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<b>Exhibit R-2, RDT&amp;E Budget Item Justification: PB 2025 Air Force</b>											<b>Date: March 2024</b>	
<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 6: RDT&amp;E Management Support</i>					<b>R-1 Program Element (Number/Name)</b> PE 0604256F / <i>Threat Simulator Development</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	-	20.835	16.626	19.927	0.000	19.927	43.055	49.189	50.969	51.974	Continuing	Continuing
662907: <i>Electronic Combat Intel Support</i>	-	2.801	2.863	2.932	0.000	2.932	3.004	3.066	3.178	3.240	Continuing	Continuing
663321: <i>Electronic Warfare Ground Test Resources</i>	-	15.893	5.819	8.687	0.000	8.687	31.535	37.432	38.785	39.551	Continuing	Continuing
667500: <i>Foreign Materiel Acquisition/Analysis</i>	-	2.141	7.944	8.308	0.000	8.308	8.516	8.691	9.006	9.183	Continuing	Continuing

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

The AF requires a comprehensive set of indoor and outdoor test facilities to implement the Air Force Electronic Warfare (EW) Test Process in order to test EW systems, including Directed Energy (DE). To manage program risk effectively throughout the EW weapons system acquisition process, and to conduct T&E effectively and efficiently, a broad multi-spectrum integrated set of T&E capabilities, ranging from Modeling and Simulation (M&S), to full-scale chamber testing, to flight testing on open-air ranges (OAR), is required. The EW Test Process Support task provides investment management and coordinated technical oversight of EW T&E facilities, including studies, analyses, and related documentation. Additionally, successful EW capabilities in battle are predicated upon a thorough understanding of the threat. To meet that requirement, this PE also includes funding to acquire foreign materiel, and to thoroughly test and evaluate that foreign materiel to understand how those threat systems affect and are affected by our EW systems.

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

<b><u>B. Program Change Summary (\$ in Millions)</u></b>	<b><u>FY 2023</u></b>	<b><u>FY 2024</u></b>	<b><u>FY 2025 Base</u></b>	<b><u>FY 2025 OCO</u></b>	<b><u>FY 2025 Total</u></b>
Previous President's Budget	21.067	16.626	20.391	0.000	20.391
Current President's Budget	20.835	16.626	19.927	0.000	19.927
Total Adjustments	-0.232	0.000	-0.464	0.000	-0.464
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.232	0.000			
• Other Adjustments	0.000	0.000	-0.464	0.000	-0.464

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<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604256F / <i>Threat Simulator Development</i>
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**Change Summary Explanation**

The FY 2025 budget request was reduced by \$0.500 million to account for the availability of prior year execution balances.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0604256F / Threat Simulator Development				<b>Project (Number/Name)</b> 662907 / Electronic Combat Intel Support			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
662907: <i>Electronic Combat Intel Support</i>	-	2.801	2.863	2.932	0.000	2.932	3.004	3.066	3.178	3.240	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project provides funding to support Foreign Materiel Operational Test and Evaluation (FMOT&E), which ensures the ability of operational commands to test and develop effective Electronic Attack/Electronic Protection (EA/EP) techniques and tactics. Funds are required for: deployment of systems to test facilities; travel of personnel to the test sites to evaluate and validate test results; range and laboratory costs; test consumables; costs for instrumentation of systems; and contracted engineering support for the conduct of tests and subsequent reporting. Funding for this program is required to prevent future aircraft losses due to improper and inaccurate aircrew tactics (e.g., lack of evasive action or proper tactics training to avoid missile attack).

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> FMOT&E	2.801	2.863	2.932
<b>Description:</b> Supports Foreign Materiel Operational Test and Evaluation (FMOT&E)			
<b>FY 2024 Plans:</b> Continue operations of electronic combat intelligence support for fighter and bomber testing, mobility special operations transport and helicopter testing, classified operational assessments and extensive evaluations and reporting of system effectiveness.			
<b>FY 2025 Plans:</b> Continue operations of electronic combat intelligence support for fighter and bomber testing, mobility special operations transport and helicopter testing, classified operational assessments and extensive evaluations and reporting of system effectiveness.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>	2.801	2.863	2.932

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

<b>Line Item</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDTE 06 0605807F: <i>Test and Evaluation Support</i>	842.401	913.213	936.913	-	936.913	1,088.746	1,273.317	1,316.674	1,368.799	Continuing	Continuing

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0604256F / Threat Simulator Development	<b>Project (Number/Name)</b> 662907 / Electronic Combat Intel Support

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

Line Item	FY 2023	FY 2024	FY 2025	FY 2025	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Cost To	
			Base	OCO	Total					Complete	Total Cost
• RDTE 06 0605976F: <i>Facilities Restoration and Modernization - Test and Evaluation Support</i>	133.420	87.889	94.828	-	94.828	218.485	211.294	250.223	237.553	Continuing	Continuing
• RDTE 06 0605978F: <i>Facilities Sustainment - Test and Evaluation Support</i>	31.561	35.065	63.579	-	63.579	92.273	173.434	176.909	180.417	Continuing	Continuing
• RDTE 06 0604759F: <i>Major T&amp;E Investment</i>	169.432	31.143	74.228	-	74.228	208.911	282.949	278.682	274.774	Continuing	Continuing
• RDTE 06 0606398F: <i>Management HQ - T&amp;E</i>	7.535	7.453	7.647	-	7.647	7.788	7.950	8.297	8.457	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force										<b>Date:</b> March 2024		
<b>Appropriation/Budget Activity</b> 3600 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0604256F / <i>Threat Simulator Development</i>				<b>Project (Number/Name)</b> 663321 / <i>Electronic Warfare Ground Test Resources</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>FY 2028</b>	<b>FY 2029</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
663321: <i>Electronic Warfare Ground Test Resources</i>	-	15.893	5.819	8.687	0.000	8.687	31.535	37.432	38.785	39.551	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The AF requires a comprehensive set of test facility modernizations to improve Electronic Warfare (EW) which includes Directed Energy (DE) weapons Test and Evaluation (T&E) capabilities. This funding is used to improve and modernize threat system simulators, stimulators, emitters and supporting infrastructure to sufficiently and cost effectively test and evaluate current and future weapon systems' ability to perform in realistic EW threat representative environments. The National Radar Cross Section (RCS) Test Facility (NRTF) at Holloman AFB, NM, provides timely, accurate, and secure RCS and antenna measurements for tri-service and joint program offices, DoD laboratories, Defense Advanced Research Projects Agency (DARPA) and industry. The NRTF tests fielded and developmental systems and technologies to meet Low Observable (LO) and EW customer requirements. The Guided Weapons Evaluation Facility (GWEF) at Eglin AFB, FL, and the Digital Integrated Air Defense System (DIADS) at Edwards AFB, CA, provide the ability to realistically evaluate hardware and software components of US weapon systems against manned hardware threat representations throughout the acquisition process. The GWEF provides simulations of advanced Infrared (IR) Surface-to-Air Missiles (SAMs) and Air-to-Air Missiles (AAMs), IR and Laser countermeasure functions, and the integration of actual threat hardware and ground clutter into advanced threat IR missile simulations. DIADS provides mission level simulations of both algorithm-based and man-in-the-loop-based enemy command and control (C2) capabilities that integrate early warning radar detection, SAM engagement capabilities, and limited ground-controlled fighter intercepts. The Benefield Anechoic Facility (BAF) at Edwards AFB, CA, and the Joint Preflight Integration of Munitions and Electronic Systems (J-PRIMES) facility at Eglin AFB, FL, both provide threat-representative EW emitters and stimulators to replicate a variety of land, sea and airborne threats in a controlled RF environment to evaluate full-scale weapon systems. The BAF additionally provides an ability to perform Electromagnetic Interference/Compatibility (EMI/EMC) testing to ensure radars, jammers, radios, and other flight-critical electronic systems will not interfere with each other during a mission. The Central Inertial and GPS Test Facility (CIGTF) at the 704th Test Group at Holloman AFB, NM provides threat-representative GPS jammers and laydowns in both lab and open-air environments to test avionics systems' performance when under various GPS-denial conditions. Provides EW test process support, conducting requirements analyses and other studies in support of AF T&E investments in test infrastructure and capabilities.

In previous R-2 Exhibits, EW T&E modernization efforts within this PE's BPAC were identified via two mission area categories: Improvement and Modernization (I&M) and EC Test Process Support. To more accurately align this R-2 Exhibit with the funding/execution baseline for this BPAC, the two aforementioned mission area categories have been combined into a single mission area titled, "Electronic Warfare Ground Test Resources".

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Electronic Warfare Ground Test Resources	15.893	5.819	8.687
<b>Description:</b> Provides for planning, monitoring, improvement, and modernization of test capabilities to conduct and support the AF EW test process. Conducts requirements analyses and other studies in support of Air Force T&E investments in test			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0604256F / <i>Threat Simulator Development</i>	<b>Project (Number/Name)</b> 663321 / <i>Electronic Warfare Ground Test Resources</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>infrastructure and capabilities. Plans for FY2024 and FY2025 include, but are not limited to, the following EW efforts which are all delayed due to the availability of prior year execution balances (under execution).</p> <p><b>FY 2024 Plans:</b> Close out the Red Integrated Air defense System (Red IADS) project. The Jammer/ECM Enhancement &amp; Integration (JECM) project will have to split the C-band antenna purchase between FY24 and 25 funds delaying the capability into FY26. Planning for the Advanced NAVWAR Open-Air T&amp;E project at AEDC will continue. Continue executing development, procurement, and integration of EW programs (at significantly reduced funding) such as the National RCS Test Facility (NRTF) Modernization and Measurement, Infra-Red Countermeasure-capability Modernization (IRCM-CM). Other projects currently on hold due to funding shortfalls, Electronic Combat Range - Dynamic Moving Target Simulator (ECR-DMTS) and the ECR Early Warning Radar (EWR), both threat simulators. Also included is continued funding of SETA support necessary to implement planned Air Force test processes and infrastructure for I&amp;M capabilities, support tri-service monitoring and analysis teams established to identify emerging joint investment needs and requirements development and assist in the management and monitoring of I&amp;M program elements and activities.</p> <p><b>FY 2025 Plans:</b> Execute Red Integrated Air Defense System (Red-IADS). The Jammer/ECM Enhancement &amp; Integration (JECM) project will have to split the C-band antenna purchase between FY24 and 25 funds delaying the capability into FY26. Start execution of the DIADS Hypersonic Air Defense Effectiveness and Susceptibility (HADES) project and the Advanced NAVWAR Open-Air T&amp;E project at AEDC. Continue executing development, procurement, and integration of EW programs; National RCS Test Facility (NRTF) Modernization and Measurement, Infra-Red Countermeasure-capability Modernization (IRCM-CM). Start planning of Electronic Combat Range - Dynamic Moving Target Simulator (ECR-DMTS) and the ECR Early Warning Radar (EWR), both threat simulators. Also included is continued funding of SETA support necessary to implement planned Air Force test processes and infrastructure for I&amp;M capabilities, support tri-service monitoring and analysis teams established to identify emerging joint investment needs and requirements development and assist in the management and monitoring of I&amp;M program elements and activities.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> A net increase of \$2.868 million is due to \$2.795 million in support of Hypersonics and nonpay non-fuel inflation.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	15.893	5.819	8.687

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<b>Appropriation/Budget Activity</b> 3600 / 6				<b>R-1 Program Element (Number/Name)</b> PE 0604256F / Threat Simulator Development				<b>Project (Number/Name)</b> 663321 / Electronic Warfare Ground Test Resources			

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

<u>Line Item</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u> <u>Base</u>	<u>FY 2025</u> <u>OCO</u>	<u>FY 2025</u> <u>Total</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>FY 2029</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE 06 0605807F: Test and Evaluation Support	842.401	913.213	936.913	-	936.913	1,088.746	1,273.317	1,316.674	1,368.799	0.000	7,740.063
• RDTE 06 0605976F: Facilities Restoration and Modernization - Test and Evaluation Support	133.420	87.889	94.828	-	94.828	218.485	211.294	250.223	237.553	0.000	1,233.692
• RDTE 06 0605978F: Facilities Sustainment - Test and Evaluation Support	31.561	35.065	63.579	-	63.579	92.273	173.434	176.909	180.417	0.000	753.238
• RDTE 06 0604759F: Major T&E Investment	169.432	31.143	74.228	-	74.228	208.911	282.949	278.682	274.774	0.000	1,320.119
• RDTE 06 0606398F: Management HQ - T&E	7.535	7.453	7.647	-	7.647	7.788	7.950	8.297	8.457	0.000	55.127

**Remarks**

**D. Acquisition Strategy**

N/A

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

<b>Appropriation/Budget Activity</b> 3600 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0604256F / Threat Simulator Development	<b>Project (Number/Name)</b> 667500 / Foreign Materiel Acquisition/Analysis
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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
667500: Foreign Materiel Acquisition/Analysis	-	2.141	7.944	8.308	0.000	8.308	8.516	8.691	9.006	9.183	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

This project's specific purpose is to support DAF Foreign Materiel Program requirements through the acquisition and analysis of foreign materiel. Due to the unique capabilities of the DAF FMP, both USAF and USSF work cooperatively to support DAF FMP requirements. Items considered for these Foreign Materiel Acquisition (FMA) funds are included in the prioritized Service's FMA Top 50 list established each year. Annually, the MAJCOM and Field Commands create integrated prioritized lists of their top 50 requirements. The requirements lists are integrated and prioritized into a classified Service requirement list. System analyses are based on and driven by acquisitions. The DAF FMP provides assessments and data for threat systems to all DoD components.

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

	FY 2023	FY 2024	FY 2025
<b>Title:</b> FMP	2.141	7.944	8.308
<b>Description:</b> Supports DAF Foreign Materiel Program (FMP) Requirements through the acquisition and analysis of foreign materiel.			
<b>FY 2024 Plans:</b> Continue to fund acquisition of available Foreign Materiel in accordance with the DAF Foreign Materiel Priority Lists; analysis of acquired Foreign Materiel; and operations and maintenance of the specialized Foreign Materiel assets.			
<b>FY 2025 Plans:</b> Continue to fund acquisition of available Foreign Materiel in accordance with the DAF Foreign Materiel Priority Lists; analysis of acquired Foreign Materiel; and operations and maintenance of the specialized Foreign Materiel assets.			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>	2.141	7.944	8.308

**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
• RDTE 06 0605807F: Test and Evaluation Support	842.401	913.213	936.913	-	936.913	1,088.746	1,273.317	1,316.674	1,368.799	Continuing	Continuing

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<b>Appropriation/Budget Activity</b> 3600 / 6				<b>R-1 Program Element (Number/Name)</b> PE 0604256F / Threat Simulator Development				<b>Project (Number/Name)</b> 667500 / Foreign Materiel Acquisition/ Analysis			

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

Line Item	FY 2023	FY 2024	FY 2025	FY 2025	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Cost To	
			Base	OCO	Total					Complete	Total Cost
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• RDTE 06 0605978F: <i>Facilities Sustainment - Test and Evaluation Support</i>	31.561	35.065	63.579	-	63.579	92.273	173.434	176.909	180.417	Continuing	Continuing
• RDTE 06 0604759F: <i>Major T&amp;E Investment</i>	169.432	31.143	74.228	-	74.228	208.911	282.949	278.682	274.774	Continuing	Continuing
• RDTE 06 0606398F: <i>Management HQ - T&amp;E</i>	7.535	7.453	7.647	-	7.647	7.788	7.950	8.297	8.457	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

N/A