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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army **Date:** May 2017

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	273.275	307.882	307.588	-	307.588	313.280	307.361	318.716	323.540	-	-
F30: Army Test Ranges & Facilities	-	273.275	307.882	307.588	-	307.588	313.280	307.361	318.716	323.540	-	-

Note

Beginning in Fiscal Year (FY) 2017, this Program Element (PE) funds labor for physical security civilian guards and equipment as well as the UH-60 helicopters. Beginning in FY18, this PE will fund the Network Enterprise Center (NEC), Computer Network Defense Service Provider (CNDSP), and airfield operations, which were previous funded by the Operations and Maintenance - Army (OMA) appropriation.

A. Mission Description and Budget Item Justification

This Program Element (PE) provides the institutional funding required to operate test activities, in accordance with Section 232 of the Fiscal Year (FY) 2003 National Defense Authorization Act (NDAA), in support of Department of Defense (DoD) Program Executive Officers, Program and Product Managers, and Research, Development, and Engineering Centers. Resources provided by this project operate six elements of the DoD Major Range and Test Facility Base (MRTFB): White Sands Test Center (WSTC), White Sands Missile Range, New Mexico; Aberdeen Test Center (ATC), Aberdeen Proving Ground, Maryland; Electronic Proving Ground (EPG), Fort Huachuca, Arizona; and Yuma Test Center (YTC), Yuma Proving Ground, Arizona; Cold Regions Test Center (CRTC), Fort Greely, Alaska; and Tropic Regions Test Centers (TRTC) at various locations. This PE also funds the Army's test capability at Redstone Test Center (RTC), Redstone Arsenal, Alabama.

This PE finances the overhead (institutional) test operating costs not billable to DoD test customers per Department of Defense Instruction (DODI) 3200.18 and Department of Defense Financial Management Regulation (DODFMR) 7000.14-R, which include recurring test infrastructure/capability sustainment requirements, replacement of test equipment, test operating procedures, and test revitalization/upgrade projects to maintain current testing capabilities and improvements to safety, environmental protection, efficiency of test operations, and technological advances. The test capabilities at these ranges have been uniquely established, are in place to support test and evaluation (T&E) requirements of funded weapons programs, and are required to assure technical performance, adherence to safety requirements, reliability, logistics supportability, Title 10 Live Fire Test and Evaluation, transportability, environmental effects, electromagnetic effects, and quality of materiel in development and in production.

This PE sustains the T&E capability required to support Army as well as Joint Service or Other Service systems, materiel, and technologies. Types of systems scheduled for testing include: Aircraft, Air Delivery, Unmanned Aerial Systems, Unmanned Ground Vehicles, Air and Missile Defense Systems, Engineering Equipment, Direct fire, Indirect fire, Nonlethal weapons, Ammunition, Automotive Systems, Intelligence Surveillance and Reconnaissance, Ground Soldier System, Missiles, Rockets, Mission Command Network, and Tactical Command, Control, and Communication.

Specific systems supported include: Network Integration Evaluation (NIE), Joint Light Tactical Vehicle (JLTV), Rifleman Radio, defense (PAC-3), Army Integrated Air and Missile Defense (AIAMD), Paladin Integrated Management, XM25 Counter Defilade Target Engagement (CDTE), Gray Eagle, Handheld, Manpack and Small Form Fit

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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605601A / <i>Army Test Ranges and Facilities</i>
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(HMS) Man Pack Radio, Soldier Protective System, M829E4 120MM Advanced Kinetic Energy, Precision Guidance Kit (PGK), and Mid-tier Networking Vehicular Radios (MNVR).

B. Program Change Summary (\$ in Millions)	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	279.896	293.748	295.388	-	295.388
Current President's Budget	273.275	307.882	307.588	-	307.588
Total Adjustments	-6.621	14.134	12.200	-	12.200
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.847	-			
• Adjustments to Budget Years	-2.774	0.000	12.200	-	12.200
• Request for Additional FY17 Appropriation	0.000	14.134	0.000	-	0.000

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Army										Date: May 2017		
Appropriation/Budget Activity 2040 / 6					R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities				Project (Number/Name) F30 / Army Test Ranges & Facilities			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
F30: Army Test Ranges & Facilities	-	273.275	307.882	307.588	-	307.588	313.280	307.361	318.716	323.540	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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This Project sustains the T&E capability required to support Army as well as Joint Service or Other Service systems, materiel, and technologies. Types of systems scheduled for testing include: Aircraft, Air Delivery, Unmanned Aerial Systems, Unmanned Ground Vehicles, Air and Missile Defense Systems, Engineering Equipment, Direct fire, Indirect fire, Nonlethal weapons, Ammunition, Automotive Systems, Intelligence Surveillance and Reconnaissance, Ground Soldier System, Missiles, Rockets, Mission Command Network, and Tactical Command, Control, and Communication.

Specific systems supported include: Network Integration Evaluation (NIE), Joint Light Tactical Vehicle (JLTV), Rifleman Radio, defense (PAC-3), Army Integrated Air and Missile Defense (AIAMD), Paladin Integrated Management, XM25 Counter Defilade Target Engagement (CDTE), Gray Eagle, Handheld, Manpack and Small Form Fit (HMS) Man Pack Radio, Soldier Protective System, M829E4 120MM Advanced Kinetic Energy, Precision Guidance Kit (PGK), and Mid-tier Networking Vehicular Radios (MNVR).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Mission Support	93.972	95.828	79.041

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Appropriation/Budget Activity 2040 / 6	R-1 Program Element (Number/Name) PE 0605601A / Army Test Ranges and Facilities	Project (Number/Name) F30 / Army Test Ranges & Facilities		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<p>Description: Funds support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supports indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) in accordance with DODI 3200.18 and DODFMR 7000.14-R.</p> <p>FY 2016 Accomplishments: Funds support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supports indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) in accordance with DODI 3200.18 and DODFMR 7000.14-R.</p> <p>FY 2017 Plans: \$14.134M Request for Additional FY17 Appropriation for Major Range and Test Facility Base (MRTFB) Range sustainment: Funding provides annual sustainment and maintenance for ATEC facilities and equipment directly supporting the 337 ATEC test capabilities in the MRTFB. These test capabilities provide vital Test and Evaluation for Soldier Systems, Engineering and General Equipment, Ground Vehicles, C4ISR Systems, Aircraft, and Air and Missile Defense Systems.</p> <p>Funds will continue to support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supports indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) in accordance with DODI 3200.18 and DODFMR 7000.14-R.</p> <p>FY 2018 Plans: Funds will continue to support test equipment upgrades and maintenance; test facility maintenance; routine calibration; handling and disposal of hazardous materials, transportation, postage, administrative supplies; tools; software; spare parts; test support vehicle maintenance; mission unique installation costs; temporary duty/training of civilian and contractor personnel; printing and reproduction; communications; land leases; and range road maintenance. Funding supports indirect costs for MRTFB Activities (ATC, EPG, WSTC, YTC (including CRTC & TRTC)) in accordance with DODI 3200.18 and DODFMR 7000.14-R.</p>				
<p>Title: T&E Civilian Pay</p> <p>Description: This funding supports the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance is customer funded. The test customer pays all direct costs that are directly attributable to the use of a test facility or</p>		130.176	143.739	144.626

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
resource for testing of a particular program. Funding is essential to maintain core T&E skills as part of the Government civilian workforce.				
FY 2016 Accomplishments: Funds support the overhead costs of the civilian labor for PBG authorizations. The balance will be customer funded. The test customer will pay all direct costs directly attributable to the use of a test facility or resource for testing of a particular program. Funding will be essential to maintain core T&E skills as part of the Government civilian workforce.				
FY 2017 Plans: Funds will continue to support the overhead costs of the civilian labor for Program Budget Guidance (PBG) authorizations. The balance will be customer funded. The test customer will pay all direct costs directly attributable to the use of a test facility or resource for testing of a particular program. Funding will be essential to maintain core T&E skills as part of the Government civilian workforce.				
FY 2018 Plans: Funds will continue to support the overhead costs of the civilian labor for PBG authorizations. The balance will be customer funded. The test customer will pay all direct costs directly attributable to the use of a test facility or resource for testing of a particular program. Funding will be essential to maintain core T&E skills as part of the Government civilian workforce.				
Title: Contractor Support		44.127	44.169	44.553
Description: This funding supports contractor labor costs not billable to the customer. Contract labor is essential to augment core civilian T&E personnel. Functions performed include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support.				
FY 2016 Accomplishments: Funds support contractor labor costs not billable to the customer. Contract labor will be essential to augment core civilian T&E personnel. Functions performed will include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support				
FY 2017 Plans: Funds will continue to support contractor labor costs not billable to the customer. Contract labor will be essential to augment core civilian T&E personnel. Functions performed will include range operations, automotive test support, radar maintenance,				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support.				
FY 2018 Plans: Funds will continue to support contractor labor costs not billable to the customer. Contract labor will be essential to augment core civilian T&E personnel. Functions performed will include range operations, automotive test support, radar maintenance, warehousing support, project management, maintenance of support fleet aircraft, recurring/general maintenance to test facilities and data acquisition support.				
Title: Revitalization/Upgrade Description: Funds support the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements are required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving test and evaluation capabilities for the highest priority Army programs.		5.000	5.000	5.000
FY 2016 Accomplishments: Funds supported the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements will be required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving test and evaluation capabilities for the highest priority Army programs. For FY2016 Revitalization/Upgrade funded the refurbishment of the ATC Moving Target Simulator, this test facility is necessary for the T&E or ground vehicle fire control systems such as; the Bradley Engineering Change Proposal (ECP) (Bradley Modernization), Light Armored Vehicle (LAV), Common Remotely Operated Weapon Station (CROWS), M1A2 Abrams ECP (Abrams Modernization), and Stryker ECP.				
FY 2017 Plans: Funds will continue to support the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements will be required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving test and evaluation capabilities for the highest priority Army programs.				
FY 2018 Plans: Funds will continue to support the revitalization/upgrade of test infrastructure and capabilities. MRTFB elements will be required to use institutional funding to sustain, upgrade or create capabilities that support multiple customers. Funding will be focused on improving test and evaluation capabilities for the highest priority Army programs. Anticipated for FY2018 are three projects; WSTC fire suppression system for the range control facility, EPG improvements to the Antenna Test Facility, and RTC upgrades to the missiles and rockets sensor integration facility.				
Title: Physical Security Guards and Equipment		-	12.279	12.438

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Description: This funding supports physical security guards mandated by regulation to guard Army Test and Evaluation Command's (ATEC's) Fast Burst Nuclear Reactor (FBR) at White Sands Missile Range (WSMR) in accordance with (IAW) Army Regulation (AR) 190-54 and Chemical Biological (CB) facilities located at Dugway Proving Ground (DPG) IAW AR 190-50 and AR 190-17. These surety facilities maintain nuclear, biological, and chemical (NBC) materials and agents in order to test the effects and effectiveness of defensive or protective equipment and measures. The physical security equipment consists of concrete barriers, security fencing around test sites, cameras, gate controllers, access and intrusion detection systems, alarms, and maintenance contracts for equipment. This equipment is necessary to secure arms rooms, ammunition storage facilities, The Fast Burst Nuclear Reactor and chemical biological surety sites. Physical security equipment is critical to maintain current security requirements as outlined in AR 190-17, AR 190-59, AR 190-51, and AR 190-13.</p> <p>FY 2017 Plans: Funds will support the physical security guards and equipment for the FBR at WSMR and CB facilities at DPG.</p> <p>FY 2018 Plans: Funds will support the physical security guards and equipment for the FBR at WSMR and CB facilities at DPG.</p>			
<p>Title: UH-60 Aircraft</p> <p>Description: This funding supports the Aviation Restructure Initiative endorsed by the SECDEF. Funding supports aircraft maintenance, aircrew labor, mandatory training, and aircraft flying hours. In accordance with DODI 3200.18 and DODFMR 7000.14-R, these costs are not billable to the test customers. UH-60 helicopters are used to provide essential logistical, sensor platform and aerial photo/video documentation support for developmental testing.</p> <p>FY 2017 Plans: Funds will support UH-60 helicopter maintenance, aircrew labor, mandatory training and aircraft flying hours.</p> <p>FY 2018 Plans: Funds will support UH-60 helicopter maintenance, aircrew labor, mandatory training and aircraft flying hours.</p>		-	6.867
<p>Title: Network Enterprise Center</p> <p>Description: This funding supports the Network Enterprise Center (NEC) operations for WSTC and YTC. Funding supports manpower and contracts, support equipment and associated costs specifically identified and measurable to plan, manage, coordinate, and execute Communication, Network, and Information Technology Services Management.</p> <p>FY 2018 Plans:</p>		-	12.181

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Funds will support all labor, support equipment, and training required for the Network Enterprise Center.			
Title: Computer Network Defense Service Provider Description: This requirement supports compliance with Department of Defense Directive (DoDD) 8530.1, which directed that all component information systems and computer networks must enter into a service agreement with a CNDSP. United States Army Cyber Command (ARCYBER) Operations Order (OPORD) 2014-224 directed all commands/Direct Reporting Units (DRU) to take immediate measures to ensure Army assets connected to Defense Research and Engineering Network (DREN) and Secure Defense Research and Engineering Network (SDREN) enclaves are aligned with the United States (US) Army Research Laboratory as their CNDSP to ensure cyber defense oversight and information security continuous monitoring going forward. FY 2018 Plans: Funds will support cyber defense oversight and continuous monitoring of information security.		-	-
Title: Airfield Operations Description: This funding supports aviation operations in developmental testing of direct fire, air transportability, indirect fire and aerial delivery systems, and transportation of chemical/biological agents. Funding supports manpower, flight management, aircraft and air traffic control services along with the maintenance of vehicles. FY 2018 Plans: Funds will support manpower, flight management, aircraft and air traffic control services along with maintenance of vehicles.		-	-
Accomplishments/Planned Programs Subtotals		273.275	307.882
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
N/A			