

UNCLASSIFIED

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 1999
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BUDGET ACTIVITY 3 - Advanced Technology Development	PE NUMBER AND TITLE 0603654A Line-of-Sight Technology Demonstration	PROJECT D460
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COST (In Thousands)	FY1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
D460 LOSAT Technology Demonstration	4683	11920	41619	52940	57527	26565	0	0	0	357730

A. Mission Description and Budget Item Justification: This program focuses on integration of the Line-of-Sight Anti-Tank (LOSAT) weapon system into an air mobile configuration in order to help remedy light forces lethality shortfall against heavy armor. The LOSAT weapon system consists of a kinetic energy (KE) missile launcher mounted on a Heavy High Mobility Multi-purpose Wheeled Vehicle (HMMWV) chassis. LOSAT offers a near term advanced capability for overwhelming armor destruction with a high rate of fire, increased range, and increased force survivability. LOSAT, deployed in the light forces, will provide the decisive edge to win swiftly with minimum casualties, and provides an assault support weapon capability. LOSAT is strategically and tactically deployable, giving Commanders and decision makers greater flexibility. The performance of this hypervelocity kinetic energy missile (velocity of a mile per second) is not affected by the proliferation of emerging threat active protect systems and enhanced reactive armors which are both rapidly becoming available on the global marketplace. LOSAT was initiated as a DoD-approved Advanced Concept Technology Demonstration (ACTD) program in FY1998 to position the technology for future acquisition decisions; demonstrate subsystem capabilities in flight tests and dirty battlefield environment; evaluate the utility of the LOSAT technology for light forces; demonstrate an integrated HMMWV based LOSAT system in flight test and advanced warfighting experiments; and evaluate affordability issues. The ACTD program is a cost-effective means to assess the operational value of LOSAT to light forces through deployment with the XVIII Airborne Corps while longer term Army After Next applied research efforts continue for a small Compact Kinetic Energy Missile. The work in this program element is consistent with the Army Science and Technology Master Plan, and the Army Modernization Plan. Work on this program is conducted through the CCAWS Project Office in Huntsville, AL. The prime contractor is Lockheed Martin-Vought Systems, Grand Prairie, TX. Subcontractors are Raytheon, Dallas, TX, and Honeywell, Minneapolis, MN.

- FY 1998 Accomplishments:**
- 1775 - Developed test missile software.
 - 2610 - Designed/fabricated missile prototype electronic hardware and Inertial Measurement Unit (IMU), and conducted hardware in-the-loop (HWIL) tests.
 - 298 - Initiated fire unit software development.
- Total 4683

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FY 1999 Planned Program:		
<ul style="list-style-type: none"> • 4294 - Conduct design analyses of fire unit electro-optical system and carbon dioxide pulsed laser. • 3133 - Conduct initial design and review of missile mechanical design/and initiate ACTD prototype material purchase to be used in testing. • 2785 - Conduct initial design and review of fire unit mechanical design, and initiate ACTD prototype material purchases to be used in testing. • 1160 - Conduct HWIL/closed loop simulation (CLS) evaluation/verification of new hardware/software designs. • 232 - Initiate design of prototype tooling and test equipment. • 316 - Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Programs.. 		
Total	11920	
FY 2000 Planned Program:		
<ul style="list-style-type: none"> • 1248 - Conduct weapon system detailed design review and assess all soldier/user issues. • 9572 - Complete missile design, conduct component tests, and initiate fabrication of prototype tactical missile. • 8740 - Complete fire unit design, and component tests, and initiate fabrication of prototype tactical fire unit. • 8324 - Conduct software code and test of fire unit and missile software requirements. • 1249 - Conduct HWIL/CLS simulation evaluation/verification of new hardware/software designs. • 1665 - Complete design of training equipment and conduct initial user assessment. • 8740 - Complete design/fabrication of prototype tooling and test equipment. • 2081 - Assess alternatives to optimize LOSAT system survivability. 		
Total	41619	
FY 2001 Planned Program:		
<ul style="list-style-type: none"> • 21176 - Finalize component qualification tests and begin fabrication of prototype tactical missiles. • 17999 - Finalize component qualification tests and begin fabrication of prototype tactical fire units. • 2118 - Perform pre-flight performance analysis/predictions in support of flight test program. • 9529 - Finalize development and test of fire unit and missile software for use in flight tests and soldier demonstrations. • 2118 - Fabricate and deliver training devices and prototype simulators for initial soldier training. 		
Total	52940	
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B. Program Change Summary	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 1999 PB)	4845	20099	40435	55886
Appropriated Value	4845	12000		
Adjustments to Appropriated Value				
a. Congressional General Reductions		-80		
b. SBIR / STTR	-122			
c. Omnibus or Other Above Threshold Reduction	-40			
d. Below Threshold Reprogramming				
e. Rescissions				
Adjustments to Budget Years Since <u>FY 1999</u> PB			+1184	-2946
Current Budget Submit (<u>FY 2000/2001</u> PB)	4683	11920	41619	52940

Change Summary Explanation: Funding - FY 1999 – Appropriated value reflects Congressional funding reduction.

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