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 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603766A *I Tactical Electronic Surveillance System - Adv Dev*							
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	-	182.400	113.365	72.314	-	72.314	64.799	37.048	36.646	37.072	Continuing	Continuing
907: *Tactical Exploitation Of National Capabilities*	-	182.400	18.264	14.108	-	14.108	15.940	15.991	16.853	17.017	Continuing	Continuing
BX9: *Tactical Intel Targeting Access Node Adv Develop*	-	-	20.003	22.767	-	22.767	21.313	18.638	17.789	17.962	Continuing	Continuing
CC5: *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*	-	-	75.098	35.439	-	35.439	27.546	2.419	2.004	2.093	Continuing	Continuing

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.

Tactical Exploitation of National Capabilities (TENCAP) accomplishes the Army's Tactical Electronic Surveillance System Advance Development by leveraging National Intelligence Community (IC) capabilities through cross-agency engineering to evaluate, enhance, prototype, and transition Intelligence, Surveillance and Reconnaissance (ISR) technologies/capabilities from the IC into Army systems and architectures. This PE includes three projects:

1) TENCAP Core project (907).
2) Tactical Intelligence Targeting Access Node (TITAN) (space) Pre-Prototype development project (BX9).
3) Low Earth Orbit ISR (LEO ISR) development project (CC5).

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 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603766A *I Tactical Electronic Surveillance System - Adv Dev*

B. Program Change Summary ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	182.400	113.365	0.000	-	0.000
Current President's Budget	182.400	113.365	72.314	-	72.314
Total Adjustments	0.000	0.000	72.314	-	72.314
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	72.314	-	72.314

Change Summary Explanation

FY 2023 funding increase reflects the fact that the FY2022 President's Budget request did not include out-year funding.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) 907 / *Tactical Exploitation Of National Capabilities*	

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
907: *Tactical Exploitation Of National Capabilities*	-	182.400	18.264	14.108	-	14.108	15.940	15.991	16.853	17.017	Continuing	Continuing
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.

The Tactical Exploitation of National Capabilities (TENCAP) office serves as the Army's centralized lead to perform National Intelligence cross-agency engineering to evaluate, enhance, prototype, and transition Intelligence, Surveillance and Reconnaissance (ISR) technologies/capabilities from the National Intelligence Community (IC) into Army systems and architectures.
TENCAP programs perform two vital functions for the Army's Warfighters: (1) ensures assured access to current and future National and Commercial sensors and supporting tactical architectures; and (2) exploits and influences new developments that focus on improving the Analysis and Tasking, Collection, Processing, Exploitation, Dissemination (TCPED) of intelligence data.

FY2023 Base funding in the amount of $14.108 million provides for systems engineering and collaborative development and prototyping on multiple, validated National Intelligence Community (IC) advanced software and prototype developments that leverage upcoming National IC investments for Army use. This collaborative environment ensures continuous Army interoperability with National IC assets and architectures, exploits advances in commercial imagery and signal technologies, and develops prototypes that directly support the Army Warfighter.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: TENCAP Cross-agency Core Engineering activities	10.845	14.729	10.528
Description: Funds cross-agency core engineering activities using organic and matrix engineering subject matter experts (SMEs). By utilizing these SMEs, TENCAP is able to collaborate, develop and exploit emerging multi-intelligence based			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
technologies to satisfy/accelerate Army Intelligence, Surveillance, Reconnaissance (ISR), Mission Command and Force Protection requirements. ***FY 2022 Plans:*** SMEs will continue to incorporate Army requirements into earliest stages of National developments by ensuring Army access to sensors and multi-intelligence based capabilities, monitoring emerging technologies and systems, exploit advances in commercial imagery, signal technologies, and developing prototypes that improve Army intelligence products. ***FY 2023 Plans:*** Continue the Core Army TENCAP Mission, to work with and incorporate Army requirements into the earliest, most cost-effective stages of National developments; ensure Army continued access to sensors and multi-intelligence based capabilities; monitor National Agencies' emerging technologies and systems; exploit advances in commercial imagery and signal technologies; develop prototypes that directly support Army Warfighters. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease due to transition of funds from this effort into TITAN (space) Pre-Prototype development.			
Title: Air Vigilance - Advanced Development ***Description:*** Enhanced intelligence, force protection, and indications and warning capabilities under Army TENCAP program to pace the proliferation and rapid advances in threat and technology. ***FY 2022 Plans:*** Continues development of advanced signal and software enhancements for Air Vigilance (AV) Army Program of Record that support the programs Capability Drops. ***FY 2023 Plans:*** Continue to develop enhanced intelligence, force protection, and indications and warning capabilities under Army TENCAP program, to pace the proliferation and rapid advances in threat and technology.	4.034	2.500	2.500
Title: TENCAP Radio Frequency Exploitation (TRFE) ***Description:*** Prototype capability software that informs, influences and enhances Multi-Discipline sensor systems within PEO IEW&S such as Air Vigilance (AV), and Terrestrial Layer System (TLS) by targeting modern digital communications systems employed by near-peer nation state armies. Assists with Joint All-Domain Operations radio Frequency (RF) Characterization for modern communication environments with the intent to synchronize Signal Intelligence (SIGINT), Electronic Warfare, and Cyber operations. Utilizes commercial industry components and architectures to minimize hardware costs, risk and maximizes scalability/modularity.	2.178	1.035	1.080

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
FY 2022 Plans: As a follow on to TENCAP Radio Frequency Exploitation (TRFE) prototype, develops the open, government-owned software framework enabling Signal Intelligence (SIGINT), Electronic Warfare and Cyber capabilities. ***FY 2023 Plans:*** Collaborate and exploit specific National investments and advances in Signal Intelligence (SIGINT), Electronic Warfare and Cyber capabilities for use and advancement of Army Warfighter capabilities. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase of $.045 million in FY23 funding is due to inflation.			
Title: Advanced Miniaturized Data Acquisition System(AMDAS)/ AMDAS Dissemination Vehicle (ADV) ***Description:*** Continue advanced engineering and development efforts to ensure continued interoperability and effectiveness of Army Corp-level TENCAP subsystems that provide national data to the tactical warfighter via intelligence community partners classified national systems. Will become subsystem to Tactical Intelligence Targeting Access Node (TITAN) prototype.	9.002	-	-
Title: Tactical Intelligence Targeting Access Node (TITAN) Space Prototype System ***Description:*** Tactical Intelligence Targeting Access Node (TITAN) (space) pre-prototype system will provide timely assured intelligence for long range precision fires and maneuver in contested and Anti-Access / Area-Denial (A2/AD) environments; Assured access to Space Intelligence, Surveillance, and Recognizance (ISR): National, Army and Commercial; Software Analytics capability to enable the intelligence cycle with increased speed, precision and accuracy Automated/Assisted Sensor-to-Shooter workflows: speed, scalability, accuracy to support Long Range Precision Fires (LRPF) in an A2/AD environment; Modern and consolidated ground station for space and select national commercial theater sensors. TITAN (space) Pre-Prototype funds were realigned to Project BX9 effective FY2022.	30.000	-	-
Title: Multi-Domain Sensing System (MDSS) ***Description:*** The Multi Domain Sensor System (MDSS) will provide multiple sensing capabilities by developing and prototyping survivable sensor capabilities on higher altitude platforms that can perform effective stand-off operations. They include Electronic Intelligence (ELINT), Communications Intelligence (COMINT), Synthetic Aperture Radar (SAR), Moving Target Indicator (MTI), Cyber/EW, Air-Launched Effects (ALE) and Aircraft Survivability sensors. MDSS was aligned with its own PE 060403 Project BY9 effective FY2022.	39.625	-	-
Title: Low Earth Orbit Satellite Capability	86.716	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Description: The Low Earth Orbit (LEO) effort will provide prototyping, development and experimentation of the Tactical Space Layer (TSL) sensors (electro optical, synthetic aperture radar, and radio frequency) which are designed to provide wide-area, responsive, deep-area sensing required for beyond-line-of-sight (BLOS) targeting and force maneuver, significantly reducing Sensor-to-Shooter (S2S) timelines. Follow-on, persistent, prototype tactical sensor capabilities will be integrated with the Army Tactical Intelligence Targeting Access Node (TITAN) ground station, which will provide direct tasking and assured access directly supporting live-fire, S2S demonstrations and assessments. LEO ISR funds were realigned to Project CC5 effective FY2022.			
Accomplishments/Planned Programs Subtotals	182.400	18.264	14.108

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
• 0605766A: *National Capabilities Integration (MIP)*	7.670	13.454	17.030	-	17.030	15.448	17.291	17.688	17.860	0.000	106.441
• OMA - 122021: *Contractor Logistics Support and Other Weapon Support*	-	11.360	11.401	-	11.401	11.469	11.513	11.536	11.651	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Army Tactical Exploitation of National Capabilities (TENCAP) Core mission is a Congressionally-mandated and chartered enduring requirement to leverage National Intelligence Community (IC) capabilities useful to the tactical Army. The Army TENCAP acquisition strategy is driven by an annual TENCAP General Officer Steering Group (TGOSG), co-chaired by the Army G-2, Army G-8, Military Deputy to the Assistant Secretary of the Army for Acquisition, Logistics, and Technology [ASA (ALT)]. The TGOSG membership includes representatives from the Army G-3, Army G-6, 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 Army and Defense strategy. Based on the 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 to 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. With acquisition discipline and oversight provided by PEO IEW&S, Army TENCAP executes the TGOSG-

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

approved efforts through use of multiple contracts and agreements with the military, National Intelligence agencies, labs, industry partners and academia for the full duration required to complete development and transition these national capabilities into enduring Army programs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

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
TENCAP Intelligence Engineers (SETA)	Option/ CPFF	Perspecta : Alexandria, VA	28.846	1.500	Jan 2021	1.500	Jan 2022	1.500	Jan 2023	-		1.500	0.000	33.346	Continuing
TENCAP Intelligence Engineers(Matrix Gov)	MIPR	Army Geospatial Cener (AGC) : Alexandria, VA	10.857	1.200	Jan 2021	1.500	Oct 2022	1.300	Oct 2022	-		1.300	0.000	14.857	-
TENCAP Intelligence Engineers (SETA) for TITAN Space prototype development (in Proj BX9 in FY22)	Option/ CPFF	Perspecta : Alexandria, VA	-	1.307	Jan 2021	-		-		-		-	0.000	1.307	-
TENCAP Intelligence Engineers (Matrix Gov) for TITAN Space prototype dev (in Proj BX9 in FY22)	MIPR	Army Geospatial Center (AGC) : Alexandria, VA	-	0.900	Mar 2021	-		-		-		-	0.000	0.900	-
SETA Support MDSS (realigns to PE 0604036A, Proj BY9 in FY22)	C/CPFF	DHPC : Woodbridge, NJ	-	2.169	Mar 2021	-		-		-		-	0.000	2.169	-
SETA Support LEO (realigns to Proj CC5 in FY22)	C/FFP	A-PNT / TENCAP : Multiple locations	-	5.000	Jan 2021	-		-		-		-	0.000	5.000	-
		Subtotal	39.703	12.076		3.000		2.800		-		2.800	0.000	57.579	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
TENCAP core mission activities	Various	Multiple : Multiple	27.632	5.920	Feb 2021	8.129	Feb 2022	5.494	Feb 2023	-		5.494	0.000	47.175	Continuing
Air Vigilance advanced software development	MIPR	Classified : MIPR	20.217	4.034	Jan 2021	2.500	Jan 2021	1.800	Jan 2023	-		1.800	0.000	28.551	Continuing
AMDAS/ADV (capability transitions to TITAN space Prototype)	MIPR	Classified : MIPR	45.409	8.918	Jan 2021	-		-		-		-	0.000	54.327	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*	

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
TRFE	MIPR	Classified : MIPR	7.968	2.178	Jan 2021	1.035	Jan 2022	0.850	Jan 2023	-		0.850	0.000	12.031	-
TITAN space Prototype Development (realings to Proj BX9 in FY22)	C/FFP	Northrup Grumman : Aurora, CO	-	24.102	Jan 2021	-		-		-		-	0.000	24.102	-
MDSS (legacy) Sensor Improvements (LRR) (realigns to PE 0604036A, Proj BY9 in FY22)	SS/FFP	Northrup Grumman : Baltimore, MD	-	9.918	Feb 2021	-		-		-		-	0.000	9.918	-
MDSS SIGINT Demonstration (realigns to PE 0604036A, Proj BY9 in FY22)	C/FFP	L3 Harris and Raytheon : Greenville, TX Sunnyvale, CA	-	4.374	Jun 2021	-		-		-		-	0.000	4.374	-
MDSS SIGINT Prototypes (realigns to PE 0604036A, Proj BY9 in FY22)	C/FFP	L3 Harris and Raytheon : Greenville, TX and Sunnyvale, CA	-	19.116	Nov 2021	-		-		-		-	0.000	19.116	-
LEO Contracts (realigns to Proj CC5 in FY22)	MIPR	Various OTAs and CCDC Organizations : Multiple Locations	-	70.400	Jan 2021	-		-		-		-	0.000	70.400	-
		Subtotal	101.226	148.960		11.664		8.144		-		8.144	0.000	269.994	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
TENCAP Prgm Mgmt-Dir Gov,travel,etc.	Allot	Army TENCAP : Alexandria, VA	19.889	2.311	Jan 2021	2.500	Jan 2022	1.739	Oct 2022	-		1.739	0.000	26.439	Continuing
TENCAP Secured Facilities and IT support	MIPR	Army Geospatial Center (AGC) : Alexandria, VA	4.077	0.525	Jan 2021	0.700	Jan 2022	1.025	Nov 2022	-		1.025	0.000	6.327	Continuing
TENCAP Prgm Mgmt - TITAN Space prototype	Allot	Army TENCAP : Alexandria, VA	-	1.800	Jan 2021	-		-		-		-	0.000	1.800	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) 907 / *Tactical Exploitation Of National Capabilities*	

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
development (realigns to Proj BX9 in FY22)															
Prog Mgmt- MDSS (realigns to PE 0604036A, Proj BY9 in FY22)	MIPR	PM SAI : Aberdeen, MD	-	2.226	Mar 2021	-		-		-		-	0.000	2.226	-
LEO Prog Mgmt (realigns to Proj CC5 in FY22)	C/CPFF	T2S, Inc. : Huntsville, AL	-	3.400	Oct 2020	-		-		-		-	0.000	3.400	-
		Subtotal	23.966	10.262		3.200		2.764		-		2.764	0.000	40.192	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
TENCAP Lab Tests, Exercises, Simulations	MIPR	Multiple : Multiple	2.631	0.400	Jan 2021	0.400	Jan 2022	0.400	Jan 2023	-		0.400	0.000	3.831	Continuing
Test and Exercises - TITAN Space prototype development (realigns to Proj BX9 in FY22)	MIPR	Multiple : Multiple	-	0.880	Jan 2021	-		-		-		-	0.000	0.880	-
LEO Tests (realigns to Proj CC5 in FY22)	MIPR	A-PNT / TENCAP : Multiple Locations	-	8.000	Mar 2021	-		-		-		-	0.000	8.000	-
MDSS Open Architecture	C/CPFF	APG: MD : Multiple Locations	-	1.822	Mar 2021	-		-		-		-	0.000	1.822	-
		Subtotal	2.631	11.102		0.400		0.400		-		0.400	0.000	14.533	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	167.526	182.400		18.264		14.108		-		14.108	0.000	382.298	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

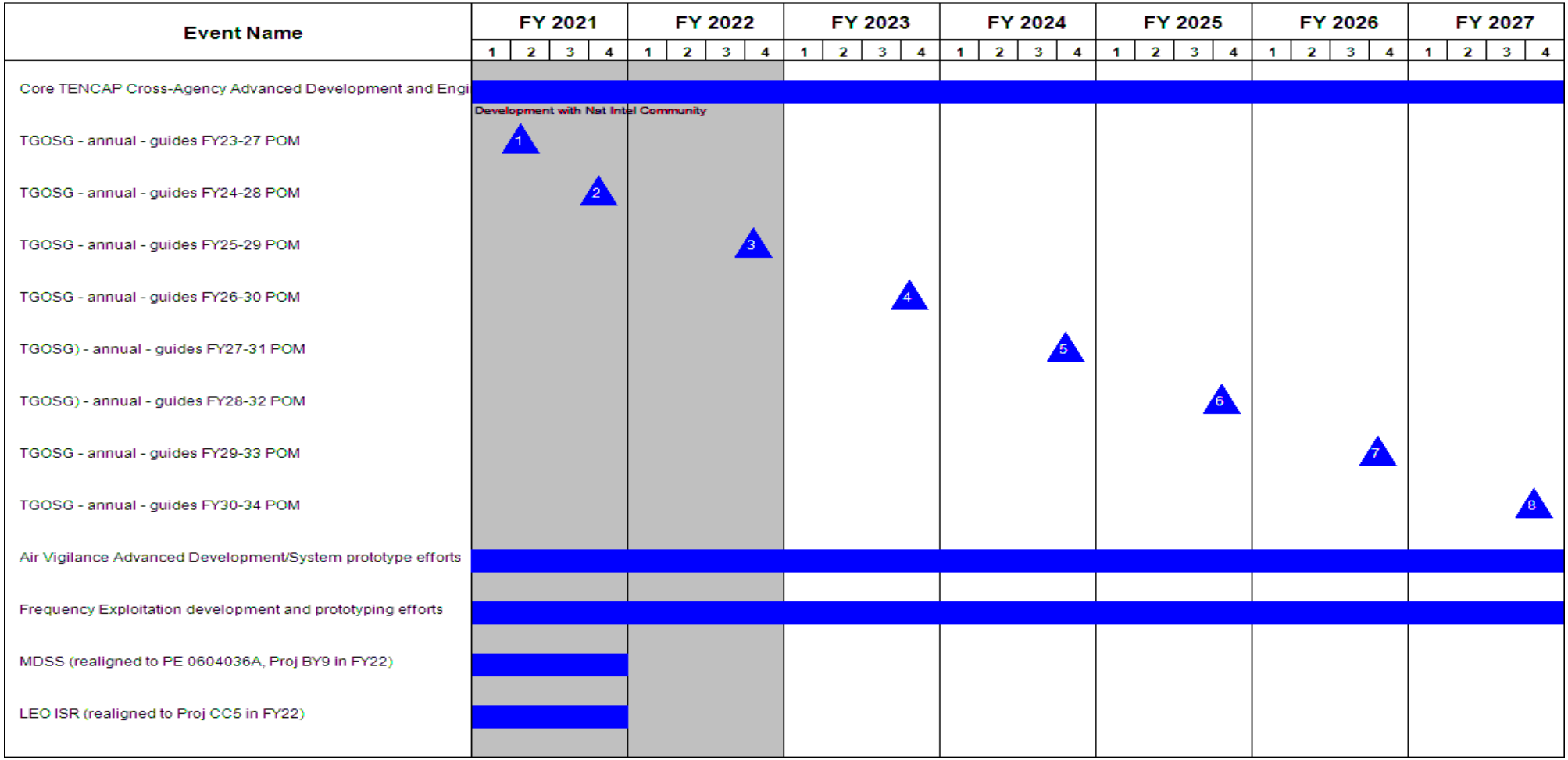

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** 907 / *Tactical Exploitation Of National Capabilities*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Core TENCAP Cross-Agency Advanced Development and Engineering	1	2018	4	2027
TGOSG - annual - guides FY23-27 POM	2	2021	2	2021
TGOSG - annual - guides FY24-28 POM	4	2021	4	2021
TGOSG - annual - guides FY25-29 POM	4	2022	4	2022
TGOSG - annual - guides FY26-30 POM	4	2023	4	2023
TGOSG) - annual - guides FY27-31 POM	4	2024	4	2024
TGOSG) - annual - guides FY28-32 POM	4	2025	4	2025
TGOSG - annual - guides FY29-33 POM	4	2026	4	2026
TGOSG - annual - guides FY30-34 POM	4	2027	4	2027
Air Vigilance Advanced Development/System prototype efforts	3	2013	4	2027
Frequency Exploitation development and prototyping efforts	1	2018	4	2027
MDSS (realigned to PE 0604036A, Proj BY9 in FY22)	1	2021	4	2021
LEO ISR (realigned to Proj CC5 in FY22)	1	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) BX9 / *Tactical Intel Targeting Access Node Adv Develop*	

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
BX9: *Tactical Intel Targeting Access Node Adv Develop*	-	-	20.003	22.767	-	22.767	21.313	18.638	17.789	17.962	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

All funding is in support of the ACTIVE COMPONENT.

A. Mission Description and Budget Item Justification

This project funds development and prototyping of space-to-ground station capabilities to provide timely assured access to National and Commercial Space-Based Intelligence, Surveillance, and Reconnaissance (ISR) sensor data supporting 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.).

Funding for TITAN Advance Development funding will also prototype software analytic capabilities to increase the speed, precision and accuracy of the intelligence cycle through Automated/Assisted Sensor-to-Shooter (S2S) workflows. These capabilities will be integrated into the TITAN Ground Station Program of Record (POR).

FY2023 base funding in the amount of $22.767 million provides for the continued development of the Space Ground Component Kit (SGCK). The SGCK is comprised of components utilized in the TITAN (space) Pre-Prototype systems that provide access to space capabilities. The SGCK consists of a small form-factor antenna, Automated Target Recognition tools, and enhanced interoperability with the fires architecture to support Army's #1 priority - LRPF. The SGCK will be integrated into the TITAN POR and will provide, rapid availability of National Reconnaissance Office (NRO) Overhead Systems (NOS) Geospatial Intelligence (GEOINT) and Signal Intelligence (SIGINT) data from Theater, National and Commercial sources.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: Tactical Intelligence Targeting Access Node (TITAN) Adv Development Prototype System	-	20.003	22.767
Description: The SGCK, when integrated into the Tactical Intelligence Targeting Access Node (TITAN) POR, 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 S2S workflows with increased speed, scalability, and accuracy.			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** BX9 / *Tactical Intel Targeting Access Node Adv Develop*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
5. Modern and consolidated ground station for National and Commercial sensors. ***FY 2022 Plans:*** Continue the development of the Tactical Intelligence Targeting Access Node (TITAN) (space) Pre-Prototype system SGCK that will provide rapid availability of National Reconnaissance Office (NRO) Overhead Systems (NOS), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) capabilities. Continue to integrate new emerging Low Earth Orbit (LEO) constellations, improved downlink, ingest and processing of commercial and government remote sensing data. Continue the development and refinement of automated/assisted target recognition along with enhanced interoperability into the fires architecture to support Army's #1 priority, Long Range Precision Fires (LRPF). ***FY 2023 Plans:*** Continue development of the SGCK (6.4 RDT&E funds) that will be integrated into the TITAN POR (6.5 RDT&E funds) and will provide rapid availability of National Reconnaissance Office (NRO) Overhead Systems (NOS), Geospatial Intelligence (GEOINT), and Signal Intelligence (SIGINT) capabilities. Funding will also support the continuation of the following related efforts: development and prototyping of emerging sensor analytics in the TITAN Integration Environment (TIE), development and refinement of small form-factor antenna, and development of Automated Target Recognition tools and enhanced interoperability with the fires architecture to support Army's #1 priority - LRPF. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase provides for development and continued compatibility of leveraged technologies from National and commercial overhead advancements for use by Army tactical operations through ground systems, as identified by the Army's Tactical Exploitation of National Capabilities (TENCAP) office and approved by the TENCAP General Officers' Steering Group (TGSOG).			
Accomplishments/Planned Programs Subtotals	-	20.003	22.767

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
• 0605766A: *National Capabilities Integration (MIP)*	7.670	13.454	17.030	-	17.030	15.448	17.291	17.688	17.860	0.000	106.441

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,

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** BX9 / *Tactical Intel Targeting Access Node Adv Develop*

processing, exploiting, fusing, and disseminating space-based sensor data to provide networked situational awareness and direct tactical support to Army commanders at echelon. The TITAN (space) Pre-Prototype will reduce Sensor-to-Shooter (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, and 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 used to develop the SGCK that is integrated into the TITAN POR.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) BX9 / *Tactical Intel Targeting Access Node Adv Develop*	

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 Engineering Services	MIPR	Army Geospatial Center (AGC) : Alexandria, VA	0.001	-		1.500	Jan 2022	1.500	Jan 2023	-		1.500	0.000	3.001	-
		Subtotal	0.001	-		1.500		1.500		-		1.500	0.000	3.001	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 Development	C/FFP	Northrup Grumman : Aurora, CA	0.001	-		15.503	Jul 2020	18.102	Nov 2022	-		18.102	0.000	33.606	-
		Subtotal	0.001	-		15.503		18.102		-		18.102	0.000	33.606	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 Program Management	MIPR	Army TENCAP : Alexandria, VA	0.001	-		2.000	Jan 2022	2.150	Oct 2022	-		2.150	0.000	4.151	-
		Subtotal	0.001	-		2.000		2.150		-		2.150	0.000	4.151	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
TITAN (space) Pre-Prototype Test and Exercises	MIPR	Multiple : Miltiple	0.001	-		1.000	Jan 2022	1.015	Jan 2023	-		1.015	0.000	2.016	-
		Subtotal	0.001	-		1.000		1.015		-		1.015	0.000	2.016	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) BX9 / *Tactical Intel Targeting Access Node Adv Develop*	

	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	0.004	-		20.003		22.767		-		22.767	0.000	42.774	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** BX9 / *Tactical Intel Targeting Access Node Adv Develop*

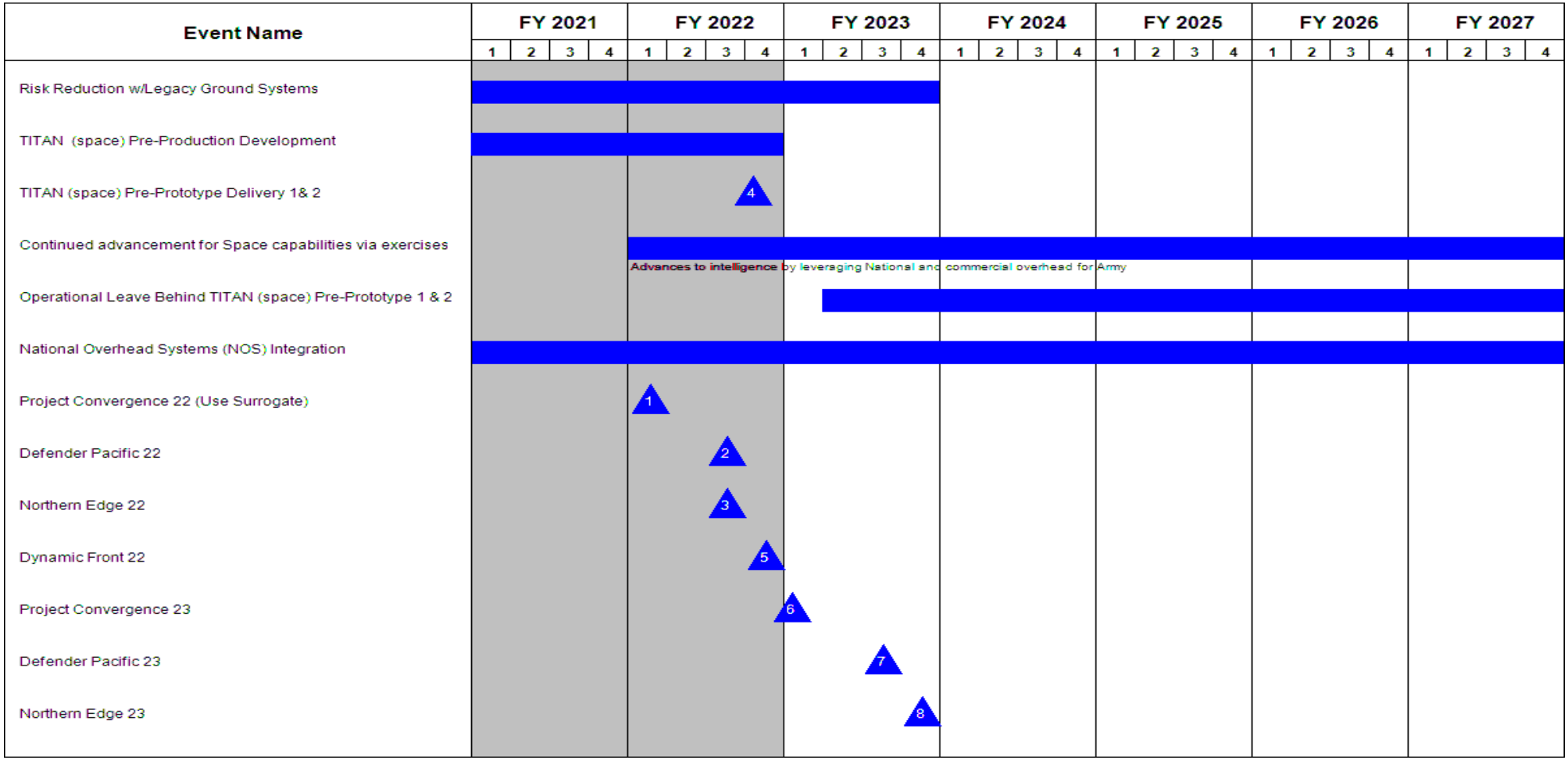

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** BX9 / *Tactical Intel Targeting Access Node Adv Develop*

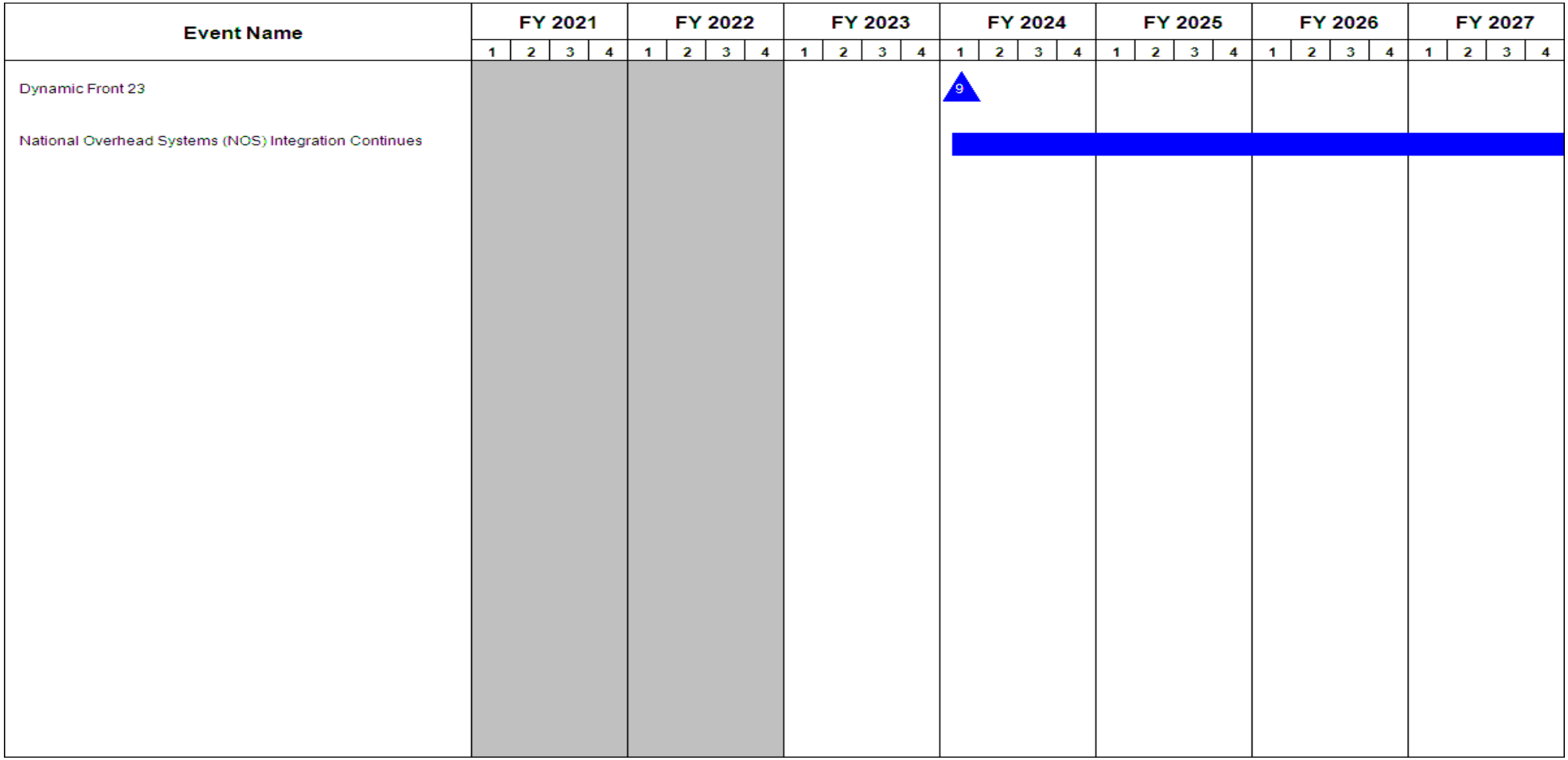

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** BX9 / *Tactical Intel Targeting Access Node Adv Develop*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Risk Reduction w/Legacy Ground Systems	1	2020	4	2023
TITAN (space) Pre-Production Development	4	2020	4	2022
TITAN (space) Pre-Prototype Delivery 1& 2	4	2022	4	2022
Continued advancement for Space capabilities via exercises	1	2022	4	2027
Operational Leave Behind TITAN (space) Pre-Prototype 1 & 2	2	2023	4	2027
National Overhead Systems (NOS) Integration	1	2021	4	2027
Project Convergence 22 (Use Surrogate)	1	2022	1	2022
Defender Pacific 22	3	2022	3	2022
Northern Edge 22	3	2022	3	2022
Dynamic Front 22	4	2022	4	2022
Project Convergence 23	1	2023	1	2023
Defender Pacific 23	3	2023	3	2023
Northern Edge 23	4	2023	4	2023
Dynamic Front 23	1	2024	1	2024
National Overhead Systems (NOS) Integration Continues	1	2024	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*	

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
CC5: *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*	-	-	75.098	35.439	-	35.439	27.546	2.419	2.004	2.093	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

All funding is in support of the ACTIVE COMPONENT.

A. Mission Description and Budget Item Justification

Low Earth Orbit (LEO) Intelligence, Surveillance and Reconnaissance (ISR) directly supports the Army Assured Position Navigation and Timing/Space (APNT/S) and Long Range Precision Fires (LRPF) modernization priorities.

The LEO ISR effort will provide prototyping, development, and experimentation of High Altitude and Tactical Space Layer (TSL) sensors (including electro optical, synthetic aperture radar, radio frequency, and hyperspectral) and space-based Alternative Positioning, Navigation, and Timing (ALTPNT) systems, which are designed to provide wide-area, responsive, deep-area sensing and alternative signal sources required for beyond-line-of-sight (BLOS) targeting and force maneuver. The BLOS sensing will significantly reduce Sensor-to-Shooter (S2S) timelines and reliance on current, at-risk signal sources. Follow-on, persistent, prototype, tactical sensor and alternative signal capabilities will be integrated with the Army Tactical Intelligence Targeting Access Node (TITAN) ground station and theater gateways. The prototype sensor capabilities will provide direct tasking, assured access, and freedom of maneuver directly supporting live-fire, S2S demonstrations and assessments.

FY2023 Base funding in the amount of $35.439 million provides prototyping, experimentation, and risk reduction activities to sensor prototypes and ALTPNT systems, supporting wide-area, responsive, and deep-area sensing and force maneuver. It will enable ground stations to dynamically task, receive and disseminate data to directly support live-fire S2S demonstrations and assessments.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Title: CC5 / Low Earth Orbit (LEO) Intel Surv Recon (ISR)	-	75.098	35.439
Description: The LEO ISR effort will provide prototyping, development and experimentation of High Altitude and Tactical Space Layer (TSL) sensors (including electro-optical, synthetic aperture radar, and radio frequency). These sensors are designed to provide wide-area, responsive, deep-area sensing required for beyond-line-of-sight (BLOS) targeting and force maneuver, and will significantly reduce S2S timelines. Follow-on persistent prototype tactical sensor capabilities will be integrated with the Army TITAN ground station and ATHENA gateways, which will provide direct tasking and assured access directly supporting live-fire S2S demonstrations and assessments.			
FY 2022 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023
Funding provides for follow-on prototype development and experimentation of High Altitude and Tactical Space Layer sensors, which will be integrated with the Army Tactical Intelligence Targeting Access Node (TITAN) ground station and theater gateways to provide direct tasking and assured access directly supporting live-fire Sensor to Shooter (S2S) demonstrations and assessments. ***FY 2023 Plans:*** Funding provides for follow-on prototype development and experimentation of High Altitude and Tactical Space Layer sensor test beds, which will be integrated with the Army TITAN ground station and ATHENA gateways, to provide direct tasking and assured access directly supporting live-fire STS demonstrations and assessments. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease from FY 2022 $75.098 million down to FY 2023 $35.439 million reflects achievement of objectives for Army influence of development on National assets and payloads through A-PNT CFT Campaign of Learning and AFC Project Convergence, and the realignment of PE 0603766A Project CC5 'LEO ISR' funds to PE 0604035A Project BX7 "Battle Management Command and Control (BMC2) and Ground Infrastructure (renamed from 'LEO Satellite Capability') to continued efforts in that area. Project CC5 "LEO ISR" is focused on the payload development and prototyping, and PE 0604035A Project BX7 ""Battle Management Command and Control (BMC2) and Ground Infrastructure is focused on the ground ingest/infrastructure development.			
Accomplishments/Planned Programs Subtotals	-	75.098	35.439

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
• 0604035A: *Low Earth Orbit (LEO) Satellite Capability*	21.850	19.638	35.509	-	35.509	39.672	22.904	23.328	23.486	Continuing	Continuing

Remarks

Development by Project CC5 "LEO ISR" are in conjunction and complement efforts funded by Project BX7 "LEO Satellite Capability" . ref. PE 0604035A.BX7

D. Acquisition Strategy

The LEO ISR effort supports work with the Intelligence Community (IC), our Mission Partner, and the Space Development Agency on the prototyping, development, and experimentation of High Altitude and Tactical Space Layer (TSL) sensors (including electro optical, synthetic aperture radar, radio frequency, and hyperspectral), and Alternative Positioning, Navigation, and Timing (ALTPNT) systems. These sensors are designed to provide wide-area, responsive, deep-area sensing required for BLOS targeting and force maneuver, significantly reducing S2S timelines. Follow-on, persistent, prototype tactical sensor capabilities (FY 2023-2024) will be integrated with the Army TITAN ground station and ATHENA gateways, which will provide direct tasking, assured access, and freedom of maneuver directly supporting live-fire

Exhibit R-2A, RDT&E Project Justification: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*

S2S demonstrations and assessments. Existing Mission Partner contracts and Aviation & Missile Technology Consortium (AMTC) Other Transaction Authority (OTAs) will be used for prototype development, engineering services and test and evaluation support.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*	

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
LEO Prototype Development and Engineering Services Support	C/FFP	A-PNT /S : Multiple Locations	-	-		5.000	Oct 2021	4.000	Jun 2023	-		4.000	0.000	9.000	-
		Subtotal	-	-		5.000		4.000		-		4.000	0.000	9.000	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
LEO Development (Classified)	MIPR	TBD : TBD	-	-		58.598	Jan 2022	26.939	Jan 2023	-		26.939	0.000	85.537	-
		Subtotal	-	-		58.598		26.939		-		26.939	0.000	85.537	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
LEO Program MGMT	TBD	APNT CFT/S : Huntsville, AL	-	-		3.500	Oct 2021	2.500	Jun 2023	-		2.500	0.000	6.000	-
		Subtotal	-	-		3.500		2.500		-		2.500	0.000	6.000	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
LEO Prototype Tests and Evaluations	TBD	Multiple : Multiple	-	-		8.000	Jan 2022	2.000	Jan 2023	-		2.000	0.000	10.000	-
		Subtotal	-	-		8.000		2.000		-		2.000	0.000	10.000	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Army			Date: April 2022
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	Project (Number/Name) CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*	

	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	-	-		75.098		35.439		-		35.439	0.000	110.537	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*

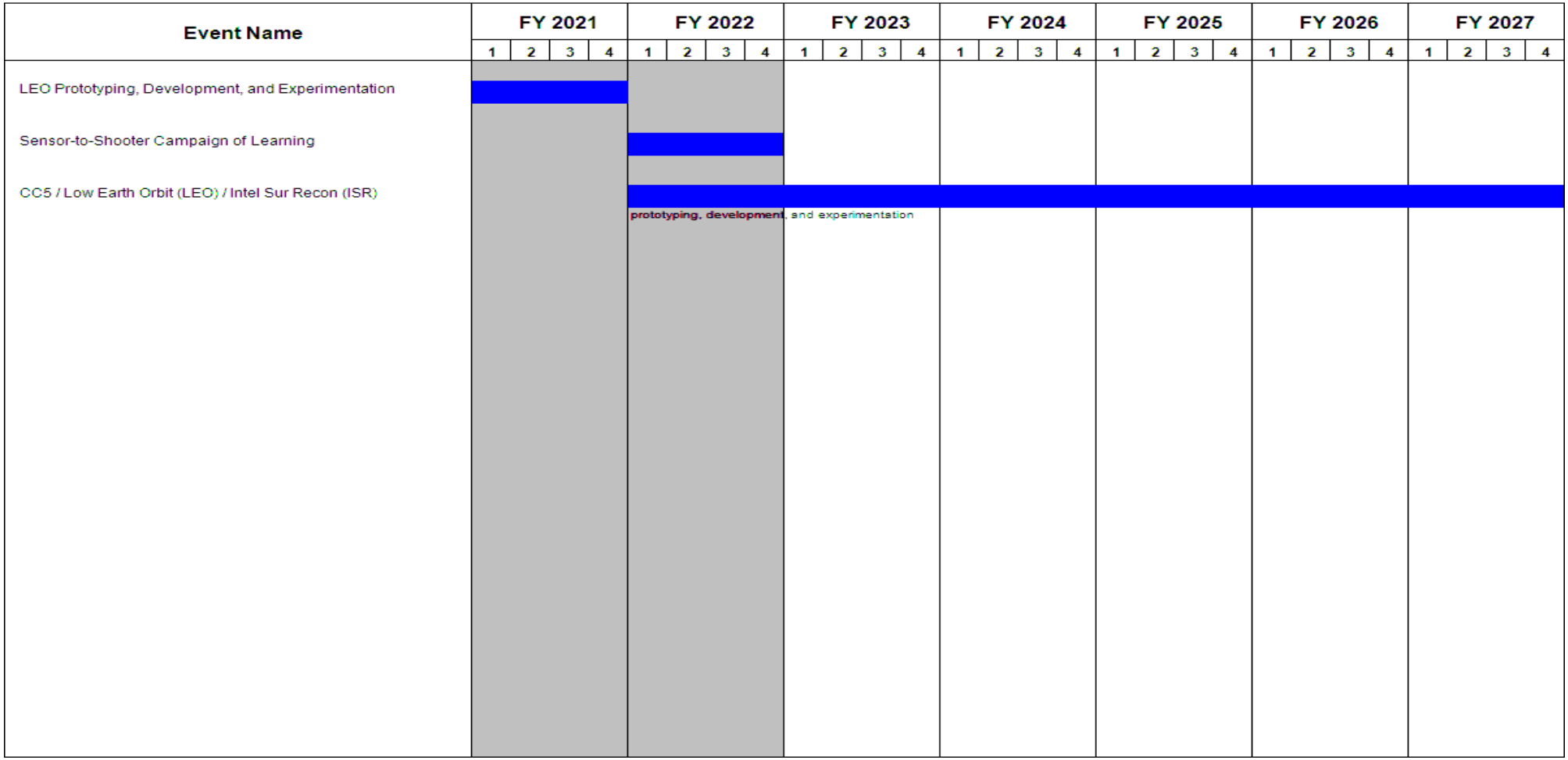

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Army		Date: April 2022
Appropriation/Budget Activity 2040 / 4	**R-1 Program Element (Number/Name)** PE 0603766A / *Tactical Electronic Surveillance System - Adv Dev*	**Project (Number/Name)** CC5 / *Low Earth Orbit (LEO) / Intel Surv Recon (ISR)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
LEO Prototyping, Development, and Experimentation	1	2020	4	2021
Sensor-to-Shooter Campaign of Learning	1	2022	4	2022
CC5 / Low Earth Orbit (LEO) / Intel Sur Recon (ISR)	1	2022	4	2027