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Exhibit R-2, PB 2010 Army RDT&E Budget Item Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 2040 - Research, Development, Test & Evaluation, Army/BA 3 - Advanced Technology Development (ATD)					R-1 ITEM NOMENCLATURE PE 0603607A JOINT SERVICE SMALL ARMS PROGRAM					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	16.367	8.781	8.996						Continuing	Continuing
62D: SMALL ARMS ADVANCED TECHNOLOGY DEV (CA)	2.512	.000	.000						Continuing	Continuing
627: JT SVC SA PROG (JSSAP)	13.855	8.781	8.996						Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) matures and demonstrates advanced technologies that integrate into individual and crew served weapons for all Services. This PE supports the maturation and demonstration of Lightweight Small Arms Technologies (LSAT) that offer significantly reduced weight over the currently fielded weapons and ammunition. All efforts are based upon the Joint Service Small Arms Master Plan (JSSAMP), the Joint Capabilities Integration Development System's Small Arms Analysis, and the resulting Capabilities Development Documents for the Services. Project 62D funds congressional special interest items.

Work in this PE is related to and fully integrated with the efforts funded in PE 0602623A (Joint Service Small Arms Program) and PE 0602624A (Weapons and Munitions Technology).

The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.

Work in this PE is performed by the US Army Armament Research, Development, and Engineering Center (ARDEC), Picatinny Arsenal, NJ.

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APPROPRIATION/BUDGET ACTIVITY 2040 - Research, Development, Test & Evaluation, Army/BA 3 - Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603607A JOINT SERVICE SMALL ARMS PROGRAM
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B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	10.629	8.809	9.085	
Current BES/President's Budget	16.367	8.781	8.996	
Total Adjustments	5.738	-.028	-.089	
Congressional Program Reductions	.000	-.028		
Congressional Rescissions	.000	.000		
Total Congressional Increases	.000	.000		
Total Reprogrammings	6.006	.000		
SBIR/STTR Transfer	-.268	.000		

Change Summary Explanation

FY08 increased because of the transfer in of High Explosive Air-Burst (HEAB) Weapon Technology.

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APPROPRIATION/BUDGET ACTIVITY 2040 - Research, Development, Test & Evaluation, Army/BA 3 - Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603607A JOINT SERVICE SMALL ARMS PROGRAM					PROJECT NUMBER 62D	
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
62D: SMALL ARMS ADVANCED TECHNOLOGY DEV (CA)	2.512	.000	.000						Continuing	Continuing
A. Mission Description and Budget Item Justification										
These are Congressional Interest Items										
B. Accomplishments/Planned Program (\$ in Millions)							FY 2008	FY 2009	FY 2010	FY 2011
Polymer Small Arms Production							1.545	.000	.000	
Modular Individual Weapon Sight and Low Cost Remote Weapon Station							.967	.000	.000	
Total							2.512	.000	.000	
C. Other Program Funding Summary (\$ in Millions)										
N/A										
D. Acquisition Strategy										
N/A										
E. Performance Metrics										
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.										

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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
627: JT SVC SA PROG (JSSAP)	13.855	8.781	8.996						Continuing	Continuing

A. Mission Description and Budget Item Justification

This project matures and demonstrates advanced technologies that provide greater lethality and range at a significantly reduced weight. These technologies lighten the Soldier's load, provide improved battlefield mobility, and reduce logistics burden while maintaining or improving current levels of performance.

Work in this PE is related to and fully integrated with the efforts funded in PE 0602623A (Joint Service Small Arms Program) and PE 0602624A (Weapons and Munitions Technology).

The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.

Work in this PE is performed by the US Army Armament Research, Development, and Engineering Center (ARDEC), Picatinny Arsenal, NJ.

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

	FY 2008	FY 2009	FY 2010	FY 2011
Small Business Innovative Research/Small Business Technology Transfer Programs	.000	.213	.000	
Lightweight Small Arms Systems (LSAS): The LSAS takes technologies that were successfully demonstrated in the Lightweight Small Arms Technologies (LSAT) effort and applies them to specific weapon systems and missions. In FY08, matured and demonstrated high payoff technologies from LSAT that were technically successful, affordable, and manufacturable. Identified and continued maturation of selected ammunition and weapon configurations including cased-telescoped and caseless ammunition, lightweight machine guns and rifles/carbines. In FY09, mature and demonstrate improved caseless ammunition formulation, fabricate small quantities of ammunition and weapons prototypes in order to conduct additional testing of hardware and validate design and analyses; begin to assess integration of technologies being developed under PE 0602623A such as graphite foam, improved lethality projectiles, and recoilless components. In FY10, will demonstrate TRL 5 for both the new lightweight machine gun and caseless ammunition, and continue integration of successful components tested from PE 0602623A.	7.142	7.319	7.428	

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B. Accomplishments/Planned Program (\$ in Millions)			FY 2008	FY 2009	FY 2010
High Explosive Air-Burst Weapon Technology: In FY08, built two Individual Airburst Weapon systems demonstrators and validated design of weapon and airburst rounds. Validated fuze safety performance in preparation for test a Safety Certification from the Army Fuze Safety Review Board. Procured additional hardware to support building three additional demonstrators and sufficient rounds to enable design validation testing and user assessment.			6.000	.000	.000
Small Arms Technology Assessment and Effectiveness Modeling: This task addresses the application of technology component solutions to mitigate identified capability gaps in the JSSAP strategy. In FY08, began system integration planning and developed additional scenarios to assess utility of existing and potential future weapon concepts utilizing current force-on-force simulation. In FY09, further mature higher order simulations to assess the utility of complimentary programs in PE 0602623A/project H21. In FY10, will demonstrate and optimize weapon concepts at the individual warfighter level and small team level that are derived from simulation results obtained previously utilizing force-on-force effectiveness simulations.			.713	1.249	1.568
Total			13.855	8.781	8.996
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy N/A					
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.					

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