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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 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605830A / Aviation Ground Support Equipment							
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	-	13.528	2.142	6.930	-	6.930	4.255	7.191	5.505	6.375	Continuing	Continuing
EE5: Aviation Ground Support Equipment	-	13.528	2.142	6.930	-	6.930	4.255	7.191	5.505	6.375	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element supports Aviation Ground Support Equipment (AGSE) developmental testing and acquisition of prototypes to enhance the functionality of current and future aircraft maintenance equipment. This will be accomplished by identifying more effective aircraft maintenance equipment, validating new maintenance concepts, improving machine interfaces, updating aircraft maintenance processes, and developing improved diagnostic technologies which will reduce Operation and Support costs. This program provides for the development of rapid battle repair procedures, tools, ground handling, and test equipment to speed the return of aircraft to a fully mission capable status. Included in this program are: Aviation Ground Power Unit (AGPU), Aviation Unit Maintenance Shop Set (AVUM SS), Self-propelled Crane Aircraft Maintenance and Positioning Increment II (SCAMP II) Type 2 (Expeditionary Variant) & Type 1 (Flight Line Variant), Non-Destructive Test Equipment (NDTE), Modernized Flexible Engine Diagnostic System (MFEDS), Modernized Maintenance Stands (MMS), Pitot Static Test Set (PSTS), and development of support equipment required for maintenance of modernized/future force aircraft.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	13.880	2.142	6.808	-	6.808
Current President's Budget	13.528	2.142	6.930	-	6.930
Total Adjustments	-0.352	0.000	0.122	-	0.122
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.352	-			
• Other Adjustments 1	0.000	0.000	0.122	-	0.122

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: EE5: Aviation Ground Support Equipment

Congressional Add: UH-72 Lakota Demonstration of the Next Generation Health Monitoring System (NGHMS)

Congressional Add Subtotals for Project: EE5

FY 2016	FY 2017
5.000	-
5.000	-

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PE 0605830A: *Aviation Ground Support Equipment*
Army

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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
EE5: Aviation Ground Support Equipment	-	13.528	2.142	6.930	-	6.930	4.255	7.191	5.505	6.375	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This Project funds Aviation Ground Support Equipment (AGSE) developmental testing and acquisition of prototypes to enhance the functionality of current and future aircraft maintenance equipment. This will be accomplished by identifying more effective aircraft maintenance equipment, validating new maintenance concepts, improving machine interfaces, updating aircraft maintenance processes, and developing improved diagnostic technologies which will reduce Operation and Support costs. This program provides for the development of rapid battle repair procedures, tools, ground handling, and test equipment to speed the return of aircraft to a fully mission capable status. Included in this program are: Aviation Ground Power Unit (AGPU), Aviation Unit Maintenance Shop Set (AVUM SS), Self-propelled Crane Aircraft Maintenance and Positioning Increment II (SCAMP II) Type 2 (Expeditionary Variant) & Type 1 (Flight Line Variant), Non-Destructive Test Equipment (NDTE), Modernized Flexible Engine Diagnostic System (MFEDS), Modernized Maintenance Stands (MMS), Pitot Static Test Set (PSTS), and development of support equipment required for maintenance of modernized/future force aircraft.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Aviation Ground Power Unit (AGPU)									4.763	-	-	
Description: The AGPU provides external hydraulic, pneumatic, and AC/DC electrical power to meet Army helicopter servicing requirements.												
FY 2016 Accomplishments: Conducted system level testing and evaluation with redesigned components into prototype AGPUs.												
Title: Aviation Unit Maintenance Shop Set (AVUM SS)									1.085	-	1.000	
Description: The AVUM SS consists of three deployable shelters which provide tool loads required for unit-level aviation maintenance tasks.												
FY 2016 Accomplishments: Completed developmental and operational testing of test samples and finalized the technical data package.												
FY 2018 Plans: Develop solution for transporting the one-sided expandable International Organization for Standardization (ISO) shelters.												
Title: SCAMP II, Type 2 (Expeditionary Variant)									0.354	1.449	1.403	

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Description: The SCAMP II, Type 2 will remove and replace major aircraft components (maintenance lifting) in support of Army Aviation Maintenance. Type 2 supports maintenance on unimproved, austere locations, split operations and downed aircraft recovery. FY 2016 Accomplishments: Completed Market Research for SCAMP II, Type 2 crane. Initiated Contracts Requirement Package documentation. Issued Request for Proposal. FY 2017 Plans: Complete Source Selection Evaluation Board, and acquisition documentation supporting a Milestone C decision. Purchase product samples for Source Selection Performance Demonstration Testing. FY 2018 Plans: Conduct customer test and technical manual development.			
Title: SCAMP II, Type 1 (Flight Line Variant) Description: SCAMP II, Type 1 will remove and replace major aircraft components (maintenance lifting) in support of Army Aviation Maintenance. Type 1 is used on improved surfaces and lift and reach the most extreme loads. FY 2018 Plans: Evaluate capability enhancements to legacy system and begin updating the technical manual to current Military Standards.		-	2.906
Title: Non-Destructive Test Equipment (NDTE) Description: NDTE provides Army Aviation Maintenance units with an electronic test instrument to inspect aircraft components and structures without complete disassembly or removal from the aircraft (includes eddy current, ultrasonic, and harmonic bond capabilities). FY 2016 Accomplishments: Purchased product samples, conducted performance verification testing, and technical manual updates.		0.204	-
Title: Modernized Flexible Engine Diagnostic System (MFEDS) Description: The MFEDS is an advanced technology engine test system designed to test and verify flight readiness of engines removed from aircraft for maintenance. FY 2016 Accomplishments:		1.408	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Performed system level performance verification testing.			
Title: Modernized Maintenance Stand (MMS) Description: The Modernized Maintenance Stand provides a stable work platform for aircraft maintainers from ground level to the rotor systems. It enhances the occupational safety environment during scheduled and unscheduled maintenance operations. FY 2016 Accomplishments: Completed performance testing and Source Selection Evaluation Board.		0.057	-
Title: Pitot Static Test Set (PSTS) Description: PSTS is a portable aircraft air data systems tester which provides the capability of troubleshooting, repairing, and verifying proper operation of flight critical aircraft air data systems. FY 2018 Plans: Procure product test samples and conduct testing.		-	0.946
Title: Management Support Services Description: Management Support Services in support of the Aviation Ground Support Equipment Product Management Office. FY 2016 Accomplishments: Continued Management Support Services. FY 2017 Plans: Continue Management Support Services FY 2018 Plans: Continue Management Support Services.		0.306	0.321
Title: Research, Development, Test, and Evaluation (RDTE) Project Test Support Description: RDTE Project Test Support for the Aviation Ground Support Equipment Product Management Office. FY 2017 Plans: Continue Project Test Support		-	0.062
Title: Technical Engineering Services		0.351	0.310
			0.371

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B. Accomplishments/Planned Programs (\$ in Millions)								FY 2016	FY 2017	FY 2018	
Description: Technical Engineering Services in support of Airworthiness and Safety certifications for Aviation Ground Support Equipment. FY 2016 Accomplishments: Continued Technical Engineering Services FY 2017 Plans: Continue Technical Engineering Services FY 2018 Plans: Continue Technical Engineering Services											
Accomplishments/Planned Programs Subtotals								8.528	2.142	6.930	
								FY 2016	FY 2017		
Congressional Add: UH-72 Lakota Demonstration of the Next Generation Health Monitoring System (NGHMS) FY 2016 Accomplishments: Produced data from the Next Generation Health Monitoring Systems that provided the Army with detailed military derived information on Operations and Maintenance savings.								5.000	-		
Congressional Adds Subtotals								5.000	-		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Aviation Ground Support Equipment: <i>Aviation Ground Support Equipment, SSN AZ3520</i>	58.067	48.234	47.404	-	47.404	37.529	37.154	34.795	35.725	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
This project is an aggregate of aviation ground support equipment related projects. While the detailed acquisition strategy varies from program to program, the general strategy for each individual program is to complete the development effort through Government test (developmental and operational). Program documentation for each milestone decision is prepared, as appropriate, concurrently with the development effort.											

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E. Performance Metrics N/A		