3	2022	NAVY	24.881	.000	24.881																									24.881
	3	2023	NAVY	24.000	.000	24.000																									24.000
	4	2024	NAVY	25.958	.000	25.958																									25.958
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006 (4)																																
Prior Years Deliveries: 50891																																
	5	2019	NAVY	14.414	.000	14.414										A -	-	-	-	-	-	-	-	-	-	-	1.614	1.600	1.600	9.600
✓	5	2019	NAVY	.076	.000	.076										A -	-	-	-	-	-	-	-	-	-	-	.009	.009	.009	.049
	5	2020	NAVY	17.123	.000	17.123																		A -	-	-	-	-	-	-	17.123
✓	5	2020	NAVY	.236	.000	.236																		A -	-	-	-	-	-	-	.236
	5	2021	NAVY	15.059	.000	15.059																									15.059
✓	5	2021	NAVY	2.526	.000	2.526																									2.526
	5	2022	NAVY	25.514	.000	25.514																									25.514
	5	2023	NAVY	23.366	.000	23.366																									23.366
	6	2024	NAVY	8.102	.000	8.102																									8.102
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1 | **P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types | **Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
							Calendar Year 2019												Calendar Year 2020												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010 (5)																															
Prior Years Deliveries: 53790																															
	7	2019	NAVY	9.479	.000	9.479			A -	-	-	-	-	-	-	-	-	-	-	-	.600	.875	1.000	1.500	1.500	1.500	1.000	.875	.629		.000
✓	7	2019	NAVY	.055	.000	.055			A -	-	-	-	-	-	-	-	-	-	-	-	.005	.006	.006	.007	.007	.007	.006	.006	.005		.000
	7	2020	NAVY	25.100	.000	25.100																						A -	-	-	25.100
✓	7	2020	NAVY	.219	.000	.219																						A -	-	-	.219
	7	2021	NAVY	19.032	.000	19.032																									19.032
✓	7	2021	NAVY	2.973	.000	2.973																									2.973
	7	2022	NAVY	3.555	.000	3.555																									3.555
	7	2023	NAVY	2.294	.000	2.294																									2.294
	8	2024	NAVY	12.082	.000	12.082																									12.082
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1 | **P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types | **Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2021												Fiscal Year 2022													BALANCE
							Calendar Year 2021															Calendar Year 2022										
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) AN/SSQ-53 (DIFAR) QZ002 (2)																																
Prior Years Deliveries: 672936																																
	1	2019	NAVY	69.388	19.353	50.035	8.900	9.000	8.900	8.300	8.000	6.935																				.000
✓	1	2019	NAVY	18.244	4.750	13.494	3.250	3.250	3.250	2.000	1.500	.244																				.000
	1	2020	NAVY	126.858	.000	126.858	-	-	-	-	-	12.500	13.000	14.500	15.000	15.000	15.302	14.500	14.000	12.556	.500											.000
✓	1	2020	NAVY	1.302	.000	1.302	-	-	-	-	-	.100	.150	.150	.175	.175	.175	.150	.150	.077												.000
	1	2021	NAVY	119.568	.000	119.568			A -	-	-	-	-	-	-	-	-	-	-	-	11.582	14.725	13.725	13.725	13.109	13.077	13.625	13.000	13.000		.000
✓	1	2021	NAVY	3.816	.000	3.816			A -	-	-	-	-	-	-	-	-	-	-	-	.350	.400	.500	.466	.450	.450	.400	.400	.400		.000
	1	2022	NAVY	123.467	.000	123.467															A -	-	-	-	-	-	-	-	-	-	123.467
	1	2023	NAVY	144.447	.000	144.447																									144.447
	2	2024	NAVY	140.759	.000	140.759																									140.759
1.1.3) AN/SSQ-62 (DICASS) QZ004 (3)																																
Prior Years Deliveries: 78432																																
	3	2019	NAVY	23.051	7.685	15.366	2.561	2.561	2.561	2.561	2.561	2.561																				.000
✓	3	2019	NAVY	1.449	.483	.966	.161	.161	.161	.161	.161	.161																				.000
	3	2020	NAVY	22.553	.000	22.553	-	-	-	-	-	2.300	2.500	2.500	2.600	2.600	2.600	2.500	2.596	2.357												.000
✓	3	2020	NAVY	.096	.000	.096	-	-	-	-	-	.010	.010	.010	.012	.012	.012	.010	.010	.010												.000
	3	2021	NAVY	19.905	.000	19.905			A -	-	-	-	-	-	-	-	-	-	-	-	1.966	2.000	2.000	1.500	1.500	1.500	1.500	2.000	1.429	2.000	2.510
✓	3	2021	NAVY	2.550	.000	2.550			A -	-	-	-	-	-	-	-	-	-	-	-	.320	.300	.300	.300	.300	.276	.250	.250	.254		.000
	3	2022	NAVY	24.881	.000	24.881															A -	-	-	-	-	-	-	-	-	-	24.881
	3	2023	NAVY	24.000	.000	24.000																									24.000
	4	2024	NAVY	25.958	.000	25.958																									25.958
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006 (4)																																
Prior Years Deliveries: 50891																																
	5	2019	NAVY	14.414	4.814	9.600	1.600	1.600	1.600	1.600	1.600	1.600																				.000
✓	5	2019	NAVY	.076	.027	.049	.009	.008	.008	.008	.008	.008																				.000
	5	2020	NAVY	17.123	.000	17.123	-	-	-	-	-	.550	1.400	2.000	3.000	3.000	3.000	2.000	1.400	.773												.000
✓	5	2020	NAVY	.236	.000	.236	-	-	-	-	-	.025	.025	.025	.030	.030	.030	.025	.025	.021												.000
	5	2021	NAVY	15.059	.000	15.059			A -	-	-	-	-	-	-	-	-	-	-	-	1.200	1.859	1.900	1.900	1.700	1.600	1.600	1.600	1.700		.000
✓	5	2021	NAVY	2.526	.000	2.526			A -	-	-	-	-	-	-	-	-	-	-	-	.250	.250	.300	.300	.300	.300	.300	.300	.226		.000
	5	2022	NAVY	25.514	.000	25.514															A -	-	-	-	-	-	-	-	-	-	25.514
	5	2023	NAVY	23.366	.000	23.366																									23.366
	6	2024	NAVY	8.102	.000	8.102																									8.102
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types	**Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010 (5)																															
Prior Years Deliveries: 53790																															
	7	2019	NAVY	9.479	9.479	.000																									.000
✓	7	2019	NAVY	.055	.055	.000																									.000
	7	2020	NAVY	25.100	.000	25.100	-	-	-	-	-	-	-	-	-	2.000	2.600	2.600	3.500	3.500	3.500	2.600	2.600	1.981	.219						.000
✓	7	2020	NAVY	.219	.000	.219	-	-	-	-	-	-	-	-	-	.010	.025	.030	.030	.030	.030	.030	.025	.009							.000
	7	2021	NAVY	19.032	.000	19.032			A -	-	-	-	-	-	-	-	-	-	-	-	.600	1.800	2.500	2.500	2.500	2.500	1.800	1.800	1.776	1.256	.000
✓	7	2021	NAVY	2.973	.000	2.973			A -	-	-	-	-	-	-	-	-	-	-	-	.223	.300	.350	.350	.350	.350	.350	.350	.350		.000
	7	2022	NAVY	3.555	.000	3.555															A -	-	-	-	-	-	-	-	-	-	3.555
	7	2023	NAVY	2.294	.000	2.294																									2.294
	8	2024	NAVY	12.082	.000	12.082																									12.082
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1 | **P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types | **Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023															Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) AN/SSQ-53 (DIFAR) QZ002 (2)																															
Prior Years Deliveries: 672936																															
	1	2019	NAVY	69.388	69.388	.000																									.000
✓	1	2019	NAVY	18.244	18.244	.000																									.000
	1	2020	NAVY	126.858	126.858	.000																									.000
✓	1	2020	NAVY	1.302	1.302	.000																									.000
	1	2021	NAVY	119.568	119.568	.000																									.000
✓	1	2021	NAVY	3.816	3.816	.000																									.000
	1	2022	NAVY	123.467	.000	123.467	-	-	12.723	13.056	13.500	13.500	13.500	13.500	14.811	14.500	14.377														.000
	1	2023	NAVY	144.447	.000	144.447			A -	-	-	-	-	-	-	-	-	-	-	-	14.300	14.300	14.400	14.400	14.400	14.400	14.400	14.396	14.400	15.051	.000
	2	2024	NAVY	140.759	.000	140.759															A -	-	-	-	-	-	-	-	-	-	140.759
1.1.3) AN/SSQ-62 (DICASS) QZ004 (3)																															
Prior Years Deliveries: 78432																															
	3	2019	NAVY	23.051	23.051	.000																									.000
✓	3	2019	NAVY	1.449	1.449	.000																									.000
	3	2020	NAVY	22.553	22.553	.000																									.000
✓	3	2020	NAVY	.096	.096	.000																									.000
	3	2021	NAVY	19.905	17.395	2.510	1.500	1.010																							.000
✓	3	2021	NAVY	2.550	2.550	.000																									.000
	3	2022	NAVY	24.881	.000	24.881	-	-	3.000	3.000	3.000	2.500	3.000	3.000	3.000	2.000	2.381														.000
	3	2023	NAVY	24.000	.000	24.000			A -	-	-	-	-	-	-	-	-	-	-	-	2.600	2.700	2.800	2.800	2.800	2.800	2.800	2.700	2.000		.000
	4	2024	NAVY	25.958	.000	25.958															A -	-	-	-	-	-	-	-	-	-	25.958
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006 (4)																															
Prior Years Deliveries: 50891																															
	5	2019	NAVY	14.414	14.414	.000																									.000
✓	5	2019	NAVY	.076	.076	.000																									.000
	5	2020	NAVY	17.123	17.123	.000																									.000
✓	5	2020	NAVY	.236	.236	.000																									.000
	5	2021	NAVY	15.059	15.059	.000																									.000
✓	5	2021	NAVY	2.526	2.526	.000																									.000
	5	2022	NAVY	25.514	.000	25.514	-	-	1.250	2.500	3.000	3.200	3.200	3.363	3.000	3.000	3.001														.000
	5	2023	NAVY	23.366	.000	23.366			A -	-	-	-	-	-	-	-	-	-	-	-	2.100	2.600	2.600	2.600	2.600	2.641	2.359	2.866	1.500	1.500	.000
	6	2024	NAVY	8.102	.000	8.102															A -	-	-	-	-	-	-	-	-	-	8.102
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types	**Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
							Calendar Year 2023												Calendar Year 2024												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010 (5)																															
Prior Years Deliveries: 53790																															
	7	2019	NAVY	9.479	9.479	.000																									.000
✓	7	2019	NAVY	.055	.055	.000																									.000
	7	2020	NAVY	25.100	25.100	.000																									.000
✓	7	2020	NAVY	.219	.219	.000																									.000
	7	2021	NAVY	19.032	19.032	.000																									.000
✓	7	2021	NAVY	2.973	2.973	.000																									.000
	7	2022	NAVY	3.555	.000	3.555	-	-	.650	.650	.650	.650	.650	.305																	.000
	7	2023	NAVY	2.294	.000	2.294			A -	-	-	-	-	-	-	-	-	-	-	-	.230	.230	.230	.230	.230	.230	.230	.230	.229	.225	.000
	8	2024	NAVY	12.082	.000	12.082															A -	-	-	-	-	-	-	-	-	-	12.082
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types	**Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2025												Fiscal Year 2026												BALANCE
										Calendar Year 2025												Calendar Year 2026									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) AN/SSQ-53 (DIFAR) QZ002 (2)																															
Prior Years Deliveries: 672936																															
	1	2019	NAVY	69.388	69.388	.000																									.000
✓	1	2019	NAVY	18.244	18.244	.000																									.000
	1	2020	NAVY	126.858	126.858	.000																									.000
✓	1	2020	NAVY	1.302	1.302	.000																									.000
	1	2021	NAVY	119.568	119.568	.000																									.000
✓	1	2021	NAVY	3.816	3.816	.000																									.000
	1	2022	NAVY	123.467	123.467	.000																									.000
	1	2023	NAVY	144.447	144.447	.000																									.000
	2	2024	NAVY	140.759	.000	140.759	-	-	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.000	14.759													.000
1.1.3) AN/SSQ-62 (DICASS) QZ004 (3)																															
Prior Years Deliveries: 78432																															
	3	2019	NAVY	23.051	23.051	.000																									.000
✓	3	2019	NAVY	1.449	1.449	.000																									.000
	3	2020	NAVY	22.553	22.553	.000																									.000
✓	3	2020	NAVY	.096	.096	.000																									.000
	3	2021	NAVY	19.905	19.905	.000																									.000
✓	3	2021	NAVY	2.550	2.550	.000																									.000
	3	2022	NAVY	24.881	24.881	.000																									.000
	3	2023	NAVY	24.000	24.000	.000																									.000
	4	2024	NAVY	25.958	.000	25.958	-	-	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.163	2.165											.000
2.1.1) AN/SSQ-101 (Multi-static Coherent Receiver) QZ006 (4)																															
Prior Years Deliveries: 50891																															
	5	2019	NAVY	14.414	14.414	.000																									.000
✓	5	2019	NAVY	.076	.076	.000																									.000
	5	2020	NAVY	17.123	17.123	.000																									.000
✓	5	2020	NAVY	.236	.236	.000																									.000
	5	2021	NAVY	15.059	15.059	.000																									.000
✓	5	2021	NAVY	2.526	2.526	.000																									.000
	5	2022	NAVY	25.514	25.514	.000																									.000
	5	2023	NAVY	23.366	23.366	.000																									.000
	6	2024	NAVY	8.102	.000	8.102	-	-	1.996	2.106	2.000	2.000																			.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types	**Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

Cost Elements (Units in Thousands)							Fiscal Year 2025												Fiscal Year 2026												BALANCE
										Calendar Year 2025												Calendar Year 2026									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
2.1.2) AN/SSQ-125/125A (Multi-static Coherent Source) QZ010 (5)																															
Prior Years Deliveries: 53790																															
	7	2019	NAVY	9.479	9.479	.000																									.000
✓	7	2019	NAVY	.055	.055	.000																									.000
	7	2020	NAVY	25.100	25.100	.000																									.000
✓	7	2020	NAVY	.219	.219	.000																									.000
	7	2021	NAVY	19.032	19.032	.000																									.000
✓	7	2021	NAVY	2.973	2.973	.000																									.000
	7	2022	NAVY	3.555	3.555	.000																									.000
	7	2023	NAVY	2.294	2.294	.000																									.000
	8	2024	NAVY	12.082	.000	12.082	-	-	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.346														.000
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 1	**P-1 Line Item Number / Title:** 4048 / Sonobuoys - All Types	**Item Number / Title [DODIC]:** 1 / Sonobuoys, All Types

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	ERAPSCO - Columbia City IN	40,000	70,000	187,000	24	3	12	15	0	0	0	0
2	VARIOUS - VARIOUS			TBD	24	3	12	15	0	0	0	0
3	ERAPSCO - Columbia City IN	6,000	7,500	29,000	24	3	12	15	0	0	0	0
4	VARIOUS - VARIOUS			TBD	24	3	12	15	0	0	0	0
5	ERAPSCO - Columbia City IN	4,000	15,000	26,000	24	3	12	15	0	0	0	0
6	VARIOUS - VARIOUS			TBD	24	3	12	15	0	0	0	0
7	Various (7) - Various	1,048	8,400	25,100	24	3	12	15	0	0	0	0
8	VARIOUS - VARIOUS			TBD	24	3	12	15	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:
(7) The AN/SSQ-125A sonobuoy contract vendor is Lockheed Martin, Manassas VA.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 3640 / Minotaur

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0305241N	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10.077	4.963	5.247	5.396	0.000	5.396	5.492	5.579	5.673	5.801	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10.077	4.963	5.247	5.396	0.000	5.396	5.492	5.579	5.673	5.801	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10.077**	**4.963**	**5.247**	**5.396**	**0.000**	**5.396**	**5.492**	**5.579**	**5.673**	**5.801**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Minotaur Family of Services (MFoS) provides interoperable systems including: 1) Core Mission Management System (MMS) (sensor calibration/control/track management), 2) Minotaur Data Link Processor (MDLP) (information exchange) and 3) Reach/Web (access to classified National Tactical Means (NTM)/cloud computing services) to ensure correlation and fusion of tactical mission data products are provided to Combatant Commanders (COCOMs), Fleet Commanders, and Tactical Commanders. MFoS enhances Intelligence, Surveillance, Reconnaissance and Targeting (ISR&T) for all warfare pillars in support of the Naval Operational Architecture (NOA). MFoS provides the basis for Battlespace Awareness (BA) tactical decision aids, intelligence data distribution, and battle-management coordination with improved decision agility. Funding provides Technical Data Packages supporting ISR&T capabilities, to include Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) aboard US Navy ships, submarines, and surface systems to include both Ground Support Stations and Command and Control (C2) nodes (afloat and ashore). Funding provides for an increase in ISR&T/TCPED capabilities, reduced operator workload, and deployment of a common system infrastructure across the Fleet as directed by the Chief of Naval Operations. The effort includes procurement and delivery of shore (i.e. Watch Floors) and ship-based capability, which integrates MFoS with existing Carrier Strike Groups, and Expeditionary Strike Groups, providing Fleet Commanders access to NTM, data storage, data analytics, and an ISR&T sensor grid via Beyond Line of Sight Internet Protocol (B/LOS IP) based networks to enable Distributed Maritime Operations (DMO) and Littoral Operations in Contested Environments (LOCE).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 3640 / Minotaur	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** 0305241N	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-5	1 / Minotaur				- / 10.077	- / 4.963	- / 5.247	- / 5.396	- / 0.000	- / 5.396
P-40	**Total Gross/Weapon System Cost**				**- / 10.077**	**- / 4.963**	**- / 5.247**	**- / 5.396**	**- / 0.000**	**- / 5.396**

*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:
Minotaur Family of Services (MFoS) systems play an increasingly significant Data-as-a-Service (DaaS) role to close critical kill chain gaps within the Naval Operational Architecture (NOA) and bring data to the tactical edge in support of Long Range Fires (LRF).

FY2024 Minotaur OPN funding provides analysis, Non-Recurring Engineering (NRE), integration, modernization, procurement, production, and delivery of MFoS capabilities, installed on ship and shore-based infrastructure, production software releases, and obsolescence upgrades to pace the threat. Efforts for code modernization necessary to deliver Minotaur for deployment in evolving Naval Operational Architecture (NOA) and networks, including CANES, DCGS-N/MC, and MTC-A/X. Funding provides technology refresh and obsolescence of high performance computing systems for surface/shore fielding of MFoS products that include Core MMS, Reach/Web, and MDLP.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 3640 / Minotaur	Item Number / Title [DODIC]: 1 / Minotaur
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10.077	4.963	5.247	5.396	0.000	5.396
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10.077	4.963	5.247	5.396	0.000	5.396
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10.077**	**4.963**	**5.247**	**5.396**	**0.000**	**5.396**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) Ship-Based	-	-	5.240	-	-	2.699	-	-	1.699	-	-	1.721	-	-	-	-	-	1.721
1.1.2) Shore-Based	-	-	1.742	-	-	0.539	-	-	1.815	-	-	1.843	-	-	-	-	-	1.843
Subtotal: Recurring Cost	-	-	*6.982*	-	-	*3.238*	-	-	*3.514*	-	-	*3.564*	-	-	-	-	-	*3.564*
Subtotal: Hardware Cost	**-**	**-**	***6.982***	**-**	**-**	***3.238***	**-**	**-**	***3.514***	**-**	**-**	***3.564***	**-**	**-**	**-**	**-**	**-**	***3.564***
Support Cost																		
2.1) Data	-	-	0.404	-	-	0.208	-	-	0.212	-	-	0.218	-	-	-	-	-	0.218
2.2) Training Equipment	-	-	1.010	-	-	0.520	-	-	0.530	-	-	0.550	-	-	-	-	-	0.550
2.3) Support Equipment	-	-	1.061	-	-	0.546	-	-	0.557	-	-	0.573	-	-	-	-	-	0.573
2.4) ILS	-	-	0.303	-	-	0.188	-	-	0.154	-	-	0.164	-	-	-	-	-	0.164
2.5) Other Support	-	-	0.317	-	-	0.263	-	-	0.280	-	-	0.327	-	-	-	-	-	0.327
Subtotal: Support Cost	**-**	**-**	***3.095***	**-**	**-**	***1.725***	**-**	**-**	***1.733***	**-**	**-**	***1.832***	**-**	**-**	**-**	**-**	**-**	***1.832***
Gross/Weapon System Cost	**-**	**-**	**10.077**	**-**	**-**	**4.963**	**-**	**-**	**5.247**	**-**	**-**	**5.396**	**-**	**-**	**0.000**	**-**	**-**	**5.396**

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4204 / Weapons Range 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

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	986.238	87.748	106.209	147.556	0.000	147.556	143.807	162.621	162.970	166.339	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	986.238	87.748	106.209	147.556	0.000	147.556	143.807	162.621	162.970	166.339	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**986.238**	**87.748**	**106.209**	**147.556**	**0.000**	**147.556**	**143.807**	**162.621**	**162.970**	**166.339**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	4.545	6.028	7.916	-	7.916	9.123	12.036	13.513	14.504	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget line item provides the resources to implement the Navy Fleet Training Range (FTR) Instrumentation Program Plan. These FTRs provide the primary means of fleet combat readiness training. The plan addresses the following major procurement areas: Electronic Warfare (EW) systems, simulators, Systems Replacement and Modernization (SRAM), and generic systems such as range computer systems, simulation, surveillance systems, Aerial Targets Range Support equipment includes Moving Land Targets (MLT) and Target Threat Simulation Program (TTSP) equipment; MLT includes vehicles, vehicle components, and Engineering Change Proposals to upgrade hardware; TTSP equipment includes EW & Threat Payload simulations, electronic countermeasures equipment and active emitter augmentation equipment, Tactical Combat Training System (TCTS), Large Area Tracking Range (LATR), Undersea Warfare Training Range/ Pacific Fleet Portable Antisubmarine Warfare (ASW) Range, and range infrastructure necessary to enable Live Virtual Constructive (LVC) training capability. The integral parts of these major range programs include but are not limited to the following: voice communications, weapons scoring systems (Laser Training and, Weapons Impact Scoring Sets), display consoles, radars, tracking subsystems, control/ computation subsystems, display/ debriefing subsystems, processors, HF/ VHF/ UHF receivers, transmitters/ transceivers, multiplexers, intercom circuits, encoding devices, frequency interface control systems, peculiar support equipment, and other specialized equipment.

[P5 / SC004 SRAM - Systems Replacement and Modernization]: The SRAM program provides for the procurement of numerous non-recurring range equipment replacement and modernization efforts that are needed at all Navy training ranges. SRAM procurements replace and modernize economically unmaintainable systems and equipment in order to increase range efficiency. Funding for installation of minor equipment is required in all years for all ranges. Sample procurements include electronic warfare systems, weapons scoring systems, secure communications equipment, ocean systems acoustical equipment, microwave data links, telecom fiber upgrades, video equipment replacement for security risk reduction, and electrical generators.

[P5 / SC012 OS - Ocean Systems]: Funds the multi-year procurement and upgrade of fixed underwater training ranges at Pacific Missile Range Facility (PMRF), Barking Sands, HI and Southern California ASW Range (SOAR), CA. Upgrades include cyber security enhancements, increased range accuracy, and splash detection capabilities. The underwater ranges are used to provide individual and unit level training for basic antisubmarine warfare (ASW) skills. Large exercises such as Composite Training Unit Exercises (COMTUEX), Fleet Exercises (FLEETEX), and Joint Task Force Exercises (JTFX) are conducted in the vicinity of the fixed underwater training ranges. Items procured under this cost element include hydrophones, undersea cable, and shore system electronics. Funded programs include Barking Sands Tactical Underwater Range (BARSTUR)/Barking Sands Underwater Range Expansion (BSURE) refurbishment, and West Coast Undersea Warfare Training Range (WC USWTR).

[P5 / SC034 LATR Shipboard Rotary Technology Upgrade]: The Large Area Tracking Range (LATR) Shipboard and Rotary Wing Technology Upgrade (LSRTU) will replace obsolete components in the legacy shipboard and rotary wing tracking instrumentation and will deliver enhanced Beyond Line of Sight (BLOS) tracking capability for Large Force Exercise support.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4204 / Weapons Range 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		

[P5 / SC158 TCTS Ground Subsystem]: The Tactical Combat Training System Inc II (TCTS II) will procure fixed and transportable instrumentation equipment for both shore-based (aircrew training) and deployable (e.g. temporary range, ship) applications. TCTS II instrumentation will transmit exercise scenarios; simulate/stimulate exercise participants sensors/weapons with the exercise scenario; track all exercise participants and events like weapons engagements; and provide accurate, realistic, and timely feedback. TCTS II is building on technology developed for existing tactical training range systems. TCTS II consists of airborne instrumentation called Participant Subsystems (PS) and Ground Subsystems (GS). GS systems are procured in FY24 for MCAS Miramar, MCAS Yuma, and Southern California Tactical Training Range (SCTTR).

[P5 / SC140 TCTS Remote Range Unit]: SC140 TCTS Remote Range Unit (RRU) provides encrypted range communication capability between the range operations center and airborne range Participant Subsystems (PS) across large Tactical Training Range areas, which are somewhat analogous to cellular telephone towers. Unit costs for RRU include site-specific costs for each Training Range and will vary per year. RRUs will be procured in FY24 for MCAS Miramar, MCAS Yuma, and Southern California Tactical Training Range (SCTTR).

[P5 / TCTS Internal Rotary Shipboard Subsystem]: Tactical Combat Training System (TCTS) Internal Rotary Shipboard Subsystem (IRSS) will provide range participant instrumentation for rotary aircraft, and large-fixed wing aircraft at Navy Tactical Training Range sites.

[P5 / TCTS ENGINEERING CHANGE PROPOSAL]: TCTS II Engineering Change Proposal (ECP) funds procurement of critical capability updates, both software and hardware updates to the TCTS II system to ensure cybersecurity compliance and connectivity with existing range infrastructure in support of connected Live-Virtual-Constructive (LVC) training requirements.

[P5 / SC040 TCTS Shipboard Ground Subsystem]: The Tactical Combat Training System Inc II (TCTS II) will procure fixed and transportable instrumentation equipment for both shore-based (aircrew training) and deployable (e.g. temporary range, ship) applications. TCTS II instrumentation will transmit exercise scenarios; simulate/stimulate exercise participants sensors/weapons with the exercise scenario; track all exercise participants and events like weapons engagements; and provide accurate, realistic, and timely feedback. TCTS II is building on technology developed for existing tactical training range systems. TCTS II consists of airborne instrumentation called Participant Subsystems (PS) and Ground Subsystems (GS) that include Common Ground Subsystem (CGS) and Shipboard Ground Subsystem (SGS) variants.

[P5 / SC105 EW - Threat Presentation]: Threat Presentation includes all the necessary components and elements associated with presenting friendly training event participants with an opposing force (OPFOR) operating environment that replicates the expected enemy order of battle. The capability of a range to recreate any Electronic Combat electronic order of battle requires a range to simulate or emulate basic elements of Electronic Combat such as search, acquisition and tracking radars, anti-aircraft artillery (AAA) systems, surface-to-air missile (SAM) systems, infrared (IR) systems, jammers, coastal threats, airborne simulators, and information warfare/ command and control systems. Individual pieces procured vary from year to year.

FY24 EW $30M increase will be used to procure and install two USMC Modular Remote Training Emitter Simulators.

[P5 / SC151 MLT Hardware]: The Moving Land Target (MLT) Program will provide Moving Land Target vehicles to train aircrews in the demands of Close Air Support (CAS), Time Sensitive Targeting (TST), Target Identification, and Forward Air Controller (FAC) procedures within a Network Centric Warfighting force. MLT provides aircrews with threat representative targets that provide infrared reactivity, mobility, and realistic radar cross-section targets to meet their combat training and testing needs. The MLT program procures Moving Land Target vehicles, vehicle components, and Engineering Change Proposals to upgrade hardware.

[P5 / SC106 TTSP]: The Target Threat Simulation Program (TTSP) replicates various threats dependent upon the objectives of the test and evaluation event(s). TTSP procures the payload equipment required to electronically enhance aerial/surface targets to provide threat representative Radio Frequency signatures, specifically the Electronic Attack and Threat Radar Emissions (Active Emitters). TTSP accomplishes this through a collection of modules which are integrated into the target in various configurations, providing the ability to simulate the RF environment.

[P5 / SC711 LVC Range Integration]: Funds Range Live Virtual Constructive (LVC) integration allowing real-time telemetry to be received from new aircraft reaching the fleet. Establish persistent integrated training between AEGIS, CVW, Maritime & UAS training assets by enabling LVC capability with live aircraft on Tactical Training Range (TTR) sites. Effort will modify range infrastructure at multiple range sites to provide secure network connectivity to provide robust integrated training capability. Allows range communications, networking, and mission brief, display, and debrief capabilities at multiple levels of security.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4204 / Weapons Range 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		

[P5 / SC158 - TCTS Block Upgrade]: The Tactical Combat Training System (TCTS) will procure fixed range instrumentation equipment for both shore-based (aircrew training) and deployable (ship/sub/aircrew training) applications. TCTS instrumentation will transmit exercise scenarios; simulate/stimulate all exercise participants sensors/weapons with the exercise scenario; track all exercise participants and events, e.g., weapons engagements; and provide accurate, realistic, and timely feedback. TCTS is building on technology developed for existing tactical training range systems. TCTS consists of airborne instrumentation called Participant Subsystems and Ground Subsystems. Increment 1 systems have been procured and fielded. Annual block upgrade software packages will be released to fielded Increment 1 systems to correct system deficiencies. These block upgrades were previously budgeted under SC920, TCTS Non-Recurring. Software block upgrades will deliver the capability to integrate and merge F-35 range participant information with TCTS time-space position information (TSPI) at TCTS ground systems for training exercise display and debrief at multiple Tactical Training Range (TTR) sites.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4204 / Weapons Range 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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 / Weapons Range Support Equipment	P-5a, P-21			- / 986.238	- / 87.748	- / 106.209	- / 147.556	- / 0.000	- / 147.556
P-40	**Total Gross/Weapon System Cost**				**- / 986.238**	**- / 87.748**	**- / 106.209**	**- / 147.556**	**- / 0.000**	**- / 147.556**

*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 Systems Replacement and Modernization (SRAM) funds fleet priorities for modernization efforts at Navy training ranges in support of fleet training wholeness (FTW). Projects are non-recurring efforts that vary from year to year and are prioritized on an annual basis to meet fleet training readiness.

The increase in Ocean Systems in FY 2024 funds the approved expansion of the Undersea Warfare Training Range (USWTR) Program of Record (PoR). This ACAT IV program contract was awarded 8 July 21 for 410M and continues the effort to modernize and deliver 6 Training Ranges. The in-water sensor system and shore electronics for Anti-Submarine Warfare (ASW) training ranges at Pacific Missile Range Facility (PMRF), HI, including the Barking Sands Tactical Underwater Range (BARSTUR) and Barking Sands Underwater Range Expansion (BSURE) operating areas. The effort will be a time-phased procurement exception to the full funding policy. Hardware buys will vary in cost from year to year to meet the Fleet's required date for Full Operational Capability (FOC) 4QFY25. FY 2024 procurements include funds for Ocean Sensor Subsystem (OSS) and Shore Electronic Subsystem (SES) Production Engineering Verification Testing and a Technical Review under the time-phased procurement contract. Additionally, FY 2023 procures long lead items to support the time phased procurement and installation schedule in FY24.

Funds in FY 2024 will continue Full-Rate Production of Tactical Combat Training System (TCTS) Increment II and starts fielding to more than one range in a single year. The increase in Tactical Combat Training System (TCTS) Increment II in FY 2024 funds the procurement of 10 Ground Subsystems (GS) and 16 Remote Range Units (RRU) to provide encryption capability for Fleet training exercises. Procurement of Shipboard units of the Internal Rotary Shipboard Subsystem (IRSS) will commence in FY25.

SC105 EW Electronic Warfare (EW) Threat Presentation funding fluctuates from year to year reflecting Navy prioritization of various Electronic Warfare (EW) Threat Presentation devices for use at multiple Tactical Training Range (TTR) sites, including Fallon, NV; Yuma, AZ; Southern California Tactical Training Range (SCTTR), CA; Townsend, SC; Mid-Atlantic Electronic Warfare Range (MAEWR), NC. FY 2024 Fleet Training Wholeness Initiative procures additional Encrypted Range Radios, two USMC Modular Remote Training Emitter Simulators, one Long Track foreign Acquisition (FMA) system modernization at Fallon site, and also funds Fleet Training Wholeness Initiative to complete specific number of electronic warfare system tech refreshes to improve availability and maintainability and secure the authority to operate at Fleet range sites that include EW Opposition Force (OPFOR) training capabilities and connect those systems to the Navy Enterprise Tactical Training Network (NETTN).

FY24 EW $30M increase will be used to procure and install two USMC Modular Remote Training Emitter Simulators.

Funds in FY 2024 for Live-Virtual-Constructive (LVC) will provide equipment for additional distributed mission training capability to East Coast and West Coast Tactical Training Ranges (TTR), with voice communication and datalink equipment in support of Live Virtual Constructive (LVC) capabilities. Install distributed network capabilities at various West Coast TTR's, according to Fleet priorities, in support of LVC capabilities.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4204 / Weapons Range Support Equipment	**Item Number / Title [DODIC]:** 1 / Weapons Range Support Equipment
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	986.238	87.748	106.209	147.556	0.000	147.556
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	986.238	87.748	106.209	147.556	0.000	147.556
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**986.238**	**87.748**	**106.209**	**147.556**	**0.000**	**147.556**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	4.545	6.028	7.916	-	7.916
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - Systems Replacement and Modernization Cost																		
Recurring Cost																		
1.1.1) SC004 SRAM - Systems Replacement and Modernization (1)	-	-	207.872	-	-	8.313	-	-	9.493	-	-	11.058	-	-	-	-	-	11.058
Subtotal: Recurring Cost	-	-	*207.872*	-	-	*8.313*	-	-	*9.493*	-	-	*11.058*	-	-	-	-	-	*11.058*
Subtotal: Hardware - Systems Replacement and Modernization Cost	**-**	**-**	***207.872***	**-**	**-**	***8.313***	**-**	**-**	***9.493***	**-**	**-**	***11.058***	**-**	**-**	**-**	**-**	**-**	***11.058***
Hardware - Ocean Systems Cost																		
Recurring Cost																		
2.1.1) SC012 OS - Ocean Systems (2)	-	-	85.460	-	-	26.050	-	-	44.045	-	-	41.802	-	-	-	-	-	41.802
2.1.2) SC161 OS - East Coast USWTR	-	-	178.721	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*264.181*	-	-	*26.050*	-	-	*44.045*	-	-	*41.802*	-	-	-	-	-	*41.802*
Subtotal: Hardware - Ocean Systems Cost	**-**	**-**	***264.181***	**-**	**-**	***26.050***	**-**	**-**	***44.045***	**-**	**-**	***41.802***	**-**	**-**	**-**	**-**	**-**	***41.802***
Hardware - Large Area Tracking Range Cost																		
Recurring Cost																		
3.1.1) SC034 LATR Shipboard Rotary Technology Upgrade	-	-	3.308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4204 / Weapons Range Support Equipment	Item Number / Title [DODIC]: 1 / Weapons Range 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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
3.1.2) SC132 LATR Navigation Technology Refresh	-	-	4.846	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*8.154*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - Large Area Tracking Range Cost	**-**	**-**	***8.154***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hardware - Tactical Combat Training System Cost																		
Recurring Cost																		
4.1.1) SC158 TCTS Ground Subsystem(†) (3)	363,000.00	2	0.726	-	-	-	345,212.88	3	1.036	352,117.14	10	3.521	-	-	-	352,117.14	10	3.521
4.1.2) SC140 TCTS Remote Range Unit(†) (4)	384,857.14	7	2.694	318,500.00	4	1.274	436,446.87	3	1.309	342,794.56	16	5.485	-	-	-	342,794.56	16	5.485
4.1.4) TCTS ENGINEERING CHANGE PROPOSAL (5)	-	-	-	-	-	-	-	-	0.564	-	-	0.945	-	-	-	-	-	0.945
Subtotal: Recurring Cost	-	-	*3.420*	-	-	*1.274*	-	-	*2.909*	-	-	*9.951*	-	-	-	-	-	*9.951*
Subtotal: Hardware - Tactical Combat Training System Cost	**-**	**-**	***3.420***	**-**	**-**	***1.274***	**-**	**-**	***2.909***	**-**	**-**	***9.951***	**-**	**-**	**-**	**-**	**-**	***9.951***
Hardware - Electronic Warfare Training Equipment Cost																		
Recurring Cost																		
5.1.1) SC105 EW - Threat Presentation (6)	-	-	200.374	-	-	22.194	-	-	24.526	-	-	57.637	-	-	-	-	-	57.637
Subtotal: Recurring Cost	-	-	*200.374*	-	-	*22.194*	-	-	*24.526*	-	-	*57.637*	-	-	-	-	-	*57.637*
Subtotal: Hardware - Electronic Warfare Training Equipment Cost	**-**	**-**	***200.374***	**-**	**-**	***22.194***	**-**	**-**	***24.526***	**-**	**-**	***57.637***	**-**	**-**	**-**	**-**	**-**	***57.637***
Hardware - Aerial Targets Range Support Equipment Cost																		
Recurring Cost																		
6.1.1) SC151 MLT Hardware (7)	-	-	20.857	-	-	1.483	-	-	1.626	-	-	1.655	-	-	-	-	-	1.655
6.1.2) SC152 MLT Engineering Change Proposals (8)	-	-	0.865	-	-	0.035	-	-	0.035	-	-	0.035	-	-	-	-	-	0.035
6.1.3) SC106 TTSP (9)	-	-	0.661	-	-	0.110	-	-	0.112	-	-	0.112	-	-	-	-	-	0.112
Subtotal: Recurring Cost	-	-	*22.383*	-	-	*1.628*	-	-	*1.773*	-	-	*1.802*	-	-	-	-	-	*1.802*

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4204 / Weapons Range Support Equipment	Item Number / Title [DODIC]: 1 / Weapons Range 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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
Subtotal: Hardware - Aerial Targets Range Support Equipment Cost	**-**	**-**	***22.383***	**-**	**-**	***1.628***	**-**	**-**	***1.773***	**-**	**-**	***1.802***	**-**	**-**	**-**	**-**	**-**	***1.802***
Hardware - Live-Virtual-Constructive Cost																		
Recurring Cost																		
7.1.1) SC711 LVC Range Integration (10)	-	-	27.381	-	-	7.811	-	-	8.986	-	-	9.921	-	-	-	-	-	9.921
Subtotal: Recurring Cost	-	-	*27.381*	-	-	*7.811*	-	-	*8.986*	-	-	*9.921*	-	-	-	-	-	*9.921*
Subtotal: Hardware - Live-Virtual-Constructive Cost	**-**	**-**	***27.381***	**-**	**-**	***7.811***	**-**	**-**	***8.986***	**-**	**-**	***9.921***	**-**	**-**	**-**	**-**	**-**	***9.921***
Software - SC158 TCTS Block Upgrade Cost																		
Recurring Cost																		
8.1.1) SC158 - TCTS Block Upgrade	-	-	9.331	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	*9.331*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Software - SC158 TCTS Block Upgrade Cost	**-**	**-**	***9.331***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Support - Production Support Cost																		
9.1) SC820 SRAM	-	-	0.977	-	-	0.672	-	-	0.686	-	-	0.699	-	-	-	-	-	0.699
9.2) SC820 Ocean Systems	-	-	15.205	-	-	2.778	-	-	1.386	-	-	1.589	-	-	-	-	-	1.589
9.3) SC820 LATR	-	-	0.539	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.4) SC820 TCTS	-	-	2.967	-	-	0.841	-	-	0.862	-	-	0.883	-	-	-	-	-	0.883
9.5) SC820 EW	-	-	8.513	-	-	2.051	-	-	2.092	-	-	2.134	-	-	-	-	-	2.134
9.6) SC820 LVC Range Integration	-	-	0.715	-	-	0.394	-	-	0.104	-	-	0.106	-	-	-	-	-	0.106
Subtotal: Support - Production Support Cost	**-**	**-**	***28.916***	**-**	**-**	***6.736***	**-**	**-**	***5.130***	**-**	**-**	***5.411***	**-**	**-**	**-**	**-**	**-**	***5.411***
Support - Production Engineering Cost																		
10.1) SC831 SRAM	-	-	21.840	-	-	2.127	-	-	2.033	-	-	2.032	-	-	-	-	-	2.032
10.2) SC831 Ocean Systems (11)	-	-	59.465	-	-	6.764	-	-	3.145	-	-	3.586	-	-	-	-	-	3.586
10.3) SC831 LATR	-	-	1.106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10.4) SC831 TCTS	-	-	22.059	-	-	1.806	-	-	1.284	-	-	1.407	-	-	-	-	-	1.407
10.5) SC831 EW	-	-	33.793	-	-	1.853	-	-	1.890	-	-	1.927	-	-	-	-	-	1.927
10.6) SC832 MLT	-	-	3.082	-	-	0.454	-	-	0.463	-	-	0.474	-	-	-	-	-	0.474
10.7) SC831 LVC Range Integration	-	-	1.369	-	-	0.738	-	-	0.532	-	-	0.548	-	-	-	-	-	0.548

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4204 / Weapons Range Support Equipment	Item Number / Title [DODIC]: 1 / Weapons Range 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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
10.8) SC831 Prior Years	-	-	71.512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Production Engineering Cost	**-**	**-**	***214.226***	**-**	**-**	***13.742***	**-**	**-**	***9.347***	**-**	**-**	***9.974***	**-**	**-**	**-**	**-**	**-**	***9.974***
Gross/Weapon System Cost	**-**	**-**	**986.238**	**-**	**-**	**87.748**	**-**	**-**	**106.209**	**-**	**-**	**147.556**	**-**	**-**	**0.000**	**-**	**-**	**147.556**

(†) indicates the presence of a P-5a

Footnotes:

(1) SC004 Systems Replacement and Modernization: The increase in FY 2024 funds fleet priorities for repair and modernization efforts at Navy training ranges in support of fleet training wholeness.

(2) SC012 Ocean Systems: The increase in Ocean Systems in FY 2024 funds the approved expansion of the Undersea Warfare Training Range (USWTR) Program of Record (PoR). This ACAT IV program contract was awarded 8 July 21 for $410M and continues the effort to modernize and deliver 6 Training Ranges. The in-water sensor system and shore electronics for Anti-Submarine Warfare (ASW) training ranges at Pacific Missile Range Facility (PMRF), HI, including the Barking Sands Tactical Underwater Range (BARSTUR) and Barking Sands Underwater Range Expansion (BSURE) operating areas. The effort will be a time-phased procurement exception to the full funding policy. BSURE Underwater Cable FY 2022 costs that were zeroed due to HAC-D Mark were procured in FY23. Hardware buys will vary in cost from year to year to meet the Fleet's required date for Full Operational Capability (FOC) of FY25. FY 2024 procurements include funds for Ocean Sensor Subsystem (OSS) and Shore Electronic Subsystem (SES), Production Engineering Verification Testing and a Critical Design Review (CDR) under the time-phased procurement contract. Additionally, FY 2024 time phased procurement schedule includes the installation of the In Water System (IWS) for BARSTUR and BSURE ranges, and SES equipment implementing new requirements.

(3) SC158 TCTS Ground Subsystem: FY 2024 funds the procurement of 10 complete Ground Subsystems (GS) to provide encryption capability for Fleet training exercises at multiple Tactical Training Ranges. Unit costs for GS include site-specific costs for each Training Range and will vary per range and per year.

(4) SC140 TCTS Remote Range Unit: FY 2024 funds the procurement of 16 Remote Range Units (RRU) to provide encryption capability for Fleet training exercises. Unit costs for RRU include site-specific costs for each Training Range and will vary per year.

(5) TCTS II Engineering Change Proposal (ECP) funds procurement of critical software and hardware updates to TCTS ground subsystems to ensure cybersecurity compliance and connectivity with existing range infrastructure in support of connected Live-Virtual-Constructive (LVC) training requirements.

(6) SC105 EW Electronic Warfare (EW) Threat Presentation funding fluctuates from year to year reflecting Navy prioritization of various Electronic Warfare (EW) Threat Presentation devices for use at multiple Tactical Training Range (TTR) sites, including Fallon, NV; Yuma, AZ; Southern California Tactical Training Range (SCTTR), CA; Townsend, SC; Mid-Atlantic Electronic Warfare Range (MAEWR), NC. FY 2024 Fleet Training Wholeness Initiative procures additional Encrypted Range Radios, two USMC Modular Remote Training Emitter Simulators, one Long Track foreign Acquisition (FMA) system modernization at Fallon site, and also funds Fleet Training Wholeness Initiative to complete specific number of electronic warfare system tech refreshes to improve availability and maintainability and secure the authority to operate at Fleet range sites that include EW Opposition Force (OPFOR) training capabilities and connect those systems to the Navy Enterprise Tactical Training Network (NETTN). FY24 EW $30M increase will be used to procure and install two USMC Modular Remote Training Emitter Simulators.

(7) SC151 MLT Hardware: MLT Hardware includes Moving Land Target Vehicles, Ground Control Stations, Command and Control units, Data Links, Radio kits, Range equipment, Relays and other hardware such as kits to include but not limited to weapon instrumentation kits, specialty tires/ wheels, and equipment protection. Equipment being procured is based on the operational demand/ training requirements of the fleet, which vary from year to year; consequently, the items, quantities of items, and associated unit costs of the items being procured, vary from year to year. Hardware procured is not one for one with target vehicles.

(8) SC152 MLT ECP: Costs include the procurement of Engineering Change Proposals for critical hardware/software/firmware updates (i.e.: Information Assurance / Windows / System Change Requests (SCRs)), as well as engineering system level changes to meet the requirements of the Risk Management Framework (RMF) Information Assurance (IA) processes and all safety/modernization related issues.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4204 / Weapons Range Support Equipment	**Item Number / Title [DODIC]:** 1 / Weapons Range Support Equipment
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(9) SC 106 - TTSP: Hardware quantities and unit costs are dependent upon which threat simulation equipment is being procured; some equipment is more expensive than others and the type of equipment being procured is dependent upon Fleet requirements and consumption. It is critical to maintain adequate inventory levels as these assets are required to establish readiness capability for the Fleet.

(10) SC711 LVC Range Integration: FY 2024 funds provide equipment for initial distributed capability and additional capability at East Coast and West Coast Tactical Training Range (TTR), with voice communication and datalink equipment in support of Live Virtual Constructive (LVC) capabilities. Install distributed network capabilities at various West Coast TTR's, according to Fleet priorities, in support of LVC capabilities.

(11) SC831 Ocean Systems: FY24 increase required for BARSTUR at-sea installation engineering support.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4204 / Weapons Range Support Equipment	Item Number / Title [DODIC]: 1 / Weapons Range Support Equipment

Cost Elements	OCO	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
4.1.1) SC158 TCTS Ground Subsystem		2021	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	May 2021	Jun 2022	2	362,858.50	Y		May 2020
4.1.1) SC158 TCTS Ground Subsystem		2023	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	Jan 2023	Feb 2024	3	345,212.88	Y		Apr 2022
4.1.1) SC158 TCTS Ground Subsystem		2024	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	Dec 2023	Jan 2025	10	352,117.14	N		Mar 2023
4.1.2) SC140 TCTS Remote Range Unit(†)		2021	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	May 2021	Jun 2022	7	384,833.57	Y		May 2020
4.1.2) SC140 TCTS Remote Range Unit(†)		2022	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	Mar 2022	Apr 2023	4	318,500.00	Y		Feb 2021
4.1.2) SC140 TCTS Remote Range Unit(†)		2023	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	Jan 2023	Feb 2024	3	436,446.87	Y		Apr 2022
4.1.2) SC140 TCTS Remote Range Unit(†)		2024	Collins Aerospace / Cedar Rapids, IA	C / FPIF	NAWCTSD	Dec 2023	Jan 2025	16	342,794.56	Y		Mar 2023

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4204 / Weapons Range Support Equipment	**Item Number / Title [DODIC]:** 1 / Weapons Range Support Equipment

Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
							Calendar Year 2021												Calendar Year 2022												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.2) SC140 TCTS Remote Range Unit [4]																															
	1	2021	NAVY	7 [12]	0	7								A -	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	5
	1	2022	NAVY	4	0	4																		A -	-	-	-	-	-	-	4
	1	2023	NAVY	3	0	3																									3
	1	2024	NAVY	16	0	16																									16
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4204 / Weapons Range Support Equipment	**Item Number / Title [DODIC]:** 1 / Weapons Range Support Equipment

Cost Elements (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.2) SC140 TCTS Remote Range Unit [4]																															
	1	2021	NAVY	7 [12]	2	5	-	-	-	-	-	-	-	5																	0
	1	2022	NAVY	4	0	4	-	-	-	-	-	-	1	-	-	-	1	2													0
	1	2023	NAVY	3	0	3				A -	-	-	-	-	-	-	-	-	-	-	-	-	3								0
	1	2024	NAVY	16	0	16															A -	-	-	-	-	-	-	-	-	-	16
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4204 / Weapons Range Support Equipment	**Item Number / Title [DODIC]:** 1 / Weapons Range Support Equipment

Cost Elements (Units in Each)							Fiscal Year 2025												Fiscal Year 2026												BALANCE
							Calendar Year 2025												Calendar Year 2026												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2024	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
4.1.2) SC140 TCTS Remote Range Unit [4]																															
	1	2021	NAVY	7 [12]	7	0																									0
	1	2022	NAVY	4	4	0																									0
	1	2023	NAVY	3	3	0																									0
	1	2024	NAVY	16	0	16	-	-	-	3	3	3	3	4																	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	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4204 / Weapons Range Support Equipment	**Item Number / Title [DODIC]:** 1 / Weapons Range Support Equipment

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	Collins Aerospace - Cedar Rapids, IA	1	5	30	5	7	13	20	5	3	13	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).

Footnotes:
(12) Available FY21 funding was utilized for continued TCTS II quantity fielding in FY22 at IOC location. Actual delivery for remaining 5 RRUs will be Aug-Sep 2025.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy			Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment		**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0204112N	**Other Related Program Elements:** 0604512N, 0604112N, 0604530N	
Line Item MDAP/MAIS Code: N/A			

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	932.259	176.387	272.044	162.273	0.000	162.273	117.925	97.652	97.973	98.420	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	932.259	176.387	272.044	162.273	0.000	162.273	117.925	97.652	97.973	98.420	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**932.259**	**176.387**	**272.044**	**162.273**	**0.000**	**162.273**	**117.925**	**97.652**	**97.973**	**98.420**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	2.716	2.917	3.203	-	3.203	2.864	2.574	1.985	0.002	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

AVIATION SUPPORT EQUIPMENT provides funds for the procurement of air-launched anti-submarine (ASW) detection and other general support equipment associated with aircraft systems. Other support equipment includes ground electronics equipment, aircraft launch and recovery equipment, photographic equipment, reconnaissance and electronic warfare process.
The items contained within this budget line item were previously funded under the following line items in FY14 and prior:
4208 Expeditionary Airfields
4214 Aircraft Rearming Equipment
4216 Aircraft Launch and Recovery Equipment
4255 LAMPS MK III Shipboard Equipment

[P5 / Expeditionary Airfields]: This program provides for procurement of aircraft recovery equipment, Expeditionary Airfield Surfacing Equipment and accessories, Airfield Lighting Equipment and Visual Landing Aids for Naval Aviation Expeditionary Airfields (EAF.) EAF recovery equipment consists of the Marine Corps Expeditionary Arresting Gear and its accessories. This equipment is used to stop aircraft in less than 1000 ft. on EAF surfacing equipment and accessories are used to construct airfields of varying configurations such as, 6000+ ft conventional airport runways and taxiways, Forward Arming and Refueling Points (FARPs), Forward Operating Bases (FOBs), Landing Zones (LZs),Vertical Takeoff and Landing (VTOL) areas, and parking areas. EAF Lighting equipment augments the many types of EAFs with lighting of the runways, taxiways, parking ramps, LZs, FARPs, FOBs, VTOL pads, In addition, EAF Lighting identifies airspace obstructions and provides wind direction guidance.
Much of the EAF Lighting utilizes Infrared Lighting for use with Night Vision Devices for night operations by all Type/Model/Series aircraft. Precision Approach Path Indicator (PAPI) and Omni Directional Approach Lighting Systems (ODALS) are used to guide aircraft to the proper landing or arresting gear area of the EAF. This core funding level directly supports the procurement and fielding of operational EAF systems for three Active Marine Aircraft Wings (MAW) and one Reserve MAW, testing and training installations, and provides assets for use by the Marine Expeditionary Forces during contingency operations. These systems directly support the Marine Corps ability to be trained and equipped as a naval expeditionary force-in-readiness prepared to operate in a contested environment.

[P5 - 2 / Acft Rearming Equip]: This program funds the procurement of common Armament Support Equipment (ASE), and Weapons Support Equipment (WSE) under the procurement and inventory control of the Naval Inventory Control Point and the Naval Air Systems Command. This budget line supports: (a) initial outfitting for all in-production weapons systems; (b) procurement of new Support Equipment, and (c) procurement of replacement items for obsolete Support Equipment. These items support sustained operations and surge deployments of the CV battle groups. Shipboard/Shorebased WSE is utilized by weapons departments to handle, transport, and maintain weapons. Shipboard/Shorebased ASE is utilized by squadrons and supporting activities to load and service aircraft weapons and guns.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0204112N	**Other Related Program Elements:** 0604512N, 0604112N, 0604530N
Line Item MDAP/MAIS Code: N/A		

[P5 - 3 / Air Launch & Recovery Equip]: This program provides for the procurement of aircraft launch, recovery, visual landing aids, and related information systems as well as ancillary items required for installation aboard aircraft carriers, air capable combatant vessels, amphibious assault ships and shore stations.

Baseline funding is required for support of 48 ALRE equipment systems. Major categories of ALRE systems support include: Launcher, Recovery, Information Systems, Visual Landing Aides (VLA), and Aviation Land and Launch Enclave (ALLE), Aviation Data Management and Control System (ADMACS) and Marine Aviation Data Management System - Consolidated Controls (MADMS-CC).

This program funds multiple ECPs to rectify critical obsolescence items, resolve evolving Cybersecurity upgrades to correct deficiencies identified through the National Defense Authorization Act (NDAA) mandated risk assessment process, and to implement technical refresh of critical out of production ALRE systems. ALRE is unique in nature in that systems are very seldom sun-downed. Several current Visual Landing Aid (VLA), Launcher and Recovery systems require significant investment due to obsolete 1960's technology.

The program is working modernization and optimization efforts of Aircraft Launch and Recovery Equipment (ALRE) across all L-Class Amphibious Assault Ship (AAS) platforms and Marine Corps land based training facilities that directly support Marine Aviation (MA) per the Commandants Planning Guidance 38 (CPG-38) and Force Design 2030. The ALRE systems onboard these vessels are antiquated, non-supportable, and require modernization and optimization with benefits of 21st century technology. The program will divest legacy capabilities, which do not meet future requirements. Modernization plans include Commercial Off-The-Shelf (COTS) systems, data automation, and enhanced situational awareness capabilities utilizing industry partners providing technology for system integration and greater cyber resiliency. The modernization focus areas will enable CPG 38 and Force Design 2030 execution ensuring USMC advantages over our peer competitors.

ALRE procurements are initiated due to a variety of reasons including fleet-generated reports associated with safe and reliable operations of existing equipment, support of fixed and rotary wing aircraft on Air Capable Ships, and maintaining reliability, availability and maintainability of ALRE equipment. Engineering Change Proposals (ECPs) are generated and processed via a Configuration Control Board. Once approved, the ECP final product is a service change kit. These kits are identified for installation aboard applicable ships as well as shore-based installations in the ECP. Major shipboard equipment items are generally installed by shipyard personnel, alteration installation teams or fleet readiness centers voyage repair teams during routine or restricted availabilities of the various ships. Service change kits support corrective actions that result from changes in operational conditions, obsolescence, and improvements in reliability, availability and maintainability.

[P5 - 4 / Natural Disaster Recovery]: Severe earthquakes in the Ridgecrest, CA area impacted Naval Air Warfare Station (NAWS) China Lake on 4 July (magnitude 6.4) and 5 July (magnitude 7.1) 2019. As a result, NAWS experienced severe damage to equipment within buildings, magazines, airfield pavements, other structures, and infrastructure. Numerous facilities were either partially damaged or rendered uninhabitable. Restoration efforts identified buildings, structures, and equipment that either require repair or complete replacement.

[P3A / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306)]: EMALS has transitioned to OPN BLI 4219 FY23 through the FYDP. EMALS is an ACAT I-size sub-program within PEO Carriers that is one of the most critical, mission essential systems and new technologies supporting FORD Class CVNs. It has been the focus of Secretariat and Flag-level forums to assess and ensure system supportability, including a steady drumbeat of recurring DON and Fleet leadership meetings/ discussions. EMALS warrants a dedicated budget line to ensure key stakeholders have full insight into its funding stability and adequacy to inform and prioritize resourcing decisions. As a secondary but important benefit, separating EMALs funding into its own BLI will avoid confusion between EMALS-dedicated funding and the larger Aircraft Launch and Recovery Equipment (ALRE) OPN line that supports all fielded systems. This is consistent with Advanced Arresting Gear (AAG), PMA-251's other FORD-unique program that has its own dedicated OPN line.

[P3A - 2 / LAMPS MK III - SRQ(KU)-4 (S1010)]: P3A - 4 / LAMPS MK III - SRQ(KU)-4 (S1010)]: LAMPS MK III, AN/SRQ-4 (Ku), is an over the horizon information communications system with a high-speed, bi-directional, digital data link that transmits reconnaissance and other data from MH-60 helicopters to surface ships (cruisers and destroyers) to provide data, imagery, electronic support measures, communications, and radar information to the warfighter via the Ku-band link.

[P3A - 3 / CMV22]: CMV-22 - CMV-22 is replacing the C-2 as the Carrier On-board Delivery (COD) platform. FY 2024 funding provides for the modification of CVN ships in support of approved CMV-22 Ship Change Documents (SCD). These modifications will allow for fire suppressant compliance, blade storage, and space modification necessary to support the CMV-22 mission.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0204112N	Other Related Program Elements: 0604512N, 0604112N, 0604530N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 Airfields	P-5a, P-21			- / 131.004	- / 11.754	- / 13.339	- / 48.514	- / 0.000	- / 48.514
P-5	2 / Acft Rearming Equip	P-5a, P-21			- / 80.964	- / 12.259	- / 13.068	- / 13.642	- / 0.000	- / 13.642
P-5	3 / Air Launch & Recovery Equip				- / 266.690	- / 65.092	- / 78.920	- / 74.184	- / 0.000	- / 74.184
P-5	4 / Natural Disaster Recovery				- / 90.166	- / 64.674	- / 152.787	- / 3.853	- / 0.000	- / 3.853
P-3a	1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306) (Reliability and Maintainability)				- / 31.660	- / 8.000	- / 0.250	- / 0.000	- / 0.000	- / 0.000
P-3a	2 / LAMPS MK III - SRQ(KU)-4 (S1010) (Non-Organic)				- / 157.584	- / 14.608	- / 13.680	- / 14.242	- / 0.000	- / 14.242
P-3a	3 / CMV22 (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 7.838	- / 0.000	- / 7.838
P-3a	4 / INACTIVE PROJECTS (TBD)				- / 174.191	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 932.259**	**- / 176.387**	**- / 272.044**	**- / 162.273**	**- / 0.000**	**- / 162.273**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	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 / Expeditionary Airfields	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-5	2 / Acft Rearming Equip	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-5	3 / Air Launch & Recovery Equip				- / -	- / -	- / -	- / -	- / -	- / -
P-5	4 / Natural Disaster Recovery				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306) (Reliability and Maintainability)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 39.910
P-3a	2 / LAMPS MK III - SRQ(KU)-4 (S1010) (Non-Organic)				- / 14.598	- / 0.000	- / 0.000	- / 0.000	- / 5.355	- / 220.067
P-3a	3 / CMV22 (TBD)				- / 4.243	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 12.081
P-3a	4 / INACTIVE PROJECTS (TBD)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 174.191
P-40	**Total Gross/Weapon System Cost**				**- / 117.925**	**- / 97.652**	**- / 97.973**	**- / 98.420**	**Continuing**	**Continuing**

*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:
Expeditionary Airfields (EAF) - FY 2024 funding is required for EAF Surfacing Equipment, Lighting Equipment, Arresting Gear and associated support costs. FY 2024 also includes $36.229M baseline funding to replace of surfacing and lighting equipment lost in support of Non-Enduring Operation efforts for US Central Command requirement for Expeditionary Airfield Systems aboard Prince Sultan Air Base, Kingdom of Saudi Arabia, in support of rotor, tilt rotor, and fixed wing aircraft operations. This surfacing and lighting equipment is an EAF War Reserve asset and directly affects the deployment of future crisis support options. Resupply of contingency surfacing and lighting equipment to support the Fleet Marine Forces' deployment goals enables commanders the unique capabilities to provide Forward Arming and Refueling Points (FARPs) and Forward Operating Bases (FOBS) in support of unmanned, rotary and fixed wing aircraft, enabling performance of a variety of functions to include: medivac, assault support, air reconnaissance, anti-air warfare, offensive air support, and electronic warfare.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0204112N	**Other Related Program Elements:** 0604512N, 0604112N, 0604530N
Line Item MDAP/MAIS Code: N/A		

Aircraft Rearming Equipment - FY 2024 baseline funding is required for A/F32K-1A Weapons Assembly Table Replacement, (MHU-126/202 Trailer Replacement, USMC A/S32K-1E Weapons Loader Replacement, HLU-288/E/HLU-196 Bomb Hoist Replacement and associated support costs.

Aircraft Launch and Recovery Equipment (ALRE) -

Information Systems: FY 2024 funding required to complete installs for LSODS Mod 1 Shock Deficiencies ECP-0548 and associated support.

Information Systems - MA: FY 2024 Marine Aviation funding to support Information Systems efforts have been broken out in the P-5 to provide further definition. FY 2024 funding is required for installation costs of hardware for Moriah Wind Systems and associated support costs. The ALRE Amphibious Assault Ship (AAS) Information Systems provides modernization of state of the art wind measuring equipment, boundary defense capability and resiliency providing cyber secure operationally available aviation networks. The Moriah Wind System and aviation enclave allow data sharing with external systems including Joint Precision Approach and Landing Systems (JPALS) and Navigation Sensor System Interface (NAVSSI) for greater situational awareness in a cyber-secure environment. The modernization of these systems allow more sustainable equipment providing the Combatant Commander and Commanding Officers mission critical data to allow more effective naval expeditionary ARG-MEU operations.

Visual Landing Aids: FY 2024 funding is required for additional kit procurements, installs and associated support costs for the following ECPs: Digital Integrated Launch and Recovery Television Surveillance System (Digital ILARTS), Landbased Optical Landing Aid (LOLA), Improved Manually Operated Visual Landing Aid System (IMOVLAS) Shipboard ECP-0442, and IMOVLAS land based ECP-0452. The program will also begin the non-recurring engineering for IFLOLS Phase 5 ECP. ILARTS must be updated from an antiquated analog system to a digital system to address numerous equipment obsolescence issues. Analog equipment is no longer available for procurement and if there is no transition to digital data, then CVNs will no longer be able to survey, record, and distribute video of flight deck and surrounding airspace. If LOLA equipment is not procured, then land based sites will not have shipboard equivalent optical landing aids for pilot training. LOLA has been a top priority request from the Landing Signal Operator (LSO) school for the past ten years.

Visual Landing Aids - MA: FY 2024 Marine Aviation funding to support Visual Landing Aid (VLA) efforts have been broken out in the P-5 to provide further definition. FY 2024 VLA MA funding is required for kit procurements, installation and associated support costs for Clone Lamps and Advanced Flight Deck Light (AFDL) Spot 9 ECP's for Ship and Shore. The ALRE AAS Visual Landing Aids provide modernization and optimization of lighting systems onboard ship and land based training facilities. These provide Marine Aviation flight operations to be compatible with Night Vision Devices (NVD), F-35B Aircraft allowing increased OPTEMPO and squadron size aboard LHA/D ships mapping to Force Design 2030 for USMC lightning carrier CONOPS focused on but not limited to USINDOPACOM Theater. It will allow for more sustainable equipment, additional F-35B night landing zones (SPOT 9), and pilot compatibility which will allow for more lethal ARG-MEU and Expeditionary Strike Group operations.

Launcher: FY 2024 funding is required for installation of Jet Blast Deflector (JBD) Side Plate Cooling and Orifice Modification for the Joint Strike Fighter ECP-0377 and Water Brake PMS without Water ECP-0171 and associated support costs. The program will also begin the non-recurring engineering for Aircraft Ship Integrated Secure and Traverse (ASIST).

Recovery: FY 2024 funding is required for additional kit procurements, installs and associated support costs for Advanced Recovery Control (ARC) Long Term Display ECP-0455, ARC Retract Control Valve (RCV) Redesign ECP-0270, Compact Swaging Machine and E28 Emergency Arresting Gear Retrieve Drives.

SLMP: FY 2024 funding is required for additional kit procurements, installs and associated support costs for MK7 Crosshead ECP-0365 and MK7 Fixed Sheave ECP-0366.

ALLE: FY 2024 funding is required for additional kit procurements, installs and associated support costs for Aviation Land and Launch Enclave (ALLE) ADMACS Network Authentication and Event Monitoring ECP-0530.

ADMACS: FY 2024 funding required for ADMACS Network Authentication and Event Monitoring ECP-0530. ADMACS ECP-0530 establishes the cryptographic device authentication and event monitoring infrastructure for the ALLE-CVN enclave. ECP-0530 will implement the server side solution to authenticate any devices that communicate on the backbone network and establish a centralized service to store and report on Enclave Program of Record (POR) event logs, as well as capture and store network traffic for future utilization. Each POR system within the ALLE enclave will complete a software-only ECP to

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0204112N	**Other Related Program Elements:** 0604512N, 0604112N, 0604530N
Line Item MDAP/MAIS Code: N/A		

lock down configurations per IATA Standards, address CTT findings, enable centralized monitoring, and enhance cyber situational awareness. As a whole ALRE systems will implement the Enclave approach together, however each POR system will execute costs (recurring, non-recurring, support, and install) independently and on various schedules, causing the overall ALLE execution profile to have a non-standard appearance.

MADMS - MA: FY 2024 funding required to begin non-recurring engineering, procure kits and associated support costs for the Marine Aviation Data Management System - Consolidated Controls (MADMS-CC) program. MADMS-CC is the ADMACS Marine Aviation L-Type variant. MADMS-CC provides ALRE modernization of air and flight operations supporting work centers on Amphibious Assault Ships (AAS). Capabilities will respond to the time critical operational need to deploy, employ, sustain, and redeploy aviation assets meeting a cyber-resilient expeditionary environment. Development of MADMS-CC on AAS will support integration of F-35Bs into the ARG/MEU. This system will enable increased F-35B OPTEMPO that maps to CPG-38 and Force Design 2030 enabling USMC lightning carrier CONOPS focused on, but not limited to, USINDOPACOM Theater. This modernized MADMS-CC equipment will permit the Expeditionary Strike Groups (ESG) to communicate with greater efficiency enabling greater situational awareness across the battlefield, accelerated operational decisions and enhancing command and control.

LAMPS MK III Shipboard Equipment - The FY 2024 baseline funding provides for installation support of AN/SRQ-4(Ku) field install kits on DDG ships at various locations.

Natural Disaster Recovery - FY 2024 funding is required to outfit, update, recalibrate, and replace peculiar support equipment needed to restore mission capability due to severe earthquakes in the Ridgecrest, CA area which impacted Naval Air Warfare Station (NAWS) China Lake.

CMV-22 - CMV-22 is replacing the C-2 as the Carrier On-board Delivery (COD) platform. FY 2024 funding provides for the modification of CVN ships in support of approved CMV-22 Ship Change Documents (SCD). These modifications will allow for fire suppressant compliance, blade storage, and space modification necessary to support the CMV-22 mission.

OOC:
FY 2022 includes $1.116M in OOC execution.
FY 2023 includes $0M in OOC enacted budget.
FY 2024 includes $36.229M for the OOC budget request.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 1 / Expeditionary Airfields
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	131.004	11.754	13.339	48.514	0.000	48.514
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	131.004	11.754	13.339	48.514	0.000	48.514
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**131.004**	**11.754**	**13.339**	**48.514**	**0.000**	**48.514**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - (SE010) EAF Surfacing Equipment Cost																		
Recurring Cost																		
1.1.1) AM-2-Matting (F72)(†)	8,166.39	5,427	44.319	8,379.12	364	3.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) AM-2 Matting (F73)(†)	9,222.22	18	0.166	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) AM-2 Matting (F71)(†)	12,405.80	1,725	21.400	13,364.00	64	0.855	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.4) AM-2 Accessory Packs (1)	-	-	7.336	-	-	0.017	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) Lightweight Matting(†) (1)	-	-	0.000	-	-	0.000	458,570.00	7	3.210	475,931.00	79	37.599	-	-	0.000	475,931.00	79	37.599
1.1.6) Surfacing Engineering Change Proposals (2)	-	-	12.459	-	-	2.284	-	-	3.548	-	-	3.259	-	-	0.000	-	-	3.259
Subtotal: Recurring Cost	-	-	*85.680*	-	-	*6.206*	-	-	*6.758*	-	-	*40.858*	-	-	*0.000*	-	-	*40.858*
Subtotal: Hardware - (SE010) EAF Surfacing Equipment Cost	**-**	**-**	***85.680***	**-**	**-**	***6.206***	**-**	**-**	***6.758***	**-**	**-**	***40.858***	**-**	**-**	***0.000***	**-**	**-**	***40.858***
Hardware - (SE860) Acceptance Testing and Evaluation - Surfacing Cost																		
Recurring Cost																		
2.1.1) EAF Surfacing Equipment (3)	-	-	2.390	-	-	0.260	-	-	0.223	-	-	0.459	-	-	0.000	-	-	0.459
Subtotal: Recurring Cost	-	-	*2.390*	-	-	*0.260*	-	-	*0.223*	-	-	*0.459*	-	-	*0.000*	-	-	*0.459*

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
Subtotal: Hardware - (SE860) Acceptance Testing and Evaluation - Surfacing Cost	**-**	**-**	***2.390***	**-**	**-**	***0.260***	**-**	**-**	***0.223***	**-**	**-**	***0.459***	**-**	**-**	***0.000***	**-**	**-**	***0.459***
Hardware - (SE010) EAF Lighting Equipment Cost																		
Recurring Cost																		
3.1.1) EAF Lighting Equipment	-	-	17.101	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.2) Lighting Engineering Change Proposals (4)	-	-	11.819	-	-	3.379	-	-	5.156	-	-	3.917	-	-	0.000	-	-	3.917
Subtotal: Recurring Cost	-	-	*28.920*	-	-	*3.379*	-	-	*5.156*	-	-	*3.917*	-	-	*0.000*	-	-	*3.917*
Subtotal: Hardware - (SE010) EAF Lighting Equipment Cost	**-**	**-**	***28.920***	**-**	**-**	***3.379***	**-**	**-**	***5.156***	**-**	**-**	***3.917***	**-**	**-**	***0.000***	**-**	**-**	***3.917***
Hardware - Acceptance Testing - Lighting Cost																		
Recurring Cost																		
4.1.1) EAF Lighting Equipment (5)	-	-	1.820	-	-	0.133	-	-	0.075	-	-	0.079	-	-	0.000	-	-	0.079
Subtotal: Recurring Cost	-	-	*1.820*	-	-	*0.133*	-	-	*0.075*	-	-	*0.079*	-	-	*0.000*	-	-	*0.079*
Subtotal: Hardware - Acceptance Testing - Lighting Cost	**-**	**-**	***1.820***	**-**	**-**	***0.133***	**-**	**-**	***0.075***	**-**	**-**	***0.079***	**-**	**-**	***0.000***	**-**	**-**	***0.079***
Hardware - (SE0210) EAF Arresting Gear Cost																		
Recurring Cost																		
5.1.1) EAF Engineering Change Proposals (6)	-	-	3.008	-	-	0.579	-	-	0.000	-	-	1.924	-	-	0.000	-	-	1.924
Subtotal: Recurring Cost	-	-	*3.008*	-	-	*0.579*	-	-	*0.000*	-	-	*1.924*	-	-	*0.000*	-	-	*1.924*
Subtotal: Hardware - (SE0210) EAF Arresting Gear Cost	**-**	**-**	***3.008***	**-**	**-**	***0.579***	**-**	**-**	***0.000***	**-**	**-**	***1.924***	**-**	**-**	***0.000***	**-**	**-**	***1.924***
Hardware - Acceptance Testing - Arresting Gear Cost																		
Recurring Cost																		
6.1.1) EAF Arresting Gear (7)	-	-	0.518	-	-	0.140	-	-	0.000	-	-	0.130	-	-	0.000	-	-	0.130
Subtotal: Recurring Cost	-	-	*0.518*	-	-	*0.140*	-	-	*0.000*	-	-	*0.130*	-	-	*0.000*	-	-	*0.130*
Subtotal: Hardware - Acceptance Testing - Arresting Gear Cost	**-**	**-**	***0.518***	**-**	**-**	***0.140***	**-**	**-**	***0.000***	**-**	**-**	***0.130***	**-**	**-**	***0.000***	**-**	**-**	***0.130***

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - (SE800) Integrated Logistics Cost																		
7.1) EAF Surfacing Equipment	-	-	3.165	-	-	0.378	-	-	0.480	-	-	0.432	-	-	0.000	-	-	0.432
7.2) EAF Lighting Equipment	-	-	0.414	-	-	0.025	-	-	0.027	-	-	0.034	-	-	0.000	-	-	0.034
7.3) EAF Arresting Gear (8)	-	-	0.405	-	-	0.000	-	-	0.000	-	-	0.034	-	-	0.000	-	-	0.034
Subtotal: Support - (SE800) Integrated Logistics Cost	**-**	**-**	***3.984***	**-**	**-**	***0.403***	**-**	**-**	***0.507***	**-**	**-**	***0.500***	**-**	**-**	***0.000***	**-**	**-**	***0.500***
Support - (SE830) Production Engineering Cost Cost																		
8.1) EAF Arresting Gear	-	-	1.058	-	-	0.188	-	-	0.183	-	-	0.182	-	-	0.000	-	-	0.182
8.2) EAF Lighting Equipment	-	-	0.665	-	-	0.200	-	-	0.212	-	-	0.225	-	-	0.000	-	-	0.225
8.3) EAF Surfacing Equipment	-	-	2.961	-	-	0.266	-	-	0.225	-	-	0.240	-	-	0.000	-	-	0.240
Subtotal: Support - (SE830) Production Engineering Cost Cost	**-**	**-**	***4.684***	**-**	**-**	***0.654***	**-**	**-**	***0.620***	**-**	**-**	***0.647***	**-**	**-**	***0.000***	**-**	**-**	***0.647***
Gross/Weapon System Cost	**-**	**-**	**131.004**	**-**	**-**	**11.754**	**-**	**-**	**13.339**	**-**	**-**	**48.514**	**-**	**-**	**0.000**	**-**	**-**	**48.514**

Remarks:
The quantities of Expeditionary Airfield Surfacing Equipment procured vary depending on the type of matting and service change requirements each year. The equipment, accessories, and service changes are procured and fielded with these funds. Equipment procurements are based on inventory shortfalls, product improvements to fill or correct deficiencies, modernizing EAF equipment to improve availability, maintainability, reliability, supportability, deploy-ability, safety-of-flight, and to keep pace with new aircraft and aircraft systems. EAF's modernization will focus special emphasis on capabilities across the full spectrum of expeditionary military operations, focusing on cross theater deploy-ability, inter-theater mobility, and enabling the community to support day-to-day consequence of being the force-in-readiness. The return on investment of updated equipment will provide commanders the flexibility required to support the ever changing flow on the battlefield. The continual adaptation of new technologies will ensure this program maintains pace with the rest of the world.

(†) indicates the presence of a P-5a

Footnotes:
(1) Lightweight Matting (1.1.5) - Funding to procure updated lightweight surfacing components. Updated surfacing components and materiel enable the war fighter to install and support VTOL, VSTOL, Taxiway, and Parking surfaces faster than ever before, while requiring a fraction of the support equipment, and logistical burden currently required. All components are designed specifically to support flexibility of employment for operations in contested littoral environments. The ship to shore and intra-theater mobility enhances the expeditionary capability for rotary and tilt-rotor operations. Unlike AM2, the Lightweight Matting systems will be procured based on capability and not square footage, in accordance with the CPG and NDS. These requirements are based on 2022 Expeditionary Airfield Surfacing System (EAFSS) Vertical Takeoff and Landing (VTOL) Pads and Vertical and/or Short Takeoff and Landing (V/STOL) Strips and projected Parking/Taxiway CDD. ECP of current legacy surfacing systems including light-duty mat and medium-duty mat focused on providing more mobile surfacing systems, to modernize EAF equipment and improve availability, maintainability, reliability, supportability and ability to deploy of these systems while continuing to maintain interoperability with AM2. FY 2024 increase also includes $36.229M baseline funding to replace surfacing equipment lost in support of Non-Enduring Operation efforts for US Central

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Command requirement for Expeditionary Airfield Systems aboard Prince Sultan Air Base, Kingdom of Saudi Arabia, in support of rotor, tilt rotor, and fixed wing aircraft operations. This surfacing equipment is an EAF War Reserve asset and directly affects the deployment of future crisis support options. FY 2024 unit cost is over the standard escalation due to market volatility for aluminum.

(2) Surfacing Engineering Change Proposals (1.1.6) supports the procurement of hardware to support multiple Surfacing ECPs and the associated engineering support. Surfacing ECPs are required to adapt to diverse airfield operating environments which drive changes to tool kits necessary for matting installation, accommodating new aircraft heat signatures (i.e. JSF, V22) as well as variable soil compositions. Increase in this line is due to direct the CPG in the INDO-PACOM Theater as changes in mission direction require ECP of current legacy surfacing equipment focused on providing mobile surfacing systems. This will modernize EAF surfacing equipment and improve availability, maintainability, reliability, supportability and deploy-ability.

(3) Surfacing Equipment Acceptance Test & Evaluation (2.1.1) address the Acceptance Testing required to support multiple Surfacing ECPs. FY 2024 increase is due to V/STOL testing efforts for Expeditionary Airfield Surfacing Equipment.

(4) Lighting Engineering Change Proposals (3.1.2) - address the obsolescence and reliability of the currently utilized aging legacy system as well as the CAT I Instrument Flight Rules and Night Vision Device. Lighting ECPs will improve readiness and safety to ensure Navy/Marine Corps aircraft can land at night in austere environments. EAF has been directed per HQMC to increase airfield light capability to overcome aging systems and meet updated forward deployment table of basic allowance requirements. This budget fully funds the request to improve and procure Expeditionary Air Fields; Approach lighting, Runway lighting, and commercial Airfield lighting solution hardware, including upgrading commercial ECP solutions throughout the FYDP. COTS LED Airfield Upgrade ECP will provide a more deployable, maneuverable modernized commercial based system that meets the above requirements while allowing procurement at an expeditious rate in-line with the CPG and ASN RDA direction. Funding will enable quicker fielding for COTS lighting solutions IAW NDS acquisition strategy and support the EABO concept. This particular effort has been ranked top five with the Expeditionary Airfield Operational Action Group for the previous five years. The Council of Colonels has directed this effort to continue full steam ahead. Certain lighting capabilities include increase in autonomous supportability and Pilot Controlled Lighting which allow the pilots to control their own lights without the requirement to have Marines on site. FY2024 includes additional funding for replacement of lighting equipment lost in support of Non-Enduring Operation efforts for US Central Command requirement for Expeditionary Airfield Systems aboard Prince Sultan Air Base, Kingdom of Saudi Arabia, in support of rotor, tilt rotor, and fixed wing aircraft operations. This lighting equipment is an EAF War Reserve asset and directly affects the deployment of future crisis support options.

(5) Lighting Equipment Acceptance Test & Evaluation (4.1.1) - address the Acceptance Testing required to support multiple Lighting ECPs; specifically the Approach lighting and Airfield upgrades. FY2024 will complete test efforts for the Sustainment Lighting System optimization and integration to the new Expeditionary Airfield Surfacing equipment.

(6) EAF Arresting Gear Engineering Change Proposal (5.1.1) - An increase in FY 2024 to FY 2027 provides a readily available systems that meets USMC requirements to support tail-hook equipped aircraft in austere environments. This is IAW the 2022 Arresting Gear CDD and the CPG for the USMC to be more expeditionary and improve readiness times in rapidly evolving future operating environments. USMC is focusing on utilizing like gear from other services. Desired systems currently fielded are used commonly throughout the DOD and NATO and will enhance future supportability, capability and interoperability. The system will replace the aging M-31 Marine Corps Expeditionary Arresting Gear System (MCEAGS) to improve readiness, increase safety, rectify issues with obsolescent assemblies and reduce lifecycle costs.

(7) EAF Arresting Gear (6.1.1) - An increase in FY 2024 to FY 2027 provides a readily available systems that meets USMC requirements to support tail-hook equipped aircraft in austere environments.

(8) EAF Arresting Gear ILS (7.3) - An increase in FY 2024 to FY 2028 provides a readily available systems that meets USMC requirements to support tail-hook equipped aircraft in austere environments.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	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) AM-2-Matting (F72)(†)		2021	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2020	May 2021	184	8,274.00	Y		Apr 2018
1.1.1) AM-2-Matting (F72)(†)	✓	2021	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2020	May 2021	3,980	8,274.00	Y		Apr 2018
1.1.1) AM-2-Matting (F72)(†)		2022	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2021	May 2022	364	8,379.12	N		Apr 2018
1.1.2) AM-2 Matting (F73)		2020	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2019	May 2020	3	11,944.00	Y		Apr 2018
1.1.2) AM-2 Matting (F73)		2021	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2020	May 2021	4	11,641.00	Y		Apr 2018
1.1.3) AM-2 Matting (F71)(†)		2021	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2020	May 2021	42	13,091.00	Y		Apr 2018
1.1.3) AM-2 Matting (F71)(†)	✓	2021	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2020	May 2021	990	13,091.00	Y		Apr 2018
1.1.3) AM-2 Matting (F71)		2022	ALFAB / Enterprise, AL	C / FFP	LKE	Nov 2021	May 2022	64	13,364.00	N		Apr 2018
1.1.5) Lightweight Matting(†)		2023	TBD / New MFG - Loc	C / FFP	LKE	Sep 2023	May 2024	7	458,570.00	Y		Apr 2023
1.1.5) Lightweight Matting(†)		2024	TBD / New MFG - Loc	C / TBD	LKE	Nov 2023	Jul 2024	79	475,931.00	Y		Apr 2023

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
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Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) AM-2-Matting (F72)																															
Prior Years Deliveries: 1263																															
	1	2021	NAVY	184	0	184														A -	-	-	-	-	-	184					0
✓	1	2021	NAVY	3,980 (9)	0	3,980														A -	-	-	-	-	-	331	331	331	331	332	2,324
	1	2022	NAVY	364	0	364																									364
1.1.3) AM-2 Matting (F71)																															
Prior Years Deliveries: 693																															
	2	2021	NAVY	42	0	42														A -	-	-	-	-	-	42					0
✓	2	2021	NAVY	990	0	990														A -	-	-	-	-	-	256	256	256	222		0
1.1.5) Lightweight Matting (1)																															
	3	2023	NAVY	7	0	7																									7
	3	2024	NAVY	79	0	79																									79
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
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Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) AM-2-Matting (F72)																															
Prior Years Deliveries: 1263																															
	1	2021	NAVY	184	184	0																									0
✓	1	2021	NAVY	3,980 (9)	1,656	2,324	332	332	332	332	332	332	332																		0
	1	2022	NAVY	364	0	364		A -	-	-	-	-	-	364																	0
1.1.3) AM-2 Matting (F71)																															
Prior Years Deliveries: 693																															
	2	2021	NAVY	42	42	0																									0
✓	2	2021	NAVY	990	990	0																									0
1.1.5) Lightweight Matting (1)																															
	3	2023	NAVY	7	0	7																								A -	7
	3	2024	NAVY	79	0	79																									79
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
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Cost Elements (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
										Calendar Year 2024												Calendar Year 2025									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) AM-2-Matting (F72)																															
Prior Years Deliveries: 1263																															
	1	2021	NAVY	184	184	0																									0
✓	1	2021	NAVY	3,980 (9)	3,980	0																									0
	1	2022	NAVY	364	364	0																									0
1.1.3) AM-2 Matting (F71)																															
Prior Years Deliveries: 693																															
	2	2021	NAVY	42	42	0																									0
✓	2	2021	NAVY	990	990	0																									0
1.1.5) Lightweight Matting (1)																															
	3	2023	NAVY	7	0	7	-	-	-	-	-	-	-	7																	0
	3	2024	NAVY	79	0	79		A -	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	13				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	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 1 / Expeditionary Airfields

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	ALFAB - Enterprise, AL	256	256	4,164	0	8	6	14	0	2	6	8
2	ALFAB - Enterprise, AL	256	256	3,072	0	8	6	14	0	2	6	8
3	TBD - New MFG - Loc			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:
(9) Production Rates refer to the production and delivery of AM2 F71, F72 and F73s.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 2 / Acft Rearming Equip
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	80.964	12.259	13.068	13.642	0.000	13.642
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	80.964	12.259	13.068	13.642	0.000	13.642
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**80.964**	**12.259**	**13.068**	**13.642**	**0.000**	**13.642**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - Ordnance Assembly Cost																		
Recurring Cost																		
1.1.1) SH042 - USMC WEAPONS ASSEMBLY STATION (A/E32K-11 LIFTING ASSLY)	273,666.67	6	1.642	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) SH050 - A/F32K-1A Weapons Assembly Table Replacement(†) (10)	-	-	0.000	-	-	0.000	-	-	0.000	100,000.00	4	0.400	-	-	0.000	100,000.00	4	0.400
Subtotal: Recurring Cost	-	-	*1.642*	-	-	*0.000*	-	-	*0.000*	-	-	*0.400*	-	-	*0.000*	-	-	*0.400*
Subtotal: Hardware - HARDWARE - Ordnance Assembly Cost	**-**	**-**	***1.642***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.400***	**-**	**-**	***0.000***	**-**	**-**	***0.400***
Hardware - HARDWARE - Ordnance Transport Cost																		
Recurring Cost																		
2.1.1) SH036 - USMC A/M32K-4A MUN TRLR REPLACEMENT - (A/M32K-10 MUN TRLR)	57,063.75	251	14.323	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) SH043 - MHU-191/M CILOP - MHU-191A/M MUN TRANSPORTER(†)	5,776.99	3,946	22.796	6,882.11	246	1.693	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 2 / Acft Rearming Equip
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
2.1.3) SH045 - MHU-126/202 TRLR REPLACEMENT - (MHU-230/M)(†) (11)	61,533.33	15	0.923	34,716.67	60	2.083	35,261.00	84	2.962	35,037.00	85	2.978	-	-	0.000	35,037.00	85	2.978
Subtotal: Recurring Cost	-	-	*38.042*	-	-	*3.776*	-	-	*2.962*	-	-	*2.978*	-	-	*0.000*	-	-	*2.978*
Subtotal: Hardware - HARDWARE - Ordnance Transport Cost	**-**	**-**	***38.042***	**-**	**-**	***3.776***	**-**	**-**	***2.962***	**-**	**-**	***2.978***	**-**	**-**	***0.000***	**-**	**-**	***2.978***
Hardware - HARDWARE - Ordnance Loading Cost																		
Recurring Cost																		
3.1.1) SH046 - USMC A/S32K-1E WEAPONS LOADER REPLACEMENT (MHU-83)(†) (12)	144,432.62	141	20.365	146,232.00	45	6.580	143,589.97	39	5.600	146,232.00	31	4.533	-	-	0.000	146,232.00	31	4.533
3.1.3) SH051 - HLU-288/E/ HLU-196 Bomb Hoist Replacement(†) (13)	-	-	0.000	-	-	0.000	-	-	0.000	200,000.00	4	0.800	-	-	0.000	200,000.00	4	0.800
Subtotal: Recurring Cost	-	-	*20.365*	-	-	*6.580*	-	-	*5.600*	-	-	*5.333*	-	-	*0.000*	-	-	*5.333*
Subtotal: Hardware - HARDWARE - Ordnance Loading Cost	**-**	**-**	***20.365***	**-**	**-**	***6.580***	**-**	**-**	***5.600***	**-**	**-**	***5.333***	**-**	**-**	***0.000***	**-**	**-**	***5.333***
Hardware - SH920 NON-RECURRING Cost																		
Non Recurring Cost																		
4.1.1) Ordnance Assembly (14)	-	-	0.115	-	-	0.000	-	-	0.000	-	-	1.186	-	-	0.000	-	-	1.186
4.1.2) Ordnance Transport (15)	-	-	3.215	-	-	0.000	-	-	1.620	-	-	0.000	-	-	0.000	-	-	0.000
4.1.3) Ordnance Loading (16)	-	-	3.188	-	-	0.000	-	-	0.500	-	-	1.458	-	-	0.000	-	-	1.458
Subtotal: Non Recurring Cost	-	-	*6.518*	-	-	*0.000*	-	-	*2.120*	-	-	*2.644*	-	-	*0.000*	-	-	*2.644*
Subtotal: Hardware - SH920 NON-RECURRING Cost	**-**	**-**	***6.518***	**-**	**-**	***0.000***	**-**	**-**	***2.120***	**-**	**-**	***2.644***	**-**	**-**	***0.000***	**-**	**-**	***2.644***
Hardware - SH010 ECP Cost																		
Recurring Cost																		
5.1.1) Ordnance Transport ECP	-	-	2.653	-	-	0.136	-	-	0.150	-	-	0.250	-	-	0.000	-	-	0.250

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 2 / Acft Rearming Equip
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
5.1.2) Ordnance Loading ECP	-	-	0.617	-	-	0.213	-	-	0.150	-	-	0.250	-	-	0.000	-	-	0.250
Subtotal: Recurring Cost	-	-	*3.270*	-	-	*0.349*	-	-	*0.300*	-	-	*0.500*	-	-	*0.000*	-	-	*0.500*
Subtotal: Hardware - SH010 ECP Cost	**-**	**-**	***3.270***	**-**	**-**	***0.349***	**-**	**-**	***0.300***	**-**	**-**	***0.500***	**-**	**-**	***0.000***	**-**	**-**	***0.500***
Hardware - SH860 Acceptance Test & Eval Cost																		
Recurring Cost																		
6.1.1) Ordnance Assembly Acceptance Testing	-	-	0.109	-	-	0.000	-	-	0.000	-	-	0.113	-	-	0.000	-	-	0.113
6.1.2) Ordnance Transport Acceptance Testing	-	-	1.362	-	-	0.212	-	-	0.251	-	-	0.113	-	-	0.000	-	-	0.113
6.1.3) Ordnance Loading Acceptance Testing	-	-	1.510	-	-	0.206	-	-	0.251	-	-	0.113	-	-	0.000	-	-	0.113
Subtotal: Recurring Cost	-	-	*2.981*	-	-	*0.418*	-	-	*0.502*	-	-	*0.339*	-	-	*0.000*	-	-	*0.339*
Subtotal: Hardware - SH860 Acceptance Test & Eval Cost	**-**	**-**	***2.981***	**-**	**-**	***0.418***	**-**	**-**	***0.502***	**-**	**-**	***0.339***	**-**	**-**	***0.000***	**-**	**-**	***0.339***
Support - SH800 ILS Cost																		
7.1) Ordnance Assembly	-	-	0.286	-	-	0.000	-	-	0.000	-	-	0.227	-	-	0.000	-	-	0.227
7.2) Ordnance Transport	-	-	1.282	-	-	0.281	-	-	0.331	-	-	0.113	-	-	0.000	-	-	0.113
7.3) Ordnance Loading	-	-	1.883	-	-	0.247	-	-	0.351	-	-	0.063	-	-	0.000	-	-	0.063
Subtotal: Support - SH800 ILS Cost	**-**	**-**	***3.451***	**-**	**-**	***0.528***	**-**	**-**	***0.682***	**-**	**-**	***0.403***	**-**	**-**	***0.000***	**-**	**-**	***0.403***
Support - SH830 Production Engineering Cost																		
8.1) Ordnance Assembly PE	-	-	0.697	-	-	0.000	-	-	0.000	-	-	0.399	-	-	0.000	-	-	0.399
8.2) Ordnance Transport PE	-	-	1.898	-	-	0.329	-	-	0.451	-	-	0.329	-	-	0.000	-	-	0.329
8.3) Ordnance Loading PE	-	-	2.100	-	-	0.279	-	-	0.451	-	-	0.317	-	-	0.000	-	-	0.317
Subtotal: Support - SH830 Production Engineering Cost	**-**	**-**	***4.695***	**-**	**-**	***0.608***	**-**	**-**	***0.902***	**-**	**-**	***1.045***	**-**	**-**	***0.000***	**-**	**-**	***1.045***
Gross/Weapon System Cost	**-**	**-**	**80.964**	**-**	**-**	**12.259**	**-**	**-**	**13.068**	**-**	**-**	**13.642**	**-**	**-**	**0.000**	**-**	**-**	**13.642**

(†) indicates the presence of a P-5a

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 2 / Acft Rearming Equip
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Footnotes:

(10) Weapons Assembly Table Replacement shifted from FY25 to FY24 due to proven program maturity allowing the acceleration of production. Total QTY set to 270 per requirements. This will be a Firm Fixed Price Contract (FFPC). Cost element added to field additional capability and optimization for "smart" weapon assembly techniques and requirements, allowing for faster throughput and increased readiness. Fleet requirements for the new weapons assembly tables were expanded to include more locations than previously planned. The new weapons assembly tables are not a one for one replacement of the legacy tables. As a result the quantity of tables need increased to 270. Updated market research and engineering data analysis resulted in a decrease in the unit cost.

(11) Updated estimate from contractor includes step ladder pricing with cost per unit of $34-37K based on quantity purchased through last ordering period in FY26. New Contract to be awarded in FY27 with estimated unit cost of $38k. Quantities adjusted across the FYDP.

(12) Corrected Prior Years QTY. Entry at PB23 erroneously included 39 units. Unit cost fluctuations are due to step-ladder pricing on the current contract.

(13) Four PPU's to be ordered in FY24, FY25 is a skip year for testing and production is to begin in FY26. Reduction in unit cost of PPU's in FY24 following reassessment of product. This is to be a Firm Fixed Price Contract (FFPC). Cost element added to field modernization for improved efficiency and ergonomics. Equipment reaching end of service life expectancy. Replacement will provide for reduced re-arming time, reduced operator fatigue, & better supportability.

(14) NRE for SH050 - A/F32K-1A Weapons Assembly Table Replacement. Shifted from FY25 to FY24 to align with Program shift.

(15) FY24 Funding reduced to 0 as final installation of MHU-191 kits will be performed during FY23.

(16) FY24 NRE for SH051 HLU-288/E/HLU-196 Bomb Hoist Replacement. FY25 NRE for SH049 FARP Ordnance Loading SE.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 2 / Acft Rearming Equip

Cost Elements	OCO	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) SH050 - A/F32K-1A Weapons Assembly Table Replacement		2024	TBD / TBD	C / FFP	NAWCADLKE	Dec 2023	Jun 2024	4	100,000.00	Y		
2.1.2) SH043 - MHU-191/M CILOP - MHU-191A/M MUN TRANSPORTER		2022	DEVAL CORPORATION / PHILADELPHIA, PA	C / FFP	NAWCADLKE	Apr 2022	Nov 2022	246	6,882.11	Y		Oct 2019
2.1.3) SH045 - MHU-126/202 TRLR REPLACEMENT - (MHU-230/M)		2022	CHOCTAW DEFENSE / McALESTER, OK	C / FFP	NAWCADLKE	Jan 2022	Oct 2022	60	34,716.67	Y		Nov 2020
2.1.3) SH045 - MHU-126/202 TRLR REPLACEMENT - (MHU-230/M)		2023	CHOCTAW DEFENSE / McALESTER, OK	C / FFP	NAWCADLKE	Oct 2022	Jul 2023	84	35,261.00	Y		Nov 2020
2.1.3) SH045 - MHU-126/202 TRLR REPLACEMENT - (MHU-230/M)		2024	CHOCTAW DEFENSE / McALESTER, OK	C / FFP	NAWCADLKE	Oct 2023	Jul 2024	85	35,037.00	Y		Nov 2020
3.1.1) SH046 - USMC A/ S32K-1E WEAPONS LOADER REPLACEMENT (MHU-83)(†)		2022	HYDRAULICS INTERNATIONAL INC / CALABASAS CA	C / FFP	NAWCADLKE	Oct 2021	Aug 2022	45	146,232.00	Y		
3.1.1) SH046 - USMC A/ S32K-1E WEAPONS LOADER REPLACEMENT (MHU-83)(†)		2023	HYDRAULICS INTERNATIONAL INC / CALABASAS CA	C / FFP	NAWCADLKE	Oct 2022	Aug 2023	39	143,589.97	Y		
3.1.1) SH046 - USMC A/ S32K-1E WEAPONS LOADER REPLACEMENT (MHU-83)(†)		2024	HYDRAULICS INTERNATIONAL INC / CALABASAS CA	C / FFP	NAWCADLKE	Oct 2023	Aug 2024	31	146,232.00	Y		
3.1.3) SH051 - HLU-288/E/ HLU-196 Bomb Hoist Replacement		2024	TBD / TBD	C / FFP	NAWCADLKE	Jan 2024	Jul 2024	4	200,000.00	Y		

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 2 / Acft Rearming Equip

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3.1.1) SH046 - USMC A/S32K-1E WEAPONS LOADER REPLACEMENT (MHU-83) (12)																															
Prior Years Deliveries: 141																															
	1	2022	NAVY	45	0	45	A -	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	4	4	4	2				0
	1	2023	NAVY	39	0	39													A -	-	-	-	-	-	-	-	-	-	3	3	33
	1	2024	NAVY	31	0	31																									31
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 2 / Acft Rearming Equip

Cost Elements (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
3.1.1) SH046 - USMC A/S32K-1E WEAPONS LOADER REPLACEMENT (MHU-83) (12)																															
Prior Years Deliveries: 141																															
	1	2022	NAVY	45	45	0																									0
	1	2023	NAVY	39	6	33	3	3	3	3	4	4	4	3	3	3															0
	1	2024	NAVY	31	0	31	A -	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	2	2	2	2	2			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	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Item Number / Title [DODIC]:** 2 / Acft Rearming Equip

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	HYDRAULICS INTERNATIONAL INC - CALABASAS CA	5	10	48	0	0	7	7	0	0	6	6

"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).

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 3 / Air Launch & Recovery Equip
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	266.690	65.092	78.920	74.184	0.000	74.184
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	266.690	65.092	78.920	74.184	0.000	74.184
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**266.690**	**65.092**	**78.920**	**74.184**	**0.000**	**74.184**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - SJ040 - Service Change Kits Cost																		
Recurring Cost																		
1.1.1) Information Systems	-	-	17.191	-	-	0.875	-	-	0.187	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) Visual Landing Aids (17)	-	-	25.692	-	-	1.807	-	-	11.492	-	-	14.007	-	-	0.000	-	-	14.007
1.1.3) VLA - MA (18)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.959	-	-	0.000	-	-	0.959
1.1.4) Launcher	-	-	8.080	-	-	1.027	-	-	0.402	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) Recovery (19)	-	-	24.514	-	-	6.518	-	-	1.267	-	-	2.439	-	-	0.000	-	-	2.439
1.1.6) SLMP (20)	-	-	6.865	-	-	3.653	-	-	4.049	-	-	2.484	-	-	0.000	-	-	2.484
1.1.7) ALLE (21)	-	-	2.554	-	-	0.000	-	-	3.349	-	-	4.143	-	-	0.000	-	-	4.143
1.1.8) MADMS - MA (22)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.500	-	-	0.000	-	-	0.500
Subtotal: Recurring Cost	-	-	*84.896*	-	-	*13.880*	-	-	*20.746*	-	-	*24.532*	-	-	*0.000*	-	-	*24.532*
Subtotal: Hardware - SJ040 - Service Change Kits Cost	**-**	**-**	***84.896***	**-**	**-**	***13.880***	**-**	**-**	***20.746***	**-**	**-**	***24.532***	**-**	**-**	***0.000***	**-**	**-**	***24.532***
Hardware - SJ305 - Non-Recurring Engineering Cost																		
Non Recurring Cost																		
2.1.1) Information Systems	-	-	17.372	-	-	0.896	-	-	0.056	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) Information Systems - MA (23)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.252	-	-	0.000	-	-	1.252

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
2.1.3) Visual Landing Aids (24)	-	-	32.463	-	-	4.442	-	-	3.100	-	-	2.227	-	-	0.000	-	-	2.227
2.1.4) VLA - MA (25)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	2.776	-	-	0.000	-	-	2.776
2.1.5) Launcher	-	-	7.992	-	-	1.075	-	-	0.195	-	-	0.000	-	-	0.000	-	-	0.000
2.1.6) Recovery (26)	-	-	27.649	-	-	4.689	-	-	6.719	-	-	0.947	-	-	0.000	-	-	0.947
2.1.7) ALLE (27)	-	-	13.643	-	-	4.844	-	-	4.583	-	-	1.983	-	-	0.000	-	-	1.983
2.1.8) ADMACS	-	-	0.000	-	-	1.987	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.9) MADMS - MA (28)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	10.252	-	-	0.000	-	-	10.252
Subtotal: Non Recurring Cost	-	-	*99.119*	-	-	*17.933*	-	-	*14.653*	-	-	*19.437*	-	-	*0.000*	-	-	*19.437*
Subtotal: Hardware - SJ305 - Non-Recurring Engineering Cost	**-**	**-**	***99.119***	**-**	**-**	***17.933***	**-**	**-**	***14.653***	**-**	**-**	***19.437***	**-**	**-**	***0.000***	**-**	**-**	***19.437***
Software - Product Improvement Cost																		
Recurring Cost																		
3.1.1) ADMACS (29)	-	-	0.000	-	-	14.902	-	-	18.310	-	-	6.998	-	-	0.000	-	-	6.998
Subtotal: Recurring Cost	-	-	*0.000*	-	-	*14.902*	-	-	*18.310*	-	-	*6.998*	-	-	*0.000*	-	-	*6.998*
Subtotal: Software - Product Improvement Cost	**-**	**-**	***0.000***	**-**	**-**	***14.902***	**-**	**-**	***18.310***	**-**	**-**	***6.998***	**-**	**-**	***0.000***	**-**	**-**	***6.998***
Support - SJ800 - Integrated Logistics Cost																		
4.1) Information Systems	-	-	3.072	-	-	0.362	-	-	0.179	-	-	0.015	-	-	0.000	-	-	0.015
4.2) Information Systems - MA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.180	-	-	0.000	-	-	0.180
4.3) Visual Landing Aids (30)	-	-	3.520	-	-	0.163	-	-	1.204	-	-	1.591	-	-	0.000	-	-	1.591
4.4) VLA - MA (31)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.100	-	-	0.000	-	-	0.100
4.5) Launcher	-	-	1.307	-	-	0.280	-	-	0.242	-	-	0.015	-	-	0.000	-	-	0.015
4.6) Recovery	-	-	5.036	-	-	0.334	-	-	0.380	-	-	0.171	-	-	0.000	-	-	0.171
4.7) SLMP	-	-	0.063	-	-	0.059	-	-	0.042	-	-	0.020	-	-	0.000	-	-	0.020
4.8) ALLE	-	-	1.061	-	-	0.217	-	-	0.261	-	-	0.266	-	-	0.000	-	-	0.266
4.9) ADMACS (32)	-	-	0.000	-	-	0.442	-	-	0.054	-	-	0.459	-	-	0.000	-	-	0.459
4.10) MADMS - MA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.728	-	-	0.000	-	-	0.728
Subtotal: Support - SJ800 - Integrated Logistics Cost	**-**	**-**	***14.059***	**-**	**-**	***1.857***	**-**	**-**	***2.362***	**-**	**-**	***3.545***	**-**	**-**	***0.000***	**-**	**-**	***3.545***
Support - SJ830 - Production Engineering Cost																		

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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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
5.1) Information Systems	-	-	5.936	-	-	0.236	-	-	0.266	-	-	0.016	-	-	0.000	-	-	0.016
5.2) Information Systems - MA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.420	-	-	0.000	-	-	0.420
5.3) Visual Landing Aids	-	-	9.256	-	-	0.720	-	-	2.633	-	-	1.940	-	-	0.000	-	-	1.940
5.4) VLA - MA (33)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.689	-	-	0.000	-	-	0.689
5.5) Launcher	-	-	2.142	-	-	0.404	-	-	0.423	-	-	0.015	-	-	0.000	-	-	0.015
5.6) Recovery	-	-	7.467	-	-	0.294	-	-	0.253	-	-	0.120	-	-	0.000	-	-	0.120
5.7) SLMP	-	-	0.154	-	-	0.054	-	-	0.108	-	-	0.059	-	-	0.000	-	-	0.059
5.8) ALLE	-	-	2.355	-	-	0.422	-	-	0.479	-	-	0.488	-	-	0.000	-	-	0.488
5.9) ADMACS (34)	-	-	0.000	-	-	2.122	-	-	1.903	-	-	1.939	-	-	0.000	-	-	1.939
5.10) MADMS - MA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	1.092	-	-	0.000	-	-	1.092
Subtotal: Support - SJ830 - Production Engineering Cost	**-**	**-**	***27.310***	**-**	**-**	***4.252***	**-**	**-**	***6.065***	**-**	**-**	***6.778***	**-**	**-**	***0.000***	**-**	**-**	***6.778***
Support - SJ900 - Installation -NonFMP Cost																		
6.1) Information Systems	-	-	1.090	-	-	0.129	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.2) Visual Landing Aids (35)	-	-	0.457	-	-	0.000	-	-	0.000	-	-	0.630	-	-	0.000	-	-	0.630
6.3) VLA - MA (36)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.198	-	-	0.000	-	-	0.198
6.5) Recovery	-	-	0.177	-	-	0.076	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - SJ900 - Installation -NonFMP Cost	**-**	**-**	***1.724***	**-**	**-**	***0.205***	**-**	**-**	***0.000***	**-**	**-**	***0.828***	**-**	**-**	***0.000***	**-**	**-**	***0.828***
Support - SJ910 - Installation -FMP Cost																		
7.1) Information Systems	-	-	12.185	-	-	3.325	-	-	3.663	-	-	0.172	-	-	0.000	-	-	0.172
7.2) Information Systems - MA (37)	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.966	-	-	0.000	-	-	0.966
7.3) Visual Landing Aids	-	-	11.954	-	-	1.114	-	-	4.003	-	-	3.952	-	-	0.000	-	-	3.952
7.4) VLA - MA	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.473	-	-	0.000	-	-	0.473
7.5) Launcher	-	-	4.636	-	-	2.227	-	-	2.535	-	-	0.801	-	-	0.000	-	-	0.801
7.6) Recovery (38)	-	-	10.593	-	-	0.990	-	-	0.315	-	-	2.067	-	-	0.000	-	-	2.067
7.7) SLMP (39)	-	-	0.100	-	-	0.732	-	-	0.494	-	-	0.571	-	-	0.000	-	-	0.571
7.8) ALLE	-	-	0.114	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
7.9) ADMACS (40)	-	-	0.000	-	-	3.675	-	-	5.774	-	-	3.064	-	-	0.000	-	-	3.064
Subtotal: Support - SJ910 - Installation -FMP Cost	**-**	**-**	***39.582***	**-**	**-**	***12.063***	**-**	**-**	***16.784***	**-**	**-**	***12.066***	**-**	**-**	***0.000***	**-**	**-**	***12.066***

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 3 / Air Launch & Recovery Equip
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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	-	-	266.690	-	-	65.092	-	-	78.920	-	-	74.184	-	-	0.000	-	-	74.184

Remarks:
[Hardware/Recurring] The recurring hardware funding shown is a combination of many planned hardware upgrades to a variety of Aircraft Launch and Recovery Systems and to a variety of ships/classes including Carrier Vessel
Nuclear (CVNs), Amphibious Assault Ships (AAS), and Air Capable Ships (ACS), which include various unit costs/quantities for differing fiscal years. As such, hardware recurring costs will vary significantly year to year and within each item.

[Hardware/Non-Recurring] Non-Recurring Engineering costs are associated with design, development, systems test and evaluation, tooling, logistics, systems engineering and project management of hardware or software Engineering Changes.

[Support Cost] Integrated Logistics Support costs are associated with the non-level of effort (organic) labor at NAWCAD Lakehurst directly supporting the manufacture of hardware, assembly kits and installation kits for many of the service changes.

[Support Cost] Installation Support:
1. Installations are subject to change with ship availability schedules.
2. The year-to-year unit installations costs will vary and can exceed the projected yearly inflation rate due to the hardware installation cost being dependent on quantity and location of the ship (i.e. Norfolk, Japan), ship class (DDG, ACS, AAS, CVN), and the ships baseline configuration.
3. Production lead time includes pre-installation checkout, kitting with other installation hardware and drawings, and time to ship the hardware to the installation site.

Footnotes:
(17) C.E. 1.1.2 Visual Landing Aids: The increased costs from FY23 to FY24 are due to increased kits procurement for four Visual Landing Aids ECPs: Digital Integrated Launch and Recovery Television Surveillance System (Digital ILARTS), Landbased Optical Landing Aid (LOLA), Improved Manually Operated Visual Landing Aid System (IMOVLAS)Shipboard ECP-0442, and IMOVLAS land based ECP-0452.
(18) C.E. 1.1.3 VLA MA: FY24 funds required for the procurement of Clone Lamp kits and Advanced Flight Deck Light (AFDL) Spot 9 kits for Ship and Shore.
(19) C.E. 1.1.5 Recovery: FY24 increase due to increased quantity of kits to be procured for Advanced Recovery Control (ARC) Long Term Display ECP-045 and kit procurements for ARC Retract Control Valve (RCV) Redesign Redesign ECP-0270 and E28 Emergency Arresting Gear Retrieve Drives.
(20) C.E. 1.1.6 Service Life Management Program (SLMP): FY24 funds to continue kit procurements for MK7 Fixed Sheave ECP-0366 and MK7 Crosshead ECP-0365.
(21) C.E. 1.1.7 Aviation Land and Launch Enclave (ALLE): The increase from FY23 to FY24 is for the procurement of ADMACS ECP-0530 kits for CVNs 70 through 79. The ADMACS kits provide the hardware required for cybersecurity network authentication and event monitoring. If the ALLE hardware is not procured then a central network will not be established so other ALRE systems may interface, thus rendering the cybersecurity enclave at a halt. A shipboard enclave environment will not be established and aviation land and launch systems will not be able to conduct manned and unmanned flight operations in a cyber-protected battlespace.
(22) C.E. 1.1.8 MADMS MA: Procurement in FY24 will allow for receipt of assets in time for initial evaluation of MADMS aboard an Amphibious Assault Ship that can utilize the immediate capability to support USMC lightning carrier CONOPS focused on, but not limited to, USINDOPACOM Theater in FY25 supporting USMC CPG 38 and Force Design 2030. Marine Aviation Data Management System - Consolidated Controls (MADMS-CC): provides Aircraft Launch and Recovery Equipment (ALRE) air and flight operations supporting work centers on Amphibious Assault Ships. Capabilities will respond to the time critical operational need to deploy, employ, sustain, and redeploy aviation assets meeting a cyber-resilient expeditionary environment.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 3 / Air Launch & Recovery Equip
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

(23) C.E. 2.1.2 Information Systems MA: FY24 increase due to NRE required for Moriah Wind Systems (MWS) LHD Class Display Configuration ECP-0515 and Moriah Cyber Enclave ECP-0500.

(24) C.E. 2.1.3 Visual Landing Aids: FY24 NRE required for Improved Fresnel Lens Optical Landing System (IFLOLS) Phase 5 ECP.

(25) C.E. 2.1.4 VLA MA: FY24 NRE required for VSTOL Tech Refresh and Advanced Stabilized Glide Scope Indicator (ASGSI) Basic Angle Change ECPs.

(26) C.E. 2.1.6 Recovery: FY24 NRE required for Aircraft Ship Integrated Secure and Traverse (ASIST).

(27) C.E. 2.1.7 ALLE: FY24 NRE required for ADMACS Flash Replacement ECP.

(28) C.E. 2.1.9 MADMS-MA: FY24 NRE supports the modernization and integration of COTS technology through industry partners and organic SMEs that will properly tie aircraft data management air and flight operations supporting work centers on Amphibious Assault Ships. The capabilities gained from this modernization will decrease time for critical operational decision for Expeditionary Strike Groups allowing increased F-35B OPTEMPO mapping to CPG-38 and Force Design 2030 while providing a more sustainable and cyber-resilient system.

(29) C.E. 3.1.1 ADMACS: FY24 funds required for ADMACS Network Authentication and Event Monitoring ECP-0530.

(30) C.E. 4.3 Visual Landing Aids: Increased cost from FY23 to FY24 is due to work on logistics products for two ECPs: Digital ILARTS and LOLA.

(31) C.E. 4.4 VLA MA: FY24 funds required to support logistics products for Clone Lamps ECP.

(32) C.E. 4.9 ADMACS: FY24 increase to support ADMACS ECP-530.

(33) C.E. 5.4 VLA MA: FY24 Engineering support required for Clone Lamps, AFDL Spot 9, ASGSI Basic Angle Change, and VSTOL Tech Refresh ECP's.

(34) C.E. 5.9 ADMACS: FY24 increase to support ADMACS ECP-0530.

(35) C.E. 6.2 VLA: Land based installations in FY24 for IMOVLAS ECP-0452 and LOLA.

(36) C.E. 6.3 VLA MA: FY24 land based install of SPOT-9 at MCAS Yuma.

(37) C.E. 7.2 Information Systems MA: FY24 funding is required to install hardware procured in prior years for Moriah Wind Systems (MWS). MWS hardware supporting LPD/LCC was procured to support initial ship installation dates provided by the Navy. As operational mission requirements evolved and ship availability schedules changed, the program is still required to install the procured hardware on the new current ship availability schedules as required/noted across the FY24 - 27 budget. This will ensure this capability to the Commanding Officers to continue decisive operational ARG/MEU mission execution.

(38) C.E. 7.6 Recovery: Increase in cost from FY23 to FY24 is due to the increase in quantity of ARC Long Term Display installations. Other installs in FY24 include CSM on CVN76 and ARC RVC installs.

(39) C.E. 7.7 SLMP: Increase from FY23 to FY24 is due to increase in the quantity of installs for Crosshead (ECP-0365) and Fixed Sheave (ECP-0366).

(40) C.E. 7.9 ADMACS: System Release Upgrade installs occur once a year for 3 or more CVNs. System Release Upgrades addresses software, cybersecurity, and obsolescence, and installs on CVNs available when an update is complete and ready for release. Unit cost varies from ship to ship and across years due to the individual ship and length of ship availability, since ADMACS software generated is unique to an individual ship to accommodate ship specific spaces (i.e. magazines are mapped to an individual ship's layout). Install schedule is determined by the timeframe constraints of each ship's availability, plus the unique modification of software for those ships, and coordination of installs for multiple ships available in that year. The time from procurement to installation varies due to: 1) constantly shifting CVN availabilities, and 2) the need to bundle procurements of several kits and do obsolescence upgrade ECPs for each bundle. ADMACS installs require at least a 6 month ship availability.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4213 / Aircraft Support Equipment	Item Number / Title [DODIC]: 4 / Natural Disaster Recovery
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	90.166	64.674	152.787	3.853	0.000	3.853
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	90.166	64.674	152.787	3.853	0.000	3.853
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**90.166**	**64.674**	**152.787**	**3.853**	**0.000**	**3.853**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - SJ307- Natural Disaster Recovery Support Equipment Cost																		
1.1) Propulsion Lab Support Equipment (41)	-	-	23.321	-	-	54.053	-	-	63.185	-	-	1.743	-	-	0.000	-	-	1.743
1.2) Initial Building Outfitting (42)	-	-	0.000	-	-	6.863	-	-	40.404	-	-	1.050	-	-	0.000	-	-	1.050
1.3) Peculiar Aviation Support Equipment (43)	-	-	66.845	-	-	3.758	-	-	49.198	-	-	1.060	-	-	0.000	-	-	1.060
Subtotal: Support - SJ307- Natural Disaster Recovery Support Equipment Cost	***-***	***-***	***90.166***	***-***	***-***	***64.674***	***-***	***-***	***152.787***	***-***	***-***	***3.853***	***-***	***-***	***0.000***	***-***	***-***	***3.853***
Gross/Weapon System Cost	**-**	**-**	**90.166**	**-**	**-**	**64.674**	**-**	**-**	**152.787**	**-**	**-**	**3.853**	**-**	**-**	**0.000**	**-**	**-**	**3.853**

Footnotes:

(41) C.E 1.1 Propulsion Lab Support Equipment: Funds are required for recalibration, repair, and updates associated with synthesis and formulation, combustion science, mass properties, energetics, and test capabilities. These requirements include but are not limited to the following: optical microscopes, pad fixtures, instrument spectrometers, microscopes, optical components and gas turbines required to restore mission capability.

(42) C.E 1.2 Initial Building Outfitting: Funds the specialized networking and communication equipment required as a result of the 2019 China Lake earthquakes to connect both newly constructed, and repaired facilities, to the central data distribution system in order to get back to operational status. Procure several Communications/Utility Buildings (CUBs) and equipment for Fiber Optic Trunking System (FOTS).

(43) C.E 1.3 Peculiar Aviation Support Equipment: Funds required to replace, repair, and update required Class 3 peculiar aviation support equipment. These requirements include but are not limited to spectrum analyzers, electrodynamic shakers, data acquisition units, molding machines, XRAY machines, laser cutters and water jet systems required to restore mission capability.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	31.660	8.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	39.910
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	31.660	8.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	39.910
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**31.660**	**8.000**	**0.250**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**39.910**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Electromagnetic Aircraft Launch System (EMALS) is replacing the C13 Steam Catapult System aboard Ford class carriers and is an advanced technology aircraft launch system which provides improved reliability and maintainability, reduced manning workload and increased operational availability.

This budget line item funds the procurement for Electromagnetic Aircraft Launch System (EMALS) life cycle support modifications and upgrades required aboard Ford Class Carriers, System Functional Demonstration (SFD) land-based test site. Modifications included in the budget support fatigue life, obsolescence and performance enhancements to ensure the system remains operational throughout the life of the program. EMALS will replace the C13 Steam Catapult System aboard Ford class carriers and is an advanced technology aircraft launch system which provides improved reliability and maintainability, reduced manning workload and increased operational availability.
EMALS is installed aboard CVN-78 and in one land based test sites at SFD.

FY23 through the FYDP has transitioned to BLI 4219. EMALS is an ACAT I-size sub-program within PEO Carriers that is one of the most critical, mission essential systems and new technologies supporting FORD Class CVNs. It has been the focus of Secretariat and Flag-level forums to assess and ensure system supportability, including a steady drumbeat of recurring DON and Fleet leadership meetings/ discussions. EMALS warrants a dedicated budget line to ensure key stakeholders have full insight into its funding stability and adequacy to inform and prioritize resourcing decisions. As a secondary but important benefit, separating EMALs funding into its own BLI will avoid confusion between EMALS-dedicated funding and the larger Aircraft Launch and Recovery Equipment (ALRE) OPN line that supports all fielded systems. This is consistent with Advanced Arresting Gear (AAG), PMA-251's other FORD-unique program that has its own dedicated OPN line.

Notes for Installations:
1. Installations are subject to change with ship availability schedules.
2. The year-to-year unit installations costs will vary and can exceed the projected yearly inflation rate due to the hardware installation cost being dependent on quantity and location of the ship at the time of install, and the ship's
baseline configuration.
3. Production lead time includes pre-installation checkout, kitting with other installation hardware and drawings, and time to ship the hardware to the installation site.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: C13-2 Steam Catapult	**Modification Type:** Reliability and Maintainability	**Related RDT&E PEs:** 0604112N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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												
1.1.1) Arhived ECPs - NonOrganic *Installation 1 of 2*	839 / 25.145	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	839 / 25.145
1.1.2) Halfbridge Gate Driver and Fuse Terminal Block Redesign - NonOrganic (44) *Installation 2 of 2*	35 / 1.326	445 / 1.867	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	480 / 3.193
2.1.1) Non-Recurring Engineering EMALS E22 Build - Organic(*) (45)	- / -	- / 4.585	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.585
Subtotal: Procurement	*- / 26.471*	*- / 6.452*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 32.923*
Support												
3.1) PE (46)	- / 0.950	- / 0.923	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 1.873
3.2) ILS (47)	- / 2.240	- / 0.538	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 2.778
Subtotal: Support	*- / 3.190*	*- / 1.461*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 4.651*
Installation												
Installation 1 of 2: GRP: 1.1.1) Archived ECPs	- / 1.999	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 1.999
Installation 2 of 2: GRP: 1.1.2) Halfbridges	- / -	- / 0.087	- / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.337
Subtotal: Installation	*- / 1.999*	*- / 0.087*	*- / 0.250*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 2.336*
Total												
Total Cost (Procurement + Support + Installation)	**31.660**	**8.000**	**0.250**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**39.910**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306)

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

Installation 1 of 2: GRP: 1.1.1) Archived ECPs

Manufacturer Information

Manufacturer Name: Various | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: 1.1.1) Archived ECPs

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	839 / 1.999	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	839 / 1.999
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	839 / 1.999	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	839 / 1.999

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	839	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	839
Out	839	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	839

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306)

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

Installation 2 of 2: GRP: 1.1.2) Halfbridges

Manufacturer Information

Manufacturer Name: General Atomics | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

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

Installation Information

Method of Implementation: AIT:: Installation Name: 1.1.2) Halfbridges

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	- / -	35 / 0.087	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	35 / 0.087
FY 2022	- / -	- / -	445 / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	445 / 0.250
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	35 / 0.087	445 / 0.250	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	480 / 0.337

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	35	-	-	-	445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480
Out	-	35	-	-	-	-	-	445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	480

Footnotes:

(44) 1.1.2 Halfbridges: This effort addresses the Dual Gate Driver obsolescence and reliability in the Power Conversion Subsystem (PCS)/Prime Power Interface Subsystem (PPIS) Half Bridge (HB). The scope of this effort incorporates a Fused Terminal Block (circuit protection to forestall any premature failures of the related HF power supplies) and deferment of the Insulated Gate Bipolar Transistor (IGBT) into E22. A failure of the HF Power Supply occurred at SFD test site in FY19, causing damage to the HF Power Supply Backplane due to lack of over current circuit protection. The fused terminal block provides such

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 1 / ALRE - Electromagnetic Aircraft Launch System (EMALS) (SJ306)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

protection. Damage of HF Power Supply Backplane requires disassembly, removal and replacement of heavy components requiring multiply personnel and hours to complete in confined spaces aboard ship and lead times for purchase of replacement. The Fuse Terminal Block and Half-Bridge retrofit kits (480 units) will be installed on CVN78 during FY22 PDT&T period.

(45) 2.1.1 Non-Recurring Engineering E22 Build - Organic: Provides the associated Non-Recurring Engineering with the various E22 Build upgrades that support Obsolescence, Reliability Improvements/ Upgrades, Operational Capability Improvements and Safety of Operations/Flight.

(46) 3.1 Production Engineering: Engineering support associated with over ten ECPs plus planning efforts related to the E22 Build.

(47) 3.2 ILS: Engineering support associated with over ten ECPs plus planning efforts related to the E22 Build, including, but not limited to, the Navy Modernization Ship Maintenance (SHIPMAIN) process.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 2 / LAMPS MK III - SRQ(KU)-4 (S1010)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	157.584	14.608	13.680	14.242	0.000	14.242	14.598	0.000	0.000	0.000	5.355	220.067
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	157.584	14.608	13.680	14.242	0.000	14.242	14.598	0.000	0.000	0.000	5.355	220.067
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**157.584**	**14.608**	**13.680**	**14.242**	**0.000**	**14.242**	**14.598**	**0.000**	**0.000**	**0.000**	**5.355**	**220.067**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LAMPS MK III, AN/SRQ-4 (Ku), is an over the horizon information dominance system with a high speed, air-to-ground, digital data link that transmits reconnaissance and other data from MH-60 helicopters to surface ships (cruisers and destroyers) to enable data, imagery, electronic support measures, communications and radar information via the Ku-band link.

Program provides for non-recurring engineering, procurement and associated installation and support of AN/SRQ-4(Ku) field install kits. This system encompasses hardware and software to transmit sensor data from the Light Airborne Multi-Purpose System (LAMPS) MK III MH-60R aircraft to the host ship classes. Kit procurements were complete in FY 2021.

The FY 2024 requests funds for installation support of AN/SRQ-4(Ku) field install kits. The increase from FY23 to FY24 is a result of the NRE requirement for crypto core modernization.

Objective Inventory is 100 kits. (68 Destroyers [DDGs], 22 Cruisers [CGs], & 10 Shore sites). 22 kits were previously installed in line item 4255 and 78 kits will be installed in line item 4213.

Notes for installation schedule:
1. Installations are subject to changes with ship availability schedules.

2. The year-to-year unit installation cost varies significantly and can exceed the projected yearly inflation rate. The varying unit cost is due to the hardware installation cost being dependent on quantity, location (i.e., Japan, Norfolk, San Diego, etc.), Shipyard (i.e. Bath or Ingalls), ship baseline configuration (i.e., Navigation System installed, A-Kit pre-install), ship availability (AVAIL) period overlaps, complexity of AVAIL (e.g., SHIPALTs can last up to 3 yrs and require intermittent visits by the install team) as well as cost sharing from other simultaneous installed SHIPALTS (e.g. mast rigging).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 2 / LAMPS MK III - SRQ(KU)-4 (S1010)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: LAMPS MK III	**Modification Type:** Non-Organic	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 1: LAMPS MK III - SRQ(KU)-4 (S1010)												
B Kits												
Recurring												
1.1.1) SRQ(KU)-4 - NonOrganic [48]	78 / 69.406	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	78 / 69.406
Subtotal: Recurring	*- / 69.406*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 69.406*
Non-Recurring												
1.2.1) NRE - Organic [49]	- / 2.919	- / -	- / -	- / 0.192	- / -	- / 0.192	- / 2.547	- / -	- / -	- / -	- / -	- / 5.658
Subtotal: Non-Recurring	*- / 2.919*	*- / -*	*- / -*	*- / 0.192*	*- / -*	*- / 0.192*	*- / 2.547*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.658*
Subtotal: LAMPS MK III - SRQ(KU)-4 (S1010)	*78 / 72.325*	*- / -*	*- / -*	*- / 0.192*	*- / -*	*- / 0.192*	*- / 2.547*	*- / -*	*- / -*	*- / -*	*- / -*	*78 / 75.064*
Subtotal: Procurement, All Modification Items	*- / 72.325*	*- / -*	*- / -*	*- / 0.192*	*- / -*	*- / 0.192*	*- / 2.547*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 75.064*
Support *(All Modification Items)*												
2.1) Data [50]	- / 3.911	- / 0.973	- / 0.992	- / 0.992	- / -	- / 0.992	- / 1.012	- / -	- / -	- / -	- / -	- / 7.880
2.2) Support Equipment [51]	- / 6.354	- / 1.153	- / 1.176	- / 1.156	- / -	- / 1.156	- / -	- / -	- / -	- / -	- / -	- / 9.839
2.3) ILS	- / 11.679	- / 2.068	- / 2.068	- / 1.725	- / -	- / 1.725	- / 1.759	- / -	- / -	- / -	- / -	- / 19.299
2.4) Government Engineering [52]	- / 12.458	- / 2.500	- / 2.719	- / 3.391	- / -	- / 3.391	- / 4.254	- / -	- / -	- / -	- / -	- / 25.322
2.5) Acceptance Test & Evaluation	- / 0.949	- / 0.216	- / 0.219	- / 0.223	- / -	- / 0.223	- / 0.227	- / -	- / -	- / -	- / -	- / 1.834
2.6) GFE	- / 3.871	- / 0.382	- / 0.380	- / 0.400	- / -	- / 0.400	- / 0.380	- / -	- / -	- / -	- / -	- / 5.413
2.7) Production Line Support [53]	- / 6.021	- / 1.711	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.732
Subtotal: Support	*- / 45.243*	*- / 9.003*	*- / 7.554*	*- / 7.887*	*- / -*	*- / 7.887*	*- / 7.632*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 77.319*
Installation												
Modification Item 1 of 1: LAMPS MK III - SRQ(KU)-4 (S1010)	- / 40.016	- / 5.605	- / 6.126	- / 6.163	- / 0.000	- / 6.163	- / 4.419	- / 0.000	- / 0.000	- / 0.000	- / 5.355	- / 67.684
Subtotal: Installation	*- / 40.016*	*- / 5.605*	*- / 6.126*	*- / 6.163*	*- / -*	*- / 6.163*	*- / 4.419*	*- / -*	*- / -*	*- / -*	*- / 5.355*	*- / 67.684*
Total												
Total Cost (Procurement + Support + Installation)	**157.584**	**14.608**	**13.680**	**14.242**	**0.000**	**14.242**	**14.598**	**0.000**	**0.000**	**0.000**	**5.355**	**220.067**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 2 / LAMPS MK III - SRQ(KU)-4 (S1010)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: LAMPS MK III - SRQ(KU)-4 (S1010)

Manufacturer Information

Manufacturer Name: L3 Communications	Manufacturer Location: Salt Lake City, Utah
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 22

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: NAWCAD St. Inigoes Installation Team:: Installation Name: AN/SRQ-4 Installations

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	46 / 40.016	7 / 5.605	7 / 6.126	7 / 6.163	0 / 0.000	7 / 6.163	5 / 4.419	- / -	- / -	- / -	6 / 5.355	78 / 67.684
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	46 / 40.016	7 / 5.605	7 / 6.126	7 / 6.163	0 / 0.000	7 / 6.163	5 / 4.419	- / -	- / -	- / -	6 / 5.355	78 / 67.684

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	46	2	-	2	3	1	2	2	2	2	2	2	1	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6	78
Out	46	-	-	-	2	2	-	3	1	2	2	2	2	2	2	1	-	2	2	1	-	-	-	-	-	-	-	-	-	6	78

Footnotes:

(48) Installs: Reconciliation of actual ship installations has resulted in six installs in "to complete" along with the associated install cost. The schedule of In/Out has been updated to reflect current timing required as overall SHIPALT schedules impact the installs and longer periods to complete the SRQ(KU)-4 installs result.

(49) Cost Element 1.2.1, The increase from FY23 to FY24 is a result of the NRE requirement for crypto core modernization.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 2 / LAMPS MK III - SRQ(KU)-4 (S1010)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(50) Cost Element 2.1, Data funding procures ship installation drawings and provides for ship checks on multiple Cruiser (CG) and Destroyers (DDG) class ships scheduled for SHIPALT 79719. This cost element provides the funds to procure the data packages eighteen months prior to ship installation start. Data costs vary year to year due to CG packages being significantly more expensive as compared to DDGs due to the age and individuality of the CGs.

(51) Cost Element 2.2, Support Equipment is for the procurement of KU-Band equipment for the fleet to replace the Test Set-4120s that allows trouble shooting of the LAMPS MK III system without an embarked helicopter.

(52) Cost Element 2.4, Government Engineering, is required for engineering support for kitting, staging, configuration/documentation management, procurement of GFE & support equipment, scheduling of ship installation activities, and test support required to produce, deliver and install the SRQ(KU)-4 kits onboard CG and DDG class ships. FY24 increase is due to 1) re-alignment of installation validation requirements, 2) reviewing and finalizing ship retrofit documentation, 3) analyzing fleet feedback regarding the performance, reliability, and training of the system, and 4) updating DDGs and CGs to the final production software release.

(53) Cost Element 2.7, Production Line support is related to the Prime Contractor System Engineering Program Management (SEPM) requirements to produce and deliver SRQ(KU)-4 installation kit. The final procurement of AN/SRQs occurred in FY22 and the Follow-on procurement contract for AN/SRQ-4 systems was transferred to NAVSEA. As such the budget (and requirement) for Production Line support was transferred to NAVSEA.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 3 / CMV22
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	7.838	0.000	7.838	4.243	0.000	0.000	0.000	0.000	12.081
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	7.838	0.000	7.838	4.243	0.000	0.000	0.000	0.000	12.081
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**7.838**	**0.000**	**7.838**	**4.243**	**0.000**	**0.000**	**0.000**	**0.000**	**12.081**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

CMV-22 SCD is a Turn-Key Mod which will modify CVN ships to accommodate CMV-22 aircraft as the Carrier On-board Delivery (COD) aircraft replacing the C-2. Ship modifications have been approved via the following Ship Change Documents (SCD):

1) SCD 7233 CMV-22 Fire Wand Clips: Mounting brackets required to secure fire wand extensions with attached 15lb CO2 bottle on CVNs in the vicinity of Spot 6, Spot 9, and the fire hose station at the base of the tower aft of the island.

2) SCD 25268 CMV-22 Blade Storage: Angle arms to provide storage of V-22 spare blades. Two sets of angle arms will be installed to support bulkhead storage of 6 spare blades. CMV-22 blade storage will be in vicinity of frame 190 (Hangar Bay 3, CVN 68 Class - Hangar Bay 2, CVN 78 Class).

3) SCD 25369 CMV-22 CVN Spaces Modifications: Current VRC C-2A (R) Detachments deployed to a CVN do not have spaces assigned, but share with the embarked E2C squadron. Due to the nature of the CONOPS, future VRM (CMV-22) Detachments deployed to CVN's will require spaces assigned to them for both the transit and operational periods of the deployment. This SCD realigns/installs infrastructure and configures spaces required to support the embarked footprint of a CMV-22 detachment as the Carrier On-board Delivery (COD) platform. These spaces include a Ready Room, Maintenance Control, and Maintenance Work Center.

Funding beginning in FY 2024 will complete ship modifications for CVN 68, CVN 76, and CVN 69.

Installations are subject to change with ship availability schedules.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 3 / CMV22
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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 1: CMV22												
B Kits												
Recurring												
1.1.1) CMV-22 SCD - Organic	- / -	- / -	- / -	2 / 3.200	- / -	2 / 3.200	1 / 1.910	- / -	- / -	- / -	- / -	3 / 5.110
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / 3.200*	*- / -*	*- / 3.200*	*- / 1.910*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.110*
Subtotal: CMV22	*- / -*	*- / -*	*- / -*	*2 / 3.200*	*- / -*	*2 / 3.200*	*1 / 1.910*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / 5.110*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / -*	*- / -*	*- / 3.200*	*- / -*	*- / 3.200*	*- / 1.910*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 5.110*
Support *(All Modification Items)*												
2.1) Other Support	- / -	- / -	- / -	- / 4.638	- / -	- / 4.638	- / 2.333	- / -	- / -	- / -	- / -	- / 6.971
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 4.638*	*- / -*	*- / 4.638*	*- / 2.333*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 6.971*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**7.838**	**0.000**	**7.838**	**4.243**	**0.000**	**0.000**	**0.000**	**0.000**	**12.081**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 3 / CMV22
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Modification Item 1 of 1: CMV22		

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 4 / INACTIVE PROJECTS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	174.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	174.191
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	174.191	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	174.191
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**174.191**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**174.191**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Inactive Projects prior year totals.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4213 / Aircraft Support Equipment	**Modification Number / Title:** 4 / INACTIVE PROJECTS
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 (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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												
1.1.1) INACTIVE PROJECTS - Organic(*)	- / 174.191	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 174.191
Subtotal: Procurement	*- / 174.191*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 174.191*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**174.191**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**174.191**

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204112N	Other Related Program Elements: 0604512N, 0604530N

Line Item MDAP/MAIS Code: 529

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	42.738	22.265	13.544	11.930	0.000	11.930	3.253	0.406	5.772	10.682	10.419	121.009
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	42.738	22.265	13.544	11.930	0.000	11.930	3.253	0.406	5.772	10.682	10.419	121.009
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**42.738**	**22.265**	**13.544**	**11.930**	**0.000**	**11.930**	**3.253**	**0.406**	**5.772**	**10.682**	**10.419**	**121.009**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	1.298	0.032	0.350	-	0.350	-	-	-	-	-	1.680
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget line item funds the procurement for Advanced Arresting Gear (AAG) life cycle support modifications and upgrades required aboard Ford Class Carriers, Jet Car Track Site (JCTS) and Runway Arrested Landing Site (RALS) systems. Modifications included in the budget support fatigue life, obsolescence and performance enhancements to ensure the system remains operational throughout the life of the program. AAG will replace Mark 7 arresting gear aboard Ford Class aircraft carriers and will provide the U.S. Navy with the ability to recover existing and projected aircraft carrier based tail-hook equipped air vehicles well into the 21st century. AAG will enhance operational capability, provide increased operational availability, while reducing manning, maintenance and support costs. AAG is installed aboard CVN-78 as well as two land based test sites JCTS and RALS.

Prior Years ($76.9M) funded under Aircraft Support Equipment (BLI 4213 and BLI 4216).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: 0204112N	Other Related Program Elements: 0604512N, 0604530N

Line Item MDAP/MAIS Code: 529

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 / Advanced Arresting Gear (AAG) (Advanced Arresting Gear (AAG))				- / 42.738	- / 22.265	- / 13.544	- / 11.930	- / 0.000	- / 11.930
P-40	**Total Gross/Weapon System Cost**				**- / 42.738**	**- / 22.265**	**- / 13.544**	**- / 11.930**	**- / 0.000**	**- / 11.930**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	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 / Advanced Arresting Gear (AAG) (Advanced Arresting Gear (AAG))				- / 3.253	- / 0.406	- / 5.772	- / 10.682	- / 10.419	- / 121.009
P-40	**Total Gross/Weapon System Cost**				**- / 3.253**	**- / 0.406**	**- / 5.772**	**- / 10.682**	**- / 10.419**	**- / 121.009**

*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 2024 Baseline funding is required for procurement of two (2) full Mod II Water Twisters and associated support.

FY 2021 and FY 2022 Water Twister Mod II procurement installs are directly affected by PMS378 Ford-class ship schedules. Mod-II Water Twister installation aboard CVN78 changed from FY 2023 to FY 2025 (quantity 6) based on the latest ship schedules for the Planned Incremental Availability (PIA) period. The CVN79 installation changed from FY 2024 to FY 2025 based on the change in Post-Shakedown Availability (PSA) schedule from dual phase to single phase. The production lead times will benefit from a learning curve from 25 months to 17 months, allowing the quantity of (2) FY 2024 kits to be installed starting in 4Q2025.

Notes for Installation Schedule:
1. Installations are subject to change with ship availability schedule updates.
2. The year-to-year unit installations costs will vary and can exceed the projected yearly inflation rate due to the hardware installation cost being dependent on quantity and location of the ship at the time of install or which site is being update, which CVN, and the ships baseline configuration.
3. Production lead time includes pre-installation checkout, kitting with other installation hardware and drawings, and time to deliver the hardware to the installation site.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	42.738	22.265	13.544	11.930	0.000	11.930	3.253	0.406	5.772	10.682	10.419	121.009
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	42.738	22.265	13.544	11.930	0.000	11.930	3.253	0.406	5.772	10.682	10.419	121.009
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**42.738**	**22.265**	**13.544**	**11.930**	**0.000**	**11.930**	**3.253**	**0.406**	**5.772**	**10.682**	**10.419**	**121.009**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget line item funds the procurement for Advanced Arresting Gear (AAG) life cycle support modifications and upgrades required aboard Ford Class Carriers, Jet Car Track Site (JCTS) and Runway Arrested Landing Site (RALS) systems. Modifications included in the budget support fatigue life, obsolescence and performance enhancements to ensure the system remains operational throughout the life of the program. AAG will replace Mark 7 arresting gear aboard Ford Class aircraft carriers and will provide the U.S. Navy with the ability to recover existing and projected aircraft carrier based tail-hook equipped air vehicles well into the 21st century. AAG will enhance operational capability, provide increased operational availability, while reducing manning, maintenance and support costs. AAG is installed aboard CVN-78, CVN 79, and in two land based test sites at JCTS and RALS.

FY 2017 and prior funded under Aircraft Support Equipment (BLI 4213 and BLI 4216).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: MK-15	**Modification Type:** Advanced Arresting Gear (AAG)	**Related RDT&E PEs:** 0604512N, 0604530N

Financial Plan (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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												
1.1.1) Archived ECP Line - NonOrganic *Installation 1 of 4*	28 / 13.664	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 13.664
1.1.2) Water Twister Mod II - NonOrganic *Installation 2 of 4*	2 / 10.189	4 / 20.907	2 / 11.200	2 / 11.400	- / -	2 / 11.400	- / -	- / -	- / -	- / -	- / -	10 / 53.696
1.2.1) Non-Recurring Engineering - Organic(*)	- / 8.401	- / 0.418	- / 0.670	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.489
2.1.1) AAG Block I Upgrade - NonOrganic *Installation 3 of 4*	2 / 6.505	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.505
2.2.1) Non-Recurring Engineering - AAG Block I - NonOrganic(*)	- / 1.518	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.518
3.1.1) Non-Recurring Engineering - AAG Build A23 - NonOrganic(*)	- / -	- / 0.243	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.243
4.1.1) AAG Build A27 - NonOrganic *Installation 4 of 4*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.337	5 / 2.675	9 / 4.012
4.2.1) Non-Recurring Engineering - AAG Build A27 - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.250	- / 5.310	- / 3.500	- / 14.060
5.1.1) Software Stability - NonOrganic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.500	- / 1.500	- / 5.000
Subtotal: Procurement	*- / 40.277*	*- / 21.568*	*- / 11.870*	*- / 11.400*	*- / -*	*- / 11.400*	*- / -*	*- / -*	*- / 5.250*	*- / 10.147*	*- / 7.675*	*- / 108.187*
Support												
6.1) Integrated Logistics Support (1)	- / 1.231	- / 0.232	- / 0.806	- / 0.153	- / -	- / 0.153	- / 0.030	- / 0.136	- / 0.172	- / 0.177	- / 0.644	- / 3.581
6.2) Production Engineering Support (2)	- / 1.007	- / 0.250	- / 0.480	- / 0.377	- / -	- / 0.377	- / 0.056	- / 0.270	- / 0.350	- / 0.358	- / 1.243	- / 4.391
Subtotal: Support	*- / 2.238*	*- / 0.482*	*- / 1.286*	*- / 0.530*	*- / -*	*- / 0.530*	*- / 0.086*	*- / 0.406*	*- / 0.522*	*- / 0.535*	*- / 1.887*	*- / 7.972*
Installation												
Installation 1 of 4: Archived ECP Line	- / 0.223	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.223
Installation 2 of 4: Water Twister Mod II	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.167	- / -	- / -	- / -	- / 0.000	- / 3.167
Installation 3 of 4: AAG Block I Upgrade	- / -	- / 0.215	- / 0.388	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.603
Installation 4 of 4: AAG Build A27	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.857	- / 0.857
Subtotal: Installation	*- / 0.223*	*- / 0.215*	*- / 0.388*	*- / -*	*- / -*	*- / -*	*- / 3.167*	*- / -*	*- / -*	*- / -*	*- / 0.857*	*- / 4.850*
Total												
Total Cost (Procurement + Support + Installation)	**42.738**	**22.265**	**13.544**	**11.930**	**0.000**	**11.930**	**3.253**	**0.406**	**5.772**	**10.682**	**10.419**	**121.009**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 1 of 4: Archived ECP Line

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: Archived ECP Line

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	28 / 0.223	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	28 / 0.223
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 0.223	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	28 / 0.223

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28
Out	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Installation 2 of 4: Water Twister Mod II

Manufacturer Information

Manufacturer Name: General Atomics (3)	Manufacturer Location: San Diego, CA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 25

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023				
Delivery Dates	Jan 2024	Jan 2025	May 2025				

Installation Information

Method of Implementation: HII (Huntington Ingalls Industries):: Installation Name: Water Twister Mod II

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.633	- / -	- / -	- / -	0 / 0.000	2 / 0.633
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.268	- / -	- / -	- / -	0 / 0.000	4 / 1.268
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.633	- / -	- / -	- / -	0 / 0.000	2 / 0.633
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.633	- / -	- / -	- / -	0 / 0.000	2 / 0.633
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	10 / 3.167	- / -	- / -	- / -	0 / 0.000	10 / 3.167

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	10
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	4	-	-	-	-	-	-	-	-	-	-	-	-	10

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Installation 3 of 4: AAG Block I Upgrade		

Manufacturer Information

Manufacturer Name: General Atomics	Manufacturer Location: San Diego, CA
Administrative Leadtime *(in Months)*: 7	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: AAG Block I Upgrade

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	- / -	1 / 0.215	1 / 0.388	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.603
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	1 / 0.215	1 / 0.388	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 0.603

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Installation 4 of 4: AAG Build A27		

Manufacturer Information

Manufacturer Name: General Atomics	Manufacturer Location: San Diego, CA
Administrative Leadtime *(in Months)*: 7	Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: [none specified]:: Installation Name: AAG Build A27

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.381	4 / 0.381
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.476	5 / 0.476
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.857	9 / 0.857

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	9

Footnotes:

(1) 6.1) Integrated Logistics Support decrease from FY23 to FY24 due to cancellation of AAG Build A23.

(2) 6.2) Production Engineering Support decrease from FY23 to FY24 due to cancellation of AAG Build A23.

(3) FY 2021 and FY 2022 Water Twister Mod II procurement installs are directly affected by PMS378 Ford-class ship schedules. Mod-II Water Twister installation aboard CVN78 changed from FY 2023 to FY 2025 (quantity of 6) based on the latest ship schedules for the Planned Incremental Availability (PIA) period. The CVN79 installation changed from FY 2024 to FY 2025 based on the change in Post-Shakedown

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4217 / Advanced Arresting Gear (AAG)	**Modification Number / Title:** 1 / Advanced Arresting Gear (AAG)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Availability (PSA) schedule from dual phase to single phase. The production lead times will benefit from a learning curve from 25 months to 17 months, allowing the quantity of (2) FY 2024 kits to be installed starting in 4Q2025.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604112N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	18.594	17.836	0.000	17.836	20.958	21.211	20.614	20.700	44.265	164.178
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	18.594	17.836	0.000	17.836	20.958	21.211	20.614	20.700	44.265	164.178
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**18.594**	**17.836**	**0.000**	**17.836**	**20.958**	**21.211**	**20.614**	**20.700**	**44.265**	**164.178**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	0.018	-	0.018	-	-	-	-	-	0.018
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Electromagnetic Aircraft Launch System (EMALS) is replacing the C13 Steam Catapult System aboard Ford class carriers and is an advanced technology aircraft launch system which provides improved reliability and maintainability, reduced manning workload and increased operational availability.

EMALS was previously funded under Aircraft Support Equipment (BLI 4213 and 4216). FY 2022 ($8M), FY2023 (.250M) for Halfbridge Installation, and Prior Years ($26.107M).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604112N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 / Electromagnetic Aircraft Launch System (EMALS) (TBD)				- / 0.000	- / 0.000	- / 18.594	- / 17.836	- / 0.000	- / 17.836
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 18.594**	**- / 17.836**	**- / 0.000**	**- / 17.836**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	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 / Electromagnetic Aircraft Launch System (EMALS) (TBD)				- / 20.958	- / 21.211	- / 20.614	- / 20.700	- / 44.265	- / 164.178
P-40	**Total Gross/Weapon System Cost**				**- / 20.958**	**- / 21.211**	**- / 20.614**	**- / 20.700**	**- / 44.265**	**- / 164.178**

*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 2024 Baseline funding is required to complete non-recurring engineering, procure kits and fund associated installs in support of the E22 Build; begin non-recurring engineering in support of the E24 Build; and procure EMALS Depot Level Support Equipment.

FY 2023 Engineering Change Proposals for Transformer Rectifier (T/R) Fuse Detection and Maintenance Laptops have been broken out from the proposed E22 Build due to hardware procurement lead times and varying installation schedules.

Notes for Installation Schedule:
1. Installations are subject to change with ship availability schedule updates.
2. The year-to-year unit installations costs will vary and can exceed the projected yearly inflation rate due to the hardware installation cost being dependent on quantity and location of the ship at the time of install or which site is
being update, which CVN, and the ships baseline configuration.
3. Production lead time includes pre-installation checkout, kitting with other installation hardware and drawings, and time to deliver the hardware to the installation site.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	18.594	17.836	0.000	17.836	20.958	21.211	20.614	20.700	44.265	164.178
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	18.594	17.836	0.000	17.836	20.958	21.211	20.614	20.700	44.265	164.178
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**18.594**	**17.836**	**0.000**	**17.836**	**20.958**	**21.211**	**20.614**	**20.700**	**44.265**	**164.178**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget line item funds the procurement for Electromagnetic Aircraft Launch System (EMALS) life cycle support modifications and upgrades required aboard Ford Class Carriers, System Functional Demonstration (SFD) land-based test site. Modifications included in the budget support fatigue life, obsolescence and performance enhancements to ensure the system remains operational throughout the life of the program. EMALS will replace the C13 Steam Catapult System aboard Ford class carriers and is an advanced technology aircraft launch system which provides improved reliability and maintainability, reduced manning workload and increased operational availability.
EMALS is installed aboard CVN-78 and in one land based test sites at SFD.

EMALS Engineering Change Proposals are budgeted based on a Build strategy (aka Block upgrade) which will allow the program to address the most critical ECPs. With swift changes in software updates and associated subsystems, impending cyber security mandates and changes driven by continuing correction of deficiencies out of RDT&E, the limited funding profile creates a dynamic situation in effectively executing this OPN Line Item to support an ever-changing list of unanticipated priority updates. The logic of Build upgrades will provide the program more flexibility to address competing priorities of what become the most critical obsolescence, reliability, operational or safety upgrades in a given year. It also avoids multiple overlapping software releases and design rework. Each Block/Build will generally be staggered by two (2) years to provide sufficient time for the design of each block and to level load Engineering Resources.

The block/build upgrades includes four (4) major categories of upgrades:
(1) Obsolescence: provides funding for ECPs used to address critical or obsolete parts in any of the major or subcomponent systems within EMALS.
(2) Reliability Improvements/Upgrades: provides funding for ECPs to address any issues that support reliability of EMALS system at SFD and onboard CVN78.
(3) Operational Capability Improvements: provides funding for ECPs that specifically address operational capability improvements, which are mostly driven by changes as a result of findings during Correction of Deficiency testing.
(4) Safety of Operations/Flight: provides funding for ECPs that directly affect safety of flight operations that might limit flight operations during normal optempo.
Additionally, ECPs for items such as software upgrades to components or subsystem components that cause issues under normal operating conditions of EMALS will be included in each of the four categories when software updates are required within the Build. Funding within the build will also be used to support directed cyber mandates to ensure compliance of cyber issues in EMALS operating system.

E22 Build addresses: 1) hardware obsolescence for Half-Bridge IGBT (retrofit by attrition); 2) Block Switch Sensor (BSS) safety software; 3) Electrical Isolation Tag-out Procedures to maximize concurrent maintenance and operation for low-power trough maintenance on the alternate pair of catapults; this also allows for maintenance of high power charging equipment while pulsed equipment is still powered; 4) Maintenance Laptop for software loading and maintenance aboard ship; 5) hardware obsolescence (Hydraulic Power Unit); 6) Transformer Rectifier (T/R) Fuse Detection. E22 is planned for phased install at SFD and shipboard on CVN78/CVN79 during an available maintenance period.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

ECP's for Transformer Rectifier (T/R) Fuse Detection, Maintenance Laptops, Hydraulic Power Unit (HPU) Pump Obsolescence and Block Switch Sensor (BSS) Safety Software have been broken out from the proposed E22 Build based on hardware procurement lead times and varying installation schedules.

E24 Build will address Block Switch Controller (BSC) Complex Programmable Logic Device and EMALS Component Obsolescence ECP's.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)
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 (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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												
1.1.1) ECP-0025 - T/R Fuse Detection - NonOrganic (1) *Installation 1 of 8*	- / -	- / -	2 / 1.411	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 1.411
1.1.2) ECP-Maintenance Laptop - NonOrganic (2) *Installation 2 of 8*	- / -	- / -	2 / 0.266	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.266
1.1.3) ECP-0039 Obsolescence (HPU) - NonOrganic (3) *Installation 3 of 8*	- / -	- / -	- / -	2 / 0.333	- / -	2 / 0.333	- / -	- / -	- / -	- / -	- / -	2 / 0.333
1.1.4) ECP-BSS Safety Software - NonOrganic *Installation 4 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.001	- / -	- / -	- / -	- / -	2 / 0.001
1.2.1) Non-Recurring Engineering - E22 Builds - NonOrganic - Organic(*) (4)	- / -	- / -	- / 12.242	- / 1.594	- / -	- / 1.594	- / -	- / -	- / -	- / -	- / -	- / 13.836
1.2.2) Non-Recurring Engineering - E22 Build Organic - Organic(*) (5)	- / -	- / -	- / 3.666	- / 1.378	- / -	- / 1.378	- / -	- / -	- / -	- / -	- / -	- / 5.044
2.1.1) EMALS E24 Build Hardware - NonOrganic *Installation 5 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.298	1 / 3.408	- / -	2 / 7.157	5 / 10.863
2.2.1) Non-Recurring Engineering EMALS E24 Build - NonOrganic - NonOrganic(*) (6)	- / -	- / -	- / -	- / 1.619	- / -	- / 1.619	- / 3.939	- / 3.195	- / 0.293	- / -	- / -	- / 9.046
2.2.2) Non-Recurring Engineering EMALS E24 Build - Organic - Organic(*) (7)	- / -	- / -	- / -	- / 0.532	- / -	- / 0.532	- / 0.846	- / 0.633	- / 0.213	- / -	- / -	- / 2.224
3.1.1) EMALS E26 Build Hardware - NonOrganic *Installation 6 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.639	- / -	3 / 0.639
3.2.1) Non-Recurring Engineering EMALS E26 Build - NonOrganic - NonOrganic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.540	- / 0.852	- / -	- / -	- / 1.392
3.2.2) Non-Recurring Engineering EMALS E26 Build - Organic - NonOrganic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.149	- / 0.215	- / -	- / -	- / 0.364
4.1.1) EMALS E28 Build Hardware - NonOrganic *Installation 7 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 2.250	6 / 2.250
4.2.1) Non-Recurring Engineering EMALS E28 Build - NonOrganic - NonOrganic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.728	- / 15.000	- / 18.728
4.2.2) Non-Recurring Engineering EMALS E28 Build - Organic - Organic(*)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.950	- / 3.900	- / 4.850
5.1.1) Electrical Isolation Hardware - NonOrganic *Installation 8 of 8*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.500	1 / 6.093	3 / 12.593
Subtotal: Procurement	*- / 0.000*	*- / -*	*- / 17.585*	*- / 5.456*	*- / -*	*- / 5.456*	*- / 4.786*	*- / 4.815*	*- / 4.981*	*- / 11.817*	*- / 34.400*	*- / 83.840*
Support												

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)
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 (*) Indicates the modification is being installed organically and no installation funds are required.	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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)*
6.1) PE [8]	- / -	- / -	- / 0.426	- / 0.486	- / -	- / 0.486	- / 0.453	- / 0.519	- / 0.529	- / 0.770	- / 2.473	- / 5.656
6.2) ILS [9]	- / -	- / -	- / 0.583	- / 0.666	- / -	- / 0.666	- / 0.686	- / 0.709	- / 0.718	- / 0.776	- / 2.983	- / 7.121
6.3) Support Equipment [10]	- / -	- / -	- / -	- / 11.207	- / -	- / 11.207	- / 14.354	- / 15.168	- / 14.226	- / 4.111	- / -	- / 59.066
Subtotal: Support	*- / 0.000*	*- / -*	*- / 1.009*	*- / 12.359*	*- / -*	*- / 12.359*	*- / 15.493*	*- / 16.396*	*- / 15.473*	*- / 5.657*	*- / 5.456*	*- / 71.843*
Installation												
Installation 1 of 8: ECP-0025 - T/R Fuse Detection	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.341	- / -	- / -	- / -	- / 0.000	- / 0.341
Installation 2 of 8: ECP-Maintenance Laptop	- / -	- / -	- / -	- / 0.021	- / 0.000	- / 0.021	- / 0.022	- / -	- / -	- / -	- / 0.000	- / 0.043
Installation 3 of 8: ECP-0039 Obsolescence (HPU)	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.266	- / -	- / -	- / -	- / 0.000	- / 0.266
Installation 4 of 8: ECP-BSS Safety Software	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.050	- / -	- / -	- / -	- / 0.000	- / 0.050
Installation 5 of 8: EMALS E24 Build Hardware	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.160	- / 0.426	- / 0.939	- / 1.525
Installation 6 of 8: EMALS E26 Build Hardware	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500	- / 0.500
Installation 7 of 8: EMALS E28 Build Hardware	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.500	- / 1.500
Installation 8 of 8: Electrical Isolation Hardware	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.800	- / 1.470	- / 4.270
Subtotal: Installation	*- / 0.000*	*- / -*	*- / -*	*- / 0.021*	*- / -*	*- / 0.021*	*- / 0.679*	*- / -*	*- / 0.160*	*- / 3.226*	*- / 4.409*	*- / 8.495*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**18.594**	**17.836**	**0.000**	**17.836**	**20.958**	**21.211**	**20.614**	**20.700**	**44.265**	**164.178**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 1 of 8: ECP-0025 - T/R Fuse Detection

Manufacturer Information

Manufacturer Name: General Atomics (11) | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Feb 2023					
Delivery Dates		Oct 2024					

Installation Information

Method of Implementation: AIT:: Installation Name: ECP-0025 - T/R Fuse Detection

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.341	- / -	- / -	- / -	0 / 0.000	2 / 0.341
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.341	- / -	- / -	- / -	0 / 0.000	2 / 0.341

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 2 of 8: ECP-Maintenance Laptop

Manufacturer Information

Manufacturer Name: Lakehurst, NJ (12) | Manufacturer Location: Not Specified..

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 12

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates		Dec 2022					
Delivery Dates		Dec 2023					

Installation Information

Method of Implementation: [none specified]:: Installation Name: ECP-Maintenance Laptop

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	1 / 0.021	0 / 0.000	1 / 0.021	1 / 0.022	- / -	- / -	- / -	0 / 0.000	2 / 0.043
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.021	0 / 0.000	1 / 0.021	1 / 0.022	- / -	- / -	- / -	0 / 0.000	2 / 0.043

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 3 of 8: ECP-0039 Obsolescence (HPU)

Manufacturer Information

Manufacturer Name: General Atomics	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 20

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates			Dec 2023				
Delivery Dates			Aug 2025				

Installation Information

Method of Implementation: AIT:: Installation Name: ECP-0039 Obsolescence (HPU)

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.266	- / -	- / -	- / -	0 / 0.000	2 / 0.266
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.266	- / -	- / -	- / -	0 / 0.000	2 / 0.266

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 4 of 8: ECP-BSS Safety Software

Manufacturer Information

Manufacturer Name: General Atomics | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates				Dec 2024			
Delivery Dates				Aug 2025			

Installation Information

Method of Implementation: AIT:: Installation Name: ECP-BSS Safety Software

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.050	- / -	- / -	- / -	0 / 0.000	2 / 0.050
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.050	- / -	- / -	- / -	0 / 0.000	2 / 0.050

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 5 of 8: EMALS E24 Build Hardware

Manufacturer Information

Manufacturer Name: General Atomics | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates					Nov 2025	Nov 2026	
Delivery Dates					Jul 2026	Jul 2027	

Installation Information

Method of Implementation: [none specified]:: Installation Name: EMALS E24 Build Hardware

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.160	- / -	0 / 0.000	2 / 0.160
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.426	0 / 0.000	1 / 0.426
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.939	2 / 0.939
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.160	1 / 0.426	2 / 0.939	5 / 1.525

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	2	5
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	2	5

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 6 of 8: EMALS E26 Build Hardware

Manufacturer Information

Manufacturer Name: General Atomics | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							Nov 2027
Delivery Dates							Jul 2029

Installation Information

Method of Implementation: AIT:: Installation Name: EMALS E26 Build Hardware

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.500	3 / 0.500
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.500	3 / 0.500

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	3
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 7 of 8: EMALS E28 Build Hardware

Manufacturer Information

Manufacturer Name: General Atomics | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: AIT:: Installation Name: EMALS E28 Build Hardware

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.500	6 / 1.500
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 1.500	6 / 1.500

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	6

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)

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

Installation 8 of 8: Electrical Isolation Hardware

Manufacturer Information

Manufacturer Name: General Atomics | Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 8

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates							Nov 2027
Delivery Dates							Jul 2028

Installation Information

Method of Implementation: AIT:: Installation Name: Electrical Isolation Hardware

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.800	0 / 0.000	2 / 2.800
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.470	1 / 1.470
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.800	1 / 1.470	3 / 4.270

Installation Schedule

	PYS	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3
Out	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3

Footnotes:

(1) 1.1.1) FY23 funds are required for the procurement of 2 Kits for EMALS E22 Build ECP-0025 T/R Fuse Detection.

(2) 1.1.2) FY23 funds are required for the procurement of 2 Kits for the EMALS E22 Build ECP Maintenance Laptop. Procurement installs are directly affected by PMS378 Ford-class ship schedules. The CVN79 shipset installation changed from FY 2024 to FY 2025 based on the change in Post-Shakedown Availability (PSA) schedule from dual phase to single phase.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4219 / Electromagnetic Aircraft Launch System (EMALS)	**Modification Number / Title:** 1 / Electromagnetic Aircraft Launch System (EMALS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(3) 1.1.3) FY24 funds are required for the procurement of 2 Kits for the EMALS E22 Build ECP-0039 Obsolescence Hydraulic Power Unit (HPU).

(4) 1.2.1) Non-Recurring Engineering - E22 Build - Non-Organic: FY24 finishes the following ECPs: Half-Bridge, Safety Software (BSS) and Electrical Isolation Tag-Out procedures.

(5) 1.2.2) Non-Recurring Engineering - E22 Build - Organic: Provides the associated NRE with the various E22 Build upgrades, including phased testing at the EMALS System Functional Demonstration Land-Based Test Site of hardware and software changes.

(6) 2.2.1) Non-Recurring Engineering - E24 Build - Non-Organic: Provides the associated Non-Recurring Engineering with the various E24 Build upgrades that support: 1) Block Switch Controller (BSC) Complex Programmable Logic Device for obsolescence and capacity upgrade; (2) COTS hardware Obsolescence.

(7) 2.2.2) Non-Recurring Engineering - E24 Build - Organic: Provides the associated Non-Recurring Engineering with the various E24 Build upgrades, including phased testing at the EMALS SFD Land-Based Test Site of hardware and software changes.

(8) 6.1 Production Engineering support: FY24 increase required to support two concurrent modification builds, E22 and E24.

(9) 6.2 Integrated Logistics Support: FY24 increase required to support two concurrent modification builds, E22 and E24, and depot planning efforts.

(10) 6.3 Support Equipment: FY24 increase to procure Depot Level Support Equipment required for initial stand-up of EMALS depot level repair capabilities for Ford Class ships. This includes test fixtures, test stands and tool sets for component repair, with focus on capability for high failure components.

(11) Transformer/Rectifier retrofit kit procurement lead time accounts for fabrication, assembly and kitting of custom components, modified COTS, and COTS.

(12) Procurement installs are directly affected by PMS378 Ford-class ship schedules. The CVN79 shipset installation changed from FY 2024 to FY 2025 based on the change in Post-Shakedown Availability (PSA) schedule from dual phase to single phase.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4226 / Meteorological 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

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	208.750	13.687	15.175	19.703	0.000	19.703	16.850	15.856	16.142	16.592	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	208.750	13.687	15.175	19.703	0.000	19.703	16.850	15.856	16.142	16.592	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**208.750**	**13.687**	**15.175**	**19.703**	**0.000**	**19.703**	**16.850**	**15.856**	**16.142**	**16.592**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.168	0.269	0.350	-	0.350	0.306	0.198	0.069	0.072	Continuing	Continuing
Flyaway Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Thousands)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Meteorological Equipment budget line item provides new and replacement meteorological equipment for Navy and Marine Corps Air Stations, Navy ships, Marine Corps Operational Force units and other activities required to provide weather observations and provide safety of flight capabilities. It also provides new Intelligence Preparation of the Operational Environment (IPOE) equipment for submarines. The Meteorological Equipment procurement has been coordinated with other Department of Defense (DoD) and civilian agencies.

[P40A / SP051 Satellite Receiver Upgrades (Space)]: Environmental Satellite Receiver Processor Systems (ESRP Ashore and ESRP Afloat) receive and process remotely sensed data in L and S frequency bands from several National and International Meteorology and Oceanography (METOC) Satellite families such as the Defense Meteorological Satellite Program (DMSP) Polar Satellites, the National Oceanic and Atmospheric Administration (NOAA) satellites, and the Geostationary Operational Environmental Satellite (GOES-R) Series. Integration of next generation polar and geostationary orbiting satellite families and new sensors of opportunity shall be incorporated in the hardware design and software upgrades to existing Environmental Satellite Receiver Processor Systems both afloat and ashore. Upgrades include GOES-R, Electro-Optical/Infrared Weather Systems - Geostationary (EWS-G) and Weather System Follow-On Microwave (WSF-M) ingest of METOC data.

[P40A / SP550 METOC SASC Upgrades]: Procurement of Government Off-The-Shelf/Commercial Off-The-Shelf hardware and associated software upgrades for the 68 fielded Automated Surface Observing Systems (ASOS) and the 9 fielded Supplemental Weather Radars (SWR). Both atmospheric sensing systems are essential for aviation safety, Naval Aviation operations, and resource protection. ASOS procurements under this project will provide system upgrades as required by the 2020 National Weather Service Interagency Agreement. SWR upgrades of End of Life components, software, and subsystems under this project provide System Life Extension by mitigating CYBER risk and Diminishing Manufacturing Sources and Material Shortages (DMSMS).

[P40A / SP600 Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV)]: Procures Unmanned Undersea Vehicle (UUV) ocean sensor systems. These include electrical powered, short duration (~days) Autonomous Undersea Vehicles (AUV) which carry sensors that characterize the ocean bottom (bathymetry, imagery, etc.) and long duration (~months) buoyancy driven ocean Gliders that sense ocean volume parameters (conductivity, temperature, depth, optical clarity, currents, etc.). The AUVs are preprogrammed with mission profiles and once launched are completely autonomous. The Ocean Gliders are controlled remotely from the Naval Oceanographic Office (NAVOCEANO), Stennis Space Center, Mississippi from the Glider Operations Center (GOC).

[P40A / SP660 Tactical METOC Applications]: The Naval Integrated Tactical Environmental System - Next Generation (NITES-Next) program identifies and transitions state-of-the-art decision support software and hardware technologies from the government and commercial industry's technology base, and then demonstrates and validates these capabilities before fielding. These software decision support tools provide platform, sensor, communications, and weapon systems performance assessments for warfighters in terms of their littoral and deep-strike battlespace environments. These assessments allow mission planners and warfighters, from Unit to Theater level, to optimize their sensor employment on airborne, surface, and subsurface platforms in support of Naval Composite Warfare mission areas including Undersea

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4226 / Meteorological 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		

Warfare (USW), Anti-Submarine Warfare (ASW), Mine Warfare (MIW), Amphibious Warfare (AMW), Anti-Surface Warfare (ASUW), Anti-Air Warfare (AAW), Strike Warfare (STW), Expeditionary Warfare (EXW), Electronic Warfare (EW), Information Operations (IO), Intelligence Operations (INT), Non-Combat Operations (NCO), Command, Control, Communication (CCC), and Naval Special Warfare (NSW). Performance assessments leading to improvements in operational and tactical control are conducted through a two-tiered approach: 1) Meteorological and Oceanographic (METOC) Decision Aids and, 2) Operational Effects Decision Aids (OEDAs). METOC Decision Aids consist of a series of analysis tools which characterize the physical environmental conditions of the battlespace based on the best set of physical environmental data available at the time (i.e., some combination of historical and/or real-time (or near real-time) in-situ, and numerically modeled forecast data). OEDAs use the METOC Decision Aid information by fusing it with relevant, often-classified, sensor and target data to predict how weapons and sensor systems will perform. Performance results are displayed in tabular and graphic formats integrated into net-centric visualization tools for use by mission planners, and combat/weapon system operators to develop localization plans, USW/AAW/ASUW screens, STW profiles, and AMW ingress and egress points. METOC Decision Aids and OEDAs typically use data derived from sensors developed in Project 2341 (METOC Data Acquisition) and assimilated by software produced by Project 2342 (METOC Data Assimilation and Modeling). METOC Decision Aids and OEDAs also use data obtained through direct interfaces to Navy combat systems. Cyber secure capabilities are a current emphasis required to characterize and/or predict sensor and weapons system performance in the highly complex littoral environments in support of regional conflict scenarios. It addresses multi-warfare areas, particularly shallow water ASW, NSW, and missile and air defense/strike capabilities.

*Beginning in FY23, the NITES-Next Program is being absorbed into the Meteorological Mobile Facility Next Generation (METMF NexGen) Program. METMF NextGen will be a more scalable configuration and absorbs the NITES program hardware requirement - laptops, servers and atmospheric surface sensors. The METMF NextGen program satisfies Fleet Marine Force and Joint Force Meteorology and Oceanography (METOC) employment requirements via a system of organic atmospheric sensing sub-systems through the delivery of timely, accurate and relevant METOC products and mission impact Assessments.

[P40A / SP220 Hazardous Weather Detection and Display Capability (HWDDC)]: The Hazardous Weather Detection and Display Capability (HWDDC) provides near real-time severe weather information (thunderstorms, high winds, turbulence, etc.) to ship, Strike Group, and Expeditionary Group personnel. HWDDC is a key safety of aviation and navigation enabler. HWDDC also supports efficient planning and execution of aircraft and small boat launch/recovery operations as well as severe weather dependent evolutions such as underway replenishments. The HWDDC technology is integrated with the AN/SPS-48E and AN/SPS-48G radars. HWDDC is currently installed on all Force Level ships (except CVN-78) with Fleet requirements for AN/SPY 6 Enterprise Air Surveillance Radar (EASR) hardware End of Life component upgrades, and associated software upgrades to enhance capabilities and prevent Cyber vulnerabilities in the Fleet.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4226 / Meteorological 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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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-40a	Meteorological Equipment	P-5a, P-21			- / 208.750	- / 13.687	- / 15.175	- / 19.703	- / -	- / 19.703
P-40	**Total Gross/Weapon System Cost**				**- / 208.750**	**- / 13.687**	**- / 15.175**	**- / 19.703**	**- / 0.000**	**- / 19.703**

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:
The FY2024 budget will procure the following:

(SP051) Environmental Satellite Receiver Systems (ESRP)
- (5) ESRP Afloat Modernized Systems
FY 2024 funding request was increased to support modernization efforts of the ESRP Afloat system.

(SP550) Meteorological and Oceanographic Surface-based Atmospheric Sensing Capability (METOC SASC) Upgrades
- (14) Automated Surface Observing System (ASOS) Upgrades
- (10) Supplemental Weather Radar (SWR) Upgrades

(SP600) Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV)
- (15) LBS Gliders (LBS-G)
- (10) LBS-UUV Upgrades/Backfits

(SP660) Tactical METOC Applications
- (328) The Meteorological Mobile Facility Next Generation (MetMF - NextGen) Laptops
NOTE: NITES Next has been re-named MetMF-NextGen starting in FY23

(SP220) Hazardous Weather Detection and Display Capability (HWDDC)
- (3) HWDDC EASR (SW v4.0); FY 2024 increase is due to ship availability and aligns to inventory objective.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4226 / Meteorological Equipment	Aggregated Items Title: Meteorological Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
1) SP051 Satellite Receiver Upgrades (Space)																				
1.1) ESRP AFLOAT Satellite Receiver Upgrade Kit(†)	A		167.267	30	5.018	577.810	2	1.156	589.363	2	1.179	-	-	-	-	-	-	-	-	-
1.2) ESRP AFLOAT Antenna Pedestal Upgrade Kit(†)	A		320.879	33	10.589	1,016.400	1	1.016	1,036.723	1	1.037	-	-	-	-	-	-	-	-	-
1.3) ESRP AFLOAT Modernized System (1)(†)	A		-	-	-	-	-	-	-	-	-	1,057.400	5	5.287	-	-	-	1,057.400	5	5.287
Subtotal: 1) SP051 Satellite Receiver Upgrades (Space)			**-**	**-**	***15.607***	**-**	**-**	***2.172***	**-**	**-**	***2.216***	**-**	**-**	***5.287***	**-**	**-**	**-**	**-**	**-**	***5.287***
2) SP550 METOC SASC Upgrades																				
2.1) Automated Surface Observing System (ASOS) Upgrades (2)(†)	A		57.302	467	26.760	202.067	15	3.031	206.375	16	3.302	210.571	14	2.948	-	-	-	210.571	14	2.948
2.2) Supplemental Weather Radar (SWR) Upgrades (3)(†)	A		76.338	142	10.840	151.111	9	1.360	154.666	9	1.392	158.600	10	1.586	-	-	-	158.600	10	1.586
Subtotal: 2) SP550 METOC SASC Upgrades			**-**	**-**	***37.600***	**-**	**-**	***4.391***	**-**	**-**	***4.694***	**-**	**-**	***4.534***	**-**	**-**	**-**	**-**	**-**	***4.534***
3) SP600 Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV)																				
3.1) LBS-Gliders (LBS-G) (4)(†)	A		570.603	73	41.654	231.540	9	2.084	236.171	15	3.543	241.333	15	3.620	-	-	-	241.333	15	3.620
3.2) LBS-UUV Upgrades/Backfits(†)	A		282.889	18	5.092	80.580	8	0.645	82.200	10	0.822	83.100	10	0.831	-	-	-	83.100	10	0.831
3.3) LBS-G Non-Recurring Engineering (NRE)	A		-	-	2.638	-	-	1.473	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 3) SP600 Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV)			**-**	**-**	***49.384***	**-**	**-**	***4.202***	**-**	**-**	***4.365***	**-**	**-**	***4.451***	**-**	**-**	**-**	**-**	**-**	***4.451***
4) SP660 Tactical METOC Applications																				
4.1) Naval Integrated Tactical Environmental - Next Generation Laptops	A		3.023	437	1.321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) Naval Integrated Tactical Environmental - Next Generation Sensors(†)	A		24.778	36	0.892	24.472	36	0.881	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4226 / Meteorological Equipment	Aggregated Items Title: Meteorological Equipment

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
4.3) METMF - Next Generation Laptops (5)(†)	A		-	-	-	-	-	-	-	-	-	3.171	328	1.040	-	-	-	3.171	328	1.040
4.4) METMF - Next Generation Sensors (6)(†)	A		-	-	-	-	-	-	24.918	37	0.922	-	-	-	-	-	-	-	-	-
Subtotal: 4) SP660 Tactical METOC Applications			**-**	**-**	***2.213***	**-**	**-**	***0.881***	**-**	**-**	***0.922***	**-**	**-**	***1.040***	**-**	**-**	**-**	**-**	**-**	***1.040***
5) SP220 Hazardous Weather Detection and Display Capability (HWDDC)																				
5.1) AN/UMR-1A(†)	A		137.000	14	1.918	139.740	2	0.279	-	-	-	-	-	-	-	-	-	-	-	-
5.2) HWDDC EASR (SW v4.0) (7)(†)	A		-	-	-	-	-	-	334.000	2	0.668	347.667	3	1.043	-	-	-	347.667	3	1.043
Subtotal: 5) SP220 Hazardous Weather Detection and Display Capability (HWDDC)			**-**	**-**	***1.918***	**-**	**-**	***0.279***	**-**	**-**	***0.668***	**-**	**-**	***1.043***	**-**	**-**	**-**	**-**	**-**	***1.043***
6) SP555 Production Support																				
6.1) Satellite Receiver Upgrades	A		-	-	1.098	-	-	0.076	-	-	0.132	-	-	0.333	-	-	-	-	-	0.333
6.2) LBS-UUV	A		-	-	4.472	-	-	0.256	-	-	0.268	-	-	0.263	-	-	-	-	-	0.263
Subtotal: 6) SP555 Production Support			**-**	**-**	***5.570***	**-**	**-**	***0.332***	**-**	**-**	***0.400***	**-**	**-**	***0.596***	**-**	**-**	**-**	**-**	**-**	***0.596***
7) SP777 FMP																				
7.1) Satellite Receiver Upgrades (8)	A		-	-	6.066	-	-	1.075	-	-	1.709	-	-	2.305	-	-	-	-	-	2.305
7.2) HWDDC (9)	A		-	-	0.175	-	-	0.175	-	-	0.050	-	-	0.213	-	-	-	-	-	0.213
Subtotal: 7) SP777 FMP			**-**	**-**	***6.241***	**-**	**-**	***1.250***	**-**	**-**	***1.759***	**-**	**-**	***2.518***	**-**	**-**	**-**	**-**	**-**	***2.518***
8) DSA																				
8.1) HWDDC (10)	A		-	-	0.333	-	-	0.180	-	-	0.151	-	-	0.234	-	-	-	-	-	0.234
Subtotal: 8) DSA			**-**	**-**	***0.333***	**-**	**-**	***0.180***	**-**	**-**	***0.151***	**-**	**-**	***0.234***	**-**	**-**	**-**	**-**	**-**	***0.234***
9) Consolidated Prior Year Requirements (11)																				
9.1) Consolidated Prior Year Requirements	A		136.602	658	89.884	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) Consolidated Prior Year Requirements			**-**	**-**	***89.884***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**208.750**	**-**	**-**	**13.687**	**-**	**-**	**15.175**	**-**	**-**	**19.703**	**-**	**-**	**-**	**-**	**-**	**19.703**

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

(†) indicates the presence of a P-5a

Footnotes:

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4226 / Meteorological Equipment	**Aggregated Items Title:** Meteorological Equipment

(1) 1.3) ESRP Afloat Modernized System - Primary focus for the FY2024 request is for procurement and installations of the modernized Satellite Receiver and Antenna Pedestal in support of the Meteorological and Oceanographic Surface-based Atmospheric Sensing Capability (METOC SASC) family of systems.

(2) 2.1) Automated Surface Observing System (ASOS) Upgrades - FY 2024 quantities represent Acquisition Control Units (ACU) and Data Collection Packages (DCP) (HW and SW) for 14 site upgrades.

(3) 2.2) Supplemental Weather Radar (SWR) Upgrades - FY 2024 quantities represent radome and waveguide upgrades for 10 site upgrades.

(4) 3.1) Littoral Battlespace Sensing - Gliders (LBS-G): FY2024 quantities represent Glider replacements to reach inventory objective due to lost, stolen or damaged units and the Fleet's inability to retrieve all deployed units.

(5) 4.4) METMF NexGen Laptops - Procurements are for the Mobile Variant of the METMF NexGen system and will not require any install costs. FY2024 increase is due METMF NexGen laptops 4 year technical refresh cycle. Beginning in FY23, the NITES-Next Program is being absorbed into the Meteorological Mobile Facility Next Generation (METMF NexGen) Program. METMF NextGen will be a more scalable configuration and absorbs the NITES program hardware requirement - laptops, servers and atmospheric surface sensors. The METMF NextGen program satisfies Fleet Marine Force and Joint Force Meteorology and Oceanography (METOC) employment requirements via a system of organic atmospheric sensing sub-systems through the delivery of timely, accurate and relevant METOC products and mission impact Assessments.

(6) 4.4) METMF Nex Gen Sensors - FY24 decrease is due to sensors being procured between the METMF Nex Gen laptop 4 year technical refresh cycle. Beginning in FY23, the NITES-Next Program is being absorbed into the Meteorological Mobile Facility Next Generation (METMF NexGen) Program. METMF NextGen will be a more scalable configuration and absorbs the NITES program hardware requirement - laptops, servers and atmospheric surface sensors. The METMF NextGen program satisfies Fleet Marine Force and Joint Force Meteorology and Oceanography (METOC) employment requirements via a system of organic atmospheric sensing sub-systems through the delivery of timely, accurate and relevant METOC products and mission impact Assessments.

(7) 5.2) HWDDC EASR (SW v4.0)- FY 2024 increase in units for HWDDC EASR (SWv4.0) is to align with fielding plan.

(8) 7.1) FY 2024 increase is in support of modernization efforts of the ESRP Afloat system.

(9) 7.2) (EASR SWv4.0) HWDDC - FY 2024 increase is based on installing 2 units on shipboard and lab test systems procured in FY 2023.

(10) 8.1) HWDDC (DSA) - FY 2024 increase in DSA costs are the result of a change in class SHIPALT drawing and engineering requirements for EASR (SW v 4.0).

(11) Consolidated Prior Year Requirements: Programs included in this Cost Element include: TESS/NITES (Mobile Tactical System and Hardware Components, METMF(R) NEXGEN/Subsystems, METOC Satellite Data Exploitation Readiness (FNMOC Upgrades and NAVOCEANO Upgrades), Hazardous Weather Detection & Display Capability (HWDDC)SPS-48E/G Variant, Littoral Battlespace Sensing - Autonomous Undersea Vehicles (LBS-AUV), Littoral Battlespace Sensing - (LBS-AUV) Shipset and Satellite Receiver Upgrades (Space) (FNMOC Upgrades and NAVOCEANO Upgrades), LBS-AUV(S)/Razorback, Environmental Satellite Receiver Processor (ESRP)ashore satellite receiver upgrades.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4226 / Meteorological Equipment	Aggregated Items: Meteorological Equipment

Item Number / Title [DODIC]	OCO	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) SP051 Satellite Receiver Upgrades (Space)												
1.1) ESRP AFLOAT Satellite Receiver Upgrade Kit		2021	Vertex / Indianapolis	SS / CPFF	NAVWAR	Feb 2021	Jun 2021	2	566.480	Y		Sep 2020
1.1) ESRP AFLOAT Satellite Receiver Upgrade Kit		2022	Vertex / Indianapolis	SS / CPFF	NAVWAR	Feb 2022	Jun 2022	2	577.810	Y		Sep 2021
1.1) ESRP AFLOAT Satellite Receiver Upgrade Kit		2023	Vertex / Indianapolis	SS / CPFF	NAVWAR	Feb 2023	Jun 2023	2	589.363	Y		Sep 2022
1.2) ESRP AFLOAT Antenna Pedestal Upgrade Kit		2022	Vertex / Indianapolis	SS / CPFF	NAVWAR	Feb 2022	Jun 2022	1	1,016.400	Y		Sep 2021
1.2) ESRP AFLOAT Antenna Pedestal Upgrade Kit		2023	Vertex / Indianapolis	SS / CPFF	NAVWAR	Feb 2023	Jun 2023	1	1,036.723	Y		Sep 2022
1.3) ESRP AFLOAT Modernized System (1)(†)		2024	Vertex / Indianapolis	SS / CPFF	NAVWAR	Feb 2024	Jun 2024	5	1,057.400	Y		Sep 2023
2) SP550 METOC SASC Upgrades												
2.1) Automated Surface Observing System (ASOS) Upgrades (2)		2022	National Weather Service (NWS) / MD	MIPR	NWS	Jan 2022	May 2022	15	202.067	Y		
2.1) Automated Surface Observing System (ASOS) Upgrades (2)		2023	National Weather Service (NWS) / MD	MIPR	NWS	Jan 2023	May 2023	16	206.375	Y		
2.1) Automated Surface Observing System (ASOS) Upgrades (2)		2024	National Weather Service (NWS) / MD	MIPR	NWS	Jan 2024	May 2024	14	210.571	Y		
2.2) Supplemental Weather Radar (SWR) Upgrades (3)		2022	Enterprise Electronics Corp. / AL	C / FP	NIWC LANT	Feb 2022	Jul 2022	9	151.111	Y		Nov 2020
2.2) Supplemental Weather Radar (SWR) Upgrades (3)		2023	Enterprise Electronics Corp. / AL	C / FP	NIWC LANT	Feb 2023	Jul 2023	9	154.666	Y		Nov 2021
2.2) Supplemental Weather Radar (SWR) Upgrades (3)		2024	Enterprise Electronics Corp. / AL	C / FP	NIWC LANT	Feb 2024	Jul 2024	10	158.600	Y		Nov 2022
3) SP600 Littoral Battlespace Sensing - Unmanned Undersea Vehicles (LBS-UUV)												
3.1) LBS-Gliders (LBS-G) (4)		2022	Teledyne Brown Eng / AL	Various	NAVWAR	Mar 2022	Feb 2023	9	231.540	Y		Jul 2021
3.1) LBS-Gliders (LBS-G) (4)		2023	Teledyne Brown Eng / AL	Various	NAVWAR	Mar 2023	Feb 2024	15	236.171	Y		Jul 2022
3.1) LBS-Gliders (LBS-G) (4)		2024	Teledyne Brown Eng / AL	Various	NAVWAR	Mar 2024	Feb 2025	15	241.333	Y		Jul 2023
3.2) LBS-UUV Upgrades/Backfits		2022	Huntington Ingalls Industries , HII / MA	C / FFP	NAVWAR	Mar 2022	Jun 2022	8	80.580	Y		Dec 2021
3.2) LBS-UUV Upgrades/Backfits		2023	Huntington Ingalls Industries , HII / MA	C / FFP	NAVWAR	Mar 2023	Jun 2023	10	82.200	Y		Dec 2022
3.2) LBS-UUV Upgrades/Backfits		2024	Huntington Ingalls Industries , HII / MA	C / FFP	NAVWAR	Mar 2024	Jun 2024	10	83.100	Y		Dec 2023
4) SP660 Tactical METOC Applications												

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4226 / Meteorological Equipment	Aggregated Items: Meteorological Equipment

Item Number / Title [DODIC]	OCO	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
4.2) Naval Integrated Tactical Environmental - Next Generation Sensors		2022	Intellisense Systems, Inc. / CA	MIPR	AIRFORCE	Mar 2022	Jun 2022	36	24.472	Y		Jan 2022
4.3) METMF - Next Generation Laptops (5)		2024	TBD / TBD	C / TBD	TBD	Mar 2024	Jun 2024	328	3.171	Y		Jan 2024
4.4) METMF - Next Generation Sensors (6)		2023	Intellisense Systems, Inc. / CA	MIPR	Air Force	Mar 2023	Jun 2023	37	24.918	Y		Jan 2022
5) SP220 Hazardous Weather Detection and Display Capability (HWDDC)												
5.1) AN/UMR-1A		2022	BCI / NJ	C / CPFF	NIWC PAC	Apr 2022	Apr 2023	2	139.740	Y		Apr 2020
5.2) HWDDC EASR (SW v4.0) (7)		2023	BCI / NJ	C / CPFF	NIWC PAC	Apr 2023	Apr 2024	2	334.000	Y		Apr 2020
5.2) HWDDC EASR (SW v4.0) (7)		2024	BCI / NJ	C / CPFF	NIWC PAC	Apr 2024	Apr 2025	3	347.667	Y		Apr 2021

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4226 / Meteorological Equipment	**Aggregated Items:** Meteorological Equipment

Items (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE
										Calendar Year 2021												Calendar Year 2022									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1) SP051 Satellite Receiver Upgrades (Space)																															
1.3) ESRP AFLOAT Modernized System [1]																															
	1	2024	NAVY	5	0	5																									5
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4226 / Meteorological Equipment	**Aggregated Items:** Meteorological Equipment

Items (Units in Each)							Fiscal Year 2023												Fiscal Year 2024												BALANCE
										Calendar Year 2023												Calendar Year 2024									
COO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1) SP051 Satellite Receiver Upgrades (Space)																															
1.3) ESRP AFLOAT Modernized System [1]																															
	1	2024	NAVY	5	0	5																	A -	-	-	-	5				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	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4226 / Meteorological Equipment	**Aggregated Items:** Meteorological Equipment

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	Vertex - Indianapolis			TBD	0	4	4	8	0	4	4	8

"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 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4248 / Legacy Airborne MCM

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604373N

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	101.728	4.443	4.689	12.202	0.000	12.202	10.786	12.116	12.356	12.269	-	170.589
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	101.728	4.443	4.689	12.202	0.000	12.202	10.786	12.116	12.356	12.269	-	170.589
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**101.728**	**4.443**	**4.689**	**12.202**	**0.000**	**12.202**	**10.786**	**12.116**	**12.356**	**12.269**	**-**	**170.589**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.474	0.425	0.284	-	0.284	0.288	0.299	0.299	-	-	2.069
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airborne Mine Countermeasures (AMCM) Equipment is currently deployed on MH-60S and MH-53E helicopters to counter the threat of sea mines. The Navy has identified the MH-53E helicopter and its associated AMCM systems for divestment starting in FY 2024 and completing in FY 2027. The sunset coincides with the fielding of the Mine Countermeasures (MCM) Mission Package (MP) onboard Littoral Combat Ships (LCS) with first deployment starting in FY 2025. Due to the respective divestment and fielding, AMCM systems on the MH-60S helicopters will have increased usage as they replace the MH-53E AMCM systems. Fleet usage has increased resulting in ramp-up of sustainment and depot activities in FY 2024. In-Service teams are addressing obsolescence and AMCM system updates. The equipment is divided into three categories -- minesweeping, minehunting, and mine neutralization.
(1) Minesweeping is performed by mechanical or influence sweeping systems deployed from the MH-53E helicopter. 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 to detonate.
(2) In minehunting, mine-like objects are located and classified (usually by means of high resolution sonar or optical systems). Current systems in use by the fleet include, AN/AES-1 Airborne Laser Mine Detection System (ALMDS) on the MH-60S helicopter and the AN/AQS-24C minehunting sonar on the MH-53E helicopter.
(3) Finally, neutralize mines using explosive devices. This includes the AN/ASQ-235 Archerfish neutralizer on the MH-60S and the AN/ASQ-232A SeaFox neutralizer on the MH-53E helicopter.
AMCM squadrons currently have mechanical, magnetic, and acoustic sweeping capabilities, mine surveillance, marking and neutralization capabilities. Current world mining threats have resulted in increased operational demand of systems to perform AMCM missions. Fleets require increased AMCM capability to address warfighting gaps and the reliability, maintainability, and availability of critical systems to perform world-wide operations. The AMCM program provides systems to address a global threat and serve to deter placement of sea mines. Lack of AMCM capability will result in loss of the Fleet's ability to conduct freedom of maneuver and increased risk to ships operating in mine threat areas.

[P5 / MODIFICATIONS]: Funds support the modification and product improvement of AMCM systems to accommodate replacement of subsystems/components because of safety, maintainability, reliability and obsolescence issues. Engineering Change Proposals (ECPs) generated from obsolescence issues and parts failures are necessary to sustain the operational availability and reliability of the Fleet's AMCM program through end of service life. Additionally, as the systems have aged, operational and intermediate level maintenance actions on the systems have failed to return assets to Ready for Issue (RFI) condition. Depot level overhauls of these systems and components are required to ensure the systems are sustainable through the end of their service life. ECPs are analyzed, prioritized and screened to accommodate replacement of subsystems/components. Funds will also support upgrades of hardware to maintain their system's operational availability as more demanding operational support and software requirements are levied on aging hardware. Cybersecurity upgrades are required to ensure compliance with Department of Navy's Risk Management Framework process.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4248 / Legacy Airborne MCM	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0604373N
Line Item MDAP/MAIS Code: N/A		

- AN/AQS-24 Sonar: Funds support an in-service mine detection system that detects, classifies, localizes, and identifies sea mines. The sonar sensor is deployed from the MH-53E helicopter and is used against moored and bottom mines. AN/AQS-24B provides High Speed Synthetic Aperture Sonar (SAS). AN/AQS-24C provides Volume Search Capability.

- AN/ASQ-235 Airborne Mine Neutralization System (AMNS): Funds support a mine neutralization system that provides a remotely controlled expendable mine neutralization device deployed from the MH-60S helicopter platform to reacquire, identify, and neutralize moored and proud sea mines.

- AN/AES-1 Airborne Laser Mine Detection System (ALMDS): Funds support a mine detection system that provides a light detection and ranging (LIDAR) system for rapid detection, classification, and localization of near surface sea mines. It is deployed on the MH-60S helicopter. This funding line supports modification and product improvements of ALMDS to accommodate obsolescence issues.

[P5 / S0020 MODIFICATIONS]: Funds support the modification and product improvement of AMCM systems to accommodate replacement of subsystems/components because of safety, maintainability, reliability and obsolescence issues. Engineering Change Proposals (ECPs) generated from obsolescence issues and parts failures are necessary to sustain the operational availability and reliability of the Fleet's neutralization through end of service life. Depot level overhauls of the neutralization systems and components are required to ensure the systems are sustainable through the end of their service life. ECPs are analyzed, prioritized and screened to accommodate replacement of subsystems/components. Funds will support upgrades of hardware to maintain their system's operational availability as more demanding operational support and software requirements are levied on hardware. Cybersecurity upgrades are required to ensure compliance with Department of Navy's Risk Management Framework process.

- AN/ASQ-235 Airborne Mine Neutralization System (AMNS) Archerfish: Funds support a mine neutralization system that provides a remotely controlled expendable mine neutralization device deployed from the MH-60S helicopter platform to reacquire, identify, and neutralize moored and proud sea mines. Updates are planned for the launch and handling system.

- AN/AES-1 Airborne Laser Mine Detection System (ALMDS): Funds support a mine hunting system that provides organic rapid wide-area reconnaissance and assessment of mine threats in littoral zones, confined straits, choke points, and amphibious objective areas for Carrier Strike Groups and Expeditionary Strike Groups. ALMDS is a light detection and ranging (LIDAR) system for high area coverage, rapid detection, classification, and localization of near surface and moored sea mines operating from the MH-60S helicopter platform. This funding line supports modification and product improvements of ALMDS to accommodate obsolescence issues identified in the receiver section as well as other major components.

[P5 - 2 / NSAM]: Net-Centric Sensor Analysis for MIW (NSAM) will be the replacement for the Organic Post Mission Analysis (OPMA) system, which provides post mission analysis (PMA) capabilities for the Airborne Laser Mine Detection System (ALMDS) and the Airborne Mine Neutralization System (AMNS) and a separate module for contact management. NSAM will be the single tactical and environmental PMA system for all Mine Warfare (MIW) sensor data and will provide integrated contact management capabilities. FY 2024-FY 2026 NSAM funding supports hardware procurement to address Diminishing Manufacturing Sources and Material Shortages (DMSMS), obsolesces issues, and processing power requirements.

[P5 - 2 / Hardware]: Net-Centric Sensor Analysis for MIW (NSAM) will be the replacement for the Organic Post Mission Analysis (OPMA) system, which provides post mission analysis (PMA) capabilities for the Airborne Laser Mine Detection System (ALMDS) and the Airborne Mine Neutralization System (AMNS) and a separate module for contact management. NSAM will be the single tactical and environmental PMA system for all Mine Warfare (MIW) sensor data and will provide integrated contact management capabilities. FY 2024-FY 2026 NSAM funding supports hardware procurement to address DMSMS, obsolesces issues, and processing power requirements. Funding supports partial replacement of existing hardware.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4248 / Legacy Airborne MCM

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604373N

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 / MODIFICATIONS				- / 101.728	- / 4.443	- / 4.689	- / 11.401	- / 0.000	- / 11.401
P-5	2 / NSAM				- / 0.000	- / 0.000	- / 0.000	- / 0.801	- / 0.000	- / 0.801
P-40	**Total Gross/Weapon System Cost**				**- / 101.728**	**- / 4.443**	**- / 4.689**	**- / 12.202**	**- / 0.000**	**- / 12.202**

*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 2024 funding supports modifications, product improvements, and engineering change proposals (ECPs) of the AN/AES-1 Airborne Laser Mine Detection System (ALMDS), AN/ASQ-235 Archerfish and associated Launch and Handling System (LHS). As the fleet transitions from MH-53E helicopter systems to the MH-60S AMCM systems, flight hours for ALMDS and AN/ASQ-235 Archerfish are expected to increase due to these systems replacing the legacy systems. Both of these AMCM systems entered service in 2017 and a number of components have been identified for replacement due to obsolescence. Replacement will improve reliability, availability, and performance.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4248 / Legacy Airborne MCM	**Item Number / Title [DODIC]:** 1 / MODIFICATIONS
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	101.728	4.443	4.689	11.401	0.000	11.401
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	101.728	4.443	4.689	11.401	0.000	11.401
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**101.728**	**4.443**	**4.689**	**11.401**	**0.000**	**11.401**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - S0020 MODIFICATIONS Cost																		
Recurring Cost																		
1.1.1) S0020 - MODIFICATION	-	-	101.728	-	-	4.443	-	-	4.689	-	-	11.401	-	-	0.000	-	-	11.401
Subtotal: Recurring Cost	-	-	*101.728*	-	-	*4.443*	-	-	*4.689*	-	-	*11.401*	-	-	*0.000*	-	-	*11.401*
Subtotal: Hardware - S0020 MODIFICATIONS Cost	**-**	**-**	***101.728***	**-**	**-**	***4.443***	**-**	**-**	***4.689***	**-**	**-**	***11.401***	**-**	**-**	***0.000***	**-**	**-**	***11.401***
Gross/Weapon System Cost	**-**	**-**	**101.728**	**-**	**-**	**4.443**	**-**	**-**	**4.689**	**-**	**-**	**11.401**	**-**	**-**	**0.000**	**-**	**-**	**11.401**

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4248 / Legacy Airborne MCM	**Item Number / Title [DODIC]:** 2 / NSAM
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	0.801	0.000	0.801
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	0.801	0.000	0.801
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**0.801**	**0.000**	**0.801**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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																		
Non Recurring Cost																		
1.1.1) NSAM	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.801	-	-	0.000	-	-	0.801
Subtotal: Non Recurring Cost	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.801*	-	-	*0.000*	-	-	*0.801*
Subtotal: Hardware - Hardware Cost	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.801***	**-**	**-**	***0.000***	**-**	**-**	***0.801***
Gross/Weapon System Cost	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.000**	**-**	**-**	**0.801**	**-**	**-**	**0.000**	**-**	**-**	**0.801**

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4250 / Common Control System

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2.478	1.470	1.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	5.558
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2.478	1.470	1.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	5.558
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2.478**	**1.470**	**1.610**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**5.558**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPN funding is required to procure and modify Common Control System (CCS) software.

FY 2023 is the last year of funding in this BLI 4250. CCS efforts for Autonomy and Executive Control of multiple unmanned aircraft previously funded under BLI 4250 have been transferred to BLI 4604 - "Architect and Cap for Autonomy in the Nav Enter (ARCANE)".

This line item provides funding to CCS Software Production, Software/Production Engineering Support and Integrated Logistics Support for all platforms. The primary mission of CCS is to provide common control across the Navy's Unmanned Systems (UxSs) portfolio to add scalable and adaptable warfighting capability, implement robust cyber security attributes, leverage existing government owned products, eliminate redundant software development efforts, consolidate product support, encourage innovation, improve cost control and enable rapid integration of unmanned system (UxS) capabilities across Aviation, Surface, Sub-Surface, and Ground domains.

CCS is a ship/shore/airborne/expeditionary based common control system that provides Vehicle Management (VM) and Mission Management/Mission Planning (MM/MP) capabilities for Naval Group 1 through 5 Unmanned Air Vehicles (UAVs) as well as other domain UxSs. VM is the software that allows the operator to control the UxS. MM/MP is the software that allows the operator to create mission plans and control the UxS's sensors and payloads. CCS software is based on the Society of Automotive Engineers (SAE) Unmanned Control Segment (UCS) architecture which is a service oriented open architecture that is modular and scalable to meet evolving Service requirements and is also supportive of safety/airworthiness certification and cybersecurity certification and accreditation.

This program delivers CCS capability that enables the flexibility for Ground Control Systems (GCS) that could be ship, shore, airborne, or expeditionary based to operate multiple and dissimilar Naval UxSs. CCS includes a common framework, user interface, and common components that are integrated and tested with legacy platform components. CCS is constructed with an open and modular business model with robust cybersecurity implementation and provided as Government Furnished Equipment (GFE) to UxS contractors as required.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4250 / Common Control System

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Common Control System				- / 2.478	- / 1.470	- / 1.610	- / -	- / -	- / -
P-40	**Total Gross/Weapon System Cost**				**- / 2.478**	**- / 1.470**	**- / 1.610**	**- / 0.000**	**- / 0.000**	**- / 0.000**

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:
FY 2024 funding decrease from FY 2023 request reflects halting of all CCS efforts under the 4250 BLI. CCS efforts for Autonomy and Executive Control of multiple unmanned aircraft previously funded under BLI 4250 have been transferred to BLI 4604 - "Architect and Cap for Autonomy in the Nav Enter (ARCANE)".

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4250 / Common Control System	Aggregated Items Title: Common Control System

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) Common Control System																				
1.1) Software Production	A		-	-	0.497	-	-	0.291	-	-	0.297	-	-	-	-	-	-	-	-	-
1.2) Software/ Production Engineering Support	A		-	-	1.787	-	-	1.082	-	-	1.216	-	-	-	-	-	-	-	-	-
1.3) Integrated Logistics Support	A		-	-	0.194	-	-	0.097	-	-	0.097	-	-	-	-	-	-	-	-	-
Subtotal: 1) Common Control System			**-**	**-**	***2.478***	**-**	**-**	***1.470***	**-**	**-**	***1.610***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total			**-**	**-**	**2.478**	**-**	**-**	**1.470**	**-**	**-**	**1.610**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	348.789	62.496	82.118	82.115	0.000	82.115	113.003	133.709	140.261	131.545	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	348.789	62.496	82.118	82.115	0.000	82.115	113.003	133.709	140.261	131.545	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**348.789**	**62.496**	**82.118**	**82.115**	**0.000**	**82.115**	**113.003**	**133.709**	**140.261**	**131.545**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.296	1.072	1.222	-	1.222	0.975	0.761	0.911	-	-	5.237
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[P40A / S7039 - Aviation Data Warehouse Environment]: Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) (S7039): DECKPLATE is the next generation of Naval Aviation Logistics Data Analysis (NALDA) and will interface with Navy Enterprise Resource Planning (ERP) data and Logistics IT source systems as the Naval Aviation Business Warehouse. It provides the technological improvements and process streamlining required to enable a cost wise transition from the NALDA program to the capabilities required in the Navy Digital Transformation Road Map. DECKPLATE is a Commercial Off the Shelf (COTS) intensive system under which numerous stovepipe legacy systems will migrate to create an integrated data environment through the use of Data Warehouse tools and concepts in support of Naval aviation logistics needs. This is being accomplished by upgrading current Naval Aviation logistics reporting mechanisms through the procurement and installation of a fully-licensed, warranted, secure, standardized, COTS, user-friendly, web-based relational database environment. Funding is required to procure the necessary hardware, networking, systems, applications software, infrastructure, and associated engineering and installation support.

[P40A / S7041 - NFSA HW/SW]: Naval Aviation Logistics Command Management Information System/NAVAIR Fleet System Array (NALCOMIS/NFSA): Funding supports procurement of HW/SW for technical refresh for both shipboard and afloat units. NALCOMIS (also identified as Naval Air Systems Command Fleet Systems Array (NFSA)) is responsible for implementation of Mid-Tier Servers at 55 sites both shipboard and shore based. These Mid-Tier Servers replicate data from the Organizational and Intermediate level maintenance activities to DECKPLATE to provide near-real time data to decision makers at all levels. The Mid-Tier also allows data to be pushed from Headquarters activities to the fleet to support maintenance activities.

[P40A / S7042 - JTDI HW/SW]: Joint Technical Data Integration (JTDI): Funding supports procurement of JTDI for installation on all Carrier (CV) and Amphibious Assault (L) class ships and up to Navy/Marine Corps aviation activities. JTDI is a digital technical data access, delivery and local O&I level library management toolset and enabler of condition-based maintenance processes. It improves accuracy and timeliness of weapon system repair manuals and other technical data delivery and minimizes the Fleet's library management burden. JTDI reduces maintenance man hours with savings Return on Investment (ROI) of 2.5:1 and savings/avoidance ROI of 9.5:1. JTDI also automates the movement of CBM+ data generated by smart weapon systems deployed around the globe, consolidates and makes platform sensor data available for automated ingest into the Standard Data Repository which provides modern, highly integrated analytic capabilities to enable condition-based maintenance processes, improve aircraft readiness, and identify opportunities to reduce weapon system maintenance costs. JTDI data transport capabilities support the future state for Logistics IT and Readiness: Naval Product Lifecycle Management (N-PLM), Naval Maintenance, Repair, and Overhaul (N-MRO), Naval Supply Chain Management (N-SCM), and Integrated Data Environment (IDE).

[P40A / S7048 - CBM+ HW/SW]: Condition Based Maintenance Plus (CBM+) (S7048): Condition Based Maintenance Plus (CBM+) The CBM+ solution is an initiative which provides Naval Aviation Enterprise with common enabling capabilities which deliver timely data-driven decisional information to optimize aircraft availability and materiel readiness by incorporating health and usage leading indicators into the failure mode mitigation process. These CBM capabilities enable the Warfighters to more efficiently meet mission requirements through automated analysis and decision making processes. The CBM+ Initiative

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	
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		

increases readiness through streamlined maintenance processes, actionable logistics/engineering data and integrated analytics not previously available, enabling engineers and acquisition professionals to support system improvements based on CBM+ acquired data and analytic results. CBM+ provides the required infrastructure and storage solutions within an Enterprise common environment needed to store and analyze weapon system sensor data to extend the life of current and new acquisition aircraft, while scaling CBM+ across NAVAIR programs and realizing savings from reductions in field (organizational and intermediate) maintenance actions, reduced functional check flight hours, mishap mitigation, and reduced parts usage.

[P40A / S7070 FRC ASM upgrades]: Sustainment Vision 2020 will procure Advanced Skills Management (ASM) software updates from NUWC Keyport that will provide interfaces with the Defense Civilian Personnel Data System (DCPDS) and Time and Attendance system (TAA). Software procurement will include enhancements for Total Workforce Readiness Query's, additional ADHOC reports and procurement of an enterprise view or query of all ASM users at the Organizational, Intermediate and Depot level of maintenance. Procurement will also establish interfaces for Optimized Organizational Maintenance Activity (OOMA) for Organizational Level, Organizational Intermediate Maintenance Activity (OIMA) for Intermediate Level and NAVAIR Depot Maintenance System (NDMS) for Depot level.

[P40A / S7049-Digital Production Floor]: Commander Fleet Readiness Center (COMFRC) Digital Production Floor (DPF): DPF initiative brings Navy Aviation Depots into the 21st Century by removing paper from the Production floor and integrating key Quality elements to support a true digital North Star to ensure viability and alignment with broader Naval Logistics IT (LOG-IT) enterprise initiatives to realize a fully unified digital sustainment capability. This capability aligns and leverages ongoing Digital Thread /Aviation Product Lifecycle Management (AvPLM) efforts to transform our existing way of doing business and align us with commercial best practices for digitization of business processes. Current paper based processes have demonstrated inefficiencies and administrative delays in performance and quality of product on Depot level repair turnaround times.

[P40A / S7050-Digital Toolboxes]: Commander Fleet Readiness Center (COMFRC) Digital Toolboxes: In alignment with the COMFRC Digital Production Floor (DPF) and broader Naval Logistics IT (LOG-IT) enterprise initiatives, this initiative will deploy standardized digital tool boxes to Navy Aviation Depots. This capability aligns and leverages ongoing Digital Thread /Aviation Product Lifecycle Management (AvPLM) efforts to transform our existing way of doing business and align us with commercial best practices for digitization of business processes. In addition to fielding the tool boxes, the intent is to implement common business methodologies across Depot activities, subsequently capturing the data collected into the LOG-IT enterprise architecture for iterative planning, analysis, reporting and metrics supporting leadership objectives.

[P5 / CSEL - SY060]: COMBAT SURVIVOR EVADER LOCATOR - SY060 (Baseline)
CSEL is an ACAT III Joint Service Program with the USAF as lead service. The CSEL Radio system provides US combat forces with secure, encrypted, low probability of exploitation, two-way, over the horizon, near real time
databurst communications with integral precise geopositioning; and non-secure, unencrypted line-of-sight voice and beacon capability to support survival, evasion, and personnel recovery operations. The user segment of the CSEL
system is composed of a battery operated Hand Held Radio (HHR) (AN/PRQ-7), a Radio Set Adapter (J-6431/PRQ-7), a Global Positioning System (GPS) antenna and coupler, and a laptop Central Processing Unit with software for
loading the HHR CSEL Planning Computer. CSEL is currently in sustainment.

[P5 / Survival Communication Devices - SY063]: SURVIVAL COMMUNICATION DEVICES - SY063 (Baseline)
Survival communication devices funding supports the USN and USMC requirement for a survival radio to be carried during all non-combat and combat operations. It includes a Non-Combat Survival Radio (NCSR) for non-combat operations and a separate radio for combat operations, Combat Survival Radio (CSR). By augmenting aircraft ejection seat locator beacons with auto-activate features in the Combat and Non-Combat radios, this funding also supports the FY21 NDAA requirement to mitigate "aircraft ejection seat locator beacons that are inoperable in water or wet conditions."

Legacy NCSRs are outdated and have not kept up with satellite rescue technology capability, and face critical obsolescence. A Commercial Off The Shelf (COTS) NCSR replacement will be procured to augment aircraft radio beacon sets. It will have the capability to mitigate delayed recovery of incapacitated aircrew in the maritime environment using auto-activate features.

Funding will procure the next generation CSR, which will replace the legacy Combat Survivor Evader Locator (CSEL). This is the next generation/continuation of SY060. Legacy CSELs are outdated and have obsolescence and performance issues. The USAF-led Joint Program Office is currently developing a next-generation Combat Survival Radio (CSR) that will be used by multiple services enabling economic order pricing and interoperability

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	
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		

[P5 / LEP- SY080]: LASER EYE PROTECTION (LEP) - SY080 (Baseline)
The LEP program is a family of eye protection solutions that will provide Fixed Wing Ejection, Fixed Wing Non-Ejection and Rotary Wing/Tilt Rotor pilots and aircrew with multiple wavelength fixed threat and hazard protection during day and night unaided and Night Vision Goggle aided missions. LEP will consist of a suite of products to include spectacles, goggles, and visors. The LEP (visor, spectacle or goggle format) is being developed for compatibility with all required Aviation Life Support Equipment (ALSE) as well as cockpit displays, night vision, and fire control systems.

[P5 / IJHMCS - SY215]: IMPROVED JOINT HELMET MOUNTED CUEING SYSTEM (IJHMCS) - SY215 (Baseline)
Procurement of the upgraded helmet mounted solution for the F/A-18E/F and EA-18G aircraft. The Improved Joint Helmet Mounted Cueing System (IJHMCS) will mitigate aircrew back and neck strain/fatigue and replace the JHMCS Helmet Mounted Day Display and Night Vision Cueing Device (NVCD) with a single day/night, digital color-capable helmet-mounted display.

[P5 / HPH - SY505]: HEARING PROTECTION HELMET (HPH) - SY505 (Baseline)
Hearing loss is a significant cost driver across DoD in veteran disability compensation. Noise levels in Naval Aviation environments present a risk to permanent hearing loss in aircrew and aviation maintainers, if not mitigated. Joint efforts are underway to incrementally field improved technology solutions as they become available to better mitigate operator impacts. Increment 1 Double Hearing Protection (DHP) solutions were developed for aviation maintainers and began fielding in 2011. Increment 2 Triple Hearing Protection (THP) solutions will further improve noise reduction for more challenging environments. THP variants are also incorporating flight deck communications capability. Increment 3 Hearing Protection Helmet (HPH) will address associated design trade improvements, including weight reduction and center of gravity adjustments to reduce neck stresses, improved impact liner, night vision/cueing mounts, potential incorporation of maturing technologies such as active digital noise reduction/cancellation, Face-to-Face communication, and F/A-18, F-35 ICS Interface, and Flight Deck Radio/Sound Powered Phone (SPP) communication capability.

[P5 / AMHHP - SY510]: AVIATION MAINTAINER HEAD & HEARING PROTECTION - SY510 (Baseline)
Protection of maintainers from hazardous head and noise conditions and materials associated with aviation, as well as to ensure maintainer safety and optimize their performance in austere environments to support quality of aircraft maintenance for warfighting. The program involves analysis, modification and qualification of COTS, helmet and low-profile hearing protection and other Personal Protective Equipment (PPE).

[P5 / HMR - SY141]: Helmet/Mask Regulator (HMR) - SY141 (Baseline)
The Helmet Mask Regulator Redesign (HMR) will provide for sensing, monitoring, and alerting of physiological status of aircrew as determined necessary by the Physiological Episode (PE) Root Cause & Corrective Action (RCCA) team. The system will monitor the physiological status of the aircrew and integrate mask cavity pressure sensors, Partial Pressure of Oxygen (PPO2) delivery measurements, and alerts when critical thresholds are detected. This program determines what improvements are needed and develops the material solution. Through RCCA, it has been determined that measuring the gas contents and pressure within the oxygen mask is a key part to understanding a sub-set of physiological conditions of Naval Aviators in flight. The integration of a single piece of hardware containing an oxygen sensor, a carbon dioxide sensor, and a mask pressure sensor into the Navy's existing MBU-23 oxygen mask assembly to collect data will inform a mask/regulator system redesign, and improvements covered under this issue. The closeout of RCCA action items is paramount to the Naval Aviation Enterprise's efforts in mitigating PE, restoring confidence in the aircraft, and most importantly, keeping our USN and USMC aircrew safe. Quantity and unit cost will be finalized once a solution has been determined.

[P5 / EVA - SY217]: ENHANCED VISUAL ACUITY (EVA) - SY217 (Baseline)
EVA provides an advanced night vision/Helmet Mounted Display capability to address validated capability gaps in low and no light illumination levels (night vision) and improved visual situational awareness in Degraded Visual Environment (DVE), which continues to drive substantial losses of aircraft and aircrew (37 aircraft, 106 lives lost since 2001). EVA introduces digital night vision capability to Aircrew, an improvement over current analog night vision goggles. The program addresses Night Vision Goggle technology shortfalls (low light, halo and blooming effects in urban environments and reduced contrast associated with scintillation), and the digital architecture of the system provides the ability to field improved tactical advantages incrementally. EVA will have the ability to be upgraded to serve as the heads-up display platform for presentation of virtual imagery and symbology overlay from fused sensor data that will mitigate DVE.

[P5 / MH-60R/A Head & Neck Injury Mitigation (HNIM) - SY139]: MH-60R/S Head & Neck Injury Mitigation (HNIM) - SY139 (Baseline)
HNIM incorporates vibration dampers into MH-60R/S cockpit seats and modifications of rotary wing helmets and vests to reduce back bulk and weight to reduce back and neck strain and fatigue. Quantity and unit cost will be finalized once a solution has been determined.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	
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		

[P5 / Physiological Monitoring - SY127]: PHYSIOLOGICAL MONITORING - SY127 (Baseline)
Directly addresses Naval Aviation's #1 Safety concern, PHYSIOLOGICAL EPISODES (PE), by measuring human performance and alerting Aircrew preventing injury, death, and/or damage to aircraft. Although the occurrence rate
is declining, there has been no definitive single causal factor identified for the Physiological Episodes being experienced by pilots using On-Board Oxygen Generation Systems (OBOGS) components. Consequently, in addition to the
OBOGS hardware improvements, The Physiological Episodes Action Team considers operator physiological monitoring to be a key component of the total protection solution set. This initiative is leveraging Defense Innovation Unit
and Cooperative Research and Development Agreements to assess mature technologies and products to field a system that monitors pilot physiological parameters. The system will constantly monitor biometrics and pilot performance to identify state of health or performance degradation that may result in loss of consciousness or ability to safely conduct the flight. This system will provide the operator with enough advance warning to accurately assess the situation and safely recover the aircraft. Multiple potential solutions are being evaluated to select a best of breed or blended solution. Since the aircrew responses to PE are so diverse, the solutions' data computation and warning algorithms will need to be iteratively adjusted over time using extensive operator usage feedback data.

[P5 / ASIP - SY126]: AIRCREW SYSTEMS IMPROVEMENT PROGRAM (ASIP) - SY126 (Baseline)
ASIP is modeled after the platform Operational Safety Improvement Program (OSIP) concept, with the objective of supporting the human (aircrew and aviation maintainers) as the weapon system platform. The Aircrew Systems portfolio exceeds 1000 products. The majority of these products are Aviation Life Support Systems/Equipment (ALSS/E) that directly affect aircrew and aviation maintainer personnel safety and survivability, both in combat and non-combat operations. Other systems enhance aircrew and maintainer performance as the human element of the total weapon platform by enabling effective warfighting at night and physical endurance over extended missions. As legacy products age and missions are modified to address evolving threats and tactics, Fleet operators identify several items each year that must be modified to ensure safety and survivability, as well as address obsolescence. ASIP funding enables the program office to proactively manage or rapidly react to discrepancies and deficiencies across the broad portfolio. ASIP provides the resources to correct such issues via lower scope Non-Recurring Engineering (NRE) efforts and Engineering Change Proposals (ECPs), and/or qualification and procurement of improved capability commercial off-the-shelf (COTS), Non-Developmental Items (NDI) from industry or other service counterparts. Correction and enhancement efforts range from minor adjustments of survival kit items (such as brighter, lighter and longer-lasting illumination devices and signaling rescue devices) to expeditiously identify and field Aircrew Systems safety-related deficiencies. ASIP enables the program office to address smaller scope, but critical Fleet issues that are safety of flight issues. This model enables the program office to shift resources as necessary to be more agile in addressing issues, based upon assessment of Fleet prioritization of identified issues combined with the level of improvement that a potential solution can provide and the degree of maturity of that solution (readiness to be fielded).

[P5 - 2 / S6003 Aviation Maintenance Advancement Solution]: Aviation Maintenance Advancement Solutions (AMAS) program integrates the Portable Electronic Maintenance Aid (PEMA) with the Standard PEMA Cyber Solution (SPECS) programs. The AMAS program will continue to deliver PEMA capability by providing Commercial-Off-The-Shelf (COTS) hardware integrated with Standard PEMA Cyber Solution (SPECS) Government-Off-The-Shelf (GOTS) software solution. AMAS creates an integrated, cost efficient maintenance and logistics support system for the warfighter. PEMA hardware is an unclassified support equipment device used by maintenance personnel to perform maintenance, inspection, fault diagnosis, and repair tasks in direct support of a Weapon System. AMAS is introducing virtual assistance capability through Augmented Reality Remote Maintenance Support System (ARRMSS) technology to connect fleet maintenance technicians with Subject Matter Experts (SMEs) virtually for technical assistance on weapons system troubleshooting and repair. ARRMSS provides virtual assistance from SMEs to the maintainer in real-time through voice/chat communication and overlaid holograms within the fleet technician's field of view allowing SME guidance on the equipment being worked. PEMA hardware serves as a host for Interactive Electronic Technical Manuals, Automated Logistics Environment and Diagnostic/Prognostic applications. SPECS software takes advantage of advance information technologies available in areas of personal computer networks, data communications, automatic Technical Publication and Software Information Assurance Availability Alert (IAVA) distribution, Host Based Security System (HBSS) Common Access Card (CAC)/Public Key Infrastructure (PKI), Full Disk Encryption and Assured Compliance Assessment Solution (ACAS). The employment of these technologies enables the warfighter to focus on the mission while realizing increased efficiencies, improved security compliance, and reduction in sustainment costs over time.

[P3A / ALIS - Program Support]: Autonomic Logistics Information System (ALIS) Ship Integration - CVN, LHD, LHA: ALIS controls all aspects of F-35 mission planning, maintenance, logistics, and supply functions. Funding for ALIS Ship Integration efforts (Programmatic Support, Engineering Support Services, Material, and Installation efforts) will enable shipboard (CVN, LHD, LHA) modification, classified/ unclassified network integration, the installation of ALIS-related shipboard equipment, ALIS security accreditation, and verification of ALIS operation and functionality to include the integration of ALIS with shipboard Command, Control, Communications and Computers & Intelligence (C4I) Networks and the Prognostic Health Management (PHM) downlink. At the completion of each installation, the respective

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	
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		

ship's ALIS will enable the F-35 system to provide, at the appropriate security levels via Navy Local Area Networks (LANs)/Wide Area Networks (WANs), the ability to transfer time-sensitive data for logistics support, mission planning, mission execution, and mission debriefing.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	Other Aviation Support Equipment	P-5a			- / 66.180	- / 7.756	- / 14.892	- / 15.111	- / -	- / 15.111
P-5	1 / Aviation Life Support	P-5a, P-21			- / 185.278	- / 38.051	- / 45.864	- / 45.946	- / 0.000	- / 45.946
P-5	2 / Aviation Maintenance Advancement Solutions (AMAS)	P-5a, P-21			- / 71.127	- / 12.952	- / 17.233	- / 17.026	- / 0.000	- / 17.026
P-3a	1 / ALIS SHIP INSTALLATION (Add Capability)				- / 26.204	- / 3.737	- / 4.129	- / 4.032	- / 0.000	- / 4.032
P-40	**Total Gross/Weapon System Cost**				**- / 348.789**	**- / 62.496**	**- / 82.118**	**- / 82.115**	**- / 0.000**	**- / 82.115**

Exhibits Schedule					FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a	Other Aviation Support Equipment	P-5a			- / -	- / -	- / -	- / -	- / -	- / -
P-5	1 / Aviation Life Support	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-5	2 / Aviation Maintenance Advancement Solutions (AMAS)	P-5a, P-21			- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / ALIS SHIP INSTALLATION (Add Capability)				- / 4.100	- / 4.200	- / 4.285	- / 4.390	Continuing	Continuing
P-40	**Total Gross/Weapon System Cost**				**- / 113.003**	**- / 133.709**	**- / 140.261**	**- / 131.545**	**Continuing**	**Continuing**

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:
The FY 2024 Budget Request includes funding for the following ($82.115M):

P-40a (S7042), $2.486M
Other Aviation Support Equipment - the procurement of hardware and associated support costs for JTDI (S7042). Procurement of Defense Enterprise Computing Center data center and cloud services; COTS hardware and software in support of ship, shore, and expeditionary aviation activities; and cyber security and program support services. JTDI is the common, enterprise solution for transporting authoritative technical data and CBM+ data to/from globally deployed aviation fleet activities, and provides a common repository for raw CBM+ data which eliminates the need for weapon system programs to develop and maintain duplicative, platform-unique IT solutions.

P-40a (S7048), $0.254M
Other Aviation Support Equipment - the procurement of hardware and associated support costs for CBM+ (S7048).

P-40a (S7041), $2.677M
Other Aviation Support Equipment - Naval Aviation Logistics Command Management Information System/Naval Air Systems Command Fleet System Array (NALCOMIS/NFSA) (S7041) consists of the purchase of multiple components, which includes servers, peripheral hardware and software rack mounted into one server suite. Funds are required to manage obsolescence, comply with Cyber Security mandates which would lead to IT system shutdown without adherence, and provide fleet data replication and analysis processes to monitor safety and readiness of the Fleet.

P-40A (S7039), $1.835M

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	
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		

Other Aviation Support Equipment-Naval Aviation Logistics Data Analysis Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE)(S7039) consists of the purchase of multiple components, which includes servers, peripheral hardware and software rack mounted into one server suite. Funds are required to manage obsolescence and comply with CYBER WARFARE/ and fleet data replication and analysis processes used to monitor safety and readiness of the Fleet as well as the ability to comply with mandatory Information Security (IA) mandates, which would lead to IT system shutdown without adherence. Analysis of cloud solutions may be required as we modernize and align DECKPLATE to future warehousing requirements such as Vision 2020, the future Naval Aviation Maintenance System (NAMS), and the Automated Logistics Environment.

P-40A (S7049),$3.576M
Other Aviation Support Equipment- the procurement of hardware and associated support costs for Commander Fleet Readiness Center (COMFRC) Digital Production Floor (DPF).

P-40a (S7050), $2.549M
Other Aviation Support Equipment- the procurement of hardware and associated support costs for Commander Fleet Readiness Center (COMFRC) Digital Toolboxes.

P-40a (S7833), $1.734M
Other Aviation Support Equipment - Production Engineering Support provided in support of Naval Aviation Logistics Data Analysis Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE)(S7039), Joint Technical Data Integration (JTDI) (S7042), Condition Based Maintenance Plus (CBM+) (S7048), Naval Aviation Logistics Command Management Information System/ NAVAIR Fleet System Array (NALCOMIS/NFSA) (S7041), Commander Fleet Readiness Center (COMFRC) Digital Production Floor (DPF)(S7049), and Commander Fleet Readiness Center (COMFRC) Digital Toolboxes (S7050).

P-5/1, $45.946M(Baseline)
Aviation Life Support - the procurement of hardware and associated support costs for:
Procurement of Non-Combat Survival Radio (NCSR) and an FY21 NDAA Congressional requirement for improved Passive Signal Device (PSD), which will augment aircraft radio beacon sets and will have the capability to mitigate delayed recovery of incapacitated aircrew with auto-activated features. Hearing Protection Helmets (HPH) helmets, which will protect maintainers and from daily high-level noise exposure produced by F-35 and F/A-18 aircraft; addressing temporary hearing damage and permanent hearing loss while increasing the resilience of flight line personnel and increasing their comprehension of radio or ICS transmissions for increased mission effectiveness. Aircrew Systems Improvement Program (ASIP) funds the support of the human (aircrew and aviation maintainers) as the weapon system platform that directly affect safety and survivability, both in combat and non-combat operation. Actual components to be determined during project selection in the year prior to execution. Physiological Monitoring (PM) addresses Naval Aviation's #1 Safety concern by measuring human performance and alerting Aircrew preventing injury, death, and/or damage to aircraft. Aviation Maintainer Helmet Hearing Protection (AMHHP) will minimize the helmet profile, while providing upgrade impact/penetration protection and hearing protection for maintainers assigned to T/M/S outside the F-35 and F/A-18 communities.

P-5/2, $17.026M
Aviation Maintenance Advancement Solution (AMAS)- the procurement of hardware, associated support and software cost for 3,365 Portable Electronic Maintenance Aid (PEMA) units in FY 2024.

P-3a/1 $4.032M
Autonomic Logistics Info Systems (ALIS) - supports Design Support Activities (DSA) to include material purchases for the installation of two (2) ALIS in FY 2024.

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Aggregated Items Title:** Other Aviation Support Equipment (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) Naval Aviation Logistics Data Analysis Decision Knowledge Programming for Logistics Analys																				
1.1) S7039 - Aviation Data Warehouse Environment (2)(†)	A		-	-	10.913	1,674K	1	1.674	1,806K	1	1.806	1,835K	1	1.835	-	-	-	1,835K	1	1.835
Subtotal: 1) Naval Aviation Logistics Data Analysis Decision Knowledge Programming for Logistics Analys			**-**	**-**	***10.913***	**-**	**-**	***1.674***	**-**	**-**	***1.806***	**-**	**-**	***1.835***	**-**	**-**	**-**	**-**	**-**	***1.835***
2) Naval Aviation Logistics Command Management Information System/Naval Air Systems Command F																				
2.1) S7041 - NFSA HW/SW (3)(†)	A		-	-	14.705	2,483K	1	2.483	2,821K	1	2.821	2,677K	1	2.677	-	-	-	2,677K	1	2.677
Subtotal: 2) Naval Aviation Logistics Command Management Information System/Naval Air Systems Command F			**-**	**-**	***14.705***	**-**	**-**	***2.483***	**-**	**-**	***2.821***	**-**	**-**	***2.677***	**-**	**-**	**-**	**-**	**-**	***2.677***
3) Joint Technical Data Integration (JTDI)																				
3.1) S7042 - JTDI HW/SW(†)	A		-	-	9.023	2,169K	1	2.169	2,450K	1	2.450	2,486K	1	2.486	-	-	-	2,486K	1	2.486
Subtotal: 3) Joint Technical Data Integration (JTDI)			**-**	**-**	***9.023***	**-**	**-**	***2.169***	**-**	**-**	***2.450***	**-**	**-**	***2.486***	**-**	**-**	**-**	**-**	**-**	***2.486***
4) Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)/Expeditionary Pack U																				
4.1) S7046 - EPUK HW/SW	B		-	-	1.565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 4) Marine Aviation Logistics Enterprise Information Technology (MAL-EIT)/Expeditionary Pack U			**-**	**-**	***1.565***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
5) Automated Data Capture System (ADCS)																				
5.1) S7047 - ADCS HW/SW	B		-	-	0.207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 5) Automated Data Capture System (ADCS)			**-**	**-**	***0.207***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
6) Condition Based Maintenance Plus (CBM+)																				
6.1) S7048 - CBM+ HW/SW(†)	A		-	-	1.138	241,000.00	1	0.241	250,000.00	1	0.250	254,000.00	1	0.254	-	-	-	254,000.00	1	0.254
Subtotal: 6) Condition Based Maintenance Plus (CBM+)			**-**	**-**	***1.138***	**-**	**-**	***0.241***	**-**	**-**	***0.250***	**-**	**-**	***0.254***	**-**	**-**	**-**	**-**	**-**	***0.254***
7) Production Engineering Support																				
7.1) S7833-Digital Tooling	A		-	-	-	-	-	-	-	-	0.204	-	-	0.186	-	-	-	-	-	0.186
7.2) S7833-Digital Production Floor	A		-	-	-	-	-	-	-	-	0.230	-	-	0.274	-	-	-	-	-	0.274
7.3) S7833 - Marine Aviation Logistics	A		-	-	0.114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Aggregated Items Title:** Other Aviation Support Equipment (1)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
Enterprise Information Technology																				
7.4) S7833 - Aviation Data Warehouse Environment	A		-	-	3.230	-	-	0.522	-	-	0.536	-	-	0.550	-	-	-	-	-	0.550
7.5) S7833 - Naval Air Systems Command Fleet System Arrays	A		-	-	3.226	-	-	0.437	-	-	0.456	-	-	0.458	-	-	-	-	-	0.458
7.6) S7833 - Joint Technical Data Integration	A		-	-	1.664	-	-	0.186	-	-	0.200	-	-	0.214	-	-	-	-	-	0.214
7.7) S7833 - Automated Data Capture System	A		-	-	0.124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7.8) S7833 - Condition Based Maintenance Plus	A		-	-	0.271	-	-	0.044	-	-	0.051	-	-	0.052	-	-	-	-	-	0.052
Subtotal: 7) Production Engineering Support			**-**	**-**	***8.629***	**-**	**-**	***1.189***	**-**	**-**	***1.677***	**-**	**-**	***1.734***	**-**	**-**	**-**	**-**	**-**	***1.734***
8) FRC ASM upgrades																				
8.1) S7070 FRC ASM upgrades	A		-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 8) FRC ASM upgrades			**-**	**-**	***10.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
9) FY 2021 Enacted Rescissions																				
9.1) FY21 Enacted Rescissions	A		-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: 9) FY 2021 Enacted Rescissions			**-**	**-**	***10.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
10) Digital Production Floor																				
10.1) S7049-Digital Production Floor (4)(†)	A		-	-	-	-	-	-	3,044K	1	3.044	3,576K	1	3.576	-	-	-	3,576K	1	3.576
Subtotal: 10) Digital Production Floor			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***3.044***	**-**	**-**	***3.576***	**-**	**-**	**-**	**-**	**-**	***3.576***
11) Digital Toolboxes																				
11.1) S7050-Digital Toolboxes (5)(†)	A		-	-	-	-	-	-	2,844K	1	2.844	2,549K	1	2.549	-	-	-	2,549K	1	2.549
Subtotal: 11) Digital Toolboxes			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	***2.844***	**-**	**-**	***2.549***	**-**	**-**	**-**	**-**	**-**	***2.549***
Total			**-**	**-**	**66.180**	**-**	**-**	**7.756**	**-**	**-**	**14.892**	**-**	**-**	**15.111**	**-**	**-**	**-**	**-**	**-**	**15.111**

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

(†) indicates the presence of a P-5a

Footnotes:

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Aggregated Items Title:** Other Aviation Support Equipment (1)

(1) Program provides for the acquisition, upgrade, and production support of aviation life support systems required for the personal safety and protection of aircrew against the hazards encountered in the aircraft operating environment and for safe recovery of downed aircrew.

(2) Naval Aviation Logistics Data Analysis Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE)(S7039) - The unit cost reflects the total of all suites being procured in each fiscal year.

(3) Naval Aviation Logistics Command Management Information System/Naval Air Systems Command Fleet System Array (NALCOMIS/NFSA) (S7041): The unit cost reflects the total of all suites being procured in each fiscal year.

(4) Digital Production Floor (S7049)-The unit cost reflects the total of all suites being procured in each fiscal year. Aviation Depots perform majority of work using paper work orders referencing paper technical publications without critical closed loop quality system integration. This initiative supports removing paper from the Production floor and integrating key Quality elements to support a true digital North Star to keep us viable. FY24 Procurement of required IT infrastructure (Wireless/Network upgrades) and software licenses to include system consolidation, software configuration, data migration, content development and software licenses.

(5) Digital Toolboxes (S7050)-The unit cost reflects the total of all suites being procured in each fiscal year. Purpose of this initiative is to replace existing Aviation Depot Aircraft and Flight Line toolboxes with digital tool boxes. The management of tools, broken tools and lost tools represents a significant cost. Time to search and recover lost tools causes delays to production. Unrecovered lost tools present a flight safety risk. This initiative is also tied to and in support of the larger Digital Production floor initiatives to help bring the Aviation Depots into the 21st century. FY24 will procure the hardware/software and IT infrastructure needed to configure Digital Toolboxes.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Aggregated Items: Other Aviation Support Equipment (1)

Item Number / Title [DODIC]	OCO	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) Naval Aviation Logistics Data Analysis Decision Knowledge Programming for Logistics Analys												
1.1) S7039 - Aviation Data Warehouse Environment (2)		2022	Teradata Government Systems / Germantown MD	C / CPFF	NAVAIR	Mar 2022	Mar 2023	1	1,674K	Y		Nov 2021
1.1) S7039 - Aviation Data Warehouse Environment (2)		2023	Teradata Government Systems / Germantown MD	C / CPFF	NAVAIR	Mar 2023	Mar 2024	1	1,806K	Y		Nov 2021
1.1) S7039 - Aviation Data Warehouse Environment (2)		2024	Teradata Government Systems / Germantown MD	C / CPFF	NAVAIR	Mar 2024	Mar 2025	1	1,835K	Y		Nov 2021
2) Naval Aviation Logistics Command Management Information System/Naval Air Systems Command F												
2.1) S7041 - NFSA HW/SW (3)		2022	VARIOUS / VARIOUS	C / FFP	NAVAIR	May 2022	Sep 2022	1	2,483K	Y		Jan 2022
2.1) S7041 - NFSA HW/SW (3)		2023	VARIOUS / VARIOUS	C / T&M	NAVAIR	May 2023	Sep 2023	1	2,821K	Y		Jan 2023
2.1) S7041 - NFSA HW/SW (3)		2024	VARIOUS / VARIOUS	C / T&M	NAVAIR	May 2024	Sep 2024	1	2,677K	Y		Jan 2024
3) Joint Technical Data Integration (JTDI)												
3.1) S7042 - JTDI HW/SW		2022	Wyle / Huntsville, AL	C / CPFF	DTIC	Jul 2022	Oct 2022	1	2,169K	Y		May 2022
3.1) S7042 - JTDI HW/SW		2023	Wyle / Huntsville, AL	C / T&M	DTIC	Jul 2023	Oct 2023	1	2,450K	Y		May 2022
3.1) S7042 - JTDI HW/SW		2024	Wyle / Huntsville, AL	C / T&M	DTIC	Jul 2024	Oct 2024	1	2,486K	Y		May 2022
6) Condition Based Maintenance Plus (CBM+)												
6.1) S7048 - CBM+ HW/SW		2022	VARIOIUS / VARIOUS	Various	NAVAIR	Feb 2022	Apr 2022	1	241,000.00	Y		Nov 2021
6.1) S7048 - CBM+ HW/SW		2023	VARIOIUS / VARIOUS	Various	NAVAIR	Feb 2023	Apr 2023	1	250,000.00	Y		Nov 2022
6.1) S7048 - CBM+ HW/SW		2024	VARIOIUS / VARIOUS	Various	NAVAIR	Feb 2024	Apr 2024	1	254,000.00	Y		Nov 2023
10) Digital Production Floor												
10.1) S7049-Digital Production Floor (4)		2023	TBD / TBD	C / TBD	Patuxent River, MD	Apr 2023	Apr 2024	1	3,044K	Y		Nov 2022
10.1) S7049-Digital Production Floor (4)		2024	TBD / TBD	C / TBD	Patuxent River, MD	Apr 2024	Apr 2025	1	3,576K	Y		Nov 2022
11) Digital Toolboxes												
11.1) S7050-Digital Toolboxes (5)		2023	TBD / TBD	C / TBD	Patuxent River, MD	Apr 2023	Apr 2024	1	2,844K	Y		Nov 2022
11.1) S7050-Digital Toolboxes (5)		2024	TBD / TBD	C / TBD	Patuxent River, MD	Apr 2024	Apr 2025	1	2,549K	Y		Nov 2022

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Item Number / Title [DODIC]: 1 / Aviation Life Support
ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	185.278	38.051	45.864	45.946	0.000	45.946
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	185.278	38.051	45.864	45.946	0.000	45.946
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**185.278**	**38.051**	**45.864**	**45.946**	**0.000**	**45.946**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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 - Survival Electronics Cost																		
Recurring Cost																		
1.1.1) CSEL - SY060	8,244.90	49	0.404	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) Survival Communication Devices - SY063(†) (6)	-	-	0.000	3,131.71	2,832	8.869	3,321.89	3,007	9.989	3,419.44	1,204	4.117	-	-	0.000	3,419.44	1,204	4.117
Subtotal: Recurring Cost	-	-	*0.404*	-	-	*8.869*	-	-	*9.989*	-	-	*4.117*	-	-	*0.000*	-	-	*4.117*
Subtotal: Hardware - Survival Electronics Cost	**-**	**-**	***0.404***	**-**	**-**	***8.869***	**-**	**-**	***9.989***	**-**	**-**	***4.117***	**-**	**-**	***0.000***	**-**	**-**	***4.117***
Hardware - Helmets, Hearing and Display Cost																		
Non Recurring Cost																		
2.1.1) JHMCS Night Vision NRE- SY215	-	-	1.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	*1.050*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*	-	-	*0.000*
Subtotal: Hardware - Helmets, Hearing and Display Cost	**-**	**-**	***1.050***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***	**-**	**-**	***0.000***
Hardware - Helmets, Hearing and Display Cost																		
Recurring Cost																		
3.1.1) LEP- SY080(†)	886.50	4,141	3.671	-	-	0.000	4,817.00	434	2.091	-	-	0.000	-	-	0.000	-	-	0.000
3.1.2) IJHMCS - SY215(†) (7)	166,717.39	552	92.028	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Item Number / Title [DODIC]: 1 / Aviation Life Support
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
3.1.3) JHMCS Night Vision Pec Spt Equip - SY215(†)	32,416.67	120	3.890	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.4) HPH - SY505(†) (8)	-	-	2.027	6,772.50	1,421	9.624	6,722.56	1,986	13.351	6,660.55	1,850	12.322	-	-	0.000	6,660.55	1,850	12.322
3.1.5) AMHHP - SY510(†) (9)	1,500.00	2,400	3.600	720.00	5,000	3.600	720.00	5,000	3.600	720.00	5,000	3.600	-	-	0.000	720.00	5,000	3.600
3.1.6) EKB - SY450	1,127.48	2,675	3.016	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.8) EVA - SY217(†) (10)	-	-	0.000	-	-	0.000	-	-	0.000	300,222.22	9	2.702	-	-	0.000	300,222.22	9	2.702
Subtotal: Recurring Cost	-	-	*108.232*	-	-	*13.224*	-	-	*19.042*	-	-	*18.624*	-	-	*0.000*	-	-	*18.624*
Subtotal: Hardware - Helmets, Hearing and Display Cost	**-**	**-**	***108.232***	**-**	**-**	***13.224***	**-**	**-**	***19.042***	**-**	**-**	***18.624***	**-**	**-**	***0.000***	**-**	**-**	***18.624***
Hardware - Life Support Systems Cost																		
Recurring Cost																		
4.1.1) Physiological Monitoring - SY127(†) (11)	-	-	0.000	5,538.46	650	3.600	5,548.39	775	4.300	5,546.22	1,785	9.900	-	-	0.000	5,546.22	1,785	9.900
4.1.2) ASIP - SY126(†) (12)	5,379K	2	10.758	6,879K	1	6.879	6,896K	1	6.896	7,800K	1	7.800	-	-	0.000	7,800K	1	7.800
4.1.3) ASIP - CSEL SW - SY131	5,338.16	414	2.210	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.4) ASIP - Bladder Relief - SY132(†)	9,720.00	300	2.916	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.5) ASIP - EEOS Carts - SY133	19,560.98	41	0.802	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.6) ASIP - LPU - SY134	921.94	2,575	2.374	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.7) ASIP - JCAST - SY135	78,515.15	33	2.591	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.8) ASIP - TACAIR Pivot Shelf Mod Kits - SY137(†)	775.68	1,850	1.435	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.9) ASIP - UWARS and NACES Risers - SY138(†)	9,200.00	120	1.104	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	*24.190*	-	-	*10.479*	-	-	*11.196*	-	-	*17.700*	-	-	*0.000*	-	-	*17.700*

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Item Number / Title [DODIC]: 1 / Aviation Life Support
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
Subtotal: Hardware - Life Support Systems Cost	-	-	***24.190***	-	-	***10.479***	-	-	***11.196***	-	-	***17.700***	-	-	***0.000***	-	-	***17.700***
Support - Production Support Cost																		
5.1) Survival Electronics - SY830	-	-	0.258	-	-	0.750	-	-	0.790	-	-	0.795	-	-	0.000	-	-	0.795
5.2) Helmets, Hearing and Displays - SY830	-	-	48.337	-	-	4.076	-	-	4.173	-	-	4.030	-	-	0.000	-	-	4.030
5.3) Life Support Systems - SY830 (13)	-	-	2.807	-	-	0.653	-	-	0.674	-	-	0.680	-	-	0.000	-	-	0.680
Subtotal: Support - Production Support Cost	-	-	***51.402***	-	-	***5.479***	-	-	***5.637***	-	-	***5.505***	-	-	***0.000***	-	-	***5.505***
Gross/Weapon System Cost	-	-	**185.278**	-	-	**38.051**	-	-	**45.864**	-	-	**45.946**	-	-	**0.000**	-	-	**45.946**

(†) indicates the presence of a P-5a

Footnotes:

(6) SY063 SCD: Survival communication devices funding supports the USN and USMC requirement for a survival radio to be carried during all non-combat and combat operations and to support the NDAA requirement to mitigate aircraft ejection seat locator beacons that are inoperable in water or wet conditions. Legacy NCSRs are outdated and have not kept up with satellite rescue technology capability, and face critical obsolescence.

(7) SY215 IJHMCS: Updated name from Joint Helmet Mounted Cueing System (JHMCS) to Improved Joint Helmet Mounted Cueing System (IJHMCS).

(8) SY505 HPH: Updated name from Triple Hearing Protection to Hearing Protection Helmet. Hearing loss is a significant cost driver across DoD in veteran disability compensation. Hearing Protection Helmet (HPH) will address associated design trade improvements, including weight reduction and center of gravity adjustments to reduce neck stresses, improved impact liner, night vision/cueing mounts, and potential incorporation of maturing technologies such as active digital noise reduction/cancellation, with Face-to-Face communication, and F/A-18, F-35 ICS Interface, and Flight Deck Radio/Sound Powered Phone (SPP) communication capability.

(9) SY510 AMHHP: AMHHP will address the impact/penetration requirement on a flight deck and hearing protection required in a maintenance environment. Maintainer helmet for all T/M/S maintainers with exception of F/A-18 and F-35 and Personal Protective Equipment.

(10) SY217 EVA: EVA starts procurement in FY24 for LRIP.

(11) SY127 PM: The physiological monitoring program is a Congressional interest item and an established Naval Aviation Life Support requirement as mandated by the Physiological Episode Action Team. Multiple Other Transactions Authority (OTA) prototypes will continue testing to inform a sensor capability selection(s) for a best of breed or blended solution. The increase in quantities and average unit cost vary each year, reflecting the iterative integration of additive multiple sensors and additional capabilities through the FYDP from the expected baseline physiological monitor and represents the initial estimate prior to test completion, data analysis, and sensor selection(s).

(12) SY126 ASIP: Growth from FY23 to FY24 will directly address two congressional interest items: Female Bladder Relief capability and downed aviator locator upgrade to URT-140 capability. FY24 quantity of one is due to a mix of different products being procured. FY25 through FY28 quantity of one is a place holder until requirements are established from the annual Aircrew Enabler Naval Aviation Requirements Group (ENARG - Fleet demand signal event) and System Safety Working Group. ASIP resources ensure that deficiencies that threaten Aircrew safety, survivability and performance, such as passive signaling for downed aviators, assured floatation, and chronic back and neck injury mitigation, are addressed in a timely manner.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 1 / Aviation Life Support
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

(13) SY830 LSS: Life Support Systems: This line is the labor that supports ASIP products.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Item Number / Title [DODIC]: 1 / Aviation Life Support

Cost Elements	OCO	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) Survival Communication Devices - SY063(†)		2022	Elbit / Fort Worth, Texas	C / IDIQ	NAVAIR	Nov 2021	Aug 2022	2,832	3,131.71	Y	Sep 2021	
1.1.2) Survival Communication Devices - SY063(†)		2023	Elbit / Fort Worth, Texas	C / IDIQ	NAVAIR	Nov 2022	Aug 2023	3,007	3,321.89	Y		
3.1.1) LEP- SY080		2021	Gentex / Simpson, Pennsylvania	C / FFP	NAVAIR	Sep 2021	Jan 2022	4,141	886.50	Y		Dec 2018
3.1.1) LEP- SY080		2023	Gentex / Simpson, Pennsylvania	C / FFP	NAVAIR	Dec 2022	Apr 2023	434	4,817.00	Y		
3.1.2) IJHMCS - SY215		2020	Rockwell Collins - ESA Vision Systems / Dallas Ft. Worth, Texas	C / FFP	NAVAIR	Mar 2020	Mar 2021	60	218,916.67	Y		Oct 2018
3.1.3) JHMCS Night Vision Pec Spt Equip - SY215		2020	Rockwell Collins - ESA Vision Systems / Dallas Ft. Worth, Texas	SS / FFP	NAVAIR	Oct 2019	Feb 2020	30	36,200.00	Y		
3.1.4) HPH - SY505(†)		2022	Creare / Hanover, NH	SS / CPFF	NAVAIR	Aug 2022	Apr 2023	1,421	6,772.50	N		
3.1.4) HPH - SY505(†)		2023	Creare / Hanover, NH	SS / CPFF	NAVAIR	Jun 2023	Oct 2023	1,986	6,722.56	N		
3.1.4) HPH - SY505(†)		2024	Creare / Hanover, NH	C / TBD	NAVAIR	Oct 2023	Feb 2024	1,850	6,660.55	N		
3.1.5) AMHHP - SY510		2021	DLA / Philadelphia, PA	C / FFP	** NO PCO **	Sep 2021	Sep 2021	2,400	1,500.00	Y		
3.1.5) AMHHP - SY510		2022	DLA / Philadelphia, PA	C / FFP	** NO PCO **	Feb 2022	Feb 2022	5,000	720.00	N	Jul 2021	
3.1.5) AMHHP - SY510		2023	DLA / Philadelphia, PA	C / FFP	** NO PCO **	Feb 2023	Feb 2023	5,000	720.00	N		
3.1.8) EVA - SY217(†)		2024	TBD / TBD	C / TBD	TBD	Jul 2024	Apr 2025	9	300,222.22	N		
4.1.1) Physiological Monitoring - SY127(†)		2022	DLA Troop Support / Philadelphia, PA	C / FFP	NO PCO	Apr 2022	Jul 2022	650	5,538.46	N	Oct 2020	
4.1.1) Physiological Monitoring - SY127(†)		2023	DLA Troop Support / Philadelphia, PA	C / FFP	NO PCO	Sep 2023	Dec 2023	775	5,548.39	N		
4.1.1) Physiological Monitoring - SY127(†)		2024	DLA Troop Support / Philadelphia, PA	C / FFP	NO PCO	Sep 2024	Dec 2024	1,785	5,546.22	N		
4.1.2) ASIP - SY126(†)		2020	VARIOUS / VARIOUS	Various	VARIOUS	Dec 2019	Feb 2020	1	8,175K	Y		
4.1.2) ASIP - SY126(†)		2021	VARIOUS / VARIOUS	Various	VARIOUS	Feb 2021	Apr 2021	1	2,583K	Y		
4.1.2) ASIP - SY126(†)		2022 (14)	VARIOUS / VARIOUS	Various	VARIOUS	Feb 2022	Apr 2022	1	6,879K	N		
4.1.2) ASIP - SY126(†)		2023 (15)	VARIOUS / VARIOUS	Various	VARIOUS	Feb 2023	Apr 2023	1	6,896K	N		
4.1.2) ASIP - SY126		2024 (16)	VARIOUS / VARIOUS	Various	VARIOUS	Feb 2024	Apr 2024	1	7,800K	N		
4.1.4) ASIP - Bladder Relief - SY132		2021	DLA / Philadelphia, PA	C / FFP	VARIOUS	Aug 2021	Sep 2021	300	9,719.93	Y		
4.1.8) ASIP - TACAIR Pivot Shelf Mod Kits - SY137		2021	DLA / Philadelphia, PA	C / FFP	** NO PCO **	Oct 2021	Jul 2022	1,850	776.00	Y		

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Item Number / Title [DODIC]: 1 / Aviation Life Support

Cost Elements	OCO	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
4.1.9) ASIP - UWARS and NACES Risers - SY138		2021	DLA / Philadelphia, PA	C / FFP	** NO PCO **	Aug 2021	Sep 2021	120	9,200.00	Y		

(†) indicates the presence of a P-21

Footnotes:

(14) FY22 approved requirements include Sequencer Test Set obsolescence, SAR Helmet and Radio systems, NACES FAST Sequencer Shorting Plugs, and LPU Locking Ring sleeves. The SAR Helmet and Radio provides SAR swimmers with 1800 fully operable helmet and hearing protection systems and 500 radios for use in-flight and during rescue operations. Current CONOPS require the flight helmet to be removed prior to water entry, which strips the Swimmer of verbal communication with other aircrew while removing hearing protection in a high noise environment. NACES FAST Sequencer Shorting Plug provides for installation of 1200 upgraded shorting plugs into NACES legacy sequencers to eliminate channel C electrical noise, which mitigates a potential failure mode identified in USAF mishaps. The LPU Locking Ring installs 70,000 winged compression fit covers to prevent unintended migration of the inflation valve locking feature which was discovered as a result of an August 2021 MH-60S mishap.

(15) Contract vehicles and Vendors vary depending on mix of ASIP items being procured in FY23.

(16) Contract vehicles and Vendors vary depending on mix of ASIP items being procured in FY24.

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 1 / Aviation Life Support

Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
							Calendar Year 2020												Calendar Year 2021												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Survival Communication Devices - SY063 (6)																															
	1	2022	NAVY	2,832	0	2,832																									2,832
	1	2023	NAVY	3,007	0	3,007																									3,007
3.1.4) HPH - SY505 (8)																															
	2	2022	NAVY	1,421	0	1,421																									1,421
	2	2023	NAVY	1,986	0	1,986																									1,986
	2	2024	NAVY	1,850	0	1,850																									1,850
3.1.8) EVA - SY217 (10)																															
	3	2024	NAVY	9	0	9																									9
4.1.1) Physiological Monitoring - SY127 (11)																															
	4	2022	NAVY	650	0	650																									650
	4	2023	NAVY	775	0	775																									775
	4	2024	NAVY	1,785	0	1,785																									1,785
4.1.2) ASIP - SY126 (12)																															
	5	2020	NAVY	1	0	1			A -	-	1																				0
	5	2021	NAVY	1	0	1																	A -	-	1						0
	5	2022	NAVY	1	0	1																									1
	5	2023	NAVY	1	0	1																									1
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3 | **P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment | **Item Number / Title [DODIC]:** 1 / Aviation Life Support

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Survival Communication Devices - SY063 (6)																															
	1	2022	NAVY	2,832	0	2,832		A -	-	-	-	-	-	-	-	-	236	236	236	236	236	236	236	236	236	236	236				0
	1	2023	NAVY	3,007	0	3,007														A -	-	-	-	-	-	-	-	-	251	251	2,505
3.1.4) HPH - SY505 (8)																															
	2	2022	NAVY	1,421	0	1,421											A -	-	-	-	-	-	-	-	118	118	118	118	119	119	711
	2	2023	NAVY	1,986	0	1,986																					A -	-	-	-	1,986
	2	2024	NAVY	1,850	0	1,850																									1,850
3.1.8) EVA - SY217 (10)																															
	3	2024	NAVY	9	0	9																									9
4.1.1) Physiological Monitoring - SY127 (11)																															
	4	2022	NAVY	650	0	650							A -	-	-	54	54	54	54	55	55	54	54	54	54	54	54				0
	4	2023	NAVY	775	0	775																								A -	775
	4	2024	NAVY	1,785	0	1,785																									1,785
4.1.2) ASIP - SY126 (12)																															
	5	2020	NAVY	1	1	0																									0
	5	2021	NAVY	1	1	0																									0
	5	2022	NAVY	1	0	1					A -	-	1																		0
	5	2023	NAVY	1	0	1																	A -	-	1						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	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3 | **P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment | **Item Number / Title [DODIC]:** 1 / Aviation Life Support

Cost Elements (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Survival Communication Devices - SY063 (6)																															
	1	2022	NAVY	2,832	2,832	0																									0
	1	2023	NAVY	3,007	502	2,505	251	251	250	251	250	251	250	250	251	250															0
3.1.4) HPH - SY505 (8)																															
	2	2022	NAVY	1,421	710	711	118	119	118	119	118	119																			0
	2	2023	NAVY	1,986	0	1,986	165	165	165	165	165	165	165	166	166	166	166	167													0
	2	2024	NAVY	1,850	0	1,850	A -	-	-	-	155	155	154	154	154	154	154	154	154	154	154	154									0
3.1.8) EVA - SY217 (10)																															
	3	2024	NAVY	9	0	9										A -	-	-	-	-	-	-	-	-	1	1	1	1	1	1	3
4.1.1) Physiological Monitoring - SY127 (11)																															
	4	2022	NAVY	650	650	0																									0
	4	2023	NAVY	775	0	775	-	-	60	65	65	65	65	65	65	65	65	65	65	65											0
	4	2024	NAVY	1,785	0	1,785												A -	-	-	146	149	149	149	149	149	149	149	149	149	298
4.1.2) ASIP - SY126 (12)																															
	5	2020	NAVY	1	1	0																									0
	5	2021	NAVY	1	1	0																									0
	5	2022	NAVY	1	1	0																									0
	5	2023	NAVY	1	1	0																									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	

Exhibit P-21, Production Schedule: PB 2024 Navy | **Date:** March 2023

Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3 | **P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment | **Item Number / Title [DODIC]:** 1 / Aviation Life Support

Cost Elements (Units in Each)							Fiscal Year 2026												Fiscal Year 2027												BALANCE
										Calendar Year 2026												Calendar Year 2027									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.2) Survival Communication Devices - SY063 (6)																															
	1	2022	NAVY	2,832	2,832	0																									0
	1	2023	NAVY	3,007	3,007	0																									0
3.1.4) HPH - SY505 (8)																															
	2	2022	NAVY	1,421	1,421	0																									0
	2	2023	NAVY	1,986	1,986	0																									0
	2	2024	NAVY	1,850	1,850	0																									0
3.1.8) EVA - SY217 (10)																															
	3	2024	NAVY	9	6	3	1	1	1																						0
4.1.1) Physiological Monitoring - SY127 (11)																															
	4	2022	NAVY	650	650	0																									0
	4	2023	NAVY	775	775	0																									0
	4	2024	NAVY	1,785	1,487	298	149	149																							0
4.1.2) ASIP - SY126 (12)																															
	5	2020	NAVY	1	1	0																									0
	5	2021	NAVY	1	1	0																									0
	5	2022	NAVY	1	1	0																									0
	5	2023	NAVY	1	1	0																									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	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 1 / Aviation Life Support

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	Elbit - Fort Worth, Texas	3,000	3,900	4,800	0	0	9	9	0	0	9	9
2	Creare - Hanover, NH	50	900	2,000	11	8	8	16	0	3	4	7
3	TBD - TBD			TBD	9	0	9	9	9	0	9	9
4	DLA Troop Support - Philadelphia, PA			TBD	0	0	0	0	0	0	0	0
5	VARIOUS - VARIOUS			TBD	0	0	0	0	0	5	2	7

"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).

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 2 / Aviation Maintenance Advancement Solutions (AMAS)
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	71.127	12.952	17.233	17.026	0.000	17.026
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	71.127	12.952	17.233	17.026	0.000	17.026
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**71.127**	**12.952**	**17.233**	**17.026**	**0.000**	**17.026**
(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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) S6001 Portable Electronic Maintenance Aids (PEMAs)	3,562.60	10,846	38.640	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) S6002 CH/ MH-53 PEMAs	3,416.20	531	1.814	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) S6003 Aviation Maintenance Advancement Solution(†)	3,736.55	3,234	12.084	3,700.00	2,634	9.746	3,774.00	3,535	13.341	3,850.00	3,365	12.955	-	-	0.000	3,850.00	3,365	12.955
Subtotal: Recurring Cost	-	-	*52.538*	-	-	*9.746*	-	-	*13.341*	-	-	*12.955*	-	-	*0.000*	-	-	*12.955*
Subtotal: Hardware - Hardware Cost	**-**	**-**	***52.538***	**-**	**-**	***9.746***	**-**	**-**	***13.341***	**-**	**-**	***12.955***	**-**	**-**	***0.000***	**-**	**-**	***12.955***
Support - Production Cost																		
2.1) S6820 Portable Electronic Maintenance Aids (PEMAs) Support	-	-	9.257	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.2) S6830 CH/MH-53 PEMAs Support	-	-	0.135	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.3) S6840 Aviation Maintenance Advancement Solutions	-	-	9.197	-	-	3.206	-	-	3.892	-	-	4.071	-	-	0.000	-	-	4.071

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 2 / Aviation Maintenance Advancement Solutions (AMAS)
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
Subtotal: Support - Production Cost	-	-	*18.589*	-	-	*3.206*	-	-	*3.892*	-	-	*4.071*	-	-	*0.000*	-	-	*4.071*
Gross/Weapon System Cost	-	-	71.127	-	-	12.952	-	-	17.233	-	-	17.026	-	-	0.000	-	-	17.026

Remarks:
[Hardware] Quantities of PEMAs are derived from actual current inventory, as reported by the fleet in the mandated asset tracking system Support Equipment Management System (SEMS). This program is a replenishment of these fielded systems on a one for one basis as required.

(†) indicates the presence of a P-5a

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4268 / Aviation Support Equipment	Item Number / Title [DODIC]: 2 / Aviation Maintenance Advancement Solutions (AMAS)

Cost Elements	OCO	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
1.1.3) S6003 Aviation Maintenance Advancement Solution(†)		2022	Panasonic of North America / Secaucus, NJ	C / IDIQ	NAWCAD LKE	Dec 2021	May 2022	2,634	3,700.00	Y		Dec 2021
1.1.3) S6003 Aviation Maintenance Advancement Solution(†)		2023	Panasonic of North America / Secaucus, NJ	C / IDIQ	NAWCAD LKE	Jan 2023	Mar 2023	3,535	3,774.00	Y		Dec 2022
1.1.3) S6003 Aviation Maintenance Advancement Solution(†)		2024	Panasonic of North America / Secaucus, NJ	C / IDIQ	NAWCAD LKE	Dec 2023	Feb 2024	3,365	3,850.00	Y		Dec 2023

(†) indicates the presence of a P-21

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 2 / Aviation Maintenance Advancement Solutions (AMAS)

Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.3) S6003 Aviation Maintenance Advancement Solution																															
Prior Years Deliveries: 3234																															
	1	2022	NAVY	2,634	0	2,634			A -	-	-	-	-	350	350	350	350	350	350	350	184										0
	1	2023	NAVY	3,535	0	3,535																A -	-	320	320	320	320	320	320	320	1,295
	1	2024	NAVY	3,365	0	3,365																									3,365
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 2 / Aviation Maintenance Advancement Solutions (AMAS)

Cost Elements (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.3) S6003 Aviation Maintenance Advancement Solution																															
Prior Years Deliveries: 3234																															
	1	2022	NAVY	2,634	2,634	0																									0
	1	2023	NAVY	3,535	2,240	1,295	320	320	320	335																					0
	1	2024	NAVY	3,365	0	3,365			A -	-	420	420	420	420	420	420	420	425													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	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Item Number / Title [DODIC]:** 2 / Aviation Maintenance Advancement Solutions (AMAS)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	Panasonic of North America - Secaucus, NJ	500	2,000	5,000	0	0	0	0	0	3	2	5

"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).

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Modification Number / Title:** 1 / ALIS SHIP INSTALLATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	26.204	3.737	4.129	4.032	0.000	4.032	4.100	4.200	4.285	4.390	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	26.204	3.737	4.129	4.032	0.000	4.032	4.100	4.200	4.285	4.390	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**26.204**	**3.737**	**4.129**	**4.032**	**0.000**	**4.032**	**4.100**	**4.200**	**4.285**	**4.390**	**Continuing**	**Continuing**
(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)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

[ALIS - Program Support] Autonomic Logistics Information System (ALIS) Ship Integration - CVN, LHD, LHA: ALIS controls all aspects of F-35 mission planning, maintenance, logistics, and supply functions. Funding for ALIS Ship Integration efforts (Programmatic Support, Engineering Support Services, Material, and Installation efforts) will enable shipboard (CVN, LHD, LHA) modification, classified/unclassified network integration, the installation of ALIS-related shipboard equipment, ALIS security accreditation, and verification of ALIS operation and functionality to include the integration of ALIS with shipboard Command, Control, Communications and Computers & Intelligence (C4I) Networks and the Prognostic Health Management (PHM) downlink. At the completion of each installation, the respective ship's ALIS will enable the F-35 system to provide, at the appropriate security levels via Navy Local Area Networks (LANs)/Wide Area Networks (WANs), the ability to transfer time-sensitive data for logistics support, mission planning, mission execution, and mission debriefing.

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Modification Number / Title:** 1 / ALIS SHIP INSTALLATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	
Models of Systems Affected: CVN, LHD, & LHA	**Modification Type:** Add Capability	**Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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 1: ALIS SHIP INSTALLATION												
B Kits												
Recurring												
1.1.1) Installation Material - NonOrganic [17]	14 / 0.560	2 / 0.080	2 / 0.080	2 / 0.080	- / -	2 / 0.080	2 / 0.080	2 / 0.080	2 / 0.080	2 / 0.080	Continuing	Continuing
Subtotal: Recurring	*- / 0.560*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*- / -*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*Continuing*	*Continuing*
Subtotal: ALIS SHIP INSTALLATION	*14 / 0.560*	*2 / 0.080*	*2 / 0.080*	*2 / 0.080*	*- / -*	*2 / 0.080*	*2 / 0.080*	*2 / 0.080*	*2 / 0.080*	*2 / 0.080*	*Continuing*	*Continuing*
Subtotal: Procurement, All Modification Items	*- / 0.560*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*- / -*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*- / 0.080*	*Continuing*	*Continuing*
Support *(All Modification Items)*												
2.1) ALIS - Program Support [18]	- / 5.242	- / 0.685	- / 0.898	- / 0.827	- / 0.000	- / 0.827	- / 0.885	- / 0.938	- / 0.963	- / 1.004	Continuing	Continuing
2.2) ALIS - Production Engineering Support [19]	- / 5.231	- / 0.670	- / 0.830	- / 0.825	- / 0.000	- / 0.825	- / 0.834	- / 0.867	- / 0.892	- / 0.926	Continuing	Continuing
Subtotal: Support	*- / 10.473*	*- / 1.355*	*- / 1.728*	*- / 1.652*	*- / -*	*- / 1.652*	*- / 1.719*	*- / 1.805*	*- / 1.855*	*- / 1.930*	*Continuing*	*Continuing*
Installation												
Modification Item 1 of 1: ALIS SHIP INSTALLATION	- / 15.171	- / 2.302	- / 2.321	- / 2.300	- / 0.000	- / 2.300	- / 2.301	- / 2.315	- / 2.350	- / 2.380	- / 0.000	- / 31.440
Subtotal: Installation	*- / 15.171*	*- / 2.302*	*- / 2.321*	*- / 2.300*	*- / -*	*- / 2.300*	*- / 2.301*	*- / 2.315*	*- / 2.350*	*- / 2.380*	*- / 0.000*	*- / 31.440*
Total												
Total Cost (Procurement + Support + Installation)	**26.204**	**3.737**	**4.129**	**4.032**	**0.000**	**4.032**	**4.100**	**4.200**	**4.285**	**4.390**	**Continuing**	**Continuing**

Exhibit P-3a, Individual Modification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4268 / Aviation Support Equipment	**Modification Number / Title:** 1 / ALIS SHIP INSTALLATION
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ALIS SHIP INSTALLATION

Manufacturer Information

Manufacturer Name: NAWC AD 4.5.10	Manufacturer Location: St. Inigoes, NAS Patuxent River MD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 4

Dates	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Contract Dates	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025	Dec 2026	Dec 2027
Delivery Dates	Apr 2022	Apr 2023	Apr 2024	Apr 2025	Apr 2026	Apr 2027	Apr 2028

Installation Information

Method of Implementation: [none specified]:: Installation Name: Installation Material

Installation Cost	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	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	14 / 15.171	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	14 / 15.171
FY 2022	- / -	2 / 2.302	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.302
FY 2023	- / -	- / -	2 / 2.321	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.321
FY 2024	- / -	- / -	- / -	2 / 2.300	0 / 0.000	2 / 2.300	- / -	- / -	- / -	- / -	0 / 0.000	2 / 2.300
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.301	- / -	- / -	- / -	0 / 0.000	2 / 2.301
FY 2026	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.315	- / -	- / -	0 / 0.000	2 / 2.315
FY 2027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.350	- / -	0 / 0.000	2 / 2.350
FY 2028	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.380	0 / 0.000	2 / 2.380
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	14 / 15.171	2 / 2.302	2 / 2.321	2 / 2.300	0 / 0.000	2 / 2.300	2 / 2.301	2 / 2.315	2 / 2.350	2 / 2.380	0 / 0.000	28 / 31.440

Installation Schedule

		FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028					
	PYS	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	TC	Tot
In	14	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	2	-	-	-	2	-	-	-	2	-	-	-	28
Out	14	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	2	-	-	-	2	-	-	-	2	-	-	28

Footnotes:

(17) FY 2024 Installation Material requested funding supports Design Support Activities (DSA) to include material purchases for the installation of two (2) ALIS in FY 2024.

(18) FY 2024 Program Support requested funding supports Design Support Activities (DSA) to include Alteration Installation Team support for the installation of two (2) ALIS in FY 2024.

(19) FY 2024 Production Engineering Support requested funding supports Design Support Activities (DSA) to include Ship Installation Drawings and Ship check in support of installation of two (2) ALIS in FY 2024.

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Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	75.657	67.226	134.726	152.687	0.000	152.687	131.201	200.476	192.822	197.087	Continuing	Continuing
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	75.657	67.226	134.726	152.687	0.000	152.687	131.201	200.476	192.822	197.087	Continuing	Continuing
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**75.657**	**67.226**	**134.726**	**152.687**	**0.000**	**152.687**	**131.201**	**200.476**	**192.822**	**197.087**	**Continuing**	**Continuing**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	3.246	8.150	-	8.150	10.333	10.126	10.427	4.563	Continuing	Continuing
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This Budget Line Item funds The Unmanned Carrier Aviation (UCA) Mission Control System (UMCS) program. This program builds, integrates, installs, and sustains the systems (control station, communications, and networks) required to operate the MQ-25 and performs ship installations associated with the MQ-25.

The UMCS program is the system-of-systems required for MQ-25 vehicle and payload control, both shipboard and shore based. The UMCS consists of all ground and ship-based hardware, software, and networks associated with the planning and execution of flight operations and tactical missions, including the control stations (displays, computers, and servers), line of sight communications, and beyond line of sight satellite communications. The ground control station (GCS) allows pilots to command and control the MQ-25 Air Vehicle using external Command, Control, Communication, Computers, and Intelligence (C4I) systems. The GCS hardware will support multiple classification levels, control of multiple unmanned aircraft, and improve MQ-25 interoperability with other DoD systems. UMCS modifies approximately 12 -15 spaces on the aircraft carrier (CVN), using the Ship Change Document (SCD) process, to install the GCS and ancillary systems needed for communications, video management, and integration with existing CVN networks. The NAVWAR C4I systems provide the CVN network paths for air vehicle and mission payload data using a variety of wideband and narrowband communication paths. UMCS modifies and integrates with Launch and Recovery systems on both NIMITZ and FORD class CVNs: Aircraft Launch and Recovery Equipment (ALRE) and Joint Precision Approach Landing Systems (JPALS). Through the Software Support Activity (SSA), UMCS maintains software for the GCS and ancillary systems and verifies integration with MQ-25 Air Vehicle unique software.

The GCS has three variants: fixed shore (MD-5D), CVN (MD-5C), and mobile (MD-5E Embarkable - RDT&E funded). The fixed shore and CVN variants will be permanent installations to support MQ-25 operations. The GCS consists of the following components: Air Vehicle Pilot (AVP) workstations, server racks, network interface racks, integrated communication system (ICS), and software. The CVN variant leverages shore system components but differs slightly to account for the rugged CVN environment. The UMCS ancillary systems provide the necessary communication, data, and network integration paths that allow MQ-25 pilots to control the MQ-25 and exchange data with CVN systems. MQ-25 pilots receive situational awareness data from two sources: the Video Management System (VidMS) and Air Traffic Control (ATC) picture. The Unmanned Carrier Aviation Transport System (UTS), used both afloat and ashore, integrates operational networks to provide narrowband and wideband communications and it contains the Data Transfer System (DTS) which allows the mission plan to be loaded on the MQ-25. Narrowband communications are provided by the ARC-210 Radio Communication System (RCS) and the Digital Modular Radio (DMR), which is used to access the Mobile User Objective System (MUOS). Each of these systems have afloat and ashore variants. The ARC-210 Radio Communication System ship system has an additional equipment rack to integrate with antennas located on the mast. The Integrated communication system half-rack, only installed on CVNs, is the interface between the GCS and Shipboard Air Traffic Control Communications (SATCC) systems allowing MQ-25 pilots access to existing ship radios. There are several ancillary systems that only have shore variants. The Shore Common Data Link (CDL) provides wideband line of sight command and control and data communications between the GCS and the MQ-25. The Ashore Routing Communication System (ARCS) is the interface between the Unmanned Carrier Aviation Transport System and the C4I wideband communication data networks. The URC-300 Voice Communication System is a set of radios for communication between the GCS and flight line personnel. UMCS leads the modification, engineering, and integration activities with NAVWAR C4I baseline systems. NAVWAR C4I is integrating the following baseline Program of Record systems to support MQ-25

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	
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		

operations: Consolidate Afloat Networks and Enterprise Service (CANES), Automated Digital Network System (ADNS), Shore Tactical Assured Command and Control (STACC), Network Tactical Common Data Link (NTCDL), CVN MUOS DMR AN/SRC-61A(V)6 & AN/SRC-61A(V)12, Shore MUOS DMR AN/SRC-147(V)5, Classic Reach, Distributed Common Ground System-Navy (DCGS-N), Global Command and Controls System-Maritime (GCCS-M), Automatic Identification System (AIS) & Naval Integrated Tactical Environment System-Next (NITES-Next).

UMCS performs CVN infrastructure modifications and hardware installations on twelve (12) NIMITZ and FORD Class carriers and three (3) operational shore locations. Currently there are seven (7) workstations planned for each NIMITZ class carrier and nine (9) workstations planned for each FORD class carrier. The CONUS shore sites have two (2) GCSs each while the OCONUS site has one (1) GCS. There are nine (9) workstations planned for both the CONUS and OCONUS sites. All CVN Modification Planning and Integration activities follow the NAVSEA Navy Modernization Process (NMP) which identifies specific schedules for documentation, drawing, and hardware deliveries. CVN installations are conducted serially across multiple availability periods. The Navy Modernization Process can be divided into four phases. Phase 1 (three years prior to an availability period) is the CVN system planning and design phase that includes generation of technical data and top-level drawings as well as some long-lead procurement. Phase 2 (two years prior to an availability period) focuses on specific CVN hulls that includes ship checks, generation of drawings, and GCS/ancillary system procurement. Phase 3 (one-year prior to the availability period) is the final approval for design, drawings, schedule, and documentation. Phase 4 is the actual CVN Installation and Shipyard Services process that occurs during an availability period. A minimum of two six-month availability periods are required to complete modifications and installations. Phases 1, 2, and 3 repeat for each availability period. Therefore, it is possible that UMCS can be installing hardware and planning for future installation work on the same CVN or multiple CVNs in any given fiscal year. Modifications and installations are subject to change based on ship availability schedule updates.

CVN Modification Planning and Integration requires extensive stakeholder coordination by a program to perform carrier modifications following NAVSEA processes and requirements for integration into a CVN Avail work package. Programs are responsible to prepare the technical documentation and detailed guidance information for each ship that will be modified per the Ship Change Documents so that Ship Installation Drawings (SIDs) can be produced. This process typically takes over a year, due to the complexity of modifications. The Unmanned Air Warfare Center (UAWC) Ship Change Documents are characterized by NAVSEA as complex since these impact several compartments, cooling, power and network/circuits on the ship. UMCS uses government and contractor resources to prepare the Ship Change Documents and supporting guidance packages across all hulls for both NIMITZ and FORD Class carriers. These resources also manage the communications and administrative paperwork levied on a Program by the Navy Modernization Process leading up to, during and after the ship installation. Guidance packages contain detailed design and interface specifications for the equipment, Unmanned Air Warfare Center arrangement drawings for placement of hardware in the control room, schematics for cabling details, supporting details and analyses to address physical security, cyber, RF spectrum studies for topside antennas, and suitability for the shipboard environment.

CVN Installation and Shipyard Services involve the physical modifications to the ship. These services are the implementation of the CVN Modification Planning and Integration processes and are significant in scope and cost. The Planning Yard produces Ship Installation Drawings and a Shipyard approved work package with a detailed installation schedule. These installations are aligned with the Maintenance Availability (Avail) schedule to minimize impact to key events & milestones so that the ship exits the Avail on time. Contractor Alteration Installation Teams (AITs) perform the industrial work and hardware installation. Alteration Installation Teams and their subcontractors must be approved by the Shipyard. Scheduling Alteration Installation Teams are done well in advance of the Maintenance Avail, mostly due to the lengthy contracting process and for them to receive approved Ship Installation Drawings to plan the installation work, procure raw materials and align subcontractors. Following the approval of the Ship Change Documents and Ship Installation Drawings, industrial work can proceed during the aligned Avail. Industrial work includes setting up shipyard services (e.g. scaffolding, ventilation, air/electric for tools, storage containers on the pier, material handling/cranes), removal of old paint and hazardous coatings/materials, cutting/grinding of metal, welding structural members, foundations and fixtures, installation of electrical and network cabling, priming and painting, installation of thermal & acoustic insulation, fabrication and installation of ventilation ducting, modification/increasing the size of cooling fans and coils, and the application of flooring. Once the industrial work has been completed, any hardware to be installed is brought aboard. If the hardware is of small enough size, it will be brought on-board the ship through the existing hatches. However, larger equipment, such as the fan room modifications, will need to have special holes cut in the deck to allow installation. The fully populated racks of the GCS require careful rigging to get the hardware through passageways and hatches into the space. Once these difficulties are overcome, hardware installation ensues, with cabling and other electrical/mechanical tasks going through various quality checks ultimately leading to a final System Operational Verification Test (SOVT).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 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 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	P-5a, P-21			- / 75.657	- / 67.226	- / 134.726	- / 152.687	- / 0.000	- / 152.687
P-40	**Total Gross/Weapon System Cost**				**- / 75.657**	**- / 67.226**	**- / 134.726**	**- / 152.687**	**- / 0.000**	**- / 152.687**

*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 FY2024 UMCS will fund the following:

CVN A
- Planning Yard (PY) and Ship Yard (SY) Ship Installation Drawings and Services to close out the FY24 Installation

CVN B
- Initial Deployment Configuration (IDC), this configuration capitalizes on work performed in prior years when MD5A was planned and is an evolutionary step to enable Deployment of MQ-25. Only the necessary/ limited set of hardware will be installed for Deployment. The Unmanned Air Warfare Center will be configured to the Final Deployment Configuration during a future Maintenance Avail that has sufficient duration to accommodate all necessary major industrial work.
- CVN installation and shipyard services for hardware installations during the six-month, FY25 Planned Incremental Availability (PIA) to support deployment: MD-5C GCS (6 pilot consoles, 4 processing/storage racks), Unmanned Carrier Aviation Transport System , integrated communication system half-rack, Video Management System upgrade, and Work Centers/Ready Room modification to support the MQ-25 detachment

CVN C
- Final Deployment Configuration-Increment 1 (FDC-1), this configuration of the Unmanned Air Warfare Center will only have the necessary set of hardware installed to enable Deployment of MQ-25. A later increment is planned to incorporate additional hardware to provide multi-level security capability which will require power and cooling alterations to the ship to accommodate increased capacity on those systems.
- CVN installation and shipyard services for the hardware installations during the six-month, FY25 Planned Incremental Availability to support deployment; MD-5C GCS (7 pilot consoles, 4 processing/storage racks), Unmanned Carrier Aviation Transport System, integrated communication system half-rack 1/2 rack, Video Management System upgrade, and Work Centers/Ready Room modification to support the MQ-25 detachment
- Procure Air Traffic Control Picture UYY-1 for installation during FY25 Avail

CVN D
- Final Deployment Configuration (FDC), this configuration of the Unmanned Air Warfare Center is planned to accommodate all hardware necessary to enable Deployment of MQ-25 with the additional multi-level security capabilities. Completion of all work on the CVN is planned to be spread over two Maintenance Avails: (1) Alteration of the ship with major industrial work to incorporate structural, power, cooling, data/ signal cabling, and topside/antennas. (2) Alteration of the ship with the industrial work to incorporate MQ-25 work centers, ready room and installation of all UMCS hardware.
- CVN installation and shipyard services for the Planning Yard to perform a ship check and create Ship Installation Drawings to support the modifications during the 15-month, FY26 Docking Planned Incremental Availability (DPIA)

CVN E

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	
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		

- Preparation for the FY25 Initial Deployment Configuration-Increment 1, this configuration capitalizes on work performed in prior years when MD-5A was planned and is an evolutionary step to enable Deployment of MQ-25. Only the necessary/limited set of hardware will be installed for Deployment. The Unmanned Air Warfare Center will be configured to the Final Deployment Configuration during a future Maintenance Avail that has sufficient duration to accommodate all necessary major industrial work.
- CVN installation and shipyard services for the Alteration Installation Teams to perform hardware installations during the four-month, FY25 Selected Restricted Availability (SRA) in support of FY19 NDAA conference language: ARC-210 Radio Communication System, topside antennas, and Video Management System upgrade), an increment of the MQ-25 work centers and ready room
- CVN installation and shipyard services for the Planning Yard and Shipyard to support the FY25 Selected Restricted Availability installation
- CVN installation and Shipyard services for the Planning Yard to perform a ship check and create Ship Installation Drawings to support hardware installations and modifications during the FY26 Selected Restricted Availability: MD-5C GCS (6 pilot consoles, 4 processing/storage racks), Unmanned Carrier Aviation Transport System, integrated communication system 1/2 rack, and complete all remaining MQ-25 work centers/Ready Room modifications
- Procure GCS for installation during FY26 Avail

CVN F
- Procure the Mobile User Objective System Digital Modular Radio Communication system for installation during the FY28 Planned Incremental Availability (approximately 40 months lead time)
-Procure ARC-210 Radio Communication Systems for installation in FY28 Avail

CVN G
- Final Deployment Configuration (FDC), this configuration of the Unmanned Air Warfare Center on the new class of CVNs is planned to accommodate all hardware necessary to enable Deployment of MQ-25 with the additional multi-level security capabilities and the maximum number of operator consoles. Completion of all work on the CVN is planned to be spread over two Maintenance Avails: (1) Alteration of the ship with major industrial work to incorporate structural, power, cooling, and data/signal cabling. (2) Alteration of the ship with the industrial work to incorporate MQ-25 work centers, ready room and installation of all UMCS hardware during the FY28 Planned Incremental Availability prior to the MQ-25 deployment.
- CVN Installation and Shipyard services for the planning yard to generate Ship Installation Drawings for the Unmanned Air Warfare Center and the Alteration Installation Teams to perform infrastructure installation during FY25 Post Shakedown Availability (PSA) Selected Restricted Availability. These infrastructure modifications also allow for temporary GCS installation to support follow-on MQ-25 testing.
-Procure ARC-210 Radio Communication Systems for installation in FY28 Avail
-Procure Video Management System for installation to support MQ-25 follow-on testing
-Procure integrated communication system 1/2 Rack for installation to support MQ-25 follow-on testing

CVN H
-Procure ARC-210 Radio Communication Systems for installation in FY28 Avail

CVN K
-Final Deployment Configuration (FDC), this configuration of the Unmanned Air Warfare Center on the new class of CVNs is planned to accommodate all hardware necessary to enable Deployment of MQ-25 with the additional multi-level security capabilities and the maximum number of operator consoles. Completion of all Unmanned Air Warfare Center, MQ-25 work centers, ready room and installation of all UMCS hardware on the CVN is planned to be completed during the FY28 Maintenance Avail.
- CVN installation and shipyard services for the Planning Yard to generate additional compartment analyses and Ship Change Documents to accommodate the Unmanned Air Warfare Center. This will enable subsequent development of Ship Installation Drawings for the Alteration Installation Teams to perform installation during the FY28 Docking Planned Incremental Availability.
- Procure ARC-210 Radio Communication Systems for installation in FY28 Avail

CONUS West Operational Shore Location
- Tasking to prepare and submit artifacts for Fleet Readiness Certification board (FRCB) approval to support installation and connection to operational networks in Q1 FY26
- System Testing (Test Reports)
- Cybersecurity & Accreditation Authority to Operate/Interim Authority to Operate (ATO/IATO) - Hardware installation System Operational Verification Test (SOVT) Plans
- Drawings: floor plans, rack elevations, schematics, block diagrams, network architectural diagrams

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	
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		

- Logistic and Lifecycle Support Documentation to include Users Logistic Support Summary (ULSS) or Logistics Support Statement (LSS) and Configuration Data Managers Database-Open Architecture (CDMD-OA)

CONUS East Operational Shore Location
- Procure 2 Video Management System for installation in FY26 (one per GCS)
- Procure 4 Shore Common Datalink (CDL) for installation in FY26 (two per GCS)
- Procure 2 Ashore Routing Communication System (ARCS) for installation in FY26 (one per GCS)
- Procure 2 ARC-210 Radio Communication Systems for installation in FY26 (one per GCS)
- Procure 2 Unmanned Communication Adaptor Transport System for installation in FY26 (one per GCS)
- Procure 1 URC-300 Radio System for installation in FY26 (one per site)
- Procure 2 sets of ancillary gear for installation in FY26 (one per GCS)

In FY 2024 UMCS will fund the following support tasking:
- Finalize GCS and ancillary system guidance documentation (top-level drawings and installation instructions) for the CONUS West Shore location
- Continue maturing GCS and ancillary system guidance documentation for the CONUS East and Forward Deployed Naval Forces (FDNF) locations
- Continue preparing guidance documents for FORD Class installations: all CVNs. Work is required to generate the FORD Class Ship Installation Drawings and planned installation work on in-service CVNs G and K (OPN funded) and during new Ship construction of CVNs H and I (SCN funded)
- Continue preparing and updating guidance documents for NIMITZ Class installations; CVNs A, B, C, D, E, F, I. Work is required to generate Ship Installation Drawings for the growth configuration planned for the Unmanned Air Warfare Center . On CVNs where installation work had been performed to the MD-5A layout, additional guidance must be provided to remove and reconfigure the Unmanned Air Warfare Center.
- Continue modifying ALRE systems for future installation on FORD Class carriers. This work is necessary for MQ-25 to operate from FORD Class CVNs
- Complete Video Management System redesign due to component End of Life (EOL)
- Continue GCS hardening modifications, complete initial testing Electromagnetic Interference (EMI), shock, and vibration testing, and begin rework.
- Begin implementing the UMCS Software Support Activity
- Continue creating technical manuals and Maintenance Training documentation for the GCS
- Continue integration efforts between the GCS and communication/ancillary systems
- Update technical data, software, and logistics documentation to support GCS operations and maintenance
- Continue C4I support to facility and GCS design to support integration with operational communication systems and networks at the three (3) shore locations
- Update Automated Digital Network System (ADNS) and other C4I systems to support integration with the new GCS and MQ-25 operations
- Continue modification, integration, and test with externally managed C4I systems to support MQ-25 operations
- Provide continued sustainment for the ARC-210 Radio Communication System

While individual hardware items are fully funded within the FYDP, procurement is based on lead-times and when that system is installed in the CVN or Shore location.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	**Item Number / Title [DODIC]:** 1 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn
ID Code (A=Service Ready, B=Not Service Ready) :	**MDAP/MAIS Code:**	

Resource Summary	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	75.657	67.226	134.726	152.687	0.000	152.687
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	75.657	67.226	134.726	152.687	0.000	152.687
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**75.657**	**67.226**	**134.726**	**152.687**	**0.000**	**152.687**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)						
Initial Spares *($ in Millions)*	-	-	3.246	8.150	-	8.150
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) MD-5C CVN Based GCS(†)	-	-	-	-	-	-	5,300K	2	10.600	5,406K	1	5.406	-	-	-	5,406K	1	5.406
1.1.2) MD-5D Shore Based GCS(†)	-	-	-	-	-	-	5,000K	4	20.000	-	-	-	-	-	-	-	-	-
1.1.3) Integrated Communication System (ICS) Ship - 1/2 Rack(†)	-	-	-	360,488.00	2	0.721	367,845.00	1	0.368	375,202.00	1	0.375	-	-	-	375,202.00	1	0.375
1.1.4) Video Management System (VidMS)(†)	854,000.00	1	0.854	-	-	-	1,096K	4	4.384	1,118K	3	3.354	-	-	-	1,118K	3	3.354
1.1.5) ARC-210 Radio Communication System (RCS) Ship(†) (1)	2,390K	3	7.170	-	-	-	2,522K	1	2.522	2,572K	4	10.289	-	-	-	2,572K	4	10.289
1.1.6) MUOS Digital Modular Radio (DMR) Communication System Ship(†) (2)	409,571.43	7	2.867	-	-	-	-	-	-	525,000.00	1	0.525	-	-	-	525,000.00	1	0.525
1.1.7) Shore Common Data Link (CDL)(†)	-	-	-	-	-	-	1,240K	4	4.960	1,265K	4	5.059	-	-	-	1,265K	4	5.059

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	Item Number / Title [DODIC]: 1 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
1.1.8) Ashore Routing Communication System (ARCS)(†)	-	-	-	-	-	-	321,658.00	2	0.643	328,091.00	2	0.656	-	-	-	328,091.00	2	0.656
1.1.9) Tech Refresh (3)	-	-	0.533	-	-	-	-	-	1.340	-	-	1.938	-	-	-	-	-	1.938
1.1.10) ARC-210 Radio Communication System (RCS) Shore(†) (4)	-	-	-	-	-	-	797,203.00	2	1.594	813,147.00	2	1.626	-	-	-	813,147.00	2	1.626
1.1.11) MUOS Digital Modular Radio (DMR) Communication System Shore(†) (5)	1,372K	2	2.743	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.12) Data Transfer System (DTS) - 1(†) (6)	279,000.00	1	0.279	-	-	-	314,538.00	3	0.944	-	-	-	-	-	-	-	-	-
1.1.13) UCA Transport System (UTS)(†) (7)	-	-	-	468,468.00	1	0.468	513,675.00	4	2.055	1,511K	2	3.023	-	-	-	1,511K	2	3.023
1.1.14) Air Traffic Control (ATC) Picture (UYY-1)(†)	-	-	-	-	-	-	84,896.00	3	0.255	86,594.00	1	0.087	-	-	-	86,594.00	1	0.087
1.1.15) URC-300 Voice Communication System(†)	614,000.00	1	0.614	-	-	-	639,453.00	1	0.639	652,242.00	1	0.652	-	-	-	652,242.00	1	0.652
1.1.16) Ancillaries (Shore Only)(†)	-	-	-	-	-	-	123,547.50	2	0.247	126,018.00	2	0.252	-	-	-	126,018.00	2	0.252
Subtotal: Recurring Cost	-	-	*15.060*	-	-	*1.189*	-	-	*50.551*	-	-	*33.242*	-	-	-	-	-	*33.242*
Non Recurring Cost																		
1.2.1) Aircraft Carrier Nuclear (CVN) Installation and Shipyard Services (8)	-	-	6.651	-	-	10.532	-	-	6.427	-	-	38.299	-	-	-	-	-	38.299
1.2.2) Launch and Recovery	-	-	-	-	-	4.979	-	-	9.115	-	-	6.191	-	-	-	-	-	6.191
1.2.3) C4I Integration (9)	-	-	9.299	-	-	10.173	-	-	9.362	-	-	14.726	-	-	-	-	-	14.726
1.2.4) Aircraft Carrier, Nuclear (CVN) Modification, Planning and Integration	-	-	5.094	-	-	2.625	-	-	4.847	-	-	4.093	-	-	-	-	-	4.093

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	P-1 Line Item Number / Title: 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	Item Number / Title [DODIC]: 1 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn
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 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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)
1.2.5) Product Support and Assembly (10)	-	-	10.642	-	-	10.130	-	-	15.324	-	-	18.009	-	-	-	-	-	18.009
1.2.6) Shore Integration (11)	-	-	5.660	-	-	3.495	-	-	2.746	-	-	3.628	-	-	-	-	-	3.628
1.2.7) Ground Control Station (GCS)	-	-	-	-	-	17.788	-	-	23.142	-	-	22.975	-	-	-	-	-	22.975
Subtotal: Non Recurring Cost	-	-	*37.346*	-	-	*59.722*	-	-	*70.963*	-	-	*107.921*	-	-	-	-	-	*107.921*
Subtotal: Hardware - Hardware Cost	**-**	**-**	***52.406***	**-**	**-**	***60.911***	**-**	**-**	***121.514***	**-**	**-**	***141.163***	**-**	**-**	**-**	**-**	**-**	***141.163***
Software - Software Cost																		
Recurring Cost																		
2.1.1) Software	-	-	6.236	-	-	0.157	-	-	6.465	-	-	4.420	-	-	-	-	-	4.420
Subtotal: Recurring Cost	-	-	*6.236*	-	-	*0.157*	-	-	*6.465*	-	-	*4.420*	-	-	-	-	-	*4.420*
Subtotal: Software - Software Cost	**-**	**-**	***6.236***	**-**	**-**	***0.157***	**-**	**-**	***6.465***	**-**	**-**	***4.420***	**-**	**-**	**-**	**-**	**-**	***4.420***
Support - Support Cost																		
3.1) Production Engineering Support (PES)	-	-	8.391	-	-	1.704	-	-	3.421	-	-	3.488	-	-	-	-	-	3.488
3.2) Integrated Logistics Support (ILS) (12)	-	-	8.624	-	-	4.454	-	-	3.326	-	-	3.616	-	-	-	-	-	3.616
Subtotal: Support - Support Cost	**-**	**-**	***17.015***	**-**	**-**	***6.158***	**-**	**-**	***6.747***	**-**	**-**	***7.104***	**-**	**-**	**-**	**-**	**-**	***7.104***
Gross/Weapon System Cost	**-**	**-**	**75.657**	**-**	**-**	**67.226**	**-**	**-**	**134.726**	**-**	**-**	**152.687**	**-**	**-**	**0.000**	**-**	**-**	**152.687**

(†) indicates the presence of a P-5a

Footnotes:

(1) Cost Element 1.1.5 ARC-210 RCS-Ship contains the following major components: couplers, ARC-210 radios, and power amplifiers. Material and assembly are in Cost Element 1.2.5. 48 months to complete a system; ordered 4 years prior to installation due to specific hardware having a single source vendor.

(2) Cost Element 1.1.6 funds procurement of the Mobile User Objective System (MUOS) Communication System-Ship and leverages a NAVWAR Program of Record (PoR) containing the Digital Modular Radio (DMR). DMR lead-time is approximately 40 months.

(3) Cost Element 1.1.9 Tech Refresh increased from FY23 to FY24 due to unplanned obsolescence issue with component in the Unmanned Communication Adaptor Transport System and additional updates needed for Video Management System to maintain CVN integration.

Exhibit P-5, Cost Analysis: PB 2024 Navy		Date: March 2023
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:	

(4) Cost Element 1.1.10 funds procurement of the ARC-210 RCS-Shore which provides narrow band LOS C2. Eliminates ship unique components (unit cost reduction from Cost Element 1.1.3). Procured 2 years prior to installation.

(5) Cost Element 1.1.11 funds procurement of the Mobile User Objective System Digital Modular Radio Communication System-Shore; leverages an existing shore-variant. Uses same hardware as the ship-based system. DMR lead-time is approximately 40 months

(6) Cost element 1.1.12 Data Transfer System was removed starting in FY24 due to a design change and it now being integrated into Cost Element 1.1.13 UCA Transport System (UTS).

(7) Cost element 1.1.13 costs updated in FY24 to reflect updated design that now integrates Cost Element 1.1.12 DTS into the UTS. Unit cost increased based on the updated design which required configuration changes with additional H/W and component cost increases due to supply chain issue during COVID.

(8) Cost element 1.2.1 Aircraft Carrier Nuclear (CVN) Installation and Shipyard Services increased from FY23 to FY24 due to the increased installation and planning work across multiples CVNs, this is an increase from FY23 which was install work on 1 CVN and planning for 1 CVN to FY24 install work on 1 CVN, planning for 5 CVNs and install and planning work on 1 CVN. These specific efforts have not been previously funded within the PB22 or PB23 approved budgets and is specifically requested as non-severable work as a part of the PB24 budget submittal for the FY24 request.

(9) Cost Element 1.2.3 C4I integration increased from FY23 to FY24 due to new GCS design and use of C4I POR systems. New GCS design requires additional changes to Automated Digital Network System (ADNS) and the addition of Shore Tactical Assured Command and Control (STACC) services for the Operational Shore Locations. Additional cost increase is also related to design change to CVN MUOS DMR AN/SRC-61A(V)6 & AN/SRC-61A(V)12 to increase communications reliability which is required for FY25 installation to support the first two MQ-25 deployments.

(10) Cost Element 1.2.5 Product Support and Assembly increased from FY23 to FY24 due to the amount of labor required to build integrate and test the hardware procured in FY23 that supports two CVNs and four shore sites.

(11) Cost Element 1.2.6 increased Shore Integration increased from FY23 to FY24 due to the increased support required to support the design activities for the three (3) operational sites, assist with contract monitoring, assess facility construction, and plan for CONUS West GCS and ancillary system installation in early FY25.

(12) Cost Element 3.2 Integrated Logistics Support increased from FY23 to FY24 due to the additional support for lifecycle sustainment planning for all NAVWAR C4I systems and to assist current logistics personnel with sustainment planning for UMCS.

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	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) MD-5C CVN Based GCS(†)		2023	NSMA / Washington DC	C / TBD	** NO PCO **	Mar 2023	Jul 2024	2	5,300K	N		
1.1.1) MD-5C CVN Based GCS(†)		2024	NSMA / Washington DC	C / TBD	** NO PCO **	Oct 2023	Feb 2025	1	5,406K	N		
1.1.2) MD-5D Shore Based GCS(†)		2023	NSMA / Washington, DC	C / TBD	** NO PCO **	Mar 2023	Sep 2024	4	5,000K	N		
1.1.3) Integrated Communication System (ICS) Ship - 1/2 Rack		2022	Frequentis USA / Columbia, MD	SS / FFP	Lakehurst, NJ	Oct 2021	Oct 2022	2	360,488.00	Y		Jun 2018
1.1.3) Integrated Communication System (ICS) Ship - 1/2 Rack		2023	Frequentis USA / Columbia, MD	C / TBD	Lakehurst, NJ	Jan 2023	Jan 2024	1	367,845.00	N		Aug 2022
1.1.3) Integrated Communication System (ICS) Ship - 1/2 Rack		2024	Frequentis USA / Columbia, MD	C / TBD	** NO PCO **	Oct 2023	Oct 2024	1	375,202.00	N		
1.1.4) Video Management System (VidMS)		2020	General Dynamics Information Technology / Falls Church, VA	C / CPAF	Pax River, MD	Jan 2020	Jan 2021	1	854,200.00	Y		Sep 2018
1.1.4) Video Management System (VidMS)		2023	General Dynamics Information Technology / Falls Church, VA	C / CPAF	Pax River, MD	Jan 2023	Apr 2024	4	1,096K	Y		Sep 2018
1.1.4) Video Management System (VidMS)		2024	General Dynamics Information Technology / Falls Church, VA	C / CPAF	Pax River, MD	Apr 2024	Jul 2025	3	1,118K	N		Sep 2018
1.1.5) ARC-210 Radio Communication System (RCS) Ship(†)		2020 (13)	NAWC WOLF / NAWCAD Patuxent River, MD	Reqn	Pax River, MD	Nov 2019	Nov 2023	2	2,373K	Y		Sep 2018
1.1.5) ARC-210 Radio Communication System (RCS) Ship(†)		2021 (14)	NAWC WOLF / NAWCAD Patuxent River, MD	Reqn	Pax River, MD	Oct 2020	Oct 2024	1	2,424K	Y		Sep 2018
1.1.5) ARC-210 Radio Communication System (RCS) Ship(†)		2023 (15)	NAWC WOLF / NAWCAD Patuxent River, MD	Reqn	Pax River, MD	Oct 2022	Oct 2026	1	2,522K	Y		Sep 2018
1.1.5) ARC-210 Radio Communication System (RCS) Ship(†)		2024 (16)	NAWC WOLF / NAWCAD Patuxent River, MD	Reqn	Pax River, MD	Jan 2024	Jan 2028	4	2,572K	Y		Sep 2018
1.1.6) MUOS Digital Modular Radio (DMR) Communication System Ship		2020 (17)	NAWC WOLF / NAWCAD Patuxent RIver, MD	Reqn	Pax River, MD	Oct 2019	Feb 2023	2	403,760.00	Y		Sep 2018
1.1.6) MUOS Digital Modular Radio (DMR) Communication System Ship		2021 (18)	NAWC WOLF / NAWCAD Patuxent RIver, MD	Reqn	Pax River, MD	Oct 2020	Feb 2024	5	411,814.00	Y		Sep 2018
1.1.6) MUOS Digital Modular Radio (DMR) Communication System Ship		2024 (19)	NAWC WOLF / NAWCAD Patuxent RIver, MD	Reqn	Pax River, MD	Dec 2023	Apr 2027	1	525,000.00	N		Sep 2018

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	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
1.1.7) Shore Common Data Link (CDL)(†)		2023	CUBIC / CALIFORNIA	C / TBD	** NO PCO **	Jun 2023	Aug 2024	4	1,240K	Y		Jan 2023
1.1.7) Shore Common Data Link (CDL)(†)		2024	CUBIC / CALIFORNIA	C / TBD	** NO PCO **	Jul 2024	Jul 2025	4	1,265K	N		
1.1.8) Ashore Routing Communication System (ARCS)		2023	General Dynamics / Falls Church, VA	C / TBD	** NO PCO **	Mar 2023	Mar 2024	2	321,658.00	N		Nov 2022
1.1.8) Ashore Routing Communication System (ARCS)		2024	General Dynamics / Falls Church, VA	C / TBD	** NO PCO **	Jul 2024	Jul 2025	2	328,091.00	N		Nov 2022
1.1.10) ARC-210 Radio Communication System (RCS) Shore		2023 (20)	NAWC WOLF / NAWCAD Patuxent River, MD	Reqn	Pax River, MD	Mar 2023	Jun 2024	2	797,203.00	N		Nov 2022
1.1.10) ARC-210 Radio Communication System (RCS) Shore		2024 (21)	NAWC WOLF / NAWCAD Patuxent River, MD	Reqn	Pax River, MD	Apr 2024	Jul 2025	2	813,147.00	N		Nov 2022
1.1.11) MUOS Digital Modular Radio (DMR) Communication System Shore		2020 (22)	NAWC WOLF / NAWCAD Patuxent RIver, MD	Reqn	Pax River, MD	Oct 2019	Feb 2023	1	1,211K	N		
1.1.11) MUOS Digital Modular Radio (DMR) Communication System Shore		2021 (23)	NAWC WOLF / NAWCAD Patuxent RIver, MD	C / FP	Pax River, MD	Apr 2021	Aug 2024	1	1,532K	Y		Sep 2018
1.1.12) Data Transfer System (DTS) - 1		2021	Defense Logistics Agency / Philadelphia, PA	Reqn	Philadelphia, PA	Sep 2021	Sep 2022	1	278,519.00	N		
1.1.12) Data Transfer System (DTS) - 1		2023	Defense Logistics Agency / Philadelphia, PA	Reqn	Philadelphia, PA	Feb 2023	Feb 2024	3	314,538.00	N		Nov 2022
1.1.13) UCA Transport System (UTS)		2022	General Dynamics / Falls Church, VA	C / TBD	** NO PCO **	Jan 2022	Jan 2023	1	468,468.00	N		
1.1.13) UCA Transport System (UTS)		2023	General Dynamics / Falls Church, VA	C / TBD	** NO PCO **	Feb 2023	Feb 2024	4	513,675.00	N	Nov 2022	
1.1.13) UCA Transport System (UTS)		2024	General Dynamics / Falls Church, VA	C / TBD	** NO PCO **	Apr 2024	Apr 2025	2	1,511K	N		
1.1.14) Air Traffic Control (ATC) Picture (UYY-1)		2023	NAWC / Patuxent River, MD	C / TBD	** NO PCO **	Jan 2023	Jan 2024	3	84,896.00	N	Nov 2022	
1.1.14) Air Traffic Control (ATC) Picture (UYY-1)		2024	NAWC / Patuxent River, MD	C / TBD	** NO PCO **	Dec 2023	Dec 2024	1	86,594.00	N		
1.1.15) URC-300 Voice Communication System		2021	Defense Logistics Agency / Philadelphia, PA	Reqn	Philadelphia, PA	Feb 2022	Feb 2023	1	613,874.00	Y		Oct 2021
1.1.15) URC-300 Voice Communication System		2023	Defense Logistics Agency / Philadelphia, PA	Reqn	Philadelphia, PA	Jan 2023	Jan 2024	1	639,453.00	N		Oct 2022

Exhibit P-5a, Procurement History and Planning: PB 2024 Navy		Date: March 2023
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Cost Elements	OCO	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
1.1.15) URC-300 Voice Communication System		2024	Defense Logistics Agency / Philadelphia, PA	Reqn	Philadelphia, PA	Jul 2024	Jul 2025	1	652,242.00	N		Oct 2022
1.1.16) Ancillaries (Shore Only)		2023	NAWC / Patuxent River, MD	Reqn	** NO PCO **	May 2023	May 2024	2	123,547.50	N		

(†) indicates the presence of a P-21

Footnotes:

(13) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(14) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(15) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(16) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(17) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(18) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(19) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(20) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(21) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(22) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.
(23) Manufacturer is represented by NAWC WOLF due to multiple vendors supplying items. All items are assembled/integrated at NAWC WOLF in Patuxent River to produce the final end item.

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
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Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE
										Calendar Year 2020												Calendar Year 2021									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MD-5C CVN Based GCS																															
	1	2023	NAVY	2	0	2																									2
	1	2024	NAVY	1	0	1																									1
1.1.2) MD-5D Shore Based GCS																															
	2	2023	NAVY	4	0	4																									4
1.1.5) ARC-210 Radio Communication System (RCS) Ship [1]																															
	3	2020	NAVY	2	0	2		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	3	2021	NAVY	1	0	1													A -	-	-	-	-	-	-	-	-	-	-	-	1
	3	2023	NAVY	1	0	1																									1
	3	2024	NAVY	4	0	4																									4
1.1.7) Shore Common Data Link (CDL)																															
	4	2023	NAVY	4	0	4																									4
	4	2024	NAVY	4	0	4																									4
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
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Cost Elements (Units in Each)							Fiscal Year 2022												Fiscal Year 2023												BALANCE
										Calendar Year 2022												Calendar Year 2023									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MD-5C CVN Based GCS																															
	1	2023	NAVY	2	0	2																		A -	-	-	-	-	-	-	2
	1	2024	NAVY	1	0	1																									1
1.1.2) MD-5D Shore Based GCS																															
	2	2023	NAVY	4	0	4																		A -	-	-	-	-	-	-	4
1.1.5) ARC-210 Radio Communication System (RCS) Ship [1]																															
	3	2020	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
	3	2021	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	3	2023	NAVY	1	0	1													A -	-	-	-	-	-	-	-	-	-	-	-	1
	3	2024	NAVY	4	0	4																									4
1.1.7) Shore Common Data Link (CDL)																															
	4	2023	NAVY	4	0	4																					A -	-	-	-	4
	4	2024	NAVY	4	0	4																									4
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		**Date:** March 2023
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Cost Elements (Units in Each)							Fiscal Year 2024												Fiscal Year 2025												BALANCE
							Calendar Year 2024												Calendar Year 2025												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MD-5C CVN Based GCS																															
	1	2023	NAVY	2	0	2	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1					0
	1	2024	NAVY	1	0	1	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1								0
1.1.2) MD-5D Shore Based GCS																															
	2	2023	NAVY	4	0	4	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1	-	-	-	1			0
1.1.5) ARC-210 Radio Communication System (RCS) Ship (1)																															
	3	2020	NAVY	2	0	2	-	1	-	1																					0
	3	2021	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1												0
	3	2023	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	3	2024	NAVY	4	0	4				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
1.1.7) Shore Common Data Link (CDL)																															
	4	2023	NAVY	4	0	4	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1								0
	4	2024	NAVY	4	0	4										A -	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
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Cost Elements (Units in Each)							Fiscal Year 2026												Fiscal Year 2027												BALANCE
							Calendar Year 2026												Calendar Year 2027												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2025	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MD-5C CVN Based GCS																															
	1	2023	NAVY	2	2	0																									0
	1	2024	NAVY	1	1	0																									0
1.1.2) MD-5D Shore Based GCS																															
	2	2023	NAVY	4	4	0																									0
1.1.5) ARC-210 Radio Communication System (RCS) Ship (1)																															
	3	2020	NAVY	2	2	0																									0
	3	2021	NAVY	1	1	0																									0
	3	2023	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	1												0
	3	2024	NAVY	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
1.1.7) Shore Common Data Link (CDL)																															
	4	2023	NAVY	4	4	0																									0
	4	2024	NAVY	4	2	2	-	1	-	1																					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	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	**Item Number / Title [DODIC]:** 1 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn

Cost Elements (Units in Each)							Fiscal Year 2028												Fiscal Year 2029												BALANCE
							Calendar Year 2028												Calendar Year 2029												
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2027	BAL DUE AS OF 1 OCT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1.1.1) MD-5C CVN Based GCS																															
	1	2023	NAVY	2	2	0																									0
	1	2024	NAVY	1	1	0																									0
1.1.2) MD-5D Shore Based GCS																															
	2	2023	NAVY	4	4	0																									0
1.1.5) ARC-210 Radio Communication System (RCS) Ship (1)																															
	3	2020	NAVY	2	2	0																									0
	3	2021	NAVY	1	1	0																									0
	3	2023	NAVY	1	1	0																									0
	3	2024	NAVY	4	0	4	-	-	-	1	-	1	-	1	-	1															0
1.1.7) Shore Common Data Link (CDL)																															
	4	2023	NAVY	4	4	0																									0
	4	2024	NAVY	4	4	0																									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	

Exhibit P-21, Production Schedule: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4269 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn	**Item Number / Title [DODIC]:** 1 / UMCS-Unman Carrier Aviation(UCA)Mission Cntrl Stn

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
					Initial				Reorder			
		MSR For 2024	1-8-5 For 2024	MAX For 2024	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	NSMA - Washington DC	1	2	4	0	1	16	17	0	6	16	22
2	NSMA - Washington, DC	1	2	4	0	6	18	24	0	3	15	18
3	NAWC WOLF - NAWCAD Patuxent River, MD	1	2	4	2	2	48	50	2	4	48	52
4	CUBIC - CALIFORNIA	2	4	8	6	9	14	23	1	10	12	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).

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4604 / Architect & Cap for Autonomy in Nav Enter (ARCANE)

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	To Complete	Total
Procurement Quantity *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	1.612	0.000	1.612	5.613	5.618	5.728	5.848	-	24.419
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	1.612	0.000	1.612	5.613	5.618	5.728	5.848	-	24.419
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**1.612**	**0.000**	**1.612**	**5.613**	**5.618**	**5.728**	**5.848**	**-**	**24.419**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Dollars)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

OPN funding is required to procure and sustain elements of the ARCANE (Architecture and Capabilities for Autonomy in the Naval Enterprise) software enterprise architecture, including software licenses, host hardware, and data center services. This is an extension of the line of effort established by Common Control System (CCS) (LI 4250), expanding into autonomy and capabilities aligned with the National Defense Strategy. New LI established for clarity.

The CCS program was redirected in FY21 to focus on autonomy, executive control, artificial intelligence, and machine learning for Unmanned Systems (UxS) systems. This direction was consistent with decisions to implement existing solutions for UAS control, while continuing to advance development in valid requirements captured in the CCS requirements document. Under this new direction the program is operating under the name ARCANE.

As part of this transition in focus, the ARCANE program is moving forward under the DoD Adaptive Acquisition Framework Software Acquisition Pathway. This pathway will allow the program to be more responsive to the autonomy needs of Naval Aviation platforms and allow for more efficient delivery of incremental capability. ARCANE has requested entry into the Planning Phase of the Software Acquisition Pathway, and is routing for DA approval. A draft acquisition strategy has been developed and will continue to be refined throughout the Planning Phase.

The ARCANE program will be a provider of autonomous capability solutions for manned and unmanned Naval Aviation systems in order to provide interoperability between unmanned and autonomous Naval Aviation platforms. ARCANE will consist of a common autonomy architecture framework; a process to enable Naval Aviation platforms to identify, achieve, and sustain autonomy needs; and a repository of autonomous behaviors developed for all ARCANE implementations across the Naval Aviation Enterprise (NAE). ARCANE will establish the autonomy enterprise architecture that supports the high-end fight and reduces impact on platform and OEM schedule / business arrangements. Autonomous capabilities will reduce cognitive decision-making workload and required operator actions to maximize warfighting impact in future "great power competition." The Software Acquisition Pathway will provide for the growth of autonomy-enabled capabilities at software pace, not traditional acquisition pace.

Concurrent with enterprise-level work on standards and architectures, the ARCANE program will transition the autonomy elements of the AVATAR Manned-Unmanned Teaming (MUM-T) program, fielding an initial MUM-T capability. The foundational autonomy elements of the MUM-T capability will also serve as the starting point for additional autonomy solutions for the NAE. Establishment of the initial MUM-T warfighting capability will be dependent on partner program integration, within that partner's resourcing approach and acquisition strategy.

Exhibit P-40, Budget Line Item Justification: PB 2024 Navy	Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N: Other Procurement, Navy / BA 03: Aviation Support Equipment / BSA 3: Aircraft Support Equipment	**P-1 Line Item Number / Title:** 4604 / Architect & Cap for Autonomy in Nav Enter (ARCANE)

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 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a	Architect & Cap for Autonomy in Nav Enter (ARCANE)				- / 0.000	- / -	- / -	- / 1.612	- / -	- / 1.612
P-40	**Total Gross/Weapon System Cost**				**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 1.612**	**- / 0.000**	**- / 1.612**

*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. Title represents the P-40a Title when only the P-40a Summary/Total is shown.

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

Justification:
FY 2024 funding is required to initiate production, procurement, and delivery of ARCANE software to the NAE.

This is not a new start. ARCANE will operate under CCS funding profile and requirements documents, but the directed focus on autonomy warrants a new BLI created for clarity.

FY 2024 funding will be utilized for the ARCANE Phase 1 autonomy enterprise architecture portion of the program.
Items to be funded in this line include:

1.1) Software Production / Enterprise Architecture Production - ARCANE funding will procure all necessary items for software production and installation, as well as establishment of the autonomy enterprise architecture (discs, hard drives, network drawings, installation manuals, and software licenses required at installation).

1.2) Software/Production Engineering Support - The ARCANE program produces software releases via an incremental development process. These releases contain changes required to retain commonality and compatibility with supported platforms, correct deficiencies, and incrementally-field new capabilities. ARCANE software releases are independent of platform hardware buys. Software/Production and Engineering Support includes production support services, engineering support services, acceptance tests, certifications, site activation, cybersecurity compliance and quality assurance efforts.

1.3) Integrated Logistics Support - The ARCANE program will conduct on-site logistics evaluations to verify installation configurations and installation media compliant with the specified configuration. This includes the production, update and delivery of technical documentation (Technical Directives and associated compliance).

Exhibit P-40a, Budget Item Justification For Aggregated Items: PB 2024 Navy		Date: March 2023
Appropriation / Budget Activity / Budget Sub Activity: 1810N / 03 / 3	**P-1 Line Item Number / Title:** 4604 / Architect & Cap for Autonomy in Nav Enter (ARCANE)	**Aggregated Items Title:** Architect & Cap for Autonomy in Nav Enter (ARCANE)

Item Number / Title [DODIC]	ID CD	MDAP/ MAIS Code	Prior Years			FY 2022			FY 2023			FY 2024 Base			FY 2024 OCO			FY 2024 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) ARCANE																				
1.1) Software Production/Enterprise Architecture Production	A		-	-	-	-	-	-	-	-	-	-	-	0.306	-	-	-	-	-	0.306
1.2) Software/ Production Engineering Support	A		-	-	-	-	-	-	-	-	-	-	-	1.209	-	-	-	-	-	1.209
1.3) Integrated Logistics Support	A		-	-	-	-	-	-	-	-	-	-	-	0.097	-	-	-	-	-	0.097
Subtotal: 1) ARCANE			**-**	**-**	***0.000***	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	***1.612***	**-**	**-**	**-**	**-**	**-**	***1.612***
Total			**-**	**-**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1.612**	**-**	**-**	**-**	**-**	**-**	**1.612**

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

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