Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
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 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	6.498	11.079	8.960	-	8.960	11.014	10.740	10.227	10.127	Continuing	Continuing
L59: *Diagnost/Expert Sys*	-	4.548	7.072	4.699	-	4.699	7.304	6.626	5.894	5.958	Continuing	Continuing
L65: *Test Equipment Development*	-	1.950	4.007	4.261	-	4.261	3.710	4.114	4.333	4.169	Continuing	Continuing

Note

FY 2016, $5.222 million reduction to support higher priority projects

A. Mission Description and Budget Item Justification

This program element (PE) provides for development and testing of 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. It focuses on 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.

Modular, reconfigurable automatic and semi-automatic systems are being developed under this program to satisfy weapon system test and diagnostics requirements. The Next Generation Automatic Test System (NGATS), currently under development, provides state-of-the-art test and diagnostic capabilities to support current and future weapon systems. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure, and it will replace several aging automatic test systems (ATS) that are becoming prohibitively expensive to operate and maintain.

This PE also 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.

FY 2016 Base funding for this program continues development of the Army's standard NGATS which will improve deployability and mobility of test and diagnostic equipment. The NGATS provides state-of-the-art test and diagnostic capabilities and a means for reducing the Army's test equipment operating and support costs and the costs for supporting a number of the Army's vital warfighting systems. The FY 2016 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 radio frequency (RF) and electro-optic (EO) testing capability. It will also provide for technology enhancements to the Army's standard at-system tester to meet test and diagnostoic requirements of the supported weapon systems, develop/redesign test program sets and hardware for support of legacy and emerging weapon systems, and develop a network centric software framework for NGATS.

The FY 2016 funding request was reduced for $2.002 million to account for the availability of prior year execution balances.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army					Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 5: *System Development & Demonstration (SDD)*			R-1 Program Element (Number/Name) PE 0604746A / *Automatic Test Equipment Development*		
B. Program Change Summary ($ in Millions)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Previous President's Budget	6.697	11.084	14.182	-	14.182
Current President's Budget	6.498	11.079	8.960	-	8.960
Total Adjustments	-0.199	-0.005	-5.222	-	-5.222
• Congressional General Reductions	-0.199	-0.005			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-5.222	-	-5.222

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L59: *Diagnost/Expert Sys*	-	4.548	7.072	4.699	-	4.699	7.304	6.626	5.894	5.958	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds development of and system enhancements for the Next Generation Automatic Test System (NGATS) and the Maintenance Support Device (MSD). The NGATS 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 and will facilitate retirement of aging and obsolete test equipment that is imposing increasing logistics and operations and support cost burdens. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure. The ARGCS initiative was sponsored by the Department of Defense, and all Services are expected to transition demonstrated technologies into their ATS programs. The MSD is the Army's standard at-system tester and requires continuing upgrades to support technology advancements in the supported weapon systems. This project funds development projects to incorporate the most current relevant technology into the next generation MSD, supports capability enhancement of the wireless at-platform test set (WATS), develops capabilities to minimize or eliminate Army dependency on expensive proprietary software to support tactical vehicles, integrates MSD into the Brigade Combat Team information structure as the at-platform data collection device for the Army's condition-based maintenance plus (CBM+) initiative and maintains compatibility with emerging aviation platform hardware bus technology and aviation notebook software interface requirements. This project also provides for continuing efforts in the development and testing of common procedures utilizing existing test program sets and software applications; and market surveys of commercially available test equipment, methods and procedures to determine applicability to Army requirements. 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 2014	FY 2015	FY 2016
Title: NGATS System Level Calibration/Verification Program	0.600	1.200	-
Description: Develop and test the NGATS system level calibration/verification program ***FY 2014 Accomplishments:*** Develop and test the NGATS system level calibration/verification program ***FY 2015 Plans:*** Continue development and testing of the NGATS system level calibration/verification program			
Title: NGATS Logistics Support Products	0.100	0.750	0.500
Description: Develop NGATS initial logistics support products (including provisioning, technical manuals and calibration) ***FY 2014 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue development of initial logistics support products. ***FY 2015 Plans:*** Continue development of initial logistics support products. ***FY 2016 Plans:*** Complete development of initial logistics support products.			
Title: Developmental and Operational Follow-on Testing ***Description:*** Complete Increment 1 developmental and operational follow-on testing activities ***FY 2016 Plans:*** Complete Increment 1 developmental and operational follow-on testing activities to include assessment/verification of the development of remaining, needed capability of existing low-rate initial production systems to operate with all existing test program sets used with legacy automatic test equipment, along with any necessary follow-on system testing.	-	-	1.000
Title: NGATS Radio Frequency (RF) Test Capability ***Description:*** Develop and integrate NGATS RF test capability ***FY 2014 Accomplishments:*** Initiate development and integration of NGATS RF test capability ***FY 2015 Plans:*** Continue development and integration of NGATS RF test capability ***FY 2016 Plans:*** Continue development and integration of NGATS RF test capability	0.500	1.000	0.500
Title: NGATS Increment 2 ***Description:*** Develop and test hardware and software for NGATS Increment 2 system ***FY 2014 Accomplishments:*** Continue development and testing of hardware and software for support of Increment 2 systems (Avenger, Multiple Launch Rocket System, TOW Missile System, Paladin and CROWS II) ***FY 2015 Plans:***	1.868	1.100	0.885

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue development and testing of hardware and software for support of Increment 2 systems (Avenger, Multiple Launch Rocket System, TOW Missile System, Paladin and CROWS II) ***FY 2016 Plans:*** Continue development and testing of hardware and software for support of Increment 2 systems (Stryker, Common Remotely Operated Weapons Station (CROWS II), Counter RCIED (Radio-Controlled Improvised Explosive Device) Electronic Warfare (CREW) Duke, Precision Fires, and Joint Assault Bridge (JAB)			
Title: NGATS Electro-Optics Subsystem ***Description:*** Develop and test hardware and software for NGATS electro-optics (EO) subsystem (to include the capability to support new ground and aerial sensors for unmanned air and ground vehicles) ***FY 2014 Accomplishments:*** Continue development and testing of hardware and software for NGATS EO subsystem and for support of Increment 3 systems (Apache, Kiowa Warrior, CROWS II and Stryker Remote Weapons Station) ***FY 2015 Plans:*** Continue development and testing of hardware and software for NGATS EO subsystem and for support of Increment 3 systems (Apache, Kiowa Warrior, CROWS II and Stryker Remote Weapons Station) ***FY 2016 Plans:*** Continue development and testing of hardware and software for NGATS EO subsystem and for support of Increment 3 systems (Apache, Kiowa Warrior, CROWS II and Stryker Remote Weapons Station)	1.000	0.500	0.200
Title: Additional Software Capabilities ***Description:*** Develop software capabilities to incorporate common logistics operating environment (CLOE)/netcentric and embedded diagnostics data collection and analysis for closed loop diagnostic maintenance in support of condition-based maintenance ***FY 2014 Accomplishments:*** Continue development of expanded software capabilities ***FY 2015 Plans:*** Continue development of a network centric software framework to facilitate message communication, configuration status accounting, and data exchange with other components of the global information grid (GIG). ***FY 2016 Plans:***	0.250	0.250	0.250

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Continue development of a network centric software framework to facilitate message communication, configuration status accounting, and data exchange with other components of the global information grid (GIG).			
Title: Power and Weight Enhancements ***Description:*** Develop power and weight enhancements for NGATS ***FY 2014 Accomplishments:*** Complete development of power and weight enhancements.	0.030	-	-
Title: NGATS Performance Enhancement ***Description:*** NGATS core instrument/software modifications to increase NGATS performance. ***FY 2015 Plans:*** Initiate development of NGATS core instrument/software modifications to increase NGATS performance. ***FY 2016 Plans:*** Continue development of NGATS core instrument/software modifications to increase NGATS performance.	-	0.217	0.300
Title: MSD Technology Enhancements ***Description:*** Incorporate current relevant technology into the next-generation MSD and support capability enhacement of the wireless at-platform test set (WATS). Develop capabilities to minimize or eliminate Army dependency on proprietary software to support tactical vehicles, integrate MSD into the Brigade Combat Team information structure as the at-platform data collection device for the Army's CBM+ initiative, and maintain compatibility with emerging aviation platform hardware bus technology and aviation notebook software interface requirements. ***FY 2015 Plans:*** Continue enhancement of WATS radio technology and common electronics package augmentation to provide at-platform wireless test support for Army vehicle and weapon systems platforms to include CBM+. Devise methods to minimize or eliminate Army dependency on proprietary software to support current and future tactical vehicles. ***FY 2016 Plans:*** Complete enhancement of WATS radio technology and common electronics package augmentation to provide at-platform wireless test support for Army vehicle and weapon systems platforms to include CBM+. Devise methods to minimize or eliminate Army dependency on proprietary software to support current and future tactical vehicles.	-	0.805	0.864
Title: Smart TPSs/Enhanced Self Test	-	0.750	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Develop enhanced smart TPS hardware and software and enhanced self test ***FY 2015 Plans:*** Initiate development of enhanced self test strategy for NGATS.			
Title: Abrams/Bradley Test Program Set (TPS) Design ***Description:*** Design, test and evaluate Abrams/Bradley TPSs ***FY 2015 Plans:*** Complete design, test and evaluation of Abrams/Bradley TPSs	-	0.500	-
Title: Abrams/Bradley EO TPS Development ***Description:*** Develop Abrams/Bradley TPSs for use with NGATS EO asset ***FY 2014 Accomplishments:*** Continue development of Abrams/Bradley TPSs	0.200	-	-
Title: EO TPS Development ***Description:*** Develop EO TPSs for use with NGATS EO asset ***FY 2016 Plans:*** Initiate development of TPSs.	-	-	0.200
Accomplishments/Planned Programs Subtotals	4.548	7.072	4.699

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• .: *OPA3, SSN MB4000, Integrated Family of Test Equipment (IFTE)*	42.460	37.482	34.487	-	34.487	30.511	27.254	26.981	27.540	Continuing	Continuing

Remarks

None.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

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; otherwise, commercial contracts are used. Equipment required for developmental projects is obtained by contract from the commercial supplier. Developmental efforts for the Next Generation Automatic Test System (NGATS) are being completed under a number of contracts awarded to the prime contractor for the Integrated Family of Test Equipment off-platform testers and other contractors with automatic test equipment (ATE) and test program set development capabilities. Full-rate production of the system was a competitive award. NGATS is following an evolutionary acquisition strategy using incremental development to satisfy Army depot and field testing requirements for new and existing systems. It will replace existing legacy Army ATE (i.e., Base Shop Test Facility (BSTF)(V)3, BSTF(V)5, and Direct Support Electrical System Test Set) as well as Army depot system-specific ATE.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / *Automatic Test Equipment Development*	Project (Number/Name) L59 / *Diagnost/Expert Sys*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	Various	Various : Various	0.000	-		-		0.150		-		0.150	Continuing	Continuing	Continuing
		Subtotal	0.000	-		-		0.150		-		0.150	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development/ Verification/Validation	Various	Various, : Various	32.360	1.343		2.200		1.101		-		1.101	Continuing	Continuing	Continuing
Hardware/Support Items Development	Various	Various, : Various	58.884	2.368		3.822		1.591		-		1.591	Continuing	Continuing	Continuing
		Subtotal	91.244	3.711		6.022		2.692		-		2.692	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	Various	Various, : Various	47.891	0.637		0.850		0.657		-		0.657	Continuing	Continuing	Continuing
Other Direct	Various	Various, : Various	3.590	0.200		0.200		0.200		-		0.200	Continuing	Continuing	Continuing
		Subtotal	51.481	0.837		1.050		0.857		-		0.857	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Testing	Various	Various, : Various	1.046	-		-		1.000		-		1.000	Continuing	Continuing	Continuing
		Subtotal	1.046	-		-		1.000		-		1.000	-	-	-

Remarks

Test program set (TPS) and contractor developmental test and evalutation are included in the product development cost.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / *Automatic Test Equipment Development*	Project (Number/Name) L59 / *Diagnost/Expert Sys*	

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	143.771	4.548		7.072		4.699		-		4.699	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

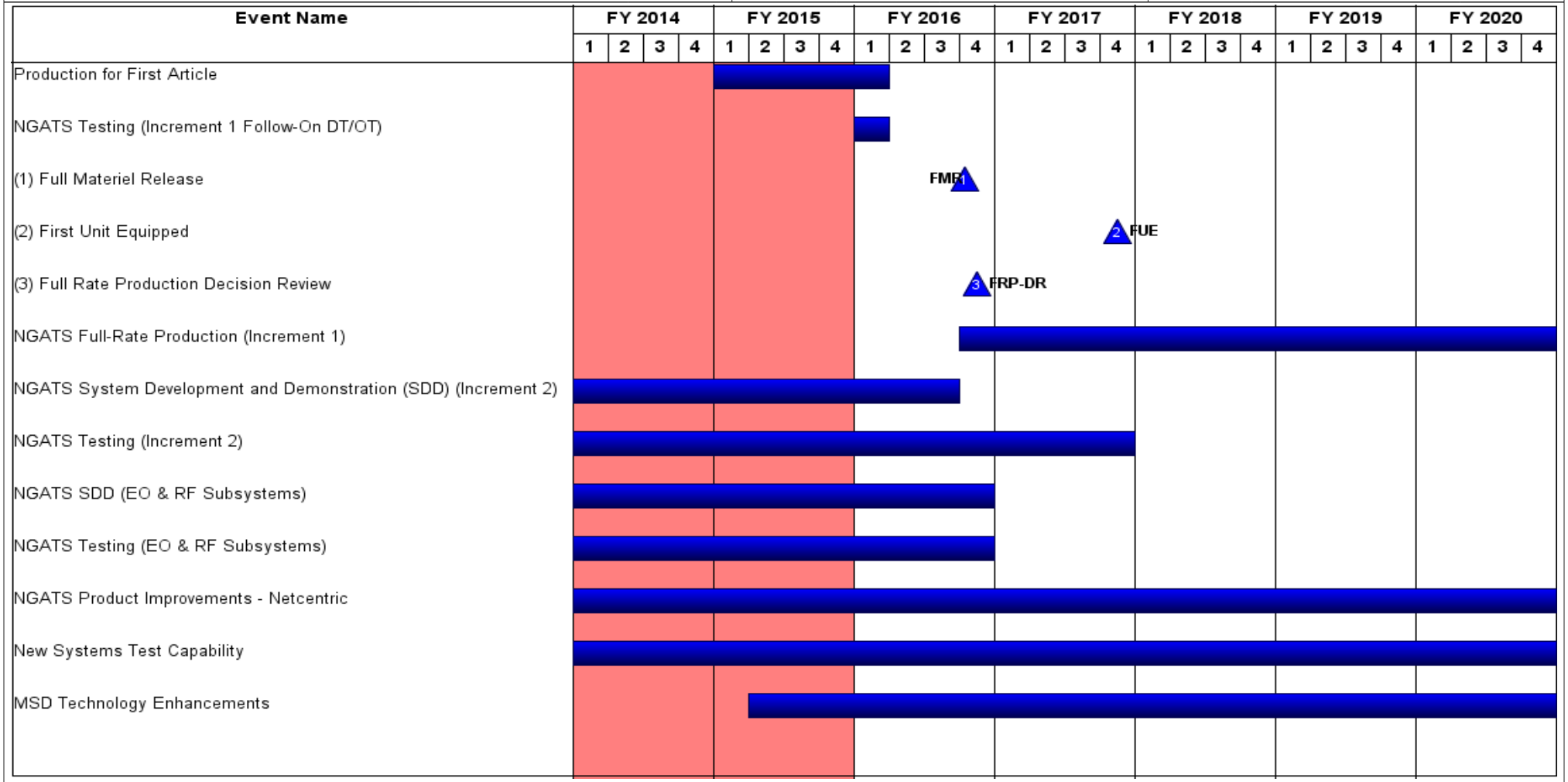

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L59 / *Diagnost/Expert Sys*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Production for First Article	1	2015	1	2016
NGATS Testing (Increment 1 Follow-On DT/OT)	1	2016	1	2016
Full Materiel Release	4	2016	4	2016
First Unit Equipped	4	2017	4	2017
Full Rate Production Decision Review	4	2016	4	2016
NGATS Full-Rate Production (Increment 1)	4	2016	4	2020
NGATS System Development and Demonstration (SDD) (Increment 2)	4	2009	3	2016
NGATS Testing (Increment 2)	4	2010	4	2017
NGATS SDD (EO & RF Subsystems)	4	2010	4	2016
NGATS Testing (EO & RF Subsystems)	4	2012	4	2016
NGATS Product Improvements - Netcentric	4	2011	4	2020
New Systems Test Capability	2	2011	4	2020
MSD Technology Enhancements	2	2015	4	2020

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604746A / *Automatic Test Equipment Development*	Project (Number/Name) L65 / *Test Equipment Development*	

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
L65: *Test Equipment Development*	-	1.950	4.007	4.261	-	4.261	3.710	4.114	4.333	4.169	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports development and demonstration of state-of-the-art calibration standards and techniques, and upgrades/improvements to existing Army calibration systems. It provides for feasibility studies, market research, inventory analyses, bid sample testing, and prototyping to support calibration systems and general-purpose test and diagnostic equipment acquisitions. Primary efforts under this project include development of calibration software, development of calibration capability for chemical and biological agent detection systems, improvement of test and measurement equipment performance envelopes via product improvements, and development/evaluation of advance technology and higher reliability calibration systems and general-purpose test, measurement and diagnostic equipment (TMDE). Product improvements are underway to current test and measurement systems to overcome deficiencies and voids in existing organic capabilities and to ensure the operational readiness, accuracy, effectiveness, and safety of Army weapons and combat support systems. These improvements will employ reconfigurable open electronics architecture and computer-based instrumentation wherever feasible and will be focused on reducing the test equipment footprints to improve deployability and mobility in areas of operation.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Calibration Sets (CALSETS) Software Environment and Calibration	0.450	0.960	1.320
Description: Develop and test an Army automated calibration environment and develop calibration procedures. Test efforts in support of DoD Information Assurance Certification and Accreditation Process (DIACAP). ***FY 2014 Accomplishments:*** Continue development and evaluation of calibration procedures. Perform testing and evaluation to support calibration software environment. Develop and test DIACAP for calibration instrument controllers. ***FY 2015 Plans:*** Continue development and evaluation of calibration procedures. Develop, test and evaluate enhanced calibration software environment. Develop and test DIACAP for calibration instrument controllers. ***FY 2016 Plans:*** Develop and evaluate automated calibration procedures. Evaluate feasibility of incorporating commercial procedures and calibration system performance monitoring within the software environment. Test and evaluate prototype calibration procedure development engine. Perform tests to support DIACAP for calibration systems.			
Title: Physical Instruments	0.702	1.357	1.238

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Research, develop, and test physical parameter calibration instrumentation to support areas such as chemical/ biological agent detection systems, night vision testers, small arms gauges, pneumatic pressure systems, temperature, etc. ***FY 2014 Accomplishments:*** Continue development and test of hydrocarbon flow calibration and test standards. Develop requirements and prototype testers for small arms gage calibration standards. Continue development and test of chemical agent detectors and protective equipment testers and calibrators. ***FY 2015 Plans:*** Complete development and test of hydrocarbon flow calibration and test standards. Continue development, automate, and test prototype small arms gage calibration standards. Complete development and test of chemical agent detectors and protective equipment testers and calibrators. Initiate development of pneumatic standards to support avionic systems. ***FY 2016 Plans:*** Continue development and test of prototype small arms gage calibration standards. Initiate development and test of calibration systems for biological agent detectors and protective equipment. Continue development of pneumatic standards to support avionic systems. Perform market research, evaluate commercial equipment, and complete specifications for acquisition.			
Title: Electrical Instruments ***Description:*** Research, develop, and test electrical parameter calibration instrumentation to support areas such as deployable recertification set, intrinsic electrical standards, electrical transport standards, etc. ***FY 2014 Accomplishments:*** Perform market research and evaluate commercial equipment and develop performance specifications for acquisition. Continue development and testing of direct current (DC) and alternating current (AC) intrinsic voltage system. Develop and test electronic transport standards. ***FY 2015 Plans:*** Perform market research and evaluate commercial equipment and develop performance specifications for acquisition. Complete testing of DC intrinsic voltage system and continue testing of AC system. Complete testing of electronic transport standards. ***FY 2016 Plans:*** Perform market research and evaluate commercial equipment and develop performance specifications for acquisition. Complete development and test of high voltage multiplier for AC intrinsic voltage system. Develop and test prototype microwave reference standard.	0.637	1.305	1.318
Title: Test Equipment Modernization	0.161	0.385	0.385

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Perform market research, bid sample testing, and evaluation of commercial equipment and develop performance specifications for acquisition. ***FY 2014 Accomplishments:*** Perform market research and evaluation of commercial equipment and develop performance specifications for future general-purpose test equipment acquisitions. ***FY 2015 Plans:*** Perform market research and evaluation of commercial equipment and develop performance specifications for future general-purpose test equipment acquisitions. ***FY 2016 Plans:*** Perform market research and evaluation of commercial equipment and develop performance specifications for acquisition. Conduct bid sample testing to support acquisition program.			
Accomplishments/Planned Programs Subtotals	1.950	4.007	4.261

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• SSN N10000: *Calibration Sets Equipment*	5.244	5.726	4.650	-	4.650	5.735	5.542	8.590	4.499	Continuing	Continuing
• SSN N11000: *Test Equipment Modernization*	17.881	13.061	11.083	-	11.083	18.354	16.816	14.771	15.363	Continuing	Continuing

Remarks

D. Acquisition Strategy

Projects are focused on use of commercial and nondevelopmental item technologies. When programmatic and engineering expertise and capability are available within the Department of Defense, services required for the individual development projects are acquired from the government source; otherwise, commercial service contracts are used to provide these capabilities. Equipment required for development projects is obtained from the commercial supplier. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government testing and evaluation.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In-house Engineering	SS/LH	Civ Labor : various	3.716	0.715		0.744		0.760		-		0.760	Continuing	Continuing	-
		Subtotal	3.716	0.715		0.744		0.760		-		0.760	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/GSM-421(V2)	Various	Various : Various	2.346	-		-		-		-		-	Continuing	Continuing	-
CALSETS Software Environment and Calibration	Various	Various : Various	5.607	0.211		0.400		0.590		-		0.590	Continuing	Continuing	-
Physical Instruments	Various	Various : Various	6.155	0.210		0.578		0.556		-		0.556	Continuing	Continuing	-
Electrical Instruments	Various	Various : Various	8.736	0.293		0.552		0.527		-		0.527	Continuing	Continuing	-
Test Equipment Modernization	Various	Various : Various	0.280	0.090		0.160		0.208		-		0.208	Continuing	Continuing	-
		Subtotal	23.124	0.804		1.690		1.881		-		1.881	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Engineering	SS/FFP	University of Alabama, Huntsville : Huntsville, AL	1.837	0.140		0.245		0.275		-		0.275	Continuing	Continuing	-
		Subtotal	1.837	0.140		0.245		0.275		-		0.275	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/GSM-421(V2)	Various	Various : Various	0.620	-		-		-		-		-	Continuing	Continuing	-
CALSETS Software Environment and Calibration	Various	Various : Various	0.500	0.070		0.360		0.430		-		0.430	Continuing	Continuing	-
Physical Instruments	Various	Various : Various	1.375	0.088		0.407		0.407		-		0.407	Continuing	Continuing	-
Electrical Instruments	Various	Various : Various	1.468	0.047		0.351		0.331		-		0.331	Continuing	Continuing	-
Test Equipment Modernization	Various	Various : Various	0.250	0.086		0.210		0.177		-		0.177	Continuing	Continuing	-
		Subtotal	4.213	0.291		1.328		1.345		-		1.345	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	32.890	1.950		4.007		4.261		-		4.261	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

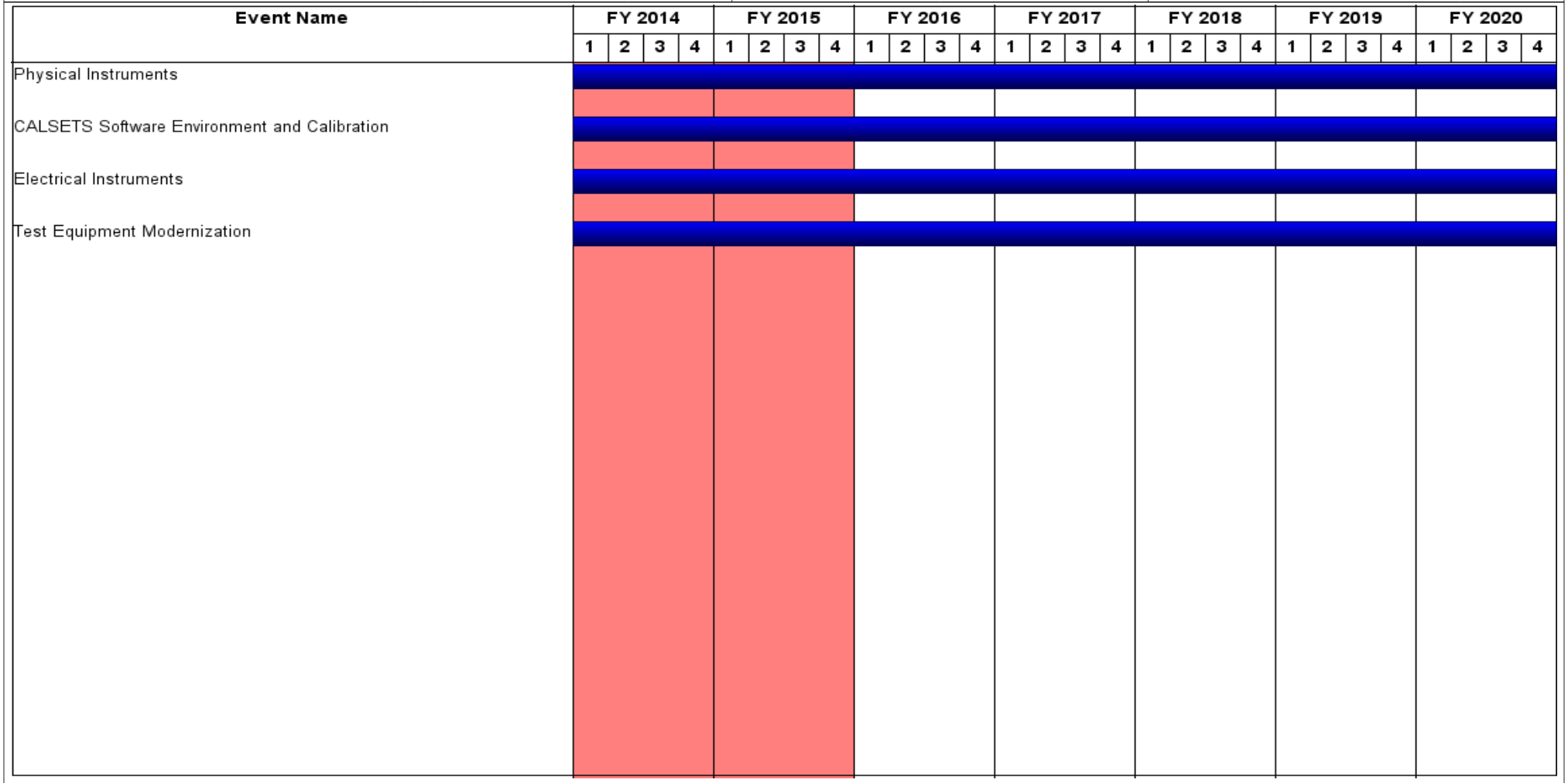

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604746A / *Automatic Test Equipment Development*	**Project (Number/Name)** L65 / *Test Equipment Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Physical Instruments	2	2007	4	2020
CALSETS Software Environment and Calibration	2	2007	4	2020
Electrical Instruments	2	2007	4	2020
Test Equipment Modernization	1	2011	4	2020