

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>
--------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------

COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	101.676	14.688	44.120	26.120	-	26.120	34.794	35.418	36.088	36.837	Continuing	Continuing
3367: <i>Training Aircraft Updates</i>	99.098	14.132	43.110	25.144	-	25.144	33.916	34.525	35.179	35.909	Continuing	Continuing
9099: <i>Physiological Episodes</i>	2.578	0.556	1.010	0.976	-	0.976	0.878	0.893	0.909	0.928	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for design, development, integration and test of various pre and post production platform improvements for Naval Undergraduate Flight Training Systems which include T-45, T-6, T-44, TH-57, TH-73A, T-44 Follow-On: Multi-Engine Training System (METS), and T-45 Follow-On: Undergraduate Jet Training System (UJTS). Continued development engineering for improvements in reliability, maintainability, and safety are required to ensure maximum benefit is achieved to provide effective cost of ownership and availability of aircraft to meet Chief of Naval Air Training (CNATRA) student training requirements. Specific efforts include: T-45, T-6, TH-57, T-44, and TH-73A Training System Improvements such as development and sustainment engineering change proposals (ECPs), avionics reliability and modernization, corrosion prevention ECPs, obsolescence ECPs, T-45 Retrofit Integration Testing (RIT), and new solutions required to meet evolving fleet training requirements; T-45 and T-6 Physiological Episode (PE) mitigation analysis; T-44 Follow-On: METS development; and T-45 Follow-On (UJTS) development.

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production decision.

B. Program Change Summary (\$ in Millions)	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>
Previous President's Budget	15.128	44.120	26.306	-	26.306
Current President's Budget	14.688	44.120	26.120	-	26.120
Total Adjustments	-0.440	0.000	-0.186	-	-0.186
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.440	0.000			
• Rate/Misc Adjustments	0.000	0.000	-0.186	-	-0.186

Change Summary Explanation

Technical: The Tactical Surrogate language was removed since the aircraft is being explored under a different USN effort. UJTS has been identified as the priority program and it will no longer specifically include goals from the Tactical Surrogate effort. However, there is a possibility that the Tactical Surrogate aircraft may be developed from the UJTS aircraft in the future.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity
1319: *Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)*

R-1 Program Element (Number/Name)
PE 0603208N / *Training System Aircraft*

Cost: N/A

Schedule: N/A

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>				Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
3367: <i>Training Aircraft Updates</i>	99.098	14.132	43.110	25.144	-	25.144	33.916	34.525	35.179	35.909	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Training System Improvements:

Funding provides for design, development, integration and test of various pre and post production platform improvements including Retrofit Integration Testing (RIT) for Naval Undergraduate Flight Training Systems which include T-45, T-6, T-44, TH-57, TH-73A, T-44 Follow-On: Multi-Engine Training System (METS), and T-45 Follow-On (UJTS).

T-45 and T-6 Physiological Episode (PE) Mitigation:

Efforts will provide for studies and development efforts to address mitigation of the T-45 and T-6 physiological episodes.

T-44 Follow-On: Multi-Engine Training System (METS):

The T-44 Training Systems consists of the (Qty 54) T-44C aircraft, and associated family of ground based training devices. The T-44 was fielded in 1978 as the only Navy/Marine Corps Multi-Engine trainer. T-44C is the only transitional platform from single engine to multi-engine Transport and Maritime fleet aircraft. The aging platform has become less cost effective to maintain annually as it has surpassed its fatigue life by greater than 50%. In addition, the aircraft is experiencing obsolescence, diminishing manufacturing resources and material shortages, and training capability gaps (as identified in the Capabilities Based Assessment Naval Undergraduate Flight Training). This effort supports development of alternatives/efforts for replacing the T-44 Multi-Engine replacement training system and development and validation of the acquisition strategy for future procurement of the capability to continue to provide the fleet replacement squadrons with qualified and capable Naval Aviators. This effort includes, but is not limited to, market research, requirements development, evaluation of acquisition strategies, evaluation of proposals, and testing of prototypes.

T-45 Follow-On: Undergraduate Jet Training System (UJTS):

The T-45 Training System consists of the T-45C aircraft, ground based training devices, curricula, and associated equipment. The T-45 is facing significant aircraft, engine, and component obsolescence issues. These issues are projected to dramatically increase operating costs and aircraft availability by 2030. This research and development effort will investigate alternatives for replacing the T-45 training system and develop and validate the acquisition strategy for the procurement of a new platform for the Undergraduate Jet Training System (UJTS). The T-45 Follow-On (UJTS) will ensure training commands continue to provide the fleet replacement squadrons with qualified and capable naval aviators. This effort includes, but is not limited to, market research, requirements and training curricula development, evaluation of acquisition strategies, evaluation of proposals, development and testing of new training technologies, and testing of aircraft, Ground Based Training System, and equipment prototypes.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: Training System Improvements	3.800	2.974	3.226	0.000	3.226

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy	Date: March 2024
--------------------------------------------------------------------	-------------------------

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p align="right">Articles:</p> <p>Description: Funding provides for design, development, integration and test of various pre and post production platform improvements including Retrofit Integration Testing (RIT) for Naval Undergraduate Flight Training Systems which include T-45, T-6, T-44, TH-57, TH-73A, T-44 Follow-on: Multi-Engine Training System (METS), and T-45 Follow-On (UJTS).</p> <p>FY 2024 Plans: Continue studies & development efforts for platform improvements for Naval Undergraduate Flight Training Systems, to include T-45 and T-6 avionics and airframe improvement studies, T-45 Test Wing Maintenance, and T-45 Follow-On (UJTS) pre-acquisition studies.</p> <p>FY 2025 Base Plans: Continue studies & development efforts for platform improvements for Naval Undergraduate Flight Training Systems, to include T-45 and T-6 avionics and airframe improvement studies, T-45 Test Wing Maintenance, and T-45 Follow-On (UJTS) pre-acquisition studies.</p> <p>FY 2025 OCO Plans: N/A</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: FY2024 to FY2025 increase of \$0.252M due to increased T-45 maintenance and Flight Ops support requirements.</p>	-	-	-	-	-
<p>Title: T-44 Follow-On: Multi-Engine Training System (METS)</p> <p align="right">Articles:</p> <p>Description: Funding supports research of alternatives for the T-44 Follow-On: Multi-Engine Training System (METS), to include development and validation of the acquisition strategy for future procurement of the capability, ensuring continuous support to fleet replacement squadrons with qualified and capable Naval Aviators. This effort includes, but is not limited to, market research, requirements development, evaluation of acquisition strategies, evaluation of proposals, and testing of prototypes.</p> <p>FY 2024 Plans: No requirements in FY2024 as the program will be fully in production.</p> <p>FY 2025 Base Plans:</p>	5.032	0.000	0.000	0.000	0.000
	-	-	-	-	-

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy	Date: March 2024
--------------------------------------------------------------------	-------------------------

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
-----------------------------------------------------------------------------------------	---------	---------	--------------	-------------	---------------

No requirements in FY2025 as the program will be fully in production.					
-----------------------------------------------------------------------	--	--	--	--	--

FY 2025 OCO Plans: N/A					
----------------------------------	--	--	--	--	--

Title: T-45 Follow-On: Undergraduate Jet Training System (UJTS)	5.300	40.136	21.918	0.000	21.918
Articles:	-	-	-	-	-

Description: Funding supports research and development for the UJTS program (T-45 Follow-On Undergraduate Jet Training System), to include development and validation of the acquisition strategy for future procurement of the capability, ensuring continuous support to fleet replacement squadrons with qualified and capable Naval Aviators. This effort includes, but is not limited to, market research, requirements and training curricula development, evaluation of acquisition strategies, evaluation of proposals, development and testing of new training technologies, and testing of aircraft, Ground Based Training System, and equipment prototypes.					
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--

FY 2024 Plans: Continuing efforts to develop Requirements Documents, Cybersecurity Strategy, Test and Evaluation Master Plan (TEMP), Acquisition Plan/Strategy, Funding Profile, Source Selection Plan, Risk Management Plan, Life Cycle Cost, Initial Capabilities Document (ICD), Market Survey, and relative documents required during the pre-solicitation process. Inform industry of the increased scope of the UJTS program effort to facilitate the program Request For Proposals and eventual program competition. Continue program studies to facilitate all program efforts.					
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--

FY 2025 Base Plans: Continuing efforts to develop Requirements Documents, Cybersecurity Strategy, Test and Evaluation Master Plan (TEMP), Acquisition Plan/Strategy, Funding Profile, Source Selection Plan, Risk Management Plan, Life Cycle Cost, Initial Capabilities Document (ICD), Market Survey, and relative documents required during the pre-solicitation process. Inform industry of the increased scope of the UJTS program effort to facilitate the program Request For Proposals and eventual program competition. Continue program studies to facilitate all program efforts.					
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--

FY 2025 OCO Plans: N/A					
----------------------------------	--	--	--	--	--

FY 2024 to FY 2025 Increase/Decrease Statement:					
--------------------------------------------------------	--	--	--	--	--

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
FY 2024 to FY 2025 decrease of -\$18.218M reflects a spike in FY 2024 funding provided for Tactical Surrogate development. FY 2025 funding reflects a return to baseline UJTS development requirements.					
Accomplishments/Planned Programs Subtotals	14.132	43.110	25.144	0.000	25.144

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025 Base</u>	<u>FY 2025 OCO</u>	<u>FY 2025 Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APN/0569: <i>T45 Series</i>	195.667	170.357	158.800	-	158.800	180.971	184.403	190.972	195.010	653.847	3,624.365
• APN/0571: <i>JT Primary Acft Trnr Sys (JPATS)</i>	19.780	28.005	24.157	-	24.157	24.700	26.152	31.695	32.367	0.000	339.763
• APN/0549: <i>Trainer Acft Series</i>	9.568	16.376	12.415	-	12.415	12.583	13.035	13.507	13.792	3.767	370.497
• APN/0344: <i>Advanced Helicopter Trainer System</i>	123.316	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	652.227
• APN/0343: <i>Multi-Engine Training System (METS)</i>	107.801	289.141	301.303	-	301.303	0.000	0.000	0.000	0.000	0.000	698.245

Remarks

D. Acquisition Strategy

Training System Improvements:

Efforts under this category are expected to be limited to those efforts meeting thresholds under the abbreviated acquisition category.

Naval Aviation Physiological Episode:

Efforts under this category are expected to be limited to those efforts meeting thresholds under the abbreviated acquisition category.

T-44 Follow-On: Multi-Engine Training System (METS):

A multi-engine training capability is required to provide advanced training for United States Navy (USN) and United States Marine Corps (USMC). The T-44 currently supports of Chief of Naval Air Training (CNATRA's) T-44 Multi-Engine Flight Instructor and Transition Curriculum, T-44C Advanced Multi-Engine MPTS, T-44C Multi-Engine Flight Instructor, and T-44C Intermediate E-2/C-2 MPTS syllabi. The T-44 Multi-Engine Follow-On Training System effort will be established to determine and implement the most cost efficient and effective path forward for providing Naval Aviators to the Fleet Replacement Squadrons. The acquisition program consists of a new multi-engine aircraft, Ground Based Training System (GBTs), and interim contractor maintenance/support.

T-45 Follow-On: Undergraduate Jet Training System (UJTS):

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy	Date: March 2024
--------------------------------------------------------------------	-------------------------

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
1319 / 5	PE 0603208N / <i>Training System Aircraft</i>	3367 / <i>Training Aircraft Updates</i>

The Undergraduate Jet Training System (UJTS) program recapitalizes the Navy's intermediate and advanced jet training capabilities for CNATRA. The program will include aircraft, ground based training systems, curricula, and associated equipment. Introduction of UJTS will provide higher availability, reduce operating costs, meet future strike training requirements, and provide a platform that aligns closely with strike aircraft the graduates will operate in the Fleet. The preliminary acquisition strategy includes two separate contract actions: 1. Development and procurement of UJTS aircraft and ground-based training systems; and 2. Interim Contractor Support for maintenance and sustainment.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
UJTS: UJTS Pre-Acquisition Studies	WR	NAWCTSD : Orlando, FL	0.000	2.691	Dec 2022	37.189	Dec 2023	18.912	Dec 2024	-		18.912	Continuing	Continuing	Continuing
T-44 Follow-On: CLS Study	C/FFP	Poplicus Inc : Arlington, VA	0.000	3.333	May 2023	0.000		0.000		-		0.000	0.000	3.333	3.333
Training System Improvements:T-45 BASH Study	MIPR	USDA APHIS WS : Riverdale, MD	0.000	1.000	Aug 2023	0.000		0.000		-		0.000	0.000	1.000	-
Prior Year Product Development costs no longer in the FYDP	Various	Various : Various	36.271	0.000		0.000		0.000		-		0.000	0.000	36.271	-
Subtotal			36.271	7.024		37.189		18.912		-		18.912	Continuing	Continuing	N/A

Remarks
 UJTS: UJTS Pre-Acquisition Studies: Continues funding for product development support for the T-45 Follow-On (UJTS) program at NAWCAD Pax River, MD.

 Training System Improvements: Bird/Wildlife Aircraft Strike Hazard (BASH) Study funds to address safety concerns related to the T-45 through studies and prototype material solution development related to BASH mitigation.

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
T-44 Follow-On: Training System	WR	NAWCAD : Patuxent River, MD	2.645	1.489	Nov 2022	0.000		0.000		-		0.000	0.000	4.134	-
T-44 Follow-On: Training System	WR	NAWCTSD : Orlando, FL	0.769	0.120	Nov 2022	0.000		0.000		-		0.000	0.000	0.889	-
T-44 Follow-On: Training System	WR	NAVFAC SE : Corpus Christi, TX	0.000	0.090	Jul 2023	0.000		0.000		-		0.000	0.000	0.090	-
UJTS: UJTS Support	WR	NAWCAD : Patuxent River, MD	0.000	2.205	Nov 2022	2.947	Nov 2023	3.006	Nov 2024	-		3.006	Continuing	Continuing	Continuing
UJTS: UJTS Support	WR	NAWCTSD : Orlando, FL	0.000	0.102	Nov 2022	0.000		0.000		-		0.000	0.000	0.102	-

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Training System Improvements:T-45 Support	WR	NAWCAD : Patuxent River, MD	0.000	0.347	Apr 2023	0.000		0.000		-		0.000	0.000	0.347	-
Prior Year Support costs no longer funded in FYDP	Various	Various : Various	35.391	0.000		0.000		0.000		-		0.000	0.000	35.391	-
Subtotal			38.805	4.353		2.947		3.006		-		3.006	Continuing	Continuing	N/A

Remarks
 UJTS: Continues funding for government labor support for the UJTS program at NAWCAD Pax River, MD.

 Training System Improvements: FY 2023 funding in support of RFI/RFP development and release of initial acquisition activities, testing, and analyzing DMSMS replacements in support of the T-45 F-405 engine.

 Following cost category items were archived to prior year Support Costs:
 Training System Improvement: T-45 Integrated Logistics Support
 T-44 Follow-On: Training System

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	Various	Various : Various	2.287	0.000		0.000		0.000		-		0.000	0.000	2.287	-
Subtotal			2.287	0.000		0.000		0.000		-		0.000	0.000	2.287	N/A

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Training System Improvements:T-45 PBTH Flight Hours	C/FFP	Rolls Royce : Indianapolis, IN	1.097	0.000	May 2023	0.343	May 2024	0.350	May 2025	-		0.350	1.200	2.990	2.904

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

Management Services (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Training System Improvements:T-45 Test Wing Maintenance	MIPR	Vertex Aerospace LLC : Madison, MS	6.171	2.325	Nov 2022	2.507	Nov 2023	2.749	Nov 2024	-		2.749	17.394	31.146	-
Training System Improvements: Travel	WR	NAVAIR : Patuxent River, MD	0.130	0.128	Oct 2022	0.124	Oct 2023	0.127	Oct 2024	-		0.127	Continuing	Continuing	Continuing
UJTS: Program Management	SS/CPFF	Stracon : Lexington Park, MD	0.000	0.302	Dec 2022	0.000		0.000		-		0.000	0.000	0.302	-
Prior Year Mgmt costs no longer funded in FYDP	Various	Various : Various	14.337	0.000		0.000		0.000		-		0.000	0.000	14.337	-
Need Item Text	C/BA	Not Specified : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Subtotal			21.735	2.755		2.974		3.226		-		3.226	Continuing	Continuing	N/A

Remarks
 Increase in FY24 and FY25 due to additional maintenance and support for T45TS Retrofit Integration Testing (RIT) Aircraft. Training System Improvements, T-45 PBTH Flight Hours: Continues funding for Power-By-The-Hour (PBTH) flight hours and support services for Retrofit Integration Testing (RIT) of T-45 aircraft and F-405 engines at Pax River, MD.

Following cost category item was archived to prior year Management Services:
 T-44 Follow-On: Program Management Studies & Analysis

Training System Improvements, T-45 Test Wing Maintenance: Continues funding for T-45 aircraft maintenance and support for Retrofit Integration Testing (RIT) at Pax River, MD. FY2025 funding increased from FY2024 by \$0.242M for increased maintenance and Flight Ops support requirements.

Training System Improvements, Travel: Continues funding for PMA's consolidated travel costs required to support management and service support for product development for all programs.

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	99.098	14.132	43.110	25.144	-	25.144	Continuing	Continuing	N/A

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Training System Improvements</i>	
Product Development: T-45 Follow-On: Undergraduate Jet Training System (UJTS): Pre-acquisition Studies	
Study/Analysis/Support: T-45 Follow-On: UJTS Support: UJTS Support	
T-44 Follow-On: Multi-Engine Training System (METS): Systems Engineering: METS Contract Award	■
T-44 Follow-On: Multi-Engine Training System (METS): Systems Engineering: T-44 Follow-On: METS Training System Support	
<i>Naval Aviation Physiological Episodes</i>	
Product Development: PE Support: T-45, PE System Engineering	
Product Development: PE Support: T-45, PE Engineering Support	
Product Development: PE Test and Evaluation: T-45, PE Test & Evaluation	
Product Development: PE Test and Evaluation: T-6, PE Test & Evaluation	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 3367 / <i>Training Aircraft Updates</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	-------------------------------------------------------------------------

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Training System Improvements</i>				
Product Development: T-45 Follow-On: Undergraduate Jet Training System (UJTS): Pre-acquisition Studies	1	2023	4	2029
Study/Analysis/Support: T-45 Follow-On: UJTS Support: UJTS Support	1	2023	4	2029
T-44 Follow-On: Multi-Engine Training System (METS): Systems Engineering: METS Contract Award	2	2023	2	2023
T-44 Follow-On: Multi-Engine Training System (METS): Systems Engineering: T-44 Follow-On: METS Training System Support	1	2023	4	2023
<i>Naval Aviation Physiological Episodes</i>				
Product Development: PE Support: T-45, PE System Engineering	1	2023	4	2029
Product Development: PE Support: T-45, PE Engineering Support	1	2023	4	2029
Product Development: PE Test and Evaluation: T-45, PE Test & Evaluation	1	2023	4	2029
Product Development: PE Test and Evaluation: T-6, PE Test & Evaluation	1	2023	4	2029

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy										Date: March 2024		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>				Project (Number/Name) 9099 / <i>Physiological Episodes</i>			
COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
9099: <i>Physiological Episodes</i>	2.578	0.556	1.010	0.976	-	0.976	0.878	0.893	0.909	0.928	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

T-45 and T-6 Physiological Episode (PE) Mitigation:
Efforts will provide for studies and development efforts to address mitigation of the T-45 and T-6 physiological episodes.

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

	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Title: T-45 Physiological Episode Mitigation	0.421	0.872	0.843	0.000	0.843
Articles:	-	-	-	-	-
Description: Funding provides for design, development, integration and test of platform improvements for Naval Aviation Physiological Episode (PE) Mitigation in the T-45 Training Aircraft.					
FY 2024 Plans: Continue Physiological Episode (PE) mitigation studies and development efforts for platform improvements to the T-45 Aircraft Training System. Conduct studies on acceptable breathing resistance limits under varying hypoxic, normoxic, and hyperoxic conditions in order to inform future platform improvements.					
FY 2025 Base Plans: Continue Physiological Episode (PE) mitigation studies and development efforts for platform improvements to the T-45 Aircraft Training System. Conduct studies on acceptable breathing resistance limits under varying hypoxic, normoxic, and hyperoxic conditions in order to inform future platform improvements.					
FY 2025 OCO Plans: N/A					
FY 2024 to FY 2025 Increase/Decrease Statement: FY 2024 to FY 2025 decrease of \$0.029M reflects decreased T-45 Physiological Episode Mitigation Systems Engineering and Test requirements.					
Title: T-6 Physiological Episode Mitigation	0.135	0.138	0.133	0.000	0.133
Articles:	-	-	-	-	-
Description: Funding provides for design, development, integration and test of platform improvements for Naval Aviation Physiological Episode (PE) Mitigation in the T-6 training aircraft.					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2025 Navy		Date: March 2024
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 9099 / <i>Physiological Episodes</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
<p><i>FY 2024 Plans:</i> Continue joint studies and development efforts with the US Air Force for platform improvements to the Joint Primary Aircraft Training System (JPATS/T-6). Continue operational field test and evaluation on newly installed OBOGS O2 concentrators. Research, develop and test installation of Automatic Backup Oxygen System (ABOS) in the T-6A. Conduct test and evaluation of prototype Integrated Sensors Phase II package.</p> <p><i>FY 2025 Base Plans:</i> Continue joint studies and development efforts with the US Air Force for platform improvements to the Joint Primary Aircraft Training System (JPATS/T-6). Continue operational field test and evaluation on newly installed OBOGS O2 concentrators. Research, develop and test installation of Automatic Backup Oxygen System (ABOS) in the T-6A. Conduct test and evaluation of prototype Integrated Sensors Phase II package.</p> <p><i>FY 2025 OCO Plans:</i> N/A</p> <p><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> FY 2024 to FY 2025 decrease of \$0.005M reflects decrease in T-6 Physiological Episode Mitigation test requirements.</p>					
Accomplishments/Planned Programs Subtotals	0.556	1.010	0.976	0.000	0.976

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
• APN/0569: <i>T-45 Physiological Episode Mitigation OSIP 012-19</i>	195.667	170.357	158.800	-	158.800	180.971	184.403	190.972	195.010	653.847	3,660.257
• APN/0571: <i>JPATS Physiological Episode Mitigation OSIP 007-20</i>	19.780	28.005	24.157	-	24.157	24.700	26.152	31.695	32.367	0.000	340.153

Remarks

D. Acquisition Strategy

PE:
Efforts under this category are expected to be limited to those efforts meeting thresholds under the abbreviated acquisition category.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 9099 / <i>Physiological Episodes</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	----------------------------------------------------------------------

Product Development (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
T45 PE OBOGS	C/BA	JHU/APL : Baltimore, MD	0.750	0.000		0.000		0.000		-		0.000	0.000	0.750	-
Subtotal			0.750	0.000		0.000		0.000		-		0.000	0.000	0.750	N/A

Support (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
T45 PE Systems Engineering	WR	NAWCAD : Patuxent River, MD	0.521	0.209	Nov 2022	0.716	Nov 2023	0.692	Nov 2024	-		0.692	Continuing	Continuing	Continuing
T45 PE Engineering Support	WR	Naval Medical Reserach Center : Silver Spring, MD	0.280	0.178	Nov 2022	0.000		0.000		-		0.000	0.000	0.458	-
Subtotal			0.801	0.387		0.716		0.692		-		0.692	Continuing	Continuing	N/A

Remarks
T45 PE, Systems Engineering: Continues funding for engineering support T-45 Physiological Episode (PE) mitigation program at NAWCAD Pax River, MD.

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation (DT&E)	WR	NSWCPCD : Panama City Beach, FL	0.070	0.034	Nov 2022	0.156	Nov 2023	0.151	Nov 2024	-		0.151	Continuing	Continuing	Continuing
Operational Test & Evaluation (OT&E)	WR	NAWCAD : Patuxent River, MD	0.919	0.135	Nov 2022	0.138	Nov 2023	0.133	Nov 2024	-		0.133	Continuing	Continuing	Continuing
Developmental Test & Evaluation (DT&E)	MIPR	AFLCM/WNWK : WR AFB	0.038	0.000		0.000		0.000		-		0.000	0.000	0.038	-
Subtotal			1.027	0.169		0.294		0.284		-		0.284	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 9099 / <i>Physiological Episodes</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	----------------------------------------------------------------------

Test and Evaluation (\$ in Millions)				FY 2023		FY 2024		FY 2025 Base		FY 2025 OCO		FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
 T45 PE, Test & Evaluation: Continues funding for engineering support for the T-45 Physiological Episode (PE) mitigation program at NSWC, Panama City Division, Panama City, FL.
 T6 PE, Test & Evaluation: Continues funding for engineering support for the T-6 Physiological Episode (PE) mitigation program at NAWCAD Pax River, MD.

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.578	0.556	1.010	0.976	-	0.976	Continuing	Continuing	N/A

Remarks
None.

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 9099 / <i>Physiological Episodes</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	----------------------------------------------------------------------

FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Naval Aviation Physiological Episodes</i>	
Support: PE Support: T-45 PE System Engineering	
Support: PE Support: T-6 PE Engineering Support	
Support: PE Test & Evaluation: T-45 PE Test & Evaluation	
Support: PE Test & Evaluation: T-6 PE Test & Evaluation	

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2025 Navy **Date:** March 2024

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0603208N / <i>Training System Aircraft</i>	Project (Number/Name) 9099 / <i>Physiological Episodes</i>
--------------------------------------------------	-------------------------------------------------------------------------------------------	----------------------------------------------------------------------

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Naval Aviation Physiological Episodes</i>				
Support: PE Support: T-45 PE System Engineering	1	2023	4	2029
Support: PE Support: T-6 PE Engineering Support	1	2023	4	2029
Support: PE Test & Evaluation: T-45 PE Test & Evaluation	1	2023	4	2029
Support: PE Test & Evaluation: T-6 PE Test & Evaluation	1	2023	4	2029