Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army											Date: April 2022	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0605766A *I National Capabilities Integration (MIP)*							
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	-	7.670	13.454	17.030	-	17.030	15.448	17.291	17.688	17.860	0.000	106.441
BV3: *Technical Intel Targeting Access Node (TITAN)*	-	-	5.729	7.057	-	7.057	5.254	6.942	7.134	7.204	0.000	39.320
DX9: *National Integration To Tactical Systems*	-	4.219	2.796	3.197	-	3.197	3.254	3.278	3.480	3.513	0.000	23.737
EX7: *Air Vigilance System Development*	-	3.451	4.929	6.776	-	6.776	6.940	7.071	7.074	7.143	0.000	43.384

A. Mission Description and Budget Item Justification

Tactical Exploitation of National Capabilities (TENCAP) exploits national capabilities to pace evolving threats in support of operations during conflict and competition. TENCAP systems and technologies provide deep sensing to support commanders' situational understanding (patterns of life, threat intentions, etc.), indications & warnings (detection of enemy mobilization and hostile activity), and intelligence support to targeting (order of battle, electronic target folders, target detection, Battle Damage Assessment, etc.). TENCAP systems and technologies support Theater-level fires and effects, TENCAP systems enable integrated Signals Intelligence (SIGINT) / Electronic Warfare (EW) / and Cyberspace operations. TENCAP supports Army modernization priorities including Long Range Precision Fires, Assured Position Navigation and Timing/Space (PNT/S), Future Vertical Lift (FVL), and Air Missile Defense (AMD). In summary, TENCAP is a key enabler to defeating peer competitor Anti-Access / Area-Denial (A2/AD) strategies.

This Program Element includes three separate projects described below.
1. Tactical Intelligence Targeting Access Node (TITAN) (BV3) - This project includes funding for system integration and testing of the TITAN (space) Pre-Prototype that will provide specific Army units with assured access to space-based Intelligence, Surveillance, and Reconnaissance (ISR) sensor data from Commercial and National levels. The follow-on effort to the TITAN (space) Pre-Prototype is testing and integration of the Space Ground Component Kit (SGCK) into the TITAN Program of Record. The SGCK consists of antennas, other RF components, and other capabilities developed as part of the TITAN (space) Pre-Prototype effort.
2. National Integration to Tactical Systems (DX9) - This project enables the Army's Tactical Exploitation of National Capabilities (TENCAP) office to monitor, synchronize, and transition proven, advanced technologies, prototypes and standards, developed by the National Intelligence Community (IC), into Army systems and Programs of Record during the most cost-effective, early stages of development.
3. Air Vigilance (AV) Program of Record (POR) (EX7) - This project provides System Development and Integration funds for the classified POR.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Army					Date: April 2022
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0605766A *I National Capabilities Integration (MIP)*		
B. Program Change Summary ($ in Millions)	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**
Previous President's Budget	7.670	14.454	0.000	-	0.000
Current President's Budget	7.670	13.454	17.030	-	17.030
Total Adjustments	0.000	-1.000	17.030	-	17.030
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-1.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	17.030	-	17.030

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding. The $1.0 million reduction is a result of an Appropriation Conference mark to the PB22 budget request.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) BV3 / *Technical Intel Targeting Access Node (TITAN)*	

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
BV3: *Technical Intel Targeting Access Node (TITAN)*	-	-	5.729	7.057	-	7.057	5.254	6.942	7.134	7.204	0.000	39.320
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

All funding is in support of the ACTIVE COMPONENT.

A. Mission Description and Budget Item Justification

TENCAP TITAN System Development and Demonstration, accomplished with 6.4 RDT&E funds (project BX9), enables demonstration and integration of space-to-ground station capabilities in the TITAN Program of Record vehicles using 6.5 RDT&E funds in the BV3 project. The integration of these capabilities into the TITAN Program of Record vehicles provides timely assured access to National and Commercial Space-Based Intelligence, Surveillance, and Reconnaissance (ISR) sensor data supporting Warfighting commanders' situational understanding (patterns of life, threat intentions, etc.), indications & warnings (detection of enemy mobilization and hostile activity), and intelligence support to targeting (order of battle, electronic target folders, target detection, Battle Damage Assessment, etc.).

FY2023 base funds in the amount of $7.057 million fund integration and demonstration of TITAN (space) Pre-Prototype and integration of the SGCK into the TITAN PoR. The SGCK will follow a Modular Open Systems Approach (MOSA) to support seamless integration of future space capability into the TITAN POR. This project realigned from the TENCAP Project (907) into Project BV3 effective FY2022.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: BV3 / Tactical Intelligence Targeting Access Node (TITAN) Prototype System	-	5.729	7.057
Description: The Tactical Intelligence Targeting Access Node (TITAN) (space) Pre-Prototypes is a Key Enabler of Army Modernization priorities that will provide the following capability to the Army: 1. Timely, assured intelligence for Long Range Precision Fires (LRPF) and maneuver in contested and Anti-Access / Area-Denial (A2/AD) environments. 2. Assured access to ISR sensor data collected at Commercial and National, levels. 3. Software analytics capability to enable the intelligence cycle with increased speed, precision, and accuracy. 4. Automated/Assisted Sensor-to-Shooter (S2S) workflows with increased speed, scalability, and accuracy to support LRPF in an A2/AD environment. 5. Modern and consolidated ground station for National and Commercial, sensors. Successful development and deployment of the TITAN (space) Pre-Prototypes paves the way for final development of the Space Ground Component Kit (SGCK) that will be integrated into and provide these same capabilities for the TITAN POR.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** BV3 / *Technical Intel Targeting Access Node (TITAN)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: Continue the integration of new ingest and processing capabilities into the TITAN (space) Pre-Prototype system and sub-systems. Also continue the integration and refinement of automated/assisted target recognition and integration with the fires architecture to support Army's #1 priority - Long Range Precision Fires LRPF. The TITAN (space) Pre-Prototype will provide direct and rapid availability of National Reconnaissance Office (NRO) Overhead Systems (NOS), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT). capabilities. The TITAN (space) Pre-Prototype will also include access to emerging Low Earth Orbit (LEO) constellations, and improved downlink, ingest, and processing of commercial and government remote sensing data. ***FY 2023 Plans:*** Finalize TITAN (space) Pre-Prototype integration and support capability demonstrations. Integrate new technologies and processing capabilities into the TITAN Program of Record (POR) through the Space Ground Component Kit (SGCK) subsystems including access to additional space sensor constellations, improving assured access of space sensor data, ingest and processing of commercial and government remote sensing data, and integration of newly-developed antenna to meet Army mobility and collection requirements in the TITAN POR. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Funds increased to support integration and delivery of initial SGCK components into the TITAN POR. This supports integration of the SGCK into the TITAN POR, after those capabilities are successfully proven through demonstration of the TITAN (space) Pre-Prototype systems in Army exercises, and as approved by the Army Tactical Exploitation of National Capabilities (TENCAP) General Officers' Steering Group(TGOSG).			
Accomplishments/Planned Programs Subtotals	-	5.729	7.057

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 0603766A: *Tactical Electronic Surveillance System - Adv Dev*	182.400	113.365	72.314	-	72.314	64.799	37.048	36.646	37.072	Continuing	Continuing

Remarks

D. Acquisition Strategy

The TITAN (space) Pre-Prototype requirement was validated by the TGOSG in April 2019. In order to maximize agility and innovation in acquisition, TENCAP worked with the Defense Innovation Unit (DIU) to establish an Other Transaction Authority (OTA) agreement to develop the TITAN (space) Pre-Prototype and follow-on SGCK capabilities. The TITAN (space) Pre-Prototype will provide a modernized, deployable, ground station capable of rapidly and semi-autonomously tasking, receiving, processing, exploiting, fusing, and disseminating space-based sensor data to provide networked situational awareness and direct tactical support to Army commanders

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** BV3 / *Technical Intel Targeting Access Node (TITAN)*

at echelon. The TITAN (space) Pre-Prototype will reduce S2S latency to allow timely intelligence support to the commander. The TITAN (space) Pre-prototype will use an agile acquisition strategy, and will maximize non-proprietary / modular open system architectures (MOSA) to enable easy upgrade of software/firmware, analytics/ algorithms, and ingest additional data streams as commercial vendors and national data become available. This OTA was preceded by Soldier touchpoints to inform this acquisition. Soldier engagement is planned throughout the development and demonstration of the TITAN (space) Pre-Prototype. The capabilities successfully demonstrated in the TITAN (space) Pre-Prototype will be integrated into the TITAN POR through the SGCK.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) BV3 / *Technical Intel Targeting Access Node (TITAN)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TITAN (space) Prototype Engineering Services	C/CPFF	TBD : TBD	-	-		0.329	Jan 2022	0.385	Jan 2023	-		0.385	0.000	0.714	-
		Subtotal	-	-		0.329		0.385		-		0.385	0.000	0.714	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TITAN (space) Pre-Prototype	C/FFP	Northrup Grumman : Aurora, CA	-	-		4.500	Jan 2022	5.742	Jan 2023	-		5.742	0.000	10.242	-
		Subtotal	-	-		4.500		5.742		-		5.742	0.000	10.242	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TITAN (space) Pre-Prototype Development	Allot	Army TENCAP : Alexandria, VA	-	-		0.500	Jan 2022	0.500	Jan 2023	-		0.500	0.000	1.000	-
		Subtotal	-	-		0.500		0.500		-		0.500	0.000	1.000	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Exercises for TITAN (space) Pre-Prototype Development	C/FFP	Multiple : Multiple	-	-		0.400	Jan 2022	0.430	Jan 2023	-		0.430	0.000	0.830	-
		Subtotal	-	-		0.400		0.430		-		0.430	0.000	0.830	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) BV3 / *Technical Intel Targeting Access Node (TITAN)*	

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		5.729		7.057		-		7.057	0.000	12.786	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** BV3 / *Technical Intel Targeting Access Node (TITAN)*

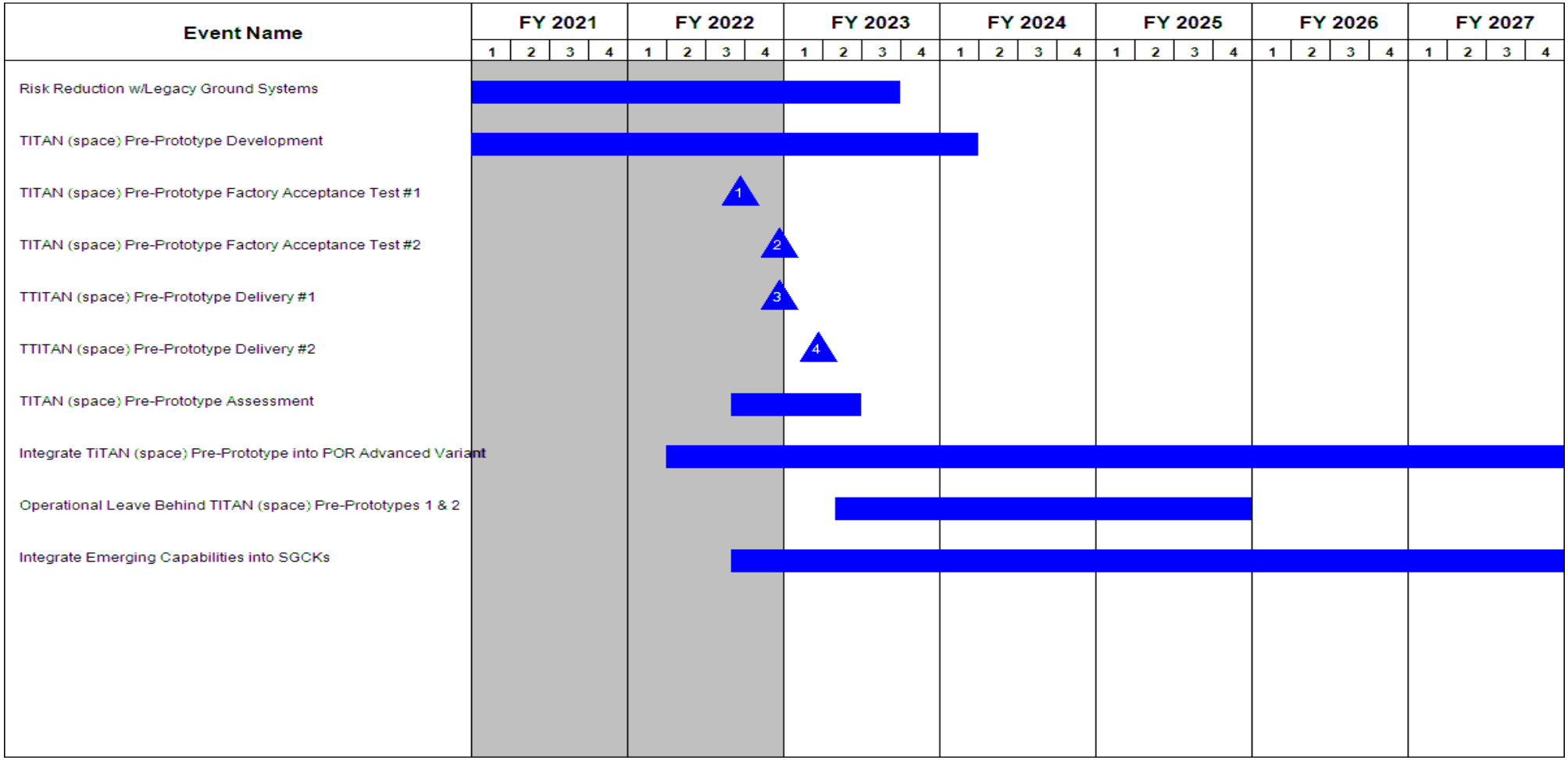

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** BV3 / *Technical Intel Targeting Access Node (TITAN)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Risk Reduction w/Legacy Ground Systems	1	2020	3	2023
TITAN (space) Pre-Prototype Development	4	2020	1	2024
TITAN (space) Pre-Prototype Factory Acceptance Test #1	3	2022	3	2022
TITAN (space) Pre-Prototype Factory Acceptance Test #2	4	2022	4	2022
TTITAN (space) Pre-Prototype Delivery #1	4	2022	4	2022
TTITAN (space) Pre-Prototype Delivery #2	1	2023	1	2023
TITAN (space) Pre-Prototype Assessment	3	2022	2	2023
Integrate TiTAN (space) Pre-Prototype into POR Advanced Variant	2	2022	4	2027
Operational Leave Behind TITAN (space) Pre-Prototypes 1 & 2	2	2023	4	2025
Integrate Emerging Capabilities into SGCKs	3	2022	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) DX9 / *National Integration To Tactical Systems*	

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
DX9: *National Integration To Tactical Systems*	-	4.219	2.796	3.197	-	3.197	3.254	3.278	3.480	3.513	0.000	23.737
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

All funding is in support of the ACTIVE COMPONENT.

A. Mission Description and Budget Item Justification

TENCAP exploits national capabilities to pace evolving threats in support of operations during conflict and competition. TENCAP systems and technologies provide deep sensing to support commanders' situational understanding (patterns of life, threat intentions, etc.), indications & warnings (detection of enemy mobilization and hostile activity), and intelligence support to targeting (order of battle, electronic target folders, target detection, Battle Damage Assessment, etc.). TENCAP systems and technologies support Theater-level fires and effects, TENCAP systems enable integrated Signals Intelligence (SIGINT) / Electronic Warfare (EW) / and Cyberspace operations. TENCAP supports Army modernization priorities including Long Range Precision Fires, Assured Position Navigation and Timing/Space (PNT/S), Future Vertical Lift (FVL), and Air Missile Defense (AMD). In summary, TENCAP is a key enabler to defeating peer competitor Anti-Access / Area-Denial (A2/AD) strategies.

Funding for this project allows the Army's Tactical Exploitation of National Capabilities (TENCAP) office to monitor, synchronize the transition, and integrate new, updated, and emerging National Intelligence Community (IC) technologies, capabilities, and standards into Army Programs of Record during early stages of development when costs are lowest. The project helps the Army to: (1) maintain operational relevance of Army programs and address changes in technology and the threat, (2) ensure Army programs maintain interoperability with and access to the National IC community architecture and systems as they evolve, and (3) advance the Army's ability to conduct analysis and tasking, collection, processing, exploitation, dissemination (TCPED) of intelligence data.

FY 2023 Base funding in the amount of $3.197 million provides integration of capabilities that are validated National IC capabilities and prioritized by the TENCAP General Officer Steering Group (TGOSG) into Army Programs of Record. The funded efforts include system development and integration of National sensors, architectures, and capabilities.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Army TNG Integration - Airborne Overhead Cooperative Operations (AOCO) / Theater Net-Centric Geolocation (TNG) ***Description:*** National Intelligence Community (IC) standard for interoperability and use of specific intelligence networked capabilities.	3.150	-	-
Title: TENCAP Radio Frequency Exploitation (TRFE)	1.069	0.500	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: Highly specialized capability software that informs, influences and enhances MULTI-INT sensor systems, by targeting modern digital communications systems employed by near-peer nation state armies. Assists with Battlespace Radio frequency (RF) Characterization for modern communication environments with the intent to synchronize Signal Intelligence (SIGINT), Cyber and Electronic Warfare operations. Utilizes commercial industry components and architectures to minimize hardware costs, risk and maximizes scalability/modularity. ***FY 2022 Plans:*** Integrates the open, government-owned software framework enabling Signal Intelligence (SIGINT), Electronic Warfare and Cyber capabilities into Program of Records (PoR)s. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease reflects movement of TRFE funds in FY23 under National Integration to Tactical Systems to align with TGOSG priorities.			
Title: National Integration to Tactical Systems ***Description:*** National Integration provides for enhancements developed by Army TENCAP's BA 6.4 Project 907 along with the integration and transition of new, updated and emerging National Intelligence Community technologies and capabilities into Program of Records (POR)s. This effort develops and integrates national intelligence community software that informs, influences and enhances MULTI-INT sensor systems, by targeting modern digital communications systems employed by near-peer nation state armies. ***FY 2022 Plans:*** Funds the system development and integration of National sensors, architectures and capabilities into Army programs as directed by the Tactical Exploitation of National Capabilities (TENCAP) General Officers' Steering Group (GOSG), to ensure National Overhead Systems (NOS) directly support Army warfighters during Large Scale Ground Combat Operations. ***FY 2023 Plans:*** Continues system development and integration of National asset capabilities into Army programs as directed by the Tactical Exploitation of National Capabilities (TENCAP) General Officers' Steering Group (GOSG), with system development and integration of antenna capability. FY2023 plans include Integrating the latest specialized capability advances and collected data into the open, government-owned software, and enabling Signal Intelligence (SIGINT), Electronic Warfare, and Cyber capabilities into Programs of Record (POR)s. ***FY 2022 to FY 2023 Increase/Decrease Statement:***	-	2.296	3.197

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase reflects the inclusion of TRFE funds with National Integration to Tactical Systems. The overall increase provides for integration of specialized capability that has been developed and collected in response to evolution of near-peer capabilities.			
Accomplishments/Planned Programs Subtotals	4.219	2.796	3.197

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 0603766A: *Tactical Electronic Surveillance System - Adv Dev*	182.400	113.365	72.314	-	72.314	64.799	37.048	36.646	37.072	Continuing	Continuing
• OMA - 122011 OMA: *Contractor Logistics Support and Other Weapon Support, OMA 122011*	2.132	-	0.000	-	0.000	-	-	-	-	0.000	2.132
• OMA - 122021 OMA: *Contractor Logistics Support and Other Weapon, OMA 122021 Support*	-	11.360	9.186	-	9.186	11.469	11.513	9.186	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

The 'National Integration to Tactical Systems' funds provide for transition and integration of National IC advanced technologies and prototypes leveraged by the Army's TENCAP program office. The Army TENCAP acquisition strategy is driven by an annual TENCAP General Officer Steering Group (TGOSG), that is co-chaired by the Army G2, Army G8, and the Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology [ASA(ALT)]. The TGOSC includes representatives from the Army G3, Army G6, Army Futures Command Intelligence-Capability Development and Integration Directorate, Army Training and Doctrine Command (TRADOC), and the Program Executive Office for Intelligence, Electronic Warfare and Sensors (PEO IEW&S). The TGOSG reviews, validates, prioritizes, and guides Army TENCAP efforts, according to the Army and Defense strategies. Based on this TGOSG guidance, Army TENCAP invests BA 6.4 RDTE in IC developments during the more cost-effective advanced development phase to ensure Army requirements are met with minimal redundancy with Army investments. Army TENCAP then uses BA 6.5 RDTE to manage the transition of these advanced development efforts through system development and integration into Army Programs of Record (POR). This strategy ensures these leveraged investments remain viable through multiple budget cycles, significantly increasing successful transition to recipient Army PORs. Army TENCAP facilitates the continued access to National IC 'joint' efforts and compatibility with those National standards and software baselines for those Army PORs that benefit from these leveraged National IC technologies. This results in cost savings through cost sharing, and Army participation in collaborative Intelligence. Funds will be used for integration efforts identified and vetted through the Army TENCAP annual TGOSG.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) DX9 / *National Integration To Tactical Systems*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TNG Engineers	MIPR	Multiple : Multiple	1.448	0.150	Jan 2021	-		-		-		-	0.000	1.598	-
National Integration Engineers	C/TBD	TBD : TBD	-	-		0.120	Jan 2022	0.150	Jan 2023	-		0.150	0.000	0.270	Continuing
		Subtotal	1.448	0.150		0.120		0.150		-		0.150	0.000	1.868	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TNG for Multiple Army PORs	MIPR	Multiple : Multiple	35.910	3.000	Jan 2021	-		-		-		-	0.000	38.910	-
TRFE	MIPR	Classified : Classified	3.427	1.069	Jan 2021	0.462	Jan 2021	0.823	Jan 2023	-		0.823	0.000	5.781	Continuing
National Integration	MIPR	Multiple : Multiple	-	-		1.691	Jan 2022	1.504	Jan 2023	-		1.504	0.000	3.195	-
		Subtotal	39.337	4.069		2.153		2.327		-		2.327	0.000	47.886	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TNG Support Costs	Allot	PEO IEW&S/PM SAI : Aberdeen Proving Grounds, MD	1.344	-		-		-		-		-	0.000	1.344	-
National Integration Program Management	Allot	Army TENCAP : Alexandria, VA	-	-		0.373	Jan 2022	0.360	Jan 2023	-		0.360	0.000	0.733	-
		Subtotal	1.344	-		0.373		0.360		-		0.360	0.000	2.077	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) DX9 / *National Integration To Tactical Systems*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TNG Test and Evaluation	MIPR	Multiple : Multiple	0.805	-		-		-		-		-	0.000	0.805	-
TRFE	MIPR	Classified : Classified	0.394	-		-		0.180		-		0.180	0.000	0.574	Continuing
National Integration	MIPR	Multiple : Multiple	-	-		0.150	Jan 2022	0.180	Jan 2023	-		0.180	0.000	0.330	Continuing
		Subtotal	1.199	-		0.150		0.360		-		0.360	0.000	1.709	N/A

	Prior Years	FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	43.328	4.219		2.796		3.197		-		3.197	0.000	53.540	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems*

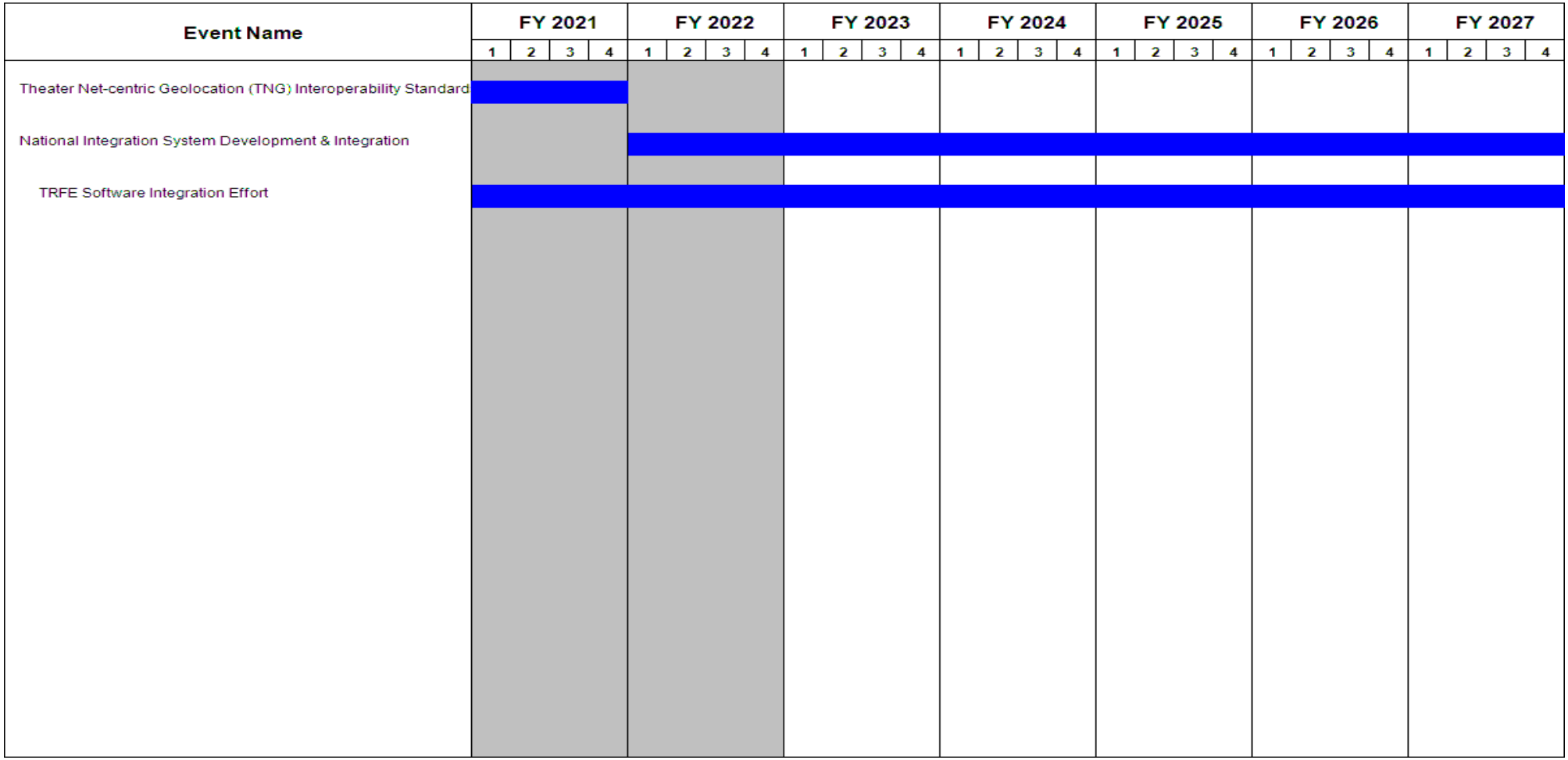

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** DX9 / *National Integration To Tactical Systems*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Theater Net-centric Geolocation (TNG) Interoperability Standards	2	2014	4	2021
National Integration System Development & Integration	1	2022	4	2028
TRFE Software Integration Effort	1	2018	4	2028

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) EX7 / *Air Vigilance System Development*	

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
EX7: *Air Vigilance System Development*	-	3.451	4.929	6.776	-	6.776	6.940	7.071	7.074	7.143	0.000	43.384
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

All funding is in support of the ACTIVE COMPONENT.

A. Mission Description and Budget Item Justification

Operational details are classified. The Air Vigilance system is a software-based capability that collects critical intelligence data on emerging threat aerial systems. The collected data provides early warning of enemy operations in restricted airspace to ensure force protection. An Air Vigilance system is comprised of a server unit configured and connected with either a single or multiple sensors.

FY2023 Base funding in the amount of $6.776 million provides for the development and integration of Pre-Planned Product Improvements (P3I) to meet and pace an evolving threat. The P3I consist of system development and integration of the latest software and hardware configurations to gain greater processing power, keep pace with emerging enemy changes, and ensure interoperability between System Capability Drops (CD). These funds also provide for continued development and integration of the CD 4 requirements into two proof-of-concept mobile systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Air Vigilance System Development and Integration	3.451	4.929	6.776
Description: Software and hardware engineering, development and integration efforts.			
FY 2022 Plans: Will provide for software and hardware development and integration to ingest latest collected sensor data into the common baseline and enhance system capabilities to meet newly identified threats and latest Capability Drop requirements.			
FY 2023 Plans: Continues to provide for software development and integration to ingest latest collected sensor data into the common baseline and enhance system capabilities to meet newly identified threats and continues development and integration of the CD 4 requirements into two proof-of-concept mobile systems.			
FY 2022 to FY 2023 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** EX7 / *Air Vigilance System Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Increase funds are for P3I enhancements to software and hardware to continue to pace the threat and development/integration of CD 4 requirements.			
Accomplishments/Planned Programs Subtotals	3.451	4.929	6.776

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• 0603766A: *Tactical Electronic Surveillance System - Adv Dev*	182.400	113.365	72.314	-	72.314	64.799	37.048	36.646	37.072	Continuing	Continuing
• W60001: *AIR VIGILANCE (AV)*	8.160	13.486	5.688	-	5.688	5.835	9.185	9.211	9.207	Continuing	Continuing

Remarks

D. Acquisition Strategy

Air Vigilance (AV) is an Acquisition Category (ACAT) III Automated Information System (AIS) program of record (POR) that started as a Quick Reaction Capability (QRC) developed and fielded cooperatively with the National Intelligence Community (IC) through the efforts and mission of the Army's Tactical Exploitation of National Capabilities (TENCAP) office. In May 2013, the Army Acquisition Executive (AAE) directed that the QRC transition into an Army POR and assigned milestone decision authority to the Army's Program Executive Officer - Intelligence Electronic Warfare and Sensors (PEO IEWS) who oversees the Army TENCAP program. The Army TENCAP office continues to leverage the IC common software development. The relationship ensures the primarily software-based system continues to leverage the IC common software updates, and ensures the latest sensor collects are integrated into the common IC data library. The TENCAP office has completed fielding systems to the approved Basis of Issue Plan (BOIP) and continues to improve existing capability through deployment of new, validated Capability Drop (CD) requirements. The AV POR will continue to evolve to meet future validated CD requirements and maintain its effectiveness against emerging threats.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) EX7 / *Air Vigilance System Development*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineers and Technical Assistance (SETA)	C/TBD	Peraton : Chantilly, Virginia	1.522	0.550	Mar 2021	0.900	Jan 2022	1.420	Mar 2023	-		1.420	0.000	4.392	Continuing
		Subtotal	1.522	0.550		0.900		1.420		-		1.420	0.000	4.392	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vigilance software and hardware updates and integration	C/TBD	CACI : Sterling, Virginia	6.278	1.900	Mar 2021	3.163	Jan 2022	4.362	Mar 2023	-		4.362	0.000	15.703	Continuing
		Subtotal	6.278	1.900		3.163		4.362		-		4.362	0.000	15.703	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Costs, Travel, Facilities	Allot	Army TENCAP : Alexandria, VA	2.424	0.900	Jan 2021	0.736	Jan 2022	0.814	Mar 2023	-		0.814	0.000	4.874	Continuing
		Subtotal	2.424	0.900		0.736		0.814		-		0.814	0.000	4.874	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vigilance System Testing and Exercises	C/TBD	TBD : TBD	0.463	0.101	Mar 2021	0.130	Jan 2022	0.180	Mar 2023	-		0.180	0.000	0.874	Continuing
		Subtotal	0.463	0.101		0.130		0.180		-		0.180	0.000	0.874	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605766A / *National Capabilities Integration (MIP)*	Project (Number/Name) EX7 / *Air Vigilance System Development*	

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	10.687	3.451	4.929	6.776	-	6.776	0.000	25.843	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** EX7 / *Air Vigilance System Development*

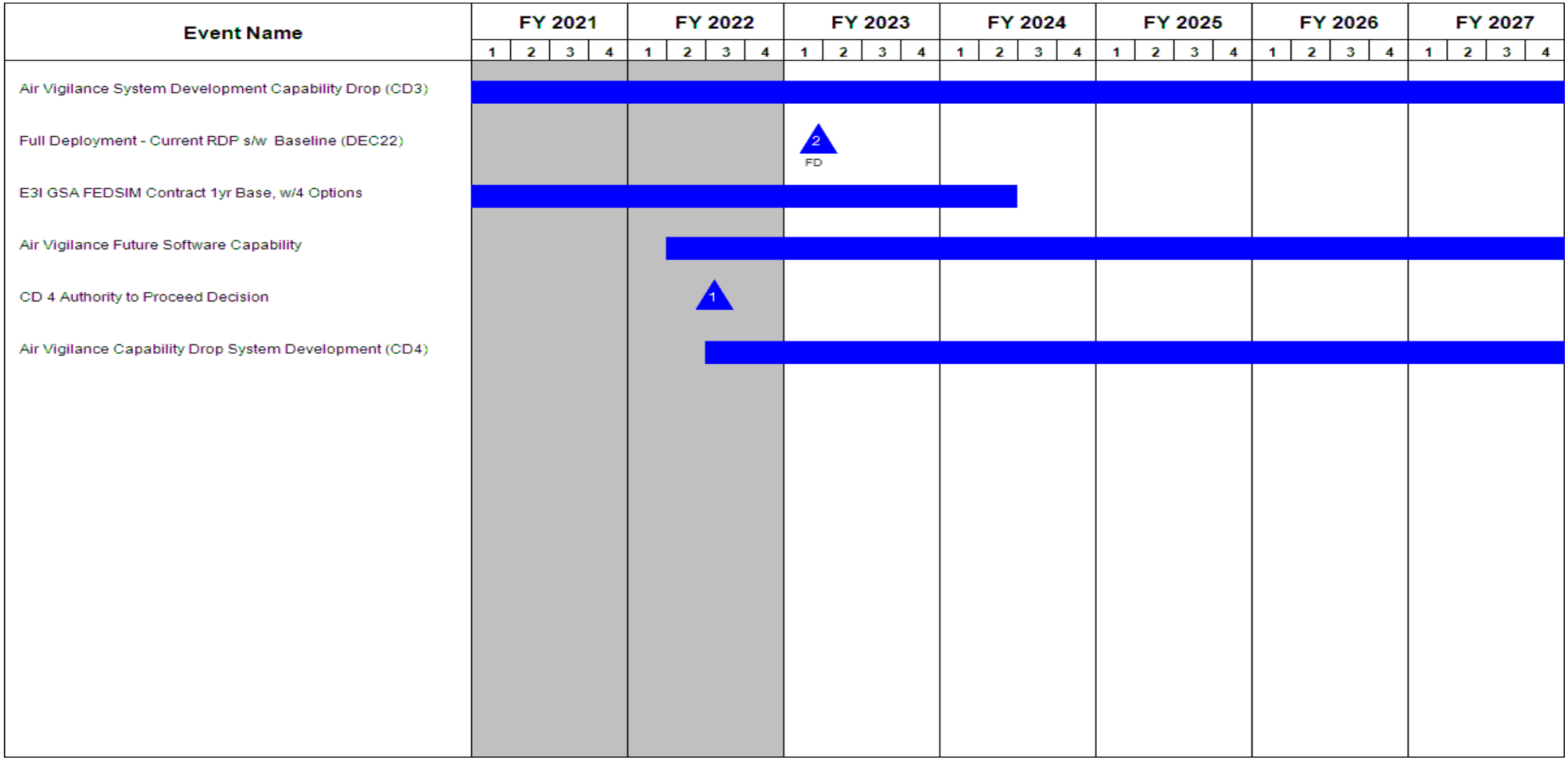

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0605766A / *National Capabilities Integration (MIP)*	**Project (Number/Name)** EX7 / *Air Vigilance System Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Air Vigilance System Development Capability Drop (CD3)	2	2016	1	2028
Air Vigilance CD #3 National Assessment Group Test	3	2018	3	2018
Full Deployment - Current RDP s/w Baseline (DEC22)	1	2023	1	2023
TRFE GSA FEDSIM Bridge Contract	2	2018	3	2019
E3I GSA FEDSIM Contract	2	2019	2	2019
E3I GSA FEDSIM Contract 1yr Base, w/4 Options	2	2019	2	2024
Air Vigilance Future Software Capability	2	2022	1	2028
CD 4 Authority to Proceed Decision	3	2022	3	2022
Air Vigilance Capability Drop System Development (CD4)	3	2022	1	2028