

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</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	-	8.352	13.804	19.264	0.000	19.264	19.721	20.105	60.235	133.002	Continuing	Continuing
653891: <i>Adv Infrared Counter Measures(Aircm)</i>	-	8.352	13.804	19.264	0.000	19.264	19.721	20.105	60.235	125.394	Continuing	Continuing
658462: <i>Airborne Electronic Attack*</i>	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.608	Continuing	Continuing

\*This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2025

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

"653891: The Advanced Infrared Countermeasure (AIRCМ) project contains related aircraft self-protection efforts aimed at increasing aircraft survivability against the increasing threat of sophisticated surface-to-air and air-to-air missiles. These missiles may employ sophisticated next-generation Electro-Optics (EO), Infrared (IR), Radio Frequency (RF), dual-mode (i.e. IR and RF), or multi-mode seekers. AIRCM will provide advanced expendable countermeasures and/or techniques that will be functionally compatible with existing dispenser systems and employed across multiple USAF weapons systems. This also includes any and all flare, chaff, decoy, and associated component development and testing that may be demanded or needed in current and future operations regardless of aircraft platform. Similar activities that are supplementary to this effort may be accomplished ad hoc using platform specific funding or through other activities such as joint services or NATO test groups."

Funding increased in FY25 due to change in focus from defeating Counter Violent Extremist Organization relevant threats to closing capability gaps to defeat latest National Defense Strategy top priority threat systems.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831 F, 0605832F, 0605833F, 0605898F, 0606398F. FY25 0.00 is forecasted for civilian pay expenses in this program element.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Air Force	<b>Date:</b> March 2024
--	-------------------------

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>
---	---

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>
Previous President's Budget	7.222	13.804	18.230	0.000	18.230
Current President's Budget	8.352	13.804	19.264	0.000	19.264
Total Adjustments	1.130	0.000	1.034	0.000	1.034
• 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	1.392	0.000			
• SBIR/STTR Transfer	-0.262	0.000			
• Other Adjustments	0.000	0.000	1.034	0.000	1.034

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

**Project:** 653891: *Adv Infrared Counter Measures(Aircm)*

Congressional Add: *Ultra-Wideband Receiver (UWR) for Radar Jammer*

Congressional Add Subtotals for Project: 653891

Congressional Add Totals for all Projects

	<b>FY 2023</b>	<b>FY 2024</b>
	5.000	0.000
Congressional Add Subtotals for Project: 653891	5.000	0.000
Congressional Add Totals for all Projects	5.000	0.000

**Change Summary Explanation**

FY2023: Reprogramming, \$1.397M -- Transfer of available funds to support the USAF overall increased investment in the AIRCM program.

FY2025: \$1.000M increase to support activities in both Cognitive Electromagnetic Warfare and Electromagnetic Battle Management to continue/complete Material Solution work.

**UNCLASSIFIED**

<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 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</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>
653891: <i>Adv Infrared Counter Measures(Aircm)</i>	-	8.352	13.804	19.264	0.000	19.264	19.721	20.105	60.235	125.394	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

"The Advanced Infrared Countermeasure (AIRCМ) project improves aircraft self-protection against the increasing threat of sophisticated surface-to-air and air-to-air missiles. Countermeasure improvements are the result of multiple related activities. First, enhanced understanding of advanced threats derived from intelligence and Threat Acquisition and Exploitation. Countermeasure Modeling and Simulation creates updated threat models, countermeasure models, and aircraft models. Modeling and Simulation is then used to digitally evaluate new techniques and products for improved effectiveness against current and emerging threat systems. Countermeasure Development yields new devices and capabilities aimed to defeat advanced threats. Countermeasure Testing collects data for updated digital models as well as tests devices and techniques to determine effectiveness. The project also provides for modernization and enhancement of tools and capabilities needed to perform Threat Acquisition and Exploitation, Countermeasure Modeling and Simulation, Countermeasure Development, and Countermeasure Testing. The project also evaluates novel countermeasure devices and techniques for potential significant capability gains against threats."

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

	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Countermeasure Development and Testing	3.352	3.304	0.000
<b>Description:</b> Development, testing and qualification of EO, IR, and RF countermeasures (CM) on aircraft.			
Note: This thrust area is being discontinued in FY2025. Current efforts are being continued, at higher levels of funding, in the CM Development, CM Testing, and CM Modeling and Simulation thrust areas, where they can be more fully described and better justified.			
<b>FY 2024 Plans:</b> FY 2024 Plans: Activities include development, testing and qualification of expendable countermeasures or cocktails on various aircraft.			
<b>FY 2025 Plans:</b> N/A			
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 funding decreased because the thrust area will not be continued in FY 2025 and beyond. Effort continues in Countermeasure Development and Countermeasure Testing.			
<b>Title:</b> Threat Acquisition & Exploitation	0.000	0.500	1.250

**UNCLASSIFIED**

<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 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p><b>Description:</b> Threat Acquisition &amp; Exploitation will be a continuing project including intelligence monitoring of threat developments, acquisition of foreign threat systems, development of threat system surrogates, exploitation of threat systems and support to digital threat model development. The funding ensures focus on threats of interest to the AIRCM program and provides the level of analysis needed to discover potential countermeasure solutions. Investment will grow capacity to acquire and exploit multiple systems simultaneously reducing time to deliver countermeasure capabilities.</p> <p><b>FY 2024 Plans:</b> New start investment for the AIRCM program in Threat Acquisition &amp; Exploitation activities.</p> <p><b>FY 2025 Plans:</b> Invest in surrogate threat system development, ramp up investment &amp; capacity for threat exploitation activities through Air Force Research Laboratory.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 funding increased because of a multi-year capacity ramp up enabling comprehensive exploitation of multiple systems concurrently. This is part of the USAF overall increased investment in the AIRCM program.</p>				
<p><b>Title:</b> Countermeasure Development</p> <p><b>Description:</b> All aspects of research, design, development, prototyping, and production of test assets for new countermeasures leading to fielding of new countermeasure capabilities. May also include development of advanced manufacturing methods and capabilities.</p> <p>Note: This is not a new start in FY25. This thrust area continues efforts previously conducted under the Countermeasure Development and Testing</p> <p><b>FY 2024 Plans:</b> N/A</p> <p><b>FY 2025 Plans:</b> Invest in maturing Army DEVCOM alternative pyrophoric material, begin investment in lower cost training flare device, fund rapid prototyping and development activities. This support previously funded under the Countermeasure Development and Testing major thrust area.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 funding increased because of the USAF overall increased investment in the AIRCM program.</p>		0.000	0.000	2.270
<p><b>Title:</b> Countermeasure Testing</p>		0.000	0.000	3.212

**UNCLASSIFIED**

<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 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p><b>Description:</b> Funds all aspects of countermeasures testing. May include flight test, ground based testing, test instrumentation availability and operation, data collection and data reduction, updates and modernization of test assets to meet changing needs as driven by updates to threat systems. Investment will enable routine test events to reduce timeline from updated countermeasure recommendations to test and validation of performance. The increased funding levels will reduce timeline to deliver countermeasures capabilities.</p> <p>Note: This is not an FY25 new start. This thrust area continues efforts previously conducted under the Countermeasure Development and Testing</p> <p><b>FY 2024 Plans:</b> N/A</p> <p><b>FY 2025 Plans:</b> Funding will support conduct of a test event in FY25. Begins work on a pneumatic countermeasure sled track to shorten timelines and costs to test developmental items. Supports investment begun by USN Crane on a digital static track system. This is a lower cost to operate system recording precise position information for flares and aircraft in flight. This data is vital to flare digital model development and current systems for recording this information are cost prohibitive to sustain and operate. This support previously funded under the Countermeasure Development and Testing major thrust area.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 funding increased because of the USAF overall increased investment in the AIRCM program.</p>				
<p><b>Title:</b> Countermeasure Modeling and Simulation</p> <p><b>Description:</b> Funds operation of countermeasure modeling and simulation, development of recommended advanced countermeasure solutions, in lab testing and support of field testing, data collection and data analysis from test events. Also funds continued advancement of modeling &amp; simulation capabilities including advancing software, digital models, and IT infrastructure required to operate. Investment will grow modeling and simulation capacity, reducing time to deliver countermeasure capabilities.</p> <p>Note: This thrust area continues efforts previously conducted under the Countermeasure Development and Testing thrust area being discontinued in FY2025.</p> <p><b>FY 2024 Plans:</b> N/A</p> <p><b>FY 2025 Plans:</b></p>		0.000	0.000	1.510

**UNCLASSIFIED**

<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 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<p>Continue ongoing efforts funding Air Force Research Laboratory Dynamic Infrared Missile Evaluation (DIME) Laboratory, Air Force Life Cycle Management Center, Georgia Tech Research Institute (GTRI), and Navy Infrared Countermeasures Effectiveness Laboratory (NICEL) for modeling &amp; simulation of Infrared and Radio Frequency guided missiles. This support previously funded under the Countermeasure Development and Testing major thrust area.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 funding increased because of the USAF overall increased investment in the AIRCM program.</p>				
<p><b>Title:</b> Electromagnetic Battle Management (EMBM)</p> <p><b>Description:</b> Perform assessments and analyses for an Air Force capability to provide electromagnetic spectrum situational awareness, decision support, and command and control - linked by common architectures, standards, and data - to enable planning, coordination, and synchronization of electromagnetic spectrum operations (EMSO) across the range of military operations.</p> <p><b>FY 2024 Plans:</b> Perform an Analysis of Alternatives.</p> <p><b>FY 2025 Plans:</b> Perform preparation activities for development of program Acquisition Strategy development.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increased in FY25 with the addition of Program Management dollars to finish Material Solution work and prep for Milestone A decision.</p>		0.000	5.000	5.511
<p><b>Title:</b> Cognitive Electromagnetic Warfare (EW)</p> <p><b>Description:</b> Perform assessments and analyses for an Air Force capability to defend from and attack an adversaries' use of the electromagnetic spectrum (EMS) assisted by incorporation of machine learning/artificial intelligence algorithms into aircraft EW systems, and share Cog EW algorithms, techniques, and identification/targeting criteria to the joint warfighting force.</p> <p><b>FY 2024 Plans:</b> Perform pre-program of record activities to include assessments and analyses of current AF EW systems ability to incorporate Cog EW capabilities into existing EW system architectures.</p> <p><b>FY 2025 Plans:</b></p>		0.000	5.000	5.511

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>
--	---	--

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2023	FY 2024	FY 2025
Perform pre-program of record activities to include assessments and analyses of current AF EW systems ability to incorporate Cog EW capabilities into existing EW system architectures and identify requirements strategy.			
<b><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i></b> Funding increased in FY25 with the addition of Program Management dollars to continue Material Solution work and start the Capabilities Based Analysis prior to the Material Development Decision.			
<b>Accomplishments/Planned Programs Subtotals</b>	3.352	13.804	19.264

	FY 2023	FY 2024
<b><i>Congressional Add:</i></b> Ultra-Wideband Receiver (UWR) for Radar Jammer	5.000	0.000
<b><i>FY 2023 Accomplishments:</i></b> Developed a direction-finding enhancement for the ultra-wideband receiver (UWR). The enhanced UWR system will perform real-time streaming containing UWR detection details, to include frequency, coarse pulse train and scan pattern details, and direction. Deliverables will include appropriate requirements, design, test specifications and product drawings.		
<b><i>FY 2024 Plans:</i></b> N/A		
<b>Congressional Adds Subtotals</b>	5.000	0.000

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

<u>Line Item</u>	FY 2023	FY 2024	FY 2025 <u>Base</u>	FY 2025 <u>OCO</u>	FY 2025 <u>Total</u>	FY 2026	FY 2027	FY 2028	FY 2029	<u>Cost To Complete</u>	<u>Total Cost</u>
• PAAF 01 356010: <i>Flares</i>	130.548	79.786	99.769	-	99.769	102.665	99.752	86.441	88.155	Continuing	Continuing

**Remarks**  
Qualified flares, if not in AF inventory, will be procured under program 0208030F War Reserve Munitions, Flares.

**D. Acquisition Strategy**

Various acquisition approaches will be used. Government organic capabilities will be utilized to the greatest practicable extent to include threat acquisition and exploitation, modeling and simulation, testing, and development work. Portions of the program will be executed via Other Transactional Authorities which facilitate collaborative Government, Industry, and Academic ordnance technology development and prototyping initiatives. Other portions may be contracted via the Eglin Wide Agile Acquisition Contract, a multi-year indefinite delivery, indefinite quantity contract supporting munitions research, development, prototyping, and production.

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>
--	---	--

<b>Product Development (\$ in Millions)</b>				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			
IR/UV: Black Body Thrusted Flare	C/CPFF	Cornerstone OTA : TBD, TN	-	1.222	Jan 2023	-		-		-		-	Continuing	Continuing	-
Next Generation Ultra-Wide Band Receiver (UWR)	TBD	TBD : Warner Robins AFB, GA	-	4.898	Apr 2023	-		-		-		-	Continuing	Continuing	-
Pyrophoric Alternative Material	MIPR	DEVCOM AC : Picatinny Arsenal, NJ	-	-		0.500	Jan 2024	0.800	Jan 2025	-		0.800	Continuing	Continuing	-
High Frequency Chaff	TBD	TBD : TBD	-	-		0.350	Mar 2024	-		-		-	Continuing	Continuing	-
IR Advanced Countermeasure Prototyping and Design	Various	Various : TBD	-	-		0.500	May 2024	1.470	Jan 2025	-		1.470	Continuing	Continuing	-
Cognitive Electromagnetic Warfare (EW)	Various	Air Combat Command : Langley AFB, VA	-	-		5.000	Oct 2023	5.511	Oct 2024	-		5.511	Continuing	Continuing	-
Electromagnetic Battle Management (EMBM)	Various	Air Combat Command : Langley AFB, VA	-	-		5.000	Oct 2023	5.511	Oct 2024	-		5.511	Continuing	Continuing	-
<b>Subtotal</b>			-	6.120		11.350		13.292		-		13.292	Continuing	Continuing	N/A

**Remarks**  
 Develop Advanced Expendable Countermeasures to defeat currently fielded threats from which aircraft are not sufficiently protected.  
 Perform assessments and analyses of proposed electromagnetic warfare (EW) capabilities.

<b>Support (\$ in Millions)</b>				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			
A&AS Support	C/FFP	EPASS: Hill AFB : UT	-	-		0.200	Feb 2024	0.000	Feb 2025	-		0.000	Continuing	Continuing	-
Flare Road Map Tech Support	C/FFP	DTIC: GTRI : GA	-	0.708	Nov 2023	-		-		-		-	Continuing	Continuing	-
Travel	Various	Not specified. : TBD	-	-		0.025		0.000	Nov 2024	-		0.000	Continuing	Continuing	-

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>
--	---	--

<b>Support (\$ in Millions)</b>				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			
<b>Subtotal</b>			-	0.708		0.225		0.000		-		0.000	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				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			
Modeling and Simulation	MIPR	Air Force Research Lab : WPAFB, OH	-	1.422	Aug 2023	-		-		-		-	Continuing	Continuing	-
Threat and Acquisition Exploitation	MIPR	Multiple : TBD	-	-		0.500	Feb 2024	1.267	Dec 2024	-		1.267	Continuing	Continuing	-
IR Modeling and Simulation	MIPR	Various : TBD	-	-		1.729	Dec 2023	1.510	Dec 2024	-		1.510	Continuing	Continuing	-
Subsonic Sled Track for Countermeasure Development	MIPR	Navy Crane : Camp Atturbury, IN	-	-		-		0.000	Jan 2025	-		0.000	Continuing	Continuing	-
Digital Static Track System	MIPR	Navy Crane : Crane, IN	-	-		-		0.000	Dec 2024	-		0.000	Continuing	Continuing	-
RF Modeling & Simulation	MIPR	Various : TBD	-	-		-		0.000	Dec 2024	-		0.000	Continuing	Continuing	-
Test Event	MIPR	Various : TBD	-	-		-		3.195	Dec 2024	-		3.195	Continuing	Continuing	-
<b>Subtotal</b>			-	1.422		2.229		5.972		-		5.972	Continuing	Continuing	N/A

**Remarks**

Threat Acquisition and Exploitation

- Effort will utilize several approaches to acquire threat systems, fund exploitation efforts and digital model development
- Fund expenditure timelines are unpredictable for threat acquisition, dependant on opportunity

Pyrophoric Alternative Material

- Continues development of DEVCOM AC alternative pyrophoric material
- Work to be done to optimize IR output
- Potential alternative to environmentally unfriendly material produced by sole source vendor
- Future of current sole source vendor is uncertain

IR Advanced Countermeasure Prototyping & Design

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>
--	---	--

<b>Test and Evaluation (\$ in Millions)</b>				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			
<ul style="list-style-type: none"> <li>- Will fund design and prototype countermeasures for test and evaluation</li> <li>- Anticipate supporting concurrent efforts through multiple acquisition approaches</li> </ul> <p>IR Modeling &amp; Simulation</p> <ul style="list-style-type: none"> <li>- This entails performance of modeling and simulation (to include hardware in the loop) which helps to predict advanced expendable countermeasure effectiveness and develop and define Air Force Requirements</li> <li>- Performing activity varies; conducted by AFRL, Georgia Tech Research Institute, US Navy NICEL Lab, Guided Weapons Evaluation Facility at Eglin AFB and others</li> <li>- Funds updates and modernization of software and hardware necessary to keep modeling and simulation capability current to advanced threat systems</li> </ul> <p>RF Modeling &amp; Simulation</p> <ul style="list-style-type: none"> <li>- Funds modeling and simulation to determine effectiveness of expendable countermeasure against radar guided threat systems</li> </ul> <p>Subsonic Sled Track for Countermeasure Development</p> <ul style="list-style-type: none"> <li>- Funds design and installation of a pneumatic powered test track to be utilized in countermeasure development and lot acceptance testing</li> <li>- Current methods require flight testing which is expensive and drives schedule delays</li> <li>- Will mirror a design successfully operating in the United Kingdom</li> </ul> <p>Digital Static Track System</p> <ul style="list-style-type: none"> <li>- Precise countermeasure trajectories is critical in model development</li> <li>- Current systems for measuring trajectories are only available at limited ranges, are expensive to operate, and in some cases are being eliminated due to cost and limited use</li> <li>- Digital Static Track System will provide a portable and lower cost system optimized for trajectory capture of flare countermeasures</li> </ul> <p>Test Support</p> <ul style="list-style-type: none"> <li>- This includes but is not limited to Seeker Test Vans (multiple vans required for Captive Seeker), duo chrome camera, and other test equipment</li> <li>- Activities/support during testing (i.e. communications/electric/security)</li> <li>- Performing Activity &amp; Location should remain "Various: TBD", multiple activities are included</li> </ul>															

<b>Management Services (\$ in Millions)</b>				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			
Program Support Costs (formerly Program Management Administration costs) -- UWR	Various	AFMC AFLCMC : Robins AFB, GA	-	0.102	Feb 2023	-		-		-		-	Continuing	Continuing	-

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</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			
<b>Subtotal</b>			-	0.102		-		-		-		-	Continuing	Continuing	N/A

**Remarks**  
AATC provides all the management, preparation and coordination of advanced expendable countermeasure testing efforts for ACC/CAF (this does not include support for AMC or AFSOC)

	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	-	8.352	13.804	19.264	-	19.264	Continuing	Continuing	N/A

**Remarks**



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270F / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> 653891 / <i>Adv Infrared Counter Measures(Aircm)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Advance IR Aircm</i></b>				
IR/UV: Black Body Thrusted Flare	4	2023	2	2024
Modeling and Simulation	1	2023	1	2024
Threat Acquisition & Exploitation	1	2024	4	2029
Pyrophoric Alternative Material	2	2024	3	2028
High Frequency Chaff	1	2024	2	2025
IR Advanced Countermeasure Prototyping and Design	2	2024	4	2029
IR Modeling and Simulation	1	2024	4	2029
Subsonic Sled Track for Countermeasure Development	2	2025	4	2027
Digital Static Track System	2	2025	3	2027
RF Modeling & Simulation	2	2024	4	2029
Test Event	1	2025	4	2029
<b><i>Wideband Receiver for Radar Jammer</i></b>				
Next Generation Wide Band Receiver	1	2023	4	2028
<b><i>Cognitive Electromagnetic Warfare (EW)</i></b>				
Cognitive Electromagnetic Warfare (EW)	1	2024	4	2029
<b><i>Electromagnetic Battle Management (EMBM)</i></b>				
Electromagnetic Battle Management (EMBM)	1	2024	4	2029