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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0207227F I <i>Combat Rescue - Pararescue</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	0.281	0.668	0.852	0.000	0.852	-	-	-	-	-	-
675352: <i>Guardian Angel RDT&E</i>	-	0.281	0.668	0.852	0.000	0.852	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Guardian Angel (GA) is an Air Force non-aircraft weapon system within the overarching Special Warfare Modernization program. GA is a Family of Systems (FoS) based in both human and equipment capabilities formulated to execute Air Force Personnel Recovery (PR) across the full spectrum of military operations. Established by the Air Force Chief of Staff in 2003 and officially captured in AFPD 10-9, the GA FoS is employed by three distinct Air Force specialties: Pararescuemen (PJ), Combat Rescue Officer (CRO), and Survival, Evasion, Resistance, Escape (SERE). The GA FoS is comprised of nine critical mission areas: Precision Aerial Insertion, Information Management, Force Application, Visual Augmentation, Maritime Recovery, Ground Mobility, Technical Rescue, Medical, and SERE. GA focus is on maintaining legacy weapon system capability while modernizing/improving subsystems for better mission effectiveness.

Funds will be used to obtain significant improvements in operational capability and develop items within the GA FoS to include but not limited to: Sound Navigation and Ranging (SONAR), Maritime Recovery, Ground Mobility, Technical Recovery, Oxygen Systems, Medical Monitoring, Aerial Insertion, Information Management (including Preservation of the Force and Family (POTFF) Tracking System), and include GA requirements in the Battlefield Air Operations Kit. This may be conducted through industry technology demonstrations, prototypes and associated engineering support to posture the GA program for technology insertion. The Guardian Angel weapon system development activities also include studies, analysis, requirements development and developmental testing to support both current and future program planning and execution. Funding will deliver enhanced capability for the dismounted Guardian Angel soldier in terms of dramatic weight reduction and increased mission effectiveness across the conflict spectrum. This funding request will support potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver Guardian Angel weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F. In FY20 \$0 was expended for civilian pay expenses in this program element and in FY21 \$0 is forecasted to expended for civilian pay expenses in this program element.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	0.281	0.669	0.910	0.000	0.910
Current President's Budget	0.281	0.668	0.852	0.000	0.852
Total Adjustments	0.000	-0.001	-0.058	0.000	-0.058
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-0.001			
• 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	0.000	0.000			
• Other Adjustments	0.000	0.000	-0.058	0.000	-0.058

Change Summary Explanation

Description for 3600 spending: A bulk of the RDT&E money is pushed for modernization in both communication equipment as well as maritime/open ocean personnel recovery. This also includes development of an aerial insertion maritime data collection capability. Leaning forward on validated requirements also includes signature management in denied/degraded environments and one man/multi-man survival life rafts. Finally, our 3600 money is currently used to fund direct cite authority of 4x civilian position at the program office.

Description for 3080 spending: Procurement money for FY22 will continue to allocate resources to existing requirements within the 9 core mission areas of the Guardian Angel portfolio to include, but not limited to, advanced communication and situational awareness tools, ground mobility assets, maritime recovery assets, weapons modernization, parachutes and oxygen systems, technical rescue and recovery equipment, and visual augmentation upgrades.

FY21 reduction - undistributed reduction, excess to need

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Title: Guardian Angel Family of Systems (FoS)	0.281	0.668	0.852
Description: Standardize, modernize and develop additional capability for the Guardian Angel (GA) weapon system used by Combat Rescue Officers and Pararescuemen. Development efforts provide enhanced and improved capabilities for execution of Air Force combat search and rescue and personnel recovery. This weapon system is utilized across the full spectrum of Personnel Recovery (PR) military operations to include patient treatment, extrication, surface/underwater search and recovery, airborne infil/exfil, and ground recovery operations.			
FY 2021 Plans:			
-Will continue to complete studies, strategic planning, and development activities for increased capability.			

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<ul style="list-style-type: none"> -Will continue necessary software upgrades to Special Warfare Assault Kit (SWAK)information management system. -Will conduct oxygen system testing for parachutist oxygen system. -Will conduct development and system enhancements on existing and future systems through incorporating test feedback and user inputs into subsequent iterations for better capability and mission success. -Will work with AFRL (711 HPW) to determine if additional funding is required to mature the Preservation of the Force and Family (POTFF) Tracking System. -Will meet with AFRL periodically to monitor ongoing RDT&E efforts and determine the best use of such funds. <p>FY 2022 Plans:</p> <ul style="list-style-type: none"> -Will continue to complete studies, strategic planning, and development activities for increased capability. -Will continue necessary software upgrades to Special Warfare Assault Kit (SWAK)information management system. -Will conduct oxygen system testing for parachutist oxygen system. -Will conduct development and system enhancements on existing and future systems through incorporating test feedback and user inputs into subsequent iterations for better capability and mission success. -Will work with AFRL (711 HPW) to determine if additional funding is required to mature the Preservation of the Force and Family (POTFF) Tracking System. -Will meet with AFRL periodically to monitor ongoing RDT&E efforts and determine the best use of such funds. <p>FY 2021 to FY 2022 Increase/Decrease Statement: Increased due to family of systems contract awards and necessary civilian pay expenses.</p>			
Accomplishments/Planned Programs Subtotals	0.281	0.668	0.852

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2022</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• OPAF 04 Line Item 842990: <i>Items Less than \$5M (Safety)</i>	22.295	22.695	23.169	-	23.169	-	-	-	-	-	-
• OPAF 02 Line Item 823230: <i>Security and Tactical Vehicles</i>	0.131	0.205	0.281	-	0.281	-	-	-	-	-	-
• WPN test: test	-	-	-	-	-	-	-	-	-	-	-

Remarks

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E. Acquisition Strategy

The Guardian Angel (GA) program will address warfighter immediate needs to standardize, modernize, and develop additional capability for the weapon system used by Combat Rescue Officers and Pararescuemen. The program will also address future requirements for the weapon system that will encompass the needs of all three GA career fields.

The GA program is an incremental evolutionary acquisition effort in which requirements are fulfilled through further sub-system development and integration. These are being identified through updates to the Core Function Support Plan and GA Concept of Employment by HQ Air Combat Command. The program has been divided into phases to more rapidly meet the user's immediate need to standardize and modernize the weapon system.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207227F / <i>Combat Rescue - Pararescue</i>	Project (Number/Name) 675352 / <i>Guardian Angel RDT&E</i>

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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

Events By Sub Project																												
BAO Kit (G) Software																												
Test Support																												
GA Equipment Upgrades																												
Human Performance Organization Support (POTFF)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Events By Sub Project				
BAO Kit (G) Software	1	2020	4	2026
Test Support	1	2020	2	2026
GA Equipment Upgrades	2	2020	2	2026
Human Performance Organization Support (POTFF)	2	2020	1	2026