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**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 0604735F / <i>Combat Training Ranges</i>
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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
Total Program Element	-	100.322	152.569	224.783	0.000	224.783	51.625	56.215	58.146	65.168	0.000	708.828
652286: <i>Combat Training Range Equipment</i>	-	100.322	152.569	224.783	0.000	224.783	51.625	56.215	58.146	65.168	0.000	708.828
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

**Note**

Advanced Radar Threat System Tech Development, changed from ARTS V4.

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

COMBAT TRAINING RANGES (CTR): Portfolio provides electronic warfare equipment and support to Air Force combat training ranges for training, testing, and evaluation of aircrews. Development and integration efforts include: aircraft pods, radar emitters, advanced radar emitters, communication jammers, command and control and debrief capability, and instrumentation equipment. All development efforts support USAF aircraft for Joint, Coalition, and Live Virtual Constructive (LVC) training events.

This program leverages digital acquisition tenets of open, agile, and digital. This program will develop Common component in collaboration with other weapon systems, to reduce redundant costs between systems with similar subsystems requirements. It will also invest in analytical, information management, data management, digital environments, networks, facilities, and security infrastructure upgrades directly supporting development and sustainment of this program's capabilities, while leveraging DoD and DAF enterprise IT solutions.

ADVANCED RADAR THREAT SYSTEM (ARTS): The ARTS program will design, develop, and test threat systems based on replicating advanced foreign fielded Surface-to-Air Missile (SAM) radar and Electronic Warfare (EW) threat systems. The ARTS variants will be used at Department of Defense (DoD) test and training ranges for 4th and 5th generation aircrew training and tactics development. ARTS variants are also developed for LVC integration and full simulation training. Efforts include but are not limited to: research, studies, technology development, engineering, and manufacturing advanced radar emitters.

MODERNIZATION RANGE THREATS SYSTEMS (RTS): The RTS program supports upgrading and modifying legacy range threat systems to provide combat training relevancy and enhanced systems capabilities. Legacy systems include Multiple Threat Emitter System (MUTES), Miniature Multiple Threat Emitter System (Mini-MUTES), Modular Threat Emitter (MTE) system, Tactical Radar Threat Generator (TRTG) system, Band Simulator, Unmanned Modular Threat Emitter (UMTE) system, and Joint Threat Emitter (JTE) system.

LIVE MISSION OPERATIONS CAPABILITY (LMOC): LMOC is an effort to modernize range control centers with common hardware and software that can support live-synthetic training missions. LMOC will provide a node-based enterprise that integrates all range system capabilities, including pre/post mission coordination, in a multi-level secure environment to enable blended live-synthetic training for 4th/5th generation aircraft and aircrew.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Air Force	<b>Date:</b> March 2024
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<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 0604735F / <i>Combat Training Ranges</i>
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P6 COMBAT TRAINING SYSTEM (P6CTS): P6CTS replaced the existing P5 Combat Training System (P5CTS). P6CTS will resolve existing critical training capability gaps and will enable comprehensive, realistic air combat training. Key upgrades include a trusted operating system, Multiple Level Security (MLS) architecture, Type 1 encryption of over-air data, and increased processing capability. P6CTS investment will support a robust Air-to-Air and Air-to-Ground combat training environment and provide a growth path to Blended Training capability.

The FY2025 funding request was reduced by \$10 million to account for the availability of prior year execution balances

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY2023 1.739M was expended for civilian pay expenses in this program element, and in FY2024 4.237M 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.

<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	103.784	152.569	235.960	0.000	235.960
Current President's Budget	100.322	152.569	224.783	0.000	224.783
Total Adjustments	-3.462	0.000	-11.177	0.000	-11.177
• 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	-3.462	0.000			
• Other Adjustments	0.000	0.000	-11.177	0.000	-11.177

**Change Summary Explanation**

FY 23 reduced -\$3.462M for Small Business Innovative Research (SBIR).

The FY2025 funding request was reduced by \$10 million to account for the availability of prior year execution balances and some minor adjustments

<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Advanced Radar Threat System-Variant 1 (ARTS-V1)	0.100	0.000	0.000

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Air Force	<b>Date:</b> March 2024
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<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 0604735F / <i>Combat Training Ranges</i>
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<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
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**Description:** ARTS-V1 program to design, develop, build, and test radar threat systems based on advanced strategic, long-range, re-locatable foreign fielded SAM radar threat systems is now in production. ARTS-V1 leverages an existing DoD test resource development program to reduce non-recurring development cost, minimize schedule risk, and promote range interoperability between test and training. The focus of the program is to develop realistic radar threat systems meant to test 5th Generation aircraft capabilities.

**FY 2024 Plans:**

N/A

**FY 2025 Plans:**

N/A

**Title:** Advanced Radar Threat System-Variant 3 (ARTS-V3)

**Description:** ARTS-V3 program will design, develop, build, and test advanced Surface-to-Air Missile (SAM) radar threat systems. ARTS-V3 will replicate strategic/tactical threats at the fidelity necessary for 5th generation multi-domain platform engagements. The ARTS-V3 requirement is to develop a modular radar threat system that has a growth path to replicate multiple advanced SAM threats and support Live Virtual Constructive (LVC) training. Efforts include but are not limited to: development of Production Representative Articles (PRA), development of command and control software, digital engineering, and efforts focused on integrating ARTS-V3 into test and training ranges plus LVC architectures.

**FY 2024 Plans:**

Development of ARTS-V3 Production Representative Articles (PRA) in X and C frequency bands for developmental and operational testing. Efforts include but are not limited to: PRA development, engineering, manufacturing, software development, developmental tests. Work includes development, test and delivery of small versions of the PRA radar technology to support F-35 and B-21 developmental test needs.

**FY 2025 Plans:**

Completion of sub-system testing activities, manufacturing development, final assembly, full-system level developmental testing, software development, software integration, training range integration, high fidelity digital model integration, additional software threat development, and begin operational testing and site acceptance testing of the X band and C band PRA.

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

	83.152	123.858	184.544

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<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 0604735F / <i>Combat Training Ranges</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Funding increased to support ramp-up in EMD-phase contract activity associated with final PRA hardware assembly and checkout, full-scale system testing and integration, deficiency report resolution, and Engineering Changes necessary to establish production baseline.				
<p><b>Title:</b> Advanced Radar Threat System Tech Development</p> <p><b>Description:</b> The ARTS Tech Development (formerly ARTS V4) for follow on variants will design, develop, and test threat systems based on replicating advanced foreign fielded Surface-to-Air Missile (SAM) radar and Electronic Warfare (EW) threat systems. The ARTS variants will be used at Department of Defense (DoD) test and training ranges for 4th generation, 5th generation, and 5th generation plus aircrew training and tactics development. ARTS variants are also developed for LVC integration and full simulation training. Efforts include but are not limited to: research, studies, technology development, engineering, and manufacturing advanced radar emitters.</p> <p><b>FY 2024 Plans:</b> N/A</p> <p><b>FY 2025 Plans:</b> This is not a new start. Work previously covered and formerly labeled as ARTS V4 for the purpose of supporting ARTS family of range threat systems with tech development and prototyping for advanced threats not addressed by current ARTS variants (V1,V3). Planned work will expand spectrums beyond X and C frequency bands to address existing and future threats.</p> <p><b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increased due to tech development and prototyping to defend against upcoming and existing threats not addressed by current ARTS variants.</p>		0.000	0.000	8.077
<p><b>Title:</b> Live Mission Operations Capability (LMOC)</p> <p><b>Description:</b> LMOC is an effort to modernize training range control centers with common hardware and software that can support live-synthetic training missions. LMOC provides a node-based software enterprise that integrates all range system capabilities, including pre/post mission coordination, in a multi-level secure environment to enable blended live-synthetic training for 4th/5th generation aircraft and aircrew.</p> <p><b>FY 2024 Plans:</b> Development and testing of additional capabilities for War Room such as Mission Planning, Live Execution, Debrief, Performance-based Training and Mission Support applications. Continue development and testing of a multi-level secure platform to provide the capability to guise, filter, or block data as required.</p> <p><b>FY 2025 Plans:</b></p>		4.864	6.970	10.176

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<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 0604735F <i>I Combat Training Ranges</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Development and testing of additional capabilities for WarRoom such as Mission Planning, Simulation and Display (SIMDIS) software, Joint Anti-Air Modeling (JAAM) and Pre/Post Mission applications. Continue development of multi-level security to provide the capability to guise, filter or block data as required.  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> Funding increased to allow the program to continue to develop and deliver minimum viable capability releases to the field. Increased funding will also support, but not limited to test and integration activities for LMOC WarRoom to include PRISM development and testing.				
<b>Title:</b> P6 Combat Training System (P6CTS)  <b>Description:</b> P6CTS will replace the existing P5CTS and the Misawa/Osan/Kunsan/Kadena Instrumentation Training System (MOKKITS). P6CTS will resolve existing critical training capability gaps and will enable comprehensive, realistic air combat training. Key upgrades include a trusted operating system, Multiple Level Security (MLS) architecture, Type 1 encryption of over-air data, and increased processing capability. P6CTS investment will support a robust Air-to-Air and Air-to-Ground combat training environment and provide a growth path to Blended Training capability.  <b>FY 2024 Plans:</b> Product development, test, and continued aircraft integration on the F-15, F-16, F-35, T-38, and B-52. Rehost P6CTS ground subsystem on Live Mission Operation Capability Center (LMOC) platform infrastructure. Application toward cost-shared Class I Engineering Change Proposals (ECPs) to address Diminishing Manufacturing Sources and Material Shortages (DMSMS).  <b>FY 2025 Plans:</b> Development, test, and continued aircraft integration based on ACC prioritization. Rehost P6CTS ground subsystem on Live Mission Operation Capability Center (LMOCC) platform infrastructure. Funds will also be applied toward Class I Engineering Change Proposals (ECPs) to address Diminishing Manufacturing Sources and Material Shortages (DMSMS).  <b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> P6CTS funds increase due to test and integration activities for Air Force unique requirements to include F-16 specific forward umbilical, Portable Support Equipment Subsystem (PSES) optimization, Diminishing Manufacturing Sources and Material Shortages (DMSMS) resolution, and investigation of platform agnostic internal mount solutions.		12.206	21.741	21.986
<b>Accomplishments/Planned Programs Subtotals</b>		100.322	152.569	224.783

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2025 Air Force	<b>Date:</b> March 2024
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<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 0604735F / <i>Combat Training Ranges</i>
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**D. 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>
• OPAF 03 Line Item 834190: <i>Combat Training Ranges</i>	139.213	103.977	290.791	-	290.791	352.838	224.091	224.329	222.912	0.000	1,558.151
• OPAF 05 Line Item 861900: <i>Spares and Repair Parts</i>	8.094	0.744	0.760	-	0.760	0.776	0.806	0.823	0.839	0.000	12.842
• APAF 07 Line Item 000075: <i>Other Production Charges</i>	21.973	57.086	81.864	-	81.864	69.462	23.008	51.482	52.503	0.000	357.378

**Remarks**

**E. Acquisition Strategy**

The acquisition strategy varies by effort. Overall strategy is competition focused, with the use of but not limited to other transaction authority, cost plus and fixed price contracts.

Live Mission Operation Center (LMOC) - Overall acquisition strategy employs an Army sponsored Indefinite Deliver Indefinite Quantity (IDIQ) Cost Plus Fixed Fee commercial contract vehicle and various Government organizational partners to employ industry best practices and agile software methodology to deliver Minimum Viable Products (MVP) in an iterative process in order to enhanced Air Force live training range infrastructure.

P6CTS overall acquisition strategy is to leverage existing Navy contracts to accomplish system integration onto Air Force platforms and Air Force Ranges, system optimization/perfection, and DMSMS management activities.

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**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 0604735F / <i>Combat Training Ranges</i>	<b>Project (Number/Name)</b> 652286 / <i>Combat Training Range Equipment</i>
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<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			
Advanced Radar Threat System-Variant 1 (ARTS-V1) Development	Various	Georgia Tech Research : Pax River, MD	-	0.100	Nov 2022	-		-		-		-	0.000	0.100	-
Advanced Radar Threat System-Variant 2 (ARTS-V2) Development	C/FPIF	Lockheed Martin : Grand Prairie, TX	-	-		-		-		-		-	0.000	0.000	-
Advanced Radar Threat System-Variant 3 (ARTS-V3) Development	C/FFP	SAAB, LM, NG, DYNETICS : Various	-	61.386	May 2023	117.275	Apr 2024	179.854	Nov 2024	-		179.854	0.000	358.515	-
Advanced Radar Threat System Tech Development	Various	Various : Various	-	-		-		8.077	Nov 2024	-		8.077	Continuing	Continuing	-
Not specified.	Various	Various : TBD	-	-		-		-		-		-	0.000	0.000	-
P6 Combat Training System	Various	Various : Various	-	2.000	Apr 2023	15.541	Dec 2023	17.694	Dec 2024	-		17.694	0.000	35.235	-
Modernization Systems	Various	Various : Hill AFB, UT	-	-		-		-		-		-	0.000	0.000	-
Live Mission Operation Capability (LMOC)	Various	Georgia Tech Research : Various	-	4.700	Jan 2023	4.567	Mar 2024	4.699	Dec 2024	-		4.699	0.000	13.966	-
<b>Subtotal</b>			-	68.186		137.383		210.324		-		210.324	Continuing	Continuing	N/A

<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			
Advanced Radar Threat Systems-Variant 3 (Direct Msn Spt)	Various	Various : Various	-	2.000	Dec 2022	1.500	Oct 2023	0.760	Dec 2024	-		0.760	0.000	4.260	-
Advanced Radar Threat Systems-Variant 3 (Direct Cite Authority Civ Pay)	Various	Various : Various	-	1.000	Feb 2023	1.650	Oct 2023	1.740	Oct 2024	-		1.740	0.000	4.390	-
LMOC (Direct Cite Authority Civ Pay)	Various	Various : Various	-	-		0.823	Oct 2023	2.350	Oct 2024	-		2.350	Continuing	Continuing	-

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**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 0604735F / <i>Combat Training Ranges</i>	<b>Project (Number/Name)</b> 652286 / <i>Combat Training Range Equipment</i>
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<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			
LMOC (Intergovernmental Support Agreement)	Various	Not specified. : TBD	-	-		0.450	Oct 2023	0.450	Oct 2024	-		0.450	Continuing	Continuing	-
P6CTS (Direct Cite Authority Civ Pay)	Various	Various; Various : TBD	-	-		2.000	Feb 2024	2.000	Oct 2024	-		2.000	0.000	4.000	-
<b>Subtotal</b>			-	3.000		6.423		7.300		-		7.300	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			
Advanced Radar Threat Systems-Variant 3	C/Various	Not specified. : TBD	-	3.500	Dec 2022	2.643	Mar 2024	1.590	Feb 2025	-		1.590	0.000	7.733	-
P6 Combat Training System	C/Various	Not specified. : TBD	-	21.886	Apr 2023	1.200	Nov 2023	2.192	Nov 2024	-		2.192	0.000	25.278	-
LMOC	PO	Not specified. : TBD	-	-		0.165	Dec 2023	0.959	Dec 2024	-		0.959	Continuing	Continuing	-
<b>Subtotal</b>			-	25.386		4.008		4.741		-		4.741	Continuing	Continuing	N/A

<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			
Advanced Radar Threat Systems-Variant 3 (Program Support Cost - Contractor Services)	Various	Various : Hill AFB, UT	-	3.000	Dec 2022	0.790	Feb 2024	0.470	Feb 2025	-		0.470	0.000	4.260	-
Advanced Radar Threat Systems-Variant 3 (Program Support Cost - Other Govt. Costs)	Various	Various : Hill AFB, UT	-	-		-		0.130	Oct 2024	-		0.130	Continuing	Continuing	-
LMOC (Program Support Cost - Contractor Services)	Various	Various : Hill AFB, UT	-	0.300	Nov 2022	0.915	Feb 2024	1.483	Jun 2025	-		1.483	0.000	2.698	-

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**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 0604735F / <i>Combat Training Ranges</i>	<b>Project (Number/Name)</b> 652286 / <i>Combat Training Range Equipment</i>
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<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			
LMOC (Program Support Cost - Other Govt. Costs)	Various	Various : Hill AFB, UT	-	-		0.050	May 2024	0.235	Dec 2024	-		0.235	Continuing	Continuing	-
P6 Combat Training System (Program Support Cost - Contractor Support costs)	Various	Various : Hill AFB, UT	-	0.450	Apr 2023	2.000	Feb 2024	-		-		-	0.000	2.450	-
P6 Combat Training System (Program Support Cost - Other Govt. Costs)	Various	Various : Hill AFB, UT	-	-		1.000	May 2024	0.100	Oct 2024	-		0.100	0.000	1.100	-
Modernization Systems (Program Support Cost - Contractor Support)	Various	AFLCMC/XA : Hill AFB, UT	-	-		-		-		-		-	0.000	0.000	-
Modernization Systems (Program Support Cost - Other Govt. Costs)	Various	Not specified. : Hill AFB, UT	-	-		-		-		-		-	Continuing	Continuing	-
<b>Subtotal</b>			-	3.750		4.755		2.418		-		2.418	Continuing	Continuing	N/A

	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>	-	100.322	152.569	224.783	-	224.783	Continuing	Continuing	N/A

**Remarks**  
 ARTS V2 program terminated for the convenience of the government.

Combat Training Ranges Support Costs. Program Support Costs are defined as direct, unique program costs (other than payroll costs for government personnel) required for the operation of a program office in its management and oversight role. The financing of program support costs must be consistent with: a) the type of work being performed; b) where the program resides within the acquisition phase (lifecycle); and c) existing regulatory and statutory doctrine, including coverage governing the purpose of an appropriation. (T-1).

Combat Training Ranges MAJCOM FM, FOA or DRU Offices will budget program support costs on an annual basis and reflect in the FY the requirement is projected to execute; requirements will be budgeted and executed in the weapon system or PEC within the procurement, RDT&E, or O&M appropriations. (T-1). For multi-year appropriations, execution of program support costs may occur in any year of funds currently available.

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2025 Air Force</b>		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604735F / <i>Combat Training Ranges</i>	<b>Project (Number/Name)</b> 652286 / <i>Combat Training Range Equipment</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

<b>Combat Training Range Equipment</b>																												
P6 CTS - Integration on USAF Aircraft																												
-- P6 CTS - F-15/16 Aircraft Test & Integration																												
Advanced Radar Threat System-Variant 1(ARTS-V1) EMD Phase																												
-- ARTS-V1 PRA Contract																												
-- ARTS-V1 DT-E and OT-E																												
-- ARTS-V1 Milestone C																												
Advanced Radar Threat System-Variant 3 (ARTS-V3) System Spec Definition																												
-- ARTS-V3 Intelligence Assessment																												
-- ARTS-V3 Intelligence Model Development																												
Advance Radar Threat System (ARTS-V3) Development																												
-- Digital Modeling and Subscale Prototype Efforts																												
-- ARTS-V3 Request For Proposal (RFP) for Production Representative Article (PRA)																												
-- ARTS-V3 PRA Contract Award																												
-- ARTS-V3 PRA Development																												
Variable Aperture Digital Radar Command and Control (VADR C2) Application Development																												
Modernization Systems																												
-- Mini-MUTES Upgrade																												

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2025 Air Force</b>												<b>Date: March 2024</b>					
<b>Appropriation/Budget Activity</b> 3600 / 5						<b>R-1 Program Element (Number/Name)</b> PE 0604735F / <i>Combat Training Ranges</i>						<b>Project (Number/Name)</b> 652286 / <i>Combat Training Range Equipment</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
Live Mission Operations Capability (LMOC)																												

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<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 0604735F / <i>Combat Training Ranges</i>	<b>Project (Number/Name)</b> 652286 / <i>Combat Training Range Equipment</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Combat Training Range Equipment</b>				
P6 CTS - Integration on USAF Aircraft	1	2024	4	2026
-- P6 CTS - F-15/16 Aircraft Test & Integration	1	2024	4	2026
Advanced Radar Threat System-Variant 1(ARTS-V1) EMD Phase	1	2023	2	2023
-- ARTS-V1 PRA Contract	1	2023	3	2023
-- ARTS-V1 DT-E and OT-E	3	2023	2	2024
-- ARTS-V1 Milestone C	2	2023	4	2023
Advanced Radar Threat System-Variant 3 (ARTS-V3) System Spec Definition	1	2023	3	2024
-- ARTS-V3 Intelligence Assessment	1	2023	4	2023
-- ARTS-V3 Intelligence Model Development	1	2023	3	2023
Advance Radar Threat System (ARTS-V3) Development	1	2023	1	2026
-- Digital Modeling and Subscale Prototype Efforts	1	2023	3	2023
-- ARTS-V3 Request For Proposal (RFP) for Production Representative Article (PRA)	1	2023	3	2023
-- ARTS-V3 PRA Contract Award	3	2023	3	2023
-- ARTS-V3 PRA Development	3	2023	1	2026
Variable Aperture Digital Radar Command and Control (VADR C2) Application Development	1	2024	1	2026
Modernization Systems	1	2023	4	2024
-- Mini-MUTES Upgrade	1	2023	4	2023
Live Mission Operations Capability (LMOC)	1	2023	4	2029