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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0210609A / Paladin Integrated Management (PIM)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	83.300	-	83.300	152.440	42.060	6.112	-	-	283.912
ED8: <i>Paladin Integrated Management (PIM)</i>	-	-	-	83.300	-	83.300	152.440	42.060	6.112	-	-	283.912

The FY 2015 OCO Request will be submitted at a later date.

Note

The PIM program is submitted under a new Program Element for the FY 2015 President's Budget. The previous program element was 0604854A, project 516. Artillery Systems - EMD program.

A. Mission Description and Budget Item Justification

Paladin Integrated Management (PIM) is an ACAT 1D Acquisition Program. The program will replace the current fleet of M109 Family of Vehicles (FoV) consisting of the M109A6 Paladin Self Propelled Howitzer and M992A2 Field Artillery Ammunition Supply Vehicle (FAASV). PIM is an Army Modernization Program that addresses a critical capability gap created by the Non-Line of Sight Cannon termination in June of 2009 as well as obsolescence and size/weight and power (SWaP) issues in the M109 FoV current Fleet. The PIM system integrates current Bradley Fighting Vehicle suspension and drive train items, Future Combat Systems (FCS) developed Electric Gun Drive systems and current fleet (M109A6) fire control systems into a new chassis that provides better force protection, survivability and increases electrical power over the current fleet. PIM is a two vehicle system: Self Propelled Howitzer (SPH) and Carrier Ammunition Tracked (CAT). The SPH has all characteristics listed above. The CAT utilizes all these same components and traits less those that relate directly to the cannon system. The PIM system replaces the current M109 FoV on a one for one basis, in the cannon fires battalions in the Armored Brigade Combat Team Formations and the Echelons above Brigade (EAB). The overall intent is to increase Soldier force protection, vehicle survivability, provide an appropriate amount of SWaP capacity to add future capabilities, reduce life cycle costs and extend the life of the M109 FoV through FY2050.

B. Program Change Summary (\$ in Millions)	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	83.300	-	83.300
Total Adjustments	-	-	83.300	-	83.300
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	83.300	-	83.300

UNCLASSIFIED

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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
ED8: <i>Paladin Integrated Management (PIM)</i>	-	-	-	83.300	-	83.300	152.440	42.060	6.112	-	-	283.912
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Paladin Integrated Management (PIM) is an ACAT 1D Acquisition Program. The program will replace the current fleet of M109 Family of Vehicles (FoV) consisting of the M109A6 Paladin Self Propelled Howitzer and M992A2 Field Artillery Ammunition Supply Vehicle (FAASV). PIM is an Army Modernization Program that addresses a critical capability gap created by the Non-Line of Sight Cannon termination in June of 2009 as well as obsolescence and size/weight and power (SWaP) issues in the M109 FoV current Fleet. The PIM system integrates current Bradley Fighting Vehicle suspension and drive train items, Future Combat Systems (FCS) developed Electric Gun Drive systems and current fleet (M109A6) fire control systems into a new chassis that provides better force protection, survivability and increases electrical power over the current fleet. PIM is a two vehicle system: Self Propelled Howitzer (SPH) and Carrier Ammunition Tracked (CAT). The SPH has all characteristics listed above. The CAT utilizes all these same components and traits less those that relate directly to the cannon system. The PIM system replaces the current M109 FoV on a one for one basis, in the cannon fires battalions in the Armored Brigade Combat Team Formations and the Echelons above Brigade (EAB). The overall intent is to increase Soldier force protection, vehicle survivability, provide an appropriate amount of SWaP capacity to add future capabilities, reduce life cycle costs and extend the life of the M109 FoV through FY2050.

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

	FY 2013	FY 2014	FY 2015
Title: Paladin/FAASV Integrated Management (PIM) Development	-	-	55.912
Description: Funding is provided for the following developmental efforts:			
FY 2015 Plans: Finalization of developmental fixes, sub-system qualification, and testing for production as well as the completion of the System Level Developmental testing. Continuance of engineering development and testing for CPOs and Software Phase III efforts required for LRIP production-continue Software Phase II maintenance efforts for Corrective Actions, Producibility, and Obsolescence (CPO) functionality and executing Software Formal Qualification Testing (FQT) for Software Phase III (SW PH III). Start the testing of an Objective Underbelly Kit per guidance of the Defense Acquisition Executive (DAE.) Execute the Log Demonstration and Manual validation supporting Initial Operational Test (IOT) and to meet requirements for fielding. Begin the execution of the Production Qualification Test (PQT) and Full Up System Live-Fire (FUSL) testing phase at Army test centers using Low Rate Initial Production (LRIP) platforms.			
Title: Test and Evaluation	-	-	19.803

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
<p>Description: Funding is provided for the following government test efforts:</p> <p>FY 2015 Plans: Complete testing of developmental fixes, sub-system qualification, and System Level Developmental testing. Complete testing for Corrective Actions, Producibility, and Obsolescence (CPO) and Software Phase III efforts required for Low Rate Initial Production (LRIP) production- complete SW Ph III Formal Qualification Testing (FQT) for the SPH and the CAT platforms. Start the testing of an Objective Underbelly Kit per guidance of the Defense Acquisition Executive (DAE.) Execute the Log Demonstration and Manual validation effort supporting IOT and to meet requirements for fielding. Begin the execution of the PQT and Full Up Systems Live-Fire (FUSL) testing phase at Army test centers using LRIP platforms.</p>			
<p>Title: Program Management</p> <p>Description: Funding is provided for the following program management support:</p> <p>FY 2015 Plans: Continue the Government System Engineering and Program Management for the total program including: Original Equipment Manufacturer (OEM) management consisting of weekly, monthly, and quarterly program management reviews; continue contract execution management for the EMD phase contract until completion of all efforts in FY 16. Manages Government Developmental System Test and Evaluation program as it enters the LRIP testing phase. Management of the program cost, schedule, and performance metrics including making programmatic trade-off decisions. Management of Other Governmental Agencies (OGAs) that support the PIM program.</p>	-	-	1.901
<p>Title: Training</p> <p>Description: Funding is provided for the following training government and contractor efforts:</p> <p>FY 2015 Plans: Complete basic training development to support LRIP Operational Test (OT), Maintenance training to support LOG DEMO and Technical Manual (TM) Validation efforts. Conduct training efforts to validate the training Programs of Instruction (POI's) for designated OT Army units. Complete Training Aids, Devices, Simulators and Simulations (TADSS) for OT designated units going into the Operational Test Phase of the program.</p>	-	-	4.879
<p>Title: Data</p> <p>Description: Funding is provided for the following data contractor efforts:</p> <p>FY 2015 Plans:</p>	-	-	0.805

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Maintain Contractor Technical Data Packages. Continue the validation of Technical Publications that support LOG DEMO and TM Validation as well as fielding's to active and reserve components organizations.			
Accomplishments/Planned Programs Subtotals	-	-	83.300

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• <i>Paladin Integrated Management:</i> <i>Paladin Integrated Management</i>	-	-	247.400	-	247.400	403.900	465.400	665.700	667.800	4,012.547	6,462.747

Remarks

D. Acquisition Strategy

The PIM Program was initiated on 16 August 07 under the BAE Systems, Inc., System Technical Support (STS) Contract W56HZV-07-C-0096. Subsequent work directives were awarded under BAE STS contract W56HZV-07-C-0256 to further define the configuration of the PIM vehicles. On 14 August 2009, a Research, Development, Test and Evaluation (RDT&E) Contract W56HZV-09-C-0550 was awarded to BAE Systems Inc. for the Prototype Development and Fabrication of 7 prototype vehicles (5 PIM Self Propelled Howitzer Systems (SPHS) and 2 PIM Carrier Ammunition Tracked (CAT) vehicles). A Comprehensive Contract Modification (CCM) award to the RDT&E contract was accomplished on 6 Jan 2012. This modification allows for the completion of the Engineering and Manufacturing Development (EMD) Phase and transfers the system responsibility for the program from the Government to BAE Systems Inc. The planned Low-Rate Initial Production (LRIP) contract is of a Fixed Price Incentive Firm Target (FPIF) contract type for procurement of vehicles with a period of performance running from Nov 2013 through approximately Jun 2019. The LRIP contract will provide for three LRIP years with the initial base year including 19 SPHs and 18 CATs and the remaining two option years with 18 sets and 30 sets, respectively (each set consisting of one each SPH and CAT) of PIM vehicles. The Full Rate Production (FRP) contract is planned as a FPIF contract that converts to a Firm Fixed Price (FFP) contract after the second year of FRP. The FRP contract provides for the remaining PIM vehicles to fulfill the requirement up to the Army Acquisition Objective of 580 sets.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Data	SS/CPIF	BAE Systems : York, PA	0.000	-		-		0.805	Dec 2014	-		0.805	-	0.805	-
Training	SS/CPIF	BAE Systems : York, PA	0.000	-		-		4.879	Dec 2014	-		4.879	-	4.879	-
PIM Development-Contractor	SS/CPIF	BAE Systems : York, PA	0.000	-		-		40.407	Dec 2014	-		40.407	-	40.407	-
PIM Development-Government	MIPR	Various OGAs : Various	0.000	-		-		15.505	Dec 2014	-		15.505	-	15.505	-
Subtotal			0.000	-		-		61.596		-		61.596	-	61.596	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PMO/PEO Support	MIPR	PM/PEO Paladin/FAASV : Picatinny	0.000	-		-		1.901	Dec 2014	-		1.901	-	1.901	-
Subtotal			0.000	-		-		1.901		-		1.901	-	1.901	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Level Testing	MIPR	Various OGAs : Various	0.000	-		-		19.803	Dec 2014	-		19.803	-	19.803	-
Subtotal			0.000	-		-		19.803		-		19.803	-	19.803	-

			Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	-		-		83.300		-		83.300	-	83.300	-

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Contractor Testing	4	2012	4	2015
Government Development Test	4	2012	4	2016
Milestone C	1	2014	1	2014
Low Rate Initial Production Contract	1	2014	2	2016
Low Rate Initial Production Deliveries	2	2015	3	2018
Full Up System Live Fire Test	3	2015	4	2016
IOTE	4	2016	4	2016
Full Rate Production Decision	2	2017	2	2017