

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)							February 2006			
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604823A - FIREFINDER							
COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		10332	45405	70151	62256	52527	9860	103	0	414096
L85	PHOENIX BATTLEFIELD SENSOR SYS AN/TPQ-47	10332	0	0	0	0	0	0	0	65216
L86	LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)	0	23537	16934	7988	0	0	0	0	48459
L87	LONG RANGE COUNTERFIRE RADAR	0	0	0	11	101	109	86	0	108885
L88	ENHANCED AN/TPQ 36	0	21868	53217	54257	52426	9751	17	0	191536
<p>A. Mission Description and Budget Item Justification: This Program funds design, development and test of primary target acquisition and counterfire radars to automatically detect, locate and classify hostile indirect fire weapons (mortars, artillery, rockets, and missiles). This PE directly supports the prioritization, tracking, and locating of targets, and dissemination of that information for simultaneous attack of multiple threats. It provides the Warfighter with continuous and responsive counterfire target acquisition systems for all types and phases of military operations. Project L85, Phoenix Battlefield Sensor System AN/TPQ-47, was re-structured in FY05 to an alternate contract conclusion due to technical challenges and competing near term radar performance shortfalls identified in Operation Iraqi Freedom (OIF). Project L86, Advanced Lightweight Counter Mortar Radar (A-LCMR), will provide 360 degree coverage and be used to detect, locate and report hostile locations of enemy indirect firing systems out to a range of 10 kilometers. Project L88, Enhanced AN/TPQ-36 (EQ-36), is a highly mobile radar system that will leverage the latest in technology design to accelerate technology infusion and increase range while improving False Alarm Rate, reducing obsolescence and increasing reliability. EQ-36 will provide 90 degree coverage and extended range, with an incremental development to increase detection capability to 360 degrees. The EQ-36 will be interoperable with Firefinder and future Battle Command Systems.</p>										

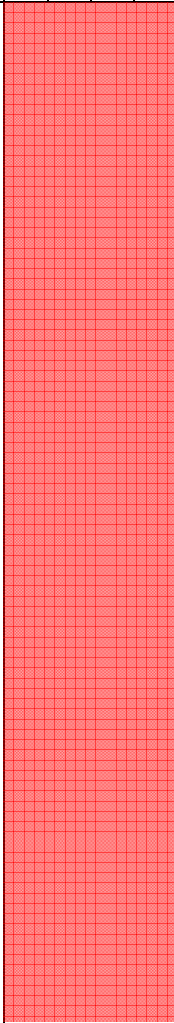






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	FY 2005	FY 2006	FY 2007	
<u>B. Program Change Summary</u>				
Previous President's Budget (FY 2006)	21764	46061	69085	
Current BES/President's Budget (FY 2007)	10332	45405	70151	
Total Adjustments	-11432	-656	1066	
Congressional Program Reductions		-199		
Congressional Rescissions		-457		
Congressional Increases			1066	
Reprogrammings	-10832			
SBIR/STTR Transfer	-600			
Adjustments to Budget Years				
Change Summary Explanation: Funding FY2005 funding was redirected to higher priority Army efforts.				

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COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L86	LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)	0	23537	16934	7988	0	0	0	0	48459
<p><u>A. Mission Description and Budget Item Justification:</u> The Advanced Lightweight Counter Mortar Radar (A-LCMR) will provide 360 degrees of azimuth coverage and be used to detect, locate, and report hostile locations of enemy indirect firing systems. It will cover a range of 500 meters to 10 kilometers and provide observed fires from friendly units. A-LCMR shall be a digitally connected, day/night mortar, cannon, and rocket locating system. The A-LCMR will be a spiral enhancement to the existing LCMR. The LCMR was originally designed to operate as a stand alone capability for Special Forces and is man portable when disassembled. This capability has been fielded to Operation Iraqi Freedom (OIF) as a Limited Procurement Urgent (LPU) capability. The RDTE program will transition in FY 2006 from Budget Activity 3, Advanced Technology Development, PE 0603772A to an Army 6.4 program of record.</p> <p>FY2007 funds the continuation of primary development of seven A-LCMR test articles.</p>										
<u>Accomplishments/Planned Program</u>							<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
Primary development of seven (7) A-LCMR test articles to include non recurring engineering and Program Management support.							0	17278		12131
Develop/build Radar Environmental Simulator (RES) to simulate system hardware/software and emulate the radar performance.							0	5190		0
Activities to support Development Test/Operational Test. Efforts include conduct of Live Ammunition Test at Yuma Proving Ground (YPG), Limited User Test, ammunition and manpower to support system test.							0	1069		4803
Total							0	23537		16934
<u>B. Other Program Funding Summary</u>		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PE: 0603772 Advanced Tactical Computer Science & Sensor Tech (Congressional Plus Up)		2500	0	0	0	0	0	0	0	2500
SSN: B05201 Lightweight Counter Mortar Radar		0	4938	16326	44193	44603	34556	35111	0	179727
<p><u>C. Acquisition Strategy</u> The Lightweight Counter Mortar Radar (LCMR) prototype was developed as a Special Operations Command (SOCOM) program under the Office of Special Technology, Broad Agency Announcement (BAA). The LCMR Engineering Development Program was also SOCOM funded which resulted into a functional system. The Advanced LCMR (A-LCMR) will leverage the SOCOM developed program and serve as a spiral development effort to provide greater range, accuracy, interoperability and</p>										

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<p>transportability to support Army's requirements. Based on the results of a Request For Information released Nov 2005, the current acquisition strategy is to award a contract in 3QFY06 and spiral the existing system into the Army's objective system. A Milestone decision is planned for 3QFY06.</p>		

ARMY RDT&E COST ANALYSIS (R3)										February 2006		
BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604823A - FIREFINDER							L86		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Dev	TBD	TBD	0	0		13011	3Q	8514	1Q	Continue	Continue	0
Radar Environmental Simulators (RES)	TBD	TBD	0	0		5190	3Q	0		5190	5190	0
Systems Engineering Contractor	SS/T&M	Various	0	0		1044	1-3Q	1060	1-3Q	Continue	Continue	0
Systems Engineering Government	MIPR	CERDEC, Fort Monmouth, NJ	0	0		613	2Q	308	1Q	Continue	Continue	0
Subtotal:			0	0		19858		9882		Continue	Continue	0
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Support (Government)	MIPR	Various	0	0		176	1-4Q	159	1-4Q	Continue	Continue	0
Subtotal:			0	0		176		159		Continue	Continue	0
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Support (Contractor)	MIPR	TBD	0	0		0		530	2-3Q	Continue	Continue	0
Developmental Test & Evaluation/LUT	MIPR	Yuma, AZ/WSMR, NM	0	0		519	3Q	3418	1-2Q	Continue	Continue	0
Test Support	MIPR	Various	0	0		240	2Q	248	1-2Q	Continue	Continue	0
Subtotal:			0	0		759		4196		Continue	Continue	0
IV. Management Services	Contract	Performing Activity &	Total	FY 2005	FY 2005	FY 2006	FY 2006	FY 2007	FY 2007	Cost To	Total	Target

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604823A - FIREFINDER						PROJECT L86		
	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
Program Management (Contractor)	C/FP	Various	0	0		995	1-3Q	1011	1-3Q	Continue	Continue	0
Program Management	In House	PM NV/RSTA, Fort Monmouth, NJ	0	0		972	1-4Q	987	1-4Q	Continue	Continue	0
Program Management (Government Matrix)	MIPR	Various	0	0		777	1-2Q	699	1-2Q	Continue	Continue	0
Subtotal:			0	0		2744		2697		Continue	Continue	0
Project Total Cost:			0	0		23537		16934		Continue	Continue	0

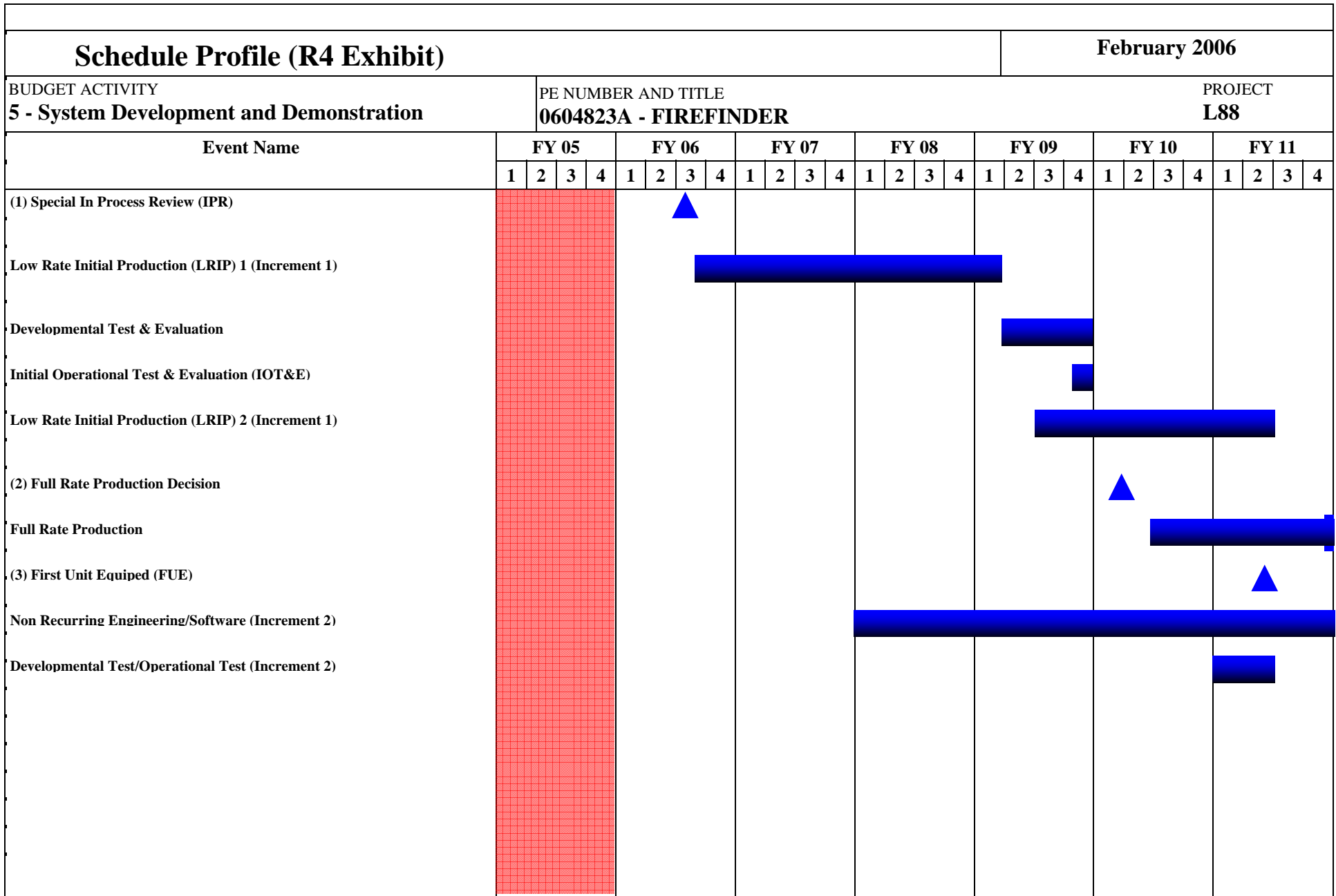
Schedule Profile (R4 Exhibit)																	February 2006															
BUDGET ACTIVITY					PE NUMBER AND TITLE																				PROJECT							
5 - System Development and Demonstration					0604823A - FIREFINDER																				L86							
Event Name					FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Milestone Decision																																
Development of A-LCMR Test Articles																																
Development Test/Operational Test (DT/OT) (IOTE)																																
(2) Full Rate Production (FRP) Decision																																
Full Rate Production (FRP)																																
(3) First Unit Equipped (FUE)																																
																																

Schedule Detail (R4a Exhibit)						February 2006	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604823A - FIREFINDER			PROJECT L86	
<u>Schedule Detail</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Milestone Decision		3Q					
Development of A-LCMR Test Articles		3-4Q	1-3Q				
Developmental Test/Operational Test (DT/OT) (IOTE)			2-3Q				
Full Rate Production (FRP) Decision			3Q				
Full Rate Production (FRP)			3-4Q	1-4Q	1-4Q	1-4Q	1-4Q
First Unit Equipped (FUE)				3Q			

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604823A - FIREFINDER				PROJECT L88		
COST (In Thousands)		FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L88	ENHANCED AN/TPQ 36	0	21868	53217	54257	52426	9751	17	0	191536
<p>A. Mission Description and Budget Item Justification: The Enhanced AN/TPQ-36 (EQ-36) is a highly mobile radar system designed to classify targets for automatic first-round location of mortar, cannon and rocket enemy fires and to provide observed fires from friendly units. The EQ-36 will provide 90 degree coverage and extended range, with a shorter range 360 degree coverage for mortars. The EQ-36 will provide 32KM range coverage for mortars/cannon and 60KM for rockets. This program will leverage the latest in technology design to provide increased range as well as increased reliability, availability, and maintainability. The EQ-36 will provide digital communications and be interoperable with Firefinder and future Battle Command Systems. The system will be capable of drive-on/drive off C-130 and will be mounted on standard Army vehicles.</p> <p>FY2007 funds prototype manufacturing, development engineering of five (5) Low Rate Initial Production (LRIP) Increment I systems.</p>										
Accomplishments/Planned Program						FY 2005	FY 2006	FY 2007		
Primary Development of five (5) Enhanced AN/TPQ-36 Low Rate Initial Production (LRIP) (Increment 1) systems, increased capabilities (Increment 2), and associated Program Management support to meet the Army's counterfire requirements.						0	17508	53217		
Develop/Build Radar Environmental Simulator (RES) to simulate system hardware/software and emulate the radar performance.						0	4360	0		
Total						0	21868	53217		
B. Other Program Funding Summary		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
B05310 Enhanced AN/TPQ-36		0	0	0	15624	86750	103827	82422	0	288623
<p>C. Acquisition Strategy The Enhanced AN/TPQ-36 (EQ-36) leverages technology developed in the Multi-Mission Radar Advanced Technology Objective (ATO) program incorporating the latest antenna technology into the AN/TPQ-36. A Request For Information (RFI) was released in 2QFY05 with a follow up RFI in 1QFY06 to assess technology readiness and viability of competition in industry. A competitive LRIP contract award is planned for 3QFY06 following a Special In Process Review (IPR) also planned for 3QFY06. In order to field the EQ-36 capability to the Warfighter in the most expeditious manner, the EQ-36 will be produced in two increments based on two tiers of technical threshold requirements. Increment 1 capabilities are planned to be fielded as a replacement to the AN/TPQ-36 radar system. Increment 2 capabilities, which will provide increased performance over Increment 1, during non-recurring engineering efforts and inserted to the Full Rate Production (FRP) line after being fully tested and approved. LRIP 1 units will be utilized for test and evaluation.</p>										

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	TBD	TBD	0	0		12960	3Q	48501	1Q	Continue	Continue	0
Radar Environmental Simulators (RES)	TBD	TBD	0	0		4360	3Q	0		0	4360	0
Systems Engineering (Contractor)	SS/T&M	Various	0	0		900	1-3Q	927	1-3Q	Continue	Continue	0
Systems Engineering (Government)	MIPR	CERDEC, Fort Monmouth, NJ	0	0		300	2Q	309	1Q	Continue	Continue	0
Subtotal:			0	0		18520		49737		Continue	Continue	0
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development Support (Government)	MIPR	Various	0	0		125	1-4Q	129	1-4Q	Continue	Continue	0
Subtotal:			0	0		125		129		Continue	Continue	0
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Support	MIPR	Various	0	0		225	1-2Q	232	1-2Q	Continue	Continue	0
Subtotal:			0	0		225		232		Continue	Continue	0
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Management (Contractor)	C/FP	Various	0	0		1029	1-3Q	1060	1-3Q	Continue	Continue	0

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Program Management (Government)	In House	PM NV/RSTA, Fort Monmouth, NJ	0	0		1555	1-4Q	1633	1-4Q	Continue	Continue	0
Program Management (Matrix)	MIPR	Various	0	0		414	1-2Q	426	1-2Q	Continue	Continue	0
Subtotal:			0	0		2998		3119		Continue	Continue	0
Project Total Cost:			0	0		21868		53217		Continue	Continue	0



Schedule Detail (R4a Exhibit)						February 2006	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604823A - FIREFINDER			PROJECT L88	
<u>Schedule Detail</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Special In Process Review (IPR)		3Q					
Low Rate Initial Production (LRIP) 1 (Increment 1)		3-4Q	1-4Q	1-4Q	1Q		
Developmental Test & Evaluation					2-4Q		
Initial Operational Test & Evaluation (IOT&E)					4Q		
Low Rate Initial Production (LRIP) 2 (Increment 1)					3-4Q	1-4Q	1-2Q
Full Rate Production (FRP) Decision						2Q	
Full Rate Production (FRP)						3-4Q	1-4Q
First Unit Equipped (FUE)							2Q
Non Recurring Engineering/Software (Increment 2)				1-4Q	1-4Q	1-4Q	1-4Q
Development Test/Operational Test (Increment 2)							1-2Q