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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3620F: Research, Development, Test & Evaluation, Space Force I BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 1206446SF I Resilient Missile Warning Missile Tracking - Low Earth Orbit (LEO)
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	499.840	0.000	499.840	723.621	802.313	827.201	863.650	Continuing	Continuing
657LEO: Resilient MW/MT - LEO	-	0.000	0.000	499.840	0.000	499.840	723.621	802.313	827.201	863.650	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project funds efforts previously funded in FY 2022 under RDT&E, Defense-Wide, program element (PE) 1206410SDA.

A. Mission Description and Budget Item Justification

The Space Development Agency (SDA) is developing and demonstrating next generation space capabilities for the joint warfighter enabled by proliferation of satellites in Low Earth Orbit (LEO) and a new acquisition model utilizing rapid spiral development. SDA is developing capabilities to address a wide range of Department of Defense (DoD) space needs as stated in the National Defense Strategy and DoD Space Vision, including advanced missile tracking and global surveillance enabling beyond-line-of-sight targeting. SDA will orchestrate the rapid development and fielding of the National Defense Space Architecture (NDSA), a resilient military sensing and data transport capability via a proliferated space architecture in LEO. This program element funds the development and demonstration of space technologies to deliver advanced missile tracking, global surveillance and surface moving target custody, and enhanced space domain awareness and deterrence capabilities to U.S. joint warfighting forces in bi-annual tranches, beginning in FY 2022.

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. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	499.840	0.000	499.840
Total Adjustments	0.000	0.000	499.840	0.000	499.840
• 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	0.000	0.000			
• Other Adjustments	0.000	0.000	499.840	0.000	499.840

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Change Summary Explanation

The worked performed in this PE is a continuation of efforts that in FY 2022 are funded under RDT&E, Defense-Wide, PE 1206410SDA.

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

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Resilient Missile Warning Missile Tracking - Low Earth Orbit (LEO)	0.000	0.000	499.840	0.000	499.840
Description: Rapidly develop, deploy and demonstrate prototype architecture that enables a resilient Missile Warning/Missile Tracking enabled by a proliferated Low Earth Orbit (pLEO) architecture. This effort will define, demonstrate, and deliver the architectures and standards necessary to fully populate a Missile Warning/Missile Tracking LEO layer as part of the NDSA.					
FY 2022 Plans: N/A					
FY 2023 Base Plans: Tranche 1: - Finalize design through Critical Design Review (CDR) for the Tracking Layer Tranche 1 space vehicles. - Begin assembly, integration, and testing (AI&T) of satellite buses. - Begin ground systems Missile Warning/Missile Tracking integration at Tranche 1 Mission Operations Centers and Missile Warning/Missile Tracking enterprise locations. - Continue Missile Warning/Missile Tracking force design analysis. Tranche 2: - Leverage lessons learned and accomplishments from Tranches 0 and 1 to inform space vehicle, ground, and interoperability design requirements for Tranche 2. - Assess, design, develop, integrate, test and conduct ground and, modem, crypto, and software defined networking risk reduction experimentation opportunities.					
FY 2023 OCO Plans: N/A					
FY 2022 to FY 2023 Increase/Decrease Statement: The worked performed in this PE continues efforts that were previously funded in FY 2022 under RDT&E, Defense-Wide, PE 1206410SDA.					
Accomplishments/Planned Programs Subtotals	0.000	0.000	499.840	0.000	499.840

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Appropriation/Budget Activity 3620F: <i>Research, Development, Test & Evaluation, Space Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 1206446SF / <i>Resilient Missile Warning Missile Tracking - Low Earth Orbit (LEO)</i>
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D. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTE 04 1206410SDA: <i>Space Technology Development and Prototyping</i>	-	550.000	-	-	-	-	-	-	-	0.000	0.000

Remarks
The worked performed in this PE continues efforts that were previously funded in FY 2022 under RDT&E, Defense-Wide, PE 1206410SDA.

E. Acquisition Strategy
Partners for these activities may include Missile Defense Agency (MDA), Space Systems Command (SSC), DoD Combatant Commands, DoD research centers, small businesses, large defense contractors, commercial space providers, Federally Funded Research and Development Centers, and University Affiliated Research Centers. Missile Warning/Missile Tracking is being acquired via Firm Fixed Price contracts conducted in accordance with Other Transaction Authority (OT) for prototyping processes.

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3620F / 5	R-1 Program Element (Number/Name) PE 1206446SF / <i>Resilient Missile Warning Missile Tracking - Low Earth Orbit (LEO)</i>	Project (Number/Name) 657LEO / <i>Resilient MW/MT - LEO</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Resilient Missile Warning Missile Tracking - Low Earth Orbit (LEO)</i>				
Develop Tranche 1 Tracking Satellites	4	2022	1	2025
Develop Tranche 1 Tracking payload data management	4	2022	1	2025
Develop Tranche 1 Tracking Ground Stations	4	2022	1	2025
Integrate into Real-time Transfer Service	4	2022	3	2024