Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army											Date: March 2023	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0604746A *I Automatic Test Equipment Development*							
COST ($ in Millions)	**Prior Years**	**FY 2022**	**FY 2023**	**FY 2024 Base**	**FY 2024 OCO**	**FY 2024 Total**	**FY 2025**	**FY 2026**	**FY 2027**	**FY 2028**	**Cost To Complete**	**Total Cost**
Total Program Element	-	8.486	5.178	13.626	-	13.626	8.226	4.631	4.680	4.731	Continuing	Continuing
L59: *Diagnost/Expert Sys*	-	5.371	1.150	6.859	-	6.859	1.174	1.198	1.211	1.224	0.000	18.187
L65: *Test Equipment Development*	-	3.115	4.028	6.767	-	6.767	7.052	3.433	3.469	3.507	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides for development and testing of automatic test equipment, precision calibration instruments, general-purpose test equipment, state of-the-art diagnostics and prognostics technologies, and software and systems to support the increasingly complex electronic components of the Army's new and upgraded weapon systems focused on joint operations in a sophisticated multi-domain area of operation. It focuses on standardization and implementation of commercial test and diagnostic technologies across multiple weapon platforms to minimize the cost of troubleshooting and maintenance of Army equipment in the field. Funding supports modernization of the test equipment fleets by investigating technology insertions including, but not limited to, predictive and prognostic maintenance, instrument reduction/miniaturization, electro-mechanical, electro-optics (EO), radio frequency (RF), physical, radiological, chemical, and biological warfare sensor calibration support capabilities, and other emerging technologies. Funding also supports development of initial prototypes to enable refinement of Operational Requirements documented by Combatant Commands (COCOM), Program Executive Offices (PEO), Army Futures Command (AFC), Army Staff, US Army Training and Doctrine Command (TRADOC), and early user feedback to support future sustainment and testing capabilities required for emerging weapons platforms. This PE provides for continued development and improvement of general-purpose test equipment and calibration standards with emphasis on the incorporation of digital electronics and tailoring of configurations to improve deployability, mobility and survivability of the support equipment. It includes development, demonstration and testing of calibration standards and techniques to support new Army test equipment requirements; and, it provides for feasibility studies, market research, inventory analyses, bid sample testing and prototyping to support acquisition of calibration systems and general-purpose test and diagnostics equipment.

The Department of Defense (DoD) has designated the Integrated Family of Test Equipment (IFTE), comprised of the Maintenance Support Device (MSD) and the Next Generation Automatic Test System (NGATS), as the authorized Army standard for field and sustainment maintenance. The MSD provides at-system automatic test and diagnostic support and the NGATS consolidates off-system automatic test and diagnostic equipment requirements. The IFTE systems being developed under this PE provide electronic fault isolation, diagnostic and repair capabilities at all levels of maintenance and do it more cost effectively than system-specific testers. They provide state-of-the-art test and diagnostic capabilities, reducing costs and logistics footprints while providing the Warfighter fix-forward capability for current and future weapon systems in multi-domain operations. The systems are designed to support the Cross-Functional Teams (CFT) in the Army Futures Command (AFC) as they mature in accordance with the DoD Automatic Test Systems strategy. The MSD is employed by more than thirty military occupational specialties to perform field level maintenance on approximately 50 weapon systems, including Abrams, Bradley, Stryker, aviation platforms, missile systems, and the Army's wheeled vehicle fleet.

FY 2024 base funding for this PE provides for market research, testing and evaluation of Intermittent Fault Detection (IFD) testers, including development of test programs, to interface with various Army platforms to reduce No Evidence of Failure (NEOF) conditions at the platform, which, according to the DoD, accounts for up to 50 percent of electronic maintenance across the DoD. This methodology will aid in the identification of intermittent faults in difficult to troubleshoot platforms, mitigate

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Date: March 2023
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NEOF to reduce unit costs of unnecessary line replaceable unit (LRU) requisitions, and improve unit operational readiness in support of multi-domain operations, large-scale combat operations and the Indo-Pacific Command. FY 2024 base funding continues incremental development of the Army's standard At-Platform Automatic Test System, MSD, which will enhance testing and diagnostic capability required by supported weapon systems. Funding supports tactical vehicle sustainment concepts, evaluates evolving weapon system diagnostic testing requirements, incorporates additional organic diagnostic software capabilities to troubleshoot weapon systems, and ensures data bus compatibility and readability with commercial technology. It evaluates and incorporates cyber security enhancements into at-platform diagnostic hardware and software. Funding also provides for market research, feasibility assessment, and interaction with supported weapon systems to determine most effective methodology for diagnostic software to incorporate emerging At-Platform Predictive Logistics requirements. The FY 2024 funding will develop or significantly modify test equipment to satisfy modular force and homeland security support requirements that cannot be accommodated with test equipment currently available in the commercial marketplace such as RF and EO testing capability. It will also develop and test general-purpose test equipment and calibration standards to meet Army weapon system support requirements, and initiate development of enhanced diagnostic software and interfaces to support emerging maintenance concepts for Long Range Precision Fires, Next Generation Combat Vehicle, Future Vertical Lift, and Air and Missile Defense. The funding will provide prototype test and evaluation of field level calibration and repair support for the Radiation Detection System (RDS) in response to Operational Needs Statement ONS 17-22580. The project resolves significant radiation measurement accuracy gaps throughout the Department of the Army operational areas and CONUS, and it provides for analysis of courses of action to incorporate additional intrinsic calibration instruments and general-purpose test equipment to reduce the maintenance hierarchy, increase calibration intervals, extend lifecycle reliability, and increase supportability across generational changes in weapon systems and weapon support systems technology.

B. Program Change Summary ($ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	8.807	5.178	4.395	-	4.395
Current President's Budget	8.486	5.178	13.626	-	13.626
Total Adjustments	-0.321	0.000	9.231	-	9.231
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.321	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	9.231	-	9.231

Change Summary Explanation

Increase in FY 2024 for the development of the Test Equipment Modernization (TEMOD) Application Program Sets (APS) associated with the TS-4549 Radio Test Sets and for market research, testing and evaluation of Intermittent Fault Detection (IFD) testers.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / *Automatic Test Equipment Development*	Project (Number/Name) L59 / *Diagnost/Expert Sys*	

COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
L59: *Diagnost/Expert Sys*	-	5.371	1.150	6.859	-	6.859	1.174	1.198	1.211	1.224	0.000	18.187
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project funds development of system enhancements for the Maintenance Support Device (MSD). The MSD is a general-purpose automatic test system (ATS) that provides test and diagnostic capabilities required to support current and future weapons and combat support systems across the Cross-Functional Teams (CFTs) in the Army Futures Command (AFC) and will facilitate retirement of aging, obsolete and non-cyber secure test equipment that imposes increasing logistics and operations and support cost burdens. The MSD is the Army's standard at-system tester and requires continuing technology insertions to support modernization of the supported weapon systems. This Project funds development efforts to insert the most current relevant technology into the next generation MSD, supports capability enhancement of at-platform test adapters, develops and standardizes capabilities to minimize or eliminate Army dependence on expensive proprietary software to support tactical vehicles, and maintains compatibility with emerging platform hardware bus technology and software interface requirements. The Department of Defense has identified the need for Intermittent Fault Detection (IFD) testers to aid in the identification of intermittent faults in difficult to troubleshoot platforms, mitigate No Evidence of Failures (NEOF) to reduce unit costs of unnecessary line replaceable unit (LRU) requisitions, and improve unit operational readiness in support of multi-domain operations, large-scale combat operations and the Indo-Pacific Command which will be funded in part by this Project. The test and diagnostic systems and procedures developed under this Project are essential for ensuring the operational readiness, accuracy and effectiveness of the Army's warfighting systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: NGATS Increment 2 ***Description:*** Develop and test hardware and software for NGATS Increment 2 support capability	0.297	-	-
Title: NGATS Performance Enhancement ***Description:*** NGATS core instrument/software modifications to increase NGATS performance	0.500	-	-
Title: Abrams/Bradley Test Program Set (TPS) Design ***Description:*** Design, test and evaluate Abrams/Bradley TPSs to utilize modern core NGATS instrumentation vice continuing to execute on single-purpose instrumentation specifically developed to emulate Abrams/Bradley legacy test equipment (i.e., Direct Support Electrical System Test Set (DSESTS))	2.612	-	-
Title: NGATS Logistics Support Products ***Description:*** Develop NGATS initial logistics support products (including provisioning, technical manuals and calibration)	0.500	-	-
Title: Maintenance Support Device (MSD) Technology Enhancements	0.962	1.108	1.179

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Description: Modernizes the current MSD fleet by investigating and incorporating relevant technology into the next-generation MSD and supporting capability enhancement of the Wireless At-platform Test Set (WATS). Develops diagnostic capabilities to minimize or eliminate Army dependency on proprietary software to support tactical vehicles and maintain compatibility with emerging platform hardware bus technology and software interface requirements. Provides a data processing capability to enable Predictive Logistics on weapon systems. ***FY 2023 Plans:*** Continue market research for the Next Generation At-Platform Test System (Maintenance Support Device). Continue to incorporate greater range of supported weapon systems diagnostic code fault detection into diagnostic software to minimize dependency on proprietary/non-cyber compliant software. Continue to evaluate and incorporate cyber security enhancements into at-platform diagnostic hardware and software. Continue market research, feasibility assessment, and interaction with supported weapon systems to determine most effective methodology to incorporate emerging Predictive Logistics capabilities. ***FY 2024 Plans:*** Evaluate market research findings for the Next Generation At-Platform Test System (Maintenance Support Device). Continue to incorporate greater range of supported weapons system diagnostic code fault detection into diagnostic software to minimize dependency on proprietary software, support tactical vehicle maintenance concepts, evaluate evolving weapon system diagnostic testing concepts and ensure data bus compatibility and readability. Continue to evaluate and incorporate cyber security enhancements into diagnostic software. Continue market research, feasibility assessment, and interaction with supported weapon systems to determine most effective methodology for diagnostic software, data collection, and data display to incorporate emerging Predictive Logistics requirements. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor increase due to program adjustment and economic assumptions for FY 2024.			
Title: TPS Development Environment ***Description:*** Develop a standardized TPS development environment for NGATS	0.500	-	-
Title: Intermittent Electronic Fault Detection ***Description:*** Test and integration of commercial off the shelf (COTS) (or modified COTS) Intermittent Fault Detection (IFD) solutions and prototypes for evaluation. IFD Test Program Set (TPS) development to adapt and work with various Army platforms. ***FY 2024 Plans:***	-	-	5.680

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Test and integrate COTS (or modified COTS) IFD solutions and prototypes for evaluation and develop IFD TPSs to adapt and work with various Army platforms. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase in FY2024 to initiate Intermittent Fault Detection (IFD) developmental efforts.			
Title: SBIR/STTR Transfer ***FY 2023 Plans:*** Funding transferred in accordance with Title 15 USC §638. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC §638.	-	0.042	-
Accomplishments/Planned Programs Subtotals	5.371	1.150	6.859

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• MB4000: *Integrated Family Of Test Equipment (IFTE)*	43.046	36.514	36.149	-	36.149	23.236	12.004	12.011	11.996	0.000	174.956

Remarks

D. Acquisition Strategy

This developmental Project consists of organic and contractual actions. When the necessary expertise and capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source via support agreements; otherwise, commercial contracts are used. Equipment required for developmental projects is obtained by contract from the commercial supplier.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army			Date: March 2023
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FY2023 SBIR/STTR Transfer	Various	Various : Various	-	-		0.042	Mar 2023	-		-		-	0.000	0.042	-
		Subtotal	-	-		0.042		-		-		-	0.000	0.042	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development/ Verification/Validation	Various	Various, : Various	46.424	2.568	Apr 2022	0.619	Jan 2023	3.355	Jan 2024	-		3.355	0.000	52.966	-
Hardware/Support Items Development	Various	Various, : Various	77.130	2.253	Apr 2022	0.324	Jan 2023	3.055	Jan 2024	-		3.055	0.000	82.762	-
		Subtotal	123.554	4.821		0.943		6.410		-		6.410	0.000	135.728	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	Various	Various, : Various	52.163	0.450	Apr 2022	0.115	Dec 2022	0.350	Jan 2024	-		0.350	0.000	53.078	-
Other Direct	Various	Various, : Various	6.328	0.100	Apr 2022	0.050	Dec 2022	0.099	Jan 2024	-		0.099	0.000	6.577	-
		Subtotal	58.491	0.550		0.165		0.449		-		0.449	0.000	59.655	N/A

	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	182.045	5.371		1.150		6.859		-		6.859	0.000	195.425	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment D evelopment*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

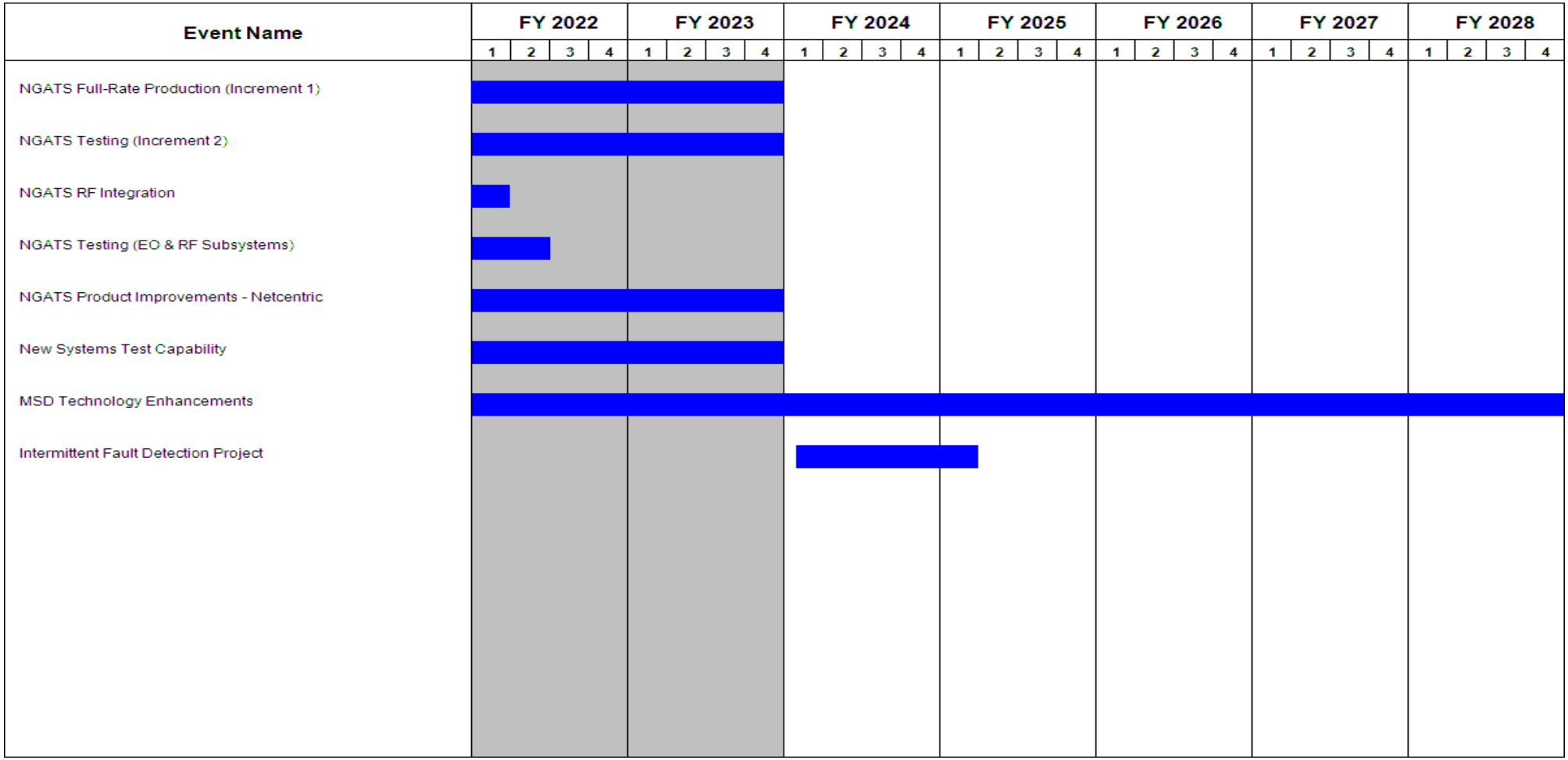

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
NGATS Testing (Increment 1)	1	2011	1	2012
Production for First Article	1	2015	2	2017
Training Materiel Release	4	2019	4	2019
Full Materiel Release	1	2021	1	2021
First Unit Equipped	1	2021	1	2021
Full Rate Production Decision Review	3	2021	3	2021
NGATS Testing (Increment 1 Follow-On DT/OT)	1	2016	3	2016
NGATS Full-Rate Production (Increment 1)	2	2019	4	2023
NGATS System Development and Demonstration (SDD) (Increment 2)	1	2016	4	2020
NGATS Testing (Increment 2)	1	2016	4	2023
FOT&E Completed (DT)	3	2018	3	2018
NGATS Development (EO Subsystem)	4	2010	4	2015
NGATS Development (RF Subsystem)	1	2016	4	2021
NGATS EO Integration	3	2016	4	2021
NGATS RF Integration	3	2017	1	2022
NGATS Testing (EO & RF Subsystems)	1	2016	2	2022
NGATS Product Improvements - Netcentric	1	2016	4	2023
New Systems Test Capability	1	2016	4	2023
MSD Technology Enhancements	1	2016	4	2028
Intermittent Fault Detection Project	1	2024	1	2025

Note

Test program set (TPS) compatibility testing runs continually throughout the product development process.

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023
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COST ($ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
L65: *Test Equipment Development*	-	3.115	4.028	6.767	-	6.767	7.052	3.433	3.469	3.507	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Project supports Program Executive Office (PEO) and Army Futures Command (AFC) system support requirements with modernization of calibration instruments, techniques, and existing Army calibration systems by investigating technology insertions including automated and autonomous operations and other emerging technologies. Funding also supports development of initial prototypes to enable refinement of Operational Requirements and early user feedback to support future calibration systems and general-purpose test, measurement, and diagnostic equipment (TMDE) acquisitions. This Project develops calibration software and calibration capability for electro-optical, chemical, biological agent, radiation sourcing and detection systems, signal measurement from direct current to microwave ranges, physical and mechanical measurements such as torque, pressure, and temperature, and improvements in test and measurement performance envelopes. It provides for product improvements and development/evaluation of advanced technologies to increase reliability of calibration systems and general-purpose TMDE. The product improvements eliminate gaps in existing organic capabilities and ensure operational readiness and safety of Army weapons and combat support systems. These improvements employ reconfigurable open-electronics architecture and computer-based instrumentation where feasible and focus on reduced test equipment footprints to improve deployability and mobility in complex multi-domain areas of operation.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Title: Calibration Sets (CALSETS) Software Environment and Calibration Procedures	0.725	0.600	0.367
Description: Continue development and testing of Army automated calibration environment (ACE) and develop calibration procedures. Develop and test an enterprise data system to capture management and test data for reporting, metrics, and dashboard to inform management and leader decisions in acquisition and operations. Test and evaluate automated calibration equipment software efforts in support of the Army risk management framework (RMF).			
FY 2023 Plans: Develop automated support capability in the Army automated calibration environment (ACE) for a wider range of Army test, measurement and diagnostic equipment (TMDE). Develop ACE features to support enhanced data sharing capabilities.			
FY 2024 Plans: Develop and test an enterprise data system that will integrate with ACE to capture management and test data for reporting metrics to inform management and leader decisions in acquisition and operations.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Funding decreased from FY 2023 to accommodate requirements in FY 2024 for higher-priority projects.			
Title: Physical Instruments	1.265	0.944	0.903
Description: Research, develop, and test physical parameter calibration instrumentation to support areas such as intrinsic high reliability physical and dimensional standards. Modernize force and torque calibration capability. Develop radiological, chemical and biological agent detection systems, small arms gage calibration, pneumatic pressure systems, and temperature radiometer calibration related to target detection in the infrared spectrum. ***FY 2023 Plans:*** Complete development of measurement standards for vapor contamination in support of chemical warfare agent (CWA) detector JCAD, as well as begin Bio-Sensor Calibrator research to provide an alternative solution in support of biological warfare agent (BWA) detector JBPDS. Complete NIST on a chip (NOAC) mass measurement project to modernize Army mass support system. Initiate development of torque multiplier calibration capability on the torque calibration system (TCS) in support of aviation maintenance equipment. ***FY 2024 Plans:*** Complete follow-up research and testing on the Bio-Sensor Calibrator to develop Photolithography on Silicon Wafer technology for organic calibration support of the BWA detector JBPDS. Develop a field deployable calibration suite to support calibration of high volume small arms and ammunition gages (SAAG) in theatre. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Minor adjustment in FY2024 funding.			
Title: Electrical Instruments	0.730	2.025	1.497
Description: Research, develop, and test electrical parameter calibration instrumentation to support modernization and replacement of aged and obsolete test instruments in areas such as intrinsic electrical standards, electrical transport standards and electro-optic standards. Develop calibration support for advanced capability in spectral and vector dense signal analysis in complex Multi-Domain areas of operation. ***FY 2023 Plans:*** Complete testing of Army-wide alternating current/direct current (AC/DC) voltage measurement modernization project. Complete replacement and testing of microwave power sensor calibration to national standards meeting Army Futures Command support requirements for Multi-Domain secured signal send and receive capability with integrated antenna functionality. Develop			

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2022	FY 2023	FY 2024
Quantum Hall Resistance (QHR) system to reduce recurring operational costs and improve mission readiness in support of Army's sustainment and traceability for all electrical resistance measurement systems. ***FY 2024 Plans:*** Continue development and testing of Army-wide alternating current voltage measurement modernization project. Continue development and testing of microwave power sensor calibration system, meeting Army Futures Command support requirements for Multi-Domain secured signal send and receive capability with integrated antenna functionality. Continue development and testing of the Army's s.primary traceable fiber-optic calibration station to support all army optical time-domain reflectometer test equipment. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Funding decreased from FY 2023 to FY 2024 due to decreased requirements for electrical instruments.			
Title: Test Equipment Modernization (TEMOD) ***Description:*** Perform market research, bid sample testing and evaluation of commercial general-purpose electronic test equipment (GPETE), and develop performance specifications for TEMOD acquisitions. ***FY 2023 Plans:*** Perform market research and evaluation of commercial GPETE and validate performance specifications for improved test equipment. Conduct bid sample testing to support acquisition program. The GPETE will support numerous Army weapon systems to include multiple Cross Functional Teams. ***FY 2024 Plans:*** Develop the TEMOD Application Program Sets (APS) associated with the TS-4549 Radio Test Sets, which will allow the TS-4549 to support additional Army radios. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Increase in FY 2024 funding for the development of the TEMOD APSs associated with the TS-4549 Radio Test Sets.	0.395	0.312	4.000
Title: SBIR/STTR Transfer ***FY 2023 Plans:*** Funding transferred in accordance with Title 15 USC §638. ***FY 2023 to FY 2024 Increase/Decrease Statement:*** Funding transferred in accordance with Title 15 USC §638.	-	0.147	-
Accomplishments/Planned Programs Subtotals	3.115	4.028	6.767

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• G02510: *Test Equipment Modernization (TEMOD)*	24.130	32.734	32.623	-	32.623	49.949	53.839	53.871	53.725	0.000	300.871

Remarks

Funds in SSNs N10000 and N11000 for FY 2022 through FY 2028 have been realigned to Test Equipment Modernization, SSN G02510.

D. Acquisition Strategy

Projects focus on commercial and nondevelopmental item technologies. Department of Defense services provide programmatic, engineering expertise and capability for individual development projects; otherwise, commercial service contracts are used to obtain required capabilities. Equipment required for development projects is obtained from commercial suppliers. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government test and evaluation.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / *Automatic Test Equipment Development*	Project (Number/Name) L65 / *Test Equipment Development*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR Transfer	Various	Various : Various	-	-		0.147	Mar 2023	-		-		-	0.000	0.147	-
		Subtotal	-	-		0.147		-		-		-	0.000	0.147	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CALSETS Software Environment and Calibration	Various	Various : Various	7.943	0.407	May 2022	0.327	Mar 2023	0.186	Mar 2024	-		0.186	Continuing	Continuing	-
Physical Instruments	Various	Various : Various	9.724	0.733	Feb 2022	0.533	Feb 2023	0.507	Feb 2024	-		0.507	Continuing	Continuing	-
Electrical Instruments	Various	Various : Various	11.104	0.414	Mar 2022	1.182	Mar 2023	0.865	Mar 2024	-		0.865	Continuing	Continuing	-
Test Equipment Modernization	Various	Various : Various	3.984	0.237	Feb 2022	0.187	Mar 2023	2.400	Mar 2024	-		2.400	Continuing	Continuing	-
		Subtotal	32.755	1.791		2.229		3.958		-		3.958	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Engineering	C/FFP	Various : Various	3.935	0.137	Jan 2022	0.165	Feb 2023	0.168	Mar 2024	-		0.168	Continuing	Continuing	-
		Subtotal	3.935	0.137		0.165		0.168		-		0.168	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CALSETS Software Environment and Calibration	Various	Various : Various	2.147	0.271	Apr 2022	0.218	Mar 2023	0.125	Mar 2024	-		0.125	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2022 Cost	FY 2022 Award Date	FY 2023 Cost	FY 2023 Award Date	FY 2024 Base Cost	FY 2024 Base Award Date	FY 2024 OCO Cost	FY 2024 OCO Award Date	FY 2024 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Physical Instruments	Various	Various : Various	3.763	0.483	Feb 2022	0.356	Feb 2023	0.339	Feb 2024	-		0.339	Continuing	Continuing	-
Electrical Instruments	Various	Various1600 : Various	2.871	0.275	Mar 2022	0.788	Mar 2023	0.577	Mar 2024	-		0.577	Continuing	Continuing	-
Test Equipment Modernization	Various	Various : Various	2.888	0.158	Feb 2022	0.125	Mar 2023	1.600	Mar 2024	-		1.600	Continuing	Continuing	-
		Subtotal	11.669	1.187		1.487		2.641		-		2.641	Continuing	Continuing	N/A

	Prior Years	FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	48.359	3.115		4.028		6.767		-		6.767	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

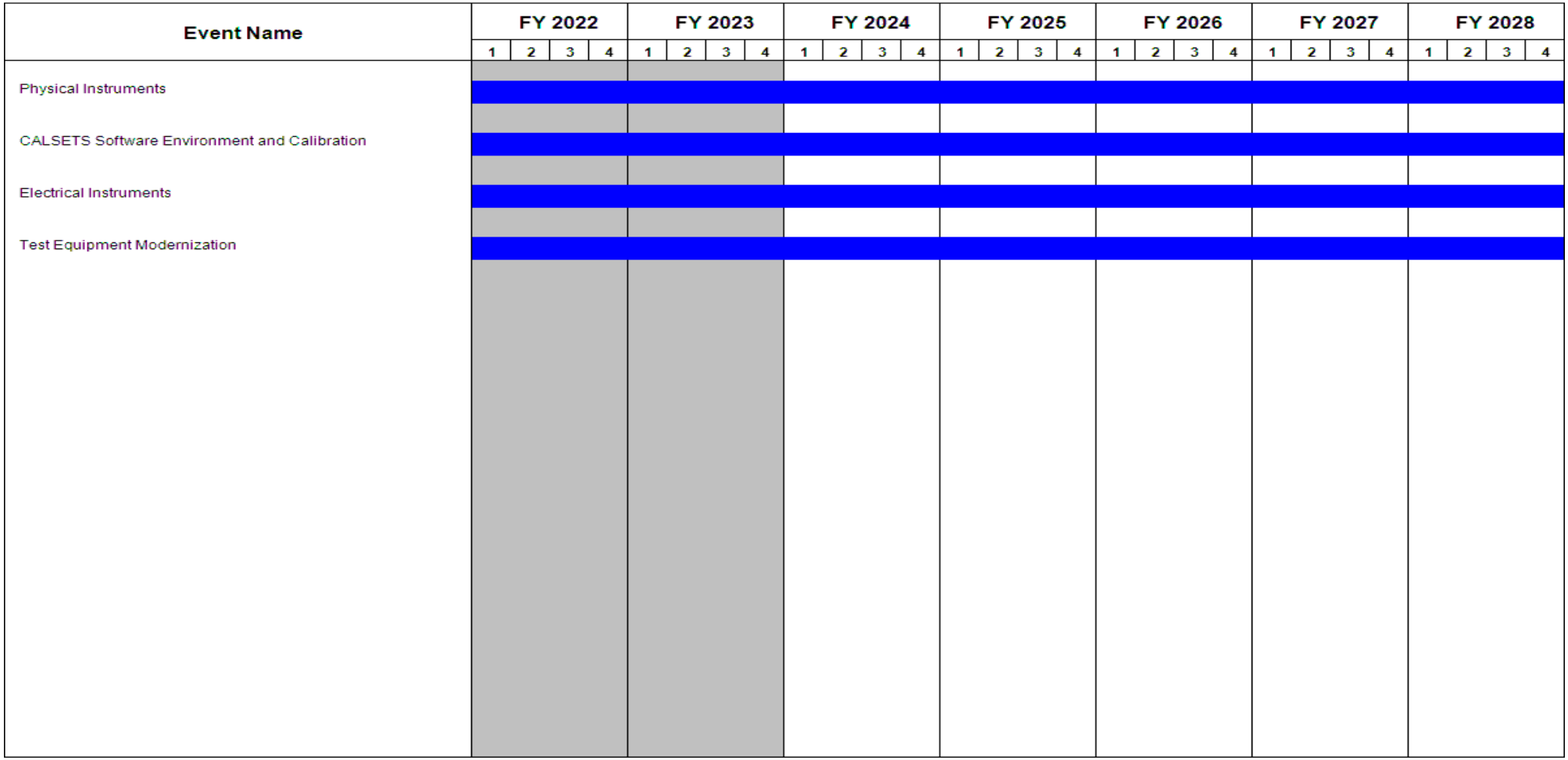

Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AN/GSM-421(V2) User Testing	2	2007	4	2012
Physical Instruments	1	2016	4	2028
CALSETS Software Environment and Calibration	1	2016	4	2028
Electrical Instruments	1	2016	4	2028
Test Equipment Modernization	1	2016	4	2028