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

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 0602134A / <i>Counter Improvised-Threat Advanced Studies</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	-	5.966	6.242	6.163	-	6.163	6.191	6.194	6.261	6.323	0.000	43.340
CD2: <i>Counter Improvised-Threat Advanced Studies</i>	-	5.966	6.242	6.163	-	6.163	6.191	6.194	6.261	6.323	0.000	43.340

A. Mission Description and Budget Item Justification

This Program Element (PE) executes applied research into novel methods for detecting and defeating Improvised Explosive Devices (IED) through the application of emerging technologies as well as research into emerging IED threats to evaluate potential methods of defeat. Efforts are selected in the budget year and current year of execution to address program requirements.

This PE is executed in coordination with the Under Secretary of Defense for Research and Engineering (USD/R&E) and the Defense Threat Reduction Agency (DTRA).

Work in this Project is fully coordinated with Program Element (PE) 0603134A (Counter Improvised Threat Simulation), Project CD3 (Counter Improvised Threat Simulation).

The cited work is consistent with the USD/R&E priority focus areas.

Work in this Project is managed by Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center. Work is performed by the United States Army Combat Capabilities Development Command (DEVCOM), Army Artificial Intelligence Integration Center (AI2C), the Engineering Research and Development Center, Space and Missile Defense Technical Center, and the United States Army Research Institute for the Behavioral and Social Sciences with oversight from Assistant Secretary of the Army for Acquisition, Logistics and Technology for Research and Technology (DASA R&T).

B. Program Change Summary (\$ in Millions)	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total
Previous President's Budget	6.192	6.242	6.245	-	6.245
Current President's Budget	5.966	6.242	6.163	-	6.163
Total Adjustments	-0.226	0.000	-0.082	-	-0.082
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.226	-			
• Adjustments to Budget Years	-	-	-0.082	-	-0.082

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Appropriation/Budget Activity
2040: *Research, Development, Test & Evaluation, Army / BA 2: Applied Research*

R-1 Program Element (Number/Name)
PE 0602134A / *Counter Improvised-Threat Advanced Studies*

Change Summary Explanation

The FY25 funding change from the previous PB to the current PB reflects an Army approved minor reduction.

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Appropriation/Budget Activity 2040 / 2					R-1 Program Element (Number/Name) PE 0602134A / <i>Counter Improvised-Threat Advanced Studies</i>				Project (Number/Name) CD2 / <i>Counter Improvised-Threat Advanced Studies</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
CD2: <i>Counter Improvised-Threat Advanced Studies</i>	-	5.966	6.242	6.163	-	6.163	6.191	6.194	6.261	6.323	0.000	43.340

A. Mission Description and Budget Item Justification

This Project investigates novel methods for detecting and defeating improvised explosive devices (IED) as well as research into emerging IED threats to evaluate potential methods of defeat of the same.

This Project is executed by the Army Futures Command (AFC) in coordination with the Under Secretary of Defense for Research and Engineering (USD/R&E) and the Defense Threat Reduction Agency (DTRA).

Work in this Project is fully coordinated with Program Element (PE) 0603134A (Counter Improvised Threat Simulation), Project CD3 (Counter Improvised Threat Simulation).

The cited work is consistent with the USD/R&E priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR) Center.

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

	FY 2023	FY 2024	FY 2025
Title: Counter IED Emerging Technologies	5.966	6.242	6.163
Description: This effort investigates emerging technologies in physics, chemistry, biology and computer science to identify applications to detect and defeat current and emerging IED critical components. This effort investigates the combination of methods and maturation of technological solutions to detect and defeat IEDs threats. The goals include increasing the standoff detection distance, increasing probability of positive identification, and reducing the rate of false indications. This effort is informed by technology trends across the Department of Defense and by analysis of IED threats encountered in operational scenarios.			
FY 2024 Plans: Will investigate and mature optical and RF components and techniques to mitigate electromagnetic interference and increase detectability of physically obscured targets. Will reduce time needed for neutralization and expand effectiveness against various IED trigger types. Will continue to investigate and develop emerging technologies to assess their ability to counter IED threats. Will investigate sensor effectiveness in multiple locations and in varied environments.			
FY 2025 Plans:			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2023	FY 2024	FY 2025
<p>Will continue to investigate and develop Electro-Optical, Infrared, and Radio Frequency (RF) techniques to detect buried Improvised Explosive Devices (IEDs) and their components. Develop data processing and data fusing techniques to detect partially hidden IEDs. Investigate and develop wide bandwidth electronics to counter radio controlled IEDs. Investigate electromagnetic and bulk detection technologies to detect personnel and vehicle borne IEDs.</p> <p><i>FY 2024 to FY 2025 Increase/Decrease Statement:</i> Funding decrease reflects planned lifecycle for this effort.</p>				
Accomplishments/Planned Programs Subtotals		5.966	6.242	6.163
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				