

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army										Date: February 2018		
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 Support Development - Adv Dev (MIP)							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	15.730	27.733	35.667	-	35.667	37.731	31.179	34.201	36.169	0.000	218.410
907: Tactical Exploitation Of National Capabilities-MIP	-	15.730	27.733	35.667	-	35.667	37.731	31.179	34.201	36.169	0.000	218.410

Note
All funding is in support of the ACTIVE COMPONENT

A. Mission Description and Budget Item Justification
The Tactical Exploitation of National Capabilities (TENCAP) program 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 developed by Science and Technology (S&T) and other activities across the National Intelligence Community (IC) into Army systems and architectures. TENCAP (1) ensures continued access to current National and Theater sensors and supporting tactical architectures; and (2) exploits new developments that focus on improving the Analysis and Tasking, Collection, Processing, Exploitation, Dissemination and Feedback (TCPEDF) of intelligence data. This includes efforts to: (1) shorten targeting timelines down to Platoon level; (2) enhance target identification; (3) provide better target location (accuracy); (4) provide continued coverage of a target; and (5) develop in-theater analytic tools to enable data exploitation in near-real-time support to contingency operations.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	15.730	27.733	32.340	-	32.340
Current President's Budget	15.730	27.733	35.667	-	35.667
Total Adjustments	0.000	0.000	3.327	-	3.327
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	3.327	-	3.327

Change Summary Explanation
Fiscal Year (FY) 2019 adjustment of \$3.327 million is the net result of an increase of \$5.150 million for Army internal adjustments to meet emerging intelligence requirements and a decrease of \$1.823 million for manpower which was transferred to Operations and Maintenance Army (OMA).

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 4					R-1 Program Element (Number/Name) PE 0603766A / Tactical Support Development - Adv Dev (MIP)				Project (Number/Name) 907 / Tactical Exploitation Of National Capabilities-MIP			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
907: Tactical Exploitation Of National Capabilities-MIP	-	15.730	27.733	35.667	-	35.667	37.731	31.179	34.201	36.169	0.000	218.410
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note All funding is in support of the ACTIVE COMPONENT												
A. Mission Description and Budget Item Justification The Tactical Exploitation of National Capabilities (TENCAP) program 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 developed by Science and Technology (S&T) and other activities across the National Intelligence Community (IC) into Army systems and architectures. TENCAP (1) ensures continued access to current National and Theater sensors and supporting tactical architectures; and (2) exploits new developments that focus on improving the Analysis and Tasking, Collection, Processing, Exploitation, Dissemination and Feedback (TCPEDF) of intelligence data. This includes efforts to: (1) shorten targeting timelines down to Platoon level; (2) enhance target identification; (3) provide better target location (accuracy); (4) provide continued coverage of a target; and (5) develop in-theater analytic tools to enable data exploitation in near-real-time support to contingency operations. FY2019 Base funding in the amount of \$35.667 million provides for: (1) engineering and collaborative development on multiple validated National Intelligence Community (IC) advanced software and prototype developments that leverage National IC invests for Army use and ensure continuous Army interoperability with National IC assets and architectures, e.g. Information Store (iStore), Scalable User-Defined Real-time GEOINT Environment (SURGE), ADV Pilot, GETS-Cedalion Transition, MERIT project management and transition; (2) Advanced Miniaturized Data Acquisition System (AMDAS) 'Next' system development; (3) advanced development of more effective intelligence collection, processing, exploitation and dissemination (PED); and (4) advanced development of capabilities for Air Vigilance (AV) Army Program of Record; and (5) development of TENCAP Radio Frequency Exploitation (TRFE) effort to support future synchronization of SIGINT, Cyber and Electronic Warfare operations.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2017	FY 2018	FY 2019	
Title: TENCAP Cross-agency Core Engineering activities									11.109	15.836	10.594	
Description: By utilizing organic and matrix engineering subject matter experts, TENCAP collaborates, develops and exploits emerging multi-intelligence based technologies to satisfy/accelerate Army Intelligence, Surveillance, Reconnaissance (ISR), Mission Command and Force Protection requirements.												
FY 2018 Plans:												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 4		R-1 Program Element (Number/Name) PE 0603766A / <i>Tactical Support Development - Adv Dev (MIP)</i>		Project (Number/Name) 907 / <i>Tactical Exploitation Of National Capabilities-MIP</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2017	FY 2018	FY 2019
<p>Incorporate Army requirements into earliest stages of National developments; Ensure Army access to sensors and Space-based capabilities; Monitor emerging technologies and systems; Exploit advances in commercial imagery and signal technologies; Develop prototypes that improve Army intelligence products.</p> <p>FY 2019 Plans: Continued work to incorporate Army requirements into earliest stages of National developments; Ensure Army access to sensors and multi-intelligence based capabilities; Monitor emerging technologies and systems; Exploit advances in commercial imagery and signal technologies; Develop prototypes that improve Army intelligence products.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funds align to TENCAP engineering and management efforts that includes initial studies and designs, and progresses to prototype development and testing.</p>					
<p>Title: Air Vigilance - Advanced Development</p> <p>Description: Enhance intelligence, force protection, and indications and warning capabilities under Army TENCAP program.</p> <p>FY 2018 Plans: Advance signal development and software enhancements for Air Vigilance (AV) Army Program of Record, and other similar follow-on prototype systems.</p> <p>FY 2019 Plans: Continue to develop advanced signal and software enhancements for Air Vigilance (AV) Army Program of Record.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Funds align to software changes required by Capability Drop requirements and newly identified and/or evolving threats.</p>			0.530	5.802	5.163
<p>Title: Advanced Miniaturized Data Acquisition System(AMDAS)/ AMDAS Dissemination Vehicle (ADV)</p> <p>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.</p> <p>FY 2018 Plans: AMDAS Next: Design prototype for TENCAP new subsystem antenna and advance sensor development, and design ground processor, to ensure alignment with evolving national architectural enhancements as the National Technical Means (NTM) capabilities progress.</p> <p>FY 2019 Plans:</p>			4.091	6.095	14.760

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 4				R-1 Program Element (Number/Name) PE 0603766A / Tactical Support Development - Adv Dev (MIP)				Project (Number/Name) 907 / Tactical Exploitation Of National Capabilities-MIP				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2017	FY 2018	FY 2019
AMDAS Next: Development of TENCAP new prototype subsystem antenna, which will include modeling and simulation along with early developmental testing. Continued work on advance sensor development, and design ground processor, to ensure alignment with evolving national architectural enhancements as the National Technical Means (NTM) capabilities progress.												
FY 2018 to FY 2019 Increase/Decrease Statement: Funds align with progression of engineering efforts from requirement refinement, studies and initial design development, into system sub-element prototype development and initial developmental testing.												
Title: TENCAP Radio Frequency Exploitation (TRFE) Description: New prototype capability kit that targets modern digital communications systems employed by near-peer nation states armies and assist with Battlespace RF Characterization for modern communication environments with the intent to synchronize SIGINT, Cyber and Electronic Warfare operations. Utilizes commercial industry components and architectures to minimize hardware costs, risk and maximizes scalability/modularity.										-	-	5.150
FY 2019 Plans: Initial Development of TRFE cognitive software based Electronic Warfare and Cyber Attack prototype capability focused on countering Peer State and modern communication targets and threats.												
FY 2018 to FY 2019 Increase/Decrease Statement: Funds aligned to initiate TENCAP Radio Frequency Exploitation (TRFE) advanced development and prototyping efforts.												
Accomplishments/Planned Programs Subtotals										15.730	27.733	35.667
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost	
• 0605766A: National Capabilities Integration (MIP)	4.955	6.882	12.340	-	12.340	11.435	9.177	13.182	12.554	0.000	70.525	
• 122011 OMA: Contractor Logistics Support and Other Weapon Support, OMA 122011	-	2.029	2.070	-	2.070	2.111	2.153	2.196	2.240	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
The Army Tactical Exploitation of National Capabilities (TENCAP) mission is a Congressionally mandated and chartered enduring requirement to leverage National intelligence capabilities useful to the tactical Army. The Army TENCAP acquisition strategy is driven by an annual TENCAP General Officer Steering Group (TGOSG),												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / <i>Tactical Support Development - Adv Dev (MIP)</i>	Project (Number/Name) 907 / <i>Tactical Exploitation Of National Capabilities-MIP</i>
<p>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)]; and includes representatives from the Army G3; Army G6; 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 this TGOSG guidance, Army TENCAP invests BA 6.4 RDTE in Intelligence Community (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 POR. With acquisition discipline and oversight provided by PEO IEW&S, Army TENCAP executes the TGOSG approved efforts through use of multiple contracts and agreements with the military, National agencies, Labs, Industry Partners and Academia for the full duration required to complete development and transition these National capabilities into enduring Army programs.</p> <p><u>E. Performance Metrics</u> N/A</p>		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603766A / <i>Tactical Support Development - Adv Dev (MIP)</i>				Project (Number/Name) 907 / <i>Tactical Exploitation Of National Capabilities-MIP</i>					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Intelligence Engineers (SETA)	C/ FFPLOE	TASC, Inc : Alexandria, VA	14.416	4.115	Feb 2017	4.200	Feb 2018	3.033	Jan 2019	-		3.033	0.000	25.764	Continuing
Intelligence Engineers(Matrix Gov)	MIPR	AGC : Alexandria, VA	4.803	1.174	Jan 2017	1.280	Jan 2018	1.300	Jan 2019	-		1.300	0.000	8.557	Continuing
Subtotal			19.219	5.289		5.480		4.333		-		4.333	0.000	34.321	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TENCAP Core (Focus) Areas	Various	Multiple : Multiple	7.309	3.782	Jan 2017	7.400	Jan 2018	3.103	Feb 2019	-		3.103	0.000	21.594	Continuing
Air Vigilance	MIPR	Classified : MIPR	3.243	0.530	Jan 2017	5.802	Jan 2018	5.163	Jan 2019	-		5.163	0.000	14.738	Continuing
AMDAS/ADV	MIPR	Classified : MIPR	7.504	4.091	Jan 2017	6.095	Jan 2018	14.760	Jan 2019	-		14.760	0.000	32.450	Continuing
TRFE	MIPR	Classified : MIPR	-	-		-		5.150	Jan 2019	-		5.150	0.000	5.150	Continuing
Subtotal			18.056	8.403		19.297		28.176		-		28.176	0.000	73.932	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prgm Mgmt-Dir Gov,travel,etc.	Allot	Army TENCAP : Alexandria, VA	10.505	1.150	Jan 2017	2.076	Jan 2018	2.258	Jan 2019	-		2.258	0.000	15.989	Continuing
Secured Facilities	MIPR	Army Geospatial : Ft. Belvoir, VA	2.224	0.423	Jan 2017	0.455	Jan 2018	0.475	Jan 2019	-		0.475	0.000	3.577	Continuing
Subtotal			12.729	1.573		2.531		2.733		-		2.733	0.000	19.566	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 4						R-1 Program Element (Number/Name) PE 0603766A / Tactical Support Development - Adv Dev (MIP)				Project (Number/Name) 907 / Tactical Exploitation Of National Capabilities-MIP					
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Lab Tests, Exercises, Simulations	MIPR	Multiple : Multiple	0.920	0.465	Jan 2017	0.425	Jan 2018	0.425	Jan 2019	-		0.425	0.000	2.235	Continuing
Subtotal			0.920	0.465		0.425		0.425		-		0.425	0.000	2.235	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			50.924	15.730		27.733		35.667		-		35.667	0.000	130.054	N/A
Remarks															

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army

Date: February 2018

Appropriation/Budget Activity

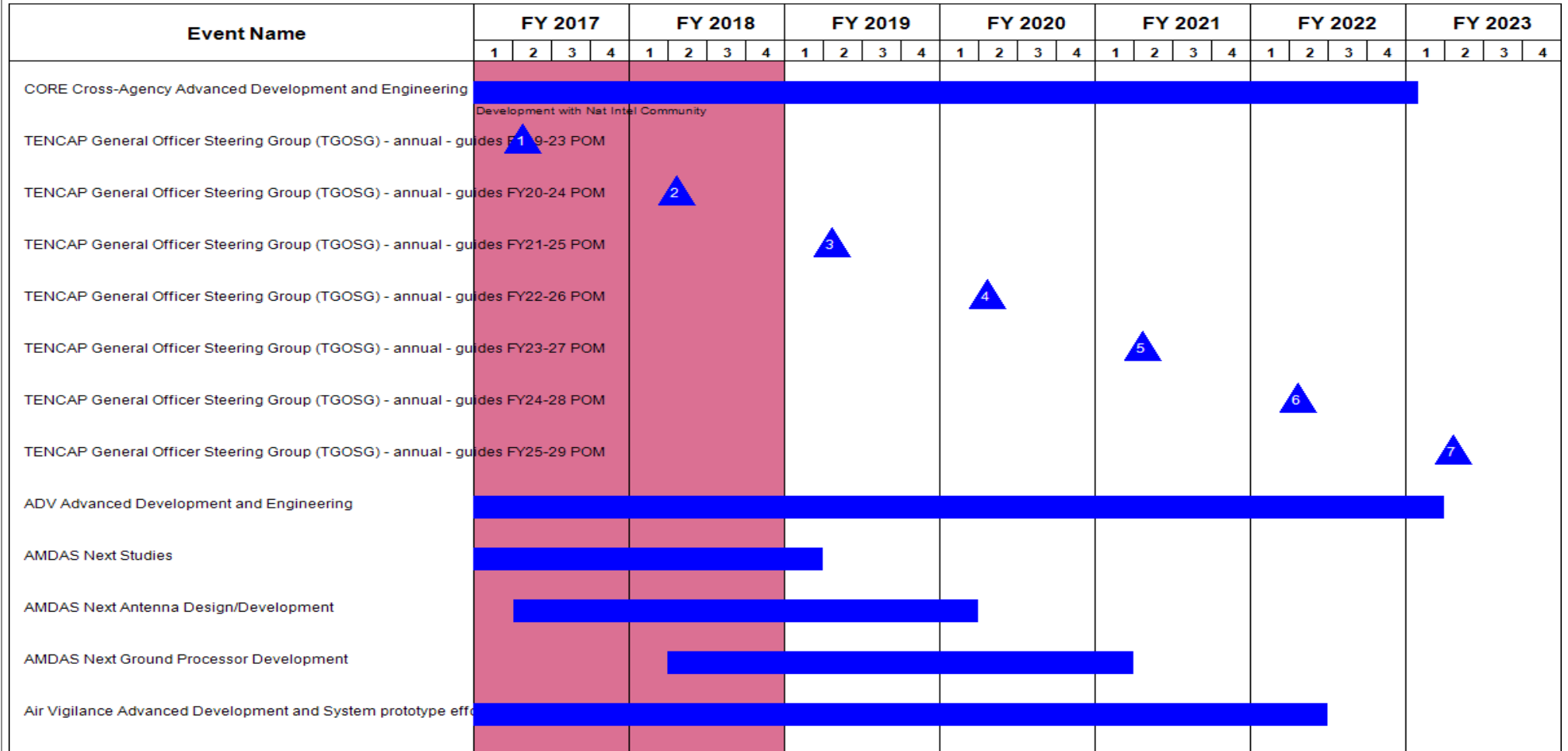
2040 / 4

R-1 Program Element (Number/Name)

PE 0603766A / *Tactical Support Development - Adv Dev (MIP)*

Project (Number/Name)

907 / *Tactical Exploitation Of National Capabilities-MIP*



UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army																Date: February 2018												
Appropriation/Budget Activity 2040 / 4										R-1 Program Element (Number/Name) PE 0603766A / Tactical Support Development - Adv Dev (MIP)								Project (Number/Name) 907 / Tactical Exploitation Of National Capabilities-MIP										
Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TRFE Prototype Development and System Integration Efforts																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 4	R-1 Program Element (Number/Name) PE 0603766A / Tactical Support Development - Adv Dev (MIP)	Project (Number/Name) 907 / Tactical Exploitation Of National Capabilities-MIP	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CORE Cross-Agency Advanced Development and Engineering	4	2006	1	2023
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY19-23 POM	2	2017	2	2017
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY20-24 POM	2	2018	2	2018
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY21-25 POM	2	2019	2	2019
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY22-26 POM	2	2020	2	2020
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY23-27 POM	2	2021	2	2021
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY24-28 POM	2	2022	2	2022
TENCAP General Officer Steering Group (TGOSG) - annual - guides FY25-29 POM	2	2023	2	2023
ADV Advanced Development and Engineering	2	2015	1	2023
AMDAS Next Studies	2	2015	1	2019
AMDAS Next Antenna Design/Development	2	2017	1	2020
AMDAS Next Ground Processor Development	2	2018	1	2021
Air Vigilance Advanced Development and System prototype efforts	3	2013	2	2022
TRFE Prototype Development and System Integration Efforts	4	2018	1	2023