

UNCLASSIFIED

**Department of Defense  
Fiscal Year (FY) 2024 Budget Estimates**

March 2023



**Navy**

*Justification Book Volume 4 of 5*

***Research, Development, Test & Evaluation, Navy***

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Navy • Budget Estimates FY 2024 • RDT&E Program

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## **Department of Defense Appropriations Act, 2024**

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### **Research, Development, Test and Evaluation, Navy**

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, \$26,922,225 to remain available for obligation until September 30, 2025.

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**Fiscal Year (FY) 2024 Overseas Operations Costs funding accounted for in the Base budget total \$15.**

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Department of the Navy  
FY 2024 President's Budget  
Exhibit R-1 FY 2024 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
<b><u>Summary Recap of Budget Activities</u></b>					
Basic Research	681,475	688,889		688,889	637,263
Applied Research	1,243,015	1,487,017		1,487,017	1,026,339
Advanced Technology Development	960,390	1,309,342		1,309,342	1,016,552
Advanced Component Development & Prototypes	6,663,911	8,548,769		8,548,769	9,734,483
System Development & Demonstration	5,308,050	6,472,604		6,472,604	6,962,234
Management Support	1,602,667	1,251,196		1,251,196	1,163,613
Operational Systems Development	5,544,231	6,221,872	40,577	6,262,449	6,359,438
Software And Digital Technology Pilot Programs	29,128	24,008		24,008	22,303
<b>Total Research, Development, Test, &amp; Evaluation</b>	<b>22,032,867</b>	<b>26,003,697</b>	<b>40,577</b>	<b>26,044,274</b>	<b>26,922,225</b>
<b><u>Summary Recap of FYDP Programs</u></b>					
Strategic Forces	328,259	493,924		493,924	529,130
General Purpose Forces	1,548,495	1,790,107		1,790,107	2,079,369
Intelligence and Communications	619,446	677,588		677,588	801,122
Research and Development	17,356,083	20,650,575		20,650,575	21,462,528
Central Supply and Maintenance	39,965	28,381		28,381	26,532
Administration and Associated Activities	3,203	1,811		1,811	2,168
Space	596				
Classified Programs	2,136,820	2,361,311	40,577	2,401,888	2,021,376
<b>Total Research, Development, Test, &amp; Evaluation</b>	<b>22,032,867</b>	<b>26,003,697</b>	<b>40,577</b>	<b>26,044,274</b>	<b>26,922,225</b>

\*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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Department of the Navy  
FY 2024 President's Budget  
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Total Obligational Authority  
(Dollars in Thousands)

Appropriation: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
1	0601103N	University Research Initiatives	01	U	169,965	147,376		147,376	96,355
2	0601153N	Defense Research Sciences	01	U	511,510	541,513		541,513	540,908
		<b>Basic Research</b>			<b>681,475</b>	<b>688,889</b>		<b>688,889</b>	<b>637,263</b>
3	0602114N	Power Projection Applied Research	02	U	41,760	27,953		27,953	23,982
4	0602123N	Force Protection Applied Research	02	U	215,913	345,576		345,576	142,148
5	0602131M	Marine Corps Landing Force Technology	02	U	62,130	79,467		79,467	59,208
6	0602235N	Common Picture Applied Research	02	U	50,371	51,911		51,911	52,090
7	0602236N	Warfighter Sustainment Applied Research	02	U	114,681	121,707		121,707	74,722
8	0602271N	Electromagnetic Systems Applied Research	02	U	89,120	131,288		131,288	92,473
9	0602435N	Ocean Warfighting Environment Applied Research	02	U	100,774	165,622		165,622	80,806
10	0602651M	Joint Non-Lethal Weapons Applied Research	02	U	6,213	6,659		6,659	7,419
11	0602747N	Undersea Warfare Applied Research	02	U	104,687	104,111		104,111	61,503
12	0602750N	Future Naval Capabilities Applied Research	02	U	193,392	177,141		177,141	182,662
13	0602782N	Mine and Expeditionary Warfare Applied Research	02	U	40,983	48,649		48,649	30,435
14	0602792N	Innovative Naval Prototypes (INP) Applied Research	02	U	143,842	145,637		145,637	133,828
15	0602861N	Science and Technology Management - ONR Field Acitivities	02	U	79,149	81,296		81,296	85,063
		<b>Applied Research</b>			<b>1,243,015</b>	<b>1,487,017</b>		<b>1,487,017</b>	<b>1,026,339</b>
16	0603123N	Force Protection Advanced Technology	03	U	35,010	59,933		59,933	29,512

\*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: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
17	0603271N	Electromagnetic Systems Advanced Technology	03	U	11,762	16,253		16,253	8,418
18	0603273N	Science & Technology for Nuclear Re-entry Systems	03	U		65,735		65,735	112,329
19	0603640M	USMC Advanced Technology Demonstration (ATD)	03	U	283,332	412,747		412,747	308,217
20	0603651M	Joint Non-Lethal Weapons Technology Development	03	U	13,026	14,048		14,048	15,556
21	0603673N	Future Naval Capabilities Advanced Technology Development	03	U	275,441	268,993		268,993	264,700
22	0603680N	Manufacturing Technology Program	03	U	74,826	61,704		61,704	61,843
23	0603729N	Warfighter Protection Advanced Technology	03	U	39,057	46,999		46,999	5,100
24	0603758N	Navy Warfighting Experiments and Demonstrations	03	U	60,878	99,020		99,020	75,898
25	0603782N	Mine and Expeditionary Warfare Advanced Technology	03	U	1,922	2,007		2,007	2,048
26	0603801N	Innovative Naval Prototypes (INP) Advanced Technology Development	03	U	165,136	261,903		261,903	132,931
		<b>Advanced Technology Development</b>			<b>960,390</b>	<b>1,309,342</b>		<b>1,309,342</b>	<b>1,016,552</b>
27	0603128N	Unmanned Aerial System	04	U	15,545	98,883		98,883	108,225
28	0603178N	Large Unmanned Surface Vehicles (LUSV)	04	U	98,871	136,580		136,580	117,400
29	0603207N	Air/Ocean Tactical Applications	04	U	26,972	60,737		60,737	40,653
30	0603216N	Aviation Survivability	04	U	24,286	17,387		17,387	20,874
31	0603239N	Naval Construction Forces	04	U	5,271	1,706		1,706	7,821
32	0603254N	ASW Systems Development	04	U	20,079	15,977		15,977	17,090
33	0603261N	Tactical Airborne Reconnaissance	04	U	3,111	3,562		3,562	3,721

\*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: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
34	0603382N	Advanced Combat Systems Technology	04	U	40,937	73,128		73,128	6,216
35	0603502N	Surface and Shallow Water Mine Countermeasures	04	U	51,637	87,746		87,746	34,690
36	0603506N	Surface Ship Torpedo Defense	04	U	8,573	473		473	730
37	0603512N	Carrier Systems Development	04	U	7,109	11,567		11,567	6,095
38	0603525N	PILOT FISH	04	U	391,704	671,000		671,000	916,208
39	0603527N	RETRACT LARCH	04	U	60,941	7,483		7,483	7,545
40	0603536N	RETRACT JUNIPER	04	U	140,080	239,088		239,088	271,109
41	0603542N	Radiological Control	04	U	758	772		772	811
42	0603553N	Surface ASW	04	U	1,099	1,180		1,180	1,189
43	0603561N	Advanced Submarine System Development	04	U	96,405	110,146		110,146	88,415
44	0603562N	Submarine Tactical Warfare Systems	04	U	13,832	10,808		10,808	15,119
45	0603563N	Ship Concept Advanced Design	04	U	132,244	130,405		130,405	89,939
46	0603564N	Ship Preliminary Design & Feasibility Studies	04	U	39,472	75,305		75,305	121,402
47	0603570N	Advanced Nuclear Power Systems	04	U	203,572	227,400		227,400	319,656
48	0603573N	Advanced Surface Machinery Systems	04	U	74,439	207,000		207,000	133,911
49	0603576N	CHALK EAGLE	04	U	76,723	91,280		91,280	116,078
50	0603581N	Littoral Combat Ship (LCS)	04	U	80,254	76,364		76,364	32,615
51	0603582N	Combat System Integration	04	U	16,884	18,236		18,236	18,610
52	0603595N	Ohio Replacement	04	U	302,004	344,981		344,981	257,076
53	0603596N	LCS Mission Modules	04	U	75,189	31,707		31,707	31,464

\*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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54	0603597N	Automated Test and Re-Test (ATRT)	04	U	36,461	60,073		60,073	10,809
55	0603599N	Frigate Development	04	U	98,022	108,626		108,626	112,972
56	0603609N	Conventional Munitions	04	U	7,245	9,286		9,286	9,030
57	0603635M	Marine Corps Ground Combat/Support System	04	U	69,451	111,431		111,431	128,782
58	0603654N	Joint Service Explosive Ordnance Development	04	U	33,974	36,304		36,304	44,766
59	0603713N	Ocean Engineering Technology Development	04	U	8,547	6,193		6,193	10,751
60	0603721N	Environmental Protection	04	U	28,150	21,647		21,647	24,457
61	0603724N	Navy Energy Program	04	U	64,991	75,320		75,320	72,214
62	0603725N	Facilities Improvement	04	U	6,306	5,664		5,664	10,149
63	0603734N	CHALK CORAL	04	U	558,549	753,303		753,303	687,841
64	0603739N	Navy Logistic Productivity	04	U	643	899		899	4,712
65	0603746N	RETRACT MAPLE	04	U	275,379	363,874		363,874	420,455
66	0603748N	LINK PLUMERIA	04	U	643,600	1,038,239		1,038,239	2,100,474
67	0603751N	RETRACT ELM	04	U	79,593	82,684		82,684	88,036
68	0603764M	LINK EVERGREEN	04	U	254,492	313,409		313,409	547,005
69	0603790N	NATO Research and Development	04	U	5,805	8,041		8,041	6,265
70	0603795N	Land Attack Technology	04	U	3,922	358		358	1,624
71	0603851M	Joint Non-Lethal Weapons Testing	04	U	27,556	30,533		30,533	31,058
72	0603860N	Joint Precision Approach and Landing Systems - Dem/Val	04	U	20,223	18,628		18,628	22,590
73	0603925N	Directed Energy and Electric Weapon Systems	04	U	80,055	65,080		65,080	52,129

\*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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74	0604014N	F/A -18 Infrared Search and Track (IRST)	04	U	47,637	55,069		55,069	32,127
75	0604027N	Digital Warfare Office	04	U	44,969	165,753		165,753	181,001
76	0604028N	Small and Medium Unmanned Undersea Vehicles	04	U	77,806	88,839		88,839	110,506
77	0604029N	Unmanned Undersea Vehicle Core Technologies	04	U	63,262	59,652		59,652	71,156
78	0604030N	Rapid Prototyping, Experimentation and Demonstration.	04	U		50,580		50,580	214,100
79	0604031N	Large Unmanned Undersea Vehicles	04	U	27,510				6,900
80	0604112N	Gerald R. Ford Class Nuclear Aircraft Carrier (CVN 78 - 80)	04	U	117,878	116,498		116,498	118,182
81	0604126N	Littoral Airborne MCM	04	U	18,067	30,240		30,240	
82	0604127N	Surface Mine Countermeasures	04	U	11,924	12,959		12,959	16,127
83	0604272N	Tactical Air Directional Infrared Countermeasures (TADIRCM)	04	U	32,530	39,028		39,028	34,684
84	0604289M	Next Generation Logistics	04	U	7,796	7,342		7,342	5,991
85	0604292N	Future Vertical Lift (Maritime Strike)	04	U	8,269	5,103		5,103	2,100
86	0604320M	Rapid Technology Capability Prototype	04	U	11,199	67,927		67,927	131,763
87	0604454N	LX (R)	04	U	3,332	18,830		18,830	21,319
88	0604536N	Advanced Undersea Prototyping	04	U	30,597	94,515		94,515	104,328
89	0604636N	Counter Unmanned Aircraft Systems (C-UAS)	04	U	5,462	7,438		7,438	11,567
90	0604659N	Precision Strike Weapons Development Program	04	U	80,661	34,824		34,824	5,976
91	0604707N	Space and Electronic Warfare (SEW) Architecture/Engineering Support	04	U	8,980	10,229		10,229	9,993

\*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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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
92	0604786N	Offensive Anti-Surface Warfare Weapon Development	04	U	75,093	223,826		223,826	237,655
93	0605512N	MEDIUM UNMANNED SURFACE VEHICLES (MUSVs))	04	U	57,872	85,966		85,966	85,800
94	0605513N	Unmanned Surface Vehicle Enabling Capabilities	04	U	115,436	181,534		181,534	176,261
95	0605514M	GROUND BASED ANTI-SHIP MISSILE	04	U	98,762	43,090		43,090	36,383
96	0605516M	LONG RANGE FIRES	04	U	85,073	36,693		36,693	36,763
97	0605518N	CONVENTIONAL PROMPT STRIKE (CPS)	04	U	1,282,595	1,230,041		1,230,041	901,064
98	0303354N	ASW Systems Development - MIP	04	U	8,536	9,769		9,769	10,167
99	0304240M	Advanced Tactical Unmanned Aircraft System	04	U	31,204	11,735		11,735	539
100	0304270N	Electronic Warfare Development - MIP	04	U	506	796		796	1,250
	<b>Advanced Component Development &amp; Prototypes</b>				<b>6,663,911</b>	<b>8,548,769</b>		<b>8,548,769</b>	<b>9,734,483</b>
101	0603208N	Training System Aircraft	05	U	5,758	15,128		15,128	44,120
102	0604038N	Maritime Targeting Cell	05	U		69,600		69,600	30,922
103	0604212M	Other Helo Development	05	U					101,209
104	0604212N	Other Helo Development	05	U	47,802	66,010		66,010	2,604
105	0604214M	AV-8B Aircraft - Eng Dev	05	U	10,037	9,205		9,205	8,263
106	0604215N	Standards Development	05	U	4,066	3,766		3,766	4,039
107	0604216N	Multi-Mission Helicopter Upgrade Development	05	U	52,962	54,684		54,684	62,350
108	0604221N	P-3 Modernization Program	05	U	564	343		343	771
109	0604230N	Warfare Support System	05	U	14,945	16,337		16,337	109,485
110	0604231N	Command and Control Systems	05	U	118,895	143,573		143,573	87,457

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Appropriation: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
111	0604234N	Advanced Hawkeye	05	U	339,032	487,281		487,281	399,919
112	0604245M	H-1 Upgrades	05	U	49,316	43,759		43,759	29,766
113	0604261N	Acoustic Search Sensors	05	U	47,534	50,231		50,231	51,531
114	0604262N	V-22A	05	U	89,448	125,233		125,233	137,597
115	0604264N	Air Crew Systems Development	05	U	20,271	50,282		50,282	42,155
116	0604269N	EA-18	05	U	58,692	116,589		116,589	172,507
117	0604270N	Electronic Warfare Development	05	U	126,373	144,471		144,471	171,384
118	0604273M	Executive Helo Development	05	U	40,496	45,645		45,645	35,376
119	0604274N	Next Generation Jammer (NGJ)	05	U	230,396	54,679		54,679	40,477
120	0604280N	Joint Tactical Radio System - Navy (JTRS-Navy)	05	U	225,867	334,787		334,787	451,397
121	0604282N	Next Generation Jammer (NGJ) Increment II	05	U	72,937	135,467		135,467	250,577
122	0604307N	Surface Combatant Combat System Engineering	05	U	321,118	345,489		345,489	453,311
123	0604311N	LPD-17 Class Systems Integration	05	U	869				
124	0604329N	Small Diameter Bomb (SDB)	05	U	39,366	42,881		42,881	52,211
125	0604366N	Standard Missile Improvements	05	U	341,355	309,943		309,943	418,187
126	0604373N	Airborne MCM	05	U	10,838	10,882		10,882	11,368
127	0604378N	Naval Integrated Fire Control - Counter Air Systems Engineering	05	U	49,110	45,892		45,892	66,445
128	0604419N	Advanced Sensors Application Program (ASAP)	05	U	10,000	13,000		13,000	
129	0604501N	Advanced Above Water Sensors	05	U	60,394	72,772		72,772	115,396
130	0604503N	SSN-688 and Trident Modernization	05	U	92,168	93,501		93,501	93,435

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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
131	0604504N	Air Control	05	U	32,614	39,138		39,138	42,656
132	0604512N	Shipboard Aviation Systems	05	U	8,889	11,759		11,759	10,442
133	0604518N	Combat Information Center Conversion	05	U	11,389	16,160		16,160	11,359
134	0604522N	Air and Missile Defense Radar (AMDR) System	05	U	84,526	87,341		87,341	90,307
135	0604530N	Advanced Arresting Gear (AAG)	05	U	146	151		151	10,658
136	0604558N	New Design SSN	05	U	468,358	316,085		316,085	234,356
137	0604562N	Submarine Tactical Warfare System	05	U	60,806	58,741		58,741	71,516
138	0604567N	Ship Contract Design/ Live Fire T&E	05	U	52,878	60,791		60,791	22,462
139	0604574N	Navy Tactical Computer Resources	05	U	4,267	4,177		4,177	4,279
140	0604601N	Mine Development	05	U	37,054	60,793		60,793	104,731
141	0604610N	Lightweight Torpedo Development	05	U	92,274	135,500		135,500	229,668
142	0604654N	Joint Service Explosive Ordnance Development	05	U	8,315	8,618		8,618	9,064
143	0604657M	USMC Ground Combat/Supporting Arms Systems - Eng Dev	05	U	40,885	45,025		45,025	62,329
144	0604703N	Personnel, Training, Simulation, and Human Factors	05	U	7,128	7,454		7,454	9,319
145	0604727N	Joint Standoff Weapon Systems	05	U		758		758	1,964
146	0604755N	Ship Self Defense (Detect & Control)	05	U	139,580	156,426		156,426	158,426
147	0604756N	Ship Self Defense (Engage: Hard Kill)	05	U	105,984	84,518		84,518	47,492
148	0604757N	Ship Self Defense (Engage: Soft Kill/EW)	05	U	64,200	97,537		97,537	125,206
149	0604761N	Intelligence Engineering	05	U	20,684	23,742		23,742	19,969
150	0604771N	Medical Development	05	U	30,429	16,178		16,178	6,061

\*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: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
151	0604777N	Navigation/ID System	05	U	48,510	60,209		60,209	45,262
152	0604800M	Joint Strike Fighter (JSF) - EMD	05	U	555	611		611	
153	0604800N	Joint Strike Fighter (JSF) - EMD	05	U	252	234		234	
154	0604850N	SSN(X)	05	U	29,174	133,772		133,772	361,582
155	0605013M	Information Technology Development	05	U	10,854	11,361		11,361	22,663
156	0605013N	Information Technology Development	05	U	261,195	318,103		318,103	282,138
157	0605024N	Anti-Tamper Technology Support	05	U	8,393	7,271		7,271	8,340
158	0605180N	TACAMO Modernization	05	U	48,644	502,493		502,493	213,743
159	0605212M	CH-53K RDTE	05	U	212,181	220,240		220,240	222,288
160	0605215N	Mission Planning	05	U	86,255	76,107		76,107	86,448
161	0605217N	Common Avionics	05	U	52,789	77,960		77,960	81,076
162	0605220N	Ship to Shore Connector (SSC)	05	U	6,295	17,886		17,886	1,343
163	0605327N	T-AO 205 Class	05	U	4,287	220		220	71
164	0605414N	Unmanned Carrier Aviation (UCA)	05	U	257,887	254,446		254,446	220,404
165	0605450M	Joint Air-to-Ground Missile (JAGM)	05	U	345	371		371	384
166	0605500N	Multi-mission Maritime Aircraft (MMA)	05	U	28,842	37,939		37,939	36,027
167	0605504N	Multi-Mission Maritime (MMA) Increment III	05	U	157,793	161,697		161,697	132,449
168	0605611M	Marine Corps Assault Vehicles System Development & Demonstration	05	U	71,237	91,501		91,501	103,236
169	0605813M	Joint Light Tactical Vehicle (JLTV) System Development & Demonstration	05	U	1,921	2,856		2,856	2,609
170	0204202N	DDG-1000	05	U	110,789	180,374		180,374	231,778

\*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: 1319N Research, Development, Test and Evaluation, Navy

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171	0301377N	Countering Advanced Conventional Weapons (CACW)	05	U		12,341		12,341	17,531
172	0304785N	ISR & Info Operations	05	U	135,538	135,252		135,252	174,271
173	0306250M	Cyber Operations Technology Development	05	U	23,299	37,038		37,038	2,068
		<b>System Development &amp; Demonstration</b>			<b>5,308,050</b>	<b>6,472,604</b>		<b>6,472,604</b>	<b>6,962,234</b>
174	0604256N	Threat Simulator Development	06	U	56,311	29,430		29,430	22,918
175	0604258N	Target Systems Development	06	U	19,553	73,708		73,708	18,623
176	0604759N	Major T&E Investment	06	U	95,451	141,371		141,371	74,221
177	0605152N	Studies and Analysis Support - Navy	06	U	3,069	3,286		3,286	3,229
178	0605154N	Center for Naval Analyses	06	U	34,686	37,685		37,685	45,672
179	0605502N	Small Business Innovative Research	06	U	531,825				
180	0605804N	Technical Information Services	06	U	1,562	987		987	1,000
181	0605853N	Management, Technical & International Support	06	U	104,950	109,565		109,565	124,328
182	0605856N	Strategic Technical Support	06	U	3,402	3,787		3,787	4,053
183	0605863N	RDT&E Ship and Aircraft Support	06	U	135,097	173,352		173,352	203,447
184	0605864N	Test and Evaluation Support	06	U	444,883	479,281		479,281	481,975
185	0605865N	Operational Test and Evaluation Capability	06	U	25,326	27,808		27,808	29,399
186	0605866N	Navy Space and Electronic Warfare (SEW) Support	06	U	17,238	27,172		27,172	27,504
187	0605867N	SEW Surveillance/Reconnaissance Support	06	U	8,065	7,186		7,186	9,183
188	0605873M	Marine Corps Program Wide Support	06	U	42,480	39,744		39,744	34,976

\*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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189	0605898N	Management HQ - R&D	06	U	35,018	40,648		40,648	41,331
190	0606355N	Warfare Innovation Management	06	U	38,066	52,060		52,060	37,340
191	0305327N	Insider Threat	06	U	2,482	2,315		2,315	2,246
192	0902498N	Management Headquarters (Departmental Support Activities)	06	U	1,747	1,811		1,811	2,168
193	0909980N	Judgment Fund Reimbursement	06	U	579				
194	0909999N	Financing for Cancelled Account Adjustments	06	U	877				
	<b>Management Support</b>				<b>1,602,667</b>	<b>1,251,196</b>		<b>1,251,196</b>	<b>1,163,613</b>
196	0604840M	F-35 C2D2	07	U	501,609	531,032		531,032	544,625
197	0604840N	F-35 C2D2	07	U	473,749	503,365		503,365	543,834
198	0605520M	MARINE CORPS AIR DEFENSE WEAPONS SYSTEMS	07	U	59,018	69,663		69,663	99,860
199	0607658N	Cooperative Engagement Capability (CEC)	07	U	148,628	156,121		156,121	153,440
200	0101221N	Strategic Sub & Weapons System Support	07	U	190,928	312,502		312,502	321,648
201	0101224N	SSBN Security Technology Program	07	U	44,212	50,761		50,761	62,694
202	0101226N	Submarine Acoustic Warfare Development	07	U	58,645	81,237		81,237	92,869
203	0101402N	Navy Strategic Communications	07	U	34,474	49,424		49,424	51,919
204	0204136N	F/A-18 Squadrons	07	U	213,010	235,204		235,204	333,783
205	0204228N	Surface Support	07	U	13,195	12,197		12,197	8,619
206	0204229N	Tomahawk and Tomahawk Mission Planning Center (TMPC)	07	U	129,919	122,719		122,719	122,834
207	0204311N	Integrated Surveillance System	07	U	83,349	98,370		98,370	76,279
208	0204313N	Ship-Towed Array Surveillance Systems	07	U	6,080	1,188		1,188	1,103

\*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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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
209	0204413N	Amphibious Tactical Support Units (Displacement Craft)	07	U	1,650	1,789		1,789	1,991
210	0204460M	Ground/Air Task Oriented Radar (G/ATOR)	07	U	43,761	61,104		61,104	92,674
211	0204571N	Consolidated Training Systems Development	07	U	53,099	100,339		100,339	115,894
212	0204575N	Electronic Warfare (EW) Readiness Support	07	U	53,412	45,936		45,936	61,677
213	0205601N	Anti-Radiation Missile Improvement	07	U	133,315	89,479		89,479	59,555
214	0205620N	Surface ASW Combat System Integration	07	U	27,781	28,999		28,999	29,973
215	0205632N	MK-48 ADCAP	07	U	98,707	155,868		155,868	213,165
216	0205633N	Aviation Improvements	07	U	140,478	149,450		149,450	143,277
217	0205675N	Operational Nuclear Power Systems	07	U	113,760	121,439		121,439	152,546
218	0206313M	Marine Corps Communications Systems	07	U	105,494	114,264		114,264	192,625
219	0206335M	Common Aviation Command and Control System (CAC2S)	07	U	12,503	14,865		14,865	12,565
220	0206623M	Marine Corps Ground Combat/Supporting Arms Systems	07	U	84,344	106,036		106,036	83,900
221	0206624M	Marine Corps Combat Services Support	07	U	20,254	26,522		26,522	27,794
222	0206625M	USMC Intelligence/Electronic Warfare Systems (MIP)	07	U	38,089	51,976		51,976	47,762
223	0206629M	Amphibious Assault Vehicle	07	U	7,475	8,246		8,246	373
224	0207161N	Tactical AIM Missiles	07	U	23,273	29,236		29,236	36,439
225	0207163N	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	U	31,776	30,898		30,898	29,198
226	0208043N	Planning and Decision Aid System (PDAS)	07	U	2,982	3,609		3,609	3,565

\*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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Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
230	0303138N	Afloat Networks	07	U	36,259	45,683		45,683	49,995
231	0303140N	Information Systems Security Program	07	U	32,592	33,752		33,752	33,390
232	0305192N	Military Intelligence Program (MIP) Activities	07	U	7,513	8,415		8,415	7,304
233	0305204N	Tactical Unmanned Aerial Vehicles	07	U	9,837	10,576		10,576	11,235
234	0305205N	UAS Integration and Interoperability	07	U	4,842	15,396		15,396	16,409
235	0305208M	Distributed Common Ground/Surface Systems	07	U	29,749	45,705		45,705	51,192
236	0305220N	MQ-4C Triton	07	U	13,029	13,893		13,893	12,094
237	0305231N	MQ-8 UAV	07	U	33,543	27,000		27,000	29,700
238	0305232M	RQ-11 UAV	07	U	533	1,234		1,234	2,107
239	0305234N	Small (Level 0) Tactical UAS (STUASL0)	07	U	1,772	3,761		3,761	2,999
240	0305241N	Multi-Intelligence Sensor Development	07	U	59,252	56,261		56,261	49,460
241	0305242M	Unmanned Aerial Systems (UAS) Payloads (MIP)	07	U	9,274	9,780		9,780	13,005
242	0305251N	Cyberspace Operations Forces and Force Support	07	U	34,977	36,505		36,505	2,000
243	0305421N	RQ-4 Modernization	07	U	134,323	150,093		150,093	300,378
244	0307577N	Intelligence Mission Data (IMD)	07	U	907	851		851	788
245	0308601N	Modeling and Simulation Support	07	U	9,479	9,437		9,437	10,994
246	0702207N	Depot Maintenance (Non-IF)	07	U	33,870	26,248		26,248	23,248
247	0708730N	Maritime Technology (MARITECH)	07	U	6,095	2,133		2,133	3,284
248	1203109N	Satellite Communications (SPACE)	07	U	596				
999	999999999	Classified Programs	07	U	2,136,820	2,361,311	40,577	2,401,888	2,021,376

\*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: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2022 Actuals	FY 2023 Less Supplementals Enacted	FY 2023 Supplementals Enacted*	FY 2023 Total Enacted	FY 2024 Request
		<b>Operational Systems Development</b>			5,544,231	6,221,872	40,577	6,262,449	6,359,438
249	0608013N	Risk management Information - Software Pilot Program	08	U	13,565	12,810		12,810	11,748
250	0608231N	Maritime Tactical Command and Control (MTC2) - Software Pilot Program	08	U	15,563	11,198		11,198	10,555
		<b>Software And Digital Technology Pilot Programs</b>			29,128	24,008		24,008	22,303
		<b>Total Research, Development, Test and Evaluation, Navy</b>			22,032,867	26,003,697	40,577	26,044,274	26,922,225

\*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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<u>Appropriation</u>	FY 2023	FY 2024
	Overseas	Overseas
	Operations	Operations
	Costs (OOC) *	Costs (OOC) *
Research, Development, Test and Evaluation, Navy		15
<b>Total Research, Development, Test, &amp; Evaluation</b>		<b>15</b>

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

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	FY 2023 Overseas Operations Costs (OOC) *	FY 2024 Overseas Operations Costs (OOC) *
<hr/>		
<b><u>Summary Recap of Budget Activities</u></b>		
Advanced Component Development & Prototypes		15
<b>Total Research, Development, Test, &amp; Evaluation</b>		<b>15</b>
<b><u>Summary Recap of FYDP Programs</u></b>		
Research and Development		15
<b>Total Research, Development, Test, &amp; Evaluation</b>		<b>15</b>

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

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	FY 2023 Overseas Operations Costs (OOC) *	FY 2024 Overseas Operations Costs (OOC) *
<hr/>		
<b><u>Summary Recap of Budget Activities</u></b>		
Advanced Component Development & Prototypes		15
<b>Total Research, Development, Test, &amp; Evaluation</b>		<b>15</b>
 <b><u>Summary Recap of FYDP Programs</u></b>		
Research and Development		15
<b>Total Research, Development, Test, &amp; Evaluation</b>		<b>15</b>

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



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Appropriation: 1319N Research, Development, Test and Evaluation, Navy

Line No	Program Element Number	Item	Act	Se c	FY 2023 Overseas Operations Costs (OOC) *	FY 2024 Overseas Operations Costs (OOC) *
70	0603795N	Land Attack Technology	04	U		15
		Other		U		15
		Advanced Component Development & Prototypes				15
Total Research, Development, Test and Evaluation, Navy						15

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

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	56.311	29.430	22.918	-	22.918	26.067	25.717	24.654	25.147	Continuing	Continuing
0602: Electronics W/F Env Simulation (ECHO)	0.000	13.848	23.154	16.354	-	16.354	19.237	18.760	18.395	18.763	Continuing	Continuing
0672: Effect Nav E/W (ENEWS)	0.000	6.648	6.276	6.564	-	6.564	6.830	6.957	6.259	6.384	Continuing	Continuing
9999: Congressional Adds	0.000	35.815	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	35.815

**A. Mission Description and Budget Item Justification**

This is a continuing program that consolidates the design, fabrication and integration of Naval Electronic Warfare (EW) threat simulators for increased managerial emphasis and coordination. These simulator development efforts provide realistic Developmental and Operational Test and Evaluation environments to test EW systems and defensive tactics. These projects develop threat Anti-Air and Anti-Ship weapon system simulators in accordance with the Services' requirements.

The 0602 Project, Electronic Warfare Environment Simulation, directly supports the Test and Evaluation resource requirements for all Naval Air EW development programs to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Joint Strike Fighter, EA-18G, Low Band Transmitter, Next Generation Jammer, Advanced Anti-Radiation Guided Missile (AARGM), Long Range Anti-Ship Missile (LRASM).

The 0672 Project, Effectiveness of Naval Electronic Warfare Systems (ENEWS), directly supports the Test and Evaluation resource requirements for Surface Ship Electronic Warfare Systems. Projects include anti-ship cruise missile seeker simulators, modeling and simulation and state of the art test facilities. Program in development and future programs include: Surface Electronic Warfare Improvement Program (SEWIP), Advanced Off-Board Electronic Warfare (AOEW), Nulka, Rapid Anti-Ship Integrated Defense and MK 245.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	57.962	29.430	24.693	-	24.693
Current President's Budget	56.311	29.430	22.918	-	22.918
Total Adjustments	-1.651	0.000	-1.775	-	-1.775
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.651	0.000			
• Program Adjustments	0.000	0.000	-1.775	-	-1.775
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 9999: Congressional Adds					
Congressional Add: C-band and S-band radar emulator upgrade for test infrastructure					
Congressional Add Subtotals for Project: 9999					
Congressional Add Totals for all Projects					
Change Summary Explanation					
Funding: The FY 2024 funding request was reduced by \$1.775 million to fund other priorities within the department.					
Schedule: Not applicable.					
Technical: Not applicable.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development				Project (Number/Name) 0602 / Electronics W/F Env Simulation (ECHO)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0602: Electronics W/F Env Simulation (ECHO)	0.000	13.848	23.154	16.354	-	16.354	19.237	18.760	18.395	18.763	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The objective of this project is development of necessary simulation facilities and approaches to allow determination of the effectiveness of Electronic Warfare (EW) in real world engagement situations and to support the introduction of modern, effective EW systems into Naval Aviation platforms. The heavy use of test resources by all Services demonstrates the importance of these assets.

The Electronic Warfare Environment Simulation project is unique because it is the only program within the Department of Defense which develops and provides Naval anti-air warfare threat assets for Test and Evaluation (T&E).

This project directly supports the T&E resource requirements for all Naval Air EW development programs, to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Joint Strike Fighter, EA-18G, Low Band Transmitter, Next Generation Jammer, Advanced Anti-Radiation Guided Missile (AARGM), Long Range Anti-Ship Missile (LRASM).

This project provides for the development of an Integrated Air Defense T&E capability to be fielded at each of the three sites comprising the Navy's Tri-Center complex: Naval Air Warfare Center Weapons Division, China Lake and Point Mugu in CA, and Naval Air Warfare Center Aircraft Division, Patuxent River, MD.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Acquisition and Measurement Capabilities	1.609	10.007	3.905	0.000	3.905
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Provide the test community with modern threat target acquisition systems and effective measurement systems necessary for Test and Evaluation of airborne early warning, situational awareness, detection and targeting systems and airborne response systems.					
<b>FY 2023 Plans:</b> - Complete the development of two threat signal augmentation simulators for NAWCWD. - Continue site preparation for three radar signal emulators at NAWCWD. - Initiate and Complete the L-Band RSE upgrade.					
<b>FY 2024 Base Plans:</b>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development		Project (Number/Name) 0602 / Electronics W/F Env Simulation (ECHO)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Continue site preparation for three radar signal emulators at NAWCWD.</div> <div>- Initiate development of small scale open-loop simulator for NAWCAD Pax and NAWCWD Pt. Mugu.</div> <div>FY 2024 OCO Plans:</div> <div>N/A</div> <div>FY 2023 to FY 2024 Increase/Decrease Statement:</div> <div>Funding decrease from FY 2023 to FY 2024 due to the completion of the threat signal augmentation simulators and the L-Band RSE upgrade.</div>						
<div>Title: Requirements and Validation</div> <div>Articles:</div> <div>Description: Validate and track intel updates of the threat systems necessary for the operation and continuous improvement of Navy laboratories and ranges which provide engineering support, testing and analysis to the developers, integrators, testers and users of systems and technologies that counter or penetrate air defenses.</div> <div>FY 2023 Plans:</div> <div>- Continue to provide program management, systems engineering, and requirements identification for the development of simulators and foreign material acquisition.</div> <div>- Continue to validate simulators and stimulators at the Navy tri-lab centers.</div> <div>FY 2024 Base Plans:</div> <div>- Continue to provide program management, systems engineering, and requirements identification for the development of simulators and foreign material acquisition.</div> <div>- Continue to validate simulators and stimulators at the Navy tri-lab centers.</div> <div>FY 2024 OCO Plans:</div> <div>N/A</div> <div>FY 2023 to FY 2024 Increase/Decrease Statement:</div> <div>Funding increase from FY 2023 to FY 2024 due to inflation</div>		0.939 -	0.945 -	1.015 -	0.000 -	1.015 -
<div>Title: Engagement Capabilities</div> <div>Articles:</div> <div>Description: Provide the test community with the modern threat engagement systems necessary for Test and Evaluation of airborne alert, Situation Awareness, targeting systems and airborne response systems.</div>		11.300 -	12.202 -	11.434 -	0.000 -	11.434 -



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development		Project (Number/Name) 0602 / Electronics W/F Env Simulation (ECHO)				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"><li>- Complete analysis and design for a closed-loop simulator of a sea based surface to air missile system for laboratory and open-air range implementation at Naval Air Warfare Center Weapons Division Pt. Mugu and China Lake and Naval Air Warfare Center Aircraft Division Pax River.</li><li>- Continue the upgrade and integration of missile simulation models.</li><li>- Continue the minor upgrades to open air and laboratory threat systems.</li><li>- Continue design and development of a reconfigurable closed-loop threat simulator for integration and utilization at laboratories and the open-air ranges.</li><li>- Continue upgrade of a closed-loop threat simulator by adding a new threat model to the simulators at Naval Air Warfare Center Weapons Division Pt. Mugu and Naval Air Warfare Center Aircraft Division Pax River.</li><li>-Initiate replacement of an obsolete closed-loop surface to air missile simulator at Naval Air Warfare Center Weapons Division Pt. Mugu and China Lake and Naval Air Warfare Center Aircraft Division Pax River with a Great Power Competitor threat simulator. The new simulator will include the latest assessed capabilities and current technology.</li></ul> <p><b>FY 2024 Base Plans:</b></p> <ul style="list-style-type: none"><li>- Continue the upgrade and integration of missile simulation models.</li><li>- Continue the minor upgrades to open air and laboratory threat systems.</li><li>- Continue design and development of a reconfigurable closed-loop threat simulator for integration and utilization at laboratories and the open-air ranges.</li><li>- Complete upgrade of a closed-loop threat simulator by adding a new threat model to the simulators at Naval Air Warfare Center Weapons Division Pt. Mugu and Naval Air Warfare Center Aircraft Division Pax River.</li><li>- Continue replacement of an obsolete closed-loop surface to air missile simulator at Naval Air Warfare Center Weapons Division Pt. Mugu and China Lake and Naval Air Warfare Center Aircraft Division Pax River with a Great Power Competitor threat simulator. The new simulator will include the latest assessed capabilities and current technology.</li><li>- Initiate development of a closed-loop short range surface to air missile radar simulator at Naval Air Warfare Center Weapons Division Pt. Mugu and Naval Air Warfare Center Aircraft Division Pax River.</li><li>- Initiate development of a surface to air missile radar emulation in a radar signal emulator at Naval Air Warfare Center Weapons Division China Lake.</li></ul> <p><b>FY 2024 OCO Plans:</b></p>								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0604256N / <i>Threat Simulator Development</i>		<b>Project (Number/Name)</b> 0602 / <i>Electronics W/F Env Simulation (ECHO)</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
N/A					
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Funding decrease from FY 2023 to FY 2024 due to the completion of all material purchases on the upgrade of a closed-loop threat simulator.					
<b>Accomplishments/Planned Programs Subtotals</b>	13.848	23.154	16.354	0.000	16.354
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b> Not Applicable.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development				Project (Number/Name) 0672 / Effect Nav E/W (ENEWS)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0672: Effect Nav E/W (ENEWS)	0.000	6.648	6.276	6.564	-	6.564	6.830	6.957	6.259	6.384	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Note Beginning in FY 2021, the Classified Program has been discontinued.												
A. Mission Description and Budget Item Justification The objective of the Effectiveness of Naval Electronic Warfare (EW) Systems (ENEWS) Project is the development, maintenance, upgrade and application of critical simulation assets to determine the effectiveness of Electronic Warfare (EW) for the surface Navy in simulated real-world engagement scenarios. ENEWS provides the Surface Navy with Anti-Ship Missile (ASM) simulators, Modeling and Simulation (M&S) and state-of-the-art evaluation facilities to support the introduction of modern, effective shipboard and off-board EW systems and tactics for EW Programs of Record (POR). ENEWS develops, maintains and operates hardware simulators, digital simulations (M&S) of legacy, modern and advanced threat ASMs that provide EW PORs an integrated simulation capability through at-sea captive carry field trials with flyable simulators, digital ASM models and the Central Target Simulator (CTS) hardware-in-the-loop evaluation facility. The reliance of ENEWS assets by the Naval Sea Systems Command, Commander, Operational Test and Evaluation Force (COMOPTEVFOR), Office of Naval Research (ONR) and other EW Research, Development, Test and Evaluation (T&E) agencies speaks to the overall importance of this project. The project provides support and effectiveness evaluations for EW system designs, Engineering Test (ET), Development Test (DT), Operational Test (OT) events including and the development and utilization of techniques and tactics. In the past, ENEWS quick reaction capabilities have provided significant support and solutions in crisis situations such as the Libyan crises, Iran threat, Persian Gulf crisis, Operation Desert Shield/Storm and the ongoing Ukrainian Crisis developing in the Black Sea. Simulation Display (SIMDIS) is a modeling tool developed under the ENEWS Project to support visualization of test events. SIMDIS has been adopted by most Department of Defense (DoD) T&E ranges as an effective tool that provides two and three dimensional graphical and video displays of live and post-test event data for EW T&E. One of the primary threats to surface ships is ASM systems. The ENEWS Project is unique in that it is the only project within DoD dedicated to developing and providing realistic ASM assets to test and evaluate the effectiveness of shipboard EW systems and tactics against these type threats. The ENEWS Project is a critical part of the Office of the Secretary of Defense Test Resource Master Plan. This plan employs many of ENEWS assets for planning, analysis, testing, and verification of shipboard and off-board Electronic Warfare systems techniques and tactics. As part of its normal activities, ENEWS provides Development Test and Evaluation (DT&E), Operational Test and Evaluation (OT&E), and Follow-on Operational Test and Evaluation (FOT&E) support to the surface Navy for all ship classes. ENEWS provides support to multiple surface Navy programs including: Surface Electronic Warfare Improvement Program (SEWIP), Advanced-Offboard Electronic Warfare (AOEW), Nulka, Rapid Anti-ship Integrated Defense System, advanced Infrared (IR) decoys, decoy placement, ship Infrared signature and radar cross section measurements for surface combatants and other ship self-defense initiatives, including the Future Naval Capability process. In addition, ENEWS assets support effectiveness evaluations for North Atlantic Treaty Organization (NATO) ships' Electronic Warfare systems in joint allied exercises and joint EW exercises such as Rim of the Pacific (RIMPAC) and Northern Edge test events.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Hardware Simulation Systems								3.324	3.326	3.392	0.000	3.392

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development		Project (Number/Name) 0672 / Effect Nav E/W (ENEWS)				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Articles:				-	-	-	-	-
<p><b>Description:</b> Maintain and perform hardware and software upgrades to the Effectiveness of Naval Electronic Warfare (EW) Systems (ENEWS) inventory of flyable and shore based Anti-Ship Missile (ASM) Electro-Optic/Infrared (EO/IR), Visible and Radio Frequency (RF) simulators and simulation systems. Perform periodic evaluation of IR and RF simulators to assess simulation operational performance and collect data for comparison with previously recorded data. Also includes development and maintenance of all simulator control consoles, captive-carry pods and power supplies.</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"><li>- Complete introduction of FY22 simulation asset into the Effectiveness of Naval Electronic Warfare (EW) Systems (ENEWS) inventory and prepare system for flight and field-testing.</li><li>- Complete FY22 software upgrade to one Electro-Optic/Infrared (EO/IR) hardware simulator.</li><li>- Continue to maintain custom instrumentation equipment such as digital data acquisition and ground truth systems.</li><li>- Continue to maintain flight certifications and installation of systems in flyable captive carry pods for field-testing.</li><li>- Continue to maintain and upgrade 22 hardware simulators, 6 programmable simulators, antenna test rig and associated simulator control panels to support SEWIP Block 3, and AOEW effectiveness evaluations. Maintenance and upgrades include integration of higher performance components for increased reliability and improved operation.</li><li>- Initiate a software upgrade for one additional Electro-Optical hardware simulator.</li><li>- Initiate and complete hardware upgrades for two RF and one EO/IR flyable simulators.</li><li>- Initiate and complete the introduction one new simulation asset into ENEWS inventory and prepare the system for field testing.</li></ul> <p><b>FY 2024 Base Plans:</b></p> <ul style="list-style-type: none"><li>- Complete software upgrade for new Electro-Optical hardware simulator.</li><li>- Continue to maintain custom instrumentation equipment such as digital data acquisition and ground truth systems.</li><li>- Continue to maintain and upgrade 22 hardware simulators, 6 programmable simulators, antenna test rig and associated simulator control panels to support system effectiveness evaluations for EW Program of Record (PORs) such as SEWIP and AOEW. Maintenance and upgrades include integration of higher performance components for increased reliability and improved mission performance. Installation of specialized wiring and cables in test aircraft and maintaining flight certifications for captive-carry electronic pods.</li></ul>								

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development	Project (Number/Name) 0672 / Effect Nav E/W (ENEWS)				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Initiate one new simulation asset into ENEWS inventory, prepare and certify system for field testing.</div> <div>- Initiate and complete software upgrade for Infrared (IR) hardware simulator to improve operational and mission performance.</div> <div>- Initiate and complete hardware upgrades for two RF and one EO/IR simulators.</div> <div>FY 2024 OCO Plans: N/A</div> <div>FY 2023 to FY 2024 Increase/Decrease Statement: There is no significant funding change from FY 2023 to FY 2024.</div>							
<div>Title: Simulation Characterization, Verification and Requirements</div> <div>Articles:</div> <div>Description: Provides for the generation of formal documentation of hardware-based Anti-Ship Missile (ASM) threat simulators. Develop reports that contain detailed descriptions and parametric data of the ASM threat simulators and compares the simulator's data to the actual threat's parametric data. Provide technical management functions in support of the ENEWS project; engineering and technical support requirements for the ASM simulators and upgrades to meet Development Test (DT)/Operational Test (OT) testing requirements, development of detailed test resource requirements and provides an interface between the Office of the Deputy Chief of Naval Operations for Information Warfare (OPNAV N2/N6), Office of Naval Research, and ENEWS oversight activities.</div> <div>FY 2023 Plans: - Complete the two parametric comparison reports started in FY22. - Continue to develop reports that compare parametric data of ASCM threat simulators to the actual threat parametric data. - Continue to provide technical and management support to the ENEWS Project. - Continue to draft and submit monthly reports, performance based assessments and financial execution reports. - Initiate characterization testing for two additional RF simulators; draft test plans that identify and document the measurement parameters. - Initiate development of parametric verification report for one RF simulator.</div> <div>FY 2024 Base Plans: - Complete report comparing ASM simulator parametric data to threat parametric data for one RF simulator.</div>			0.800 -	0.502 -	0.517 -	0.000 -	0.517 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development		Project (Number/Name) 0672 / Effect Nav E/W (ENEWS)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Continue characterization testing and test data analysis for two RF simulators; develop verification reports to document parametric data comparison between simulators and threat systems.</div> <div>- Continue to provide technical and management support to the ENEWS Project.</div> <div>- Continue to draft and submit monthly and ad hoc reports and briefings, performance-based management assessments, apply risk reduction metrics, and financial execution reports.</div> <div>- Initiate characterization testing for one additional RF simulator; draft test plans that define test procedures and identify and document measurement parameters.</div> <div>FY 2024 OCO Plans: N/A</div> <div>FY 2023 to FY 2024 Increase/Decrease Statement: There is no significant funding change from FY 2023 to FY 2024.</div>						
Title: Support and Computers Simulation Systems		2.524	2.448	2.655	0.000	2.655
Articles:		-	-	-	-	-
<div>Description: Perform upgrades and preventative maintenance to Electro-Optic/Infrared, Digital, and Radio Frequency Laboratory Simulation Testing facilities including flight support equipment based on existing and emerging complex threat systems. Employ these simulation tools and assets into a total EW effectiveness methodology to evaluate EW systems effectiveness. Development of testing &amp; evaluation scenarios and environmental modeling to support Electronic Support (ES) and Electronic Attack (EA) testing and modify Anti-Ship Missile (ASM) threat simulators based on the latest data.</div> <div>FY 2023 Plans:</div> <div>- Complete migration of fifth closed-loop simulation and two open-loop captive-carry simulations.</div> <div>- Complete integration of replacement TAC into CTS and verify operation.</div> <div>- Complete integration and testing of new threat model.</div> <div>- Continue maintenance and upgrades to EO/IR, digital, and RF laboratory simulation test and evaluation facilities and flight support equipment to provide ES and EA test support to SEWIP Block 3 and AOEW programs.</div> <div>- Continue to maintain and update the ENEWS CRUISE_Missiles ASCM models in support of M&amp;S based EW testing for SEWIP Block 3, AOEW, and Navy Enterprise Testbed programs.</div> <div>- Continue updates to the Scenario and Environmental Model used to support open and closed loop simulations.</div> <div>- Continue upgrades to configuration control software library as new releases became available.</div>						



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development	Project (Number/Name) 0672 / Effect Nav E/W (ENEWS)
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy Not applicable.		



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604256N / Threat Simulator Development				Project (Number/Name) 9999 / Congressional Adds			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
9999: Congressional Adds	0.000	35.815	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	35.815
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Congressional Add												
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2022</b>	<b>FY 2023</b>			
<b>Congressional Add:</b> C-band and S-band radar emulator upgrade for test infrastructure								35.815	0.000			
<b>FY 2022 Accomplishments:</b> Initiate and complete upgrade of C-Band and S-Band radar signal emulators to closed loop radars.												
<b>FY 2023 Plans:</b> N/A												
<b>Congressional Adds Subtotals</b>								35.815	0.000			
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A												
<b>Remarks</b>												
<b>D. Acquisition Strategy</b> Not required for Congressional Adds												

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support	<b>R-1 Program Element (Number/Name)</b> PE 0604258N / Target Systems Development
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	19.553	73.708	18.623	-	18.623	12.244	11.435	11.573	11.804	Continuing	Continuing
0609: Aerial Target System Dev	0.000	10.426	12.277	13.653	-	13.653	9.494	9.920	10.028	10.228	Continuing	Continuing
0612: Surface Targets Development	0.000	1.404	1.431	1.456	-	1.456	1.485	1.515	1.545	1.576	Continuing	Continuing
2159: ASW TARGET	0.000	0.000	0.000	3.514	-	3.514	1.265	0.000	0.000	0.000	0.000	4.779
9999: Congressional Adds	0.000	7.723	60.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	67.723

**A. Mission Description and Budget Item Justification**

This program element funds the development of Aerial Target Systems, Unmanned Aerial Vehicle targets, Sea Surface Target Systems, Target Control systems, and associated Target Mission Support Systems, Target Threat Simulation Program and Target Augmentation and Auxiliary Systems required to simulate real world threats. These capabilities are required to execute developmental/operational test and evaluation of naval combat weapon systems and to satisfy advanced fleet training requirements while ensuring the Navy continues to develop threat simulations of emerging threat requirements.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST AND EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	20.113	13.708	18.623	-	18.623
Current President's Budget	19.553	73.708	18.623	-	18.623
Total Adjustments	-0.560	60.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	60.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.560	0.000			
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: Congressional Adds

Congressional Add: Lab and test range upgrades- targets

FY 2022	FY 2023
7.723	0.000

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy		Date: March 2023	
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development	
Congressional Add Details (\$ in Millions, and Includes General Reductions)		FY 2022	FY 2023
Congressional Add: Energetic technology advancements		0.000	15.000
Congressional Add: Test capabilities acceleration - Subsonic aerial target		0.000	30.000
Congressional Add: Test capabilities acceleration - Seaborne powered target		0.000	15.000
Congressional Add Subtotals for Project: 9999		7.723	60.000
Congressional Add Totals for all Projects		7.723	60.000

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>				Project (Number/Name) 0609 / <i>Aerial Target System Dev</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0609: <i>Aerial Target System Dev</i>	0.000	10.426	12.277	13.653	-	13.653	9.494	9.920	10.028	10.228	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

The mission of the Aerial Target Systems Development program is the design and development of threat representative subsonic and supersonic aerial targets that simulate threat weapon systems, threat aircraft or threat Unmanned Aerial Vehicles. In addition to representative air vehicles, this includes development of Target Control (TC) systems and associated Target Augmentation and Auxiliary Systems (TA/AS) which are used to replicate specific threats. Targets and auxiliary payloads are developed to support test and evaluation of combat systems required to defend fleet surface and air units in a hostile environment. As to specific hardware development, this project includes:

- Supersonic Targets: Portfolio includes GQM-163A Supersonic Sea-Skimming Target (SSST), AQM-37 High Diver, and Supersonic Air Launch Target (SALT) programs. Supersonic targets represent supersonic anti-ship cruise missile threats. The design and development of GQM-163A capabilities provide threat representative targets that are used in direct support of Developmental Test and Evaluation, Operational Test and Evaluation, and Live Fire Test and Evaluation of major combat weapons programs and to a lesser degree, support fleet training. Critical live-fire Test and Evaluation events are supported for AEGIS CG and DDG Mods, DDG-51 Flight III, DDG-1000, LHA-6/8, CVN-78, CVN-79 LPD Flight II, and LSD-41/49 (SM-6, SM-2, RAM, SSDS, and ESSM). The GQM-163A is a non-recoverable supersonic sea skimming aerial target, capable of speeds in excess of Mach 2.5 and cruise altitudes from 13.0 to 66 ft. The GQM-163A has also demonstrated higher altitude diving threat profiles. The GQM-173A Multi-Stage Supersonic Target (MSST) was a supersonic development effort that was terminated on September 25, 2015; however, the requirement still exists to provide a multi-stage vehicle presentation. Funding may also be used to begin development of potential future supersonic targets to keep pace with emerging threats.

- Subsonic Targets: Portfolio includes BQM-177A, and BQM-34S & BQM-74E subsonic target programs. The BQM-177A SSAT development primarily represents subsonic anti-ship cruise missile threats, replacing legacy BQM-74E targets with a modernized subsonic target with increased capabilities. The BQM-177A SSAT provides threat representation for developmental and operational test & evaluation events of major combat weapons systems programs and in support of fleet training events. Specifically, the BQM-177A SSAT provides critical live-fire test and evaluation events for AEGIS CG and DDG Mods, DDG-51 Flight III, CVN-78, CVN-79, LHA-8, LPD Flight II, JSF, E-2D, SM-6, SM-2, RAM, and ESSM. BQM-34s are undergoing product improvement program efforts which may increase their current performance envelope to meet evolving Fleet training requirements and weapon system test events.

- Target Augmentation and Auxiliary Systems (TA/AS): Includes Target Threat Simulation Program (TTSP), Target Mission Support Systems (TMSS), and Target Control (TC). The TTSP portfolio provides the payload equipment required to electronically enhance aerial targets to provide threat representative radio frequency signatures, specifically the electronic attack and threat radar emissions (active emitters). Development of threat representative simulation components is on-going and required to keep pace with evolving threats and ensure that the Navy's threat simulation capabilities maintain warfighter readiness in the current environment. TC provides command and control of targets to enable the execution of threat-representative mission profiles. The mission also includes the design, development and qualification of various TMSS projects including but not limited to: Target RF datalink hardware, ground control hardware and software, scorer transponders, scoring

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PE 0604258N: *Target Systems Development*  
Navy

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development		Project (Number/Name) 0609 / Aerial Target System Dev		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase of \$0.005M from FY 2023 to FY 2024 to account for inflation.						
Title: Subsonic Targets - Development & Upgrades of Subsonic aerial targets		1.042	1.000	1.000	0.000	1.000
Articles:		-	-	-	-	-
Description: Provides funding for the upgrades and evolutionary development of Subsonic targets to keep pace with evolving threat characteristics. Efforts include continued development of performance envelope expansion and increased capabilities to provide realistic threat representation in support of critical live-fire Test and Evaluation events for major weapons systems and fleet combat training. Funding will also support the development of other unique subsonic target as required.						
FY 2023 Plans:						
Continue engineering, manufacturing, training, logistics and test efforts of Subsonic targets. Incorporate Engineering Change Proposals, modernizations, and capability enhancements in the baseline design configuration as mission and threats evolve. Continue studies & development efforts on other subsonic target alternatives.						
FY 2024 Base Plans:						
Continue engineering, manufacturing, training, logistics and test efforts of Subsonic targets. Incorporate Engineering Change Proposals, modernizations, and capability enhancements in the baseline design configuration as mission and threats evolve. Continue studies & development efforts on other subsonic target alternatives.						
FY 2024 OCO Plans:						
N/A						
FY 2023 to FY 2024 Increase/Decrease Statement:						
No change.						
Title: Target Augmentation and Auxiliary Systems (TA/AS)		9.137	11.025	12.396	0.000	12.396
Articles:		-	-	-	-	-
Description: The Target Threat Simulation Program (TTSP) provides 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). The TTSP accomplishes this by providing a collection of modules which are integrated into individual targets in various configurations to provide the ability to simulate the RF environment. Funding will support the continued development of the TTSP portfolio						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development		Project (Number/Name) 0609 / Aerial Target System Dev				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>so that the Navy can keep pace with emerging enemy threats. Provides funding for the development of Target Control (TC) systems and Target Augmentation and Auxiliary Systems (TA/AS) capable of supporting Test and Evaluation (T&amp;E) and fleet training activities to ensure emerging threat simulation requirements are met. Target Control Systems (TCS) involve the improved command and control systems capable of controlling multiple targets simultaneously while delivering adequate fidelity of T&amp;E telemetry data. The TMSS program portfolio provides target control, scoring, location, and navigation of air, land and seaborne targets for fleet training and weapons systems test and evaluation. Funding also supports the design, development and qualification of TMSS including but not limited to the current and next generation TC systems, scalar scorers, scoring ground station, telemetry antennas, radar and locator beacons, identification friend or foe and associated test sets. Augmentation and auxiliary systems must be capable of augmenting targets in support of radar acquisition test, electronic countermeasures (jamming) evaluation, infrared measurement/test, radar cross section evaluation, decoy effectiveness, maneuver analysis, electronic warfare, warhead effectiveness and evaluation of fleet tactics, readiness, and training.</p> <p><b>FY 2023 Plans:</b> Continue development of more advanced emitters and electronic attack payloads to include miniaturized payloads. The Supersonic Kitten advanced Digital Radio Frequency Module for the GQM-163A integration effort and Low Rate Initial Production is planned as is SubRESS emitter upgrades. Towed Decoy integration on the BQM-177A will continue, along with beginning integration of a dual band decoy system. New antenna developments are required to meet fleet operational test scenarios as well as RDTE testing needs. Continue development and qualification of the Next Generation SNTC Ground Control Station with associated hardware and software upgrades. Continue development of the Next Generation Scoring System. Continue fielding the replacement AN/DPN-90 Radar Beacon. Complete fielding the DSQ-50A Scalar Scorer and its associated Ground Telemetry Station and continue fielding the TCS Radio Frequency Subsystem (SNTC BLK 3) upgrade hardware, both two to three year processes.</p> <p><b>FY 2024 Base Plans:</b> Complete Supersonic Kitten advanced Digital Radio Frequency Module (DRFM). Integration of the AMIE advanced DRFM into the BQM-34 and BQM-177A is planned along with possible integration into the GQM-163A. Continued development of Dual band decoy system for integration into sub and full scale targets will continue. Development of High frequency DRFM is also expected to meet future fleet needs. Continue development and qualification of the Next Generation SNTC Ground Control Station with associated hardware and software upgrades. Continue development of the Next Generation Scoring System. Continue fielding the</p>								



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development	Project (Number/Name) 0609 / Aerial Target System Dev	

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
replacement AN/DPN-90 Radar Beacon. DSQ-50A Scalar Scorer and its associated Ground Telemetry Station and the TCS Radio Frequency Subsystem (SNTC BLK 3) upgrade hardware have been completed.  <b><i>FY 2024 OCO Plans:</i></b> N/A  <b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase of \$1.371M from FY 2023 to FY 2024 for the Target Threat Simulation Payload (TTSP) to develop miniaturized TTSP payloads currently used on Supersonic and Subsonic targets. These payloads emulate threat electronic warfare signals aboard aerial targets to challenge the defending platforms electronic surveillance. The increase specifically covers miniaturization of existing emitters for use aboard the recently fielded BQM-177A - having a smaller payload section over the BQM-74E and also for new threat emitter development aboard the GQM-163A supersonic target. Future test events require dual payloads (Emitter and Jx) as required by DDG FLT III, AEGIS ACB 16, CVN-78 and DDG-1000 weapon defense systems.					
<b>Accomplishments/Planned Programs Subtotals</b>	10.426	12.277	13.653	0.000	13.653

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• WPN 2280: <i>Aerial Targets</i>	141.446	182.134	176.588	-	176.588	178.839	182.323	185.840	189.557	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

Supersonics: The GQM-163A Supersonic Sea-Skimming Target (SSST) is an ACAT II program. The acquisition strategy includes the development of Quad Launch, design efforts for integration of new Radome and Radar Altimeter, Electronic Warfare (EW) systems and other Engineering Change Proposals as required to emulate emerging threat systems. These development efforts will continue to be rolled into the production baseline. Production efforts are expected to continue at higher quantities in order to meet projected MDAP T&E requirements. The acquisition strategy includes the Supersonic Air Launch Target (SALT) modification, an Abbreviated Acquisition Program (AAP). Additionally, development of alternative supersonic targets is being explored.

Subsonics: The Subsonic Aerial Target (SSAT) program is an ACAT-IV program. The Low Rate Initial Production (LRIP) 3 contract was awarded in 3rd Quarter of FY 2019 with Full Rate Production (FRP) Contracts to follow. Full Operational Capability (FOC) was declared in 2022. Engineering Change Proposals will be contracted as required via IDIQ contract vehicles to keep pace with emerging threat systems and changes rolled into the production baseline. Development efforts for other subsonic targets will be resourced via other contracting efforts as required.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604258N / Target Systems Developme nt	Project (Number/Name) 0609 / Aerial Target System Dev
Target Augmentation and Auxiliary Systems (TA/AS): Includes Target Threat Simulation Program (TTSP) and Target Mission Support Systems (TMSS). The acquisition strategy for these components vary depending on industry responses to government issued Requests for Information, but most are acquired via Firm Fixed Price IDIQ contracts.		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development				Project (Number/Name) 0612 / Surface Targets Development			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0612: Surface Targets Development	0.000	1.404	1.431	1.456	-	1.456	1.485	1.515	1.545	1.576	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project develops seaborne targets and their related target augmentation systems in support of air-to-surface and surface-to-surface weapons test and evaluation and fleet training.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Surface Targets Development  Articles:  FY 2023 Plans: Review emerging threats and developing weapon systems and analyze requirements for new targets or improvements/alterations to existing targets. Monitor developments in Command and Control and support developments for System for Naval Target Control (SNTC) applicable to Seaborne Targets. Develop improvements to SeaCAN nodes to incorporate new commercial components to improve performance and reliability. Research improvements to Portable Command and Control Unit (PCCU) graphical user interface based upon user input. Develop improvements to target swarm formation control. Develop new augmentation systems for towed targets to support test and evaluation of new weapon systems.  FY 2024 Base Plans: Develop improvements to QST-35 target remote control system. Research capability to improve control system reliability and reduce data lag when operating Portable Command and Control Unit via satellite data link. Research improved methods for target control using waypoint navigation. Develop improved target navigation algorithms for utilization in environments with denied access to global positioning system. Test modified local controller-area network system on Fast Attack Craft Target to be compatible with control of target swarms. Test system for deploying small air vehicles from remote-controlled seaborne targets.  FY 2024 OCO Plans: N/A  FY 2023 to FY 2024 Increase/Decrease Statement:								1.404	1.431	1.456	0.000	1.456
								-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023							
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development		Project (Number/Name) 0612 / Surface Targets Development							
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total			
Minimal increase in funding from FY 2023 to FY 2024 to account for inflation.											
Accomplishments/Planned Programs Subtotals				1.404	1.431	1.456	0.000	1.456			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• OPN/5429: ASW SE	14.757	11.596	11.190	-	11.190	12.191	12.444	12.695	12.948	Continuing	Continuing
Remarks											
Other Program Funding reflects OPN/5429 funds directly associated with Project 0612, not the total value of the OPN Line Item.											
D. Acquisition Strategy											
Not applicable.											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0604258N / <i>Target Systems Development</i>				<b>Project (Number/Name)</b> 2159 / <i>ASW TARGET</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2159: <i>ASW TARGET</i>	0.000	0.000	0.000	3.514	-	3.514	1.265	0.000	0.000	0.000	0.000	4.779
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> RDT&E,N Budget provides funding for sprint speed and frequency expansion to improve performance capability for the MK 39 Mod 3 Expendable Mobile ASW Training Target (EMATT). This effort supports the transition of the Sprint Speed and Low Frequency Improvement into MK 39 Mod 3 EMATT production and starts to investigate Continuous Active Sonar (CAS) capability to provide better detection performance and provide operators with a continuous track. Sprint Speed and Frequency Expansion upgrade allows EMATT to more closely represent submarine tactics for evasion and will make it compatible with new ASW sensors like the FFG Constellation Class Variable Depth Sonar.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> ASW Target Development  <div align="right"><b>Articles:</b></div> <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> Funds integration of MK 39 EMATT sprint speed and low frequency expansion efforts to improve performance capability for the Mk39 Mod 3 Expendable Mobile ASW Training Target (EMATT). This effort supports the transition of the Sprint Speed developed by BAE systems into production variant. Funds integration and final development of Low Frequency module into MK 39 Mod 3 EMATT variant.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> No funding was budgeted in FY 2023 for this tasking. FY 2024 increase is to complete transition of SBIR Phase 2.5 developed technology into the production baseline.							0.000	0.000	3.514	0.000	3.514	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							0.000	0.000	3.514	0.000	3.514	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604258N / <i>Target Systems Development</i>	Project (Number/Name) 2159 / ASW TARGET
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy		
N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604258N / Target Systems Development				Project (Number/Name) 9999 / Congressional Adds			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
9999: Congressional Adds	0.000	7.723	60.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	67.723
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
FY 2022 Congressional Add C781: Lab and test range upgrades- targets												
FY 2023 Congressional Add C900: Energetic technology acceleration												
FY 2023 Congressional Add C914: Test capabilities acceleration - Subsonic aerial targets												
FY 2023 Congressional Add C915: Test capabilities acceleration - Seaborne powered target												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2022	FY 2023			
Congressional Add: Lab and test range upgrades- targets								7.723	0.000			
FY 2022 Accomplishments: Provide support to the development and test asset procurement of the Supersonic Kitten (SSK) miniaturized electronic attack payload for use in the GQM-163A Supersonic Target.												
FY 2023 Plans: N/A												
Congressional Add: Energetic technology advancements								0.000	15.000			
FY 2022 Accomplishments: N/A												
FY 2023 Plans: Develop and qualify a new MK 70 Solid Rocket Motor (SRM) for the GQM-163A Supersonic Target and other DoD programs. Establish a government owned Production Using Salvaged Hardware (PUSH) Technical Data Package (TDP) for development, production and sustainment. Build and test prototype MK 70 PUSH SRMs. Establish new manufacturing processes and capacity to meet technical requirements and SRM operational demand.												
Congressional Add: Test capabilities acceleration - Subsonic aerial target								0.000	30.000			
FY 2022 Accomplishments: N/A												
FY 2023 Plans: Procure additional fifteen (15) BQM-177A Subsonic Aerial Targets in both Lots 4 & 5, respectively, in support of Operational Test events supporting DDG Flight III Test and Evaluation Master Plan (TEMP) 1984, Capstone Air Warfare Ship Self Defense (AW SSD) TEMP 1714 and CVN 78 GERALD R. FORD CLASS TEMP 1610. Additionally, build back inventory to support future testing in support of CVN 79, LPD Flight												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0604258N / <i>Target Systems Development</i>	<b>Project (Number/Name)</b> 9999 / <i>Congressional Adds</i>

  

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>
II and LHA 8 test campaigns and procure the necessary Peculiar Test/Support Equipment required for both the BQM-177A and the BQM-34S subsonic targets systems.		
<b>Congressional Add:</b> Test capabilities acceleration - Seaborne powered target  <b>FY 2022 Accomplishments:</b> N/A  <b>FY 2023 Plans:</b> Develop documentation to support the procurement of Seaborne Powered Target (SEPTAR) QST-35s to support air-to-surface and surface-to-surface weapon system testing at the Point Mugu Sea Range. Procure Tier 1 and Tier 2 Seaborne Target Radar Emitters for use during air-to-surface and surface-to-surface missile test and evaluation.	0.000	15.000
<b>Congressional Adds Subtotals</b>	7.723	60.000

  

**C. Other Program Funding Summary (\$ in Millions)**  
 N/A

**Remarks**

  

**D. Acquisition Strategy**  
 N/A



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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					PE 0604759N / Major T&E Investment							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	95.451	141.371	74.221	-	74.221	78.283	75.036	122.168	122.557	Continuing	Continuing
2195: T & E Investment	0.000	83.867	103.371	74.221	-	74.221	78.283	75.036	122.168	122.557	Continuing	Continuing
9999: Congressional Adds	0.000	11.584	38.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	49.584

**A. Mission Description and Budget Item Justification**

This project corrects major deficiencies, improves Test & Evaluation (T&E) capabilities, and increases T&E support effectiveness at Navy Major Range and Test Facility Base ranges and facilities. The T&E Investment project improves, modernizes and adds new test capabilities at the following test facilities: the Naval Undersea Warfare Center Division Newport Atlantic Undersea Test and Evaluation Center, Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA; the Sea Range, Land Ranges, Target Operations, Ordnance T&E Facility, Test Wing Pacific located at the Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Air Vehicle Modification and Instrumentation facility, Test Wing Atlantic, Target Operations, and the Propulsion Systems Evaluation Facility located at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD and the test and evaluation capabilities located at the Pacific Missile Range Facility, Kauai, HI.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	96.617	95.316	76.954	-	76.954
Current President's Budget	95.451	141.371	74.221	-	74.221
Total Adjustments	-1.166	46.055	-2.733	-	-2.733
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.945			
• Congressional Rescissions	-	-			
• Congressional Adds	-	48.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.166	0.000			
• Program Adjustments	0.000	0.000	-2.624	-	-2.624
• Rate/Misc Adjustments	0.000	0.000	-0.109	-	-0.109

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Congressional Adds*

<b>FY 2022</b>	<b>FY 2023</b>

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>		<b>R-1 Program Element (Number/Name)</b> PE 0604759N / <i>Major T&amp;E Investment</i>	
<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b>		<b>FY 2022</b>	<b>FY 2023</b>
Congressional Add: <i>Joint simulation environment</i>		0.000	8.000
Congressional Add: <i>Lab and test range upgrades- targets</i>		11.584	0.000
Congressional Add: <i>Real time pulse level modeling and simulation</i>		0.000	10.000
Congressional Add: <i>Test capabilities accel. - PMRF data management modernization</i>		0.000	20.000
Congressional Add Subtotals for Project: 9999		11.584	38.000
Congressional Add Totals for all Projects		11.584	38.000
<b><u>Change Summary Explanation</u></b> Funding: FY 2024 funding request was reduced by \$2.933 million to fund other priority programs within the department and increased by \$0.200 million for miscellaneous adjustments to MRTFB Modernization Projects for a net decrease of 2.733 million Schedule: Not applicable. Technical: Not applicable.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment				Project (Number/Name) 2195 / T & E Investment			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2195: T & E Investment	0.000	83.867	103.371	74.221	-	74.221	78.283	75.036	122.168	122.557	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project corrects major deficiencies, improves Test & Evaluation (T&E) capabilities, and increases T&E support effectiveness at Navy Major Range and Test Facility Base ranges and facilities. The T&E Investment project improves, modernizes and adds new test capabilities at the following test facilities: the Naval Undersea Warfare Center Division Newport Atlantic Undersea Test and Evaluation Center (AUTEC), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA; the Sea Range, Land Ranges, Target Operations, Ordnance T&E Facility, Test Wing Pacific located at the Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Air Vehicle Modification and Instrumentation facility, Test Wing Atlantic, Target Operations, and the Propulsion Systems Evaluation Facility located at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD and the test and evaluation capabilities located at the Pacific Missile Range Facility, Kauai, HI.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> UNDERSEA RANGE INVESTMENTS	25.498	32.962	18.905	0.000	18.905
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> This effort funds the modernization, upgrades, and new test and evaluation capabilities required at the Navy's Major Range Test Facility Base undersea ranges, to include AUTEC, Andros Island, Bahamas and the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA.					
<b>FY 2023 Plans:</b> - Complete upgrade to acoustic acquisition systems and replace the acoustic signal processing systems at Nanoose and Dabob. - Complete replacement of the acoustic signal processing system at AUTEC. - Complete modernization of acoustic tracking and beamforming capability at Nanoose and Dabob. - Complete replacement of radio communication system at Nanoose and Dabob. - Continue the minor upgrade and modernization of test capabilities at AUTEC, Nanoose and Dabob. - Continue replacement of underwater cables to hydrophone arrays at Nanoose and Dabob. - Continue replacement of the array structures at Nanoose and Dabob. - Continue replacement of the hydrophone tracking system at AUTEC. - Continue replacement of the tracking display system at AUTEC. - Continue replacement of universal winch fiber optic at Nanoose and Dabob.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Continue real time tracking software upgrade at Nanoose and Dabob.</div> <div><b>FY 2024 Base Plans:</b><div>- Complete replacement of universal winch fiber optic at Nanoose and Dabob.</div><div>- Complete real time tracking software upgrade at Nanoose and Dabob.</div><div>- Continue the minor upgrade and modernization of test capabilities at AUTC, Nanoose and Dabob.</div><div>- Continue replacement of underwater cables to hydrophone arrays at Nanoose and Dabob.</div><div>- Continue replacement of the array structures at Nanoose and Dabob.</div><div>- Continue replacement of the hydrophone tracking system at AUTC.</div><div>- Continue replacement of the tracking display system at AUTC.</div><div>- Initiate and complete modernization of radio communication system at AUTC.</div><div>- Initiate upgrade of T&amp;E target emulator at Nanoose and Dabob.</div><div>- Initiate upgrade of range operational security sensors at Nanoose and Dabob.</div></div> <div><b>FY 2024 OCO Plans:</b><div>N/A</div></div> <div><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b><div>Funding decrease from FY 2023 to FY 2024 due to the completion of multiple projects including the signal processor replacement at AUTC and the signal processor replacement, acoustic beamforming capability development and the radio replacement at Nanoose and Dabob.</div></div>						
<div>Title: OPEN AIR RANGE INVESTMENTS</div> <div>Articles:</div> <div>Description: This effort funds the modernization and upgrades of existing capabilities and the development of new T&amp;E capabilities required at the Navy's Major Range Test Facility Base open air ranges at the Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent River, MD, Naval Air Warfare Center Weapons Division (NAWCWD), Point Mugu, CA and China Lake, CA and Pacific Missile Range Facility (PMRF), Kauai, HI.</div> <div><b>FY 2023 Plans:</b><div>- Complete the imaging radar transmitter modernization at PMRF.</div><div>- Complete tracking pedestal modernization at NAWCAD.</div><div>- Complete imaging radar modernization at NAWCAD.</div><div>- Continue the minor upgrade and modernization of test capabilities at NAWCAD, NAWCWD and PMRF.</div><div>- Continue procurement of Range Support Aircraft.</div><div>- Continue the development and integration of Telemetry equipment on the Range Support Aircraft.</div></div> <td>41.104 -</td> <td>43.735 -</td> <td>40.276 -</td> <td>0.000 -</td> <td>40.276 -</td>		41.104 -	43.735 -	40.276 -	0.000 -	40.276 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Continue optical tracking mount replacement at PMRF.</div> <div>- Continue software modifications to increase air warfare battleshaping capabilities at NAWCWD.</div> <div>- Continue mobile radio replacement at NAWCWD.</div> <div>- Complete telemetry recorder replacement at PMRF.</div> <div>- Continue upgrades to telemetry collection and processing capabilities at NAWCWD.</div> <div>- Continue upgrades to telemetry collection and processing capabilities at PMRF.</div> <div>FY 2024 Base Plans:</div> <div>- Complete procurement of Range Support Aircraft.</div> <div>- Complete optical tracking mount replacement at PMRF.</div> <div>- Complete mobile radio replacement at NAWCWD.</div> <div>- Continue the minor upgrade and modernization of test capabilities at NAWCAD, NAWCWD and PMRF.</div> <div>- Continue the development and integration of Telemetry equipment on the Range Support Aircraft.</div> <div>- Continue software modifications to increase air warfare battleshaping capabilities at NAWCWD.</div> <div>- Continue upgrades to telemetry collection and processing capabilities at NAWCWD.</div> <div>- Continue upgrades to telemetry collection and processing capabilities at PMRF.</div> <div>- Initiate and complete purchase of network based telemetry instrumentation at NAWCAD.</div> <div>- Initiate and complete purchase of networked flight test instrumentation at NAWCAD.</div> <div>- Initiate and complete modernization of telemetry data recorders at NAWCAD.</div> <div>- Initiate communication system upgrade on Mobile At Sea Sensor at PMRF.</div> <div>- Initiate replacement of flight termination system at China Lake.</div> <div>- Initiate imaging radar transmitter replacement at PMRF.</div> <div>- Initiate cross-domain solution upgrade at NAWCAD.</div> <div>- Initiate upgrade of the R2508 microwave radar relay system at NAWCWD.</div> <div>FY 2024 OCO Plans:</div> <div>N/A</div> <div>FY 2023 to FY 2024 Increase/Decrease Statement:</div> <div>Funding decrease from FY 2023 to FY 2024 due to the completion of multiple projects including radar transmitter and telemetry recorder projects at PMRF and imaging radar modernization at NAWC AD.</div>						
Title: TEST FACILITIES INVESTMENTS		17.265	26.674	15.040	0.000	15.040
Articles:		-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p><b>Description:</b> This effort funds the modernization and upgrades of existing capabilities and the development of new Test &amp; Evaluation capabilities required at the Navy's Major Range Test Facility Base ground test facilities at NAWCAD, Patuxent River, MD, and NAWCWD, Point Mugu, CA and China Lake, CA.</p> <p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"><li>- Continue the minor upgrade and modernization of test capabilities at NAWCAD and NAWCWD and the upgrade to general instrumentation and equipment.</li><li>- Continue the modernization of the insensitive munitions test arena at NAWCWD. Tasks include renovating and modernizing the control room, refurbishing the test pads and cable paths to the test arena and replacing associated cabling between the test pad and control room at the Ordnance test facility.</li><li>- Continue the modernization of the ordnance test arena at NAWCWD by replacing conduits, cabling, firing control system and data collection system.</li><li>- Continue helicopter drive system upgrade by aligning test stand and replacing loading and instrumentation at NAWCAD.</li><li>- Continue modernization of environmental test chambers at NAWCWD.</li><li>- Continue modernization of the electromagnetic radiation test area at NAWCAD.</li><li>- Continue development of direct drive electromagnetic pulse test capability at NAWCAD.</li><li>- Continue development of an integrated fire control test environment at NAWCAD.</li></ul> <p>Modeling and Simulation:</p> <ul style="list-style-type: none"><li>- Complete development of high fidelity blue-on-red and red-on-blue jamming technique models and simulations including blue-on-blue EMI that are realistic and observed across all systems. Provide a means to test and train in degraded and denied environments for Communications, Global Positioning System (GPS), Link, and Radar modes.</li><li>- Complete integration of multi-domain reference interoperability emulators, low fidelity capability assessment tools and battlespace suites in labs and testbeds designed to allow platforms to assess performance early in system development.</li><li>- Complete developing scalable and reusable M&amp;S environments for experimenting and testing with new concepts and warfighting capabilities across Doctrine, Organization, Training, Materiel, Leadership, Personnel and Facilities (DOTMLPF) spectrum. Task includes development of M&amp;S capabilities in order to support T&amp;E requirements associated with subsurface environment capabilities, undersea sensors, data fusion capabilities,</li></ul>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
and measuring the effectiveness of Counter-Intelligence Surveillance, Reconnaissance and Targeting (C-ISRT), Cyber and Electronic Warfare effects in near real time supporting Electromagnetic Maneuver Warfare (EMW) and Integrated Fires (IF) (e.g., Military Deception/Operational Deception (MILDEC/OPDEC), Computer Network Attack (CNA), Computer Network Exploitation (CNE), and active / passive Electronic Attack (EA).						
- Complete development of Next Generation M&S Space capability for users across the Test and Evaluation labs, facilities and ranges including LVC, Analysis, Tactics, Techniques and Procedures (TTP) planning, Testing, Training, and Fleet Design activities.						
- Complete enhancement of modeling behaviors (e.g. evasion rules and environment data from blue and red torpedoes) to support assessment of autonomous behaviors in a warfighting environment, improve decision making via mining of simulation / LVC big datasets, uncover hidden patterns, reveal trends, and understand SoS interactions.						
- Complete advanced improvements of intelligent models to realistically represent the Battlespace as well as analyze and assess Modeling and Simulation (M&S) environments. Simulate intelligent enemy agent tactics to provide realistic OPFOR for T&E.						
- Complete multi-domain testbed improvements and integration using best practices, open interfaces and ensure persistent connectivity to enhance integrated Live Virtual Constructive (LVC) capability across Department of the Navy test and evaluation labs, facilities and ranges.						
- Continue update of Naval modeling and simulation environment to implement improved electronic warfare modeling effects, propagation and interactions. Improve fidelity and accuracy of the Electronic Warfare (EW) interactions and environmental effects (including Radio Frequency, Electro-Optical and Infrared (RF/EO/IR). Testing will include virtual and hardware-in-the-loop facilities and ranges to create coherent Live, Virtual, and Constructive (LVC) EW evaluation environments.						
- Continue to develop architecture to integrate emerging threat intelligence products for both classified software, virtual and low-cost hardware representations. Task will improve and integrate Integrated Threat Analysis Simulation Environment (ITASE) to meet Navy requirements. Task will integrate classified mixed hardware / software threat emulations into a real-time LVC environment. Threat will be available through innovative repository/cloud solutions.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>- Complete updates to Family of Simulation models to account for offensive and defensive cyber effects in the battlespace. Integrate automated intelligence and machine learning models with the Next Generation Threat System (NGTS) environment then assess the improvements available to both test and training.</p> <p><b>FY 2024 Base Plans:</b></p> <ul style="list-style-type: none"><li>- Complete modernization of environmental test chambers at NAWCWD.</li><li>- Complete development of direct drive electromagnetic pulse test capability at NAWCAD.</li><li>- Complete development of an integrated fire control test environment at NAWCAD.</li><li>- Continue the minor upgrade and modernization of test capabilities at NAWCAD and NAWCWD and the upgrade to general instrumentation and equipment.</li><li>- Continue the modernization of the insensitive munitions test arena at NAWCWD. Tasks include renovating and modernizing the control room, refurbishing the test pads and cable paths to the test arena and replacing associated cabling between the test pad and control room at the Ordnance test facility.</li><li>- Continue the modernization of the ordnance test arena at NAWCWD by replacing conduits, cabling, firing control system and data collection system.</li><li>- Continue helicopter drive system upgrade by aligning test stand and replacing loading and instrumentation at NAWCAD.</li><li>- Continue modernization of the electromagnetic radiation test area at NAWCAD.</li><li>- Initiate and complete upgrade of the high horse power drive load system at NAWCAD.</li><li>- Initiate and complete upgrade of the electromagnetic interference drive stand at NAWCAD.</li><li>- Initiate and complete replacement of the electromagnetic pulse suspension towers at NAWCAD.</li></ul> <p>Modeling and Simulation:</p> <ul style="list-style-type: none"><li>- Complete update of Naval modeling and simulation environment to implement improved electronic warfare modeling effects, propagation and interactions. Improve fidelity and accuracy of the Electronic Warfare (EW) interactions and environmental effects (including Radio Frequency, Electro-Optical and Infrared (RF/EO/IR). Testing will include virtual and hardware-in-the-loop facilities and ranges to create coherent Live, Virtual, and Constructive (LVC) EW evaluation environments.</li><li>- Complete to develop architecture to integrate emerging threat intelligence products for both classified software, virtual and low-cost hardware representations. Task will improve and integrate Integrated Threat Analysis Simulation Environment (ITASE) to meet Navy requirements. Task will integrate classified mixed hardware / software threat emulations into a realtime LVC environment. Threat will be available through innovative repository/cloud solutions.</li></ul> <p><b>FY 2024 OCO Plans:</b></p>						



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment		Project (Number/Name) 2195 / T & E Investment		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease from FY 2023 to FY 2024 due to the completion of most modeling and simulation tasks.						
Accomplishments/Planned Programs Subtotals		83.867	103.371	74.221	0.000	74.221
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
Not Applicable.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment				Project (Number/Name) 9999 / Congressional Adds			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
9999: Congressional Adds	0.000	11.584	38.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	49.584
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Congressional Add

**B. Accomplishments/Planned Programs (\$ in Millions)**

	<b>FY 2022</b>	<b>FY 2023</b>
<b>Congressional Add:</b> Joint simulation environment <b>FY 2022 Accomplishments:</b> N/A <b>FY 2023 Plans:</b> Initiate and complete improvements to red air threat realism, develop a cyber warfare effects environment and develop a large force cross domain scenario in the Joint Simulation Environment.	0.000	8.000
<b>Congressional Add:</b> Lab and test range upgrades- targets <b>FY 2022 Accomplishments:</b> Initiate replacement of the hydrophone tracking system at AUTECH. <b>FY 2023 Plans:</b> N/A	11.584	0.000
<b>Congressional Add:</b> Real time pulse level modeling and simulation <b>FY 2022 Accomplishments:</b> N/A <b>FY 2023 Plans:</b> Initiate and complete the integration of electronic warfare integrated reprogramming database models into the next generation threat system.	0.000	10.000
<b>Congressional Add:</b> Test capabilities accel. - PMRF data management modernization <b>FY 2022 Accomplishments:</b> N/A <b>FY 2023 Plans:</b> Initiate and complete the modernization of the Pacific Missile Range Facility and Mobile At-Sea Sensor unclassified and classified networks.	0.000	20.000
<b>Congressional Adds Subtotals</b>	11.584	38.000

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

N/A

**Remarks**

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment	Project (Number/Name) 9999 / Congressional Adds
<b>D. Acquisition Strategy</b> Not required for Congressional Adds		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	PE 0605152N / <i>Studies &amp; Analysis Supt - Navy</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	3.069	3.286	3.229	-	3.229	3.773	3.697	3.624	3.697	Continuing	Continuing
2097: <i>Manpower Personnel &amp; Training</i>	0.000	0.489	0.537	0.412	-	0.412	0.640	0.623	0.577	0.588	Continuing	Continuing
3310: <i>Naval Aviation Developmental Planning</i>	0.000	2.580	2.749	2.817	-	2.817	3.133	3.074	3.047	3.109	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program provides analytical support to the Secretary of the Navy and the Chief of Naval Operations as a basis for major policy, planning and acquisition program execution decisions. It supports research and development strategy development and planning. It supports studies in the areas of manpower, personnel, training, and aviation. It also develops analytical tools for evaluating effectiveness of U.S. weapons against potential foreign threat ships and submarines.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	3.108	3.286	3.544	-	3.544
Current President's Budget	3.069	3.286	3.229	-	3.229
Total Adjustments	-0.039	0.000	-0.315	-	-0.315
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.039	0.000			
• Program Adjustments	0.000	0.000	-0.333	-	-0.333
• Rate/Misc Adjustments	0.000	0.000	0.018	-	0.018

**Change Summary Explanation**

Cost: No significant change.  
 Technical: Not applicable.  
 Schedule: Not applicable.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605152N / Studies & Analysis Supt - Navy				Project (Number/Name) 2097 / Manpower Personnel & Training			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2097: Manpower Personnel & Training	0.000	0.489	0.537	0.412	-	0.412	0.640	0.623	0.577	0.588	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Chief of Naval Personnel has a continuing need for studies and analysis of Manpower and Personnel (M&P) policies and programs and critical M&P issues that have Navy-wide implications. This project provides an essential management tool to: (a) assess the effectiveness of existing M&P policies and programs; (b) identify needs for new policies and programs; (c) determine the required manpower and training mix relative to changing demographic, societal and legislative/regulatory actions, and to evolving strategic and geopolitical factors; (d) study the impact of M&P programs on Navy accession, attrition, retention, and performance; and, (e) to develop, validate and/or refine a broad range of M&P forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emergent M&P issues on a continuing basis. This program is funded under RDT&E operational systems development because it encompasses engineering and development of new end-items prior to production approval decision.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Manpower Personnel & Training	0.489	0.537	0.412	0.000	0.412
<b>Articles:</b>	3	3	3	-	3
<p><b>Description:</b> The Chief of Naval Personnel has a continuing need for studies and analysis of Manpower and Personnel (M&amp;P) policies and programs and critical M&amp;P issues that have Navy-wide implications. This project provides an essential management tool to: (a) assess the effectiveness of existing M&amp;P policies and programs; (b) identify needs for new policies and programs; (c) determine the required manpower and training mix relative to changing demographic, societal and legislative/regulatory actions, and to evolving strategic and geopolitical factors; (d) study the impact of M&amp;P programs on Navy accession, attrition, retention, and performance; and, (e) to develop, validate and/or refine a broad range of M&amp;P forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emergent M&amp;P issues on a continuing basis. This program is funded under RDT&amp;E operational systems development because it encompasses engineering and development of new end-items prior to production approval decision.</p> <p>Analytical support to the Secretary of the Navy and the Chief of Naval Personnel as a basis for major policy, planning, and acquisition program execution decisions. It supports the maturation and implementation of strategy and planning via studies in the areas of manpower, personnel, training, and education.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605152N / <i>Studies &amp; Analysis Supt - Navy</i>		<b>Project (Number/Name)</b> 2097 / <i>Manpower Personnel &amp; Training</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<p><b><i>FY 2023 Plans:</i></b>  Continue studies on retention and uses of MPTE data files and special topics: Comparing ADVANA/Jupiter to ADE  Continue study on CNP Annual Study Program Priority List (FY22 selection) - Navy Nutritional Intake for Performance  Begin 1 study to advance policies in MPT&amp;E on CNP Annual Studies Priority List</p> <p><b><i>FY 2024 Base Plans:</i></b>  Continue studies on retention and uses of MPTE data files and special topics: Comparing ADVANA/Jupiter to ADE  Begin 2 Annual studies Program selections from CNP prioritization list  Bi-annual S&amp;T Gap Analysis</p> <p><b><i>FY 2024 OCO Plans:</i></b>  N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b>  Although the number of projects remains the same from FY23 to FY24, the scope has been decreased.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		0.489	0.537	0.412	0.000	0.412
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b>						
N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605152N / Studies & Analysis Supt - Navy				Project (Number/Name) 3310 / Naval Aviation Developmental Planning			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3310: Naval Aviation Developmental Planning	0.000	2.580	2.749	2.817	-	2.817	3.133	3.074	3.047	3.109	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Funding supports Naval aviation pre-Milestone B developmental activities to include the conduct and integration of systems engineering activities. This project unit provides information, automated tools, and decision aids necessary to perform acquisition planning in support of warfighter capability requirements. This project unit also supports research, development, and analysis efforts to include various studies, joint requirements analysis, and cost analysis in support of systems engineering activities, analyses of alternatives, and development of Capability Evolution Plan. Due to high turnover and end of service life of several Naval aircraft set against increasing threat capabilities, DOD 5000 series mandates documentation of capability requirements and mechanisms to obtain these capabilities. This project unit allows Naval aviation the means to properly identify capability gaps and potential solutions required to maintain maximum warfighting capability realizing (or achieving) reductions to technical risks and overall program costs.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Naval Aviation Developmental Planning	2.580	2.749	2.817	0.000	2.817
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Continue studies for various aircraft with integrated engineering, logistics, and manpower requirements. Meet emergent engineering requirements documentation within the air warfare portfolio. Update decision support toolset to facilitate internal air warfare and program office total life-cycle trades, and reduce long-term costs of data repositories, manpower, and computer programs. Fund total life-cycle analysis modeling environment required for multiple anticipated analyses of alternatives on fighter, adversary, and rotary-wing aircraft to reduce total cost of studies. Analyses are required to meet pre-Milestone B, DOD 5000 series mandated activities, as well as timelines mandated by the Congressional requirements for an Aviation Investment Plan.					
<b>FY 2024 Base Plans:</b> Continue studies for various aircraft with integrated engineering, logistics, and manpower requirements. Meet emergent engineering requirements documentation within the air warfare portfolio. Update decision support toolset to facilitate internal air warfare and program office total life-cycle trades, and reduce long-term costs of data repositories, manpower, and computer programs. Fund total life-cycle analysis modeling environment required for multiple anticipated analyses of alternatives on fighter, adversary, and rotary-wing aircraft to reduce					



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605152N / <i>Studies &amp; Analysis Supt - Navy</i>		<b>Project (Number/Name)</b> 3310 / <i>Naval Aviation Developmental Planning</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
total cost of studies. Analyses are required to meet pre-Milestone B, DOD 5000 series mandated activities, as well as timelines mandated by the Congressional requirements for an Aviation Investment Plan.						
<b><i>FY 2024 OCO Plans:</i></b> N/A						
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase from FY 2023 to FY 2024 provides platform integration study to assess aeromechanical properties of aircraft to inform the trade space in weapon size/weight and the impact on weapon capabilities.						
<b>Accomplishments/Planned Programs Subtotals</b>		2.580	2.749	2.817	0.000	2.817
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> N/A						

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> / BA 6: <i>RDT&amp;E Management Support</i>					<b>R-1 Program Element (Number/Name)</b> PE 0605154N / <i>Center For Naval Analyses</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	34.686	37.685	45.672	-	45.672	43.648	43.290	38.595	39.366	Continuing	Continuing
0031: <i>MCOAG</i>	0.000	5.146	6.493	7.164	-	7.164	7.283	7.413	7.531	7.681	Continuing	Continuing
0148: <i>Center For Naval Analyses (CNA)</i>	0.000	29.540	31.192	38.508	-	38.508	36.365	35.877	31.064	31.685	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Department of the Navy's (DON) Studies and Analysis Federally Funded Research and Development Center (DON S&A FFRDC - hereinafter referred to as the FFRDC) provides independent, objective, and expert analyses based on its unique access to sensitive data and hands-on exposure to fleet operations gained through a world-wide field program. The FFRDC's research program is centrally funded by this program element and is primarily concentrated along one Marine Corps category and thirteen Navy categories of study called product areas. These product areas are structured to enhance the FFRDC's focus of research and analysis upon the major present and future needs and issues of the Navy and the Marine Corps. Because of rapid advances in technology, changes in the fleet, the increasing complexity of weapon systems, and reductions in manpower, force structure, budgets, the current security environment, and Department of Defense (DOD) transformation, the Navy and Marine Corps have a greater need for analyses that are sophisticated, relevant, and timely. The FFRDC conducts research and analysis at all security classification levels, to include Sensitive Compartmented Information (SCI) and Special Access Programs (SAP).

Due to the number of efforts in this PE, the programs described herein are representative of the work included in this PE.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	34.227	40.624	38.333	-	38.333
Current President's Budget	34.686	37.685	45.672	-	45.672
Total Adjustments	0.459	-2.939	7.339	-	7.339
• Congressional General Reductions	-	-2.939			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.639	0.000			
• SBIR/STTR Transfer	-1.180	0.000			
• Program Adjustments	0.000	0.000	7.113	-	7.113
• Rate/Misc Adjustments	0.000	0.000	0.226	-	0.226

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses	
<p><b>Change Summary Explanation</b></p> <p>Funding: The increase in funding to the DON FFRDC program will enable the Navy to expand the long-term relationship with the FFRDC as required by DoD Instruction 5000.77, by investing the core competencies and capabilities required by DON sponsors as agreed in the Sponsoring Agreement signed by ASN(RDA) 10/20/2021. The increased funding will provide embedded analytic support in under-supported Navy commands and headquarters; restore on-demand analytic support to senior Navy leaders; and increase the number of Navy annual studies by 17 in 2024.</p> <p>Technical: not applicable</p> <p>Schedule: not applicable</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses				Project (Number/Name) 0031 / MCOAG			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0031: MCOAG	0.000	5.146	6.493	7.164	-	7.164	7.283	7.413	7.531	7.681	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project supports the Marine Corps portion of the Department of the Navy's (DoN) Studies and Analysis Federally Funded Research and Development Center (DoN S&A FFRDC - hereinafter referred to as the FFRDC) Research Program, and is managed as an element of the Marine Corps Studies System. This program provides the Marine Corps with independent and objective research and analysis of specific issues/topics appropriately performed by a FFRDC. Marine Corps Division analysts work at the FFRDC's headquarters and, through the FFRDC's Field representative Program serve at commands worldwide, including: Marine Forces Command, Marine Forces Pacific, Marine Special Operations Command, the three Marine Expeditionary Forces, and Marine Aviation Weapons and Tactics Squadron One (MAWTS-1). The FFRDC also assigns analysts to support the Deputy Commandants and their staffs as well as other Marine Corps organizations such as the Marine Corps Warfighting Lab, Marine Corps Systems Command, and the Commander, Marine Forces Reserve.

The program areas are linked to the Marine Corps Advocacy (prepotency), which are: (1) Logistics and Infrastructure; (2) Manpower and Training; (3) Research, Development and Acquisition; (4) Operations and Plans; (5) Programs and Resources; (6) Aviation; (7) Combat Development and Integration; and (8) Intelligence, Surveillance and Reconnaissance. FFRDC Scientific Analyst support provides six scientific analysts for the following six focus areas: Deputy Commandant (DC), Plans, Policies and Operations; DC Aviation; DC Installation and Logistics; DC Programs and Resources; DC Manpower Reserve Affairs; and Director, Manpower Plans (MP) - Manpower and Reserve Affairs (M&RA). The program continues analytical support for field exercises; Ad Hoc and Quick Response study requirements.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Marine Corps Operations and Analysis Group	5.146	6.493	7.164	0.000	7.164
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Analytical support provided by the FFRDC will focus on the Deputy Commandant (DC) Combat Development and Integration (CD&I) and Commandant(CMC), HQMC priorities of Force Design 2030 and USMC Vision and Strategy 2025 by preparing for sweeping changes needed to meet the principal challenges facing the institution: effectively providing analysis to support the USMC's role as the nation's naval expeditionary force-in-readiness, while simultaneously modernizing the force in accordance with the National Defense Strategy (NDS) - and doing both within the fiscal resources provided. Continue the FY 2022 analytic efforts and support and increase analysis to address CMC priorities such as: - Force redesign of the Marine Information Group to support Marine Expeditionary Forces (MEF); - Space Domain modeling and improvements to the completed of MARFORSPACE component command;					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses		Project (Number/Name) 0031 / MCOAG		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Utility of multi-domain Mobile Reconnaissance units possessing OPF-I, light-weight vehicles, unmanned air and surface systems, boats, and other capabilities necessary to succeed in a contested information environment;</div> <div>- Warfighting Concepts and Force Development to include Stand in Force, Expeditionary Advanced Base Operations(EABO);</div> <div>- Unmanned Systems, and Warfighting Investments and Divestments;</div> <div>- Interoperable systems equipment maximizing joint and coalition warfare;</div> <div>- The relative threats posed by our major adversaries (e.g., Russian resurgence, N. African instability, China's One;</div> <div>- Maritime, multi-domain reconnaissance constructs and activities to enhance the ability of the Stand-in force to dominate the information environment;</div> <div>- Wargame analysis experiment with alternative constructs for the Marine Expeditionary Unit (MEU) to mitigate future challenges to survivability and sustainability;</div> <div>- Leveraging autonomy and artificial intelligence to establish and maintain dominance over existing and emerging threats.</div> <div>- Provide expert analytical support required Ad Hoc by the CMC and DC to meet emergent tasks.</div> <div><b>FY 2024 Base Plans:</b> Analytical support provided by the FFRDC will focus on the Deputy Commandant (DC) Combat Development and Integration (CD&amp;I) and Commandant(CMC), HQMC priorities of Force Design 2030 and USMC Vision and Strategy 2025 by preparing for sweeping changes needed to meet the principal challenges facing the institution: effectively providing analysis to support the USMC's role as the nation's naval expeditionary force-in-readiness, while simultaneously modernizing the force in accordance with the National Defense Strategy (NDS) - and doing both within the fiscal resources provided. Continue the FY 2023 analytic efforts and support and increase analysis to address CMC priorities such as:</div> <div>- Force redesign of the Marine Information Group to support Marine Expeditionary Forces (MEF);</div> <div>- Space Domain modeling and improvements to the completed of MARFORSPACE component command;</div> <div>- Utility of multi-domain Mobile Reconnaissance units possessing OPF-I, light-weight vehicles, unmanned air and surface systems, boats, and other capabilities necessary to succeed in a contested information environment;</div> <div>- Warfighting Concepts and Force Development to include Stand in Force, Expeditionary Advanced Base Operations(EABO);</div> <div>- Unmanned Systems, and Warfighting Investments and Divestments;</div>						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605154N / <i>Center For Naval Analyses</i>		<b>Project (Number/Name)</b> 0031 / <i>MCOAG</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<ul style="list-style-type: none"> <li>- Interoperable systems equipment maximizing joint and coalition warfare;</li> <li>- The relative threats posed by our major adversaries (e.g., Russian resurgence, N. African instability, China's One;</li> <li>- Maritime, multi-domain reconnaissance constructs and activities to enhance the ability of the Stand-in force to dominate the information environment;</li> <li>- Wargame analysis experiment with alternative constructs for the Marine Expeditionary Unit (MEU) to mitigate future challenges to survivability and sustainability;</li> <li>- Leveraging autonomy and artificial intelligence to establish and maintain dominance over existing and emerging threats.</li> <li>- Provide expert analytical support required Ad Hoc by the CMC and DC to meet emergent tasks.</li> </ul> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Funding increase from FY 2023 to FY 2024 funds planned joint services cyber wargaming efforts to support the Force Design 2030 efforts initiated by the Marine Corps. Provides detailed and comprehensive analysis of cyber efforts of advisories and solutions to future threats.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		5.146	6.493	7.164	0.000	7.164
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses				Project (Number/Name) 0148 / Center For Naval Analyses (CNA)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0148: Center For Naval Analyses (CNA)	0.000	29.540	31.192	38.508	-	38.508	36.365	35.877	31.064	31.685	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This program supports the Navy's portion of the Department of the Navy's (DON) Studies and Analysis Federally Funded Research and Development Center (DON S&A FFRDC - hereinafter referred to as the FFRDC) Research Program, which is primarily concentrated along thirteen Navy categories of study called product areas. These product areas include the following: (1) Manpower/Personnel, Medical and Training; (2) Intelligence, Information and Networks; (3) Plans, Policy, and Operations; (4) Infrastructure and Readiness; (5) Resources, Programs, and Assessments; (6) Capability Integration; (7) Research, Development and Acquisition; (8) Navy Field Program; (9) Navy Field Exercise Program; (10) Scientific Analyst Program; (11) Navy Quick Response Projects; (12) Navy General Concept Development and (13) Naval Analyses Initiated Projects. This program provides the Navy with independent and objective research and analysis of specific issues/topics in support of key operational problems; efforts include field support to fleet commanders, scientific analyst support to Deputy Chiefs of Naval Operations (DCNOs) and their staffs, exercise support, and studies and analysis across the full spectrum of Naval Operations. Support has resulted in substantial improvements in force structure, fleet effectiveness, and significant cost avoidance.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> CENTER FOR NAVAL ANALYSES, NAVY	29.540	31.192	38.508	0.000	38.508
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Funding in this project supports integrated research for the Department of Navy (DON) and other DOD components across a broad range of issues including the development and evaluation of tactics, operations testing of new systems, assessment of current capabilities, logistics and readiness, work-force management, space and space-related activities, cyber operations, cost and operational program analysis, assessment of advanced technology, force planning, and strategies implications of political-military developments. CNA provides analytic support and conducts individual analytic efforts for a wide range of DON sponsors including: OPNAV and HQMC, the Navy Secretariat, Type Commanders, the numbered Fleets and Navy/Marine Corps component commanders, Combatant Commands, and SYSCOMs. It often also provides support to the Office of the Secretary of Defense, other military Services and Defense agencies.					
<b>FY 2023 Plans:</b> In FY23 CNA will support Navy analytic priorities by conducting 24 studies, providing on-site analytic support to 20 Navy organizations, and will provide detailed analyses for two wargames and exercises. CNA will maintain its analytic competencies through a combination of line-funded and sponsor-funded work in the following areas:					



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605154N / Center For Naval Analyses	Project (Number/Name) 0148 / Center For Naval Analyses (CNA)		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>
Analysis of Defense, National Security, and Maritime Operation. This area includes work that helps operating military forces, develop or evaluate new tactics; test or employ new equipment, or plan, conduct, or learn from real-world operations.					
Analysis of Defense, National Security, and Maritime Policies, Strategies and Doctrine. This area includes broad studies intended to help DoD develop, promulgate, evaluate, or refine new policies, strategies, or doctrine.					
Analysis of Defense, National Security, and Maritime System Requirements and Acquisition. This area includes work that addresses the potential utility of new technologies; the relative need for new systems or capabilities, or the costs and consequences of acquiring a particular system or family of systems.					
Analysis of Defense, National Security, and Maritime Resources. This area includes studies or analyses of issues involving workforce management, sustainment, medical, readiness and logistics, or installations and infrastructure.					
Analysis of Defense, National Security and Maritime Program Planning. This area includes analyses intended to help the military, formulate coherent and executable long-term plans covering the evolution of its missions; the integration or improvement of its capabilities; the acquisition of needed supplies or services; or the future size and shape of its forces.					
<b>FY 2024 Base Plans:</b> In FY24 CNA will support Navy analytic priorities by conducting 17 studies, providing on-site analytic support to 22 Navy organizations, and will provide detailed analyses for two wargames and exercises. CNA will maintain its analytic competencies through a combination of line-funded and sponsor-funded work in the following areas:					
Analysis of Defense, National Security, and Maritime Operation. This area includes work that helps operating military forces, develop or evaluate new tactics; test or employ new equipment, or plan, conduct, or learn from real-world operations.					
Analysis of Defense, National Security, and Maritime Policies, Strategies and Doctrine. This area includes broad studies intended to help DoD develop, promulgate, evaluate, or refine new policies, strategies, or doctrine.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605154N / <i>Center For Naval Analyses</i>		<b>Project (Number/Name)</b> 0148 / <i>Center For Naval Analyses (CNA)</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Analysis of Defense, National Security, and Maritime System Requirements and Acquisition. This area includes work that addresses the potential utility of new technologies; the relative need for new systems or capabilities, or the costs and consequences of acquiring a particular system or family of systems.						
Analysis of Defense, National Security, and Maritime Resources. This area includes studies or analyses of issues involving workforce management, sustainment, medical, readiness and logistics, or installations and infrastructure.						
Analysis of Defense, National Security and Maritime Program Planning. This area includes analyses intended to help the military, formulate coherent and executable long-term plans covering the evolution of its missions; the integration or improvement of its capabilities; the acquisition of needed supplies or services; or the future size and shape of its forces.						
<b><i>FY 2024 OCO Plans:</i></b> N/A						
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The increase in funding to the DON FFRDC program will enable the Navy to expand the long-term relationship with the FFRDC as required by DoD Instruction 5000.77, by investing the core competencies and capabilities required by DON sponsors as agreed in the Sponsoring Agreement signed by ASN(RDA) 10/20/2021. The increased funding will provide embedded analytic support in under-supported Navy commands and headquarters; restore on-demand analytic support to senior Navy leaders; and increase the number of Navy annual studies by 17 in 2024.						
<b>Accomplishments/Planned Programs Subtotals</b>		29.540	31.192	38.508	0.000	38.508
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> N/A						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy										Date: March 2023			
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605502N / Small Business Innovative Research								
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost	
Total Program Element	0.000	531.825	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	531.825	
1812: NAVAIR SBIR Program	0.000	98.946	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	98.946	
1813: SPAWAR SBIR Program	0.000	22.339	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	22.339	
1814: NAVSEA SBIR Program	0.000	103.110	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	103.110	
1824: USMC SBIR Program	0.000	20.190	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	20.190	
1862: SSPO SBIR Program	0.000	39.135	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	39.135	
1864: ONR SBIR Program	0.000	138.399	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	138.399	
1865: SBIR ADMIN - ONR	0.000	10.050	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.050	
2204: Small Business Tech Transfer Program	0.000	45.609	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	45.609	
2240: SBIR ADMIN - USMC	0.000	1.300	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.300	
2241: SBIR ADMIN - SPAWAR	0.000	1.178	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.178	
2242: SBIR ADMIN - NAVSEA	0.000	9.491	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	9.491	
2243: SBIR ADMIN - NAVAIR	0.000	6.172	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.172	
2244: SBIR ADMIN - NAVFAC	0.000	0.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.100	
2248: SBIR ADMIN - SSPO	0.000	1.995	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.995	
3201: SBIR CRP - NAVAIR	0.000	1.041	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.041	
3202: SBIR CRP - SPAWAR	0.000	0.199	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.199	
3203: SBIR CRP - NAVSEA	0.000	1.052	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.052	
3204: SBIR CRP - USMC	0.000	0.219	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.219	
3205: SBIR CRP - ONR	0.000	1.886	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.886	
3213: NAVAIR STTR Program	0.000	14.640	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	14.640	
3233: SPAWAR STTR Program	0.000	0.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.500	
3235: Marine Corps STTR Program	0.000	1.083	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.083	
3344: SBIR Trial Admin Program	0.000	13.191	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.191	

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0605502N / Small Business Innovative Research				
A. Mission Description and Budget Item Justification						
The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR and .45% for STTR. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.						
B. Program Change Summary (\$ in Millions)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget		0.000	0.000	0.000	-	0.000
Current President's Budget		531.825	0.000	0.000	-	0.000
Total Adjustments		531.825	0.000	0.000	-	0.000
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		531.825	0.000			
• Rate/Misc Adjustments		0.000	0.000	0.000	-	0.000
Change Summary Explanation						
Technical: Not applicable.						
Schedule: Not applicable.						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1812 / <i>NAVAIR SBIR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1812: <i>NAVAIR SBIR Program</i>	0.000	98.946	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	98.946
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> NAVAIR SBIR PROGRAM  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
								<b>Articles:</b>				
								98.946	0.000	0.000	0.000	0.000
								-	-	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>								98.946	0.000	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1813 / <i>SPAWAR SBIR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1813: SPAWAR SBIR Program	0.000	22.339	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	22.339
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVWAR SBIR Program  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
							<b>Articles:</b>					
							22.339	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							22.339	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1814 / NAVSEA SBIR Program			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1814: NAVSEA SBIR Program	0.000	103.110	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	103.110
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVSEA SBIR Program  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							103.110	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							103.110	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1824 / <i>USMC SBIR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1824: <i>USMC SBIR Program</i>	0.000	20.190	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	20.190
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> USMC SBIR Program  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
								<b>Articles:</b>				
								20.190	0.000	0.000	0.000	0.000
								-	-	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>								20.190	0.000	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1862 / <i>SSPO SBIR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1862: <i>SSPO SBIR Program</i>	0.000	39.135	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	39.135
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> SSPO SBIR Program  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A								<b>Articles:</b>				
								39.135	0.000	0.000	0.000	0.000
								-	-	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>								39.135	0.000	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1864 / <i>ONR SBIR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1864: <i>ONR SBIR Program</i>	0.000	138.399	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	138.399
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> ONR SBIR Program  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							138.399	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							138.399	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 1865 / <i>SBIR ADMIN - ONR</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1865: <i>SBIR ADMIN - ONR</i>	0.000	10.050	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.050
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovation Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR ADMIN- ONR							10.050	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							10.050	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2204 / <i>Small Business Tech Transfer Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2204: <i>Small Business Tech Transfer Program</i>	0.000	45.609	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	45.609
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Technology Transfer (STTR) program requires Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 0.45% for STTR. This funds cooperative R&D between small businesses and research institutions. The program goals are to create vehicles from moving ideas from research institutions to market; enable researchers to pursue commercial application of technologies; and bridge funding gap between basic research and commercial product.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> Small Business Tech Transfer Program							45.609	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							45.609	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2240 / <i>SBIR ADMIN - USMC</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2240: <i>SBIR ADMIN - USMC</i>	0.000	1.300	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.300
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovative Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR ADMIN- USMC							1.300	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							1.300	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2241 / <i>SBIR ADMIN - SPAWAR</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2241: <i>SBIR ADMIN - SPAWAR</i>	0.000	1.178	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.178
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovative Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR ADMIN-NAVWAR  <div style="text-align: right;"><b>Articles:</b></div>							1.178	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							1.178	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A  <b>Remarks</b>   <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2242 / <i>SBIR ADMIN - NAVSEA</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2242: <i>SBIR ADMIN - NAVSEA</i>	0.000	9.491	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	9.491
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovative Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR ADMIN- NAVSEA  <div style="text-align: right;"><b>Articles:</b></div>							9.491	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							9.491	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A  <b>Remarks</b>   <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2243 / <i>SBIR ADMIN - NAVAIR</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2243: <i>SBIR ADMIN - NAVAIR</i>	0.000	6.172	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.172
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovative Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVAIR SBIR ADMIN  <div style="text-align: right;"><b>Articles:</b></div>							6.172	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							6.172	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A  <b>Remarks</b>   <b>D. Acquisition Strategy</b> N/A												



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2244 / <i>SBIR ADMIN - NAVFAC</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2244: <i>SBIR ADMIN - NAVFAC</i>	0.000	0.100	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.100
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovative Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVFAC SBIR PROGRAM							0.100	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							0.100	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>												
<b>D. Acquisition Strategy</b> N/A												

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 2248 / <i>SBIR ADMIN - SSPO</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2248: <i>SBIR ADMIN - SSPO</i>	0.000	1.995	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.995
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Small Business Innovative Research (SBIR) Administration. Manage the program, technical efforts and award contracts related to SBIR.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR ADMIN-SSP							1.995	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							1.995	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3201 / <i>SBIR CRP - NAVAIR</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3201: <i>SBIR CRP - NAVAIR</i>	0.000	1.041	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.041
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Section 252 of the 2006 NDAA Public law No. 109-163 allowed up to 1% of the SBIR to be used to fund the administrative costs of the Commercialization Pilot Program (CPP). The pilot program transitioned to the Commercialization Readiness Program (CRP). CRP is part of the SBIR and STTR Reauthorization Act of 2012 (P. L. 112-81, Section 5001).												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVAIR SBIR CRP  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							1.041	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							1.041	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3202 / <i>SBIR CRP - SPAWAR</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3202: <i>SBIR CRP - SPAWAR</i>	0.000	0.199	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.199
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Section 252 of the 2006 NDAA Public law No. 109-163 allowed up to 1% of the SBIR to be used to fund the administrative costs of the Commercialization Pilot Program (CPP). The pilot program transitioned to the Commercialization Readiness Program (CRP). CRP is part of the SBIR and STTR Reauthorization Act of 2012 (P. L. 112-81, Section 5001).												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR CRP-NAVWAR  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A												
							<b>Articles:</b>					
							0.199	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							0.199	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3203 / <i>SBIR CRP - NAVSEA</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3203: <i>SBIR CRP - NAVSEA</i>	0.000	1.052	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.052
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Section 252 of the 2006 NDAA Public law No. 109-163 allowed up to 1% of the SBIR to be used to fund the administrative costs of the Commercialization Pilot Program (CPP). The pilot program transitioned to the Commercialization Readiness Program (CRP). CRP is part of the SBIR and STTR Reauthorization Act of 2012 (P. L. 112-81, Section 5001).												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR CRP-NAVSEA  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							1.052	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							1.052	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3204 / <i>SBIR CRP - USMC</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3204: <i>SBIR CRP - USMC</i>	0.000	0.219	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.219
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Section 252 of the 2006 NDAA Public law No. 109-163 allowed up to 1% of the SBIR to be used to fund the administrative costs of the Commercialization Pilot Program (CPP). The pilot program transitioned to the Commercialization Readiness Program (CRP). CRP is part of the SBIR and STTR Reauthorization Act of 2012 (P. L. 112-81, Section 5001).												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR CRP-USMC  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							0.219	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							0.219	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3205 / <i>SBIR CRP - ONR</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3205: <i>SBIR CRP - ONR</i>	0.000	1.886	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.886
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Section 252 of the 2006 NDAA Public law No. 109-163 allowed up to 1% of the SBIR to be used to fund the administrative costs of the Commercialization Pilot Program (CPP). The pilot program transitioned to the Commercialization Readiness Program (CRP). CRP is part of the SBIR and STTR Reauthorization Act of 2012 (P. L. 112-81, Section 5001).												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> SBIR CRP-ONR  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							1.886	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							1.886	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3213 / <i>NAVAIR STTR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3213: <i>NAVAIR STTR Program</i>	0.000	14.640	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	14.640
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Technology Transfer (STTR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$1,000,000,000 to set aside 0.45% for STTR in FY 2022. This funds cooperative R&D between small businesses and research institutions. The program goals are to create vehicles from moving ideas from research institutions to market; enable researchers to pursue commercial application of technologies; and bridge funding gap between basic research and commercial product.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVAIR STTR PROGRAM  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>	14.640	0.000	0.000	0.000	0.000
								-	-	-	-	-
<b>Accomplishments/Planned Programs Subtotals</b>							14.640	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3233 / <i>SPAWAR STTR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3233: SPAWAR STTR Program	0.000	0.500	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.500
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Technology Transfer (STTR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$1,000,000,000 to set aside 0.45% for STTR in FY 2022. This funds cooperative R&D between small businesses and research institutions. The program goals are to create vehicles from moving ideas from research institutions to market; enable researchers to pursue commercial application of technologies; and bridge funding gap between basic research and commercial product.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> NAVWAR STTR PROGRAM  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A							<b>Articles:</b>					
							0.500	0.000	0.000	0.000	0.000	
							-	-	-	-	-	
<b>Accomplishments/Planned Programs Subtotals</b>							0.500	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3235 / <i>Marine Corps STTR Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3235: <i>Marine Corps STTR Program</i>	0.000	1.083	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.083
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Small Business Technology Transfer (STTR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$1,000,000,000 to set aside 0.45% for STTR in FY 2022. This funds cooperative R&D between small businesses and research institutions. The program goals are to create vehicles from moving ideas from research institutions to market; enable researchers to pursue commercial application of technologies; and bridge funding gap between basic research and commercial product.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> USMC STTR Program							1.083	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							1.083	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605502N / <i>Small Business Innovative Research</i>				<b>Project (Number/Name)</b> 3344 / <i>SBIR Trial Admin Program</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3344: <i>SBIR Trial Admin Program</i>	0.000	13.191	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	13.191
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Small Business Innovation Research (SBIR) program requires each Federal agency that has an extramural budget for Research and Development (R&D) in excess of \$100,000,000 to set aside 3.2% for SBIR in FY 2022. This funds R&D at small businesses. The program goals are to stimulate technological innovation; increase small business participation in federally funded R&D; foster participation by minority and disadvantaged firms in technological innovation; and increase private sector commercialization of federal R&D.

This project provides funding for the pilot administrative program authorized by the FY2012 National Defense Authorization Act (SEC. 5141. PILOT TO ALLOW FUNDING FOR ADMINISTRATIVE, OVERSIGHT, and CONTRACT PROCESSING COSTS).

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> SBIR Trial Admin Program	13.191	0.000	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> N/A					
<b>FY 2024 Base Plans:</b> N/A					
<b>FY 2024 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	13.191	0.000	0.000	0.000	0.000

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

**Remarks**

**D. Acquisition Strategy**  
N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605804N / Technical Information Services							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	1.562	0.987	1.000	-	1.000	1.009	1.024	1.037	1.058	Continuing	Continuing
0835: Technology Transfer - Policy and Strategic Partnerships	0.000	0.906	0.987	1.000	-	1.000	1.009	1.024	1.037	1.058	Continuing	Continuing
2296: Federal Lab Consortium	0.000	0.656	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.656

**A. Mission Description and Budget Item Justification**

The Department of the Navy (DON) has aligned the DON Technology Transfer (T2) office within the NavalX organization in ONR to align T2 functions with Navy Tech Bridge activities in support of the transfer of technology into the DON, in addition to facilitating DON government funded research and new technologies out to the commercial marketplace. To facilitate these "tactical to practical" transitions, the DON Technology Transfer (T2) Program Office produces policy and guidance, products and services to help make Navy-developed technologies available for public use, as appropriate, and industry technology transfer into Navy programs. T2 and aligned Tech Bridge offices enhance U.S. naval forces effectiveness by strategically leveraging industrial and academic research and development partnerships for modernization. These partnerships transition private sector technology into the NRE, and transfer appropriate Navy-developed innovative concepts, inventions, facilities and materiel to the private sector for the purposes of dual-use commercialization, to benefit DoD, the public economy, and academia. (Public Law 96-480, Federal Technology Transfer Act of 1986.) This program also provides the Department of the Navy interface to the Office of the Assistant Secretary of Defense for Research and Engineering, and to the Assistant Secretary of Commerce for Technology Policy for matters relating to policy and reporting requirements for technology transfer.

Due to the number of efforts in this PE, the programs described herein are representative of the work included in this PE.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	0.934	0.987	0.942	-	0.942
Current President's Budget	1.562	0.987	1.000	-	1.000
Total Adjustments	0.628	0.000	0.058	-	0.058
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.628	0.000			
• Program Adjustments	0.000	0.000	0.053	-	0.053
• Rate/Misc Adjustments	0.000	0.000	0.005	-	0.005

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0605804N / Technical Information Services
<div>Change Summary Explanation</div> <div>Funding: No significant change.</div> <div>Technical: No significant change.</div> <div>Schedule: No significant change.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605804N / Technical Information Services				Project (Number/Name) 0835 / Technology Transfer - Policy and Strategic Partnerships			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0835: Technology Transfer - Policy and Strategic Partnerships	0.000	0.906	0.987	1.000	-	1.000	1.009	1.024	1.037	1.058	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Department of Navy Technology Transfer (T2) Program Office develops policy, and guidance, products and services to the Naval Research and Development Enterprise's (NR&DE) 51 T2-designated laboratories. These laboratories pursue collaborations and partnerships to enhance warfighter effectiveness, by supporting research and development, test and evaluation, and maintenance and sustainment of improved capabilities for the fleet and force. These partnerships enable private sector technology to enter into the NR&DE, and transfer appropriate Navy-developed innovative concepts, inventions, facilities and materiel to the private sector. In addition to these efforts, a strong ecosystem is created that the DON and DoD can leverage to benefit the warfighter, academia, industry, and U.S. economy. (Public Law 96-480, Federal Technology Transfer Act of 1986). This program also provides the Department of the Navy interface to the Office of the Assistant Secretary of Defense for Research and Engineering, and to the Assistant Secretary of Commerce for Technology Policy for matters relating to policy and reporting requirements for technology transfer.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> DON Technology Transfer	0.906	0.987	1.000	0.000	1.000
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> DON Technology Transfer (T2) Program Office is responsible for Technology Transfer policy updates, administration, and oversight as delegated by the Secretary of the Navy (SECNAV). The T2 Program Office is also responsible for programmatic and financial management, setting requirements for and administering professional training, opportunity marketing, setting T2 laboratory designation authority, pilot program administration, T2 records management, review, reporting, and storage. This program has also been aligned within NavalX and also provides the DON interface to the Office of the Assistant Secretary of Defense for Research and Engineering, and to the Assistant Secretary of Commerce for Technology Policy for matters relating to policy and reporting requirements for technology transfer.					
<b>FY 2023 Plans:</b> Continue:					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605804N / Technical Information Services		Project (Number/Name) 0835 / Technology Transfer - Policy and Strategic Partnerships	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-The DON Technology Transfer (T2) Program Office will continue to enhance the transactional efficiency between the Navy laboratories and industry and academic collaborators by updating Technology Transfer agreement templates, the Navy Defense Technology Transfer Information System (NDTTIS) database, and policy guidance.</p> <p>-The program will continue to execute at least one new pilot project that encourages innovative application of T2 at Naval laboratories, technical activities, and maintenance and sustainment facilities.</p> <p>-The DON T2 Program Office will continue to champion a customer relationship and transaction management system that harmonizes and streamlines the T2 collaboration process, consolidates Naval intellectual capital into a comprehensive portfolio system, and engages with all Naval T2 stakeholders.</p> <p>-conduct ecosystem landscape analysis discover and forge opportunities for mutually beneficial commercialization collaborations with academia, economic development agencies and start-up businesses.</p> <p>-The number of T2-designated laboratories across the DON continues to increase, as Naval laboratory leadership further embrace the benefits of technology transfer. In FY23, we anticipate additional laboratories will request designation. As the number of labs continues to increase, the DON T2 Program Office will continue to ensure compliance and program success of the T2 laboratory ecosystem.</p> <p>Complete:</p> <p>-The DON T2 Program Office will complete a comprehensive revision of the main DON T2 policy guidance document, the DON Technology Transfer Handbook. This revision will incorporate updates to the T2 agreement templates, naval T2 policy, and best practices for agreement negotiation.</p> <p><b>FY 2024 Base Plans:</b></p> <p>Continue:</p> <p>-The DON Technology Transfer (T2) Program Office will continue to enhance the transactional efficiency between the Navy laboratories and industry and academic collaborators by updating Technology Transfer agreement templates, the Navy Defense Technology Transfer Information System (NDTTIS) database, and policy guidance.</p> <p>-The program office will continue to execute at least one new pilot project that encourages innovative application of T2 at Naval laboratories, technical activities, and maintenance and sustainment facilities.</p>					



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605804N / <i>Technical Information Services</i>		<b>Project (Number/Name)</b> 0835 / <i>Technology Transfer - Policy and Strategic Partnerships</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>-The program office will continue to champion a customer relationship and transaction management system that harmonizes and streamlines the T2 collaboration process, consolidates naval intellectual capital into a comprehensive portfolio system, and engages with all Naval T2 stakeholders.</p> <p>-Conduct ecosystem landscape analysis discover and forge opportunities for mutually beneficial commercialization collaborations with academia, economic development agencies and start-up businesses.</p> <p>-The number of T2-designated laboratories across the DON continues to increase, as Naval laboratory leadership further embrace the benefits of technology transfer. In FY24, we anticipate additional laboratories will request designation. As the number of labs continues to increase, the DON T2 Program Office will continue to ensure compliance and program success of the T2 laboratory ecosystem.</p> <p>Complete: -The DON T2 Program Office will initiate/complete the DoN Tech Transfer Strategy as required by the OSD Tech Transfer Office to align DoD and DoN Tech Transfer missions, objectives, goals, and activities.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> There is no significant funding change from FY 2023 to FY 2024</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		0.906	0.987	1.000	0.000	1.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b>						
N/A						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605804N / <i>Technical Information Services</i>				<b>Project (Number/Name)</b> 2296 / <i>Federal Lab Consortium</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2296: <i>Federal Lab Consortium</i>	0.000	0.656	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.656
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**  
Federal Lab Consortium

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Federal Lab Consortium	0.656	0.000	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> N/A					
<b>FY 2024 Base Plans:</b> N/A					
<b>FY 2024 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.656	0.000	0.000	0.000	0.000

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

**Remarks**

**D. Acquisition Strategy**  
N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					<b>R-1 Program Element (Number/Name)</b> PE 0605853N / Management, Technical & Intl Supt							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	104.950	109.565	124.328	-	124.328	142.899	120.984	119.670	121.456	Continuing	Continuing
0149: International Coop RDT&E	0.000	2.521	3.198	2.552	-	2.552	3.785	3.710	3.473	3.542	Continuing	Continuing
1767: Naval War Col Strategic Studies Supt	0.000	5.591	6.110	6.276	-	6.276	6.367	6.483	6.591	6.722	Continuing	Continuing
2098: Navy Postgraduate School (NPS) Studies Support	0.000	11.484	11.993	12.486	-	12.486	12.866	13.137	13.399	13.685	Continuing	Continuing
2221: JT Mission Assessment Studies	0.000	21.293	24.535	28.270	-	28.270	29.918	28.862	28.883	29.463	Continuing	Continuing
3017: Enterprise Information Systems	0.000	0.940	1.088	1.111	-	1.111	1.142	1.163	1.185	1.209	Continuing	Continuing
3027: Defense Critical Infrastructure Program	0.000	7.421	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.421
3312: MTMD-Maritime Theater Missile Defense Forum	0.000	11.722	10.992	11.792	-	11.792	11.951	12.230	12.425	12.037	Continuing	Continuing
3330: Naval Research Laboratory (NRL) Facilities Modernization	0.000	16.629	16.729	26.380	-	26.380	37.116	20.003	16.067	16.399	Continuing	Continuing
3363: PACOM Initiative	0.000	12.811	29.920	35.461	-	35.461	39.754	35.396	37.647	38.399	Continuing	Continuing
9999: Congressional Add	0.000	14.538	5.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.538

## **A. Mission Description and Budget Item Justification**

PU 0149 International Cooperative RDT&E:

Provide program management, execution, and support to implement a broad range of cooperative Naval Research and Development, Test and Evaluation initiatives to improve coalition interoperability, harmonize US Navy requirements with allied and friendly nations, and identify cooperative international opportunities, and improve coalition interoperability. In addition, it develops coherent approaches, coordinating with partner nations, to sea-based missile defense, command, control, communications, computers and intelligence (C4I), and cooperative acquisition programs while also identifying technology to support the Global Maritime Partnership initiative.

PU 1767 Naval War College Strategic Studies Support:

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / <i>Management, Technical &amp; Intl Supt</i>
<p>Provides research, analysis and gaming activities which serve as a focal point, stimulus, and major source of strategic and operational thought within the Navy, joint and interagency communities. These efforts generate strategic and operational alternatives, quantitative analysis, war gaming and political military assessments, and provide recommendations regarding the formulation and execution of maritime options . The War Gaming Department plans, designs, executes, analyzes and reports on the Navy's Title 10 war games. These war games provide analytical input to the Navy's Strategic Plan, assessments of future concepts, and recommendations to the Navy's Quadrennial Defense Review, force design, and strategy process. The War Gaming Department also designs, executes and analyzes war games for theater security cooperation plans and operational war fighting issues.</p> <p>PU 2098 Naval Postgraduate School (NPS) Studies Support:</p> <p>Navy Postgraduate School (NPS) Naval Research Program (NRP) supports senior decision-makers from the Department of the Navy, the Office of the Chief of Naval Operations, Budget Submission Offices and Fleet Commanders in reaching well-informed, objective decisions on strategic, operational, and programmatic issues through collaborative and interdisciplinary research which integrates traditional research and analysis with advanced decision support tools. Faculty conducted research, student theses and capstone projects are an integral part of this program in support of the critical research and analysis requirements across the Naval enterprise.</p> <p>PU 2221 Assessment Program:</p> <p>The Navy Assessment Program provides capability-based planning assessment for Joint Capabilities Integration and Development System (JCIDS), conducts analysis to affect war fighting capability trades and enterprise resources, identifies needs, gaps, and overlaps, and assesses alternative solutions to Joint needs. The program supports both the development and use of modeling, simulation and analytically-based warfare and provides business analyses and analytic tools that provide the basis for decision making with respect to concepts of operations (CONOPS), Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems (Information Dominance); warfare systems (Sea Strike, Sea Shield, and Sea Basing) and analytical underpinnings/basis for programmatic decisions of the Navy's top leadership regarding their architectures, force structure, and the Navy's core "organize, train, and equip mission" (the warfare and provider Enterprises). The program provides overarching Planning, Programming, Budgeting and Execution System (PPBES) analyses and guidance for PPBES which provides gap analysis and investment strategy and total obligation authority allocation. It provides independent capability analysis and assists in structuring follow-on Navy analyses. The program coordinates Navy's position for the enhanced planning process and conducts net assessments. It serves as the lead campaign analysis to approve Navy warfare and support requirements. The program supports "A Cooperative Strategy for 21st Century Seapower 21" as modified by the Maritime Strategy which charts a course for the Navy, Coast Guard and Marine Corps to work collectively with each other and international partners to prevent crises from occurring or reacting quickly should one occur to avoid negative impact to the United States. It serves as an independent assessor providing a broad-view perspective across the Navy staff apart from resource sponsors, with an integrated look at both war fighting and war fighting support programs. The program supports the world class modeling efforts to attain a level of Modeling and Simulation (M&amp;S) capability that is world class and establishes the Navy as a leader in the Department of Defense (DoD) M&amp;S community. It provides Navy alternatives in assessing the implications embedded within resource decisions in a quantified context of costs versus capability versus risk. The program provides independent analytic support to Navy leadership in conjunction with various executive level decision forums. It develops tools and analytical methodologies that assist in evaluating Navy programs and provides technical leadership for the analysis functional area of Naval Modeling and Simulation.</p>		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / <i>Management, Technical &amp; Intl Supt</i>
PU 3017 Enterprise Information Systems:  This project funds the Office of Naval Research (ONR) Next Generation Enterprise Network (NGEN) Information Technology corporate costs.  PU 3312 MTMD - Maritime Theater Missile Defense Forum:  This project funds participation in Maritime Integrated Air and Missile Defense projects with other nations through the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended 2009, 2015, 2016 and 2020). Known as the Maritime Theater Missile Defense (MTMD) Forum, it promotes interoperability with the Navies of twelve participating nations (Australia, Belgium, Canada, Denmark, France, Germany, Italy, Netherlands, Norway, Spain, United Kingdom and the United States). This project provides interoperability assessment and opportunities to Allies that directly contributes to increasing the number of countries capable of supporting NATO Ballistic Missile Defense (BMD). Engineering analysis and data analytics from MTMD activities are provided to European and Pacific Combatant Commands in direct support of theater Integrated Air and Missile Defense (IAMD) priorities. The MTMD Forum addresses challenges associated with integrating maritime Allied Air Defense in Support of Ballistic Missile Defense Operations into joint IAMD command and control. MTMD Forum nations leverage At-Sea Demonstration (ASD) test events, coupled with operational Fleet Exercises (Formidable Shield and Pacific Dragon), to integrate technology and validate national capabilities in operational constructs, supportive of operational force employment.  The MTMD Forum encourages national development of systems and practices that enhance protection and defense against the proliferation of short, medium and long-range Ballistic Missile (BM) and Advanced Anti-Ship Cruise Missile (ASCM) threats through the development of interoperable sea-based Integrated Air and Missile Defense (IAMD) capability among MTMD Forum nations. The MTMD Forum enhances utilization of existing sea-based IAMD systems to protect against current threats, while measuring progressive improvement and development of compatible systems to better counter evolving threats.  This project supports USN participation in a Maritime IAMD Project Arrangement focused on:  (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) to define and develop architectures and perform engineering to address coalition capability gaps. (2) Modeling & Simulation (M&S) to establish and maintain a maritime coalition M&S testbed and to perform legacy and future systems simulation testing. (3) Hardware-in-the-Loop Testing of Coalition combat systems to assess interoperability within the Coalition Distributed Engineering Plant (CDEP). (4) Open Architecture (OA) work to develop Interface Standards and Data Models. (5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting. (6) Operational Requirements (OR) to identify operational constraints and tactical constructs surrounding coalition maritime integrated air and missile defense activities, and their integration into joint operations. (7) Reciprocal Use of Test Facilities agreements with other nations to support Maritime IAMD and MTMD Forum-related demonstrations.  PU 3330 Naval Research Laboratory (NRL)Facilities Modernization:		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & Intl Supt				
This program has been established to provide a systematic and planned approach to improve vital in-house science and technology (S&T) laboratory facilities which are reaching or have reached critical stages of deterioration. The program includes restoration and modernization (R&M) initiatives for about 350,000 net square feet, where the average age of the buildings is 67 years old.						
PU 3363 PACOM Initiative:						
This project supports the China Strategic Initiative (CSI) and Pacific Multi-Domain Training and Experimentation Capability (PMTEC) efforts. The CSI program is U.S. Indo-Pacific Command's(INDOPACOM) first Asia Rebalance initiative and provides cutting-edge research on adversary approaches to warfare, monitoring and analysis of adversary social media and censorship, unique understanding of effects of U.S. actions at the strategic and operational levels, sponsorship of Track 1.5/2 Strategic Nuclear Dialogue with China, etc. This funding is for a classified effort and details can be provided at a higher classification level.						
Pacific Multi-Domain Training and Experimentation Capability (PMTEC) is foundational to meeting Commander, USINDOPACOM's high-end warfighting capability, theater force posture, and Ally & Partner (A&P) objectives through the execution of joint experimentation in the Indo-Pacific. PMTEC is the joint synchronizer and integrator by bringing together OSD, Service RDT&E, other government agencies, industry, and academia with Combatant Commands, Service Components, warfighting units, and A&Ps to expedite experimentations of R&D projects/prototypes and to facilitate more rapid modernization and interoperability.						
JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.						
B. Program Change Summary (\$ in Millions)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget		108.055	105.152	123.721	-	123.721
Current President's Budget		104.950	109.565	124.328	-	124.328
Total Adjustments		-3.105	4.413	0.607	-	0.607
• Congressional General Reductions		-	-0.587			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	5.000			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-0.454	0.000			
• SBIR/STTR Transfer		-2.651	0.000			
• Program Adjustments		0.000	0.000	-0.521	-	-0.521
• Rate/Misc Adjustments		0.000	0.000	1.128	-	1.128
Congressional Add Details (\$ in Millions, and Includes General Reductions)					FY 2022	FY 2023
Project: 9999: Congressional Add						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy		Date: March 2023	
<b>Appropriation/Budget Activity</b> 1319: Research, Development, Test & Evaluation, Navy I BA 6: RDT&E Management Support		<b>R-1 Program Element (Number/Name)</b> PE 0605853N I Management, Technical & Intl Supt	
<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>		<b>FY 2022</b>	<b>FY 2023</b>
Congressional Add: Proj C783: Consortium for Additive Manufacturing Research and Development		14.538	5.000
Congressional Add Subtotals for Project: 9999		14.538	5.000
Congressional Add Totals for all Projects		14.538	5.000
<b>Change Summary Explanation</b> \$5M increase to support NRL Facilities upgrades to accelerate work and increase funds for the Naval Research Laboratory's facilities modernization. The additional funding will assist that laboratory with modernizing temperature and humidity controls for the Materials Science and Technology Division.			

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 0149 / International Coop RDT&E			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0149: International Coop RDT&E	0.000	2.521	3.198	2.552	-	2.552	3.785	3.710	3.473	3.542	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Provides funding for program management, execution, and support activities to implement a broad range of cooperative naval Research and Development, Test and Evaluation (RDT&E) initiatives to improve coalition interoperability, harmonize US Navy requirements with allied and friendly nations, and identify cooperative international opportunities. The funding is used to develop approaches to international cooperation consistent with combatant commanders (COCOMs), Chief of Naval Operations (CNO), and Secretary of the Navy (SECNAV) priorities in the maritime domain.												
Various cooperative RDT&E programs, projects and exchanges are pursued to identify cooperative acquisition programs, enhance Overseas Contingency Operations (OCO) efforts, fill capability gaps, improve US/coalition interoperability, and standardize defense capabilities with international partners. Such efforts have resulted in:												
1. Negotiating and developing approximately 57 international RDT&E Agreements annually with allied and friendly nations;												
2. Executing Information Exchange Annexes (IEAs) with foreign partners;												
3. Improving IEA information dissemination with allied and friendly countries and within Department of the Navy (DON);												
4. Coordinating Navy inputs to the Office of the Under Secretary of Defense (OUSD) Acquisition and Sustainment (A&S) Foreign Comparative Test (FCT) Program, and Coalition Warfare Program (CWP) as well as the DON Technology Transfer Security Assistance Review Boards (TTSARB).												
5. Representing the U.S. Navy in Office of the Secretary of Defense (OSD) directed Armaments Cooperation Forums, including the Conference of North Atlantic Treaty Organization (NATO) Armaments Directors' groups (NATO Naval Armaments Group (NNAG)), and Senior National Representative (SNR);												
6. Funding of various international RDT&E support databases including Technical Project Officer (TPO), International Agreement Generators, Information/Data Exchange Agreements, and Project Agreements/Memorandums of Understanding;												
7. Funding for Engineering and Scientist Exchange Program (ESEP).												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: International Coop RDT&E								2.521	3.198	2.552	0.000	2.552
								Articles: -	-	-	-	-
FY 2023 Plans:												
-Continue all efforts from prior FYs.												
-Continue support for an unmanned maritime systems forums with foreign partners, including expansion of international participation in technical discussions.												
-Establish support for a new multi-nation Arctic research and development cooperation forum												



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 0149 / International Coop RDT&E		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue execution and support in placement of U.S. Navy and partner nation engineers and scientists under OSD's Engineer and Scientist Exchange Program (ESEP), with a focused increase (~4-5 additional/year) on ESEP placements.</p> <p>-Continue to support U.S. Navy execution of approximately 150 Information Exchange Agreements/Data Exchange Agreements (IEA/DEA) with more than 30 countries.</p> <p>-Continue to coordinate U.S. Navy participation in OUSD (A&amp;S) Coalition Warfare Program (CWP) selection processes to meet emerging military capability requirements.</p> <p>-Support meeting logistics to facilitate bilateral engagements for the U.S.-India Defense Technology and Trade Initiative (DTTI) Working Groups, including the Joint Working Group on Aircraft Carrier Technology Cooperation (JWGACTC), the Jet Engine Technology Joint Working Group (JETJWG), and the Joint Working Group on Naval Systems (JWGNS).</p> <p>-Support U.S.-India Joint Technical Group (JTG) Information Exchange and the U.S. Navy's Maritime Technical Working Group meetings and exchanges to promote cooperative opportunity development.</p> <p>-Continue to support NATO Naval Armaments Group (NNAG) and Five Power Groups on cooperative programs.</p> <p>-Provide contract support for Senior National Representative (SNR) and Navy International Programs Office for international outreach, development, and administrative activities.</p> <p>-Provide travel support for SNR participation in Senior Naval National Representative (SNNR) meetings with key foreign partners, and for select NATO meetings in support of CNO priorities.</p> <p><b>FY 2024 Base Plans:</b></p> <p>-Continue all efforts from prior FYs.</p> <p>-Continue support for an unmanned maritime systems forums with foreign partners, including expansion of international participation in technical discussions.</p> <p>-Continue support for multi-nation Arctic research and development cooperation forum</p> <p>-Continue execution and support in placement of U.S. Navy and partner nation engineers and scientists under OSD's Engineer and Scientist Exchange Program (ESEP), with a focused increase (~4-5 additional/year) on ESEP placements.</p> <p>-Continue to support U.S. Navy execution of approximately 150 Information Exchange Agreements/Data Exchange Agreements (IEA/DEA) with more than 30 countries.</p> <p>-Continue to coordinate U.S. Navy participation in OUSD (A&amp;S) Coalition Warfare Program (CWP) selection processes to meet emerging military capability requirements.</p> <p>-Support meeting logistics to facilitate bilateral engagements for the U.S.-India Defense Technology and Trade Initiative (DTTI) Working Groups, including the Joint Working Group on Aircraft Carrier Technology Cooperation</p>						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / <i>Management, Technical &amp; Intl Supt</i>		<b>Project (Number/Name)</b> 0149 / <i>International Coop RDT&amp;E</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>(JWGACTC), the Jet Engine Technology Joint Working Group (JETJWG), and the Joint Working Group on Naval Systems (JWGNS).</p> <p>-Support U.S.-India Joint Technical Group (JTG) Information Exchange and the U.S. Navy's Maritime Technical Working Group meetings and exchanges to promote cooperative opportunity development.</p> <p>-Continue to support NATO Naval Armaments Group (NNAG) and Five Power Groups on cooperative programs.</p> <p>-Provide contract support for Senior National Representative (SNR) and Navy International Programs Office for international outreach, development, and administrative activities.</p> <p>-Provide travel support for SNR participation in Senior Naval National Representative (SNNR) meetings with key foreign partners, and for select NATO meetings in support of CNO priorities.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The FY 2024 decrease of \$0.646M due to reduced capability to conduct and participate in major Cooperative R&amp;D leadership level events, technical forums, meetings, and supported workshops.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		2.521	3.198	2.552	0.000	2.552
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 1767 / Naval War Col Strategic Studies Supt			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
1767: Naval War Col Strategic Studies Supt	0.000	5.591	6.110	6.276	-	6.276	6.367	6.483	6.591	6.722	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Naval War College (NWC) research, analysis and gaming activities serve as a focal point, stimulus, and major source of strategic and operational thought within the Navy, Joint and Interagency communities. These efforts generate strategic and operational alternatives, tactical imperatives, quantitative analysis, war gaming, political-military assessments, and provide recommendations to the Chief of Naval Operations (CNO), Fleet Commanders and numbered Fleet Commanders regarding the formulation and execution of maritime options for the President of the United States.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Strategic Studies  Articles:  Description: Naval War College (NWC) research, analysis and gaming activities serve as a focal point, stimulus, and major source of strategic and operational thought within the Navy, Joint Force, and Interagency. These efforts generate timely and relevant strategic and operational alternatives; tactical imperatives; qualitative analysis; war gaming; quantitative and qualitative political-military assessments; and provide informed recommendations to the Chief of Naval Operations (CNO); Naval Fleet, Component, and Type Commanders; Combatant Commanders; the US Intelligence Community; and other US Government Departments and Agencies regarding the formulation and execution of maritime options for the President of the United States.  Naval War College (NWC) conducts research in strategic studies in response to tasking from the Secretary of the Navy (SECNAV); Chief of Naval Operations (CNO); Naval Fleet, Component, and Type Commanders; and Combatant Commanders. NWC research includes strategic documents produced by its Chinese Maritime Studies Institute (CMSI), Russia Maritime Studies Institute (RMSI), Cyber Innovation Policy Institute (CIPI), and the Brodie Group.  FY 2023 Plans: - Conduct research and analysis projects and provide supporting events for OPNAV; Naval Component, Type, and Fleet Commanders; and Combatant Commanders. - Continue to support OPNAV tasked research projects.								0.728	0.769	0.793	0.000	0.793
								-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 1767 / Naval War Col Strategic Studies Supt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>- Conduct research into Cyber, Chinese, Russian, Iranian, and Future maritime capabilities and affairs to enhance understanding of global developments and provide studies and advice for CNO and Fleet.</p> <p>- Conduct deterrence research on deterrence capabilities with focus on Naval contribution to national nuclear deterrence missions by Naval capabilities.</p> <p><b>FY 2024 Base Plans:</b></p> <p>- Conduct research and analysis projects and provide supporting events for OPNAV; Naval Component, Type, and Fleet Commanders; and Combatant Commanders.</p> <p>- Support OPNAV tasked research projects.</p> <p>- Conduct research into Cyber, Chinese, Russian, Iranian, and Future maritime capabilities and affairs to enhance understanding of global developments and provide studies and advice for CNO and Fleet. - Conduct deterrence research on deterrence capabilities with focus on Naval contribution to national nuclear deterrence missions by Naval capabilities</p> <p><b>FY 2024 OCO Plans:</b></p> <p>N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b></p> <p>There is no significant increase from FY2023 to FY2024.</p>						
<p><b>Title:</b> Naval War Gaming Support</p> <p><b>Articles:</b></p> <p><b>Description:</b> Naval War College (NWC) conducts strategic and operational war gaming and directed research for Office of the Chief of Naval Operations (OPNAV); Naval Fleet, Component, and Type Commanders; and the Combatant Commanders. Each year, 45-60 major war games and associated events provide support to efforts that explore and analyze military, political, informational and economic aspects of differing strategic and operational scenarios and tactical imperatives. NWC continues to expand its capability and capacity to execute war games of increased scope, magnitude, and complexity.</p> <p><b>FY 2023 Plans:</b></p> <p>- Conduct 42 events supporting the design development and data collection and analysis planning events to refine war game scope, research questions, deliverables to sponsor, execution strategy and subject matter expert coordination.in support of 8 highly classified, complex and large war games supporting the requirements</p>		4.209 -	4.650 -	4.771 -	0.000 -	4.771 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 1767 / Naval War Col Strategic Studies Supt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
from OPNAV, Numbered Fleet Commanders, and Combatant Commands. Additionally support and execute CNO Fleet Sync conferences. - Continue to foster cooperative relationships with international partners through use of war gaming, research, analysis and education. - Refined and technically supported active learning capstone war gaming exercises that supported the Joint Military Operations curriculum, Maritime Staff Operators Course and International Maritime Staff Operators Course. (34 events) - Execute capstone war game exercise for the Joint Force Maritime Component Commander (JFMCC) Course. - Resource and provision life cycle maintenance requirements for networks, communications, and modeling and simulation capacity. - Resource and provision required manpower and equipment for the High Security Research and Wargaming Facility.  <b>FY 2024 Base Plans:</b> - Conduct 42 events supporting the design development and data collection and analysis planning events to refine war game scope, research questions, deliverables to sponsor, execution strategy and subject matter expert coordination.in support of 8 highly classified, complex and large war games supporting the requirements from OPNAV, Numbered Fleet Commanders, and Combatant Commands. Additionally support and execute CNO Fleet Sync conferences. - Continue to foster cooperative relationships with international partners through use of war gaming, research, analysis and education. - Conduct 35 events supporting 8 Executive Committee and CNO approved war games and Navy Title X war games, directed research, and analysis. - Continue to foster cooperative relationships with international partners through use of war gaming, research, analysis and education. - Refine capstone war gaming exercises that supported the International Maritime Staff Operators Course. - Execute Fleet Synchronization Conferences. - Execute capstone war game exercise for the Joint Force Maritime Component Commander (JFMCC) Course. - Resource and provision life cycle maintenance requirements for networks, communications, and modeling and simulation capacity. - Resource and provision required manpower and equipment for the High Security Research and Wargaming Facility.  <b>FY 2024 OCO Plans:</b>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 1767 / Naval War Col Strategic Studies Supt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: FY24 increase supports layered classification in the CNO approved war games.						
Title: Warfare Analysis and Research		0.568	0.600	0.618	0.000	0.618
Articles:		-	-	-	-	-
Description: Naval War College (NWC) supports senior decision-makers from the Department of Defense; Department of the Navy; Naval Fleet, Component, and Type Commanders; and Combatant Commanders in reaching well-informed, objective decisions on strategic, operational and programmatic issues through collaborative research that integrates traditional research and analysis with advanced decision support tools.						
FY 2023 Plans: - Conduct major decision events in support of OPNAV; Naval Fleet, Component, and Type Commanders; and Combatant Commanders. - Conduct warfighting analysis requirements for numbered Fleet commanders. - Conduct analytical research on key strategic and operational challenges such as maritime ballistic missile defense, proliferation security initiative, global maritime security, maritime situational awareness, maritime operations headquarters, interconnectivity, and multi-service force deployment. - Support evaluation of concepts and decision events in conjunction with war gaming center. - Conduct research targeted at the strategic and policy level decision making within China, Russia, and Iran. - Provide direct support to NWC student research groups and war gaming. - Execute approximately 20 major decision events in support of these efforts.						
FY 2024 Base Plans: - Conduct major decision events in support of OPNAV; Naval Fleet, Component, and Type Commanders; and Combatant Commanders. - Conduct warfighting analysis requirements for numbered Fleet commanders. - Conduct analytical research on key strategic and operational challenges such as maritime ballistic missile defense, proliferation security initiative, global maritime security, maritime situational awareness, maritime operations headquarters, interconnectivity, and multi-service force deployment. - Support evaluation of concepts and decision events in conjunction with war gaming center. - Conduct research targeted at the strategic and policy level decision making within China, Russia, and Iran. - Provide direct support to NWC student research groups and war gaming.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & Intl Supt		Project (Number/Name) 1767 / Naval War Col Strategic Studies Supt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
- Execute approximately 20 major decision events in support of these efforts.						
FY 2024 OCO Plans: N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: FY24 increase provides for additional gaming capacity to address and analyze Known Operational Problems (KOPs).						
Title: NWC Student Research Projects		0.086	0.091	0.094	0.000	0.094
Articles:		-	-	-	-	-
Description: Selected top performing Naval War College (NWC) students to conduct focused research and analysis of current and future strategic and operational challenges and tactical imperatives. Students are organized under the supervision of the Halsey, Holloway, and Gravely Group Programs.						
FY 2023 Plans: Conduct focused research, analysis and war gaming of current and future strategic/operational challenges and tactical imperatives by the Halsey, Holloway, and Gravely Group Programs. - Research groups conduct focused research, analysis and free-play war gaming of current and future operational challenges and tactical imperatives arising from regional threats, homeland defense and access denial efforts at the high end of the conflict spectrum in the Indo-Pacific Command (INDOPACOM), European Command (EUCOM), Central Command (CENTCOM) and Northern Command (NORTHCOM) area of responsibility (AOR). Research and analysis efforts continue in those areas and will expand bringing a detailed focus on counter-targeting, operational deception, and countering information denial and missile defense at the theater joint operational level.						
FY 2024 Base Plans: - Conduct focused research, analysis and war gaming of current and future strategic/operational challenges and tactical imperatives by the Halsey, Holloway, and Gravely Group Programs. - Research groups conduct focused research, analysis and free-play war gaming of current and future operational challenges and tactical imperatives arising from regional threats, homeland defense and access denial efforts at the high end of the conflict spectrum in the Indo-Pacific Command (INDOPACOM), European Command (EUCOM), Central Command (CENTCOM) and Northern Command (NORTHCOM) area of responsibility (AOR). Research and analysis efforts continue in those areas and will expand bringing a detailed						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 1767 / Naval War Col Strategic Studies Supt		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
focus on counter-targeting, operational deception, and countering information denial and missile defense at the theater joint operational level.						
<b>FY 2024 OCO Plans:</b> N/A						
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> There is no significant increase from FY 2023 to FY 2024.						
<b>Accomplishments/Planned Programs Subtotals</b>		5.591	6.110	6.276	0.000	6.276
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> N/A						



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 2098 / Navy Postgraduate School (NPS) Studies Support			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2098: Navy Postgraduate School (NPS) Studies Support	0.000	11.484	11.993	12.486	-	12.486	12.866	13.137	13.399	13.685	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Navy Postgraduate School (NPS) research and analysis activities serve as a focal point, stimulus, and major source of strategic, tactical and operational thought within the Navy communities. These efforts generate strategic and operational alternatives, tactical imperatives, quantitative analyses, technical developments and assessments, and political-military assessments. Also, provide recommendations to the Chief of Naval Operations (CNO), Fleet Commanders and numbered Fleet Commanders regarding the formulation and execution of maritime options for the President of the United States. Research will be conducted that will enhance graduate education for Naval Officers and potentially provide students with areas of studies for theses and faculty projects. These research activities also serve as a means for OPNAV Resource Sponsors and Major Commands to have analysis and decision support research conducted in the uses of the applied, soft, and hard sciences in solving diverse and complex resource allocation and strategic issues facing the Navy today and envisioned in the future.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Faculty and Student Studies, Analysis and Research	11.484	11.993	12.486	0.000	12.486
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Navy Postgraduate School (NPS) Naval Research Program (NRP) supports senior decision-makers from the Department of the Navy, the Office of the Chief of Naval Operations, Budget Submission Offices and Fleet Commanders in reaching well-informed, objective decisions on strategic, operational, and programmatic issues through collaborative and interdisciplinary research which integrates traditional research and analysis with advanced decision support tools. Faculty conducted research, student theses and capstone projects are an integral part of this program in support of the critical research and analysis requirements across the Naval enterprise.					
<b>FY 2023 Plans:</b> Conduct studies in support of the following organizations: - OPNAV N1 - OPNAV N2/N6 - OPNAV N3/N5 - OPNAV N4 - OPNAV N7					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 2098 / Navy Postgraduate School (NPS) Studies Support		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- OPNAV N8</div> <div>- OPNAV N9</div> <div>- US Fleet Forces Command</div> <div>- The Secretary of the Navy</div> <div>Planned studies in the following areas:</div> <div>- Applied Mathematics</div> <div>- Computer Science</div> <div>- Defense Analysis</div> <div>- Defense Management</div> <div>- Electrical and Computer Engineering</div> <div>- Energy Academic Group</div> <div>- Information Sciences</div> <div>- Modeling, Virtual Environments and Simulation</div> <div>- Mechanical and Aerospace Engineering</div> <div>- Meteorology</div> <div>- National Security Affairs</div> <div>- Oceanography</div> <div>- Operations Research</div> <div>- Physics</div> <div>- Space Systems</div> <div>- Systems Engineering</div> <div>- Wargaming and Warfare Analysis</div> <div>FY 2024 Base Plans:</div> <div>Conduct studies in support of the following organizations:</div> <div>- OPNAV N1</div> <div>- OPNAV N2/N6</div> <div>- OPNAV N3/N5</div> <div>- OPNAV N4</div> <div>- OPNAV N7</div> <div>- OPNAV N8</div> <div>- OPNAV N9</div>						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy			<b>Date:</b> March 2023			
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / Management, Technical & Intl Supt		<b>Project (Number/Name)</b> 2098 / Navy Postgraduate School (NPS) Studies Support		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<ul style="list-style-type: none"> <li>- US Fleet Forces Command</li> <li>- The Secretary of the Navy</li> </ul> <p>Planned studies in the following areas:</p> <ul style="list-style-type: none"> <li>- Applied Mathematics</li> <li>- Computer Science</li> <li>- Defense Analysis</li> <li>- Defense Management</li> <li>- Electrical and Computer Engineering</li> <li>- Energy Academic Group</li> <li>- Information Sciences</li> <li>- Modeling, Virtual Environments and Simulation</li> <li>- Mechanical and Aerospace Engineering</li> <li>- Meteorology</li> <li>- National Security Affairs</li> <li>- Oceanography</li> <li>- Operations Research</li> <li>- Physics</li> <li>- Space Systems</li> <li>- Systems Engineering</li> <li>- Wargaming and Warfare Analysis</li> </ul> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding has increased from FY2023 to FY2024 due to inflationary factors and continuation of analytical studies.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		11.484	11.993	12.486	0.000	12.486
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & Intl Supt	Project (Number/Name) 2098 / Navy Postgraduate School (NPS) Studies Support
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 2221 / JT Mission Assessment Studies			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2221: JT Mission Assessment Studies	0.000	21.293	24.535	28.270	-	28.270	29.918	28.862	28.883	29.463	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This exhibit has been updated to reflect the establishment of the Navy Analytic Office (NAO), which is responsible for the executive oversight of Navy studies and analysis. The NAO was stood up to better align the annual Analytic Agenda to Chief Naval Operation's (CNO) strategic priorities while also providing for study of the more tactical requirements of the Fleet and Navy writ large. The outcome will be synchronized modeling, simulation, assessments, wargames, experiments and exercises providing rich, shared data to support and refine warfighting concepts and to inform budget decisions.

The Navy Annual Studies Program supports the Analytic Agenda by providing both the development and use of modeling, simulation and analytically-based warfare, business analyses and analytic tools that provide the basis for decision making with respect to concepts of operations (CONOPS), Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems; warfare systems, and analytical underpinnings/basis for programmatic decisions of the Navy's top leadership regarding their architectures, force structure, and the Navy's core "organize, train, and equip mission" (the warfare and provider Enterprises). The program provides capability-based planning assessment for Joint Capabilities Integration and Development System (JCIDS), conducts analysis to affect warfighting capability trades and enterprise resources, identifies needs, gaps and overlaps, and assesses alternative solutions to Joint needs. The program provides overarching Planning, Programming, Budgeting and Execution System (PPBES) analyses and guidance for PPBES which provides gap analysis and investment strategy and total obligation authority allocation. It provides independent capability analysis and assists in structuring follow-on Navy analyses. The program coordinates Navy's position for the enhanced planning process and conducts net assessments. It serves as the lead campaign analysis to approve Navy warfare and support requirements. The program supports the Maritime Strategy which charts a course for the Navy, Coast Guard and Marine Corps to work collectively with each other and international partners to prevent crises from occurring, or reacting quickly should one occur to avoid negative impact to the United States. The Studies Program provides a broad-view perspective across the Fleet and Navy staff, with an integrated look at both warfighting and warfighting-support programs. It provides Navy alternatives in assessing the implications embedded within resource decisions in a quantified context of costs versus capability versus risk. The program provides independent analytic support to Navy leadership in conjunction with various executive level decision forums.

This project funds concept development engineering, mission effectiveness analysis, and other analyses for formulation of future surface ship and associated platform force structure along with development of the tools to accomplish these efforts. Advanced platform concept studies and systems technology assessments will be conducted as will the development and upgrade of concept design and engineering tools, methods, and criteria. Concept Formulation (CONFORM)/Concept Development and Experimentation (CDE) for ships, boats and unmanned maritime vehicles must be continuously exercised to remain viable. It takes years to train competent practitioners, and knowledge currency is quickly lost without practice. Evolving threats and technologies drive concepts (and the tools, processes, and skills needed to produce them) towards obsolescence without constant attention. Capability Based Assessments and Analysis of Alternatives (AoA) timelines are insufficient for establishing potential material solution cost versus capability relationships without significant concept formulation work beforehand. Active collaboration between the Office of the Chief of Naval Operations requirement sponsors, Program Offices, and the various System Commands (Naval Sea Systems Command, Naval Air

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt	Project (Number/Name) 2221 / JT Mission Assessment Studies				
<p>Systems Command and Space and Naval Warfare Systems Command) engineers is critical for fully exploring the trade space by conducting analysis for affordability, effectiveness and risk. The majority of Total Ownership Cost (TOC) is locked into a design before it is even a program. In the later stages of a program it becomes much more costly to make changes that will significantly impact TOC. Investment up front in concept design can have a high payoff in TOC reduction over the life of a platform class. Outputs include concept costing and performance parameterization for comparative assessment against capability objectives and synthesis to quantify overall (Fleet) capabilities. These products (expressions of cost vs. capability) will serve as the basis of requirements and Joint Capabilities Integration and Development System analysis, define the trade space for AoA efforts, and underpin discussion of force architecture/structure during Quadrennial Defense Review, Long Range Shipbuilding Strategy builds, and Joint Requirements Oversight Council reviews.Perform-2-Plan(P2P) analytical Studies will continue to create a shared understanding of organizational metrics that includes understanding the effort needed to achieve a more complex readiness success, elevating barriers and matters requiring Echelon I leadership action to resolve, fostering a data-driven decision culture and simplifying and standardizing metrics reporting to spotlight issues and improve problem-solving. Utilize the LCS driver tree framework to assess the significance of different variables that may impact the number of LCSs to support operational requirements, develop advanced analytic models using machine learning techniques and Monte Carlo simulation based on the LCS P2P driver tree. The analytical model will forecast the numbers of mission ready LCS, parts shortages, unplanned down days, and/or CASREPs/CANNABs. The analytical model will serve as the basis for prioritizing and assessing how resources can best be allocated to improve LCS readiness as well as identify key actionable drivers that result in a decrease in LCS mission readiness and increase unplanned down days.</p> <p>Develop a prescriptive analytics model to determine the cost-minimizing driver levels to achieve a greatly increased number of mission ready LCS while reducing unplanned down days. Assess costs associated with various combinations of driver levels that would achieve target levels of performance.</p> <p>Capabilities-Based Assessment (CBA) is the Joint Capabilities Integration and Development System (JCIDS) analysis process that includes three phases: Functional Area Analysis (FAA), Functional Needs Analysis (FNA), and Functional Solution Analysis (FSA). The results of the CBA are used to develop a joint capabilities document (based on the FAA and FNA) or initial capabilities document (based on the full analysis). CBA funding provides the resource sponsors the means to develop the analytic underpinning required by Chairman of the Joint Chiefs of Staff Instruction 3170.01G to support the determination of Naval warfighting capabilities and force structure needed to support the Joint Requirements Oversight Council (JROC)/JCIDS requirements validation process and to inform Program Objective Memorandum programming decisions. This analysis includes evaluation of integration and interoperability gaps of both current and future Navy platforms and systems capabilities.</p>							
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Navy Studies & Analysis			17.906	20.816	22.477	0.000	22.477
Articles:			-	-	-	-	-
FY 2023 Plans:							
Continue to develop, update and maintain detailed level Navy Standard scenarios based on DPG (Defense Planning Guidance).							
-Continue to develop alternative scenarios in support of Defense Review guidance, Joint studies, and Navy resource analyses.							
-Continue to develop, update and maintain analytic baselines for the MCO (Major combat operation) based on DPG (Defense Planning Guidance).							

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023	
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & Intl Supt	Project (Number/Name) 2221 / JT Mission Assessment Studies	

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue to develop details required to execute analysis of designated Defense Planning Scenarios and their respective Multi-Service Force Deployment Plans.</p> <p>-Continue to develop and maintain a framework and common set of processes to ensure that essential elements of warfare analyses, including scenarios, operational concepts, tactics, capabilities of platforms and systems (for Navy, Joint, coalition and threat forces), key assumptions and input data are defined and traceable to government approved/provided source material.</p> <p>-Continue to develop scenarios and operational concepts based on government inputs that are sufficiently detailed for use in naval and joint campaign analyses.</p> <p>-At the mission level, continue to script Operational Situations (OPSITS) or Tactical Situations (TACSITS) for use in effectiveness analyses in specific warfare mission areas.</p> <p>-Continue to provide analytically-based decision recommendations to CNO (Chief of Naval Operations) for both warfighting and support areas.</p> <p>-Continue to develop CNO (Chief of Naval Operations) investment strategy recommendations and assessments for Program Review and Program Objective Memorandum.</p> <p>-Continue to perform rigorous, time critical naval and joint campaign and mission-level analyses, usually based on modeling and simulation that illuminated complex warfare issues which support decision-making in the PPBE (Planning, Programming, Budgeting and Execution) process.</p> <p>-Continue to conduct ISR (Intelligence, Surveillance, Reconnaissance) and METOC (Meteorological and oceanographic systems) assessments to determine the optimal mix of Naval ISR ((Intelligence, Surveillance, Reconnaissance) and METOC ((Meteorological and oceanographic systems) sensors, platforms, and processing, analysis and fusion disposition to support MCOs (Major combat operation), the OCO(Overseas Contingency Operations), and intelligence preparation of the environment for both MCOs(Major combat operation) and OCO (Overseas Contingency Operations).</p> <p>-Continue to develop and maintain common baselines from which campaign excursions and mission-level analyses are executed.</p> <p>-Continue to identify, develop and improve data and modeling, and broker agreements upon assumptions, CONOPS (Concepts of Operation), scenarios, and data.</p> <p>-Continue to lead campaign analysis for OPNAV (Office of the Chief of Naval Operations) and lead Navy's participation in OSD/Joint Staff analytic agenda, baseline development, and collection of data.</p> <p>-Continue to conduct modeling and simulation support for ongoing OPNAV missile defense analysis requirements.</p> <p>-Continue to provide analytically-based decision recommendations to OPNAV for joint warfighting and support areas.</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt	Project (Number/Name) 2221 / JT Mission Assessment Studies				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue to develop new analytic models and techniques for informing resource allocation decisions; conduct all campaign and warfare mission-level analyses and develop investment strategies.</p> <p>-Continue to develop and improve the Navy's analysis capabilities which support Joint and Navy analytic agendas and resource-allocation decision making by refining the linkages between cost and performance in performance-modeled programs in support of Navy analysis and assessment. Areas of tool development and improvement included mission and campaign-level warfighting models, active and reserve manpower, afloat and ashore readiness, and medical capabilities.</p> <p>-Continue to focus on integrated analysis capabilities that cut across business and program accounts. Specific efforts address cyber warfare and security, optimizing the training pipeline, integrating ship maintenance and operations price performance models, and improving mission- and campaign-level C5ISR (Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance) models and representations.</p> <p>-Continue to develop medical analysis that links to campaign analysis including movement of injured between care facilities, life-saving treatment of injured and recuperation support of injured to support Navy Medical Program decisions.</p> <p>-Continue to update the high-level readiness model that fully integrates all aspects of warfighting support (operational utilization, training cycles, training centers, depots, etc.) and personnel (recruitment, training, development, deployment, retention, etc.) across the Navy's warfighting platforms (aircraft, ships, submarines, etc.), facilities and personnel development centers.</p> <p>-Continue to conduct ship, boat, and unmanned marine vehicle concept studies in preparation for Capabilities Based Assessments (CBAs) and Analysis of Alternatives (AoAs). Studies will be performed in a continuous manner to support future recapitalization of Surface Combatants, Amphibious Ships, Carriers, Auxiliary Ships and other emerging program requirements.</p> <p>-Continue to collaborate with Warfare Systems design experts to perform continuous Warfare Systems analysis at the ship and fleet level. Warfare Systems effectiveness assessment tools are being continually developed and enhanced as required to address future concepts and to incorporate improvements in information technology systems. Additionally, collaborate with aircraft, C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance), and networks by continuing dialog and collaboration between NAVSEA (Naval Sea Systems Command), NAVAIR (Naval Air Systems Command), and NAVWAR (Naval Warfare Systems Command) systems commands which refines fleet level requirements.</p> <p>-Continue to conduct future force structure concept formulation. Fleet synthesis and analysis will be conducted, which includes capabilities requirements, platform design and cost and quantitative tracking of the long-term</p>							



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 2221 / JT Mission Assessment Studies		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
evolution of the fleet as new platforms are introduced and old ones are retired. Areas to be examined include interoperability concepts, force architecture impact studies, and operational employment concept studies. -Utilize the LCS driver tree framework to assess the significance of different variables that may impact the number of LCSs to support operational requirements, develop advanced analytic models using machine learning techniques and Monte Carlo simulation based on the LCS Plan-2-Perform (P2P) driver tree. The analytical model will forecast the numbers of mission ready LCS, parts shortages, unplanned down days, and/or CASREPs/CANNABs. The analytical model will serve as the basis for prioritizing and assessing how resources can best be allocated to improve LCS readiness as well as identify key actionable drivers that result in a decrease in LCS mission readiness and increase unplanned down days. -Develop a prescriptive analytics model to determine the cost-minimizing driver levels to achieve a greatly increased number of mission ready LCS while reducing unplanned down days. Assess costs associated with various combinations of driver levels that would achieve target levels of performance. -Support early development stages of a Digital Program Objective Memorandum (POM) tool. The Digital POM is a holistic, end-to-end effort intended to maximize Naval Power by modernizing and optimizing the Navy's investment decision processes and technologies. To optimize investment decisions, the Navy must implement practices that go beyond traditional planning and performance monitoring to determine return on investment (ROI) and allow management of operational, investment and other enterprise risk- adjusted outcomes. The ideal solution(s) provide data management, traceability, ease of use, scalability, and an ability to find causal relationships, total operating costs, and alternatives to programs of record based on correlation to alignment to key problems, desired output, or ROI. The vision for the Digital POM is an integrated and automated decision management system that enables confident, objective, and transparent decisions that consistently maximize Naval Power in real time using accurate, relevant and timely data information.  <b>FY 2024 Base Plans:</b> Continue to develop, update and maintain detailed level Navy Standard scenarios based on DPG (Defense Planning Guidance). -Continue to develop alternative scenarios in support of Defense Review guidance, Joint studies, and Navy resource analyses. -Continue to develop, update and maintain analytic baselines for the MCO (Major combat operation) based on DPG (Defense Planning Guidance). -Continue to develop details required to execute analysis of designated Defense Planning Scenarios and their respective Multi-Service Force Deployment Plans.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 2221 / JT Mission Assessment Studies		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>-Continue to develop and maintain a framework and common set of processes to ensure that essential elements of warfare analyses, including scenarios, operational concepts, tactics, capabilities of platforms and systems (for Navy, Joint, coalition and threat forces), key assumptions and input data are defined and traceable to government approved/provided source material.</div> <div>-Continue to develop scenarios and operational concepts based on government inputs that are sufficiently detailed for use in naval and joint campaign analyses.</div> <div>-At the mission level, continue to script Operational Situations (OPSITS) or Tactical Situations (TACSITS) for use in effectiveness analyses in specific warfare mission areas.</div> <div>-Continue to provide analytically-based decision recommendations to CNO (Chief of Naval Operations) for both warfighting and support areas.</div> <div>-Continue to develop CNO (Chief of Naval Operations) investment strategy recommendations and assessments for Program Review and Program Objective Memorandum.</div> <div>-Continue to perform rigorous, time critical naval and joint campaign and mission-level analyses, usually based on modeling and simulation that illuminated complex warfare issues which support decision-making in the PPBE (Planning, Programming, Budgeting and Execution) process.</div> <div>-Continue to conduct ISR (Intelligence, Surveillance, Reconnaissance) and METOC (Meteorological and oceanographic systems) assessments to determine the optimal mix of Naval ISR ((Intelligence, Surveillance, Reconnaissance) and METOC ((Meteorological and oceanographic systems) sensors, platforms, and processing, analysis and fusion disposition to support MCOs (Major combat operation), the OCO(Overseas Contingency Operations), and intelligence preparation of the environment for both MCOs(Major combat operation) and OCO (Overseas Contingency Operations).</div> <div>-Continue to develop and maintain common baselines from which campaign excursions and mission-level analyses are executed.</div> <div>-Continue to identify, develop and improve data and modeling, and broker agreements upon assumptions, CONOPS (Concepts of Operation), scenarios, and data.</div> <div>-Continue to lead campaign analysis for OPNAV (Office of the Chief of Naval Operations) and lead Navy's participation in OSD/Joint Staff analytic agenda, baseline development, and collection of data.</div> <div>-Continue to conduct modeling and simulation support for ongoing OPNAV missile defense analysis requirements.</div> <div>-Continue to provide analytically-based decision recommendations to OPNAV for joint warfighting and support areas.</div> <div>-Continue to develop new analytic models and techniques for informing resource allocation decisions; conduct all campaign and warfare mission-level analyses and develop investment strategies.</div>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 2221 / JT Mission Assessment Studies				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue to develop and improve the Navy's analysis capabilities which support Joint and Navy analytic agendas and resource-allocation decision making by refining the linkages between cost and performance in performance-modeled programs in support of Navy analysis and assessment. Areas of tool development and improvement included mission and campaign-level warfighting models, active and reserve manpower, afloat and ashore readiness, and medical capabilities.</p> <p>-Continue to focus on integrated analysis capabilities that cut across business and program accounts. Specific efforts address cyber warfare and security, optimizing the training pipeline, integrating ship maintenance and operations price performance models, and improving mission- and campaign-level C5ISR (Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance) models and representations.</p> <p>-Continue to develop medical analysis that links to campaign analysis including movement of injured between care facilities, life-saving treatment of injured and recuperation support of injured to support Navy Medical Program decisions.</p> <p>-Continue to update the high-level readiness model that fully integrates all aspects of warfighting support (operational utilization, training cycles, training centers, depots, etc.) and personnel (recruitment, training, development, deployment, retention, etc.) across the Navy's warfighting platforms (aircraft, ships, submarines, etc.), facilities and personnel development centers.</p> <p>-Continue to conduct ship, boat, and unmanned marine vehicle concept studies in preparation for Capabilities Based Assessments (CBAs) and Analysis of Alternatives (AoAs). Studies will be performed in a continuous manner to support future recapitalization of Surface Combatants, Amphibious Ships, Carriers, Auxiliary Ships and other emerging program requirements.</p> <p>-Continue to collaborate with Warfare Systems design experts to perform continuous Warfare Systems analysis at the ship and fleet level. Warfare Systems effectiveness assessment tools are being continually developed and enhanced as required to address future concepts and to incorporate improvements in information technology systems. Additionally, collaborate with aircraft, C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance), and networks by continuing dialog and collaboration between NAVSEA (Naval Sea Systems Command), NAVAIR (Naval Air Systems Command), and NAVWAR (Naval Warfare Systems Command) systems commands which refines fleet level requirements.</p> <p>-Continue to conduct future force structure concept formulation. Fleet synthesis and analysis will be conducted, which includes capabilities requirements, platform design and cost and quantitative tracking of the long-term evolution of the fleet as new platforms are introduced and old ones are retired. Areas to be examined include interoperability concepts, force architecture impact studies, and operational employment concept studies.</p>								

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 2221 / JT Mission Assessment Studies		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Utilize the LCS driver tree framework to assess the significance of different variables that may impact the number of LCSs to support operational requirements, develop advanced analytic models using machine learning techniques and Monte Carlo simulation based on the LCS Plan-2-Perform (P2P) driver tree. The analytical model will forecast the numbers of mission ready LCS, parts shortages, unplanned down days, and/or CASREPs/CANNABs. The analytical model will serve as the basis for prioritizing and assessing how resources can best be allocated to improve LCS readiness as well as identify key actionable drivers that result in a decrease in LCS mission readiness and increase unplanned down days.</p> <p>-Develop a prescriptive analytics model to determine the cost-minimizing driver levels to achieve a greatly increased number of mission ready LCS while reducing unplanned down days. Assess costs associated with various combinations of driver levels that would achieve target levels of performance.</p> <p>-Support early development stages of a Digital Program Objective Memorandum (POM) tool. The Digital POM is a holistic, end-to-end effort intended to maximize Naval Power by modernizing and optimizing the Navy's investment decision processes and technologies. To optimize investment decisions, the Navy must implement practices that go beyond traditional planning and performance monitoring to determine return on investment (ROI) and allow management of operational, investment and other enterprise risk- adjusted outcomes. The ideal solution(s) provide data management, traceability, ease of use, scalability, and an ability to find causal relationships, total operating costs, and alternatives to programs of record based on correlation to alignment to key problems, desired output, or ROI. The vision for the Digital POM is an integrated and automated decision management system that enables confident, objective, and transparent decisions that consistently maximize Naval Power in real time using accurate, relevant</p> <p>- Growth in Digital POM specifically focuses the transition to production in FY 24. Development and production of the Digital Program Objective Memorandum (POM) tool. This effort intended to maximize Naval Power by modernizing and optimizing the Navy's investment decision processes and technologies using nontraditional defense contractor's technology to perform AI backed decision tradeoffs. Due to the inherent complexities of the Navy Enterprise, a Readiness and Performance Analysis process will help leadership to focus on the most impactful performance drivers to achieve Readiness recovery, while highlighting key opportunities to achieve measurable outcomes in the most efficient manner.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Program increase of \$1.661K from FY23 to FY24 will support the growth within the Perform-to-Plan (P2P) activities continuing within the analytic studies portfolio as well as support early development stages of a Digital</p>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 2221 / JT Mission Assessment Studies		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Program Objective Memorandum (POM) tool. Growth in Digital POM specifically focuses the transition to production in FY 24 as development of the prototype will conclude in FY23. The prototyping effort in FY 23 focuses on one specific budget area while the production effort in FY24 will pull in all areas of the Navy budget in support decision making for POM 26.						
This increase will also reflect Navy's Perform-to-Plan (P2P) process as a Readiness Planning and Performance Analysis process to improve Navy Readiness by clearly articulating performance gaps, identifying barriers to execution, and developing potential solutions to achieve an integrated, enterprise approach to Readiness recovery as outlined in the National Defense Strategy (NDS) in support of Get Real Get Better CNO initiatives.						
Title: Joint Mission Assessment Studies		3.387	3.719	5.793	0.000	5.793
Articles:		-	-	-	-	-
Description: Capabilities-Based Assessment (CBA) is the JCIDS analysis process that includes three phases: the Functional Area Analysis (FAA), the Functional Needs Analysis (FNA), and the Functional Solution Analysis (FSA). The results of the CBA are used to develop a joint capabilities document (based on the FAA and FNA) or initial capabilities document (based on the full analysis). CBA funding provides the resource sponsors the means to develop the analytic underpinning required by Chairman of the Joint Chiefs of Staff Instruction 3170.01G to support the determination of Naval war fighting capabilities and force structure needed to support the JROC/ JCIDS requirements validation process and to inform Program Objective Memorandum programming decisions.						
FY 2023 Plans:						
CBA such as advanced Naval Warfare fires and Naval aviation integrated analysis to identify future capability requirements. Develop metrics to describe the effectiveness of solutions, and evaluate current and programmed systems ability to meet capability requirements to determine capability gaps. Expand warfighting gap assessments addressing interaction of mission area kill chain platforms, sensors, and weapons in a system-of-system construct.						
FY 2024 Base Plans:						
CBA such as advanced Naval Warfare fires and Naval aviation integrated analysis to identify future capability requirements. Develop metrics to describe the effectiveness of solutions, and evaluate current and programmed systems ability to meet capability requirements to determine capability gaps. Expand warfighting gap assessments addressing interaction of mission area kill chain platforms, sensors, and weapons in a system-of-						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / <i>Management, Technical &amp; In</i> <i>tl Supt</i>		<b>Project (Number/Name)</b> 2221 / <i>JT Mission Assessment Studies</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
system construct. This also includes the off cycle wargame event to provide fleet operators with threat scenarios to determine future gap analysis.  <b><i>FY 2024 OCO Plans:</i></b> N/A  <b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The increase from FY23 to FY24 will provide for the Operator in the Loop Wargame for fleet operators to access fleet threat scenarios and provide gap analysis.						
<b>Accomplishments/Planned Programs Subtotals</b>		21.293	24.535	28.270	0.000	28.270
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>						
N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b>						
N/A.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & Intl Supt				Project (Number/Name) 3017 / Enterprise Information Systems			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3017: Enterprise Information Systems	0.000	0.940	1.088	1.111	-	1.111	1.142	1.163	1.185	1.209	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> This project funds the Office of Naval Research (ONR) Next Generation Enterprise Network (NGEN) Information Technology corporate costs.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	
<b>Title:</b> Next Generation Enterprise Network (NGEN)  <b>Articles:</b>  <b>Description:</b> This project funds the Office of Naval Research (ONR) Next Generation Enterprise Network (NGEN) Information Technology corporate costs.  <b>FY 2023 Plans:</b> Continue to support NGEN Corporate requirements, such as (tech refresh, etc.).  <b>FY 2024 Base Plans:</b> Continue to support NGEN Corporate requirements, such as (tech refresh, etc.).  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> There is no significant funding change from FY 2023 to FY 2024.							0.940	1.088	1.111	0.000	1.111	
Accomplishments/Planned Programs Subtotals							0.940	1.088	1.111	0.000	1.111	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A  <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 3027 / Defense Critical Infrastructure Program			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3027: Defense Critical Infrastructure Program	0.000	7.421	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.421
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Funds received pursuant to the transfer of budget authority from Office of the Secretary of Defense (Policy) Homeland Defense Mission Assurance Directorate will be used for infrastructure analysis, assessment, and research required to support execution of the Defense Critical Infrastructure and Mission Assurance Program (DCIP / MA). Additionally, the transferred budget authority will be used to provide in-depth/cross-cutting analysis to the Mission Assurance (MA)/DCIP programs at the Office of the Secretary of Defense (OSD), Joint Staff, Military Departments/Services, Defense Agencies, and Combatant Commands. NSWCDD-A40 will also perform cyber mission assurance research and provide expertise in infrastructure mitigation techniques and solutions.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Mission Assurance Risk Management System (MARMS) Technical Support  <b>Articles:</b>  <b>Description:</b> Provide capabilities to meet the technical requirements in support of the developmental efforts for the current and future common operating picture for Mission Assurance supporting Joint Staff MARMS development team, program office and A40 mission assurance database organization.  The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff provide oversight for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure(DCI)programs at the Joint Staff and Office of the Secretary of Defense Policy (OSD)(P).  <b>FY 2023 Plans:</b> N/A  <b>FY 2024 Base Plans:</b> N/A  <b>FY 2024 OCO Plans:</b> N/A								0.530	0.000	0.000	0.000	0.000
								-	-	-	-	-
<b>Title:</b> Mission Assurance Assessments (MAA) Support								1.333	0.000	0.000	0.000	0.000



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3027 / Defense Critical Infrastructure Program		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>Articles:</div> <div>Description: Provide analysis and characterization of Defense Critical Infrastructure through research and study of existing assessment data and incoming assessment data to analyze trends, provide feedback, and significant impacts to defense missions and assets during events, exercises, and planning efforts.</div> <div>The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff will provide oversight to A40 for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure (DCI) programs at the Joint Staff and OuSD (P).</div> <div>FY 2023 Plans: N/A</div> <div>FY 2024 Base Plans: N/A</div> <div>FY 2024 OCO Plans: N/A</div>		-	-	-	-	-
<div>Title: Cyber Mission Assurance (MA)</div> <div>Articles:</div> <div>Description: Analysts will investigate cyber impacts to missions and infrastructure associated with DoD assets. This information will be conveyed in assessments, memorandums, and white papers to inform senior leaders and teams about the significance of cyber infrastructure and the interdependencies with physical infrastructure.</div> <div>The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff will provide oversight to A40 for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure (DCI) programs at the Joint Staff and OUSD (P).</div> <div>FY 2023 Plans: N/A</div> <div>FY 2024 Base Plans:</div>		1.227 -	0.000 -	0.000 -	0.000 -	0.000 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3027 / Defense Critical Infrastructure Program		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A						
FY 2024 OCO Plans: N/A						
Title: Defense Critical Electric Infrastructure (DCEI)  Articles:  Description: Provide electric power analysis and characterization of defense installations at the request of senior leaders engaged with energy security and resilience efforts for national security with interagency representatives from industry utilities, DHS, and DoE.  The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff will provide oversight to A40 for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure (DCI) programs at the Joint Staff and OUSD (P).  FY 2023 Plans: N/A  FY 2024 Base Plans: N/A  FY 2024 OCO Plans: N/A		0.494 -	0.000 -	0.000 -	0.000 -	0.000 -
Title: Mission Assurance Program Management  Articles:  Description: Monitor, track and report on all budget related inquiries and task planning and execution for the Mission Assurance / DCIP programs including data calls, weekly budget reports, and deliverables.  The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff will provide oversight to A40 for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure (DCI) programs at the Joint Staff and OUSD (P).		0.871 -	0.000 -	0.000 -	0.000 -	0.000 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3027 / Defense Critical Infrastructure Program		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
FY 2023 Plans: N/A						
FY 2024 Base Plans: N/A						
FY 2024 OCO Plans: N/A						
Title: Defense Critical Infrastructure		0.600	0.000	0.000	0.000	0.000
Articles:		-	-	-	-	-
Description: Provide mission assurance assessment and support for characterization of defense critical infrastructure and supporting links to commercial industry and equipment. Analysis and research will provide details on critical links to defense missions and assets and support risk management decision planning for installations, services, and Combatant Commands (CCMDs).						
The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff will provide oversight to A40 for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure (DCI) programs at the Joint Staff and OUSD (P).						
FY 2023 Plans: N/A						
FY 2024 Base Plans: N/A						
FY 2024 OCO Plans: N/A						
Title: Defense Critical Mission (DCM)		0.503	0.000	0.000	0.000	0.000
Articles:		-	-	-	-	-
Description: Conduct research and provide expertise on the defense critical missions nominated by the Joint Staff and Mission Assurance community for development of mitigations and solutions to vulnerabilities discovered as part of mission assurance assessment processes. Analysts will provide expertise and knowledge						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
in multiple areas of engineering and infrastructure to provide robust and resilient plans and projects to enhance installation infrastructure and planning to increase successful support of critical missions.						
The Office of the Undersecretary of Defense for Policy (OUSD-P) Mission Assurance Directorate and the Joint Staff will provide oversight to A40 for funding that will be used for infrastructure analysis, assessment, and research required in support of Mission Assurance and Defense Critical Infrastructure (DCI) programs at the Joint Staff and OUSD (P).						
FY 2023 Plans: N/A						
FY 2024 Base Plans: N/A						
FY 2024 OCO Plans: N/A						
Title: Outside the Wire (OTW) Infrastructure Reports		0.620	0.000	0.000	0.000	0.000
Articles:		-	-	-	-	-
Description: Provide infrastructure characterization reports on non-DoD owned supporting infrastructure at DoD installations on the same schedule as the Defense Threat Reduction Agency (DTRA) mission assurance assessments						
FY 2023 Plans: N/A						
FY 2024 Base Plans: N/A						
FY 2024 OCO Plans: N/A						
Title: MA Advanced Homeland Analysis & Assessment Integration		1.243	0.000	0.000	0.000	0.000
Articles:		-	-	-	-	-
Description: Provide technical assessment support and improve mission assurance implementation to enterprise systems, and provide leadership in support of OSD and NAVSEA efforts between mission assurance,						

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Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3027 / Defense Critical Infrastructure Program		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
threat intelligence, big data analysis and cybersecurity network programs. This includes identifying and categorizing Mission Relevant Terrain-Cyber (MRT-C) data via Red Team capabilities.						
FY 2023 Plans: N/A						
FY 2024 Base Plans: N/A						
FY 2024 OCO Plans: N/A						
Accomplishments/Planned Programs Subtotals		7.421	0.000	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 3312 / MTMD-Maritime Theater Missile Defense Forum			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3312: MTMD-Maritime Theater Missile Defense Forum	0.000	11.722	10.992	11.792	-	11.792	11.951	12.230	12.425	12.037	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

This project funds participation in Maritime Integrated Air and Missile Defense projects with other nations through the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended 2009, 2015, 2016 and 2020). Known as the Maritime Theater Missile Defense (MTMD) Forum, it promotes interoperability with the Navies of twelve participating nations (Australia, Belgium, Canada, Denmark, France, Germany, Italy, Netherlands, Norway, Spain, United Kingdom and the United States). This project provides interoperability assessment and opportunities to Allies that directly contributes to increasing the number of countries capable of supporting NATO Ballistic Missile Defense (BMD). Engineering analysis and data analytics from MTMD activities are provided to European and Pacific Combatant Commands in direct support of theater Integrated Air and Missile Defense (IAMD) priorities. The MTMD Forum addresses challenges associated with integrating maritime Allied Air Defense in Support of Ballistic Missile Defense Operations into joint IAMD command and control. MTMD Forum nations leverage At-Sea Demonstration (ASD) test events, coupled with operational Fleet Exercises (Formidable Shield and Pacific Dragon), to integrate technology and validate national capabilities in operational constructs, supportive of operational force employment.

The MTMD Forum encourages national development of systems and practices that enhance protection and defense against the proliferation of short, medium and long-range Ballistic Missile (BM) and Advanced Anti-Ship Cruise Missile (ASCM) threats through the development of interoperable sea-based Integrated Air and Missile Defense (IAMD) capability among MTMD Forum nations. The MTMD Forum enhances utilization of existing sea-based IAMD systems to protect against current threats, while measuring progressive improvement and development of compatible systems to better counter evolving threats.

This project supports USN participation in a Maritime IAMD Project Arrangement focused on:

- (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) to define and develop architectures and perform engineering to address coalition capability gaps.
- (2) Modeling & Simulation (M&S) to establish and maintain a maritime coalition M&S testbed and to perform legacy and future systems simulation testing.
- (3) Hardware-in-the-Loop Testing of Coalition combat systems to assess interoperability within the Coalition Distributed Engineering Plant (CDEP).
- (4) Open Architecture (OA) work to develop Interface Standards and Data Models.
- (5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting.
- (6) Operational Requirements (OR) to identify operational constraints and tactical constructs surrounding coalition maritime integrated air and missile defense activities, and their integration into joint operations.
- (7) Reciprocal Use of Test Facilities agreements with other nations to support Maritime IAMD and MTMD Forum-related demonstrations.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt	Project (Number/Name) 3312 / MTMD-Maritime Theater Missile Defense Forum			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: MTMD-Martime Theater Missile Defense Forum		11.722	10.992	11.792	0.000	11.792
Articles:		-	-	-	-	-
FY 2023 Plans:						
(1) BMC4I is the foundation on which interoperability is built. The BMC4I Working Group will continue conducting engineering analysis to identify key attributes (e.g., National capability differences, information exchange discrepancies, interoperability challenges) affecting MTMD Forum Coalition Operations supporting Target Architectures (TA). MTMD Forum, National platform, Coalition Task Force, and Joint operation capability and interoperability assessments will be conducted from test event data analysis [laboratory and at-sea], responses from Requests for Information (RFI), and data link bit-level implementation evaluation via System Tactical Data Link (TDL) Interoperability Report (STIR), and associated Special Experts Meetings (SEM) analysis. BMC4I continues to assist the refinement of the "IAMD Maturity Model and Assessment Report" representing National performance and progress in four (4) main categories: 1) Interoperability, 2) Air Defense, 3) Ballistic Missile Defense (BMD), and 4) Human/Operational Aspects. BMC4I will support the development of a "Common Tactical Picture (CTP) Assessment Report" that measures and maps the MTMD Forum's shared track picture, in order to, provide proposals and priorities for mitigating CTP interoperability issues and shortfalls. The project will continue with Model-Based Systems Engineering (MBSE) efforts to formalize system requirements and design continuing throughout development and later life cycle phases supporting Department of Defense Architecture Framework (DoDAF). This includes creating architecture models [e.g., Capability Viewpoints (CV), Operational Viewpoints (OV), Services Viewpoints (SvcV), etc.] depicting the unit-level functional threads and force-level coordination threads interactions supporting the Force-Level Functions (FLF). Multi-national interoperability gap assessments [e.g., Maturity Model, CTP, Capability Gaps (CG) and Interoperability Gaps (IG)] will be documented and tracked in BMC4I's Coalition Capability and Interoperability (CCI) Report, and the Capabilities and Limitations (C&L) database. BMC4I collaborates with and supports, sibling Working Groups (OA, OR, M&S, CDEP, and TPEX) and Projects (laCTP, BMDi, FLOATS, and FTE2C).						
(2) M&S will continue their cyclical work providing analysis of Target Architectures and conduct assessments in support of recommendations to improve information exchange requirements identified by BMC4I and the System Engineering Team (SET). M&S will continue to ensure all associated authorities to operate are in place for continued coalition modeling and simulation. M&S will ensure all coalition partners in the MTMD Forum who participate in the M&S working group have online access as required to M&S modeling and simulation equipment to continue to run simulations in support of these efforts. M&S will model future Target Architectures and provide analysis in support of future at-sea demonstrations. The M&S team will continue development of the						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
test bed and the test environment that provides analytical capability to the Forum Systems Engineering Team in order to provide timely responses to requests for model/simulation data to support recommendations. The M&S Working Group will continue development of Mission Models in support of capability development to illustrate operational impact of proposed solutions to complex Integrated Air and Missile Defense (IAMD) problems.						
(3) CDEP will continue to assess interoperability of joint air and land assets in Annual Test Events (ATE) consistent with the MTMD Forum Project Management Framework. CDEP will provide technical expertise to the BMD Integration, FTE2C and IAMD Interoperability/ Common Tactical Picture (CTP) projects within the MTMD Forum. CDEP will continue to assess interoperability of joint air and land assets in Annual Test Event (ATE) 2023. Three additional nations have fielded national Hardware in the Loop (HWIL) capabilities in the last two years, bringing the total capable nations in the MTMD Forum to five, requiring more frequent connection testing by the U.S. CDEP Team. CDEP will work with BMC4I to test various Coalition Capabilities and Interoperability (CCI) gaps. CDEP will prepare for and conduct hardware-in-the-loop tests with enabled allied partners, and will provide assessments and recommendations to improve information exchanges required to conduct at-sea demos.						
(4) Open Architecture will model and extend the component software interfaces for additional Force Level Functions (FLFs) Sensor Management and Track Management. The Force Data Model will be extended, after generating the required use cases, to support the information exchange of additional FLFs. The Force Level Open Architecture Technical Standard (FLOATS) messaging interfaces will be implemented in national Force Threat Evaluation and Weapons Assignment (FTEWA) prototype efforts such as ONR's The Technical Cooperation Program (TTCP). It will also be finalized and exercised via scenarios within the M&S and CDEP environments. In addition to identifying errors and deficiencies in the standard, these exercises and implementations will demonstrate various operational methodologies for distributing data within the Force, as well as identifying performance parameters. Comments submitted against the standard will be adjudicated and the standard will be updated as required. The OAWG will continue to collaborate with BMC4I, M&S, and the System Experts Meeting (SEM) to ensure the interfaces and data exchange align with the Target and Reference Architectures as well as selected Possible Point Solutions (PPSs). The OAWG will also collaborate with the OR, CDEP, and the FTEWA Subject Matter Experts (SMEs) to ensure the FLF component interfaces align with FTEWA and operational requirements. The OAWG is committed to a two year surge with our partner nations to accelerate the delivery of FLOATS to enable operational implementation beginning in CY26, three (3) years ahead of schedule. The OAWG will monitor the Open Architecture Radar Interface Standard (OARIS) Industry						



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy			<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / <i>Management, Technical &amp; Intl Supt</i>	<b>Project (Number/Name)</b> 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>
<p>Group and commercial standards as required to determine if there are relevant industry developed standards and artifacts (e.g. data models, software interfaces) that can be reused to accelerate the FLOATS project.</p> <p>(5) TPEX will continue preparations for MTMD participation and support for the ongoing at-sea test event series. The data analysis effort contained within the TPEX line of effort provides the linkage and measures of success between the various MTMD Forum supported at-sea demonstrations that enable key policy makers and leaders to understand capability gaps / possible solutions with quantified metrics. TPEX will be evaluating results from Pacific Dragon 2022 (PD 22), a Commander, U.S. Pacific Fleet directed exercise that will involve Australian, Canadian, and United States surface units alongside Japanese and Republic of Korea maritime units. The TPEX group will also support execution of the Commander, U.S. Sixth Fleet directed Exercise Formidable Shield (FS-23) in May 2023. Future planning in FY23 will include Pacific Dragon 24 in August 2024 and At-Sea Demo/ FS-25 in May 2025. Formidable Shield exercises are the premier maritime IAMD exercises in Europe, run by Commander U.S. Naval Forces Europe (NAVEUR).</p> <p>(6) Operational Requirements group will continue to provide operational requirements and perspectives for the engineering and test activity conducted in the other working groups in the MTMD Forum. This critical cooperation with Naval Surface &amp; Mine Warfare Development Command (SMWDC) enables allied linkage into the established relationship between the Naval Surface and Mine Warfighting Development Center (SMWDC) and the Naval Sea Systems Command (NAVSEA).</p> <p><b>FY 2024 Base Plans:</b></p> <p>(1) BMC4I will continue to coordinate, collaborate, synchronize, and align with the System Engineering Team (SET) and across MTMD Projects and Working Groups (WG) to improve relationships, achieve mutual goals and objectives, and enhance Integrated Air and Missile Defense (IAMD) interoperability and capabilities in a Coalition Maritime Force integrated into the Joint Battle. Identify crucial interoperability and capability gaps based on test event data analysis, responses to Request for Information (RFI), Special Experts Meetings (SEM) analysis, System Tactical Data Link (TDL) Interoperability Report (STIR), documented Coalition Capability and Interoperability (CCI) Report, and the Capabilities and Limitations (C&amp;L) database. Establish "C&amp;L Fleet Modifiable Tool (FMT)" availability to Forum Nations via CFBLNet/MTMD-SEE. Provide Information Exchange Requirements (IER) supporting Modeling and Simulation (M&amp;S) Working Group synthetic test efforts, Coalition Distributed Engineering Plant (CDEP) Working Group exercises (e.g., Annual Test Events (ATEs)), and Test Planning and Execution (TPEX) Working Group At-Sea test events and/or Hardware-in-the-Loop (HWIL) activities to validate and demonstrate IAMD objectives. Engage with Open Architecture (OA) Working Group,</p>					
					<b>FY 2024 OCO</b>
					<b>FY 2024 Total</b>

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Force Level Open Architecture Technical Standard (FLOATS) Project, and Force Threat Evaluation and Effects Coordination (FTE2C) Project supporting Force-Level Function (FLF) development and testing facilitated from System Architects models and Object-Oriented designs. Collaborate with Operational Requirements (OR) Working Group by incorporating warfighter Tactics, Techniques and Procedures (TTP). Draft Target Architecture 4 (TA4) objectives and concepts supporting MTMD Forum's IAMD vision. Work with Interoperability and Common Tactical Picture (IaCTP) Project in developing a "CTP Assessment Means" assessing the CTP quantitatively and qualitatively; evolving an "IAMD Maturity Model" by tracking and measuring continued IAMD capability progression/maturity; and outline roles, capabilities, and C2 structure for integration into Joint coalition operations.						
(2) M&S will continue their cyclical work providing analysis of Target Architectures and conduct further assessments to support recommendations to improve information exchange requirements identified by BMC4I and the Systems Engineering Team (SET). M&S will continue to ensure all associated authorities to operate are in place for continued coalition modeling and simulation. M&S will ensure all coalition partners in the MTMD Forum who participate in the M&S working group have online access as required to M&S modeling and simulation equipment to continue to run simulations in support of these MTMD efforts. M&S will model future Target Architectures and provide analysis in support of future at-sea demonstrations. The M&S team will continue development of the test bed and add additional computing power to the test environment to provide faster and more powerful analytical capability to the Forum System Engineering Team in order to provide more timely responses to requests for model/simulation data to support recommendations. The M&S Working Group will continue development of Mission Models in support of capability development to illustrate operational impact of proposed solutions to complex Integrated Air and Missile Defense (IAMD) problems. In these ways M&S will provide for further cost avoidance by performing simulations and analysis of these simulations realizing affordability initiatives as fewer costly 'real world' testing events are needed.						
(3) CDEP will continue to assess interoperability of joint air and land assets in Annual Test Events (ATE) consistent with the MTMD Forum Project Management Framework. CDEP will provide technical expertise to the BMD Integration, FTE2C and IAMD Interoperability/ Common Tactical Picture (CTP) projects within the MTMD Forum. CDEP will continue to assess interoperability of joint air and land assets in Annual Test Event (ATE) 2023 and ATE 2024. Three additional nations have fielded their national Hardware in the Loop (HWIL) capabilities in the last two years, bringing the total capable nations in the MTMD Forum to five, requiring more frequent connection testing by the U.S. CDEP Team. France is joining the CDEP ATEs in 2023 and 2024. CDEP will work with BMC4I to test various Coalition Capabilities and Interoperability (CCI) gaps. CDEP will prepare						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
for and conduct hardware-in-the-loop tests with enabled allied partners, and will provide assessments and recommendations to improve information exchanges required to conduct at-sea demos.						
(4) Open Architecture group will conduct a series of M&S test series to prove FLOATS, and conduct NATO engagement advocating for the formal adoption of FLOATS as a NATO standard. The group will also deliver FLOATS v.7.0, v8.0 and v9.0 and continue engaging acquisition programs for the adoption of FLOATS into national programs to ensure interoperability with our partner nations. Development work of an operational test design to test FLOATS operationally is planned to determine its suitability for implementation and potential deployment.						
(5) TPEX will continue preparations for MTMD participation and support for ongoing at-sea test event series. Pacific Dragon (PD) 2024 exercise will execute in Q4 of FY24. The exercise is specified and endorsed by COMPACFLT. Target development initiated in FY22 will continue to support the live-fire objectives for PD 24 and future PD exercises. During PD 24, live-fire Integrated Air and Missile Defense (IAMD) events are planned to be conducted with MTMD Forum nations bringing ships, aircraft, and ground based sensors. These at-sea demonstrations will include live tracking events and a combination of live and simulated engagements within a fleet exercise, focused on interoperability assessment. The MTMD Forum Project will sponsor the targets for these and will leverage 3rd Fleet Rim of the Pacific (RIMPAC) resources to conduct the PD exercise. Planning for At-Sea Demonstrations and follow-on at-sea testing will continue into future years and include further IAMD target procurement. The data analysis effort contained within the TPEX line of effort provides the linkage and measures of success between the various MTMD Forum supported at-sea demonstrations that enable key policy makers and leaders to understand capability gaps / possible solutions with quantified metrics. Future planning in FY24 will include At-Sea Demo/FS-25 in May 2025 and PD26 in August 2026. Formidable Shield exercises are endorsed by Commander U.S. Naval Forces Europe (NAVEUR). Target developments to support PD 24 as well as ASD/FS-25 will also occur in FY24.						
(6) Operational Requirements group will continue to provide operator's perspective and recommendations to the engineering and test activity conducted in the other working groups. This critical cooperation with Surface Mine Warfare Development Command (SMWDC) enables allied linkage into the established relationship between SMWDC and Naval Sea Systems Command (NAVSEA).						
FY 2024 OCO Plans:						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605853N / Management, Technical & In tl Supt		<b>Project (Number/Name)</b> 3312 / MTMD-Maritime Theater Missile Defense Forum	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>				<b>FY 2022</b>	<b>FY 2023</b>
N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The FY24 increase of \$0.8 million is needed to fund required levels of effort associated with conduct of Exercise Pacific Dragon 24, an international Integrated Air and Missile Defense exercise planned to develop interoperability with Pacific allies in Q4 of FY24. The exercise reinforces regional partnerships, supports experimentation with emerging technology, and develops readiness.					
<b>Accomplishments/Planned Programs Subtotals</b>				11.722	10.992
				11.792	0.000
				11.792	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b> N/A					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 3330 / Naval Research Laboratory (NRL) Facilities Modernization			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3330: Naval Research Laboratory (NRL) Facilities Modernization	0.000	16.629	16.729	26.380	-	26.380	37.116	20.003	16.067	16.399	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This program has been established to provide a systematic and planned approach to improve vital in-house science and technology (S&T) laboratory facilities which are reaching or have reached critical stages of deterioration. The program includes restoration and modernization (R&M) initiatives for NRL's facilities, where the average age of the buildings is 67 years.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> NRL Facilities Modernization	16.629	16.729	26.380	0.000	26.380
<b>Articles:</b>	-	-	-	-	-
<p><b>Description:</b> Critical Science and Technology research cannot be sustained or succeed in deteriorated facilities. World class research can only be accomplished in facilities that are at a minimum "adequate", but preferably "state-of-the-art." Due to their advanced age and deterioration, funds are planned to restore/modernize various laboratory facilities at the Naval Research Laboratory.</p> <p><b>FY 2023 Plans:</b> The Naval Research Laboratory continues efforts to undertake numerous planned and emergent studies, evaluations, and modernization projects of laboratory facilities and infrastructure modernization of laboratories to meet future technological threats. Facility upgrade and repair projects planned for in FY 2023 include:</p> <ul style="list-style-type: none"> <li>- Replacement of aging transformers and switchgear to ensure that NRL's laboratories are ready to support the electrical power requirements of modern, state-of-the-art S&amp;T research. These projects are planned to be funded fully in FY 2023.</li> <li>- Replacement of aging building chillers and upgrades to Heating, Ventilating, and Air-Conditioning (HVAC) systems to ensure that NRL's laboratories are ready to support the temperature and humidity requirements of modern, state-of-the-art S&amp;T research. These projects are planned to be funded fully in FY 2023.</li> </ul> <p><b>FY 2024 Base Plans:</b></p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>The Naval Research Laboratory continues efforts to undertake numerous planned and emergent studies, evaluations, and modernization projects of laboratory facilities and infrastructure modernization of laboratories to meet future technological threats. Facility upgrade and repair projects planned for in FY 2024 include:</p> <p>-Evaluating and repairing the mechanical purge systems for the Tactical Electronic Warfare laboratory spaces. This project is planned to be fully funded in FY2024.</p> <p>-Replacement of exhaust vents and motors on the roof of the Optical Sciences laboratory building. This project is planned to be fully funded in FY2024.</p> <p>-Replacement of transformers and switchgear for the Ocean and Atmospheric Science &amp; Technology and Business Operations Directorates laboratory and office spaces. This project is planned to be fully funded in FY2024.</p> <p>-Roof replacement for the Central Chiller Plant. This project is planned to be fully funded in FY2024.</p> <p>-Heating, Ventilation, and Air Conditioning (HVAC) system upgrades for the Materials Sciences and Ocean and Atmospheric Science &amp; Technology Division laboratory spaces. Note that this project extends previous FY2023 plans and is intended to continue in various phases through FY2025 for multiple science and technology laboratory and research spaces.</p> <p>-Lab-wide modernization of the communication infrastructure (VoIP). This project is planned to be partially funded in FY2024 with BA 6.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> FY 2024 funding increase supports acceleration of work and increase funds for the Naval Research Laboratory's facilities modernization. The additional funding will assist a laboratory with modernizing temperature and humidity controls for the Materials Science and Technology Division. The research mission for this division has</p>								

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Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3330 / Naval Research Laboratory (NRL) Facilities Modernization			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
been severely impacted by major variances in temperature humidity; this project will be a phased, whole-building system modernization.							
Accomplishments/Planned Programs Subtotals			16.629	16.729	26.380	0.000	26.380
C. Other Program Funding Summary (\$ in Millions) N/A							
Remarks							
D. Acquisition Strategy None							

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 3363 / PACOM Initiative			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3363: PACOM Initiative	0.000	12.811	29.920	35.461	-	35.461	39.754	35.396	37.647	38.399	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

China Strategic Initiative (CSI) became a DoD RDTE program in FY 2014. The CSI program is U.S. Indo-Pacific Command's(INDOPACOM) first Asia Rebalance initiative and provides critical support to planning efforts across the Command addressing Secretary of Defense's # 1 priority. CSI is a command-directed program that provides the Commander, INDOPACOM, and his staff vital support at all levels of planning and decision-making within the INDOPACOM Area Of Responsibility. The CSI program provides: cutting-edge research on adversary approaches to warfare, monitoring and analysis of adversary social media and censorship, unique understanding of effects of U.S. actions at the strategic and operational levels, sponsorship of Track 1.5/2 Strategic Nuclear Dialogue with China, etc. This funding is for a classified effort and details can be provided at a higher classification level.

Pacific Multi-Domain Training and Experimentation Capability (PMTEC) is foundational to meeting Commander, USINDOPACOM's high-end warfighting capability, theater force posture, and Ally & Partner (A&P) objectives through the execution of joint experimentation in the Indo-Pacific. The innovative combinations of new technology, capability, and CONOPS in Joint Exercises will enable integration, warfighting assessment, and rapid capability development. PMTEC is the joint synchronizer and integrator by bringing together OSD, Service RDT&E, other government agencies, industry, and academia with Combatant Commands, Service Components, warfighting units, and A&Ps to expedite experimentations of R&D projects/prototypes and to facilitate more rapid modernization and interoperability.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> INDOPACOM Initiative	12.811	14.746	15.345	0.000	15.345
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> China Strategic Initiative (CSI): RDTEN funding supports critical classified research that directly advances the core mission and functionality of INDOPACOM's China Strategic Initiative (CSI - a DoD program of record). CSI informs senior U.S. Gov't / DoD policymakers with long-term & strategic insights into the People's Republic of China (PRC) actions/ policies across the spectrum, including domestic/foreign policymaking, political thinking, military policies, economic policies, and many other areas. Part of CSI consists of a series of integrated analytical working groups comprised of experts from the U.S. Gov't (policy, planning, and intelligence), Federally Funded Research and Development Corporations (FFRDCs), academia, and private industry. All PACOM CSI efforts are overseen by a 25-member PACOM Review Board (PRB) to ensure all CSI programs are integrated and not redundant. All program efforts are done under direction of OSD and the China Strategic Roundtable, supporting Great-power					



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt	Project (Number/Name) 3363 / PACOM Initiative				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
competition with China, DoD's top priority for defense planning. CSI program is DoD/PACOM's first Rebalance to Asia initiative issue nomination priority.							
FY 2023 Plans: - CSI requires continued/sustained support for expanded studies & analysis of operational/intelligence planning against regional adversaries; deepen understanding of PRC crisis management and strategic decision-making; and core analysis and expertise for strategic and operational level emulation efforts across the entire DIMEFIL. The CSI program office and its Community of Interest (COI) comprise a broad range of subject matter expertise which includes supporting Modeling & Simulation services to assist CSI in researching, developing, testing, and demonstrating a theater-level campaign model based on a range of inputs. Developing a modeling plan which details the method to research, develop, test, and demonstrate a theater level campaign model. Developing a campaign model which details a method of scenario creation that supports a broad range of strategic and operational planning efforts, including C4ISR planning and collection at the national and operational levels. Providing gap analysis to identify shortfalls in the baseline model and suggest alternatives for resolution. The outputs and lessons learned from campaign-level modeling and scenarios will be used to inform CSI COI partners including DoD, the Joint Staff, the COCOMs, the Intelligence Community (IC), and the Interagency to enable key stakeholder decision-making processes across a broad range of topics that include strategic and operational planning, national defense systems acquisition research & development, intelligence collection tasking and target prioritization, strategic messaging, and other critical areas of interest. - Contract three additional emulation events to better understand Chinese decision-making processes.							
FY 2024 Base Plans: - CSI requires continued/sustained support for expanded studies & analysis of operational/intelligence planning against regional adversaries; deepen understanding of PRC crisis management and strategic decision-making; and core analysis and expertise for strategic and operational level emulation efforts across the entire DIMEFIL. The CSI program office and its Community of Interest (COI) comprise a broad range of subject matter expertise which includes supporting Modeling & Simulation services to assist CSI in researching, developing, testing, and demonstrating a theater-level campaign model based on a range of inputs. Developing a modeling plan which details the method to research, develop, test, and demonstrate a theater level campaign model. Developing a campaign model which details a method of scenario creation that supports a broad range of strategic and operational planning efforts, including C4ISR planning and collection at the national and operational levels. Providing gap analysis to identify shortfalls in the baseline model and suggest alternatives for resolution. The outputs and lessons learned from campaign-level modeling and scenarios will be used to inform CSI COI							

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3363 / PACOM Initiative		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
partners including DoD, the Joint Staff, the COCOMs, the Intelligence Community (IC), and the Interagency to enable key stakeholder decision-making processes across a broad range of topics that include strategic and operational planning, national defense systems acquisition research & development, intelligence collection tasking and target prioritization, strategic messaging, and other critical areas of interest. - Improve the China Strategic Initiative's capability to continuously assess how PRC will anticipate, perceive, and react to U.S. action in the INDOPACIFIC. USINDOPACOM China Strategic Focus Group would use the additional funding for eight additional contracted research studies to raise DoD warfighters, planners, and policy makers' awareness on PRC grand strategy, warfighting concepts, and indications/warning.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding increase from FY2023 to FY2024 supports improvement of the China Strategic Initiative's capability to continuously assess how PRC will anticipate, perceive, and react to U.S. action in the INDOPACIFIC. USINDOPACOM China Strategic Focus Group will fund up to eight additional contracted research studies to raise DoD warfighters, planners, and policy makers' knowledge on PRC grand strategy, warfighting concepts, and indications/warning.						
<b>Title:</b> Pacific Multi-Domain Training and Experimentation Capability (PMTEC)  <b>Articles:</b>  <b>Description:</b> Pacific Multi-Domain Training and Experimentation Capability (PMTEC):  PMTEC is foundational to meeting Commander, USINDOPACOM's high-end warfighting capability, theater force posture, and Ally & Partner (A&P) objectives through the execution of joint experimentation in the Indo-Pacific. The innovative combinations of new technology, capability, and CONOPS in Joint Exercises will enable integration, warfighting assessment, and rapid capability development. PMTEC is the joint synchronizer and integrator by bringing together OSD, Service RDT&E, other government agencies, industry, and academia with Combatant Commands, Service Components, warfighting units, and A&Ps to expedite experimentations of R&D projects/prototypes and to facilitate more rapid modernization and interoperability.  PMTEC Support provide mission integration of Service capabilities into joint warfighting capabilities and concepts. This is accomplished through theater scale joint field experimentation focused on high-end warfighting, emphasizing a combination of Service exercises, Joint exercises, and stand-alone warfighting		0.000 -	15.174 -	20.116 -	0.000 -	20.116 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt		Project (Number/Name) 3363 / PACOM Initiative		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
experiments. Theater scale joint experimentation will require the design and engineering of integrated Services' capabilities and the associated networking and peering of Services' live, virtual and constructive test and training range facilities. This will be extensible to allies and partners to create the required common joint environment.						
FY 2023 Plans: - Design, engineer and execute two joint experimentation venues that demonstrates an initial INDO-Pacific theater joint fires architecture and concept incorporating new Service capabilities supporting long range fires. This will be demonstrated under Large Scale Global Exercise (LSGE) 2023, under which the two experimentation venues being exercises BALIKATAN 23 (Western Pacific) and NORTHERN EDGE 23 (Alaska, Hawaii and Western Pacific). - Network and peer Guam, Alaska and Hawaii range complexes for LSGE 2023 to support increased fidelity for incorporating live representative threats and increased availability of forces to demonstrate at large scale the theater joint fires architecture and concept.						
FY 2024 Base Plans: - Design, engineer and execute three joint experimentation venues that matures the FY2023 INDO-Pacific theater joint fires architecture. This will be demonstrated during VALIANT SHIELD 2024 that will be a large scale joint exercise that will span from the Western Pacific to CONUS, a Western Pacific partner nation exercise, and a high end distributed CONUS complex experiment for advanced capabilities. - Incorporate expanded networking and peering of additional CONUS and mid-Pacific ranges to add space, other advanced capabilities such as hypersonics, and combined/ joint/live/virtual/constructive (CJLVC), and high end range instrumentation that provides feedback measurement and analysis to support design of experiments for employment of new warfighting concepts, training, and joint theater battle management.						
FY 2024 OCO Plans: N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increases from FY2023 to FY2024 due to the initial start of an FY24 investment providing an advanced Joint Simulation and Technology Command and Control capability that links sites within the AOR to deliver Joint/ Live/Virtual/Constructive (JLVC) enablers to execute multiple event requirements simultaneously.						
Accomplishments/Planned Programs Subtotals		12.811	29.920	35.461	0.000	35.461

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt	Project (Number/Name) 3363 / PACOM Initiative
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & In tl Supt				Project (Number/Name) 9999 / Congressional Add			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
9999: Congressional Add	0.000	14.538	5.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	19.538
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Naval Postgraduate School (NPS) is tasked to establish a consortium for additive manufacturing research and education that will accelerate widespread adoption of additive manufacturing across the Department of Defense. The Consortium will drive the adoption of 3D rapid prototyping method in support of the Tri-Service Maritime Strategy. NPS will serve as a focal point for advancing technology capabilities and education of Naval and Coast Guard forces in support of advancing the adoption of Additive Manufacturing (AM) in support of national naval security. NPS will lead a multi-year, interdisciplinary, umbrella research and education initiative with consortium partners, including USN (NAVSEA, NAVFAC, NAVAIR, NAVWAR), USMC, USA, USAF, USCG commands, Warfighting Labs and active-duty units, as well as Academia, Industry, and Government Laboratory partners. The goals of the effort include conducting a continuous study of user needs; coordinating a diverse portfolio of interdisciplinary research projects that advance basic and applied research domains in concert with education and training; addressing both technical issues and human/personnel issues, i.e., support a full human-technology integration; testing and validation of metal-based AM technologies aboard deployed platforms; and whenever possible, look for sustainability of the efforts, i.e., make sure the foundation is set for long(er)-term self-sustainability.

**B. Accomplishments/Planned Programs (\$ in Millions)**

	FY 2022	FY 2023
<b>Congressional Add:</b> Proj C783: Consortium for Additive Manufacturing Research and Development	14.538	5.000
<b>FY 2022 Accomplishments:</b> - Organized two workshops to identify the elements of CAMRE Framework, and major research areas that CAMRE members will be engaged on - Engaged with DASN/RDT&E AM Lead for alignment with NR&DE activities - Coordinated digital twin testing of Xerox ElemX liquid metal 3D printing systems with SURFPAC - Engaged with Defense Innovation Unit for utilization of their OTA for establishing contracts - Established SOW with NSWC-Corona for Program Management functions - Designed approaches for study of user needs and initiated discussions with Naval commands (NAVSEA, Marine Corps Systems Command, NSWC-Corona) - Evaluated a range of low cost commercial off the shelf 3D scanners in support of 3D data acquisition and rapid prototyping. - Initiated research on a stand-alone AM-themed platform that supports adopters' training, collaboration, and storage of 3D models. Connected with NETC and discussed the integration of the effort with USNs Ready Relevant Learning (RRL) initiative. - Examined the use of a single-user and multiuser AR systems to support training and maintenance of 3D printers.		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy		<b>Date:</b> March 2023
<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605853N / <i>Management, Technical &amp; Intl Supt</i>	<b>Project (Number/Name)</b> 9999 / <i>Congressional Add</i>

  

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>
<ul style="list-style-type: none"> <li>- Established collaboration with SWRMC Additive Manufacturing Lab, San Diego Naval Base</li> <li><b><i>FY 2023 Plans:</i></b> - Organized stakeholder and executive steering committee workshops to identify the elements of CAMRE Framework, and major research areas that CAMRE members will be engaged on</li> <li>- Engaged with DASN/RDT&amp;E AM Lead for alignment with NR&amp;DE activities</li> <li>- Engage with SIB and SSBN tied to large scale metal AM efforts (WAAM, DED, FSAM, Cold Spray)</li> <li>- Engage with NAVAIR tied to F357 Materials R&amp;D</li> <li>- Engage with NAVSEA tied to At Sea data collection using Hybrid Metal AM</li> <li>- Engage with NAVSEA, USMC, and US Army tied to "Ashore" materials study of Hybrid Metal AM</li> <li>- Engage with ORNL ISO SIB and SSBN tied to large scale metal AM efforts</li> <li>- Engage with NAVAIR, AC FFRDC and USAF/USSF on 10Ni Materials R&amp;D and Hypersoncis</li> <li>- Engage with USMC, US Navy and UK MoD on Model Based Definitions of 2D/3D TDPs</li> <li>- Engaged USCG on all USMC &amp; US Navy related efforts.</li> <li>- Coordinated digital twin testing of Xerox ElemX liquid metal 3D printing systems with SURFPAC</li> <li>- Engaged with Defense Innovation Unit for utilization of their OTA for establishing contracts</li> <li>- Established SOW with WFC for Research</li> <li>- Designed approaches for study of user needs and initiated discussions with Naval commands (NAVSEA, Marine Corps Systems Command, NSWC-Corona)</li> <li>- Evaluated a range of low cost commercial off the shelf 3D scanners in support of 3D data acquisition and rapid prototyping.</li> <li>- Initiated research on a stand-alone AM-themed platform that supports adopters training, collaboration, and storage of 3D models. Connected with NETC and discussed the integration of the effort with USNs Ready Relevant Learning (RRL) initiative.</li> <li>- Examined the use of a single-user and multiuser AR systems to support training and maintenance of 3D printers.</li> <li>- Established collaboration with SWRMC Additive Manufacturing Lab, San Diego Naval Base</li> <li>- Engaged with Defense Innovation Unit for utilization of their OTA for establishing contracts</li> <li>- Established SOW with WFC for Research</li> </ul>	<b>Congressional Adds Subtotals</b>	14.538  5.000

  

<b>C. Other Program Funding Summary (\$ in Millions)</b>
N/A
<b>Remarks</b>

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605853N / Management, Technical & Intl Supt	Project (Number/Name) 9999 / Congressional Add
D. Acquisition Strategy N/A		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy Date: March 2023

Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605856N / Strategic Technical Support							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	3.402	3.787	4.053	-	4.053	4.792	4.565	4.412	4.500	Continuing	Continuing
0128: Mgmt/Tech Supt Strategic	0.000	1.452	1.604	1.640	-	1.640	1.669	1.700	1.727	1.762	Continuing	Continuing
1038: Acoustic & Non-Acoustic Analysis Supt	0.000	1.950	2.183	2.413	-	2.413	3.123	2.865	2.685	2.738	Continuing	Continuing

## A. Mission Description and Budget Item Justification

This program element supports technical studies and analyses as directed by the Director for Submarine Warfare to support major policy and procurement decisions. This program is divided into two elements to support decision making in the areas of submarine and antisubmarine warfare and undersea surveillance.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	3.538	3.787	4.607	-	4.607
Current President's Budget	3.402	3.787	4.053	-	4.053
Total Adjustments	-0.136	0.000	-0.554	-	-0.554
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.136	0.000			
• Program Adjustments	0.000	0.000	-0.572	-	-0.572
• Rate/Misc Adjustments	0.000	0.000	0.018	-	0.018

## Change Summary Explanation

Internal realignment between PU 0128 and PU 1038 in FY21-FY25 that supports additional efforts directed towards Tactical Submarine Evolution Plan (TSEP) requirements development for VIRGINIA Class Block VI/VII and follow-on attack submarines (SSNs), TSEP Analysis of Alternatives and Subsea and Seabed Warfare and Undersea Constellation plan development and supporting studies.

Technical: N/A

Schedule: N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605856N / Strategic Technical Support				Project (Number/Name) 0128 / Mgmt/Tech Supt Strategic			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0128: Mgmt/Tech Supt Strategic	0.000	1.452	1.604	1.640	-	1.640	1.669	1.700	1.727	1.762	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The project provides analytical support to the Director, Undersea Warfare Division as a basis for major policy, planning, and acquisition program decisions. It supports the development of the Submarine Force strategic vision to guide research and development investment strategy and future planning. Additionally, this line supports studies in the area of submarine and undersea surveillance missions, force structure, payloads and sensors, and force employment.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> MANAGEMENT AND TECHNICAL SUPPORT, STRATEGIC	1.452	1.604	1.640	0.000	1.640
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Continue to conduct analysis to identify and weigh options for addressing problems/challenges and assessing the impact across the strategic and conventional military spectrum with use of modeling and simulation, including projects such as Tactical Submarine Evolution Plan, Unmanned Undersea Vehicle (UUV) inventory and capabilities modeling, and Subsea and Seabed Warfare. - Continue to anticipate emerging and future undersea warfare challenges, and lead effective assessment efforts to proactively address those challenges. - Perform additional analysis and support for development and implementation of the Undersea Constellation warfare area strategy.					
<b>FY 2024 Base Plans:</b> - Continue to conduct analysis to identify and weigh options for addressing problems/challenges and assessing the impact across the strategic and conventional military spectrum with use of modeling and simulation, including projects such as Tactical Submarine Evolution Plan, SSN(X), Unmanned Undersea Vehicle (UUV) inventory and capabilities modeling, and Subsea and Seabed Warfare. - Continue to anticipate emerging and future USW challenges, and lead effective assessment efforts to proactively address those challenges. - Perform additional analysis and support for development and implementation of the Undersea Constellation warfare area strategy.					
<b>FY 2024 OCO Plans:</b>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605856N / <i>Strategic Technical Support</i>		<b>Project (Number/Name)</b> 0128 / <i>Mgmt/Tech Supt Strategic</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>
N/A					
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Program increase of \$0.036 from FY2023 to FY2024 is required for increased analysis and technical support to develop Undersea Constellation requirements.					
<b>Accomplishments/Planned Programs Subtotals</b>		1.452	1.604	1.640	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>					
N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b>					
N/A					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605856N / Strategic Technical Support				Project (Number/Name) 1038 / Acoustic & Non-Acoustic Analysis Supt			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
1038: Acoustic & Non-Acoustic Analysis Supt	0.000	1.950	2.183	2.413	-	2.413	3.123	2.865	2.685	2.738	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides analytical support to the Director, Undersea Warfare as a basis for major policy, planning, and acquisition program decisions. It supports studies in the area of undersea surveillance missions, sensor system communications, and acoustic performance prediction systems, environmental and medical effects of acoustic systems, operational security, and future threat analysis. Supports synthetic mission lay down simulations for Integrated Undersea Surveillance System (IUSS) strategic planning and resource allocation. Supports continued development and documentation of architecture for future undersea surveillance capabilities and systems. Supports studies to determine long-term impact of IUSS active sensors on marine animals and development of Surveillance Towed Array Sensor System (SURTASS) Low Frequency Active (LFA), and Compact LFA (CLFA).

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> ACOUSTIC AND NON-ACOUSTIC ANALYSIS SUPPORT	1.950	2.183	2.413	0.000	2.413
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> - To continue data set identification and production as the sole source for real-world data to enable advanced development initiatives which span Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), Integrated Warfare Systems (IWS), Naval Information Warfare Center (NIWC), Naval Research Laboratory (NRL), and others to bring critically needed new capabilities and capability improvements to the IUSS community. - To provide support for requirements development for the Integrated Undersea Surveillance Systems family of systems provided by fixed, mobile, deployable sensors, integrated common processor, and the advanced surveillance builds. - To continue to provide analysis and support for development and implementation of the Undersea Constellation warfare area strategy.					
<b>FY 2024 Base Plans:</b> -To continue comprehensive case analyses to establish a basis for understanding what impact, both positive and negative, our legacy tactical sonar systems and new ASB capability deliveries have on fleet operations. Continue to contribute to OWR.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605856N / <i>Strategic Technical Support</i>		<b>Project (Number/Name)</b> 1038 / <i>Acoustic &amp; Non-Acoustic Analysis Supt</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>- To continue data set identification and production as the sole source for real-world data to enable advanced development initiatives which span Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), Integrated Warfare Systems (IWS), Space &amp; Naval Warfare Systems Command (SPAWAR), Naval Research Laboratory (NRL), and others to bring critically needed new capabilities and capability improvements to the IUSS community.</p> <p>- To provide support for requirements development for the Integrated Undersea Surveillance Systems family of systems provided by fixed, mobile, deployable sensors, integrated common processor, and the advanced surveillance builds.</p> <p>- To provide support on IUSS systems in the gate and JCIDS process, including IUSS Deployable family of systems.</p> <p>- To provide analyses in support of IUSS Future Plan and Maritime Surveillance Evolution Plan.</p> <p>- To provide analysis and support for development and implementation of the Undersea Constellation warfare area strategy.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Program increase is in support of advancing Undersea Constellation from concepts and technology surveys for a warfare area strategy with analyses supporting the development of formal requirements and JCIDS documents.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		1.950	2.183	2.413	0.000	2.413
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> N/A						

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605863N / <i>RDT&amp;E Ship &amp; Aircraft Support</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	135.097	173.352	203.447	-	203.447	154.849	149.601	166.710	153.567	Continuing	Continuing
0568: <i>RDT&amp;E Acft Flt Hours</i>	0.000	39.611	39.471	42.580	-	42.580	42.599	43.495	44.374	44.855	Continuing	Continuing
0569: <i>RDT&amp;E Acft Supt</i>	0.000	53.695	50.391	51.214	-	51.214	52.421	53.426	54.440	55.528	Continuing	Continuing
2924: <i>SDTS</i>	0.000	14.696	21.306	52.003	-	52.003	15.436	15.655	15.910	16.228	Continuing	Continuing
3206: <i>T&amp;E Enterprise</i>	0.000	14.517	44.949	42.420	-	42.420	23.657	16.820	32.487	17.067	Continuing	Continuing
3238: <i>Threat Engineering</i>	0.000	12.578	17.235	15.230	-	15.230	20.736	20.205	19.499	19.889	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This continuing program provides support for the Self Defense Test Ship and developmental test squadron aircraft required to support Research, Development, Test and Evaluation (RDT&E) of new systems. The RDT&E ship and aircraft inventory is required to adequately test modifications and improvements to fielded weapon systems and sensors and new weapon systems and sensors and evaluate modifications to address new threat capabilities to increase the warfighting capability of the fleet. The program provides integrated logistics support for aircraft at selected field activities, provides depot-level maintenance of aircraft, engines and components for the Navy's inventory of RDT&E aircraft; and provides support for DON aircraft in the custody of contractors in support of RDT&E. The Self Defense Test Ship is a remotely operated platform that supports the test and evaluation of surface ship sensors, combat systems and weapons within the close-in self defense zone. Cost covered under this element include test execution for the Air Warfare Ship Self-Defense Enterprise, aircrew training and proficiency, fuel, supplies, equipment, repair and Aviation Depot Level Repairables, as well as organizational, intermediate and depot maintenance of aircraft in the Navy RDTE inventory and the Self Defense Test Ship. Threat engineering provides test and evaluation (T&E) modeling and simulation (M&S) products and informs targets, simulators, and stimulator designs and development. This project satisfies Surface Navy advanced missile system threat characterization and verification, validation, & accreditation (VV&A) requirements for testing

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		PE 0605863N / RDT&E Ship & Aircraft Support			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	135.149	173.352	194.455	-	194.455
Current President's Budget	135.097	173.352	203.447	-	203.447
Total Adjustments	-0.052	0.000	8.992	-	8.992
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.150	0.000			
• SBIR/STTR Transfer	-1.202	0.000			
• Program Adjustments	0.000	0.000	4.986	-	4.986
• Rate/Misc Adjustments	0.000	0.000	4.006	-	4.006
<b>Change Summary Explanation</b>					
The net programmatic increase of \$8.992 million supports work associated with growth of material and preservation conditions of hull, mechanical and electrical equipment during the SDTS FY24 Selected Restricted Availability as well as Enterprise Testbed (ETB) dual-band radar (DBR) model development and modeling and simulation (M&S) combat system validation tests for CVN 78 configuration; and increased funding to address rising fuel costs associated with RDTE Aircraft Test Pilot Flight Hours.					



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 0568 / RDT&E Acft Flt Hours			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0568: RDT&E Acft Flt Hours	0.000	39.611	39.471	42.580	-	42.580	42.599	43.495	44.374	44.855	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Research, Development, Test and Evaluation (RDT&E) Aircraft Flight Hours. This non-acquisition project supports direct flight hour costs and a portion of the costs of Aviation Depot Level Repairables (AVDLR) associated with NAVAIR test pilot proficiency flights, including organizational and intermediate maintenance, associated consumables, including petroleum, oil, lubricants and spare and replacement parts for components that fail. Annual test pilot flight hours, as delineated in OPNAVINST 3710.7 are satisfied through a combination of program funded test flights, which vary year to year based on program schedules; and flights funded through this project unit to ensure a baseline level of pilot readiness. These flight hours ensure test pilots remain proficient in assigned type / model / series aircraft in which they are qualified (approximately 3 hours per month) during lulls in program test schedules to ensure proficient test pilots are available to safely support aviation program testing. Readiness hours are designed to provide aircrew with a minimum of 11 flight hours per month, for a total of 133 hours annually. Flight hours support post maintenance acceptance test flights, aircrew training and test pilot proficiency when test program demand is low, in direct support of Research and Development Programs at Naval Air Systems Command, and Office of Naval Research flight activities.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward maintaining test pilot readiness in direct support of general research, development, test and evaluation.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> RDT&E Acft Flt Hours	39.611	39.471	18.644	0.000	18.644
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Provide support for direct flight hour costs, a portion of the costs of Aviation Depot Level Repairables (AVDLR) associated with NAVAIR test pilot proficiency flights, including organizational and intermediate-level maintenance, supply and petroleum, oil, lubricants and spare and replacement parts for components that fail in support of test pilot proficiency flights. Fund readiness to 60% of the requirement based on assessment of FY23 program workload to ensure test pilots remain proficient and to meet OPNAVINST 3710.7 requirements, to ensure flight safety and to reduce the risk of aviation mishaps.					
<b>FY 2024 Base Plans:</b> Provide support for direct flight hour costs, a portion of the costs of Aviation Depot Level Repairables (AVDLR) associated with NAVAIR test pilot proficiency flights, including organizational and intermediate-level maintenance, supply and petroleum, oil, lubricants and spare and replacement parts for components that fail					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605863N / RDT&E Ship & Aircraft Support		<b>Project (Number/Name)</b> 0568 / RDT&E Acft Flt Hours		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>in support of test pilot proficiency flights. Fund readiness to 60% of the requirement based on assessment of FY24 program workload to ensure test pilots remain proficient and to meet OPNAVINST 3710.7 requirements, to ensure flight safety and to reduce the risk of aviation mishaps.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease of \$0.897M is due to forecasted pilot loading. Decrease of \$19.930 is due to adding a new accomplishment/planned program to document the fuel requirement for RDTE Aircraft Flight Hours.</p>						
<p><b>Title:</b> Fuel</p> <p style="text-align: right;"><b>Articles:</b></p> <p><b>FY 2023 Plans:</b> N/A</p> <p><b>FY 2024 Base Plans:</b> Provide fuel in support for direct flight hour costs</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase of \$23.936 is for fuel and is based on assessment of FY24 program workload to ensure test pilots remain sufficiently proficient and ensure sufficient resourcing as a result of the increase in fuel costs.</p>		0.000 -	0.000 -	23.936 -	0.000 -	23.936 -
<b>Accomplishments/Planned Programs Subtotals</b>		39.611	39.471	42.580	0.000	42.580
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b>						
Not Applicable						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 0569 / RDT&E Acft Supt			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0569: RDT&E Acft Supt	0.000	53.695	50.391	51.214	-	51.214	52.421	53.426	54.440	55.528	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Research, Development, Test and Evaluation (RDT&E) Aircraft Support. This continuing project funds costs associated with the preventive and corrective maintenance of fixed and rotary wing aircraft which directly support test and evaluation of aircraft and associated weapon systems and sensors. Testing aboard dedicated RDT&E aircraft reduces the number of fleet units required to support test and evaluation of aviation programs. This project unit funds airframe Standard Depot Level Maintenance (SDLM), the Integrated Maintenance Concept and Planned Depot Maintenance, major in-service repairs, emergent repairs and aircraft engine periodic maintenance and overhauls and aircraft material condition and field inspections. Also included in this project unit, are the costs of Aviation Depot Level Repairables (AVDLR), which are spare and replacement parts for components that fail during the conduct of readiness flight operations, aircrew training and proficiency flight hours, and must be replaced to support follow-on flight operations. This project unit also funds Aircraft Structure Periodic Assessments (ASPA), Individual Material Readiness List (IMRL) tools and support equipment, Aviation Climate Assessment Survey System (ACASS) and other projects and peripheral equipment associated with the maintenance of flight readiness for RDT&E aircraft.												
JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing equipment required for general research, development, test and evaluation.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Aircraft/Engine Maintenance and AVDLR/IMRL Support  Articles:  FY 2023 Plans: Provide support of RDT&E Aircraft planned depot maintenance events while funding annual operating and sustainment costs associated with Aviation Depot Level Repairables (AVDLR) and Individual Material Readiness List (IMRL) items associated with test pilot proficiency flights, engine repairs and overhauls, and emergent repairs to RDT&E aircraft. The 2023 base plan supports operations and implementation of Naval Air Enterprise Naval Sustainment Systems in support of fleet aircraft readiness efforts. Major Depot events include one KC-130T, one P-8A, efforts to support an additional Planned Depot Maintenance activity for one E-2D aircraft, and Depot events for seven F-18 variant aircraft, one TH-57C, and three MH-60 helicopters.  FY 2024 Base Plans: Provide support of RDT&E Aircraft planned depot maintenance events while funding annual operating and sustainment costs associated with Aviation Depot Level Repairables (AVDLR) and Individual Material Readiness								53.095	49.791	50.614	0.000	50.614
								-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support		Project (Number/Name) 0569 / RDT&E Acft Supt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
List (IMRL) items associated with test pilot proficiency flights, engine repairs and overhauls, and emergent repairs to RDT&E aircraft. The 2024 base plan supports operations and implementation of Naval Air Enterprise Naval Sustainment Systems in support of fleet aircraft readiness efforts. Major Depot events include one KC-130T, one P-8A, efforts to support an additional Planned Depot Maintenance activity for one P-3D aircraft, and Depot events for nine F-18 variant aircraft, one C-38A and three MH-60 helicopters.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Budget increase of \$0.823M from FY 2023 to FY 2024 is in direct support of increases in depot and overhaul costs necessary to sustain aircraft assigned to developmental test squadrons. Additional funding was also provided to address increases in the costs associated with aviation depot level repairable parts associated with readiness flights, and cost growth associated with Planned Depot Maintenance events of existing RDT&E inventory of aircraft and engines, to include funding of following major depot events: 1 KC-130T; 1 P-8A; 1 P-3D; 9 FA-18s; 1 C-38A; and 3 H-60s.						
Title: In-Service Repairs  <b>Articles:</b>  <b>FY 2023 Plans:</b> Provide planned In-Service Repair funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.  <b>FY 2024 Base Plans:</b> Provide planned In-Service Repair funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.  <b>FY 2024 OCO Plans:</b> N/A		0.600 -	0.600 -	0.600 -	0.000 -	0.600 -
Accomplishments/Planned Programs Subtotals		53.695	50.391	51.214	0.000	51.214
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support	Project (Number/Name) 0569 / RDT&E Acft Supt
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 2924 / SDTS			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2924: SDTS	0.000	14.696	21.306	52.003	-	52.003	15.436	15.655	15.910	16.228	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides for the preventive and corrective maintenance of mission critical Hull Mechanical and Electrical (HM&E) and remote control system maintenance aboard the Self-Defense Test Ship (SDTS) in support of the Navy RDT&E of ship self-defense systems. Testing aboard this ship provides the capability to safely test self-defense weapon systems within their minimum range and reduces the number of fleet units required to support RDT&E efforts.												
Funds are used to purchase consumable supplies and repair parts, conduct routine preventive and emergent corrective maintenance and engineering support services.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: SDTS  Articles:								14.696	21.306	52.003	0.000	52.003
								-	-	-	-	-
FY 2023 Plans: NSWC PHD continues to conduct management, operation, maintenance and repair/upgrade of critical ship HM&E systems to ensure safe operation of the Self Defense Test Ship (SDTS). Maintain, operate, configure and upgrade the Test Ship Remote Control System (TSCRS) and associated infrastructure in support of T&E requirements onboard the SDTS to support the Air Warfare Ship Self Defense Enterprise test requirements as well as surface ship combat system developmental test programs. Continue to work outstanding maintenance and repair efforts and complete necessary repairs to clear any outstanding Departures from Specification (DFS).												
Support planning and procurement of long lead items and upgrade of the Test Ship Remote Control System for the SDTS Selected Restricted Availability (SRA) in FY24. Without depot level maintenance, the SDTS will be unsafe for at sea operations past FY25. SRA will extend the life of the SDTS through FY29 to support execution of the CVN 79, LPD Flight II and LHA 8 test programs. SRA will afford repair/replacement of critical HM&E Systems such as safety systems, electrical systems, main engine, fuel oil storage and service systems, firemain and seawater support systems.												
FY 2024 Base Plans: Commence and complete a 7 month Selected Restricted Availability (SRA) depot level maintenance on the Self Defense Test Ship (SDTS). Specific activities include contract award and execution of SRA. Scope of the SRA includes repair/replacement/preservation of critical Hull, Mechanical and Electrical (HM&E) systems such as												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605863N / RDT&E Ship & Aircraft Support		<b>Project (Number/Name)</b> 2924 / SDTS		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>safety systems, electrical systems, main engine and electrical generation, fuel oil storage and service systems, firemain and seawater support systems and various tank inspections, necessary to clear outstanding Departures from Specification. Funding pays for shipyard labor and materials, not procured in FY23, to accomplish all elements of the work package and address as found material and preservation conditions as systems are opened for inspection and repair. Completion of the SRA in FY24 will extend the life of the SDTS through FY29 to support execution of the CVN 79, LPD Flight II and LHA 8 test programs.</p> <p>NSWC PHD will continue to conduct management, operation, and organizational level maintenance and repair/upgrade of critical ship HM&amp;E systems to ensure safe operation of the Self Defense Test Ship (SDTS).</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase of \$30.697M from FY 2023 to FY 2024 supports contract award and execution of Selected Restricted Availability (SRA) for the Self Defense Test Ship EDD 964 in FY 2024. Scope of SRA includes critical repair/replacement/preservation of Hull, Mechanical and Electrical equipment necessary to ensure the continued safe operation of the Self Defense Test Ship and extend the life of the ex Paul F Foster through FY29.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		14.696	21.306	52.003	0.000	52.003
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> This line of accounting is for recurring HM&E and ship maintenance.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 3206 / T&E Enterprise			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3206: T&E Enterprise	0.000	14.517	44.949	42.420	-	42.420	23.657	16.820	32.487	17.067	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Currently finishing Air Warfare Ship Self Defense (AW SSD) testing on legacy SSDS Baseline 10 class ship, CVN 78 (TEMP 1714), and starting testing on follow on SSDS Baseline 12 ship classes, CVN 79, LHA 8, and LPD Flt II (TEMP 1910). This approach merges common ship, element, and system requirements into common infrastructure for combined Developmental and Operational Testing (DT/OT) of the Surface Navy antiship cruise missile (ASCM) defense requirement, expressed as a Probability of Raid Annihilation (PRA). Enterprise Testing characterizes system performance with live fire events and through Modeling & Simulation (M&S) assessments informed by live-fire demonstrations.

Enterprise Cost elements:

a) Enterprise Testing and Planning. SDTS and Lead Ship tracking and firing exercises are conducted against single- and dual-, subsonic and supersonic ASCM threat surrogates. Includes the contractor and government costs to administer the Enterprise, collect and distribute data from live events, maintain Cybersecurity certifications, and financial management.

b) Self-Defense Test Ship (SDTS) Combat Systems. Includes procurement, installation, check-out, stage testing, routine preventive maintenance, and repairs of major combat system elements.

c) Enterprise Testbed (ETB). Includes all M&S costs required to create OT-quality digital representations of shipboard combat system performance including infrastructure, distributed secure network, and common environmental services for DT/OT. SDTS testing requirements outlined in AW SSD Enterprise TEMP 1714 and lead/operational ship testing requirements for Evolved Sea Sparrow Missile (ESSM) TEMP 1471, Rolling Airframe Missile (RAM) Blk 2 TEMP 286-2, DDG 1000 TEMP 1560, CVN 78 TEMP 1610, Cooperative Engagement Capability (CEC) TEMP 1415, SSDS TEMP 1400, LHA 6 TEMP 1697, AN/SPQ-9B TEMP 1463, Surface Electronic Warfare Improvement Program (SEWIP) TEMP 1658 (Block 1A), and LCS TEMP 1695.

The Testing & Evaluation Enterprise merges common ship, element, and system requirements into the fewest number of test events while leveraging planned Combat System Ship Qualification Trials (CSSQT) to accomplish Developmental Testing (DT) and Operational Testing (OT) requirements. All tests on the SDTS require the sharing of infrastructure, missile range allocations, execution time, and underway time to eliminate duplicative testing. T&E Enterprise provides end-to-end mission Operational Testing in a realistic operational environment, capitalizing on Probability of Raid Annihilation Modeling and Simulation (M&S) data validated with results of Operational and Live Fire Testing, and ensuring a consistent approach across ship classes. Applicability of all test events is beneficial across multiple ship classes with the same variation under test.



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support		Project (Number/Name) 3206 / T&E Enterprise		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: T&E Enterprise		14.517	44.949	42.420	0.000	42.420
Articles:		-	-	-	-	-
FY 2023 Plans:						
Final at sea Operational Test on CVN 78 (ET 10) has shifted to 3rd quarter FY24; the focus of FY23 funding is procurement of combat system and weapon elements required for AW SSD testing for CVN 79, LHA 8, and LPD Flight II scheduled to start FY 25.						
1) Enterprise Testing and Planning:						
a)Planning and scenario certification for final at sea Operational Test on CVN 78 (ET 10). Test will provide the live data necessary to validate model for Dual Band Radar supporting the ETB runs for record. Without the completion of ET 10, the model will not be completed.						
b)Continue test planning efforts in support of TEMP 1910 Enterprise TEMP in support of Ship Self Defense System (SSDS) Baseline 12 Platforms. Efforts include assisting stakeholders in developing test planning documentation and resourcing requirements.						
c)Provide overall technical management and financial execution support for the T&E Enterprise. Provide aircraft services coordination, technical documentation support, and meeting coordination.						
2) Self-Defense Test Ship (SDTS) Combat Systems.						
a)Develop acquisition plans and procure combat system and weapon elements required for AW SSD testing for CVN 79, LHA 8, and LPD Flight II. Procurements in FY23 align with project 2924 (SDTS) investment for FY24 Selected Restricted Availability (SRA) for the Self Defense Test Ship EDD 964.						
b)Combat system procurements include Global Positioning System (GPS)-based Positioning, Navigation, and Timing Service (GPNTS) system, Ship Self Defense System (SSDS) hardware, Cooperative Engagement Capability (CEC) Antenna, and AN/SPY-6(V) Enterprise Air Surveillance Radar (EASR) support. Assumes AN/SPY-6(V) (EASR) will be borrowed.						
c)Continue routine combat system maintenance and IA/Cybersecurity Certification and Accreditation on combat system elements and the remote control system on the SDTS. If repair parts are required to support T&E event(s), the impacted T&E User may be required to fund replacement parts.						
3) Enterprise Testbed (ETB).						
a)Initiate Phase 2 model (high fidelity) development of Dual Band Radar (DBR) for CVN 78 ETB. Phase 2 model required for CVN 78 ETB M&S OT. M&S OT efforts include Integrate DBR tactical signal processing software						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support		Project (Number/Name) 3206 / T&E Enterprise		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
into DBR simulation. Integrate DBR simulation into T&E Enterprise Testbed. Test target detection/tracking employing DBR simulation in T&E Enterprise Testbed. b)Continue ETB virtual range development, documentation of the ETB and coordination of a multi-organizational team to perform overarching enterprise systems engineering. Management, computing hardware and infrastructure to support co-located and geographically distributed Testbed baselines. c)Continue to facilitate the integration of ETB systems into the PEO IWS M&S Shared Technical Framework (STF). STF organizes common practices and shared solutions to systems-of-systems kill chain M&S. STF provides requirements traceability to draw value from every empirical data point across programs to support M&S development and validation.  <b>FY 2024 Base Plans:</b> 1) Enterprise Testing and Planning: a)Execution of Enterprise Lead Ship test (ET 10) on CVN 78. Test will provide the live data necessary to validate the model for Dual Band Radar supporting the ETB runs for record. Without the completion of ET 10, the model will not be completed. b)Provide overall technical management and financial execution support for the T&E Enterprise. Provide aircraft services coordination, technical documentation support, and meeting coordination.  2) Self-Defense Test Ship (SDTS) Combat Systems. a)Coordination and execution of installation and checkout (INCO) of combat system and weapon elements on SDTS required for AW SSD testing for CVN 79, LHA 8, and LPD Flight II. INCO includes Ship Self Defense System (SSDS), Cooperative Engagement Capability (CEC), GPNTS system, and AN/ SPY-6(V) (EASR). b)Continue routine combat systems maintenance and IA/Cybersecurity Certification and Accreditation on combat system elements and the remote control system on the SDTS. If repair parts are required to support T&E event(s), the impacted T&E User may be required to fund replacement parts.  3) Enterprise Testbed (ETB). a)Continue Phase 2 model (high fidelity) development of Dual Band Radar (DBR) for CVN 78 ETB. M&S OT efforts include installation of virtual range environmental modeling in DBR simulation. Test DBR simulation with ESSM simulation in AW engagements to verify Interrupted Continuous Wave Illumination (ICWI) functions. Begin integration testing of ESSM, RAM, and CIWS kill chains for CVN 78.						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605863N / RDT&E Ship & Aircraft Support		<b>Project (Number/Name)</b> 3206 / T&E Enterprise		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
b)Continue ETB virtual range development, documentation of the ETB, and coordination of a multi-organizational team to perform overarching enterprise systems engineering. Management, computing hardware, and infrastructure to support co-located and geographically distributed Testbed baselines. c)Continue to facilitate the integration of systems into the PEO IWS M&S Shared Technical Framework (STF) to allow the most efficient use of the Enterprise Test Bed (ETB).  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Planned cost for execution of Enterprise Lead Ship test (ET 10) on CVN 78 and SDTS Installation and Checkout in FY 24 is less than the estimated SDTS procurement costs in FY 23.						
<b>Accomplishments/Planned Programs Subtotals</b>		14.517	44.949	42.420	0.000	42.420
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b>						
N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 3238 / Threat Engineering			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3238: Threat Engineering	0.000	12.578	17.235	15.230	-	15.230	20.736	20.205	19.499	19.889	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

The Threat Engineering program assesses the current and future threat environment and works in coordination with the Office of Naval Intelligence (ONI) to develop, produce, and evolve digital threat engineering models in support of test and evaluation (T&E) requirements. NAVSEA requires comprehensive, validated threat modeling and simulation (M&S) products to dynamically and responsively interact with surface ship air defense systems and subsystems to allow for a performance evaluation in an operationally realistic environment. These threat M&S products, called Acquisition Threat Engineering Products (ATEP), must contain the details, features, and components necessary to react with the Blue air defense systems as the actual threats will with, deployed air defense systems to provide a comprehensive, high-confidence evaluation of Blue system capabilities. The successful and rigorous end-to-end evaluation of surface ship combat systems, to include the component systems, are required before capability and ship baselines can be delivered to the warfighter.

ATEPs are valid T&E assets that satisfy Director of Operational Test and Evaluation (DOT&E) and Operational Test & Evaluation Force (OPTEVFOR) requirements in both Modeling and Simulation (M&S) testbed and at-sea configurations. ATEPs satisfy OPTEVFOR's threat model requirement for fidelity commensurate with the blue-force system representations and contain intel-derived lethality/vulnerability data, physics-based six degrees-of-freedom models, reactive seekers and guidance, and other engineering data. ATEPs are necessary to evaluate mandatory ship Key Performance Parameters (KPP), including operational effectiveness and suitability. ATEPs are also used to evaluate a system's lethality and survivability, and its ability to achieve its performance requirements within operation and sustainment costs. In many cases, ATEP models are the only way in which the Navy can accurately emulate threat ASCM performance. ATEPs reduce Navy operational testing (OT) costs by enabling portions of OT to be conducted via M&S, increasing requirements coverage and avoiding the costs of targets and weapons that would ordinarily be required to conduct OT solely via live fire events.

Threat Engineering products inform investment strategies, validate the effectiveness of capabilities provided to the Fleet, and augment live-fire T&E to obtain affordable, statistical confidence in measured performance. Threat Engineering work is prioritized to avoid technical surprise, avoid point solutions, and ensure Fleet capability against specific threats (most stressing, unique, or widely deployed and exported).

Each threat system poses unique challenges to the various combat system elements and each threat system affects Blue system effectiveness in different ways, therefore each combat system configuration must undergo rigorous testing against multiple threats. T&E using M&S is essential to fill gaps and to offer realistic operational scenarios that cannot be tested via live-fire events (due to safety, numbers of targets, limitations on the characteristics of the targets, cost to develop a realistic threat, etc.). OPTEVFOR has listed a number of threat representations in ATEPs as their number one and number two priorities for the past five years because they are appropriately built to represent the salient features of the threat as an Intelligence Community-Validated and sufficient product qualified to be used in Operational T&E (OT&E).

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support	Project (Number/Name) 3238 / Threat Engineering				
<p>As each threat system is unique, the ATEP representation of each must include the features of specific threats, such as electronic countermeasures (ECM), active countermeasures, communications links, electronic counter-countermeasures (ECCM). Furthermore, the ATEP products must capture any engineering or manufacturing uncertainties as well as intelligence uncertainties so that our Blue Systems, once deployed to the Fleet, operate in the face of these threats as they were/are designed. Finally, these ATEP products must integrate with the PEO IWS testbeds to be used in Developmental and Operational T&amp;E. In short, each validated threat product must contain the features, components, and details necessary to evaluate the specific combat system or ship baseline.</p> <p>The Threat Engineering group develops specific requirements from threat foundational information (i.e., intelligence data), and systems under test. The requirements are used to guide design, development, and integration of each ATEP product. Blue Systems face severe limitations to test, and risk delayed deployment to the warfighter without required ATEP products. ATEP products need to be developed and integrated IAW Blue System needs and schedules in order to clearly evaluate performance and enable all capabilities to be delivered to the Fleet expeditiously. Additionally, until analysis is performed using the ATEP products, it is often unclear or unknown what the impacts are due to various features and techniques found to be on threat systems. The focus is to meet combat/weapon system Systems Engineering and T&amp;E requirements for in-service and new construction surface platforms to include:</p> <ul style="list-style-type: none"><li>-DDG 51 FLT III</li><li>-CVN 78</li><li>-CVN 79</li><li>-LHD 8</li><li>-LPD FLT II</li><li>-FFG 62 and others</li></ul> <p>ATEPs cost approximately \$5-30M per product, require a minimum of 18 months to build, and include all features and capabilities, unlimited number of runs, and may be used for live, virtual, constructive (LVC) testing. Notably, the advanced seeker discrimination, target selection, and salvo operations and decisions are difficult to characterize until the second or third versions of the ATEP products.</p> <p>It is important to note that the development and integration of each ATEP is a function of the threat system and its complexities, the available foundational intelligence data, and the Blue Systems requirements to include the schedules for T&amp;E; therefore, the cost to develop and integrate each ATEP is not consistent. Moreover, the threat products must be sustained; there are many reasons that ATEP products require additional development and enhancements to evolve to the next version.</p> <ul style="list-style-type: none"><li>-Our adversaries are continually developing new threats and upgrading and improving existing threat systems additionally our understanding of the threat foundation data may change and evolve.</li><li>-Our Blue Systems and their operational characteristics change (e.g., a new Radar may operate in a new RF Band, with different channels/bandwidth, and/or other signature requirements).</li><li>-Our operating T&amp;E or operational environments may change.</li></ul>							
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Threat Engineering			12.578	17.235	15.230	0.000	15.230

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support		Project (Number/Name) 3238 / Threat Engineering		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Articles:		-	-	-	-	-
<b>FY 2023 Plans:</b> Sustainment: -Continue Support and Sustainment (S&S) of 4 Threat Models that remain in continued use. Periodic refinement and update of models are required due to continued evolving threats.  Development and Integration: -Continue to provide support for the integration and use of threat products (ATEP) in various combat system testbeds for use in Developmental and Operational Testing (DT/OT). Supported ship classes include: (but not limited to) CVN 78, DDG FLT IIA/III, and preparation for SSDS Build 12 Ships (CVN 79, LPD FLT II, LHA 8). -Continue Development and Integration of 9 Threat Models to support DT and OT events. -Continue integrating new and updated threat products (ATEPs) into M&S Testbeds to support DT and OT. Supported ship classes include but are not limited to: CVN 78, DDG FLT IIA/III, and preparation for SSDS Build 12 Ships (CVN 79, LPD FLT II, LHA 8). -DDG 51 FLT III: Continue developing 5 threat products (ATEPs) and updating 2 existing threat products (ATEPs). Required completion before Q2FY23. -CVN 78: Continue developing 5 threat products (ATEPs) and updating 2 existing threat products (ATEPs). -FFG 62: Continue developing 6 threat products (ATEPs) and update 2 existing threat products (ATEPs).  T&E Support: -Provide required support for CVN 78 M&S Testbed DT. -Provide required support for AEGIS Baseline 9.2 M&S Testbed OT. -Provide required support for AEGIS Baseline 10.0 and SLQ-32 V (7) (SEWIP Blk 3) M&S Testbed DT. -Provide continued support and preparation for SSDS Build 12 Ships (CVN 79, LPD FLT II, LHA 8).						
<b>FY 2024 Base Plans:</b> Sustainment: -Continue Support and Sustainment (S&S) of 6 Threat Models that remain in continued use. Periodic refinement and update of models are required due to continued evolving threats.  Development and Integration:						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support		Project (Number/Name) 3238 / Threat Engineering		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>-Continue to provide support for the integration and use of threat products (ATEP) in various combat system testbeds for use in Developmental and Operational Testing (DT/OT). Supported ship classes include: (but not limited to) CVN 78, DDG FLT IIA/III, and preparation for SSDS Build 12 Ships (CVN 79, LPD FLT II, LHA 8).</p> <p>-Continue Development and Integration of 7 Threat Models to support DT and OT events.</p> <p>-Continue integrating new and updated threat products (ATEPs) into M&amp;S Testbeds to support DT and OT. Supported ship classes include but are not limited to: CVN 78, DDG FLT IIA/III, and preparation for SSDS Build 12 Ships (CVN 79, LPD FLT II, LHA 8).</p> <p>-CVN 78: Continue developing 4 threat products (ATEPs) and updating 3 existing threat products (ATEPs).</p> <p>-FFG 62: Continue developing 5 threat products (ATEPs) and update 3 existing threat products (ATEPs).</p> <p>T&amp;E Support:</p> <p>-Provide required support for CVN 78 M&amp;S Testbed DT.</p> <p>-Provide required support for AEGIS Baseline 10.0 and SLQ-32 V (7) (SEWIP Blk 3) M&amp;S Testbed DT.</p> <p>-Provide continued support and preparation for SSDS Build 12 Ships (CVN 79, LPD FLT II, LHA 8).</p> <p><b>FY 2024 OCO Plans:</b></p> <p>N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b></p> <p>FY23 to FY24 program decrease by \$2.005M is due to a reduced number of threat models under the Development and Integration support for DT and OT events. The program will decrease from 9 Threat Models (FY23) to 7 Threat Models (FY24) to support Developmental test (DT) and Operational test (OT) supporting CVN-89 and LPD-29 Testing.</p>						
Accomplishments/Planned Programs Subtotals		12.578	17.235	15.230	0.000	15.230
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support	Project (Number/Name) 3238 / Threat Engineering

**D. Acquisition Strategy**

This program is in direct support to an Enterprise Test & Evaluation strategy that includes live fire test events ISO Modeling & Simulation efforts for both Developmental and Operational Testing.



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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	444.883	479.281	481.975	-	481.975	461.753	438.219	446.425	455.307	Continuing	Continuing
0541: AUTECH	0.000	60.360	62.609	62.908	-	62.908	63.510	65.245	66.553	67.832	Continuing	Continuing
0566: NAVAIR Environmental Compliance	0.000	4.960	4.773	5.094	-	5.094	5.697	5.473	5.409	5.516	Continuing	Continuing
0653: NAWC Weapons Division	0.000	147.935	151.906	155.661	-	155.661	158.650	161.743	164.967	168.256	Continuing	Continuing
0654: NAWC Acft Division	0.000	103.943	105.978	109.562	-	109.562	111.724	113.927	116.225	118.560	Continuing	Continuing
2511: Natural Disaster Relief	0.000	26.631	58.835	49.943	-	49.943	3.941	0.000	0.000	0.000	0.000	139.350
2921: Pacific Missile Range Facility	0.000	5.960	6.227	6.344	-	6.344	6.473	6.602	6.734	6.869	Continuing	Continuing
2922: MRTFB Maint & Repair	0.000	47.081	48.057	58.301	-	58.301	79.224	52.393	53.266	54.332	Continuing	Continuing
2958: Cyberspace Activities	0.000	0.444	0.441	0.450	-	0.450	0.459	0.467	0.476	0.486	Continuing	Continuing
3154: Nanoose and Dabob Bay Ranges	0.000	15.429	13.293	14.494	-	14.494	14.764	14.984	15.255	15.562	Continuing	Continuing
3386: MRTFB Marine Vessels	0.000	15.694	16.162	19.218	-	19.218	17.311	17.385	17.540	17.894	Continuing	Continuing
9999: Congressional Adds	0.000	16.446	11.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	27.446

**A. Mission Description and Budget Item Justification**

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations and maintenance required to support research, development, test and evaluation.

This program provides institutional maintenance and operations support for: the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center, Andros Island, Bahamas; the Environmental Compliance Program; Naval Air Warfare Center Weapons Division, Point Mugu and China Lake, CA; Naval Air Warfare Center Aircraft Division, Patuxent River, MD; Test and Evaluation related capabilities at the Pacific Missile Range Facility, Barking Sands, HI; Maintenance and Repair at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. The program also provides marine vessels overhauls and preventative maintenance in support of the 23 Major Range and Test Facility Base marine vessels located at Naval Air Warfare Center Weapons Division, Point Mugu, CA, Pacific Missile Range Facility, Honolulu, HI, Naval Undersea Warfare Center Keyport Nanoose and Dabob Bay Ranges, Keyport, WA, Naval Air Warfare Center Aircraft Division, Patuxent River, MD, and Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. The Test and Evaluation activities make up the Navy portion of the Department of Defense's Major Range and Test Facility Base. These activities are chartered to perform Test and Evaluation for the development and acquisition of technologically advanced weapons systems.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				
Core Test and Evaluation capabilities and capacity are operated to obtain weapons system performance documentation for acquisition program milestone decisions to provide operational forces with effective weapons systems. This program provides Navy Acquisition Program Managers required test capabilities; lowers cost of Test and Evaluation; removes cost and scheduling impact of developing and providing their own Test and Evaluation capabilities; and retains the physical airspace, land space and sea space needed to conduct testing.						
B. Program Change Summary (\$ in Millions)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget		446.277	468.281	471.280	-	471.280
Current President's Budget		444.883	479.281	481.975	-	481.975
Total Adjustments		-1.394	11.000	10.695	-	10.695
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	11.000			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-1.394	0.000			
• Program Adjustments		0.000	0.000	10.183	-	10.183
• Rate/Misc Adjustments		0.000	0.000	0.512	-	0.512
Congressional Add Details (\$ in Millions, and Includes General Reductions)						
Project: 9999: Congressional Adds						
Congressional Add: Lab and test range upgrades- targets						
Congressional Add: Future workforce innovation						
Congressional Add: Range safety improvements						
Congressional Add Subtotals for Project: 9999						
Congressional Add Totals for all Projects						
Change Summary Explanation						
The FY 2024 funding request was increased by \$4.0 million to support the Mobile At Sea Sensor (MATSS) barge overhaul and vessel maintenance; increased by \$8.500 million for AUTECH facility upgrades; increased by \$0.512 million for fuel pricing and a reduced by \$2.317 for other miscellaneous program adjustments for an overall increase of \$10.695 million.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 0541 / AUTECH			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0541: AUTECH	0.000	60.360	62.609	62.908	-	62.908	63.510	65.245	66.553	67.832	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

As a detachment of Naval Undersea Warfare Center, Division Newport, the mission of the Atlantic Undersea Test and Evaluation Center is to provide the US Navy an underwater range facility for full-spectrum test and evaluation of Undersea Warfare systems and for Fleet training and readiness assessment. The Atlantic Undersea Test and Evaluation Center Program Office is headquartered at Newport, RI. Atlantic Undersea Test and Evaluation Center's administrative offices are located at West Palm Beach, Florida. Test facilities are located at Andros Island, Sites 1 through 4, and the Berry Islands in the Bahamas. Atlantic Undersea Test and Evaluation Center aircraft make scheduled daily flights between West Palm Beach and Andros Town Airport.

Atlantic Undersea Test and Evaluation Center manages and, under service contract, maintains and operates a 500 square nautical mile deep-water and a 100 square nautical mile shallow-water range; air-target tracking capabilities; sonobuoy simulation systems; electronic warfare threat simulation systems; rotary wing aircraft; aircraft ground support facilities; acoustic targets; torpedo retrieval and flushing capabilities; open-ocean range craft; marine support facilities; and data processing and analysis capabilities.

Major test facilities on Andros Island are located at Site 1. The Command Control Building houses the range tracking displays and replay centers, the computer center, operations support functions, communications center, and the central timing system. The Range Support Facility houses a torpedo post-run workshop, Mark 46 /Mark 50 and Mark 54 lightweight torpedo Intermediate Maintenance Activity, a Mark 30 undersea target Intermediate Maintenance Activity, a Mark 48 heavyweight torpedo Research and Development Turnaround facility and related technical facilities. The complex includes electrical and physical calibration labs, a complete electronics maintenance shop, a dive locker, a precision machine shop, and logistics support areas.

Atlantic Undersea Test and Evaluation Center has a 285-foot concrete pier with a controlling depth of 17 feet (5.2 meters) at mean low tide. An adjacent wharf is approximately 240 feet in length (72 meters) with a controlling depth of 15 feet at mean low tide. Power is available at both locations. Facilities at the pier/marine area include fully equipped machine /fabrication and marine overhaul shops. Also at Site 1, six Range User Buildings are maintained for assembling test equipment and equipment check-out during test mobilization or dockside periods. These staging areas are equipped with a variety of power sources, gantry cranes, compressed air and security features. A fully equipped range user hanger for ground maintenance and storage of helicopters is located at the Atlantic Undersea Test and Evaluation Center helicopter airstrip. Sites 2, 3, and 4 are small instrumented areas located south of Site 1 used to extend tracking of sonobuoys, communications, and air target track. This project funds costs that are not chargeable to customers.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Atlantic Undersea Test and Eval Ctr Facility	48.604	50.501	50.800	0.000	50.800
<b>Articles:</b>	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0541 / AUTECH		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p><b>Description:</b> Atlantic Undersea Test and Evaluation Center is a Test and Evaluation facility for collecting selected underwater, surface and air tracking data on test participants. In accordance with Department of Defense Directive 3200.11, this project funds the overhead/institutional costs required to sustain the Major Range and Test Facility capabilities at Atlantic Undersea Test and Evaluation Center.</p> <p><b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources, instrumentation systems and marine craft required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services. Continue to support resolution of policy compliance issues resulting from a Naval Sea Systems Command Inspector General/Newport Office of Counsel and Contracting review.</p> <p><b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources, instrumentation systems and marine craft required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services. Continue to support resolution of policy compliance issues resulting from a Naval Sea Systems Command Inspector General/Newport Office of Counsel and Contracting review.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Funding increase from FY 2023 to FY 2024 reflects Fuel Pricing increase.</p>						
<p><b>Title:</b> Bahamian Lease</p> <p style="text-align: right;"><b>Articles:</b></p> <p><b>Description:</b> Rental payments to the Bahamian government for use of land and ocean in the Bahamas.</p> <p><b>FY 2023 Plans:</b></p>		11.756 -	12.108 -	12.108 -	0.000 -	12.108 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0541 / AUTECH		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Continue to provide rental payments to the Bahamian government for use of land and ocean in the Bahamas.						
FY 2024 Base Plans: Continue to provide rental payments to the Bahamian government for use of land and ocean in the Bahamas.						
FY 2024 OCO Plans: N/A						
Accomplishments/Planned Programs Subtotals		60.360	62.609	62.908	0.000	62.908
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy Not applicable.						

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 0566 / NAVAIR Environmental Compliance			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0566: NAVAIR Environmental Compliance	0.000	4.960	4.773	5.094	-	5.094	5.697	5.473	5.409	5.516	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This continuing project supports environmental compliance, conservation and pollution prevention related efforts at the Navy Major Range and Test Facility Base located at Patuxent River, MD, China Lake, CA, Point Mugu, CA, and Atlantic Undersea Test and Evaluation Center, Bahamas. The Navy Major Range and Test Facility Base environmental projects include ongoing efforts to comply with Federal, State, and local environmental requirements.												
The Major Range and Test Facility Base are test and evaluation facilities that provide for Department of Defense test and evaluation support missions. These missions include: Weapons system testing, military operational squadron training on new weapon systems, and validation of performance or operational characteristics.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Environmental Compliance  Articles:  Description: Projects supporting level 1 compliance requirements at Naval Air Systems Command Ranges inclusive of hazardous waste disposal, Resource Conservation & Recovery Act, Subtitle C - 40 CFR 260 through 279, and Emergency Planning and Community Right-to-Know Act, Sections 311-312; solid waste disposal, Resource Conservation & Recovery Act, Subtitle D - 40 CFR Parts 239 through 259; natural & cultural resources programs, National Environmental Policy Act, Environmental Protection Act, Marine Mammal Protection Act, Endangered Species Act, Archeological and Historic Preservation Act, maintenance of environmental permits, Clean Air Act, Clean Water Act, and environmental monitoring. Resource Conservation & Recovery Act, 42 U.S.C. Section 6901 et sequens 1976; Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Section 11001-11050 et sequens 1986; National Environmental Policy Act, 42 U.S.C. Section 4331 et sequens 1969; Marine Mammal Protection Act, 16 U.S.C. Section 1361 et sequens 1972; Clean Water Act, 33 U.S.C. Section 1251-1387 1972; ESA, 7 U.S.C. Section 136, 16 U.S.C. Section 1531 et sequens 1973; Archeological and Historic Preservation Act, 16 USC Section 469-469c-2 1960; and Clean Air Act, Title V, 33 U.S.C. Section 1251 et sequens 1972.  FY 2023 Plans: Continue the identification and funding of level 1 requirements that support compliance projects at Naval Air and Naval Sea Systems Command Ranges to ensure applicable laws and regulations are met and Range mission/								4.960	4.773	5.094	0.000	5.094
								-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605864N / <i>Test &amp; Evaluation Support</i>		<b>Project (Number/Name)</b> 0566 / <i>NAVAIR Environmental Compliance</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>operations proceed unencumbered. Continue evaluation of Global Information Systems Encroachment and Cultural Surveys.</p> <p><b><i>FY 2024 Base Plans:</i></b> Continue the identification and funding of level 1 requirements that support compliance projects at Naval Air and Naval Sea Systems Command Ranges to ensure applicable laws and regulations are met and Range mission/ operations proceed unencumbered. Continue evaluation of Global Information Systems Encroachment and Cultural Surveys.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase from FY 2023 to FY 2024 reflects an increase in solid waste disposal and coral reef preservation at AUTC, Bahamas to comply with Environmental and Sanitation requirements.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		4.960	4.773	5.094	0.000	5.094
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b>						
Not applicable.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 0653 / NAWC Weapons Division			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0653: NAWC Weapons Division	0.000	147.935	151.906	155.661	-	155.661	158.650	161.743	164.967	168.256	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Project provides continuing maintenance and operational support for the Naval Air Warfare Center Weapons Division Test and Evaluation capabilities. These capabilities include the Pacific Ranges and Facilities, consisting of China Lake Ranges, Ordnance T&E facilities and the Point Mugu Sea Range, aerial and surface target launch and recovery, target test instrumentation and Test and Evaluation aircraft. The Pacific Ranges use China Lake's 1.1 million acres of land and 17,000 square miles of military restricted (R-2508) airspace together with Point Mugu's 125,000 square miles of instrumented sea range and 36,000 square miles of controlled overlying airspace, and airfield and test instrumentation at San Nicolas Island to perform its Test and Evaluation mission. Included in the China Lake ranges is the Electronic Combat Range, which provides outdoor free space developmental and operational testing of airborne electronic warfare systems and tactics against shipboard and land based air defense systems. These ranges perform metric radar, multilateration and optical tracking of test objects; command, control, and destruct for range safety purposes; communications; frequency interference control and analysis; collection processing and display of telemetered data; real-time data processing and display; and the operation of a sub scale aerial target launch capability. Other test capabilities include sled tracks, measurement facilities; propulsion, warhead, environmental, rocket motor, and other missile component test facilities; and gun ranges. This project funds costs that are not chargeable to customers.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Pacific Ranges	59.164	61.090	60.332	0.000	60.332
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> In accordance with Department of Defense Directive 3200.11., this project funds the overhead/ institutional costs required to sustain the Major Range and Test Facility Base capabilities at the Pacific Ranges and Facilities located at China Lake and Point Mugu, CA. These facilities provide safe, instrumented, controlled open air testing utilizing the Land Range, Sea Range, Electronic Combat Ranges, and San Nicholas Island.					
<b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation as well as ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Sustain maintenance activities associated with five Radar Signal Emulators (RSEs) and					



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support	Project (Number/Name) 0653 / NAWC Weapons Division			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
a battlespace shaping capability that requires Special Access Program (SAP) facilities. Initiate maintenance activities to sustain warfare battle shaping capability.  <b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation as well as ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Sustain maintenance activities associated with five Radar Signal Emulators (RSEs) and a battlespace shaping capability that requires Special Access Program (SAP) facilities. Initiate maintenance activities to sustain warfare battle shaping capability.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease from FY 2023 to FY 2024 is due to reduction in Advanced Range Data System and material support.						
Title: Navy Test Wing Pacific  <div>Articles:</div> <b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Naval Test Wing Pacific located at China Lake and Point Mugu, CA. These facilities provide the Navy's principal Pacific test activity for Naval Aviation Systems Command aircraft, engaged in or supporting Test & Evaluation of aircraft, weapons and weapons systems and services in support of Range Surveillance and Clearance, airborne telemetry and optical data collection.  <b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support aircraft associated with aviation platform and weapon system test and evaluation. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Naval Test Wing Pacific operations.  <b>FY 2024 Base Plans:</b>		22.865 -	22.227 -	24.385 -	0.000 -	24.385 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0653 / NAWC Weapons Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Continue to maintain and operate mission essential/core test support aircraft associated with aviation platform and weapon system test and evaluation. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Naval Test Wing Pacific operations.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is due to inflation and an increase to T&E A/C support activities.						
<b>Title:</b> Threat/Target Systems  <b>Articles:</b>		11.986 -	11.800 -	12.170 -	0.000 -	12.170 -
<b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Threat/Target Systems facilities. These facilities provide airborne and seaborne target presentations for test and evaluation.  <b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne target operations required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base target operations.  <b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne target operations required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base target operations.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 due to inflation as well as an increase in BQM-177 Subsonic Aerial Target maintenance.						
<b>Title:</b> Test and Evaluation Ordnance  <b>Articles:</b>		3.662 -	3.975 -	4.086 -	0.000 -	4.086 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0653 / NAWC Weapons Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p><b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Test and Evaluation Ordnance facilities. These facilities provide test and evaluation of All-Up live ordnance and components.</p> <p><b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources associated propulsion, warhead, environmental, rocket motor, and other missile component test facilities required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base ordnance test and evaluation operations.</p> <p><b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources associated propulsion, warhead, environmental, rocket motor, and other missile component test facilities required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Major Range and Test Facility Base ordnance test and evaluation operations.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is due to planned aging test equipment and inflation.</p>						
<p><b>Title:</b> Naval Air Warfare Center Weapons Division Command</p> <p><b>Articles:</b></p> <p><b>Description:</b> This project funds the overhead/institutional costs required to sustain the Naval Air Warfare Center Weapons Division Major Range and Test Facility Base Test and Evaluation capabilities.</p> <p><b>FY 2023 Plans:</b> Continue to reimburse the Command for General and Administration Support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities, Navy Marine Corps Intranet, and any costs necessary to manage and sustain Major Range and Test Facility Base operations.</p> <p><b>FY 2024 Base Plans:</b></p>		50.258 -	52.814 -	54.688 -	0.000 -	54.688 -

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605864N / <i>Test &amp; Evaluation Support</i>		<b>Project (Number/Name)</b> 0653 / <i>NAWC Weapons Division</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Continue to reimburse the Command for General and Administration Support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities, Navy Marine Corps Intranet, and any costs necessary to manage and sustain Major Range and Test Facility Base operations.						
<b><i>FY 2024 OCO Plans:</i></b> N/A						
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The increase from FY 2023 to FY 2024 is due to a General & Administrative Assessment increase.						
<b>Accomplishments/Planned Programs Subtotals</b>		147.935	151.906	155.661	0.000	155.661
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> Not applicable.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 0654 / NAWC Acft Division			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0654: NAWC Acft Division	0.000	103.943	105.978	109.562	-	109.562	111.724	113.927	116.225	118.560	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides funds for the maintenance and operations of the Naval Air Warfare Center Aircraft Division's Major Range and Test Facility Base capabilities used to conduct test and evaluation of air platforms and associated systems. Naval Air Warfare Center Aircraft Division has extensive airfield, flight test ranges, aircraft systems test facilities and simulation laboratories to support aircraft Research Development Test and Evaluation. This includes 50,000 square miles of airspace, 39,375 square miles of sea space, and 7,950 acres of land space. Product areas include aircraft systems flight test and evaluation, carrier suitability certification, test article preparation, installed system test and evaluation, and modeling and simulation support of the acquisition program test requirements. The Test and Evaluation Group, Patuxent River, performs development and operational test and evaluation of manned and unmanned air vehicle systems, including mission systems, equipment, subsystems, components, and support systems. This project also provides test and evaluation facilities for air-breathing propulsion systems and extensive facilities for conducting both installed and uninstalled aircraft engine development and test and evaluation. This project funds costs that are not chargeable to customers.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Atlantic Ranges	25.912	26.298	28.021	0.000	28.021
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> In accordance with Department of Defense Directive 3200.11, this project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities associated with the Atlantic Ranges and Facilities and Air Vehicle Modification and Instrumentation. These facilities provide safe, instrumented, controlled flight testing and training in air, sea, and land arenas.					
<b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft and ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Continue maintenance for two new control rooms that operate at the Special Access Program (SAP) level, including the IT equipment required to perform test and evaluation operations from the control rooms.					
<b>FY 2024 Base Plans:</b>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0654 / NAWC Acft Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Continue to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft and ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Continue maintenance for two new control rooms that operate at the Special Access Program (SAP) level, including the IT equipment required to perform test and evaluation operations from the control rooms.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is due to inflation and increased maintenance requirements associated with critical legacy test instrumentation.						
<b>Title:</b> Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility  <b>Articles:</b>  <b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities associated with Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility. These facilities provide Test and Evaluation support with integrated, interactive, and repeatable synthetic environments and reduce the risk and cost for programs with the use of installed systems tests to include simulation and stimulation tools, techniques and technologies.  <b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility operations.  <b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment		22.687 -	23.525 -	24.593 -	0.000 -	24.593 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0654 / NAWC Acft Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Electromagnetic Environmental Effects and Air Combat Environment Test and Evaluation Facility operations.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is due to inflation and increased maintenance requirements associated with secure space.						
<b>Title:</b> Propulsion Systems Evaluation Facility  <b>Articles:</b>  <b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Propulsion Systems Evaluation Facility. These facilities perform Test and Evaluation of propulsion systems in the laboratories, engine test chambers and component test rigs of the Propulsion Systems Evaluation Facility and the Aircraft Test and Evaluation Facility. Propulsion Systems consists of engines, engine components and accessories.  <b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Propulsion System Evaluation Facility operations.  <b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Propulsion System Evaluation Facility operations.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 due to facility preventative maintenance and inflation.		4.693 -	4.741 -	4.856 -	0.000 -	4.856 -
<b>Title:</b> Threat/Target Systems  <b>Articles:</b>		2.362 -	2.387 -	2.446 -	0.000 -	2.446 -

## UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0654 / NAWC Acft Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p><b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base. Threat/Target Systems operations to provide airborne and seaborne target presentations for test and evaluation.</p> <p><b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne target operations required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base target operations.</p> <p><b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources associated with airborne and seaborne target operations required to meet customer test workload. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base target operations.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is due to the hiring of Safety Manager/Hazmat coordinator and inflation.</p>						
<p><b>Title:</b> Naval Test Wing Atlantic</p> <p style="text-align: right;"><b>Articles:</b></p> <p><b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities of the Naval Test Wing Atlantic located at NAS Patuxent River, MD. These facilities provide the Navy's principal Atlantic test activity for Naval Aviation Systems Command aircraft, engaged in or supporting Test &amp; Evaluation of aircraft, weapons and weapons systems.</p> <p><b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support aircraft associated with aviation platform and weapon system test and evaluation. Fund civilian labor, travel, transportation, equipment, supplies,</p>		23.203 -	23.156 -	22.917 -	0.000 -	22.917 -



## UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0654 / NAWC Acft Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Naval Test Wing Atlantic operations.  <b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support aircraft associated with aviation platform and weapon system test and evaluation. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain Naval Test Wing Atlantic operations.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease from FY 2023 to FY 2024 eliminates sustainment funds for one F/A-18 Chase Aircraft that is in excess to the requirement.						
<b>Title:</b> Naval Air Warfare Center Aircraft Division Command  <b>Articles:</b>  <b>Description:</b> This project funds the overhead/institutional costs required to sustain the Naval Air Warfare Center Aircraft Division Major Range and Test Facility Base Test and Evaluation capabilities.  <b>FY 2023 Plans:</b> Continue to reimburse the Command for General and Administrative support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Naval Air Warfare Center Aircraft Division Range and Test Facility Base operations.  <b>FY 2024 Base Plans:</b> Continue to reimburse the Command for General and Administrative support services. Continue to fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Naval Air Warfare Center Aircraft Division Range and Test Facility Base operations.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>		25.086 -	25.871 -	26.729 -	0.000 -	26.729 -

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 0654 / NAWC Acft Division		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase from FY 2023 to FY 2024 due to increases in utility cost, G&A assessment and labor.						
Accomplishments/Planned Programs Subtotals		103.943	105.978	109.562	0.000	109.562
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
Not applicable.						

## UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2511 / Natural Disaster Relief			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2511: Natural Disaster Relief	0.000	26.631	58.835	49.943	-	49.943	3.941	0.000	0.000	0.000	0.000	139.350
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project was created in response to the 2019 Searles Valley Earthquakes at Naval Weapons Station China Lake to support repairs at Navy MRTFB sites that have been damaged by natural disasters to include earthquakes, wildfires, hurricanes, tornadoes, landslides and floods.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Natural Disaster Relief	26.631	58.835	49.943	0.000	49.943
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> This is a continuation efforts to repair damage caused by natural disasters at Navy MRTFB sites. FY23 repairs will include: Procurement of Class 3 Plant Property in support of outfitting MILCON P1918 Ordnance Test Laboratory, P1919 Radiographic Building, P1922 Skytop Firing Bays and MILCON P1911 Range Control Complex; Real Time Operations Control Equipment, Test Bay Support Equipment, Video Systems.					
<b>FY 2024 Base Plans:</b> This is a continuation efforts to repair damage caused by natural disasters at Navy MRTFB sites. FY24 repairs will include: Continuation of Procurement of Class 3 Plant Property in support of outfitting MILCON P1918 Ordnance Test Laboratory, P1919 Radiographic Building, P1922 Skytop Firing Bays and MILCON P1911 Range Control Complex; Real Time Operations Control Equipment, Test Bay Support Equipment, Video Systems. Begin recovery services at: Ordnance T&E, VX-31 and China Lake Range; and repair roads to CLPL Environmental and CT-6 sites.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease from FY 2023 to FY 2024 is due to the project nearing completion.					
<b>Accomplishments/Planned Programs Subtotals</b>	26.631	58.835	49.943	0.000	49.943

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023	
Appropriation/Budget Activity 1319 / 6				R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2511 / Natural Disaster Relief			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• OMN/BSS1: Base Operating Support	9.925	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	36.879
• OMN/BSM1: Sustainment, Restoration and Modernization	39.881	32.800	44.000	-	44.000	0.000	0.000	0.000	0.000	0.000	658.514
• OPN/4213: Aircraft Support Equipment	64.674	152.787	3.853	-	3.853	0.000	0.000	0.000	0.000	0.000	311.480
Remarks											
Natural Disaster Relief funding is only a portion of the Line Items listed above.											
D. Acquisition Strategy											
N/A											

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2921 / Pacific Missile Range Facility			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2921: Pacific Missile Range Facility	0.000	5.960	6.227	6.344	-	6.344	6.473	6.602	6.734	6.869	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This program provides continuing maintenance and operations support for Test and Evaluation related capabilities at the Pacific Missile Range Facility located at Barking Sands on Kauai, HI. Pacific Missile Range Facility's Test and Evaluation capabilities include precision radar and telemetry assets, the Mobile At Sea Sensor System, and Stabilized High-accuracy Optical Tracking System. These assets support Navy, Department of Defense, and Missile Defense Agency Test and Evaluation. This project funds costs not chargeable to customers.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Pacific Missile Range Facility	5.960	6.227	6.344	0.000	6.344
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> This project funds the overhead/institutional costs required to sustain the Major Range and Test Facility Base capabilities at Pacific Missile Range Facility in accordance with Department of Defense Directive 3200.11.					
<b>FY 2023 Plans:</b> Continue to maintain and operate mission essential/core test support resources including three precision radars and eight telemetry antennas, the Mobile At Sea Sensor System barge, and the four Optical Systems required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.					
<b>FY 2024 Base Plans:</b> Continue to maintain and operate mission essential/core test support resources including three precision radars and eight telemetry antennas, the Mobile At Sea Sensor System barge, and the four Optical Systems required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.					
<b>FY 2024 OCO Plans:</b>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 2921 / Pacific Missile Range Facility		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: Increase from FY 2023 to FY 2024 is due to inflation						
Accomplishments/Planned Programs Subtotals		5.960	6.227	6.344	0.000	6.344
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
Not applicable.						

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 2922 / MRTFB Maint & Repair			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2922: MRTFB Maint & Repair	0.000	47.081	48.057	58.301	-	58.301	79.224	52.393	53.266	54.332	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides funding for the maintenance and repair of the Major Range and Test Facility Base Real Property Maintenance Activities at the Naval Air Warfare Center Weapons Division, the Naval Air Warfare Center Aircraft Division, and the Atlantic Undersea Test and Evaluation Center. Funds mission critical emergency services, recurring maintenance and repair, and major repair projects. In addition it addresses priority items on the Backlog of Maintenance and Repair list.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Facility Maintenance and Repair	47.081	48.057	58.301	0.000	58.301
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Maintenance and repair of the Major Range and Test Facility Base Real Property assets at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center.					
<b>FY 2023 Plans:</b> Continue to support mission critical emergency services, recurring maintenance and repair, and minor and major repair efforts at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. FY23 budget funds Major Range and Test Facility Base facility to 70% of Department of Defense Facility Sustainment Model v23.3 with \$12M to continue the Naval Air Systems Command Hangar recapitalization efforts.					
<b>FY 2024 Base Plans:</b> Continue to support mission critical emergency services, recurring maintenance and repair, and minor and major repair efforts at Naval Air Warfare Center Weapons Division, Naval Air Warfare Center Aircraft Division, and the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center. FY24 budget funds Major Range and Test Facility Base facility to 70% of Department of Defense Facility Sustainment Model v24.4 with \$12M to continue the Naval Air Systems Command Hangar recapitalization efforts.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support		Project (Number/Name) 2922 / MRTFB Maint & Repair		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase from FY 2023 to FY 2024 due to increase in scope of major repairs at Naval Air Warfare Center Weapons Division and the upgrade of water infrastructure; mission adaptation; and severe weather resilience at Atlantic Undersea Test and Evaluation Center, Andros Island						
Accomplishments/Planned Programs Subtotals		47.081	48.057	58.301	0.000	58.301
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
Not applicable.						



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605864N / Test & Evaluation Support				<b>Project (Number/Name)</b> 2958 / Cyberspace Activities			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2958: <i>Cyberspace Activities</i>	0.000	0.444	0.441	0.450	-	0.450	0.459	0.467	0.476	0.486	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**  
 This project provides funding for cyber requirements for the Major Range and Test Facility Base Real Property at the Atlantic Undersea Test and Evaluation Center. Funds critical cybersecurity upgrades to instrumentation and networks to ensure capabilities are secure and available to support customer test requirements.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Cyberspace Activities	0.444	0.441	0.450	0.000	0.450
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> This project funds network and instrumentation compliance with cybersecurity requirements at the Atlantic Undersea Test and Evaluation Center.					
<b>FY 2023 Plans:</b> Maintain compliance with cybersecurity requirements at Atlantic Undersea Test and Evaluation Center as required to support test and evaluation operations at the Atlantic Undersea Test and Evaluation Center.					
OCO: Not applicable					
<b>FY 2024 Base Plans:</b> Maintain compliance with cybersecurity requirements at Atlantic Undersea Test and Evaluation Center as required to support test and evaluation operations at the Atlantic Undersea Test and Evaluation Center.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is due to inflation.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.444	0.441	0.450	0.000	0.450

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605864N / <i>Test &amp; Evaluation Support</i>	Project (Number/Name) 2958 / <i>Cyberspace Activities</i>
C. Other Program Funding Summary (\$ in Millions)		
<u>Remarks</u>		
D. Acquisition Strategy		
Not applicable.		

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 3154 / Nanoose and Dabob Bay Ranges			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3154: Nanoose and Dabob Bay Ranges	0.000	15.429	13.293	14.494	-	14.494	14.764	14.984	15.255	15.562	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides maintenance and operations support for the Nanoose and Dabob Bay Ranges along with associated support systems to provide Test and Evaluation and readiness assessment services for acquisition programs and the Fleet. Operates ocean-based environment, measurement and support systems. Maintains and repairs systems that measure warfare system performance. Oversees test, training, and measurement facilities, equipment, operations and maintenance processes. Satisfies customer exercise and measurement requirements through the operation of ocean based test and measurement systems. Assures the readiness of systems through the implementation of calibration, maintenance, repair and life cycle processes. Performs exercise planning, exercise interpretation and development of surrogate environments, for system performance measurement. Assists in the design, fabrication and testing of systems for Undersea Warfare applications. Oversees the manning and maintenance of Naval Undersea Warfare Center Division Keyport range craft and range craft systems. This project funds costs not chargeable to customers.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Undersea Ranges  Articles:  Description: In accordance with Department of Defense Directive 3200.11,this project funds the overhead/ institutional costs required to sustain the Major Range and Test Facility Base capabilities at the Nanoose and Dabob Bay undersea tracking ranges.  FY 2023 Plans: Continue to maintain and operate mission essential/core test support resources associated with the unique test environments for Test and Evaluation of undersea weapons, sensors, submarines and other undersea systems required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.  FY 2024 Base Plans: Continue to maintain and operate mission essential/core test support resources associated with the unique test environments for Test and Evaluation of undersea weapons, sensors, submarines and other undersea systems required to meet customer test requirements. Fund civilian labor, travel, transportation, equipment, supplies,								15.429	13.293	14.494	0.000	14.494
								-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605864N / <i>Test &amp; Evaluation Support</i>		<b>Project (Number/Name)</b> 3154 / <i>Nanoose and Dabob Bay Ranges</i>		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain the Major Range and Test Facility Base operations. Reimburse the Command for General and Administrative support services.						
<b><i>FY 2024 OCO Plans:</i></b> N/A						
<b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase from FY 2023 to FY 2024 reflects increase in Barge maintenance costs for preventative and corrective actions as well as commodity cost increases.						
<b>Accomplishments/Planned Programs Subtotals</b>		15.429	13.293	14.494	0.000	14.494
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b> Not applicable.						

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605864N / Test & Evaluation Support				Project (Number/Name) 3386 / MRTFB Marine Vessels			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3386: MRTFB Marine Vessels	0.000	15.694	16.162	19.218	-	19.218	17.311	17.385	17.540	17.894	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project funds the overhauls and preventative maintenance of the 23 Major Range and Test Facility Base marine vessels located at Naval Air Warfare Center Weapons Division, Point Mugu, CA, Pacific Missile Range Facility, Honolulu, HI, Naval Undersea Warfare Center Keyport, WA, Naval Air Warfare Center Aircraft Division, Patuxent River, MD, and Atlantic Undersea Test and Evaluation Center. These vessels are used to launch and recover torpedoes, acoustic systems, and other weapons, provide range surveillance and clearance, and can be configured for target services. Overhauls are required to operate ships over 300 tons in compliance with American Bureau of Shipping "Load Line" certification requirements. Major preventative maintenance requiring shipyard support is also performed during these periods to mitigate risks of failures and sustain critical, Hull, Mechanical and Electrical systems to support operations at sea.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> MRTFB Marine Vessels	15.694	16.162	19.218	0.000	19.218
<b>Articles:</b>	-	-	-	-	-
<p><b>Description:</b> This project funds the overhauls and preventative maintenance of the 23 Major Range and Test Facility Base marine vessels located at Naval Air Warfare Center Weapons Division, Point Mugu, CA, Pacific Missile Range Facility, Barking Sands, Kauai, HI, Naval Undersea Warfare Center Keyport, Nanoose and Dabob Bay Ranges, Keyport, WA, Naval Air Warfare Center Aircraft Division, Patuxent River, MD, and Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center.</p> <p><b>FY 2023 Plans:</b> Perform overhauls on Naval Undersea Warfare Center Keyport, Atlantic Undersea Test and Evaluation Center, Naval Air Warfare Center Aircraft Division, and Naval Air Warfare Center Weapons Division vessels. Complete Purchase Replacement of Naval Air Warfare Center Weapons Division HM-08.</p> <p><b>FY 2024 Base Plans:</b> Perform overhauls on Naval Undersea Warfare Center Keyport, Atlantic Undersea Test and Evaluation Center, Naval Air Warfare Center Aircraft Division, Naval Air Warfare Center Weapons Divisions and Pacific Missile Range, HI vessels.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b></p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605864N / <i>Test &amp; Evaluation Support</i>		<b>Project (Number/Name)</b> 3386 / <i>MRTFB Marine Vessels</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Increase from FY 2023 to FY 2024 includes increased cost for the Mobile At Sea Sensor (MATSS) Barge overhaul and vessel maintenance to address conditions found during inspection as well as increases in commodity costs.					
<b>Accomplishments/Planned Programs Subtotals</b>	15.694	16.162	19.218	0.000	19.218
<b>C. Other Program Funding Summary (\$ in Millions)</b>					
N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b>					
Not applicable.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605864N / Test & Evaluation Support				<b>Project (Number/Name)</b> 9999 / Congressional Adds			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
9999: Congressional Adds	0.000	16.446	11.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	27.446
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Congressional Adds: C781: Lab and test range upgrades - targets C784: Future workforce innovation C904: Range Safety improvements												
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>								<b>FY 2022</b>	<b>FY 2023</b>			
<b>Congressional Add:</b> Lab and test range upgrades- targets <b>FY 2022 Accomplishments:</b> Funds procurement and outfitting of a Mobile Ship Target for surface to surface and air to surface weapons testing. <b>FY 2023 Plans:</b> N/A								15.446	0.000			
<b>Congressional Add:</b> Future workforce innovation <b>FY 2022 Accomplishments:</b> Funding will be used to support Future Workforce Innovation initiative at NAWC AD. <b>FY 2023 Plans:</b> Funding will be used to support Future Workforce Innovation initiative at NAWC AD.								1.000	1.000			
<b>Congressional Add:</b> Range safety improvements <b>FY 2022 Accomplishments:</b> N/A <b>FY 2023 Plans:</b> Congressional Add provided for range safety improvements to ensure test and development efforts are conducted in a safe and responsible manner.								0.000	10.000			
<b>Congressional Adds Subtotals</b>								16.446	11.000			
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					PE 0605865N / Operational Test & Eval Capability							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	25.326	27.808	29.399	-	29.399	31.001	31.292	31.646	32.306	Continuing	Continuing
0831: OPTEVFOR Support	0.000	23.249	25.681	27.244	-	27.244	28.712	28.965	29.289	29.900	Continuing	Continuing
2958: Cyberspace Activities	0.000	2.077	2.127	2.155	-	2.155	2.289	2.327	2.357	2.406	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing facilities and conducting operations required for general research, development, test and evaluation.

Headquartered in Norfolk, Virginia, since inception in 1945. OPTEVFOR serves as the Service Operational Test Agency for the Navy, as well as Marine Corps Aviation. In addition to the headquarters element, OPTEVFOR includes a Fleet-scheduling detachment in San Diego, a detachment supporting the Joint Strike Fighter, US Operational Test Team at Nellis, Air Force Base (AFB), NV, and a Surface Warfare Division detachment at Dahlgren, VA. There are four Navy and Marine Corps Squadrons that conduct OT&E under the direction of the Director. Air Test and Evaluation Squadron ONE (VX-1), located at Patuxent River, MD, is under the administrative control of Commander, Naval Air Forces, Atlantic. Air Test and Evaluation Squadron NINE (VX-9), located at China Lake, CA, is under the administrative control of Commander, Naval Air Forces, Pacific. Marine Operational Test and Evaluation Squadron ONE (VMX-1), located at Yuma, AZ is administratively aligned under the Deputy Commandant for Aviation. Marine Helicopter Squadron ONE (HMX-1), located at Quantico, VA, responsible for OT of aircraft assigned for Presidential transport.

OPTEVFOR is a competency- and warfare-aligned organization. Rather than a strict Fleet military structure, OPTEVFOR's Warfare Divisions are fully responsible for delivering test documents ready for the Director's signature and executing and reporting adequate operational test and evaluation (OT&E) for Naval systems and capabilities. They are supported by Competency Divisions, whose job is to ensure the product meets technical requirements, and DoN and the Director's standards.

There are seven warfare divisions that are supported by competency divisions. The warfare divisions include Undersea Warfare (40), Air Warfare (50), Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) (60), Surface Warfare (70), Expeditionary Warfare and Littoral Combat Ship (LCS) (80), and Advanced Programs (90). Each warfare division has a Navy Captain as the division Director with a senior civil servant as the Deputy or a senior civil servant as the division Director and a Navy Commander as the Deputy.

There are four competency divisions: Policy, Operations and Training (01A), Test Design and Modeling Simulation (01B), Test Planning and Evaluation(01C), and Cybersecurity Testing (01D). In addition, the Technical Director (00TD) supports all divisions on technical aspects of the test products. Other business divisions include the Staff Commanding Officer and Administration (10), Chief Information Officer (CIO) (20), Contracts (01K), and the Comptroller (30).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		PE 0605865N / Operational Test & Eval Capability			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	24.872	27.808	29.831	-	29.831
Current President's Budget	25.326	27.808	29.399	-	29.399
Total Adjustments	0.454	0.000	-0.432	-	-0.432
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.454	0.000			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	-0.759	-	-0.759
• Rate/Misc Adjustments	0.000	0.000	0.327	-	0.327

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605865N / <i>Operational Test &amp; Eval Capability</i>				Project (Number/Name) 0831 / <i>OPTEVFOR Support</i>			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0831: <i>OPTEVFOR Support</i>	0.000	23.249	25.681	27.244	-	27.244	28.712	28.965	29.289	29.900	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This program element (PE) provides Operational Test and Evaluation Force (OPTEVFOR) general support funding for headquarters annual operating expenses and ensures OPTEVFOR compliance with Secretary of Defense (SECDEF) and Secretary of the Navy (SECNAV) directives during the conduct of independent operational testing and evaluation. This funding supports planning, testing, and reporting on the operational effectiveness, suitability, and cyber survivability of new and improved systems and recommending fleet usage to the Chief of Naval Operations (CNO). Funding also supports initiatives (including the manpower to execute) that improve OPTEVFOR's ability to develop "minimum, adequate" test strategies maximizing efficiencies and minimizing assets required to conduct planned operational testing, thereby driving down overall test and evaluation costs for the Navy. The CNO, as well as acquisition executives and managers at all levels, have a continuing need for expeditious and efficient conduct of Operational Test and Evaluation (OT&E) by OPTEVFOR to provide new warfighting capabilities to the fleet. To this end, this funding supports OPTEVFOR's continued pursuit of a variety of initiatives aimed at increasing efficiencies in T&E; these initiatives include IT Network, database and decision-making technology upgrades, Integrated Testing and Mission Based Test Design across all programs, and improved staffing and expertise in the areas of DON acquisition processes, Modeling and Simulation, Statistical Studies, Information Assurance, and similar disciplines. All of these are aimed at improving the quality of test and evaluation, thus ensuring delivery to fleet units fully tested and capable combat systems. OT&E issues have direct long-term Navy-wide implications on the Fleet's readiness and warfighting capability. Rapid advances in technology, changes in fleet tactics, and increased complexity of weapons systems and platforms have created an increased need for technical and operational analyses that are sophisticated and timely in order to ensure an optimal return on investment of Navy resources.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> OPTEVFOR SUPPORT	23.249	25.681	27.244	0.000	27.244
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Funding in this project funds the civilian salaries and operating costs for the Operational Test and Evaluation Force (OPTEVFOR). In addition, it supports several initiatives aimed at increasing efficiencies in Test and Evaluation (T&E) to facilitate the Navy's ability to deliver warfighting capability to the fleet at the speed of relevance. These initiatives include IT Network, database and decision-making technology upgrades; implementation of Integrated Testing and Mission Based Test Design across all programs; and improved staffing and expertise in the areas of DON acquisition processes, Modeling and Simulation, Statistical Studies, Information Assurance, and related disciplines. All of these initiatives are aimed at improving the quality of testing and evaluation, thus ensuring delivery to fleet units of appropriately tested and capable combat capabilities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605865N / Operational Test & Eval Capability		Project (Number/Name) 0831 / OPTEVFOR Support	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p><b>FY 2023 Plans:</b></p> <ul style="list-style-type: none"><li>- This project will fund civilian salaries and operating costs for OPTEVOR.</li><li>- Continue efforts to enhance and improve test processes and products in support of increasing the value of OT&amp;E; tailoring of processes and methods to ensure relevance for adaptive acquisition pathways and Agile IT systems will continue to mature.</li><li>- Continue to support Warfare Capability Baseline (WCB) assessments and report on the Navy's capability across all platforms, networks, weapons, or sensors. The WCB is a Fleet-prioritized system-of-systems technical feasibility assessment of kill chains and their supporting effects chains based on real world data, which includes Operational Test data, Fleet data, and Developmental Test data collected in representative operational environments and configurations. These data further include modeling and simulation data accredited by OPTEVFOR for use in operational evaluations. OPTEVFOR coordinates with Warfighting Development Centers and Systems Command tactical and technical experts to transition Operational Test data and insights into kill chain knowledge to enhance warfighting readiness.</li><li>- Analyze performance across warfare domains; continue to collaborate across warfare domains to maximize lessons learned, share resources, gain efficiencies in testing, and provide value to the Fleet, Warfighting Development Centers, and acquisition decision makers.</li><li>- Implement the Six Core Test Principles for Adaptive, Relevant Testing through an emphasis on Capabilities Based Test and Evaluation; leveraging Mission Based Test Design (MBTD) throughout all test phases of test programs to facilitate early learning to accelerate delivery of combat capabilities to the Fleet.</li><li>- Continue the refinement of Platform Mission Task (PMT) Views as a means to visualize knowledge about system performance in terms of Navy mission capabilities.</li><li>- Initiate efforts to deliver data on cyber kill chains impacting the mission effectiveness of the Navy's warfighting systems, OPTEVFOR is focusing on bringing more cyber T&amp;E expertise and cyber threat realism directly to the Fleet. Initiative includes improving and expanding the cybersecurity test workforce achieving a National Security Agency Red Team certification and NIPR/SIPR/.COM infrastructure accreditation to support remote operations across the DoD Information Network enclaves. These efforts will enable enhanced operational realism during planned cyber T&amp;E test phases by portraying realistic remote, outsider cyber threats to systems across the various security enclaves in the Navy's enterprise networks.</li><li>- Another facet of OPTEVFOR's cybersecurity efforts includes increased test support involving non-enterprise systems (i.e., Internet Protocol (IP) based). A significant portion of the Navy's warfighting capabilities depend on</li></ul>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605865N / Operational Test & Eval Capability		Project (Number/Name) 0831 / OPTEVFOR Support		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
non-IP, commercial based systems; the same systems used in the commercial sector that come under cyber-attack. Expansion of the cybersecurity test workforce will allow testing of non-IP systems such as: industrial control systems, data buses, radio frequency-based information systems, etc.						
FY 2024 Base Plans: - This project will fund civilian salaries and operating costs for OPTEVFOR. It is noted that OPTEVFOR was included in the Flag billet reduction, which led to a change of office and modifying the leadership structure to be civilian based. - Continue efforts to enhance and improve test processes and products in support of increasing the value of OT&E; tailoring of processes and methods to ensure relevance for adaptive acquisition pathways and Agile IT systems will continue to mature. - Continue to support Warfare Capability Baseline (WCB) assessments and report on the Navy's capability across all platforms, networks, weapons, or sensors. The WCB is a Fleet-prioritized system-of-systems technical feasibility assessment of kill chains and their supporting effects chains based on real world data, which includes Operational Test data, Fleet data, and Developmental Test data collected in representative operational environments and configurations. These data further include modeling and simulation data accredited by OPTEVFOR for use in operational evaluations. OPTEVFOR coordinates with Warfighting Development Centers and Systems Command tactical and technical experts to transition Operational Test data and insights into kill chain knowledge to enhance warfighting readiness. - Analyze performance across warfare domains; continue to collaborate across warfare domains to maximize lessons learned, share resources, gain efficiencies in testing, and provide value to the Fleet, Warfighting Development Centers, and acquisition decision makers. - Bridge Fleet-to-acquisition communication seams through greater external engagement with Warfighting Development Centers, implementation of Capabilities Based T&E (CBTE) across the Enterprise, re-tooling Cyber OT&E, and continuously improving our operations, training and knowledge management. - A high level summary of the focus area initiatives relevant to the levels of effort identifiers from the NAVPLAN Implementation Framework are adaptive relevant testing (ART), external engagement, cyber, and command operations. ART initiatives include collaboration across external OT&E stakeholders to implement the OTA6 core principles; align OPTEVFOR's organizational structure, training, and testing approach to the OTA6 core principles; and to identify barriers and opportunities in Naval Aviation T&E to bring efficiency and improve the outcomes for the warfighters by delivering capability faster while preserving test adequacy. External engagement initiatives include providing information that addresses operational knowledge gaps and is						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605865N / <i>Operational Test &amp; Eval Capability</i>		<b>Project (Number/Name)</b> 0831 / <i>OPTEVFOR Support</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>straightforward to understand and implement (R5); ensure that customers receive information that directly addresses their demonstrated needs within an operationally relevant timeframe (Ca); and participate in Fleet Experimentation within OPTEVFOR capabilities to better understand external and internal benefits of working with the Fleet in this area. Cyber initiatives include integrating System Under Test (SUT) cyber survivability data from Developmental Testing into OT&amp;E and conduct platform level cyber survivability evaluations during OT. Command Operations initiatives include developing and implementing knowledge management with a focus on effective storage and dissemination of institutional knowledge; develop and implement human capital with a focus on enabling dynamic prioritization of hiring requirements and resources (S3); infrastructure with the focus on establishing the foundation needed to support operations (S2); process improvement with the focus on improve visibility and tracking for contract and finance processes; and execution of the command leadership restructure in response to Service directed Flag billet reduction.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Funding increase from FY23 to FY24 reflects an increase in requirements for cybersecurity test and evaluation of non-IP based systems across aviation, submarine, surface, expeditionary, C4ISR and facility security platforms and programs.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		23.249	25.681	27.244	0.000	27.244
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> OPTEVFOR leverages a Firm Fixed Price, multi-award contract for services.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605865N / Operational Test & Eval Capability				Project (Number/Name) 2958 / Cyberspace Activities			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2958: Cyberspace Activities	0.000	2.077	2.127	2.155	-	2.155	2.289	2.327	2.357	2.406	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project funds the civilian salaries and supports associated maintenance and sustainment of cyber hygiene and resiliency of network infrastructure, as well as enterprise IT services for OPTEVFOR operational support networks. Additionally, these funds ensure the hardware and software required to maintain is in compliance with cybersecurity directives that support command operations as required. The Cyber Pure funding under this project directly supports the Assessment & Authorization (A&A) of OPTEVFOR IT systems and the monthly patching and scanning, and reauthorization required for continuous monitoring.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Cyberspace Activities  <b>Articles:</b>  <b>Description:</b> Funding will support maintenance of cyber hygiene and resiliency of network infrastructure and enterprise IT services for OPTEVFOR operational support networks, as well as the hardware and software required to maintain compliance with cybersecurity directives. Funding ensures ability of OPTEVFOR network engineers to comply with cybersecurity requirements for the networks used in support of command operations as required in DoD Instruction (DoDI) 8510.01, Risk Management Framework (RMF) for DoD Information Technology (IT) and DoDI 8500.01, Cybersecurity. Facilitates the monthly network patching and scanning required to protect networks from cyber-attacks and intrusions.  <b>FY 2023 Plans:</b> Maintain compliance with cybersecurity requirements associated with Director, Operational Test and Evaluation Force's information technology and associated networks. Conduct required vulnerability scans and install necessary network patches to ensure cybersecurity of critical network infrastructure.  <b>FY 2024 Base Plans:</b> Maintain compliance with cybersecurity requirements associated with Director, Operational Test and Evaluation Force's information technology and associated networks. Conduct required vulnerability scans and install necessary network patches to ensure cybersecurity of critical network infrastructure.  <b>FY 2024 OCO Plans:</b>								2.077	2.127	2.155	0.000	2.155
								-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605865N / Operational Test & Eval Ca pability		Project (Number/Name) 2958 / Cyberspace Activities		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase from FY23 to FY24 due to CIVPERS pricing adjustment.						
Accomplishments/Planned Programs Subtotals		2.077	2.127	2.155	0.000	2.155
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
N/A						



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**Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy** **Date:** March 2023

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>					<b>R-1 Program Element (Number/Name)</b> PE 0605866N / <i>Navy Space &amp; Electr Warfare Supt</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	17.238	27.172	27.504	-	27.504	27.435	26.712	27.014	27.562	Continuing	Continuing
0706: <i>EMC &amp; RF Mgmt</i>	0.000	2.550	2.584	2.686	-	2.686	2.620	2.648	2.687	2.733	Continuing	Continuing
3239: <i>Real-Time Spectrum Operations (RTSO)</i>	0.000	14.688	24.588	24.818	-	24.818	24.815	24.064	24.327	24.829	Continuing	Continuing

## **A. Mission Description and Budget Item Justification**

Project 0706, Electromagnetic Compatibility (EMC) and Radio Frequency (RF) Management Program. This project develops tools, processes, EMC Criteria for Navy Systems, and algorithms to identify and mitigate Electromagnetic Interference (EMI) sources for Navy systems and platforms.

Project 3239, The Real-Time Spectrum Operations (RTSO) effort researches and develops software to automate analyses of the electromagnetic (EM) environmental effects (E3) between shipboard transmitters and receivers on ships and the interactions of the EM systems within the other systems installed on units within a strike group. RTSO develops and updates numerical models, algorithms, data bases, and software aiding and supporting warfighter spectrum planning, sensing and monitoring of the EM environment, EM spectrum characterization and prediction, and managing and maneuvering within the EM spectrum.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	17.653	27.175	27.650	-	27.650
Current President's Budget	17.238	27.172	27.504	-	27.504
Total Adjustments	-0.415	-0.003	-0.146	-	-0.146
• Congressional General Reductions	-	-0.003			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.415	0.000			
• Program Adjustments	0.000	0.000	-0.500	-	-0.500
• Rate/Misc Adjustments	0.000	0.000	0.354	-	0.354

## **Change Summary Explanation**

FY24 program adjustments: -\$500K reduction to Real Time Spectrum Operations (RTSO)

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605866N / Navy Space & Electr Warfar e Supt				Project (Number/Name) 0706 / EMC & RF Mgmt			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0706: EMC & RF Mgmt	0.000	2.550	2.584	2.686	-	2.686	2.620	2.648	2.687	2.733	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Electromagnetic Compatibility (EMC) and Radio Frequency (RF) Management Program. This project develops tools, processes, and algorithms to identify and mitigate Electromagnetic Interference (EMI) sources for Navy systems and platforms.

(a) It will support the research, development, testing, and evaluation of electromagnetic compatibility criteria and frequency management to support afloat electromagnetic spectrum operations. The RF EMC criteria will be enhanced to include new RF systems and to comply with fleet operational requirements and streamline Strike Force frequency management processes. It will provide automated Spectrum Management (SM) compatibility criteria for development of operational task communication and radar/weapon plans to support fleet deployments, exercises, and contingency operations. It will provide identification and mitigation of EMI in Navy, North Atlantic Treaty Organization (NATO), Allied, Ashore and Joint Combat Operations. It will provide analysis related to spectrum reallocation proposals to assess impacts on Navy operations and systems, as well as for the Spectrum Supportability Risk Assessments. It will assist numbered fleet commands and DoD commands with determination of EMC criteria and processes to maximize ships' ability to operate in contested and congested environments.

(b) It will support the Shipboard Electromagnetic Compatibility Improvement Program (SEMCIP) to identify, engineer, and evaluate effectiveness of potential EMI corrections. The program also characterizes and quantifies the operational impact of EMI problems on system's mission performance.

(c) It will support the Nuclear Electromagnetic Pulse (EMP) Survivability Program. The program assesses the EMP survivability of all mission critical systems and funds development of a hardness assurance and maintenance program. It will develop improved modeling capability to reduce hardness validation costs at delivery and over the lifetime of the system/platform. The program develops new and updated design criteria, test methodology, test limits, and survivability validation procedures for all Navy systems, ships, submarines and shore facilities.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> RF Management	0.404	0.385	0.409	0.000	0.409
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b>					
- Provide engineering analyses and recommendations for updating Littoral Radiation Restrictions for numbered fleet areas of responsibility. Document the worldwide Littoral Radiation Restrictions and provide to the fleet and to Real-Time Spectrum Operations (RTSO).					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605866N / Navy Space & Electr Warfare Supt		Project (Number/Name) 0706 / EMC & RF Mgmt				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div><div>- Conduct engineering analyses and testing to determine EMC criteria for Navy assets, such as AN/SPN-50.</div><div>- Document EMC criteria in NAVSEA Operational Publication S9407-AA-GYE-010/(S) OP-3840 "Electromagnetic Compatibility Criteria for Navy Systems (U)".</div><div>- Revise and update Standing Operational Tasking (OPTASK) Communications Plans to accommodate Navy equipment and host nation regulations.</div><div>- Provide impact assessments and analysis for new spectrum-dependent equipment, spectrum policy updates, and changing geopolitical conditions.</div><div>- Serve as the Navy's subject matter experts for spectrum de-confliction, EMC, and tactical spectrum management within Navy, DoD, and external components.</div><div>- Represent Navy tactical spectrum management requirements in various working groups and venues, including Electromagnetic Battle Management (EMBM), electromagnetic maneuver warfare (EMW), and electromagnetic spectrum operations (EMSO) efforts. Integrate Navy spectrum management requirements into joint and DoD enterprise architectures and processes.</div></div> <div><div>FY 2024 Base Plans:</div><div>- Provide engineering analyses and recommendations for updating Littoral Radiation Restrictions for numbered fleet areas of responsibility. Document the worldwide Littoral Radiation Restrictions and provide to the fleet and to Real-Time Spectrum Operations (RTSO).</div><div>- Continue to conduct engineering analyses and testing to determine EMC criteria for Navy assets, such as AN/SPN-50.</div><div>- Document EMC criteria in NAVSEA Operational Publication S9407-AA-GYE-010/(S) OP-3840 "Electromagnetic Compatibility Criteria for Navy Systems (U)".</div><div>- Continue to revise and update Standing Operational Tasking (OPTASK) Communications Plans to accommodate Navy equipment and host nation regulations.</div><div>- Continue to provide impact assessments and analysis for new spectrum-dependent equipment, spectrum policy updates, and changing geopolitical conditions.</div><div>- Serve as the Navy's subject matter experts for spectrum de-confliction, EMC, and tactical spectrum management within Navy, DoD, and external components.</div><div>- Represent Navy tactical spectrum management requirements in various working groups and venues, including Electromagnetic Battle Management (EMBM), electromagnetic maneuver warfare (EMW), and electromagnetic spectrum</div></div>								

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605866N / Navy Space & Electr Warfare Supt		Project (Number/Name) 0706 / EMC & RF Mgmt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
operations (EMSO) efforts. Integrate Navy spectrum management requirements into joint and DoD enterprise architectures and processes.						
FY 2024 OCO Plans: N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: .024 increase provides additional hours for EMC criteria development, testing.						
Title: Shipboard Electromagnetic Compatibility Improvement Program (SEMCIP)		1.219	1.245	1.307	0.000	1.307
Articles:		-	-	-	-	-
FY 2023 Plans: - Continue characterization of technical impacts of new, high priority shipboard EMI problems reported and predicted from to date. - Develop new EMI fixes and evaluate their effectiveness in mitigating shipboard EMI. - Implement Unmanned Bit Error Rate Test (UBERT) capability into Ship EMC Certification to characterize EMI impacts on SATCOM links. - Evaluate Unmanned Bit Error Rate Test (UBERT) capability for adaptive, shipboard EBEM replacement modem. - Evaluate and improve autonomous EMI detection capabilities for radar and communication systems in order to reduce test time and quantify likelihood over extended periods, like ship underway periods or operational deployments. - Continue development and implementation of high frequency (HF) intermodulation (IMI) test methods and standards, and alternate test methods applicable to digital HF receivers.						
FY 2024 Base Plans: - Continue characterization of technical impacts of new, high priority shipboard EMI problems reported and predicted from to date. - Continue to develop new EMI fixes and evaluate their effectiveness in mitigating shipboard EMI. - Continue to implement Unmanned Bit Error Rate Test (UBERT) capability into Ship EMC Certification to characterize EMI impacts on SATCOM links. - Continue to evaluate Unmanned Bit Error Rate Test (UBERT) capability for adaptive, shipboard EBEM replacement modem.						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605866N / Navy Space & Electr Warfare Supt		Project (Number/Name) 0706 / EMC & RF Mgmt		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Continue to evaluate and improve autonomous EMI detection capabilities for radar and communication systems in order to reduce test time and quantify likelihood over extended periods, like ship underway periods or operational deployments.</div> <div>- Continue development and implementation of high frequency (HF) intermodulation (IMI) test methods and standards, and alternate test methods applicable to digital HF receivers.</div> <div>FY 2024 OCO Plans: N/A</div> <div>FY 2023 to FY 2024 Increase/Decrease Statement: .062 increase provides more engineering hours supporting core capability to achieve electromagnetic compatibility (EMC) by effective prevention, identification, characterization, resolution, and control of electromagnetic interference (EMI) impacting U.S. Naval surface and strike groups in joint and littoral operations</div>						
<div>Title: Electromagnetic Pulse (EMP) Survivability</div> <div>Articles:</div> <div>FY 2023 Plans:<div>- Continue research, development and refinement of new Hybrid-Based High Altitude Electrometric Pulse (HEMP) evaluation technique to evaluate HEMP hardness of navy ships via a low-cost, low potential for equipment damage and quicker method of analysis (decreasing costs in the performance of tests).</div><div>- Continue research, development and investigation of small, inexpensive measurement devices for incorporation into Hybrid-Based HEMP evaluation methodology.</div><div>- Validate Cable Shield Transfer Impedance in-situ testing for evaluating shipboard cables.</div><div>- Investigate Parametric Cable measurement techniques.</div><div>- Investigate usage of magneto-optic media High Altitude Electrometric Pulse (HEMP)-Induced Current Sensors to observe magnetic-field onboard ships using swept continuous wave testing.</div><div>- Research and develop integration of Continuous Wave Antenna into EXpanded EMP Test - Capabilities (EXEMPT C) effort for ship High Altitude Electrometric Pulse (HEMP) health testing and demonstration.</div><div>- Integrate Digital Data re-construction of magnetic tapes to computer format from the early 1990's Electromagnetic Pulse Radio Frequency (RF) Environment Simulator for Ships (EMPRESS) II into the validation of Computational Electromagnetics modeling.</div></div> <div>FY 2024 Base Plans:</div>		0.927	0.954	0.970	0.000	0.970
		-	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605866N / Navy Space & Electr Warfare Supt		<b>Project (Number/Name)</b> 0706 / EMC & RF Mgmt	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<ul style="list-style-type: none"> <li>- Continue research, development and refinement of new Hybrid-Based High Altitude Electrometric Pulse (HEMP) evaluation technique to evaluate HEMP hardness of navy ships via a low-cost, low potential for equipment damage and quicker method of analysis (decreasing costs in the performance of tests) and identify potential EMP vulnerabilities and mitigating solutions.</li> <li>- Continue research, development and investigation of small, inexpensive measurement devices for incorporation into Hybrid-Based HEMP evaluation methodology.</li> <li>- Continue to validate Cable Shield Transfer Impedance in-situ testing for evaluating shipboard cables.</li> <li>- Continue to investigate Parametric Cable measurement techniques.</li> <li>- Continue to investigate usage of magneto-optic media High Altitude Electrometric Pulse (HEMP)-Induced Current Sensors to observe magnetic-field onboard ships using swept continuous wave testing.</li> <li>- Research and develop integration of Continuous Wave Antenna into EXpanded EMP Test - Capabilities (EXEMPT C) effort for ship High Altitude Electrometric Pulse (HEMP) health testing and demonstration.</li> <li>- Integrate Digital Data re-construction of magnetic tapes to computer format from the early 1990's Electromagnetic Pulse Radio Frequency (RF) Environment Simulator for Ships (EMPRESS) II into the validation of Computational Electromagnetics modeling.</li> </ul> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> .016 increase due development of ship HEMP health demonstration planned for out-year.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	2.550	2.584	2.686	0.000	2.686
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b> N/A					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605866N / Navy Space & Electr Warfare Supt				Project (Number/Name) 3239 / Real-Time Spectrum Operations (RTSO)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3239: Real-Time Spectrum Operations (RTSO)	0.000	14.688	24.588	24.818	-	24.818	24.815	24.064	24.327	24.829	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Real-Time Spectrum Operations (RTSO) develops tools, processes, and algorithms to conduct spectrum planning, sense and monitor the electromagnetic (EM) environment, characterize and predict electromagnetic (EM) environmental effects (E3), and manage and maneuver to avoid and mitigate electromagnetic interference (EMI) and EM vulnerability of Navy systems and platforms.

RTSO supports Navy and Marine Corps Electromagnetic Spectrum Operations for global spectrum usage and allocation planning. The effort researches the effects between shipboard transmitters and receivers on ships and EM systems interactions within the other systems installed on strike ship units. RTSO developed a capability to sense and monitor shipboard EM spectrum usage and validate spectrum plans to support Emissions Control (EMCON) within the strike group. RTSO software validates and displays spectrum plan compliance with a spectrum common operational picture. This EM spectrum management aid, combined with an Own Force Monitoring (OFM) sensor input, supports Battlespace Awareness and Information Operations. These self-awareness and validation capabilities greatly enhance the Navy's ability to perform command and control of the EM spectrum warfighting domain.

FY 2024 will develop and test Spectral Warrior capability replacements and begin to deploy OFM capability to non- Ship's Signal Exploitation Equipment (SSEE) platforms. Additionally, funds will allow further Joint Capability Technology Demonstration (JCTD) Radiant Touchstone development efforts. (Details held at a higher classification)

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Real-Time Spectrum Operations (RTSO)	14.688	24.588	24.818	0.000	24.818
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> - Begin to develop a permanent solution to Spectral Warrior capability replacements and integration efforts to deploy Own Force Monitoring (OFM) capability to non- Ship's Signal Exploitation Equipment (SSEE) platforms. (Details held at a higher classification) - Begin to test, integrate, and transition Ship's Signal Exploitation Equipment (SSEE) Own Force Monitoring (OFM) capability to non-SSEE platforms. Fielding designs meet critical Fleet requirements for Emissions Control (EMCON) validation and Tactical Situation (TACSIT) management on all non-Ship's Signal Exploitation					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023					
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605866N / Navy Space & Electr Warfare Supt		Project (Number/Name) 3239 / Real-Time Spectrum Operations (RTSO)				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Equipment (SSEE) capable ships, to meet validated Own Force Monitoring (OFM) capability requirements outlined in U.S. Fleet Forces Command / Commander, U.S. Pacific Fleet RTSO Requirements.</p> <p>- Continue transition efforts for an OFM capability integrated with SSEE systems. Fielding designs meet critical Fleet requirements for Emissions Control (EMCON) validation and TACSIT management on all non-capable ships, to meet validated OFM capability requirements outlined in U.S. Fleet Forces Command / Commander, U.S. Pacific Fleet RTSO Requirements.</p> <p>- Continue to research, develop, enhance and refine Cloud architecture, Spectrum Common Operational Picture (COP), Live data, Detect, counter-detect (1-to-1), Time slide, and Network nodes</p> <p>- Continue research and development of proof-of-concept capabilities for spectrum mission planning decision aids and intelligent sectoring/cut-outs for radiating systems</p> <p>- Continue research and development efforts for models to estimate effective RF performance ranges of spectrum dependent systems in the complex electromagnetic environment (one-on-one and multi-on-one effects)</p> <p>- Continue to participate in LOEs to demonstrate incremental capability to Fleet users</p> <p>- Continue development of an architecture supporting mission module delivery of RTSO capability on all platforms</p> <p>- Finalize RTSO v2.0 release to ashore and afloat Fleet users in a cloud environment</p> <p><b>FY 2024 Base Plans:</b></p> <p>- Continue developing a permanent solution to non-permanent Spectral Warrior capabilities, detecting electromagnetic interference (EMI) of satellite communications and integration efforts to deploy Own Force Monitoring (OFM) capability to non- Ship's Signal Exploitation Equipment (SSEE) platforms. (Details held at a higher classification)</p> <p>- Continue testing, integration, and transition of SSEE OFM capability to non-SSEE platforms. Fielding designs will meet critical Fleet requirements for EMCON validation and Tactical Situation (TACSIT) management on all non-SSEE capable ships, to meet validated OFM capability requirements outlined in U.S. Fleet Forces Command / Commander, U.S. Pacific Fleet RTSO Requirements</p> <p>- Continue transition efforts for an OFM capability integrated with SSEE systems on surface combatants and force level platforms to meet validated OFM capability requirements outlined in U.S. Fleet Forces Command / Commander, U.S. Pacific Fleet RTSO Requirements</p> <p>- Continue research, development, enhancement and refinement of RTSO software cloud architecture, spectrum common operational picture (COP), live data ingest, detection and counter-detection (1-to-1), time slide, and network nodes</p>								



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy						<b>Date:</b> March 2023					
<b>Appropriation/Budget Activity</b> 1319 / 6				<b>R-1 Program Element (Number/Name)</b> PE 0605866N / Navy Space & Electr Warfare Supt			<b>Project (Number/Name)</b> 3239 / Real-Time Spectrum Operations (RTSO)				
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<ul style="list-style-type: none"> <li>- Continue research and development of proof-of-concept capabilities for spectrum mission planning decision aids and intelligent sectoring/cut-outs for radiating systems</li> <li>- Continue research and development efforts for models to estimate effective RF performance ranges of spectrum dependent systems in the complex electromagnetic environment (one-on-one and multi-on-one effects)</li> <li>- Continue to participate in LOEs to demonstrate incremental capability to Fleet users</li> <li>- Continue development of a software architecture supporting mission module delivery of RTSO capability on all platforms</li> <li>- Finalize RTSO v2.1 release to afloat Fleet users in a cloud environment, including integration testing, cybersecurity authorization, and completing deployment configurations for all deployment environments</li> <li>- Begin engineering work to validate current design for at least seven different ship classes.</li> <li>- Begin engineering research and development integrating RTSO software and outputs with other software applications</li> <li>- Hold fleet user engagements to gain sailor feedback on latest software capabilities to improve usability, functionality, and applicability to user requirements</li> </ul> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Real-Time Spectrum Operations (RTSO) FY 2023 to FY 2024 increase (+\$0.23M) is attributed to beginning engineering research and development integrating RTSO software and outputs with other software applications.</p>											
<b>Accomplishments/Planned Programs Subtotals</b>						14.688	24.588	24.818	0.000	24.818	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024 Base</u>	<u>FY 2024 OCO</u>	<u>FY 2024 Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN/2360: Shipboard IW Exploit	261.735	289.974	379.230	-	379.230	368.023	397.560	418.278	429.876	Continuing	Continuing
<b>Remarks</b>											
<b>D. Acquisition Strategy</b> N/A											

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	PE 0605867N / SEW SURVEILLANCE/RECONNAISSANCE SUPPORT											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	8.065	7.186	9.183	-	9.183	9.247	8.472	8.522	8.712	Continuing	Continuing
1034: <i>TAC SAT Recon Office</i>	0.000	8.065	7.186	9.183	-	9.183	9.247	8.472	8.522	8.712	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The details of this program element are classified CUI and are submitted annually to Congress in the classified budget justification books.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	8.065	7.186	10.522	-	10.522
Current President's Budget	8.065	7.186	9.183	-	9.183
Total Adjustments	0.000	0.000	-1.339	-	-1.339
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	-1.000	-	-1.000
• Rate/Misc Adjustments	0.000	0.000	-0.339	-	-0.339

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> <i>1319: Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> <i>PE 0605873M / Marine Corps Program Wide Supt</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	42.480	39.744	34.976	-	34.976	31.709	31.598	31.451	32.107	Continuing	Continuing
0030: <i>Studies &amp; Analysis/MC</i>	0.000	2.627	3.176	3.595	-	3.595	4.022	4.103	4.185	4.269	Continuing	Continuing
0033: <i>OT&amp;E Support</i>	0.000	15.338	15.738	16.356	-	16.356	16.528	16.587	16.608	16.967	Continuing	Continuing
2330: <i>Chem Bio Consequence Mgmt</i>	0.000	1.623	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.623
3009: <i>Marine Corps Wargaming Capability</i>	0.000	19.230	17.306	11.684	-	11.684	6.069	6.190	6.313	6.439	Continuing	Continuing
3783: <i>Information Environment Strategy, Policy and Governance</i>	0.000	3.662	3.524	3.341	-	3.341	5.090	4.718	4.345	4.432	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element (PE) provides the analytical foundation for the Marine Corps Studies System (MCSS), including mandated Mission Area Analyses and Cost and Operational Effectiveness Analyses. It also includes capabilities that facilitate force development, war plan assessment, and concept and combat development. The MCSS is the front end of the Marine Corps's acquisition system. This PE also supports the material acquisition process as follows: managing Marine Corps Operational Test and Evaluations; providing Chemical and Biological Consequence Management capabilities for Weapons of Mass Destruction incident response forces; development of the Wargaming capability; and conducting analyses to inform the development and integration of Marine Corps Information Environment Operations (IE Ops).

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	43.524	39.744	31.311	-	31.311
Current President's Budget	42.480	39.744	34.976	-	34.976
Total Adjustments	-1.044	0.000	3.665	-	3.665
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.044	0.000			
• Program Adjustments	0.000	0.000	4.486	-	4.486
• Rate/Misc Adjustments	0.000	0.000	-0.821	-	-0.821

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt
<div>Change Summary Explanation</div> <div>The decrease of \$4.768M from FY 2023 to FY 2024 is primarily due to the completion of baselining and finalizing the wargaming software prototype system for Marine Corps Wargaming Capability.</div>		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 0030 / Studies & Analysis/MC			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0030: Studies & Analysis/MC	0.000	2.627	3.176	3.595	-	3.595	4.022	4.103	4.185	4.269	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Marine Corps Requirements Oversight Council (MROC) established Operations Analysis Directorate (OAD), as the sole operations research, analytic support, and studies management program for the Marine Corps Study System (MCSS). MCSS analysis is achieving greater efficiency, productivity, and innovation through operations research methodologies such as: operational analysis, statistical analysis, multi-objective decision methods, optimization, cost analysis, and a wide range of computer-based models and combat simulations ensuring the optimization of resources now and in the future. Analyses spans the spectrum of conflict in a Joint, Interagency, Intergovernmental, and Multinational (JIIM) context to inform critical senior level decision makers of current and future national security issues and provides unique and distinct analytic capabilities that enable the collaboration and sharing of analyses that reduces the duplication of topics that are of broad interest. MCSS is an integral part of the Marine Corps and Joint Chiefs decision-making processes to organize, man, train, equip, sustain, and transform resources from the current to the future force.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Studies & Analysis/MC  Articles:  Description: The Marine Corps Studies System (MCSS) supports the Commandant's Force Design 2030 plan. Executive Order 13589, Department of Defense (DoD) Directive 8260.05 Support for Strategic Analysis, and DoD Instruction 8260.2 Implementation of Data Collection, Development, and Management for Strategic Analyses, directs analytic teams apply the following analytic principles: Transparency, Consistency, Integration, use of Standardized and Accepted Methods, thorough consideration of Quantitative and Qualitative Factors, and documentation of Assumptions and Constraints. Program provides research and analysis and findings to ensure a greater understanding of issues and alternatives concerning force design, tactics, wargaming, strategies, intelligence, weapon selection and retention, systems' programs, cyber intel, and resource allocation. Efforts focus on current and future USMC mission requirements and the need for comprehensive analyses that meets the Marine Corps' strategic goals, supports and protects forces in theater, and utilizes funds efficiently.  FY 2023 Plans: Continue: FY 2022 analytic efforts requested by the CMC, DC, CD&I, HQMC, and FMF senior leadership across the Marine Corps with comprehensive analysis in the areas of: - Space based Capabilities;								2.627	3.176	3.595	0.000	3.595
								-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt		Project (Number/Name) 0030 / Studies & Analysis/MC		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<ul style="list-style-type: none"><li>- Marine Corps Enterprise (MCEN) cyber operations;</li><li>- Modernization of Munitions Requirements;</li><li>- Intelligence Satellite Communications;</li><li>- Maneuver, Logistics and Seabasing Capabilities;</li><li>- Marine Air and Ground Task Force (MAGTF) Capabilities and Readiness Strategies;</li><li>- Force Design;</li><li>- Wargaming, Readiness, MCWL, and NCIP-MC Wargaming Modeling and Simulation;</li><li>- Training, Education, and Talent Management;</li><li>- Health of the Force;</li><li>- Field Logistics;</li><li>- Mission &amp; Capabilities Integration;</li><li>- Operational Cyber Weapons Systems;</li><li>- Joint Services Strategic Planning.</li></ul> <ul style="list-style-type: none"><li>- Complete: Synthetic Operations Research Model Phase III (STORM) that supports analysis involving irregular warfare missions executed in a future Defense Planning Guidance scenario.</li><li>- Complete: Phase I of Joint Services wargames modeling and simulation analysis and support. Provided analytic input to game design and recommend best practices for the use of methods, models, and tools (MMTs) to meet each wargame's stated objectives.</li><li>- Complete: Firm, concise statistical data and facts that enable the Marine Corps to make informed decisions in the areas of: Mission Capability Packages, (MCPs); Investment Strategy Aviation; Maneuver; Logistics; Investment Strategy; Joint Capability Assessments (JCAs), and Future Force Development.</li><li>- Complete: Space Domain modeling and improvements to the completed of MARFORSPACE component command.</li><li>- Complete: Aviation efforts such as F-35 and CH-53K.</li><li>- Complete: Undersea Warfare model of communication capabilities required to relay information from the undersea sensors to a command element or undersea asset. Analyzed opportunities for redundancies and alternative pathways to relay the information from sensor to command element.</li><li>- Complete: Naval Capabilities Integrated Process, USMC, Electromagnetic Warfare Study: Identify and explore gaps in current electromagnetic capabilities and/or capacity in the future operating environment, identify mitigations, and opportunities for exploitation.</li><li>- Complete: Marine Corps Modeling and Simulation Joint Services contract Phase I;</li></ul>						





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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt		Project (Number/Name) 0030 / Studies & Analysis/MC		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<div>- Training, Education, and Talent Management;</div> <div>- Health of the Force;</div> <div>- Field Logistics;</div> <div>- Mission &amp; Capabilities Integration;</div> <div>- Operational Cyber Weapons Systems;</div> <div>- Joint Services Strategic Planning.</div> <div>Complete:</div> <div>- Synthetic Operations Research Model Phase V (STORM) that supports analysis involving irregular warfare missions executed in a future Defense Planning Guidance scenario.</div> <div>- Phase II of Joint Services wargames modeling and simulation analysis and support. Provided analytic input to game design and recommend best practices for the use of methods, models, and tools (MMTs) to meet each wargame's stated objectives.</div> <div>- Firm, concise statistical data and facts that enable the Marine Corps to make informed decisions in the areas of: Mission Capability Packages, (MCPs); Investment Strategy Aviation; Maneuver; Logistics; Investment Strategy; Joint Capability Assessments (JCAs), and Future Force Development.</div> <div>- Utility of multi-domain Mobile Reconnaissance units possessing OPF-I, light-weight vehicles, unmanned air and surface systems, boats, and other capabilities necessary to succeed in a contested information environment;</div> <div>- Unmanned Systems and Warfighting Investments and Divestments;</div> <div>- Maritime, multi-domain reconnaissance constructs and activities to enhance the ability of the Stand-in force to dominate the information environment;</div> <div>- Leveraging space domain and artificial intelligence to establish and maintain dominance over existing and emerging threats;</div> <div>- Marine Corps Modeling and Simulation Joint Services contract Phase II;</div> <div>Initiate:</div> <div>- Synthetic Operations Research Model Phase VI (STORM) that supports analysis involving irregular warfare missions executed in a future Defense Planning Guidance scenario. These missions include information operations, offensive tactical and operational CYBER operations, foreign internal defense, special direct action arising from intelligence gathered from Human Intelligence (HUMINT) and technical (SIGINT, CYBER) means.</div> <div>- Phase III of Joint Services wargames modeling and simulation analysis and support. Provided analytic input to game design and recommend best practices for the use of methods, models, and tools (MMTs) to meet each wargame's stated objectives.</div> <div>- Unmanned Systems and Warfighting Investments and Divestments;</div>						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605873M / Marine Corps Program Wide Supt		<b>Project (Number/Name)</b> 0030 / Studies & Analysis/MC		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<ul style="list-style-type: none"> <li>- Maritime, multi-domain reconnaissance constructs and activities to enhance the ability of the Stand-in force to dominate the information environment;</li> <li>- Leveraging space domain and artificial intelligence to establish and maintain dominance over existing and emerging threats;</li> <li>- Marine Corps Modeling and Simulation Joint Services contract, Phase III.</li> <li>- Naval Capabilities Integrated Process, USMC, Electromagnetic Warfare Study Phase II.</li> <li>- Provide expert analytical support required Ad Hoc by the CMC and DC to meet emergent tasks.</li>   <li>- Purchase of Data Center IT equipment required to initiate and execute highly complex modeling and simulation programs.</li> </ul> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Increase in funding from FY 2023 to FY 2024 is for continuation of Phase III Joint Services Wargaming and Phase IV STORM contract. Higher complexity analyses and the requirement for skilled professional analysts are required for progression. Additional phases on initiated studies may be required to achieve necessary complete analyses of issues.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		2.627	3.176	3.595	0.000	3.595
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 0033 / OT&E Support			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0033: OT&E Support	0.000	15.338	15.738	16.356	-	16.356	16.528	16.587	16.608	16.967	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Marine Corps Operational Test and Evaluation Activity (MCOTEA) supports the material acquisition process by managing the Marine Corps Operational Test (OT) programs for Acquisition Categories (ACAT) I through ACAT IV (less OT of manned aircraft) and performs other functions that may be directed by the Commandant of the Marine Corps. The primary purpose of Operational Test and Evaluation (OT&E) is to provide information to the Milestone Decision Authority (MDA) regarding the Operational Effectiveness (OE) and Operational Suitability (OS) of the system addressed at a decision point. MCOTEA must ensure that the Marines in the Operating Forces receive the very best possible equipment and support. MCOTEA must also ensure each system proposed for acquisition is tested adequately, evaluated objectively, and reported independently.

Marine Corps Operational Test and Evaluation Activity (MCOTEA) is the only unit that provides the Marine Corps with required operational test and evaluation (OT&E) capability, ensuring the Marine Corps is compliant with laws and regulations, and ensuring that training and equipment are operationally effective, relevant, and suitable. Additionally, MCOTEA's early involvement, coordination, and oversight in developmental testing and evaluation of new combat and combat support systems ensures that our Marines are the best trained, and have the best equipment, with the lowest test costs for taxpayers. Finally, MCOTEA's support of rapid acquisitions ensures that Marines in the fight are supported with the newest and most advanced equipment and that the Marine Corps is compliant with regulations.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> MCOTEA	15.338	15.738	16.356	0.000	16.356
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Continue evaluating, quantifying, and reporting on programs for the operational effectiveness, suitability, and survivability of planned acquisitions to meet warfighting capabilities and will be providing Milestone Decision Authority (MDAs) to programs that are inherently governmental and a comprehensive understanding of operational risk associated with ACAT programs.					
<b>FY 2024 Base Plans:</b> Continue evaluating, quantifying, and reporting on programs for the operational effectiveness, suitability, and survivability of planned acquisitions to meet warfighting capabilities and will be providing Milestone Decision					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605873M / Marine Corps Program Wide Supt		<b>Project (Number/Name)</b> 0033 / OT&E Support		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Authority (MDAs) to programs that are inherently governmental and a comprehensive understanding of operational risk associated with ACAT programs.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase from FY 2023 to FY 2024 is a result of civilian pay/benefits/awards rate increases						
<b>Accomplishments/Planned Programs Subtotals</b>		15.338	15.738	16.356	0.000	16.356
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 2330 / Chem Bio Consequence Mgmt			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2330: Chem Bio Consequence Mgmt	0.000	1.623	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.623
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> The Family of Incident Response Systems (FIRS) consists of equipment, systems, and services designed to provide Weapons of Mass Destruction (WMD) incident response forces the capabilities needed to effectively respond to a terrorist attack using Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE). FIRS meets the mission requirements for the detection; mass casualty decontamination; force protection; responder inter-agency interoperability; Command, Control, Communications, Computers & Intelligence (C4I); urban search and rescue; medical and general support requirements needed by these forces to mitigate the effects of a CBRNE terrorist attack. FIRS relies primarily on Commercial Off-The-Shelf/Non-Developmental Items (COTS/NDI) equipment and systems that meet the particular mission requirements of Consequence Management (CM). Nuclear, Biological, and Chemical (NBC) systems are adopted if they meet the CM mission requirements. FIRS Research & Development effort allows the program to keep abreast of emerging technologies in the commercial sector and address operational capability gaps that cannot be met by commercial items.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	
<b>Title:</b> FIRS: Family of Incident Response Systems							1.623	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							1.623	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt	Project (Number/Name) 2330 / Chem Bio Consequence Mgmt
D. Acquisition Strategy N/A		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 3009 / Marine Corps Wargaming Capability			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3009: Marine Corps Wargaming Capability	0.000	19.230	17.306	11.684	-	11.684	6.069	6.190	6.313	6.439	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Note**

Previously executed within Proj 0030 Studies & Analysis/MC

**A. Mission Description and Budget Item Justification**

The enhanced Wargaming Capability (WGC) facilitates Force Design by utilizing advanced modeling and simulation systems and analytic assessments of current Operation Plans, Concepts of Operations, future operational and functional concepts, and operational and technology-based approaches. These results will refine our Force Design through our campaign of learning and increase research capacity to maintain the USMC as a "force-in-readiness." The WGC program office is unique from other programs in that the program office is responsible for the system of systems within the facility as well as coordinating the unique manpower requirements. The USMC WGC consists of Wargaming software, model, and simulation tools and systems, a Wargaming and Analysis Center (MILCON Project P-719), and the necessary personnel supporting the new capability.

WGC will provide an enhanced basis for analytically informed decision support to capability development prioritization and resourcing. The WGC program acquisition strategy utilizes 10 U.S.C 2302 Middle Tier of Acquisition (MTA). In 3QFY23, the program plans on transitioning to Rapid Fielding under the MTA. The overarching strategy consists of four phases: Phase I: Risk Reduction Prototyping (FY 2019 - FY 2020); Phase II: Integrated Prototyping (FY 2020 - FY 2022); Phase III: Follow-on Baseline/Production (FY 2023 - FY 2025) Phase IV: Sustainment/Operations (FY 2026+).

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Wargaming Capability	19.230	17.306	11.684	0.000	11.684
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> FY 2023 plan consists of funding to execute a eight-month period of performance to baseline/finalize (enhance and refine) the wargaming software prototype in preparation for Production Baseline Review (PBR) to establish the initial Product Baseline (iPBL) of the system. Major milestones during this period are: (a) Test Readiness Review to evaluate the readiness of the prototype to proceed into an Operational Demonstration (OpsDemo)/ cyber evaluation; (b) OpsDemo of the vendor's final prototype system; (c) conduct a PBR to establish the iPBL based upon system's performance specification requirements; and (d) conduct a Rapid Fielding designation review and receive a production decision from the acquisition decision authority. In FY 2023, the OpsDemo and					



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy			<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605873M / Marine Corps Program Wide Supt		<b>Project (Number/Name)</b> 3009 / Marine Corps Wargaming Capability	

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>cyber evaluation of the final prototyped system will lead to a wargaming software production system in 4Q FY 2023, which will utilize FY 2023 PMC for integration, testing, installation, and accreditation activities in support of a single Secret Wargame for IOC declaration in FY 2024. Additionally, FY 2023 RDTE will fund development/ integration of conceptual models and capability enhancements. Conceptual model development and capability enhancements are required to support FY 2025 Full Operational Capability (FOC) objectives and evaluate additional tools and models that may provide enhanced fidelity of the wargaming software production system's synthetic environment used to support Force Design decisions.</p> <p><b>FY 2024 Base Plans:</b> The FY 2024 RDTE plan continues the development, assessment, and integration of Conceptual Models and other capability enhancements. This RDTE funding will continue to leverage evolving state-of-the-art technologies to meet critical and emerging wargaming requirements and transformational initiatives which facilitate Marine Corps' Force Design 2030. This funding will also support Technology Insertion / Pre-Planned Product Improvement (P3I) initiatives, including hardware enhancements and technological advances of the Information Technology (IT) and Audio-Visual (A/V) infrastructure within the MCWAC facility. The IT and A/V infrastructure integrates the wargaming software materiel solution into the MCWAC and is essential to ensuring optimal functionality in support Force Design decisions. The program will maintain a technology roadmap requirement to continue development of the Conceptual Models and enhancing the capability with P3I technology advances.</p> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> The decrease from FY 2023 to FY 2024 is primarily due to the completion of baselining the wargaming software prototype.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	19.230	17.306	11.684	0.000	11.684

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/4630: Common Computer Resources-Marine Corps Wargaming Capability	22.676	8.893	15.422	-	15.422	7.763	3.740	3.802	3.878	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy									Date: March 2023		
Appropriation/Budget Activity 1319 / 6				R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 3009 / Marine Corps Wargaming Capability			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Remarks											
RDTE/3009 and PMC/4630 Marine Corps Wargaming Capability reflects funding associated with Middle Tier Acquisition (MTA) rapid prototyping and fielding.											
Marine Corps Wargaming Capability - MTA PMC Funding											
FY 2022: \$22.676M											
FY 2023: \$8.893M											
FY 2024: \$15.422M											
Marine Corps Wargaming Capability - MTA RDTE Funding											
Prev: \$8.238M											
FY 2020: \$11.027M											
FY 2021: \$14.423M											
FY 2022: \$19.230M											
FY 2023: \$17.306M											
FY 2024: \$11.684M											
D. Acquisition Strategy											
The WGC program acquisition strategy takes advantage of 10 U.S.C 2302 Middle Tier of Acquisition (MTA) and was designated a MTA for Rapid Prototyping in May 2019. The overarching strategy consists of four phases: Phase I: Risk Reduction Prototyping (FY 2019 - FY 2020); Phase II: Integrated Prototyping (FY 2020 - FY 2022); Phase III: Follow-on Baselining/Production (FY 2023 - FY 2025); Phase IV: Sustainment/Operations (FY 2026+).											

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605873M / Marine Corps Program Wide Supt				Project (Number/Name) 3783 / Information Environment Strategy, Policy and Governance			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3783: Information Environment Strategy, Policy and Governance	0.000	3.662	3.524	3.341	-	3.341	5.090	4.718	4.345	4.432	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

The Information Environment (IE) is a global, interconnected, complex, continuously changing eco-system that is increasingly connected across our war fighting functions. Given the complexity and the speed of changes in the IE and to address the significant role information now plays in current and future conflicts, a unifying operational and technical strategy must be developed to outpace our adversaries.

Analysis will inform the development and integration of Marine Corps Information Environment Operations (IE Ops) that are guided by the 38th Commandant's Planning Guidance (CPG) and Marine Corps Force Design. Research and analysis efforts support: design and coordinated implementation of an Objective Network to fight on and through a contested environment; design and collaboration on a Naval Tactical Grid and a Joint Tactical Grid; a threat estimate to inform capability development; and analysis to inform the development and fielding of an integrated information capability. These efforts will be accomplished leveraging analytic support from government Labs and Industry to dynamically exploit our National Defense Strategy (NDS) priority operational problems related to the Information Environment through limited user evaluations and functional capability assessments with Marines. In addition, rapid development of capabilities to address problems in the IE Ops will be developed utilizing the Accelerator process which utilizes best commercial practice of design thinking.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Information Environment Strategy	3.662	3.524	3.341	0.000	3.341
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> - Continue to conduct innovation activities across the information domain to develop user centered capabilities for the future operating environment. - Continue to focus on the Information Warfare capabilities within the Deputy Commandant for Information portfolio. This includes the following capabilities; Information Operations, Electronic Warfare, Tactical Command and Control, and Cyber Operations. - Continue rapid development of capabilities to address problems supporting Operations in the Information Environment, utilizing the Accelerator and incubator processes. The Marine Corps Information Environment Enterprise (MCIEE) Information Modernization team will develop and transition software and hardware solutions to Programs of Record.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605873M / <i>Marine Corps Program Wide Supt</i>		<b>Project (Number/Name)</b> 3783 / <i>Information Environment Strategy, Policy and Governance</i>	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>- This funding also supports MCIEE efforts that align to the CMC Force Design 2030.</p> <p><b><i>FY 2024 Base Plans:</i></b></p> <p>- Continue to conduct innovation activities across the information domain to develop user centered capabilities for the future operating environment.</p> <p>- Continue to focus on the Information Warfare capabilities within the Deputy Commandant for Information portfolio. This includes the following capabilities; Information Operations, Electronic Warfare, Tactical Command and Control, and Cyber Operations.</p> <p>- Continue rapid development of capabilities to address problems supporting Operations in the Information Environment, utilizing the Accelerator and incubator processes. The Marine Corps Information Environment Enterprise (MCIEE) Information Modernization team will develop and transition software and hardware solutions to Programs of Record.</p> <p>- This funding also supports MCIEE efforts that align to the CMC Force Design 2030.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> Decrease from FY 2023 to FY 2024 aligns to the scope of the development being conducted.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>		3.662	3.524	3.341	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b> N/A					

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	35.018	40.648	41.331	-	41.331	44.711	44.757	41.302	42.141	Continuing	Continuing
0223: <i>Sub Combat System Improvement (ADV)</i>	0.000	0.119	0.130	0.132	-	0.132	0.131	0.132	0.133	0.123	Continuing	Continuing
0824: <i>Science &amp; Technology Managment</i>	0.000	17.892	23.317	22.079	-	22.079	26.555	26.394	22.754	23.210	Continuing	Continuing
1447: <i>Surf Combatant Combat System Imp</i>	0.000	0.212	0.210	0.096	-	0.096	0.231	0.217	0.183	0.187	Continuing	Continuing
3159: <i>Naval Integrated Fire Control-Counter Air SE&amp;I</i>	0.000	0.208	0.205	0.094	-	0.094	0.227	0.213	0.181	0.185	Continuing	Continuing
3186: <i>Air and Missile Defense Radar</i>	0.000	0.508	0.324	0.461	-	0.461	0.753	0.634	0.556	0.567	Continuing	Continuing
3345: <i>ONR Management Headquarters</i>	0.000	16.079	16.462	18.469	-	18.469	16.814	17.167	17.495	17.869	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Management HQ - R&D program funds management headquarter civilian personnel salaries at the Office of Naval Research (ONR). These personnel support the management of the Naval Science and Technology (S&T) programs. This program also funds management headquarter contractor support for the Integrated Warfare Systems (IWS) Program Executive Office.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	35.614	40.648	39.370	-	39.370
Current President's Budget	35.018	40.648	41.331	-	41.331
Total Adjustments	-0.596	0.000	1.961	-	1.961
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.596	0.000			
• Program Adjustments	0.000	0.000	1.842	-	1.842

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		PE 0605898N / Management HQ - R&D			
• Rate/Misc Adjustments		0.000	0.000	0.119	- 0.119
<b><u>Change Summary Explanation</u></b>					
Funding: The FY 2024 funding increase of \$1,961K supports planned manpower increases, inflation and civilian pay economic assumptions.					
Technical: No significant change.					
Schedule: No significant change.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D				<b>Project (Number/Name)</b> 0223 / Sub Combat System Improvement (ADV)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0223: Sub Combat System Improvement (ADV)	0.000	0.119	0.130	0.132	-	0.132	0.131	0.132	0.133	0.123	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides management headquarters contractor support to the Integrated Warfare Systems (IWS) Program Executive Office (PEO). This work supports Navy Acoustic Superiority and Technology Insertion Initiatives through the application of advanced development and testing of sensors and sensor processing systems supporting tactical control systems improvements. This addresses technology challenges to improve tactical control in littoral and open ocean environments for a variety of operational missions.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Management Headquarters Personnel	0.119	0.130	0.132	0.000	0.132
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b>					
- Continue Advanced Processing Build (APB) development, integration, land-based testing, at-sea testing, and establishment of tactical scenarios.					
<b>FY 2024 Base Plans:</b>					
- Continue Advanced Processing Build (APB) development, integration, land-based testing, at-sea testing, and establishment of tactical scenarios.					
<b>FY 2024 OCO Plans:</b>					
N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>					
- FY 2023 (\$0.130) to FY 2024 (\$0.132M) increase (\$+0.002M) is associated with inflation.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.119	0.130	0.132	0.000	0.132

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

N/A

**Remarks**

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 0223 / Sub Combat System Improvement (ADV)
D. Acquisition Strategy N/A		



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D				Project (Number/Name) 0824 / Science & Technology Managment			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0824: Science & Technology Management	0.000	17.892	23.317	22.079	-	22.079	26.555	26.394	22.754	23.210	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project funds all basic costs of Office of Naval Research Management Headquarters Activity (MHA) non-labor in support of the entire Navy Science & Technology (S&T) program. Through this support, the S&T enterprise pursues the technological advances that enable the Fleet's ability to operate from a position of technological superiority.												
Specifically, funding facilitates the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Science and Technology Management  <b>Articles:</b>  <b>FY 2023 Plans:</b> Continue to provides corporate MHA Non-Labor support in facilitating the purchase of the S&T programs for the Navy to ensure consistent external reporting. Imitate start of new structure within building.  <b>FY 2024 Base Plans:</b> Continue to provides corporate MHA Non-Labor support in facilitating the purchase of the S&T programs for the Navy to ensure consistent external reporting. Inmate start of new structure within building.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Reduction due to CIVPERS adjustments and realignment of funds to Project 3345: ONR Management Headquarters Personnel								17.892	23.317	22.079	0.000	22.079
								-	-	-	-	-
Accomplishments/Planned Programs Subtotals								17.892	23.317	22.079	0.000	22.079

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D	Project (Number/Name) 0824 / Science & Technology Managment
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D				<b>Project (Number/Name)</b> 1447 / Surf Combatant Combat System Imp			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1447: Surf Combatant Combat System Imp	0.000	0.212	0.210	0.096	-	0.096	0.231	0.217	0.183	0.187	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**  
 This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This work supports Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrates new equipment and systems to pace the threat and capture advances in technology.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Management Headquarter Personnel	0.212	0.210	0.096	0.000	0.096
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> Continue to support Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrate new equipment and systems to pace the threat and capture advances in technology.					
<b>FY 2024 Base Plans:</b> Continue to support Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrate new equipment and systems to pace the threat and capture advances in technology.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease due to manning efficiencies as result of Department of Navy Total Workforce Management initiative.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.212	0.210	0.096	0.000	0.096

**C. Other Program Funding Summary (\$ in Millions)**  
 N/A

**Remarks**

**D. Acquisition Strategy**  
 N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D				<b>Project (Number/Name)</b> 3159 / Naval Integrated Fire Control-Counter Air SE&I			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3159: Naval Integrated Fire Control-Counter Air SE&I	0.000	0.208	0.205	0.094	-	0.094	0.227	0.213	0.181	0.185	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This work supports Naval Integrated Fire Control - Counter Air (NIFC-CA) project. Through this support technological advances are being developed enabling PEO IWS to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons.												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Management Headquarter Personnel  <div style="text-align: right;"><b>Articles:</b></div> <b>FY 2023 Plans:</b> Support the Navy's research and development efforts for NIFC-CA's System Engineering, Integration and Test (SEI&T) project. Assist with Test Events At SEA and Land Based Test events.  <b>FY 2024 Base Plans:</b> Support the Navy's research and development efforts for NIFC-CA's System Engineering, Integration and Test (SEI&T) project. Assist with Test Events At SEA and Land Based Test events.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Decrease due to manning efficiencies as result of Department of Navy Total Workforce Management initiative.								0.208 -	0.205 -	0.094 -	0.000 -	0.094 -
<b>Accomplishments/Planned Programs Subtotals</b>								0.208	0.205	0.094	0.000	0.094
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A  <b>Remarks</b>  <b>D. Acquisition Strategy</b> N/A												

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D				Project (Number/Name) 3186 / Air and Missile Defense Radar			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3186: Air and Missile Defense Radar	0.000	0.508	0.324	0.461	-	0.461	0.753	0.634	0.556	0.567	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). Through this support, technological advances are being developed, enabling PEO IWS to deliver "Enterprise" solutions for Naval Warfare Systems that operate seamlessly and effectively within the Fleet and Joint Forces.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Management Headquarter Personnel  Articles:  FY 2023 Plans: Continue risk reduction testing at Advanced Radar Development Evaluation Laboratory (ARDEL), including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity.  FY 2024 Base Plans: Continue risk reduction testing at ARDEL, including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity.  FY 2024 OCO Plans: N/A  FY 2023 to FY 2024 Increase/Decrease Statement: Increase aligns with planned development and test efforts.								0.508	0.324	0.461	0.000	0.461
								-	-	-	-	-
Accomplishments/Planned Programs Subtotals								0.508	0.324	0.461	0.000	0.461

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023	
Appropriation/Budget Activity 1319 / 6				R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D				Project (Number/Name) 3186 / Air and Missile Defense Radar			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• RDT&E/0604522N: Air and Missile Defense Radar (AMDR) System	98.186	90.538	90.174	-	90.174	91.269	84.381	0.000	0.000	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
N/A											

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D				Project (Number/Name) 3345 / ONR Management Headquarters			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3345: ONR Management Headquarters	0.000	16.079	16.462	18.469	-	18.469	16.814	17.167	17.495	17.869	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project funds all basic costs of Office of Naval Research Management Headquarters Activity (MHA) salaries in support of the entire Navy Science & Technology (S&T) program. Through this support, the S&T enterprise pursues the technological advances that enable the Fleet's ability to operate from a position of technological superiority.

Specifically, funding facilitates the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Management Headquarters Personnel	16.079	16.462	18.469	0.000	18.469
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> N/A					
<b>FY 2023 Plans:</b> Continue to provides corporate MHA personnel salaries to facilitate the purchase of the S&T programs for the Navy to ensure consistent external reporting. All Non-Operational HQ is now Major Headquarters Activity (MHA).  Continue to reduce auditability challenges to meet the mandate.					
<b>FY 2024 Base Plans:</b> Continue to provides corporate MHA personnel salaries to facilitate the purchase of the S&T programs for the Navy to ensure consistent external reporting.  Continue to reduce auditability challenges to meet the mandate.					
<b>FY 2024 OCO Plans:</b> N/A					
<b>FY 2023 to FY 2024 Increase/Decrease Statement:</b>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605898N / Management HQ - R&D		Project (Number/Name) 3345 / ONR Management Headquarters		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase due to pricing adjustments and realignment of funds from Project: 0824 Science & Technology Management Personnel.						
Accomplishments/Planned Programs Subtotals		16.079	16.462	18.469	0.000	18.469
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
N/A						



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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	0.000	38.066	52.060	37.340	-	37.340	39.520	26.927	27.156	27.580	Continuing	Continuing
0798: Allied/Coalition Maritime Environment (ACME)	0.000	1.154	1.261	7.317	-	7.317	7.524	7.546	7.569	7.597	Continuing	Continuing
2144: Space & Elec Warfare Engineering	0.000	24.255	27.149	15.167	-	15.167	16.961	4.074	4.020	4.104	Continuing	Continuing
3020: MIDS/JTRS	0.000	0.000	9.800	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	9.800
3319: Fleet Experimentation	0.000	10.412	11.446	12.346	-	12.346	12.530	12.761	12.975	13.235	Continuing	Continuing
3320: TRIDENT Warrior	0.000	2.245	2.404	2.510	-	2.510	2.505	2.546	2.592	2.644	Continuing	Continuing
Program MDAP/MAIS Code: Project MDAP/MAIS Code(s): 554												
A. Mission Description and Budget Item Justification Allied/Coalition Maritime Environment (ACME) 0798: This project promotes interoperability with allied and coalition forces by facilitating maritime interoperability in both processes and communication systems, including emerging capabilities, to counter growing high-end asymmetric threats.  Space & Electronic Warfare (SEW) Engineering 2144: This project is a systems engineering non-acquisition program to develop, test, implement Technical Authority (TA) products, and validate Naval Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), Business Information Technology (IT), and Space System architectures to support naval, Joint and Coalition missions across normal, contested, and degraded cyber/operational environments. The objective of this project is carried out by multiple tasks that ensure development and delivery of Naval Information Warfare (IW) capabilities that are well-integrated, interoperable, secure, and resilient to meet validated warfighting requirements.  MIDS/JTRS 3020: Separate and distinct MIDS program funding requested in PE0604280N Project 3020, the funding within this PE provides for improvements to the TTNT Terminal Software and Waveform in order to out-pace the threat.  The Multifunctional Information Distribution System (MIDS) program office is the Performing Activity in the Navy (Lead Service for Department of Defense (DOD)) Link 16 capability and consists of two (2) product lines, MIDS Low Volume Terminal (LVT) (legacy hardware defined radio) and MIDS Joint Tactical Radio System (JTRS) (software (SW) defined radio).												

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management	
<p>The MIDS JTRS has four channels and adds capabilities such as Link 16 Enhanced Throughput (ET), Link 16 FR, SW programmability, CM, and Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4).</p> <p>MIDS JTRS TTNT, provides an Internet Protocol-based networking capability on tactical aircraft. TTNT is a low latency, high throughput waveform that has the capability to support data exchange between fast-moving tactical aircraft, weapons, and unmanned aircraft, in addition to air, land, and sea-based command and control nodes, in a variety of air-to-air and air-to-ground missions including time sensitive targeting, air warfare, close air support, non-traditional ISR, and anti-surface warfare. TTNT and MIDS JTRS CMN-4 directly supports Naval Integrated Fire Control (NIFC) capability requirements. These capabilities provide Joint Airborne Network-Tactical Edge functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise.</p> <p>The FY2024 funding is to continue the efforts for MIDS JTRS terminals and terminal integration into a classified program.</p> <p>Fleet Experimentation 3319: The U.S. Navy's Fleet Experimentation (FLEX) project advances operational and tactical warfighter capabilities through the experimentation of high payoff initiatives, technologies and concepts, Fleet Concepts of Operations (CONOPS), doctrine, and new tactics, techniques and procedures (TTP). The main focus of FLEX between 2023 and 2028 is to operationalize A Design For Maintaining Maritime Superiority Blue Line of Effort (LOE) through the execution of Fleet Design materiel/non-materiel capability employment.</p> <p>Trident Warrior Project 3320: The U.S. Navy's Trident Warrior (TW) experimentation campaign enables early delivery of capabilities to the warfighter via Fleet-directed Trident Warrior operational events with an emphasis on United States Fleet Forces/Commander Pacific Fleet (USFF/CPF) directed focus areas.</p> <p>Maritime Communications Demonstration Project 3420: Classified Project Maritime Communications Demonstration (MCD) funding was realigned from project 3319 FLEX in FY18. The Expeditionary SFOC Communications is developing and experimenting innovative concepts designed to validate both materiel and non-materiel methodologies to provide resilient command and control within the maritime domain. Identified previous work done within Office of the Secretary of Defense (OSD) channels, and will leverage lessons learned.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy				Date: March 2023	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support		PE 0606355N / Warfare Innovation Management			
B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	38.958	52.060	39.233	-	39.233
Current President's Budget	38.066	52.060	37.340	-	37.340
Total Adjustments	-0.892	0.000	-1.893	-	-1.893
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.003	0.000			
• SBIR/STTR Transfer	-0.889	0.000			
• Program Adjustments	0.000	0.000	-2.847	-	-2.847
• Rate/Misc Adjustments	0.000	0.000	0.954	-	0.954

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management				Project (Number/Name) 0798 / Allied/Coalition Maritime Environment (ACME)			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0798: Allied/Coalition Maritime Environment (ACME)	0.000	1.154	1.261	7.317	-	7.317	7.524	7.546	7.569	7.597	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The ACME program advances Information Warfare (IW) to include Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR); Electronic Warfare (EW); and Cyber Warfare, interoperability with Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS), North Atlantic Treaty Organization (NATO), and other Allied and Coalition partners. The program determines maritime operational gaps with our allies, identifies Doctrine, Organization, Training, Material, Leadership, Personnel, and Facilities (DOTMLPF) solutions with the potential to fill those gaps, and assesses these solutions and associated concepts of operation in laboratory and at-sea environments. The ACME program includes integration and testing in support of joint and Allied war fighting capabilities, including interoperability testing of IW equipment. Allied and joint interoperability is critical for future maritime operations, especially as the United States Navy cooperatively works towards a federated environment through initiatives such as Mission Partner Environment/ NATO Federated Mission Networking (MPE/FMN), Secret and Below Releasable Environment (SABRE), and U.S. Battlefield Information Collection and Exploitation System - eXtended (BICES-X).

Currently, IP connectivity with AUSCANNZUKUS and other Allied/Coalition forces is focused on traditional paths, requiring extensive backhaul through ashore infrastructure. Higher bandwidth solutions suitable for use over tactical networks require development and assessment for emerging coalition and joint interoperability requirements, such as Network Operations Without Shore (NOWS), Denied, Degraded, Intermittent and Low-bandwidth (DDIL) operations, and to counter Anti-Access Area Denial (A2/AD) threats. Increases in data throughput are required for the effective exchange of rich IW data sets and services via Service Oriented Architectures (SOA) within the limitations of High Frequency (HF), Ultra-High Frequency (UHF), and other portions of the radio frequency spectrum, coupled with appropriate Information Assurance and Computer Network Defense (IA/CND) mechanisms. Development and assessment of potential solutions will integrate improved IP capabilities with the Advanced Digital Network Systems (ADNS) and existing international standards (e.g. Allied Communications Publication 200, NATO Standardization Agreements 5066 and 4691). The continued development and refinement of advanced tactical networking technologies and protocols, to include Low Probability of Intercept (LPI), Low Probability of Detection (LPD), and Anti-Jam (AJ) capabilities as well as Automatic Link Establishment (ALE) standards, will provide for a significant improvement in secure data sharing within, and between, coalition maritime elements.

Coalition Warrior Interoperability eXperiment (CWIX) has been integrated with the ACME Program starting in FY24. CWIX efforts are focused on assessing federated Coalition capabilities within the NATO command construct via connected Live, Virtual, Constructive (LVC) capabilities resident in the Combined Federated Battle Laboratories Network (CFBLNet). CWIX also resources engineering activities in cooperation with PEO C4I to integrate USN Expeditionary Mission Partner Environment with US Air Force (USAF) Mission Partner Capabilities Office (MPCO) Enterprise Mission Partner Environment efforts. Additionally, CWIX resourcing enables assessment of NATO Federated Mission Networking Spiral Specifications as they relate to USN Programs of Record via the Coalition Interoperability Assurance and Validation (CIAV) construct in conjunction with Joint Staff J6.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 0798 / Allied/Coalition Maritime Environment (ACME)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Advanced Relay Capabilities		1.154	1.261	7.317	0.000	7.317
Articles:		-	-	-	-	-
FY 2023 Plans:						
<div>- Continue to develop and evaluation secure, interoperable technologies and capabilities supporting Denied, Degraded, Intermittent and Low-bandwidth (DDIL) operations including Allied/Coalition Shared Situational Awareness, cross-domain and data labeling solutions in maritime tactical networking environments, and advanced Information Assurance and Computer Network Defense (IA/CND) solutions (with common and interoperable processes and technologies).</div> <div>- Continue to assess technologies for interoperable maritime networking. Solutions address higher bandwidth, Low Probability of Intercept (LPI)/Low Probability of Detection (LPD)/Anti-Jam (AJ) technologies across the Radio Frequency (RF) and Optical spectrum and include airborne capabilities. Continued evaluation of electromagnetic spectrum management and visualization technologies, force-level Electronic Warfare/Electromagnetic Maneuver Warfare (EW/EMW) will also enhance interoperable Information Warfare (IW).</div> <div>- Continue to enhance Allied IW interoperability with other joint and maritime multi-national forums, such as the Combined Communications Electronic Board (CCEB), Multinational Maritime Information-system Interoperability Steering Group (M2I2) and Mission Partner Environment/ Future Mission Networking venues.</div> <div>- Continue to assess and validate individual technologies, integrated solutions, and associated Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) through experimentation, trials and demonstrations with Australia, Canada, New Zealand, United Kingdom, United States and other Allied/Coalition partners using live, virtual, constructive and operational venues, such as the United States Navy (USN) Rim of the Pacific (RIMPAC) or United Kingdom (UK) Joint Warrior events.</div> <div>- Continue to evaluate and make recommendations to the Information Warfare acquisition community for integration of Allied Partner Nations into the Secret and Below Releasable Environment (SABRE).</div>						
FY 2024 Base Plans:						
<div>- Australia, United Kingdom, United States (AUKUS) Electronic Warfare (EW) experiment planned for execution in RIMPAC 24.</div> <div>- Coalition Interoperability eXperiment (CWIX) resourcing, which assesses federated Coalition capabilities within the NATO command construct via connected Live, Virtual, and Constructive (LVC) capabilities.</div> <div>- Continue to develop and evaluate secure, interoperable technologies and capabilities supporting Denied, Degraded, Intermittent and Low-bandwidth (DDIL) operations including Allied/Coalition Shared Situational Awareness, cross-domain and data labeling solutions in maritime tactical networking environments, and</div>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management	Project (Number/Name) 0798 / Allied/Coalition Maritime Environment (ACME)	

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>advanced Information Assurance and Computer Network Defense (IA/CND) solutions (with common and interoperable processes and technologies).</p> <ul style="list-style-type: none"> <li>- Continue to evaluate technologies for interoperable maritime networking. Solutions will address higher bandwidth, Low Probability of Intercept (LPI)/Low Probability of Detection (LPD)/Anti-Jam (AJ) technologies across the Radio Frequency (RF) and Optical spectrum and include airborne capabilities. Evaluation of electromagnetic spectrum management and visualization technologies, force-level Electronic Warfare/Electromagnetic Maneuver Warfare (EW/EMW) will also enhance interoperable Information Warfare (IW).</li> <li>- Continue to enhance Allied IW interoperability with other joint and maritime multi-national forums, such as the Combined Communications Electronic Board (CCEB), Multinational Maritime Information-system Interoperability Steering Group (M2I2), and Mission Partner Environment/Future Mission Networking forums.</li> <li>- Continue to assess and validate individual technologies, integrated solutions, and associated Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) through experimentation, trials and demonstrations with Australia, Canada, New Zealand, United Kingdom, United States and other Allied/Coalition partners using Live, Virtual, Constructive, and Operational venues, such as the United States Navy (USN) Rim of the Pacific (RIMPAC), United Kingdom (UK) Joint Warrior events.</li> <li>- Continue assessment of Navy capabilities performance in a simulated NATO federated environment via CWIX event.</li> <li>- Continue evaluation of USN capabilities as they conform to NATO Federated Mission Networking Spiral Specification documentation.</li> <li>- Continue to evaluate existing/ emerging innovative technologies for value in increasing interoperability among US and Allied Nations, allowing them to act as force multipliers in Distributed Maritime Operations.</li> <li>- Continue to evaluate and make recommendations to the Information Warfare acquisition community for integration of Allied Partner Nations into the Secret and Below Releasable Environment (SABRE).</li> </ul> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> Increase of \$1.056M from FY23 to FY24 attributed to the realignment of Coalition Interoperability eXperiment (CWIX) resourcing from PE 0606355N PU 2144, which assesses federated Coalition capabilities within the NATO command construct via connected Live, Virtual, and Constructive (LVC) capabilities.</p> <p>Increase of \$5.0M from FY23 to FY24 can be attributed to the addition of an Australia, United Kingdom, United States (AUKUS) Electronic Warfare (EW) experiment planned for execution in RIMPAC 24. Specific efforts</p>					

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Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 0798 / Allied/Coalition Maritime Environment (ACME)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
include: Threat Assessment, Blue Force Data Analysis, Tactical Data Movement, Effects optimization, and Scenario development in Synthetic Environments.						
Accomplishments/Planned Programs Subtotals		1.154	1.261	7.317	0.000	7.317
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						
D. Acquisition Strategy						
N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management				Project (Number/Name) 2144 / Space & Elec Warfare Engineering			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
2144: Space & Elec Warfare Engineering	0.000	24.255	27.149	15.167	-	15.167	16.961	4.074	4.020	4.104	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

## A. Mission Description and Budget Item Justification

To support Navy objectives in advancing Information Warfare (IW) capabilities, the Space and Electronic Warfare (SEW) Engineering project provides three main functions:

(1) Navy Additive Manufacturing (AM) technology aligns to CNO priorities to deliver revolutionary capabilities to improve fleet readiness. These enterprise solutions will provide the foundation to (a) enhance warfighter capability through new innovative system designs; (b) increase readiness through low volume production of hard to source items; and (c) improve warfighting capacity by enabling production at or near the point of need. Specific efforts include the development of an Enterprise Digital Manufacturing Architecture which addresses design and certification of AM capabilities for both afloat and ashore, development of Cyber Security Risk Management Profiles for devices and applications on operational networks, definition of a secure Technical Data Package to describe components that can be digitally manufactured, and the development of an overarching, enterprise-level Digital Manufacturing Thread (device management, digital rights management, licensing, configuration management, data storage rule/access and application programming interfaces).

(2) Perform System of Systems (SoS) Cybersecurity Engineering; develop the architectures, specifications and standards, tools, and processes to support a single integrated Navy plan for cybersecurity. These engineering artifacts provide Navy specific guidance to drive common and consistent implementation of security controls across current and future Navy Programs of Record/projects. This eliminates redundancies and inefficiencies characteristic of previous stove-pipe development efforts in which each system addressed security individually. These efforts enable a standardized approach to move out faster to improve the Navy's cyber resiliency. Provide the cybersecurity vulnerability and functional test capability, which supports cybersecurity test requirements and the Command, Control, Communications, Computers, Intelligence (C4I) components of Naval Information Warfare Systems Command (NAVWARSYSCOM) Information Warfare (IW) Capability Testing Lab (formerly USS SECURE). NAVWAR Cyber Security Testing Capability/Labs is a cyber assessment program within the Navy. This SoS (Afloat, Aloft, C4I & Shore) capability in a test laboratory environment provides a rapidly re-configurable capability that integrates maritime hardware systems into a virtual platform. This platform level SoS provides cybersecurity research, development, test and evaluation, and training, not otherwise possible. This combination of Systems Commands (SYSCOM) laboratories, cyber ranges, and Red Teams simulating Navy platforms in operational maritime environments is critical for effectively evaluating cyber threats against specified mission threads.

(3) Perform System of Systems (SoS) Capability Roadmapping and Engineering; define an integrated Enterprise Architecture to support design, development and delivery of integrated Navy Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), Business Information Technology (IT), and Space System capabilities. This architecture reflects current (as-is) and future (target) end states to support technical analyses, program planning, and enterprise-level investment decisions across IW capabilities. Perform mission based system of systems analysis to ensure integration and interoperability, and validate end-to-end warfighting capabilities to quickly address emerging threats. Provides engineering tools and processes to drive rigorous Systems Engineering



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Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 2144 / Space & Elec Warfare Engineering		
discipline across the acquisition lifecycle to support rapid development and delivery of secure and interoperable C4ISR, Business IT, and Space Systems capabilities that meet Fleet requirements. Conduct Systems Engineering Technical Reviews (SETRs) to provide independent, objective assessments of technical maturity and compliance with applicable architectures, specifications and standards across IW capabilities.						
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Additive Manufacturing (AM)		2.296	2.559	3.118	0.000	3.118
Articles:		-	-	-	-	-
FY 2023 Plans:						
- Continue utilizing the Additive Manufacturing Test-Bed to further develop specifications, standards, and architecture/models to drive interoperability across the Navy / Joint Enterprise Digital Thread for Additive Manufacturing.						
- Develop a systems engineering model to define the Additive Manufacturing Architecture that ties Logistics Information Technology (LOG IT) architecture and initial integration with the DoD Joint Additive Manufacturing Exchange (JAMEX) environment.						
- Continue development of the additive manufacturing data strategy.						
- Continue to define the Digital Manufacturing Strategy for integration into logistics Digital transformation plan.						
FY 2024 Base Plans:						
- Continue utilizing the Additive Manufacturing Test-Bed to further develop specifications, standards, and architecture/models to drive interoperability across the Navy / Joint Enterprise Digital Thread for Additive Manufacturing.						
- Continue to develop a systems engineering model to define the Additive Manufacturing Architecture that ties Logistics Information Technology (LOG IT) architecture and initial integration with the DoD Joint Additive Manufacturing Exchange (JAMEX) environment.						
- Deploy a product to the cloud environment to connect multiple Additive Manufacturing sites to a collaborative access point for 3D Models a from a shared repository through content management capability.						
- Continue development of the additive manufacturing data strategy.						
- Continue to define the Digital Manufacturing Strategy for integration into logistics Digital transformation plan.						
FY 2024 OCO Plans:						
N/A						
FY 2023 to FY 2024 Increase/Decrease Statement:						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy				Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 2144 / Space & Elec Warfare Engineering		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Increase of \$0.559M between FY23 and FY24 is attributed to increased support for the deployment of the Additive Manufacturing content management capability, allowing sailors to be able to produce technical data packages for printing approvals.						
Title: System of Systems (SoS) Cybersecurity Engineering		11.778	13.278	6.659	0.000	6.659
Articles:		-	-	-	-	-
FY 2023 Plans:						
- Continue key efforts to develop technical architectures, tools, standards, and best practices to advance the Navy's integrated plan for effective implementation of resilient cybersecurity. These critical CS TA artifacts: (1) leverage Cyber Security Technical Authority (CS TA) Cyber Risk Assessments (CRA) to account for emerging cyber threats and advances in technology, (2) drive the use of inheritance to reduce redundant cybersecurity investments, (3) ensure integration between cyber capabilities across Defensive Cyber Operations to support Navy-wide modernization efforts such as Integrated Navy Operations Command and Control System (INOCCS), and (4) enable uniform delivery of Fleet capabilities that are more easily operated by the sailor.						
- Continue to perform holistic CRAs that evaluate Navy systems in the context of warfighting missions across tabletop, lab, and operational environments. The results of the CS TA Tabletop Mission Cyber Risk Assessments (TMCRA), which examine access vectors and likelihood of adversary exploit, are tested in NAVWAR's Information Warfare (IW) Capability Testing Lab (formerly USS SECURE), and are then used to support Navy-wide Live, Virtual, and Constructive (LVC) IW capability tests and Fleet experimentation. This holistic set of assessments allows Program Managers to mitigate existing risks across the system lifecycle as well as strengthen the cybersecurity design of future system variants.						
- Continue rollout of the Cybersecurity Figure of Merit (CFOM) as a lightweight tool to quickly and objectively evaluate cybersecurity health during acquisition events (e.g., Gate Reviews, Systems Engineering Technical Reviews). CFOM is an independent, quantitative look at cybersecurity health that provides a simple, visual tool for Program Managers, Resource Sponsors, and Milestone Decision Authorities across the Navy to consistently prioritize cyber acquisition activities across a portfolio of systems.						
- Develop an automated Risk Management Framework (RMF) Authorization process, leveraging digital engineering models that will streamline data and provide efficiencies. The automated process includes integrating various RMF roles, data entry, and auditing/validating RMF steps (control selection, assessment, and						

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Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 2144 / Space & Elec Warfare Engineering		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
authorization). Develop and pilot Cyber Operational Risk threat assessments that utilize continuous monitoring of critical operational assets.  <b>FY 2024 Base Plans:</b> - Continue key efforts to develop technical architectures, tools, standards, and best practices to advance the Navy's integrated plan for effective implementation of resilient cybersecurity. These critical Cyber Security Technical Authority (CS TA) artifacts: (1) leverage CS TA Cyber Risk Assessments (CRA) to account for emerging cyber threats and advances in technology, (2) drive the use of Risk Management Framework (RMF) Rapid Assess and Incorporate (A&I) Software Engineering (RAISE) process for inheritance to reduce redundant cybersecurity investments, lower operational risk and significantly improve delivery times for emerging capabilities.  - Continue to perform holistic Cyber Risk Assessments (CRA) that evaluate Navy systems in the context of warfighting missions across tabletop, lab, and operational environments. The results of the CS TA Tabletop Mission Cyber Risk Assessments (TMCRA), which examine access vectors and likelihood of adversary exploit, are tested in NAVWAR's IW Capability Testing environment, and are then used to support Navy-wide Live, Virtual, and Constructive (LVC) Information Warfare (IW) capability tests and Fleet experimentation. This holistic set of assessments allows Program Managers to include to mitigate existing risks across the system lifecycle as well as strengthen the cybersecurity design of future system variants.  - Continue to develop automation of the RMF process, leveraging integrated digital engineering models that will streamline data and analytics to provide assessment results. The automated process includes integrating various RMF roles, data entry, and continued auditing/validating RMF steps (control selection, assessment, and authorization). Implement cyber operational risk threat assessments and continuous monitoring.  <b>FY 2024 OCO Plans:</b> N/A  <b>FY 2023 to FY 2024 Increase/Decrease Statement:</b> - Decrease of \$6.619M between FY23 and FY24 results in a reduction of the newly-approved DON CISO Cyber Figure of Merit (CFOM) acquisition gate assessments, system of systems Cyber Risk to Mission (CRTM) assessments, and the ability to develop and update cybersecurity technical standards, all of which support better understanding of and mitigation of cyber risk across the Navy. Decrease also inhibits Risk Management Framework (RMF) reform efforts to develop and advance the Continuous Monitoring (COMMON) and cyber						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
operational picture capability required to meet Fleet Cyber Command (FCC) and Operation Triton Bastion needs.						
Title: System of Systems (SoS) Capability Roadmapping and Engineering		10.181	11.312	5.390	0.000	5.390
Articles:		-	-	-	-	-
FY 2023 Plans:						
- Continue to expand efforts to transformation digital engineering by developing and implementing integrated modeling environments and authoritative sources of truth across unclassified and classified enclaves. Enable the ability to share and reuse technical data by continuing development of the digital integrated dictionary and model-based systems engineering (MBSE) schema that provides an interoperable modeling framework. Increase the utility and effectiveness of digital models by developing and incorporating cybersecurity/Risk Management Framework and mission engineering schemas. These efforts provide the digital engineering infrastructure and standards that are foundational to enabling the Navy's transformation to modern engineering practices and automation, and enables an environment of continuous design, development, integration, testing, and fielding that pushes capabilities to the Fleet at the speed of technology.						
- Continue to perform Systems Engineering Technical Reviews (SETRs) across Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance (C4ISR) and Space Systems; Digital Enterprise Services; Manpower, Logistics, and Business Solutions programs to ensure compliance with statutory and regulatory directives, as well as implementing applicable Information Technology (IT) and Cybersecurity (CS) Technology Authority (TA) architectures, specifications, standards, policies, processes and profiles. Continue efforts to integrate digital engineering and artificial intelligence advances to accelerate and automate SETR reviews to better support programs leveraging Agile or DevSecOps frameworks to support the Adaptive Acquisition Framework pathways.						
- Continue to conduct Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) certifications and technical reviews of formal acquisition and engineering documentation through design and testing analysis, ensuring interoperability with platform, force level, and joint/allied/coalition forces.						
- Create a Network Modernization Plan that will identify and prioritize Information Technology (IT), cloud and network technical requirements and integrate them into the Navy's Target Enterprise Architecture (TEA). The						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>Navy's Network Modernization Plan, supported by TEA expansion, will identify capability gaps in programs such as NGEN/NEN and INOCCS that shape transformation opportunities and specify capability upgrades to the Navy's network infrastructure.</p> <p><b>FY 2024 Base Plans:</b></p> <ul style="list-style-type: none"> <li>- Continue to perform Systems Engineering Technical Reviews (SETRs) across Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance (C4ISR) and Digital Enterprise Services (DES); Manpower, Logistics, and Business Solutions (MLB) programs to ensure compliance with statutory and regulatory directives, as well as implementing applicable Information Technology (IT) and Cybersecurity (CS) Technology Authority (TA) architectures, specifications, standards, policies, processes and profiles. Continue efforts to integrate digital engineering advances as applicable to accelerate and automate SETR reviews to better support programs leveraging Agile or DevSecOps frameworks to support the Adaptive Acquisition Framework pathways.</li> <li>- Continue digital reviews for program certifications and technical reviews of formal acquisition and engineering documentation through enhanced design and testing analysis.</li> </ul> <p><b>FY 2024 OCO Plans:</b> N/A</p> <p><b>FY 2023 to FY 2024 Increase/Decrease Statement:</b></p> <ul style="list-style-type: none"> <li>- Decrease of \$5.922M between FY23 and FY24 results in a significant reduction in Digital Transformation efforts, system and system of systems model-based analysis, and the evolution of cybersecurity compliance activities. This reduction will also eliminate the advancement and maturation of all digital engineering efforts needed to implement a model-based system engineering across NAVWAR programs and result in the delay of development and delivery of information warfare capabilities in addition to delaying the development of the Enterprise architecture efforts that show a direct tie to the JADC2 Enterprise; building the foundational architecture modeling that is driving the future state for Naval Network Modernization.</li> </ul>						
<b>Accomplishments/Planned Programs Subtotals</b>		24.255	27.149	15.167	0.000	15.167
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0606355N / <i>Warfare Innovation Management</i>	<b>Project (Number/Name)</b> 2144 / <i>Space &amp; Elec Warfare Engineering</i>

### D. Acquisition Strategy

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0606355N / Warfare Innovation Management				<b>Project (Number/Name)</b> 3020 / MIDS/JTRS			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3020: MIDS/JTRS	0.000	0.000	9.800	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	9.800
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>Project MDAP/MAIS Code:</b> 554												
<p><b>A. Mission Description and Budget Item Justification</b></p> <p>The Multifunctional Information Distribution System (MIDS) program office is the Performing Activity in the Navy (Lead Service for Department of Defense (DOD)) Link 16 capability and consists of two (2) product lines, MIDS Low Volume Terminal (LVT) (legacy hardware defined radio) and MIDS Joint Tactical Radio System (JTRS) (software (SW) defined radio).</p> <p>MIDS JTRS, designed as a Pre-Planned Product Improvement (P3I) and executed as an Engineering Change Proposal (ECP) to the production MIDS-LVT configuration, and is fully compatible with MIDS-LVT. The MIDS JTRS has four channels and adds capabilities such as Link 16 Enhanced Throughput (ET), Link 16 FR, SW programmability, CM, and Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4).</p> <p>MIDS JTRS Tactical Targeting Network Technology (TTNT), is a block upgrade to the MIDS JTRS CMN-4 Terminal providing an Internet Protocol-based networking capability on tactical aircraft. TTNT is a low latency, high throughput waveform that has the capability to support data exchange between fast-moving tactical aircraft, weapons, and unmanned aircraft, in addition to air, land, and sea-based command and control nodes, in a variety of air-to-air and air-to-ground missions including time sensitive targeting, air warfare, close air support, non-traditional ISR, and anti-surface warfare. TTNT and MIDS JTRS CMN-4 directly supports Naval Integrated Fire Control (NIFC) capability requirements. These capabilities provide Joint Airborne Network-Tactical Edge functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise.</p> <p>FY2024 funding supports correcting deficiencies from early testing and completing integration efforts into the platform. It also supports the purchase of MIDS JTRS terminals for operational testing for the platform.</p>												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<p><b>Title:</b> MIDS Integration New Platform</p> <p align="right"><b>Articles:</b></p> <p><b>FY 2023 Plans:</b></p> <p>-Analyze the system requirements and flow the requirements to the host system. Begin host system software development.</p> <p>-Procure MIDS JTRS variant(s) terminals for early integration, development and test efforts.</p>							0.000	9.800	0.000	0.000	0.000	
							-	-	-	-	-	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0606355N / Warfare Innovation Management		<b>Project (Number/Name)</b> 3020 / MIDS/JTRS		
<b><u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u></b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
-Conduct initial integration and test (I&T), ensuring compatibility and integration with the platform to reduce risk for the classified platform.  <b><i>FY 2024 Base Plans:</i></b> N/A  <b><i>FY 2024 OCO Plans:</i></b> N/A  <b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The decrease of \$9.800M from FY2023 to FY2024 is due to funding profile transfer to BRSE program of record under 0604280N RDTEN Project 0725.						
<b>Accomplishments/Planned Programs Subtotals</b>		0.000	9.800	0.000	0.000	0.000
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>						
N/A						
<b><u>Remarks</u></b>						
<b><u>D. Acquisition Strategy</u></b>						
Multifunctional Information Distribution System Joint Tactical System (MIDS JTRS) development was initiated as a major modification to the MIDS-LVT using an Engineering Change Proposal to the existing production contracts. The U.S. prime contractors from the MIDS-LVT program, Data Link Solutions (DLS) and Viasat Inc., cooperatively designed and developed each of the MIDS JTRS terminal variants and Block Upgrade 2 for MIDS-LVT. The U.S. implemented a continuous competition strategy between DLS and ViaSat that will be maintained throughout the MIDS-LVT and MIDS JTRS production phases. This strategy has been successfully used on all MIDS variants.						



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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management				Project (Number/Name) 3319 / Fleet Experimentation			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3319: Fleet Experimentation	0.000	10.412	11.446	12.346	-	12.346	12.530	12.761	12.975	13.235	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Mission: The Fleet Experimentation (FLEX) program seeks out and examines potential materiel and non-materiel solutions and develops recommendations to enhance the Fleet's ability to execute assigned missions through 12 to 15 major analytic activities annually. The activities include workshops, war-games, and live at-sea events. The activities are integrated into a multi-year experiment campaign aligned to Fleet priority capability gap areas.

FLEX is co-led by Commander U.S. Fleet Forces Command (CUSFFC), Commander U.S. Pacific Fleet (CPF), and Commander U.S. Naval Forces Europe - Africa (CNE-AF) to address priority Fleet warfighting gaps.

Commanders' FLEX guidance is directly linked to the January 2021 Chief of Naval Operations (CNO) Navigation Plan (NAVPLAN) guidance to continue refinement of concepts and capabilities through experimentation. FLEX priorities are aligned to CNO NAVPLAN Naval Integration Framework (NIF) pillars. FLEX planners collaborate directly with the NAVPLAN Integration Framework (NIF) teams to inform gap closure plans for Long Range Fires (Ca-5), Command and Control Counter-Intelligence, Surveillance, Reconnaissance, and Targeting (Ca-4), and Navy Operational Architecture (NOA)(Ca-2). Artificial Intelligence/Machine Learning (AI/ML) and Unmanned Systems are considered enabling capabilities for FLEX. FLEX planners also collaborate with these NIF teams.

FLEX initiatives are tied to CNO-approved Distributed Maritime Operations (DMO) concept capability requirements, Fleet warfighting gaps, and Key Operational Problems (KOP). FLEX is aligned with National Defense Strategy lines of effort 1 and 3 as identified in the FY20-22 Business Operations Plan, which highlights the need to increase experimentation, war-games, and exercises. FLEX also supports the Tri-Service Maritime Strategy.

USFFC N8/N9-manages the FLEX investment -- \$75M (FY23-FY28) - to support planning, execution, analysis, and reporting for analytically rigorous experiments leveraging small scale Limited Objective Experiments (LOE), scheduled fleet exercises, and high-end operational rehearsals such as Fleet Battle Problems (FBP) and Large Scale Exercises (LSE).

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

	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<b>Title:</b> Fleet Experimentation (FLEX)	10.412	11.446	12.346	0.000	12.346
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> \$12.3M in FY24 will fund experimentation event planning, execution, analysis, and reporting to assess initiatives to implement Distributed Maritime Operations (DMO) and other Chief of Naval Operations (CNO) approved foundational warfighting concepts. Proposed experimentation initiatives and venues will be					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management	Project (Number/Name) 3319 / Fleet Experimentation				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>considered in early spring 2023, followed by formal approval in the summer of 2023. Tentative FLEX Campaign strategic areas are identified in the FY2024 Base Plans section of this document. Once approved, additional details can be provided on Secret Internet Protocol Router (SIPR) Network.</p> <p>Through experimentation, materiel and non-materiel solutions to concept required capabilities are tested and refined, and post-experiment recommendations support non-materiel solution implementation (e.g., TTP promulgation) and support NIF and program sponsor acquisition strategies, and inform procurement decisions. FLEX is a proven and efficient approach to improving warfighting effectiveness.</p> <p>FLEX deliverables are focused on operational and tactical warfighting capabilities in the near term (within the Future Years Defense Plan) and prioritized by annual FLEX Commanders' Guidance to enhance warfighting capability across priority warfare areas.</p> <p>FLEX venues and initiatives support the Chief of Naval Operations (CNO)-directed Fleet Battle Problems (FBP) and Large Scale exercises (LSE) series as identified in the DMO concept and the CNO Navigation Plan (NAVPLAN) signed in January 2021.</p> <p><b>FY 2023 Plans:</b> FY23 FLEX efforts will address Fleet warfighting priorities identified in the FY22-23 Commanders' FLEX Guidance message. FLEX will continue to focus on materiel and non-materiel solutions using appropriate experimentation venues including workshops, war-games, and at-sea events. Alignment with Integrated Priority Lists (IPL), Key Operation Problems (KOP), Distributed Maritime Operations (DMO), capability development and with NAVPLAN gap closure plans will drive experimentation efforts. The following FY23 venues will be used to support Fleet Experimentation. Additional details about each experiment, including final experimentation reports will be provided on the Secret Internet Protocol Router (SIPR) Network.</p> <p>As of 18 August 2022: PERSISTENT TARGETING AND LONG RANGE MARITIME FIRES Five (5) experiments planned with additional details available via SIPR Buzzer Beater Limited Objective Experiment Naval Special Warfare Limited Objective Experiment FLEX in Resolute Hunter 23-2</p>							

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 3319 / Fleet Experimentation	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>FLEX in Talisman Sabre 23 RED Rover Limited Objective Experiment</p> <p>COUNTERING-C5, INTELLIGENCE, SURVEILLANCE, RECONNAISSANCE, AND TARGETING (C-C5ISRT) Five (5) experiments planned with additional details available via SIPR Helicopter Strike Maritime (HSM) Helicopter Advance Readiness Program (HARP) Limited Objective Experiment Office of Naval Research Technology Innovation Game #1 Family of Systems Limited Objective Experiment FLEX in Fleet Battle Problem/Advanced Tactical Exercise FLEX in Large Scale Exercise-23</p> <p>NAVAL OPERATIONAL ARCHITECTURE (NOA) Twelve (12) experiments planned with additional details available via SIPR FLEX in Project Convergence 22 (PC-22) USS Gerald R Ford Limited Objective Experiment Office of Naval Research Technology Innovation Game #2 USS Carl Vinson Limited Objective Experiment FLEX in Northern Edge 23 Atmospheric Sensors on Every Ship Limited Objective Experiment Radiant SLIPSTREAM Limited Objective Experiment Satellite Terminal (STtNG) Limited Objective Experiment (EUR) Satellite Terminal (STtNG) Limited Objective Experiment (PAC) Manned/Unmanned Electromagnetic Warfare Training Limited Objective Experiment FLEX in Robotic Experimentation and Prototyping Augmented by Maritime Unmanned Systems (REPMUS) 23 STARMAP Limited Objective Experiment</p> <p>UNMANNED SYSTEMS Will be part of Six (6) experiments planned with additional details available via SIPR FLEX in Northern Edge 23 Family of Systems Limited Objective Experiment FLEX in Fleet Battle Problem/Advanced Tactical Exercise Manned/Unmanned Electromagnetic Warfare Training Limited Objective Experiment FLEX in Robotic Experimentation and Prototyping Augmented by Maritime Unmanned Systems (REPMUS) 23</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 3319 / Fleet Experimentation		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
RED Rover Limited Objective Experiment						
NAVAL INTEGRATION						
Will be part of six (6) experiments planned with additional details available via SIPR						
FLEX in Project Convergence 22 (PC-22)						
Office of Naval Research Technology Innovation Game #1						
FLEX in Northern Edge 23						
FLEX in Resolute Hunter 23-2						
Satellite Terminal (STtNG) Limited Objective Experiment (Europe)						
Satellite Terminal (STtNG) Limited Objective Experiment (Pacific)						
FY 2024 Base Plans:						
FY24 FLEX efforts will address Fleet warfighting priorities identified in the Commanders' FLEX Guidance message. FLEX will continue to focus on materiel and non-materiel solutions using appropriate experimentation venues including workshops, war-games, and at-sea events. Alignment with Integrated Priority Lists (IPLs), Key Operational Problems KOPs), Distributed Maritime Operations (DMO) capability development and with Navigation Plan (NAVPLAN) gap closure plans will drive experimentation efforts. Initiatives aligned Commander's guidance focus areas will be collected and reviewed. Proposed initiatives will be coordinated with the Fleet Commanders' staffs and other stakeholders in spring 2023, leading to 12-star approval of initiatives and potential experiment venues (together comprising the FY24 campaign) in early summer 2023. Tentative FLEX Campaign strategic areas may include:						
PERSISTENT TARGETING AND LONG RANGE MARITIME FIRES						
COUNTER-INTELLIGENCE, SURVEILLANCE, RECONNAISSANCE, AND TARGETING (C-ISRT)						
NAVAL OPERATIONAL ARCHITECTURE (NOA)						
UNMANNED SYSTEMS						
NAVAL INTEGRATION						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy			Date: March 2023			
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management		Project (Number/Name) 3319 / Fleet Experimentation		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
CONTESTED LOGISTICS						
FY 2024 OCO Plans: N/A						
FY 2023 to FY 2024 Increase/Decrease Statement: \$0.9M increase from FY 2023 to FY 2024 will fund additional experimentation initiatives supporting "All Domain Fires" during three (3) Chief of Naval Operations-directed Fleet Battle Problems.						
Accomplishments/Planned Programs Subtotals		10.412	11.446	12.346	0.000	12.346
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0606355N / Warfare Innovation Management				Project (Number/Name) 3320 / TRIDENT Warrior			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3320: TRIDENT Warrior	0.000	2.245	2.404	2.510	-	2.510	2.505	2.546	2.592	2.644	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
U.S. Navy's Trident Warrior (TW) experiment campaign enables early delivery of Information Warfare (IW) capabilities to the warfighter via Fleet-directed TW operational events. It integrates stand-alone systems and efforts to achieve enhanced capabilities and demonstrates these capabilities in operational environments. This places innovative technologies into the hands of the warfighter to evaluate their effectiveness. Additionally, it develops supporting doctrine and Concepts of Operation to improve warfighting effectiveness. Coordinates IW efforts with other Service/Joint/Department of Defense/National efforts to ensure Joint/Interagency/ Allied/Coalition applicability and interoperability.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Trident Warrior  Articles:								2.245	2.404	2.510	0.000	2.510
								-	-	-	-	-
FY 2023 Plans: - Continue to evaluate Trident Warrior 2022 (TW22) executed experiments and recommend next steps to all stakeholders. - Continue to promote broad participation in TW by researching advanced technology solution candidates, in conjunction with other services, and academic research in order to fill Information Warfare technology gaps. - In accordance with standardized procedures, continue to lead TW participant efforts with the following: specific goal identification; risk identification; experiment plans (to include data requirements and collection); and required installation and security certifications, accreditations, and approvals. - Continue to provide independent experts and Subject Matter Expertise to ensure compliance with experiment plans, lead analysis effort, and deliver unbiased assessments and results to government sponsors to support the program's engineering recommendations. - Plan and execute Trident Warrior 2023 (TW23) with a continued focus on Distributed Maritime Operations. - Begin Trident Warrior 2024 (TW24) planning with a continued focus on Distributed Maritime Operations.												
FY 2024 Base Plans: - Evaluate Trident Warrior 2023 (TW23) executed experiments and recommend next steps to all stakeholders. - Continue to promote broad participation in TW by researching advanced technology solution candidates, in conjunction with other services, and academic research in order to fill Information Warfare technology gaps.												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0606355N / <i>Warfare Innovation Management</i>		<b>Project (Number/Name)</b> 3320 / <i>TRIDENT Warrior</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<p>- In accordance with standardized procedures, continue to lead TW participant efforts with the following: specific goal identification; risk identification; experiment plans (to include data requirements and collection); and required installation and security certifications, accreditations, and approvals.</p> <p>- Continue to provide independent experts and Subject Matter Expertise to ensure compliance with experiment plans, lead analysis effort, and deliver unbiased assessments and results to government sponsors to support the program's engineering recommendations.</p> <p>- Plan and execute Trident Warrior 2024 (TW24) with a continued focus on Information Warfare Operations and Overmatch related capabilities.</p> <p>- Begin Trident Warrior 2025 (TW25) planning, taking into consideration identified Naval Capability Gaps.</p> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> - Increase of \$0.106M between FY23 and FY24 can be attributed to additional Subject Matter Expertise (SME) support for core ship services during the experimentation period.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		2.245	2.404	2.510	0.000	2.510
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> N/A						

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	PE 0305327N / <i>Insider Threat</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	2.482	2.315	2.246	-	2.246	2.994	2.818	2.677	2.730	Continuing	Continuing
3442: <i>Insider Threat</i>	0.000	2.482	2.315	2.246	-	2.246	2.994	2.818	2.677	2.730	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Executive Order 13587 and the National Insider Threat Policy mandate all United States Government departments and agencies to implement insider threat programs that monitor user activity on all classified networks and provide an insider threat analytical and response capability. The Counter Insider Threat Capability (CITC) is the Department of the Navy's implementation of this requirement. CITC's mission is to prevent, deter, detect, and respond to the threat from witting and unwitting insiders. The Platform for Risk Evaluation and Engagement to Neutralize Threat (PREVENT) is the materiel solution required to support the CITC mission, and consists of two parts: (1) User Activity Monitoring (UAM), which monitors user activity on classified Navy networks, and (2) an Integrated Tool Suite (ITS), which provides the Information Technology platform for the analytic and response capabilities. The PREVENT system provides the technology required by the Navy Insider Threat Analytic Hub to comply with the National mandates and to protect Navy data, equipment, and personnel from insider threats. RDT&E,N funding is required to develop, integrate, and perform testing and evaluation of this capability.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	2.581	2.315	2.725	-	2.725
Current President's Budget	2.482	2.315	2.246	-	2.246
Total Adjustments	-0.099	0.000	-0.479	-	-0.479
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.099	0.000			
• Program Adjustments	0.000	0.000	-0.479	-	-0.479
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

**Change Summary Explanation**

Funding: No significant change.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0305327N / Insider Threat				Project (Number/Name) 3442 / Insider Threat			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3442: Insider Threat	0.000	2.482	2.315	2.246	-	2.246	2.994	2.818	2.677	2.730	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Executive Order 13587 and the National Insider Threat Policy mandate all United States Government departments and agencies to implement insider threat programs that monitor user activity on all classified networks and provide an insider threat analytical and response capability. The Counter Insider Threat Capability (CITC) is the Department of the Navy's implementation of this requirement. CITC's mission is to prevent, deter, detect, and respond to the threat from witting and unwitting insiders. The Platform for Risk Evaluation and Engagement to Neutralize Threat (PREVENT) is the materiel solution required to support the CITC mission, and consists of two parts: (1) User Activity Monitoring (UAM), which monitors user activity on classified Navy networks, and (2) an Integrated Tool Suite (ITS), which provides the Information Technology platform for the analytic and response capabilities. The PREVENT system provides the technology required by the Navy Insider Threat Analytic Hub to comply with the National mandates and to protect Navy data, equipment, and personnel from insider threats. RDT&E,N funding is required to develop, integrate, and perform testing and evaluation of this capability.

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<b>Title:</b> Counter Insider Threat Capability (CITC)	2.482	2.315	2.246	0.000	2.246
<b>Articles:</b>	-	-	-	-	-
<b>FY 2023 Plans:</b> <ul style="list-style-type: none"> <li>- Complete development and testing of additional PREVENT capabilities to be included in future capability drops.</li> <li>- Investigate commercial cloud environments and UAM capabilities for future increments of PREVENT capability including alternative technologies and existing solutions including Big Data Platform (BDP/SPINNAKER).</li> <li>- Continue testing, evaluation, and integration efforts on SIPRNet afloat networks (CANES).</li> <li>- Initiate research, development, and integration of enhanced testing environment into Navy networks to measure health of UAM system including policy performance and network impacts.</li> <li>- Initiate reassessment and reaccreditation of PREVENT capability.</li> </ul>					
<b>FY 2024 Base Plans:</b> <ul style="list-style-type: none"> <li>- Initiate testing of ITS major upgrades to current UAM solution.</li> <li>- Initiate testing and development of long-term UAM and ITS capability on JWICS and SIPRNet.</li> <li>- Continue testing of UAM major upgrades to current UAM solution including testing across multiple networks with existing UAM capabilities and cloud environment.</li> <li>- Continue investigating commercial cloud environments and UAM capabilities for future increments of PREVENT capability including alternative technologies and existing solutions including Big Data Platform (BDP/SPINNAKER).</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy				<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0305327N / <i>Insider Threat</i>		<b>Project (Number/Name)</b> 3442 / <i>Insider Threat</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
<ul style="list-style-type: none"> <li>- Continue testing, evaluation, and integration efforts on SIPRNet afloat networks (CANES).</li> <li>- Continue research, development, and integration of enhanced testing environment into Navy networks to measure health of UAM system including policy performance and network impacts.</li> <li>- Continue reassessment and reaccreditation of PREVENT capability.</li> </ul> <p><b><i>FY 2024 OCO Plans:</i></b> N/A</p> <p><b><i>FY 2023 to FY 2024 Increase/Decrease Statement:</i></b> The FY23 to FY24 decrease of \$.069M is attributed to the anticipated completion of development and testing of future PREVENT capabilities for the last remaining capability drop of the Middle Tier Acquisition (MTA) Rapid Fielding pathway.</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		2.482	2.315	2.246	0.000	2.246
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> CITC is employing a flexible acquisition strategy based on the IT Box model to incrementally deliver capability that is responsive to rapidly evolving requirements, priorities, and technology. Requirements for each increment of capability are scoped by validated Capability Drop requirements documents. The initial increment of capability, defined by Capability Drop 1 (CD-1), was designed to achieve Initial Operational Capability (IOC) by end of FY21 by rapidly fielding existing Commercial Off the Shelf (COTS) tools using Section 804 Middle Tier Acquisition (MTA) authority. CD-2 is in development and requirements approved by the CITC Requirements Governance Board (RGB) in September 2022. CD-2 continues to utilize MTA and expands upon CD-1 by delivering enhanced case management capabilities and additional ITS data sources. Following usage of the MTA pathway, the CITC program will build toward Full Operational Capability (FOC) requirements by incrementally expanding UAM coverage across all networks and integrating additional analytic capabilities and data feeds from multiple enclaves into the ITS utilizing a Cross Domain Solution (CDS) and advanced data analytics, as specified in future Capability Drops.						

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b>					<b>R-1 Program Element (Number/Name)</b>							
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>					PE 0902498N / <i>Management HQ - Departmental Spt Acts</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	1.747	1.811	2.168	-	2.168	2.236	2.286	2.338	2.389	Continuing	Continuing
0831: <i>OPTEVFOR Support</i>	0.000	1.747	1.811	2.168	-	2.168	2.236	2.286	2.338	2.389	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element (PE) provides Operational Test and Evaluation Force (OPTEVFOR) general support funding and operating costs for Management Headquarter Activity (MHA) functions that support OPTEVFOR compliance with Secretary of Defense (SECDEF) and Secretary of the Navy (SECNAV) directives to conduct independent operational test and evaluation as described in PE 0605865N Operational Test & Evaluation Capability.

<b>B. Program Change Summary (\$ in Millions)</b>	<b><u>FY 2022</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024 Base</u></b>	<b><u>FY 2024 OCO</u></b>	<b><u>FY 2024 Total</u></b>
Previous President's Budget	1.747	1.811	2.123	-	2.123
Current President's Budget	1.747	1.811	2.168	-	2.168
Total Adjustments	0.000	0.000	0.045	-	0.045
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	0.000	0.000	0.045	-	0.045

**Change Summary Explanation**

FY 2024 increase reflects the increase of 2 FTEs.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0902498N / Management HQ - Departmental Spt Acts				Project (Number/Name) 0831 / OPTEVFOR Support			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
0831: OPTEVFOR Support	0.000	1.747	1.811	2.168	-	2.168	2.236	2.286	2.338	2.389	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This program element (PE) provides Operational Test and Evaluation Force (OPTEVFOR) general support funding and operating costs for Management Headquarter Activity (MHA) functions that support OPTEVFOR compliance with Secretary of Defense (SECDEF) and Secretary of the Navy (SECNAV) directives during the conduct of independent operational testing and evaluation as described in PE 0605865N Operational Test & Evaluation Capability.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)												
							FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	
Title: OPTEVFOR Support							1.747	1.811	2.168	0.000	2.168	
Articles:							-	-	-	-	-	
Description: Beginning in Fiscal Year 2018, MHA labor and operating costs in support of 14 FTE has been realigned from 0605865N Operational Test and Evaluation Capability into this program element 0902498N Management Headquarters (Departmental Support Accounts) to identify all MHA costs separately.												
FY 2023 Plans:												
This project will provide for the basic costs of the OPTEVFOR headquarters activities. Specifically, it will pay for salaries and support costs of civilian personnel who support OPTEVFOR compliance with directives during the conduct of independent operational testing and evaluation to determine the operational effectiveness, suitability, and cyber survivability of new and improved systems.												
FY 2024 Base Plans:												
This project will provide for the basic costs of the OPTEVFOR headquarters activities. Specifically, it will pay for salaries and support costs of civilian personnel who support OPTEVFOR compliance with directives during the conduct of independent operational testing and evaluation to determine the operational effectiveness, suitability, and cyber survivability of new and improved systems.												
FY 2024 OCO Plans:												
N/A												
FY 2023 to FY 2024 Increase/Decrease Statement:												
FY24 increase reflects CIVPERS pricing adjustments.												
Accomplishments/Planned Programs Subtotals							1.747	1.811	2.168	0.000	2.168	

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy		Date: March 2023
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0902498N / Management HQ - Departmental Spt Acts	Project (Number/Name) 0831 / OPTEVFOR Support
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> N/A		

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	PE 0909980N / <i>Judgment Fund Reimbursement</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	0.579	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.579
0000: <i>UNDIST</i>	0.000	0.579	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.579

**A. Mission Description and Budget Item Justification**

Funds to reimburse the U.S. Treasury for judgement fund invoices.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.579	0.000	0.000	-	0.000
Total Adjustments	0.579	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.585	0.000			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	-0.006	0.000	0.000	-	0.000

**Change Summary Explanation**

Technical: Not applicable.

Schedule: Not applicable.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0909980N / <i>Judgment Fund Reimbursement</i>				<b>Project (Number/Name)</b> 0000 / <i>UNDIST</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0000: <i>UNDIST</i>	0.000	0.579	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.579
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Judgement Fund Payment												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> New Accomplishment/Planned Program Entry							0.579	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>Description:</b> Judgement Fund Payment												
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							0.579	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>												
<b>D. Acquisition Strategy</b> N/A												

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2024 Navy	<b>Date:</b> March 2023
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	PE 0909999N / <i>Cancelled Account Adjustments</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	0.877	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.877
0000: <i>UNDIST</i>	0.000	0.877	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.877

**A. Mission Description and Budget Item Justification**

Cancelled Account adjustments

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.877	0.000	0.000	-	0.000
Total Adjustments	0.877	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.878	0.000			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	-0.001	0.000	0.000	-	0.000

**Change Summary Explanation**

Technical: Not applicable.

Schedule: Not applicable.

## UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2024 Navy										<b>Date:</b> March 2023		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0909999N / <i>Cancelled Account Adjustments</i>				<b>Project (Number/Name)</b> 0000 / <i>UNDIST</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0000: <i>UNDIST</i>	0.000	0.877	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.877
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
<b>A. Mission Description and Budget Item Justification</b> Cancelled Account adjustments												
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>												
							<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024 Base</b>	<b>FY 2024 OCO</b>	<b>FY 2024 Total</b>	
<b>Title:</b> Cancelled Account Adjustment							0.877	0.000	0.000	0.000	0.000	
<b>Articles:</b>							-	-	-	-	-	
<b>FY 2023 Plans:</b> N/A												
<b>FY 2024 Base Plans:</b> N/A												
<b>FY 2024 OCO Plans:</b> N/A												
<b>Accomplishments/Planned Programs Subtotals</b>							0.877	0.000	0.000	0.000	0.000	
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A <b>Remarks</b>												
<b>D. Acquisition Strategy</b> N/A												