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

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	45.447	43.060	25.547	-	25.547	-	-	-	-	-	-
EF7: <i>Precision Fires Warrior Dismounted & Mounted</i>	-	3.356	3.199	3.024	-	3.024	-	-	-	-	-	-
EF8: <i>AFATDS Increment 1</i>	-	42.091	39.861	22.523	-	22.523	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

The Fire Support Command & Control (FSC2) funding line supports the Long Range Precision Fires (LRPF) Cross Functional Team (CFT), the #1 priority in the Army Modernization Strategy and the Common Operating Environment (COE). Efforts are aligned to support the Network-CFT capability set approach.

Product Manager (PdM) FSC2 oversees the development and fielding of the Advanced Field Artillery Tactical Data System (AFATDS), Precision Fires-Dismounted/ Mounted (PF-D/M) and Joint Automated Deep Operations Coordination System (JADOCS) programs. In support of the LRPF CFT, it also supports development of the Extended Range Canon Artillery (ERCA), Extended Range Guided Multiple Launch Rocket System (ER-GMLRS) and Precision Strike Missile System (PRSM) initiatives. To support these initiatives, PdM FSC2 also began supporting the Long Range Hypersonic Weapons (LRHW) program in FY 2020.

FSC2 systems automate the planning and execution of fire support operations so that suitable weapons or a group of weapons adequately cover targets. Fire support is the effect of lethal and non-lethal weapons (fires) that directly support land, maritime, amphibious and special operations forces to engage enemy forces, combat formations and facilities in pursuit of tactical and operational objectives.

The Advanced Field Artillery Tactical Data System (AFATDS) provides the Army and Marine Corps automated fire support command, control and communications. AFATDS is used to plan, execute, and deliver lethal and non-lethal effects. AFATDS provides Joint/Coalition Situational Awareness for fires execution and mission management. The system interoperates and integrates with over 80 different battlefield systems, including Navy and Air Force command and control weapons systems. As a member of the Artillery System Cooperation Agreement (ASCA), AFATDS is interoperable with coalition partner fire support systems. Currently fielding AFATDS 6.8 baseline, which automates the planning, coordination, and control of all fire support assets (field artillery, mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars).

The Advanced Field Artillery Tactical Data System (AFATDS) funding line supports the Army Modernization Strategy Common Operating Environment. Efforts are aligned to support the Network-Cross Functional Team (CFT) capability set approach to achieve the network modernization strategy. AFATDS 7 modernizes the software currently in the field and enhances the existing legacy baseline by: (1) Providing a modernized web service backend that will simplify long-term maintenance of the software, (2) Bringing AFATDS into full compliance with the Army's Common Operating Environment (COE) Command Post Computing Environment (CPCE) initiative and (3) Enhancing overall usability of the system through the implementation of a role-based capability architecture with embedded training that allows the AFATDS operator to receive on-the-spot training for any aspect of AFATDS via interactive instruction.

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCs)</i>
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AFATDS supports Long Range Precision Fires (LRPF) CFT, Extended Range Canon Artillery (ERCA), Extended Range Guided Multiple Launch Rocket System (ER-GMLRS), Precision Strike Missile System (PRSM) and emerging sensor to shooter initiatives. To support these initiatives, AFATDS will serve as the key sensor to shooter link for the Army and US Marine Corps providing fully automated support for planning, coordinating, controlling and executing fires and effects. AFATDS began supporting Long Range Hypersonic Weapons in Fiscal Year 20. FY22 funding of \$22.523 million will be used for continued development of AFATDS 7 capabilities, specifically, code conversion from Ada to Java, cyber enhancements and some User Interface improvements.

Precision Fires Dismounted/Mounted (PF-D/M) provides the dismounted and mounted Forward Observer (FO) and Fire Support Teams (FISTs) the ability to execute fire missions.

Precision Fires Dismounted (PF-D), is a software application that operates on the Nett Warrior End User Device (EUD). It provides the dismounted Forward Observer (FO) and (FISTs) the capability and functionality to accurately and rapidly locate ground targets and digitally process a Call for Fire. PF-D answers the Mobile Handheld Computing Environment requirement that all handheld applications reside on the Nett Warrior EUD. PF-M replaces the Lightweight Forward Entry Device's (LFED) Forward Observer Software (FOS) at the maneuver company FIST. PF-M answers the Mounted Computing Environment requirement and will reside on the Mounted Family of Computing Systems (MFoCS) computer. FY2022 funding of \$3.312 million will be utilized to continue the enhancement of PF-D software onto the NW EUD for dismounts and porting the dismounted software to the MFoCS vehicle platforms through software development/hardware integration efforts with development of PF-M.

B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	47.398	44.691	26.114	-	26.114
Current President's Budget	45.447	43.060	25.547	-	25.547
Total Adjustments	-1.951	-1.631	-0.567	-	-0.567
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.951	-1.631			
• Adjustments to Budget Years	-	-	-0.567	-	-0.567

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Army										Date: May 2021		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
EF7: Precision Fires Warrior Dismounted & Mounted	-	3.356	3.199	3.024	-	3.024	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Precision Fires Dismounted (PF-D), formerly known as Pocket-sized Forward Entry Device (PFED) Increment II is a software application that operates on the Nett Warrior (NW) End User Device (EUD). It provides the dismounted Forward Observer (FO) and Fire Support Teams (FISTs) the capability and functionality to accurately and rapidly locate ground targets and digitally process a Call For Fire. PF-D answers the Mobile Handheld Computing Environment requirement that all handheld applications reside on the NW EUD. PF-M replaces the Lightweight Forward Entry Device's (LFED) Forward Observer Software (FOS) at the maneuver company FIST. PF-M answers the Mounted Computing Environment requirement and will reside on the Mounted Family of Computing Systems (MFoCS) computer. FY2022 funding of \$3.312 million will be utilized to continue the enhancement of PF-D software onto the NW EUD for dismounts and porting the dismounted software to the MFoCS vehicle platforms through software development/hardware integration efforts with development of PF-M.

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

	FY 2020	FY 2021	FY 2022
Title: Program Management Support Costs for PF-D/M	-	0.410	0.409
Description: Program support for Precision Fires Dismounted/Mounted (PF-D/M) software development efforts.			
FY 2021 Plans: Will provide Program Management Office (PMO) support for all aspects of the PF-D/M program including requirements development, software development efforts, logistics, and business management support.			
FY 2022 Plans: Will provide PMO support for all aspects of the PF-D/M program including requirements development, software development efforts, logistics and business management support.			
FY 2021 to FY 2022 Increase/Decrease Statement: Funding remains constant.			
Title: PF-D/M Software Development	3.189	2.291	2.117
Description: PF-D/M Software Development			
FY 2021 Plans:			

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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Will complete development of Block 2 capabilities. Complete Hardware and Software integrating with NW EUD. Begin the development of block 3 capabilities with vehicle integration onto MFoCS and begin development of PF-M 1.0. FY 2022 Plans: PF-M Block 3 development. FY 2021 to FY 2022 Increase/Decrease Statement: Funding remains relatively constant.			
Title: Testing for PF-D/M Description: Conduct and Support Army Testing Activities for PF-D/M FY 2021 Plans: DT/OT and AIC testing. FY 2022 Plans: DT/OT testing of Block 3.	0.167	0.498	0.498
Accomplishments/Planned Programs Subtotals	3.356	3.199	3.024

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• BZ9851: POCKET FORWARD ENTRY DEVICE (PFED)	8.620	3.896	2.648	-	2.648	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

On 18 May 2015, the Milestone Decision Authority (PEO C3T) signed the Acquisition Decision Memorandum (ADM) approving the PFED Increment II Milestone B. The ADM officially approved entry into the Development phase as an Acquisition Category (ACAT) III program. The system received a Limited Deployment Decision in Jan 2017, to enter into operational test and in Jan 2018 received Full Deployment Decision for Block 1 and Full Materiel Release.

PF-D Block 1 leverages an Army Science and Technology (S&T) investment by transitioning a software application that was been developed and used in proponent experimentation events (e.g. Army Expeditionary Warrior Experiment (AEWE) and Bold Quest). Upon a successful Milestone B decision in FY15, this software application transitioned to PM Mission Command (PMMC) to conduct all Army developmental and operational test and evaluation requirements. With both the Mobile and Mounted Computing

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<p>environments migrating towards a technical foundation that operates on an ATAK software baseline, the PF-D software was further adapted to coalesce to a new common operating environment. Reusable components and services were taken from the S&T baseline to help satisfy operational requirements and enhance the end user experience provided with the ATAK infrastructure.</p> <p>PF-D/M is developed using a block approach where capability is incrementally added to the overall baseline over the course of five blocks. PF-D Block 2 focuses on transitioning from a standalone Android application to a plugin on the Android Tactical Assault Kit (ATAK) architecture. Capabilities include Sensor Interoperability, Digital Precision Strike Suite, and Digitally Aided Close Air Support over the Link 16 network. PF-D/M Block 3 encompasses both the continuation of PF-D Block 2 software with additional capabilities for the handheld environment, and starts the new development of PF-M by transitioning it to the mounted environment. This will move the PF-M Block 2 baseline onto the MFoCS, which is a complete replacement for the Lightweight Forward Entry Device (LFED)/Forward Observer System (FOS) and offers enhanced interoperability to Fire Support Sensors mounted on the platform and offer capabilities of interacting with Net-Enabled munitions. PF-D/M Blocks 4 and 5 will be determined by the Fires Center of Excellence (FCoE) Governance Board under the Information Technology (IT) Box process.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army **Date:** May 2021

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Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support for PF-D/M (CORE)	Sub Allot	PM Mission Command (MC) : APG, MD	0.100	-		-		-		-		-	0.000	0.100	-
Program Management Support for PF-D/M (Matrix)	IA	Various Mix Orgs (Govt) : APG, MD	0.491	-		0.205		0.205		-		0.205	0.000	0.901	Continuing
Program Management Support for PF-D/M (SETA)	C/FFP	CACI : APG, MD	0.650	-		0.205		0.204		-		0.204	0.000	1.059	Continuing
Subtotal			1.241	-		0.410		0.409		-		0.409	0.000	2.060	N/A

Remarks
FY21 and out account for a reduction in matrix support from the realignment of business management support matrixed from AMC to direct.

Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PF-D/M Software Development efforts	IA	CCDC C5ISR : APG, MD	13.301	3.189		2.291		2.117		-		2.117	Continuing	Continuing	Continuing
Subtotal			13.301	3.189		2.291		2.117		-		2.117	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support	Various	PM Mission Command (MC) : APG, MD	1.517	-		-		-		-		-	Continuing	Continuing	-
Subtotal			1.517	-		-		-		-		-	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
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Event Name	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PF-D SW Development Block 2 (PF-D v2.0)	████████████████																											
LDD Block 2					▲ 1																							
BD Block 3								▲ 2																				
Operational Test and Evaluation (OT&E) Block 2								■																				
PF-D/M Software (SW) Development Block 3 (PF-D v2.1&2.2/PF-M v1.0)					██																							
FDD Block 2								▲ 3																				
LDD Block 3								▲ 4																				
PF-D Block 2 IOC								▲ 5																				
PF-D Block 3 DT/OT (PF-D v 2.1)								████████																				
PF-D/M Block 3 FDD										▲ 6																		
BD Block 4												▲ 7																
DT/OT Block 3 (PF-D v2.2/PF-M v1.0)												████████																
LDD Block 4														▲ 8														

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted

Event Name	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026																																																																																																																																																																																																																																																	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4																																																																																																																																																																																																																																														
PF-D/M SW Development Block 4 (PF-D v2.3 & 2.4/PF-M v2.0)																																																																																																																																																																																																																																																																										
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DT/OT Block 4 (PF-D v2.3)																																																																																																																																																																																																																																																																										
DT/OT Block 4 (PF-D v2.4/PF-M v2.0)																																																																																																																																																																																																																																																																										
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DT/OT/AIC Block 5 (PF-D v2.6/PF-M v3.0)																																																																																																																																																																																																																																																																										
DevOps/Soldier Touch Point																																																																																																																																																																																																																																																																										

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Precision Fires Warrior Dismounted & Mounted

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B	3	2015	3	2015
Limited Deployment Decision (LDD)	4	2016	4	2016
Operational Test (OT)	4	2016	4	2016
Full Deployment Decision (FDD)	2	2017	2	2017
Initial Operational Capability (IOC)	3	2017	3	2017
Build Decision (BD) Block 2	2	2018	2	2018
PF-D SW Development Block 2 (PF-D v2.0)	2	2019	2	2021
LDD Block 2	2	2021	2	2021
BD Block 3	4	2021	4	2021
Operational Test and Evaluation (OT&E) Block 2	3	2021	3	2021
PF-D/M Software (SW) Development Block 3 (PF-D v2.1&2.2/PF-M v1.0)	2	2021	2	2023
FDD Block 2	2	2022	2	2022
LDD Block 3	2	2022	2	2022
PF-D Block 2 IOC	3	2022	3	2022
PF-D Block 3 DT/OT (PF-D v 2.1)	1	2022	2	2022
PF-D/M Block 3 FDD	4	2022	4	2022
BD Block 4	2	2023	2	2023
DT/OT Block 3 (PF-D v2.2/PF-M v1.0)	1	2023	2	2023
LDD Block 4	1	2024	1	2024
PF-D/M SW Development Block 4 (PF-D v2.3 & 2.4/PF-M v2.0)	2	2023	2	2025
PF-D/M Block 5 BD	1	2025	1	2025
PF-D/M SW Development Block 5 (PF-D v2 2.5 & 2.6/PF-M v3.0)	2	2025	1	2028

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

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Events	Start		End	
	Quarter	Year	Quarter	Year
DT/OT Block 4 (PF-D v2.3)	1	2024	2	2024
DT/OT Block 4 (PF-D v2.4/PF-M v2.0)	1	2025	2	2025
LDD Block 5	1	2026	1	2026
FDD Block 5	4	2026	4	2026
DT/OT Block 5 (PF-D V 2.5)	1	2026	2	2026
DT/OT/AIC Block 5 (PF-D v2.6/PF-M v3.0)	1	2027	2	2027
DevOps/Soldier Touch Point	4	2021	4	2021

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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
EF8: AFATDS Increment 1	-	42.091	39.861	22.523	-	22.523	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Advanced Field Artillery Tactical Data System (AFATDS) funding line supports the Army Modernization Strategy Common Operating Environment. Efforts are aligned to support the Network-Cross Functional Team (CFT) capability set approach to achieve the network modernization strategy. AFATDS 7 modernizes the existing AFATDS software currently in the field and enhances the existing legacy baseline by: (1) Providing a modernized web service backend that will simplify long-term maintenance of the software, (2) Bringing AFATDS into full compliance with the Army's Common Operating Environment (COE) Command Post Computing Environment (CPCE) initiative and (3) Enhancing overall usability of the system through the implementation of a role-based capability architecture with embedded training that allows the AFATDS operator to receive on-the-spot training for any aspect of AFATDS via interactive instruction.

AFATDS supports Long Range Precision Fires (LRPF) CFT, Extended Range Canon Artillery (ERCA), Extended Range Guided Multiple Launch Rocket System (ER-GMLRS), Precision Strike Missile System (PRSM) and emerging sensor to shooter initiatives. To support these initiatives, AFATDS will serve as the key sensor to shooter link for the Army and US Marine Corps providing fully automated support for planning, coordinating, controlling and executing fires and effects. AFATDS began supporting Long Range Hypersonic Weapons in Fiscal Year 20.

FY22 funding of \$22.523 million will be used for continue development of AFATDS 7.0 capabilities, specifically, code conversion from Ada to Java, cyber enhancements and some User Interface improvements.

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

	FY 2020	FY 2021	FY 2022
Title: Program Management Costs for AFATDS software development	1.137	4.004	3.074
Description: Provide program support for AFATDS software development efforts.			
FY 2021 Plans: Continue to provide Program Management Office (PMO) support (Matrix, and Systems Engineering and Technical Assistance (SETA)) for all aspect of the AFATDS program including requirements analysis, software development efforts, logistics, and business management support.			
FY 2022 Plans: Continue to provide PMO support (Matrix, and Systems Engineering and Technical Assistance (SETA)) for all aspects of the AFATDS program including requirements analysis, software development efforts, logistics and business management support.			
FY 2021 to FY 2022 Increase/Decrease Statement:			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
Reduction of SETA and matrix support to align with the software development effort.			
Title: AFATDS software development efforts Description: Development of AFATDS 7.0 software FY 2021 Plans: continue development of AFATDS 7 capabilities, specifically, code conversion from Ada to Java, cyber enhancements and some User Interface improvements. FY 2022 Plans: continue development of AFATDS 7 capabilities, specifically, code conversion from Ada to Java, cyber enhancements and some User Interface improvements. FY 2021 to FY 2022 Increase/Decrease Statement: Decrease cost and time table for code conversion.	40.500	33.982	19.449
Title: AFATDS 7.0 test events Description: AFATDS 7.0 Test Support FY 2021 Plans: AFATDS 7.0 Blocks 1 & 2 Product Verification/Customer Support and Independent Verification and Validation testing. FY 2021 to FY 2022 Increase/Decrease Statement: Testing resources decreased to align with software development effort.	0.454	1.875	-
Accomplishments/Planned Programs Subtotals	42.091	39.861	22.523

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• B28620: MOD OF IN-SVC EQUIP, AFATDS	4.083	5.494	7.205	-	7.205	-	-	-	-	-	-

Remarks

D. Acquisition Strategy

The AFATDS 7 requirement was validated by the Joint Requirements Oversight Council (JROC) under the AFATDS Increment 2 Capability Definition Document (CDD) in June 2011. On 13 May 2015, the Army Acquisition Executive (AAE) approved AFATDS as a modification to the existing program baseline, continuing as an

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF8 / <i>AFATDS Increment 1</i>
<p>Acquisition Category (ACAT) II defense acquisition program (DAP) (non-Automated Information System) with PEO C3T oversight. The AFATDS 7 is a software only modification/modernization effort that will be hosted on already fielded hardware used for legacy AFATDS software.</p> <p>The overall acquisition approach to delivering AFATDS 7 is to modernize and redesign the software to create a single software baseline featuring web services and a suite of Common Operating Environment (COE) applications that meet threshold values of all key performance parameters identified in the AFATDS Increment 2 CDD. The AFATDS Increment 2 CDD was approved under an IT Box construct, which promotes evolutionary development by facilitating requirement refinement and the incorporation of the latest technology. While the JROC Memorandum (JROCM) 083-11 validated the AFATDS 7 performance parameters, it also delegated authority for identifying and approving future capability requirements that fall within the CDD's scope to the Fires Support Command and Control (FSC2) Tactical Software Requirements Governance Board.</p> <p>In October 2020, the MDA redirected the overall concept for a modernized AFATDS 7.0 to include code conversion (Ada to Java) while redesigning the front end, to ensure a strong technical foundation is in place for the continued expansion of capability and adoption of emerging technology initiatives. This strategy will eliminate cyber vulnerabilities, update back end code to a modern language (Java) and make changes to the user interface. This approach will eliminate archaic code and allow for a true modernization of back end software. Subsequent versions of AFATDS 7 will be developed to achieve full compliance with the Army's COE, Command Post Computing Environment (CPCE) initiative, and enhance overall usability of the system through the implementation of a role-based capability architecture with embedded training that allows the AFATDS operator to receive on-the-spot training for any aspect of AFATDS via interactive instruction.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1
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Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support for AFATDS (Core)	Sub Allot	PM Mission Command (MC) : APG, MD	4.008	-		-		-		-		-	0.000	4.008	-
Program Management Support for AFATDS (Matrix)	IA	Various Matrix Orgs (Govt) : Aberdeen PG, MD	3.769	-		1.750		1.277		-		1.277	0.000	6.796	-
Program Management Support for AFATDS (SETA Contr)	C/FFP	CACI : Aberdeen PG, MD	2.610	-		1.254	Mar 2021	1.797	Mar 2022	-		1.797	0.000	5.661	-
Program Management Support for AFATDS (FFRDC)	FFRDC	MITRE : APG, MD	0.383	-		-		-		-		-	0.000	0.383	-
Taxes	TBD	PEO C3T : APG, MD	0.214	1.137		-		-		-		-	0.000	1.351	-
Subtotal			10.984	1.137		3.004		3.074		-		3.074	0.000	18.199	N/A

Remarks
FY21 and out account for a reduction in matrix support from the realignment of business management support matrixed from AMC to direct.

Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development of AFATDS Version 6.8.1.1	C/CPFF	Raytheon Systems Corp. : Ft. Wayne, IN	21.636	-		-		-		-		-	0.000	21.636	33.188
Software Development of AFATDS Version 7.0	C/CPIF	Leidos : Abingdon, MD	71.368	40.500		34.982	Jul 2021	19.449		-		19.449	0.000	166.299	-
Subtotal			93.004	40.500		34.982		19.449		-		19.449	0.000	187.935	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Army												Date: May 2021			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				EF8 / AFATDS Increment 1							
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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
Information Assurance and Engineering Support for AFATDS requirements	C/CPFF	CSC : Various Locations	1.060	-		-		-		-		-	0.000	1.060	-
Defensive Cyber Tools (T-PKI)	TBD	TBD : TBD	1.100	-		-		-		-		-	0.000	1.100	-
Subtotal			2.160	-		-		-		-		-	0.000	2.160	N/A
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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
Government Confidence Demo for AFATDS V6.8.x requirements.	IA	Army Test & Evaluation Command (ATEC)/Fires Test Directorate (FTD) : Various Locations	0.626	-		-		-		-		-	0.000	0.626	-
Independent Verification and Validation of AFATDS V7.0 requirements	C/CPFF	Engility : Various Locations	1.538	0.454		0.274		-		-		-	0.000	2.266	-
Developmental Testing for AFATDS v7.0	IA	Multiple Govt Test Agencies (ATEC, ATC, EPG) : Multiple	0.750	-		1.601		-		-		-	0.000	2.351	-
Subtotal			2.914	0.454		1.875		-		-		-	0.000	5.243	N/A
Project Cost Totals			109.062	42.091		39.861		22.523		-		22.523	0.000	213.537	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Army			Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1	

Event Name	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
AFATDS Development																												
DT/OT																												
Full Deployment Decision																	1											
First Unit Equipped (FUE)																	2											

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Army		Date: May 2021
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AFATDS Development	1	2021	3	2024
DT/OT	2	2023	1	2024
Full Deployment Decision	2	2024	2	2024
First Unit Equipped (FUE)	3	2024	3	2024