

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	159175	1423146	2700455	3791837	3334655	2161868	1558460	Continuing	15129595
470 FUTURE COMBAT SYSTEM - SDD	159175	0	0	0	0	0	0	0	159175
F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	Continuing	459755
F60 FAMILY OF SYSTEMS, ANAL&INT	0	173719	135903	168624	172187	115959	108354	Continuing	874746
F61 GOVERNMENT SUPPORT COSTS	0	305728	488750	615028	547652	456057	409729	Continuing	2822944
F62 MISSION EQUIPMENT PLATFORMS	0	139286	634630	1208793	953321	367634	139362	Continuing	3443026
F63 NETWORK SOFTWARE	0	117434	380491	500953	386237	220761	155530	Continuing	1761406
F64 OTHER CONTRACT COSTS	0	329501	246935	336042	277395	149082	114361	Continuing	1453316
F65 S OF S ENGR & PROG MGT	0	200023	461924	436673	365618	270763	180889	Continuing	1915890
F66 S OF S TEST AND EVALUATION	0	59216	54802	80083	94624	74414	83109	Continuing	446248
F67 SUPPORTABILITY	0	5518	31754	55324	55160	38191	28813	Continuing	214760
F68 SYS INTEGRATION MGT	0	0	51861	54602	44555	32126	31034	Continuing	214178
F69 TRAINING	0	8151	21797	30876	26346	14606	12208	Continuing	113983
F70 NLOS LAUNCH SYSTEM	0	52022	76445	168278	311203	374630	267590	Continuing	1250168
F71 JOINT MILITARY INTEL PROG	0	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:Future Combat Systems (FCS) will operate as a System of Systems (SoS) that will network existing systems, systems already under development, and new systems to be developed to meet the needs of the Unit of Action (UA) (UA is analogous to a brigade). The network will enable improved intelligence, surveillance and reconnaissance, battle command, real time sensor-shooter linkages, and increased synergy between echelons and within small units. It will also enable the UA to connect to the Unit of Employment (UE) (UE is analogous to a division), joining capabilities, and national assets making these capabilities available to the small units of the UA.

FCS enables the networked UA to develop the situation in and out of contact, set conditions, maneuver to positions of advantage to close with and destroy the enemy through standoff attack and combat assault as articulated in the Future Force UA Operations and Organizational (O&O) plan.

The FCS program is contained in two Program Elements (PEs): Non-Line of Sight - Cannon (NLOS-C) and Armored Systems Modernization (ASM). The NLOS-C PE contains the development effort associated with NLOS-C unique work and all Manned Ground Vehicles (MGV) common components. PE ASM contains the development effort for the balance of the MGVs, Unmanned Ground Vehicles (UGVs), Unmanned Air Vehicles (UAVs), Non-line of Sight - Launch System

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<p>(NLOS-LS), and SoS development efforts including network, integration, and software.</p> <p>Army transformation is grounded in the operational framework of joint doctrine and concepts for future joint and combined operations. Transforming to the Future Force and developing the FCS is the Army's number one acquisition priority. The FCS family of systems (FoS) is being designed with the joint fight in mind.</p> <p>FCS is comprised of a family of advanced, networked air and ground based maneuver, maneuver support, and sustainment systems that will include manned and unmanned platforms which are networked via a Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) architecture, including networked communications, network operations, sensors, battle command systems, and manned and unmanned reconnaissance and surveillance capabilities. This will enable FCS to achieve improved situational understanding and operations at a level of synchronization heretofore unachievable.</p> <p>The outcome of the FCS FY04 budget justification brief of 24 November 2003 to the four defense committees was to pursue formal approval of the Army reprogramming request to create the FCS program using the Work Breakdown Structure (WBS) and the Earned Value Management System (EVMS).</p> <p>Based upon discussions with the staffers of the four defense committees, the R Forms will now be based on the WBS program management structure. This will provide Congress the same program baseline data for budget justification, as the Program Manager uses for program management. The two PEs and fourteen projects reflect the WBS reporting structure that will be provided to Congress quarterly. A full description of the projects can be found in the project level R2 form.</p> <p>This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).</p>		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)**February 2004****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604645A - Armored Systems Modernization (ASM)-Eng.
Dev.**

<u>B. Program Change Summary</u>	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	239213	1701331	2458373
Current Budget (FY 2005 PB)	159175	1423146	2700455
Total Adjustments	-80038	-278185	242082
Congressional program reductions	-3179	-12667	
Congressional rescissions			
Congressional increases			
Reprogrammings	-70014		
SBIR/STTR Transfer	-6845		
Adjustments to Budget Years		-265518	242082

Adjustments in FY2004 and FY2005 are based upon the creation of a new Program Element (PE) for NLOS-C as directed by Congress.

Adjustments to Budget Years:

FY04 - Decreases are based on the separation of the NLOS-C Program Element (PE) from within this PE as well as inflation adjustments.

FY05 - Increase of \$242,082 to fund to the Army Cost Position (ACP). This increase will allow the FCS program to begin Army transformation this decade.

Schedule Detail (R4a Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.	PROJECT 0604645A
<p><u>Schedule Detail:</u> Not applicable for this item.</p>		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

470

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
470 FUTURE COMBAT SYSTEM - SDD	159175	0	0	0	0	0	0	0	159175

A. Mission Description and Budget Item Justification: The Future Combat Systems (FCS) FY03 budget was used for the following activities:

- Milestone B support.
- System Development and Demonstration (SDD) contract negotiation and award.
- First quarter of SDD execution which included System of Systems (SoS) and Family of Systems (FoS) engineering and requirements analysis (decomposing Operational Requirement Document (ORD) and Operations and Organizational (O&O) plan into performance specifications, the development of the System of Systems Common Operating Environment (SoSCOE), and modeling and simulation developed to support trade studies.

This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).

<u>Accomplishments/Planned Program</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
SoS Engineering and Program Management	59795	0	0
FoS Analysis and Integration	29651	0	0
Network Software	3458	0	0
Systems Integration Management	0	0	0
Supportability	1738	0	0
Training	1135	0	0
SoS Test and Evaluation	2648	0	0
Other Contract Costs - includes termination liability	31398	0	0
Government PMO and OGA - including taxes and test costs	29175	0	0
Common Components	177	0	0
Totals	159175	0	0

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

470

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires	127951	0	0	0	0	0	0	0	238538
603854A F47 Non-Line of Sight - Cannon	306778	0	0	0	0	0	0	0	306778
604645A F49 Non-Line of Sight-Launch System	0	0	0	0	0	0	0	0	0
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207

C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's MS B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirements Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved and signed by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance into System Development and Demonstration (SDD) for the Army's FCS Program. It also approved the strategy of maintaining a single funding line (Program Element (PE)), a shortened Acquisition Life Cycle, and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's cost estimates.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT 470		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Network Software	OTA	The Boeing Company, Seattle WA	0	3458	3Q	0		0		0	3458	0
b . FoS Analysis and Integration	OTA	The Boeing Company, Seattle Wa	0	29651	3Q	0		0		0	29651	0
c . Common Components	OTA	The Boeing Company, Seattle WA	0	177	3Q	0		0		0	177	0
d . System of Systems Engineering & Program Management (Contractor)	OTA	The Boeing Company, Seattle WA	0	59795	3Q	0		0		0	59795	0
e . Supportability	OTA	The Boeing Company, Seattle WA	0	1738	3Q	0		0		0	1738	0
f . Training	OTA	The Boeing Company, Seattle WA	0	1135	3Q	0		0		0	1135	0
g . SoS Test and Evaluation	OTA	The Boeing Company, Seattle WA	0	2648	3Q	0		0		0	2648	0
h . Other contract Costs - Includes termination liability	OTA	The Boeing Company, Seattle WA	0	31398	3Q	0		0		0	31398	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					470			
I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	130000		0		0		0	130000	0	
Subtotal:													
Remarks: Current FY03 totals based on November 03 CPR data.													
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Government PMO and OGA			0	29175		0		0		0	29175	0	
Subtotal:			0	29175		0		0		0	29175	0	
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . System Test, Simulation, and Analysis- Government & Contractor	Various	TBD	0	0		0		0		0	0	0	
Subtotal:			0	0		0		0		0	0	0	

ARMY RDT&E COST ANALYSIS(R3)										February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT 470		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Core Program Support and OGA's	Various	PM FCS	0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			0	159175		0		0		0	159175	0

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.				PROJECT 470
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Acquisition Strategy Report	2Q						
Operational Requirements Document (ORD)	2Q						
System Development & Demonstration (SDD) Solicitation	2Q						
MS B	3Q						
SDD Contract Award for FCS	3Q						
Organizational & Operational (O&O)	4Q						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004																		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.			PROJECT F59																		
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost																
F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	Continuing	459755																
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contractor efforts for this project are found in the program Work Breakdown Structure (WBS 1.1.2.3.2). Common components are developed and produced for inclusion into more than one vehicle platform. This includes contractor development engineering, prototypes and integration and assembly of common components. This project reflects the budget breakout negotiated with the Congressional staffers from the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees.</p> <p>The effort in this project ensures the following:</p> <ul style="list-style-type: none"> - Definition, development, procurement, fabrication, integration, and test of common subsystems. - Definition, documentation, and management of subsystem interfaces in an open architecture design. - Verification of functions and performance characteristics and requirements of common and mission equipment subsystem prototypes through tests. Functional and performance demonstration through modeling and simulation of the end item will be used, along with prototypes, to validate functionality and performance requirements. <p>Since all ground common components for manned vehicles are included in the Non-Line of Sight - Cannon (NLOS-C) PE, this project only contains the following common components: Sensors (air), communication (air), autonomous navigation system (ANS).</p> <p><u>This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).</u></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 75%; text-align: left; padding: 5px;"><u>Accomplishments/Planned Program</u></th> <th style="width: 12.5%; text-align: center; padding: 5px;">FY 2003</th> <th style="width: 12.5%; text-align: center; padding: 5px;">FY 2004</th> <th style="width: 12.5%; text-align: center; padding: 5px;">FY 2005</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Communication System - Air</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">19800</td> <td style="text-align: center; padding: 5px;">33126</td> </tr> <tr> <td style="padding: 5px;">Sensors Air</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">3000</td> <td style="text-align: center; padding: 5px;">29426</td> </tr> <tr> <td style="padding: 5px;">Autonomous Navigation</td> <td style="text-align: center; padding: 5px;">0</td> <td style="text-align: center; padding: 5px;">6100</td> <td style="text-align: center; padding: 5px;">41669</td> </tr> </tbody> </table>										<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005	Communication System - Air	0	19800	33126	Sensors Air	0	3000	29426	Autonomous Navigation	0	6100	41669
<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005																						
Communication System - Air	0	19800	33126																						
Sensors Air	0	3000	29426																						
Autonomous Navigation	0	6100	41669																						

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

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**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F59

Accomplishments/Planned Program (continued)

Common Vehicle Utility Subsystem

FY 2003

FY 2004

FY 2005

0

3648

10942

Totals

0

32548

115163

B. Other Program Funding Summary

FY 2003

FY 2004

FY 2005

FY 2006

FY 2007

FY 2008

FY 2009

To Compl

Total Cost

603645A F48 Networked Fires (FY03 only)

127951

0

0

0

0

0

0

0

127951

603854A F47 Non-Line of Sight – Cannon
(FY03 only)

306778

0

0

0

0

0

0

0

306778

604645A 470 FCS SDD (FY03 only)

159175

0

0

0

0

0

0

0

159175

604645A F49 Non-Line of Sight – Launch
System (FY03 only)

0

0

0

0

0

0

0

0

0

603005A 53G FCS S & T Activities for Future
Spirals

162000

112659

109360

48188

0

0

0

0

432207

604647A F58 Non-Line of Sight – Cannon

0

260495

497643

459084

285095

104452

32388

0

1639157

604645A F60 Family of Systems Analysis &
Integration

0

173719

135903

168624

172187

115959

108354

0

874746

604645A F61 Government Support Costs

0

305728

488750

615028

547652

456057

409729

0

2822944

604645A F62 Mission Equipment Platforms

0

139286

634630

1208793

953321

367634

139362

0

3443026

604645A F63 Network Software

0

117434

380491

500953

386237

220761

155530

0

1761406

604645A F64 Other Contract Costs

0

329501

246935

336042

277395

149082

114361

0

1453316

604645A F65 System of Systems Engineering &
Program Management

0

200023

461924

436673

365618

270763

180889

0

1915890

604645A F66 System of Systems Test &
Evaluation

0

59216

54802

80083

94624

74414

83109

0

446248

604645A F67 Supportability

0

5518

31754

55324

55160

38191

28813

0

214760

604645A F68 Integration Management

0

0

51861

54602

44555

32126

31034

0

214178

604645A F69 Training

0

8151

21797

30876

26346

14606

12208

0

113984

604645A F70 Non-Line of Sight–Launch System

0

52022

76445

168278

311203

374630

267590

0

1250168

WTCV G86100 FCS Production

0

0

0

0

752324

3187371

3153325

0

7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
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<p>C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirements Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)

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PROJECT

F59

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Communication System - Air	OTA	The Boeing Company - Seattle, Washington - See remark 1	0	0		19800	1-3Q	33126	1-3Q	0	52926	0
b . Sensors - Air	OTA	The Boeing Company - Seattle, Washington - See remark 2	0	0		3000	1-3Q	29426	1-3Q	0	32426	0
c . Autonomous Navigation	OTA	The Boeing Company - Seattle, Washington See remark 3	0	0		6100	1-3Q	41669	1-3Q	0	47769	0
d . Common Vehicle Utility Subsystem	OTA	The Boeing Company - Seattle, Washington See remark 4	0	0		3648	1-3Q	10942	1-3Q	0	14590	0
Subtotal:			0	0		32548		115163		0	147711	0

Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with the Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.

All funding reserved for statutory reductions (SIBR/STTR) are accounted for in Program Element (PE) 0604645A, Project 61, Government Support Cost.

Remark 1 - Subcontractor: BAE Systems IESI-Nashua, NH

Remark 2 - Subcontractor: Northrop Grumman Electronic Systems Division-Linthicum, MD

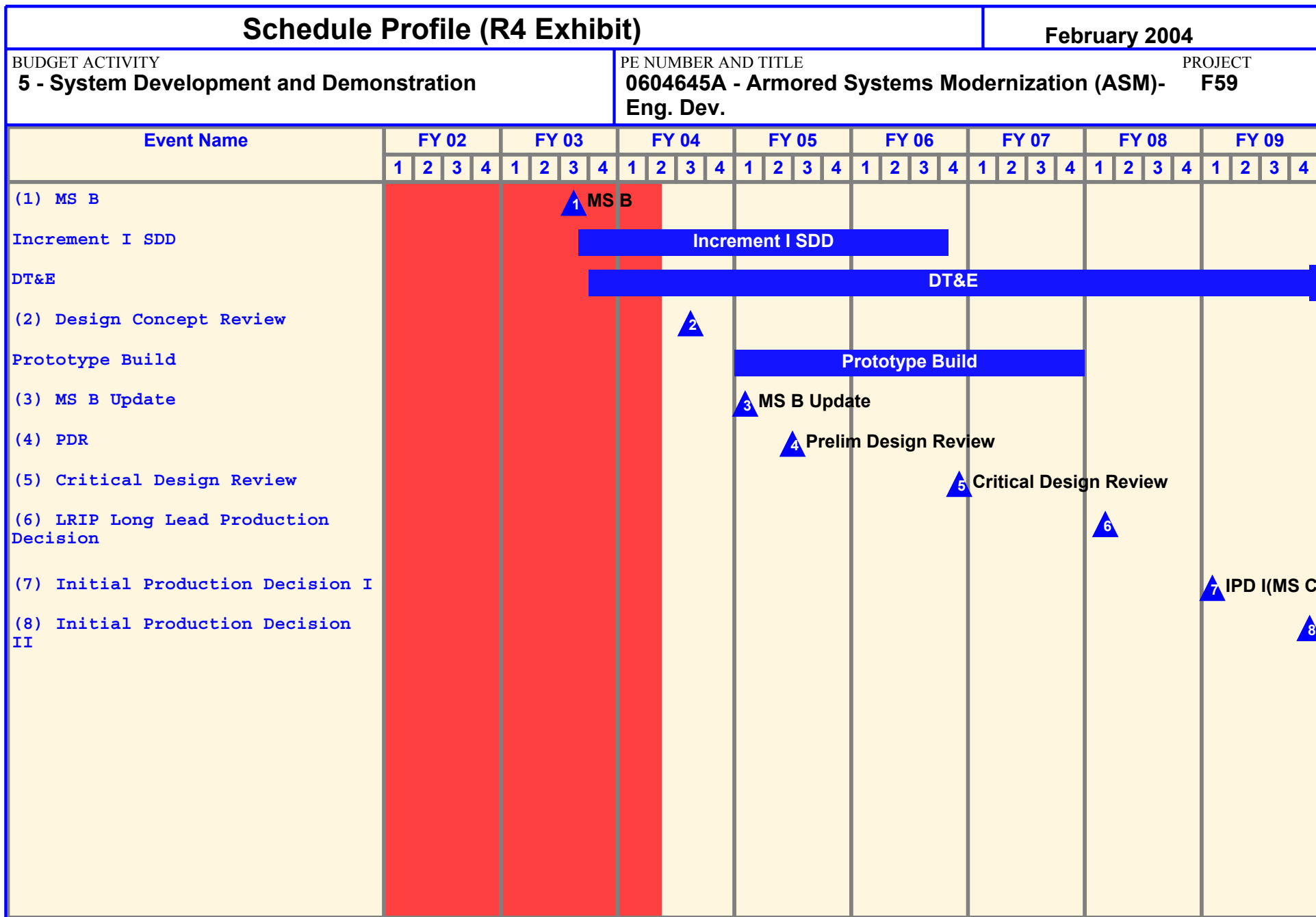
Remark 3 - Subcontractor: GD Robotics Systems-Westminster, MD

Remark 4 - Subcontractors: United Defense Limited Partnership-Minneapolis, MN and General Dynamics Land Systems-Sterling Heights, MI. Note: This cost is a NLOS-C cost because NLOS-C is the lead system. However, due to database reductions in the NLOS-C PE, this contractual effort was funding from the FCS PE.

Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-					PROJECT F59		
					Eng. Dev.							
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government Support costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F59		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
Project Total Cost:			0	0		32548		115163		0	147711	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F59	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision							
Network Maturity Milestone						4Q	
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F60	
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F60 FAMILY OF SYSTEMS, ANAL&INT	0	173719	135903	168624	172187	115959	108354	Continuing	874746
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contractor efforts for this project are found in the Program Work Breakdown Structure (WBS 1.1.2.1).</p> <p>FCS Family of Systems (FoS) analysis and integration supports advanced networked air and ground based maneuver, maneuver support, and sustainment systems that include manned and unmanned systems. This effort includes design analysis/trade studies, and determination of requirements flow down within the context of the FoS in order to maintain baseline performance, functional, physical, and logical integration. This project reflects the budget breakout negotiated with Congressional staffers from all four defense committees. The same level of management data will be reviewed quarterly with the four defense committees. This project includes the following:</p> <p>FoS Management - Consists of the performance and design analysis, trades and requirements flow down within the context of the FoS to maintain baseline performance plus functional, physical, and logical integration. It also involves development and maintenance of a dynamic trace linking the System of Systems (SoS) specification to FoS specification and FoS systems' designs.</p> <p>FoS Analysis - Consists of performance analysis and trade studies for the FoS to ensure that the supporting Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) network meets the SoS requirements. It also includes analysis of requirements and designs to balance the following system operational performance parameters: responsiveness, deployability, agility, and versatility, lethality, survivability, sustainability, training, interoperability, availability, and vulnerability. This includes Cost as an Independent Variable (CAIV), producibility, Manpower and Personnel Integration (MANPRINT), testability, and safety in the analysis/trade process.</p> <p>FoS Technical Baseline Management Controls - Management and control of the FoS technical baseline including definition and conduct of FoS level trade studies, requirements definition and allocation, and interface control for both hardware configuration items (HWCI) and computer software configuration items (CSCI) across the FoS and from the SoS to Complementary and associated programs. It involves allocation of performance, functional, and non-functional requirements from the SoS to the FoS systems through preparation of a series of Prime Item Development Specifications (PIDS). It also involves the identification and management of the technical interface requirements among FCS FoS components and between the FoS and Complementary and associated programs. In addition it involves identification and integrational interfaces to systems external to the FCS Unit of Action (UA) (current, higher echelon, joint, coalition, and other Government & non-Government agencies) and the internal control of FoS system-to-system interfaces. Configuration Management (CM) of the FoS is performed in accordance with SoS CM guidance including CM custodial responsibility for FCS to</p>									

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F60

Complementary and associated programs Interface Control Documents (ICDs) as defined in Complementary and associated programs Government Memorandum of Agreement (MOA)/Subordinate Memorandum of Agreement (SMOAs). The management and maintenance of a performance baseline of system and subsystem attributes is necessary for the SoS/FoS analysis, modeling, and simulation, consistent with the Army FCS UA systems book.

Systems Integration Labs (SILs) - This project includes the management, design, development, use, and maintenance of a SoS Integration Laboratory (SoSIL) for use in SoS development, integration, and test. The SILs establish system emulators and simulators at supplier sites as well as framework and detailed interface definitions to integrate simulators across the dispersed sources/users, including interfacing with Complementary and associated programs hardware, software, and SILs in accordance with SoS test plans. This effort also provides interface to the Department of Defense (DOD) Joint Distributed Engineering Plant for interoperability testing and interface to the Army technical test capabilities.

This system supports the future force transition path of the Transformation Campaign Plan.

<u>Accomplishments/Planned Program</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Family of System (FOS) Management	0	22984	12434
(FOS) Analysis	0	2907	13732
FOS Technical Baseline & Control	0	84078	108671
System Integrated Laboratory (SIL)	0	63750	1066
Totals	0	173719	135903

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT
F60

B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

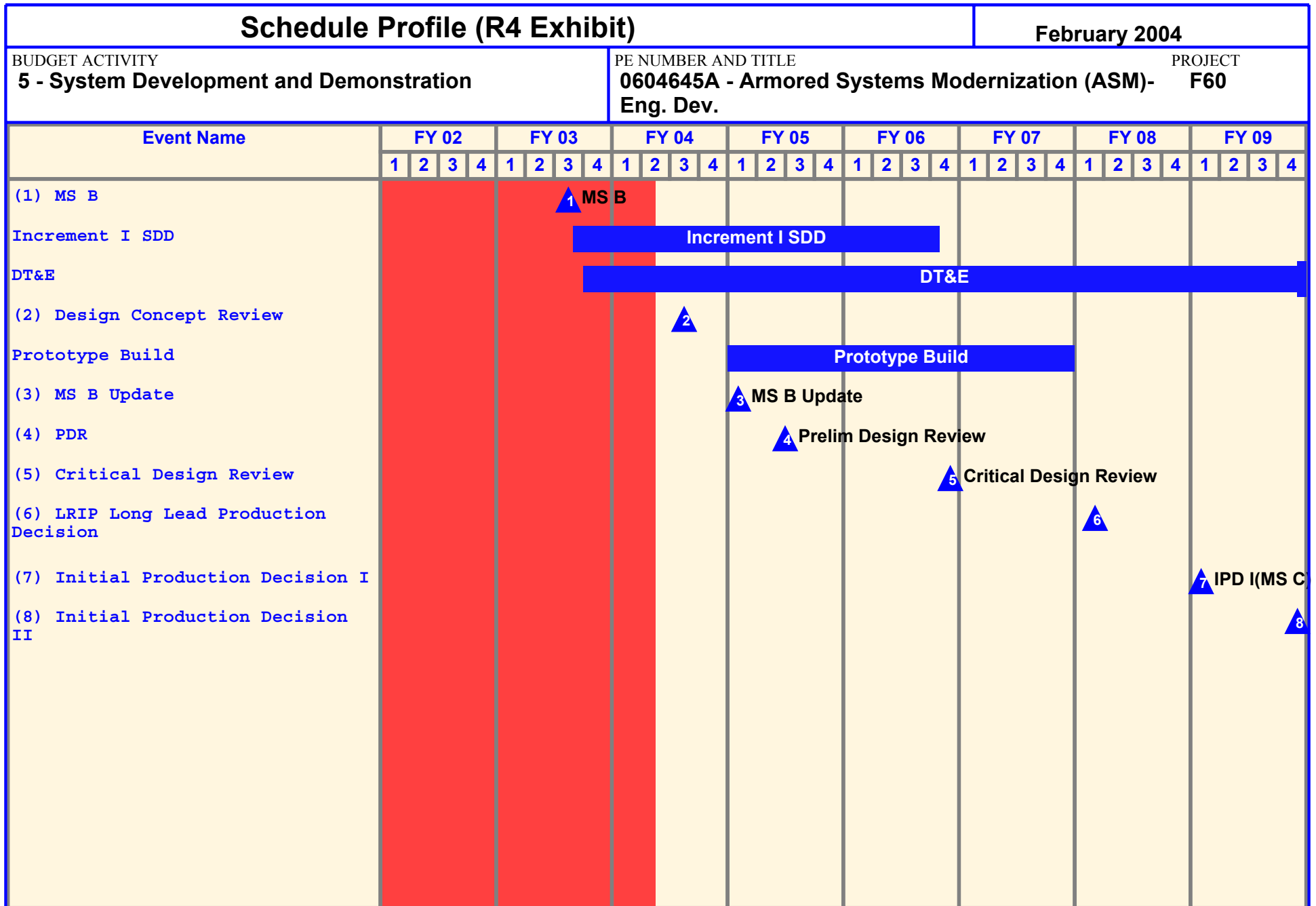
C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F60
<p>on a Joint Requirement Oversight Committee (JROC) approved Operational Requirements Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F60		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . FoS Management	OTA	The Boeing Company - Seattle, Washington	0	0		22984	1-3Q	12434	1-3Q	0	35418	0
b . FoS Analysis	OTA	The Boeing Company - Seattle, Washington	0	0		2907	1-3Q	13732	1-3Q	0	16639	0
c . FoS Technical Baseline Management & Control	OTA	The Boeing Company - Seattle, Washington	0	0		84078	1-3Q	108671	1-3Q	0	192749	0
d . SIL	OTA	The Boeing Company - Seattle, Washington	0	0		63750	1-3Q	1066	1-3Q	0	64816	0
Subtotal:			0	0		173719		135903		0	309622	0
<p>Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.</p> <p>All funding reserved for statutory reductions (SIBR/STTR) are accounted for in the Program Element (PE) 0604645A, Project 61, Government Support Cost.</p> <p>Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).</p>												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F60		
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government Support costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.												

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F60			
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . *			0	0		0		0		0	0	0	
Subtotal:			0	0		0		0		0	0	0	
Remarks: * All Management Services costs are included in Program Element 0604645A, Project F61, Government Support Costs.													
Project Total Cost:			0	0		173719		135903		0	309622	0	



Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F60

<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision						4Q	
Network Maturity Milestone							1Q
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F61	
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F61 GOVERNMENT SUPPORT COSTS	0	305728	488750	615028	547652	456057	409729	Continuing	2822944
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>Government Support Costs include funding for government personnel to include labor, travel, supplies, and other support costs (support contractors, Automated Data Processing (ADP), supplies, and equipment). This project also includes funding for government testing to include personnel, test execution, ammunition and expendables, infrastructure development, procurement of unique test instrumentation, development of an Army wide inter-range distributed test network, and Government modeling and simulation Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) test bed, and Advanced Collaborative Environment (ACE) Government user fees, expediting Complementary Program (schedule risk reduction) for JTRS Cluster 5, waveform for the JTRS Cluster 5, SECOMP-I, and JTRS network datalink. This project also reserves funding for all the potential FCS Small Business Innovative Research (SBIR), Small Business Technology Transfer Program (STTR).</p>									
<u>Accomplishments/Planned Program</u>							FY 2003	FY 2004	FY 2005
PM Personnel							0	50612	52727
System of System Personnel							0	37001	38547
Travel							0	14848	15466
Other Support Costs							0	25354	50000
ACE Support							0	10587	19430
Modeling and Symulation							0	9850	18470
Test Support							0	63820	193750
GFX/Complementary Programs							0	44000	0
Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR taxes)							0	49656	100360
Totals							0	305728	488750

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F61

B. Other Program Funding Summary

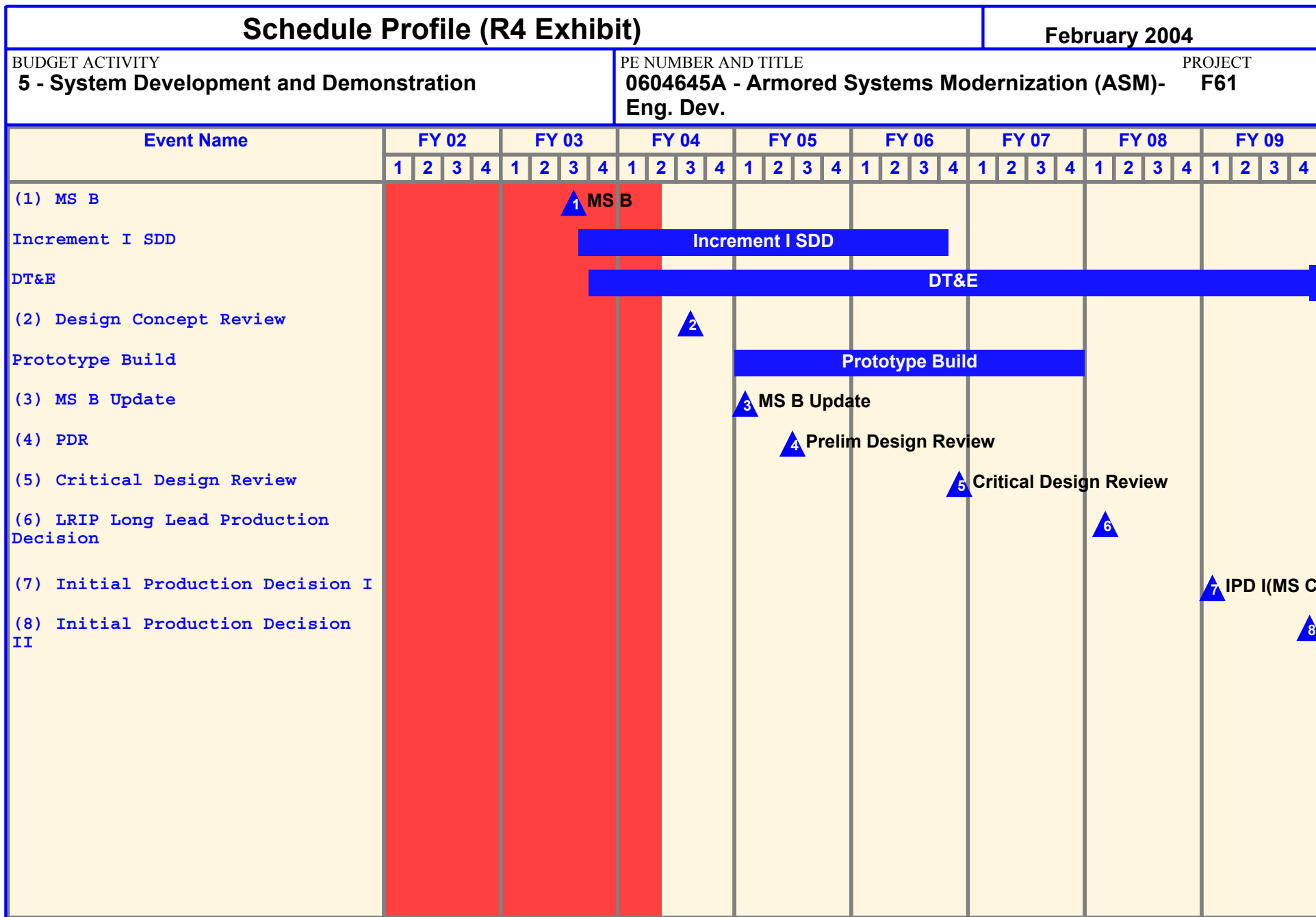
	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F61
<p><u>C. Acquisition Strategy:</u>On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					F61			
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . GFX - Complementary Programs	Various	Various	0	0		44000	1-3Q	0		0	44000	0	
Subtotal:			0	0		44000		0		0	44000	0	
Remarks: All FCS funding reserved for statutory reductions (SIBR/STTR) are accounted for in this "Government Support Cost" project. Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).													
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . PM Personnel		Various	0	0		50612		52727		0	103339	0	
b . SoS Personnel		Various	0	0		37001		38547		0	75548	0	
c . Travel		Various	0	0		14848		15466		0	30314	0	
d . Other Support Cost		Various	0	0		25354		50000		0	75354	0	
e . ACE Support		Various	0	0		10587		19430		0	30017	0	
f . Anticipate Withholds (4%)*			0	0		49656		100360		0	150016	0	

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					F61			
II. Support Cost (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		188058		276530		0	464588	0	
Subtotal:													
Remarks: * Anticipated withholds calculated based on anticipated 4% SIBR, STTR historical reductions. FY03 reduced by (17690) and FY04 reduced by (27564) for database reductions for inflation and other OSD reductions (approximately 1.4%). Includes all governmental support cost for PE 0604645 and PE 0604647. PM SoS Personnel includes both government and SETA support.													
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
a . Test Support		Various	0	0		63820		193750		0	257570	0	
b . Modeling & Simulation		Various	0	0		9850		18470		0	28320	0	
Subtotal:			0	0		73670		212220		0	285890	0	

ARMY RDT&E COST ANALYSIS(R3)										February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F61		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:						305728		488750		0	794478	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F61	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award Fee for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes 1Q 05			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision							
Network Maturity Milestone						4Q	
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004					
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.			PROJECT F62					
COST (In Thousands)				FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F62 MISSION EQUIPMENT PLATFORMS				0	139286	634630	1208793	953321	367634	139362	Continuing	3443026
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contractor efforts for this project are found in the Work Breakdown Structure (WBS 1.1.2.3.3). This project covers all FCS platforms other than Non-Line of Sight - Cannon (NLOS-C) and includes the contractor development, engineering, prototype procurement and integration assembly of all variant vehicle platforms and associated costs to include development of unique mission equipment. Platforms include: Infantry Carrier Vehicle (ICV), Recon and Surveillance Vehicle (RSV), Command and Control Vehicle (C2V), Mounted Combat System (MCS), Non-Line of Sight Mortar (NLOS-M), Medical Vehicle (MV), Armed Robotic Vehicle (ARV), Small Unmanned Ground Vehicle (SUGV), Multi-function Utility/Logistics Equipment (MULE), Unmanned Aerial Vehicles (UAVs), and Unattended Ground Sensors (UGS). This project reflects the budget breakout discussions with Congressional staffers from the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees.</p> <p>Included in this project is developmental and engineering effort for requirement analysis, specification determination and justification, detail design packages for integration of common and mission equipped end items. The focus is on a producible, reliable, sustainable, maintainable, and affordable design. Also included are subsystem prototypes, models, and/or simulations as necessary to support development as well as tests and demonstrations.</p> <p>This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).</p>												
<u>Accomplishments/Planned Program</u>								<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>		
Infantry Carrier Vehicle (ICV)								0	31100	69200		
Reconnaissance and Surveillance Vehicle (RSV)								0	25300	64620		
Mounted Combat System (MCS)								0	26100	164680		
Non-Line of Sight - Mortar (NLOS-M)								0	12100	51610		
Armed Robotic Vehicle (ARV)								0	4800	12604		
Multi-function Utility/Logistics and Equipment Vehicle (MULE)								0	5600	55518		
Class 1 Unmanned Aerial Vehicle (UAV)								0	1000	20460		
Class 4 Unmanned Aerial Vehicle (UAV)								0	2286	71156		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F62

Accomplishments/Planned Program (continued)

	FY 2003	FY 2004	FY 2005
Unattended Ground Sensors (UGS)	0	4000	29544
Command and Control Vehicle (C2V)	0	19900	58740
Medical Vehicle (MV)	0	1600	9200
Small Unmanned Ground Vehicle (SUGV)	0	5500	27298
Totals	0	139286	634630

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F62
<p>C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirements Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F62		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Unattended Ground Sensors (UGS)		The Boeing Company - Seattle, Washington - See remark 1	0	0		4000	1-3Q	29544	1-3Q	0	33544	0
b . Command and Control Vehicle (C2V)		The Boeing Company - Seattle, Washington - See remark 2	0	0		19900	1-3Q	58740	1-3Q	0	78640	0
c . Medicle Vehicle (MV)		The Boeing Company - Seattle, Washington - See remark 3	0	0		1600	1-3Q	9200	1-3Q	0	10800	0
d . Small Unmanned Ground Vehicle (SUGV)		The Boeing Company - Seattle, Washington - See remark 4	0	0		5500	1-3Q	27298	1-3Q	0	32798	0
e . Infantry Carrier Vehicle (ICV)		The Boeing Company - Seattle, Washington - See remark 3	0	0		31100		69200	1-3Q	0	100300	0
f . Reconnaissance and Surveillance Vehicle (RSV)		The Boeing Company - Seattle, Washington - See remark 2	0	0		25300	1-3Q	64620	1-3Q	0	89920	0
g . Mounted Combat System (MCS)		The Boeing Company - Seattle, Washington - See remark 2	0	0		26100	1-3Q	164680	1-3Q	0	190780	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
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PROJECT

F62

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
h . Non-Lon of Sight - Mortar (NLOS-M)		The Boeing Company - Seattle, Washington - See remark 5	0	0		12100	1-3Q	51610	1-3Q	0	63710	0
i . Armed Robotic Vehicle (ARV)		The Boeing Company - Seattle, Washington - See remark 3	0	0		4800	1-3Q	12604	1-3Q	0	17404	0
j . Class 1 Unmanned Aerial Vehicle (UAV)		The Boeing Company - Seattle, Washington	0	0		1000	1-3Q	20460	1-3Q	0	21460	0
k . Class 4 Unmanned Aerial Vehicle (UAV)		The Boeing Company - Seattle, Washington - See remark 6	0	0		2286	1-3Q	71156	1-3Q	0	73442	0
l . Multi-function Utility/Logistics and Equipment Vehicle (MULE)		The Boeing Company - Seattle, Washington - See remark 7	0	0		5600	1-3Q	55518	1-3Q	0	61118	0
Subtotal:			0	0		139286		634630		0	773916	0

Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.

All funding reserved for statutory reductions (SIBR/STTR) are accounted for in the Program Element 0604645A, Project 61, Government Support Costs. Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).

Remark 1: Subcontractor: Textron Systems, Intelligent Battlefield Systems Division - Willington, MA

Remark 2: Subcontractor: General Dynamics - Sterling Heights, MI

Remark 3: Subcontractor: United Defense Limited Partnership - Santa Clara, CA

Remark 4: Subcontractor: iRobot Corporation - Burlington MA

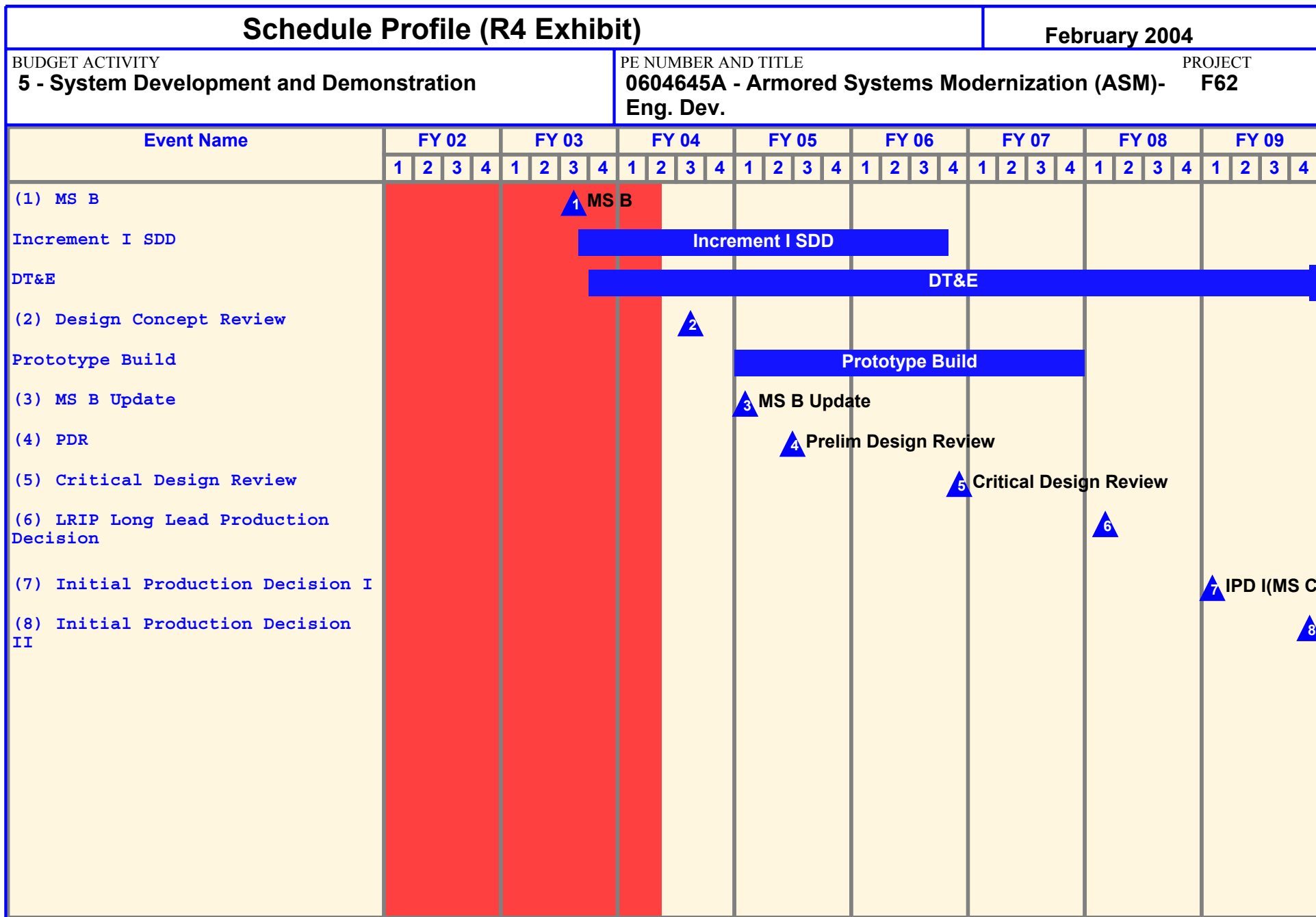
Remark 5: Subcontractor: United Defense - Minneapolis, MN

Remark 6: Subcontractor: Northrop Grumman Systems Corporation - San Diego, CA

Remark 7: Subcontractor: Lockheed Martin Missile & Fire Control - Grand Prairie, TX

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-					PROJECT F62		
					Eng. Dev.							
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government Support costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F62		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
Project Total Cost:			0	0		139286		634630		0	773916	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F62	
<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes 1Q 05			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision						4Q	
Network Maturity Milestone							1Q
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	February 2004
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BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F63
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COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F63 NETWORK SOFTWARE	0	117434	380491	500953	386237	220761	155530	Continuing	1761406

A. Mission Description and Budget Item Justification: This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).

The contractor efforts for this project are found in the Work Breakdown Structure (WBS 1.1.2.2). The Network Software is the System of Systems (SoS) engineering effort to transform the FCS Operational Requirements Document (ORD) into a networked SoS architecture. It includes the conduct of system reviews, trade studies, and architectural design of the SoS network including requirements flowdown, configuration management, SoS software requirements, architecture, and design reviews to ensure network integration across all of the Unit of Action (UA) Battlefield Functional Areas to meet FCS requirements and SoS integration. This project reflects the budget breakout discussed with the Congressional staffers from the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees. This project includes:

Network software management - This effort represents the contractors' management of all of this project's efforts and cost accounts.

Network software analysis and integration - Definition, design, procurement, construction, integration, and testing of the elements of the distributed network system across the FoS in accordance with the Software Development Plan (SDP), SoS specification, Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR), and applicable segment and subsystem specifications. The distributed network consists of the following elements: a distributed information management backbone, communications applications and interfaces, Intelligence, Surveillance and Reconnaissance (ISR) applications and interfaces, command and control applications and interfaces, and training and supportability applications.

Command and control - Definition, development, procurement, fabrication, integration, and testing of the distributed command and control application software, including soldier interfaces, mission planning, situational awareness and understanding, and battle command for the FCS UA.

Information management - Definition and development of the information management backbone and application interface structure for implementation of the distributed network.

System of Systems Common Operating Environment (SoSCOE) - Definition, planning, and management the Software Engineering (SE) processes to transform the FCS ORD requirements into an acceptable, testable, and verifiable SoS solution.

Fusion - Definition, development, procurement, fabrication, integration, and testing of the distributed ISR elements and application software, including soldier interfaces, common sensor interface, Level 1 fusion with organic and non-organic sensor feeds, and sensor data management for the FCS.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2004****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.****PROJECT****F63**

Communication system software - Definition, integration, development, coding, and qualification of the communications network. Includes: requirements development, traceability and management, functional flow analysis and update to the requirements database, technical trade studies and analyses.

Unmanned vehicle control software - Distributed control of unmanned platforms.

Weapons management control software - Distributed control of network fires.

ACE applications - The ACE applications that reside with the soldier and on the platforms for reachback.

Embedded training integration software - Definition, development, procurement, fabrication, integration, and testing of the common and unique training applications that are distributed across the FCS FoS.

Supportability application software - Definition, development, procurement, fabrication, integration, and testing of a Logistics Decision Support System (LDSS), and a Platform Soldier-Mission Readiness System (PS-MRS) to support each manned/unmanned platform vehicle.

This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).

<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005
Network Software Management	0	22194	533
Network Software Analysis and Integration	0	5336	236
Command and Control	0	5164	103285
Information Management	0	9400	43900
System of Systems Common Operating Environment	0	32659	0
Fusion	0	5100	27014
Communication System Software	0	0	54890
Unmanned Vehicle Control Software	0	0	0
Weapons Management Control Software	0	4400	0
Advanced Collaborative Environment	0	0	749
Embedded Training Integration Software	0	18338	72410
Supportability Application Software	0	14843	77474

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)								February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F63			
<u>Accomplishments/Planned Program (continued)</u>								FY 2003	FY 2004	FY 2005	
Totals								0	117434	380491	
<u>B. Other Program Funding Summary</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost		
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951		
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778		
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175		
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0		
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207		
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157		
604645A F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	0	459755		
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746		
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944		
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026		
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316		
604645A F65 System of Systems Engineering & Program Managemen	0	200023	461924	436673	365618	270763	180889	0	1915890		
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248		
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760		
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178		
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984		
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168		
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020		

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F63
<p>C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration					0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					F63		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Network Software Management	OTA	The Boeing Company - Seattle, Washington - See remark 1	0	0		22194	1-3Q	533	1-3Q	0	22727	0
b . Network Software Analysis & Integration	OTA	The Boeing Company - Seattle, Washington - See remark 2	0	0		5336	1-3Q	236	1-3Q	0	5572	0
c . Command and Control	OTA	The Boeing Company - Seattle, Washington - See remark 3	0	0		5164	1-3Q	103285	1-3Q	0	108449	0
d . Information Management	OTA	The Boeing Company - Seattle, Washington - See remark 4	0	0		9400	1-3Q	43900	1-3Q	0	53300	0
e . SoSCOE	OTA	The Boeing Company - Seattle, Washington	0	0		32659	1-3Q	0		0	32659	0
f . Fusion	OTA	The Boeing Company - Seattle, Washington - See remark 5	0	0		5100	1-3Q	27014	1-3Q	0	32114	0
g . Communication System Software	OTA	The Boeing Company - Seattle, Washington	0	0		0		54890	1-3Q	0	54890	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F63

I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
h . Unmanned Vehicle Control Software	OTA	The Boeing Company - Seattle, Washington	0	0		0		0		0	0	0
i . Weapons Management Control Software	OTA	The Boeing Company - Seattle, Washington - See remark 6	0	0		4400	1-3Q	0		0	4400	0
j . ACE Applications	OTA	The Boeing Company - Seattle, Washington	0	0		0		749	1-3Q	0	749	0
k . Embedded Training Integration Software	OTA	The Boeing Company - Seattle, Washington - See remark 7	0	0		18338	1-3Q	72410	1-3Q	0	90748	0
l . Supportability Application Software	OTA	The Boeing Company - Seattle, Washington - See remark 8	0	0		14843	1-3Q	77474	1-3Q	0	92317	0
Subtotal:			0	0		117434		380491		0	497925	0

Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with the Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.

All funding reserved for statutory reductions (SIBR/STTR) are accounted for in the Program Element 0604645A, Project 61, Government Cost project.

Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).

Remark 1 - Subcontractor: Nortrop Grumman Mission Systems, Tactical Systems Division - Carson, CA

Remark 2 - Subcontractor: Autstin Information Systems - Austin, TX

Remark 3 - Subcontractor: Raytheon Network Centric Systems - Fort Wayne, IN

Remark 4 - Subcontractor: General Dyanmics Decision Systems - Scottsdale, AZ

Remark 5 - Subcontractor: Lockheed Martin Orincon Defense - San Diego, CA

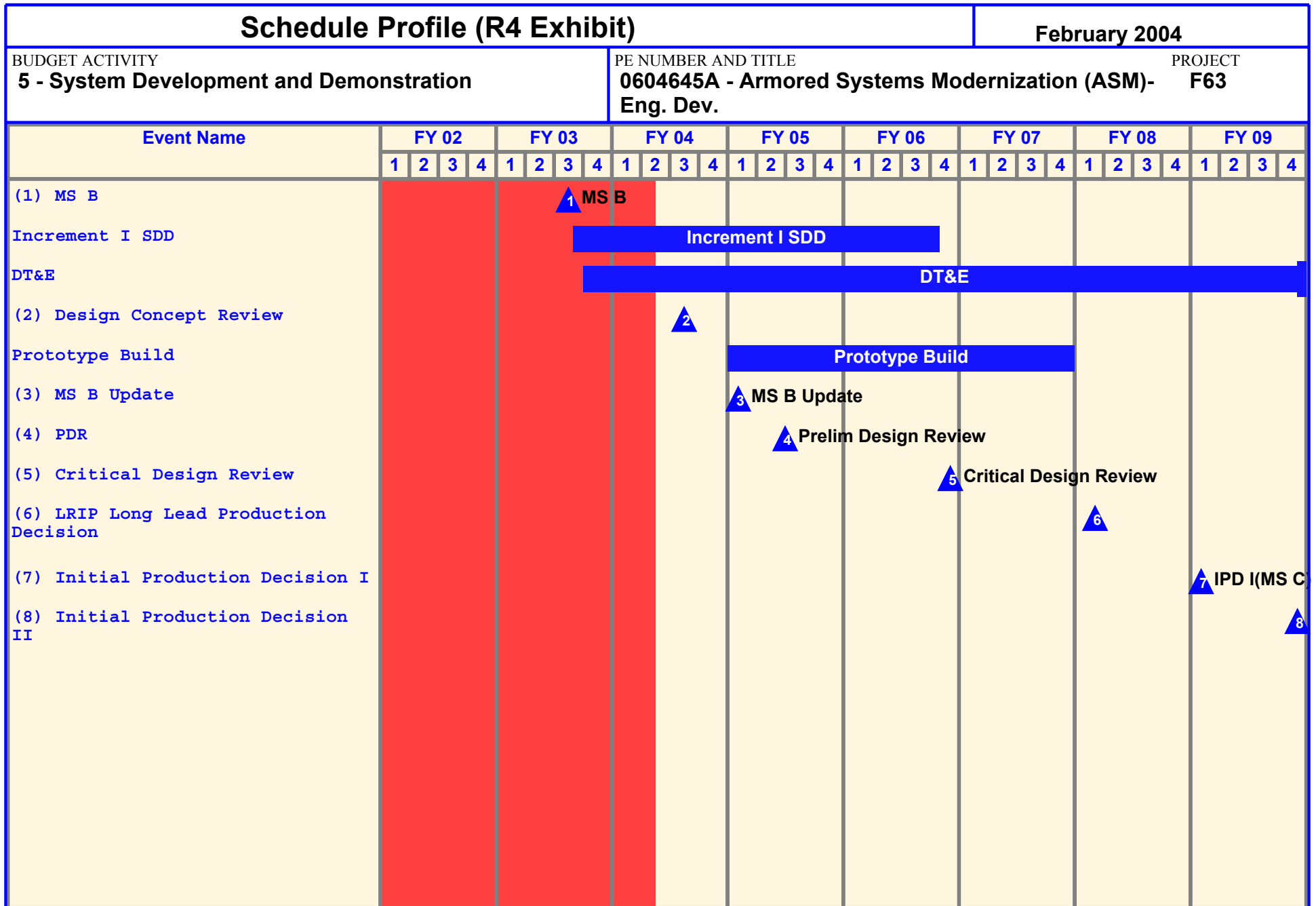
Remark 6 - Subcontractor: The Boeing Company - Mesa, AZ

Remark 7 - Included in all subcontractor Scope of Work (SOW)

Remark 8 - Subcontractors: Northrop Grumman, Mission Systems, Tactical System Division - Carson, CA. Honeywell Defense & Electronic Systems - Albuquerque, NM

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-					PROJECT F63		
					Eng. Dev.							
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government Support costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.												

ARMY RDT&E COST ANALYSIS(R3)									February 2004						
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.									PROJECT F63	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract			
a . *			0	0		0		0		0	0	0			
Subtotal:			0	0		0		0		0	0	0			
Remarks: * All Management Services costs are included in Program Element 0604645A, Project F61, Government Support Costs.															
Project Total Cost:			0	0		117434		380491		0	497925	0			



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F63	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision						4Q	
Network Maturity Milestone							1Q
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	February 2004
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BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F64
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COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F64 OTHER CONTRACT COSTS	0	329501	246935	336042	277395	149082	114361	Continuing	1453316

A. Mission Description and Budget Item Justification: This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).

Other Contract Costs include funding for contractor activities (management reserve, contractor undistributed budget, termination liability, cost of money, government and administrative costs, fee incentives, and other indirect costs) that are not included in the EVMS Baseline. Management reserve is budgeted within the Other Transaction Agreement (OTA) for in-scope efforts pending future definitization. Undistributed budget is budget within the OTA for known Scope of Work (SOW) pending distribution to control accounts. Termination liability is the amount of funding reserved in the OTA in case of contract termination. All management reserve and undistributed budget will be reallocated to the appropriate projects by reprogramming action at the quarterly review. Once these OTA funding requirements are identified, the funds will be moved to the appropriate project. When the termination liability requirements timeline expire, these funds will be redistributed to appropriate work projects. Cost of money and government administrative costs are negotiated by contract.

This system supports the Future Force transition path of the Transformation Campaign Plan.

<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005
Undistributed Budget and Management Reserve	0	57712	0
Termination Liability	0	109300	131000
Fee and Indirect Support Costs (i.e. G&A)	0	162489	115935
Totals	0	329501	246935

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F64

B. Other Program Funding Summary

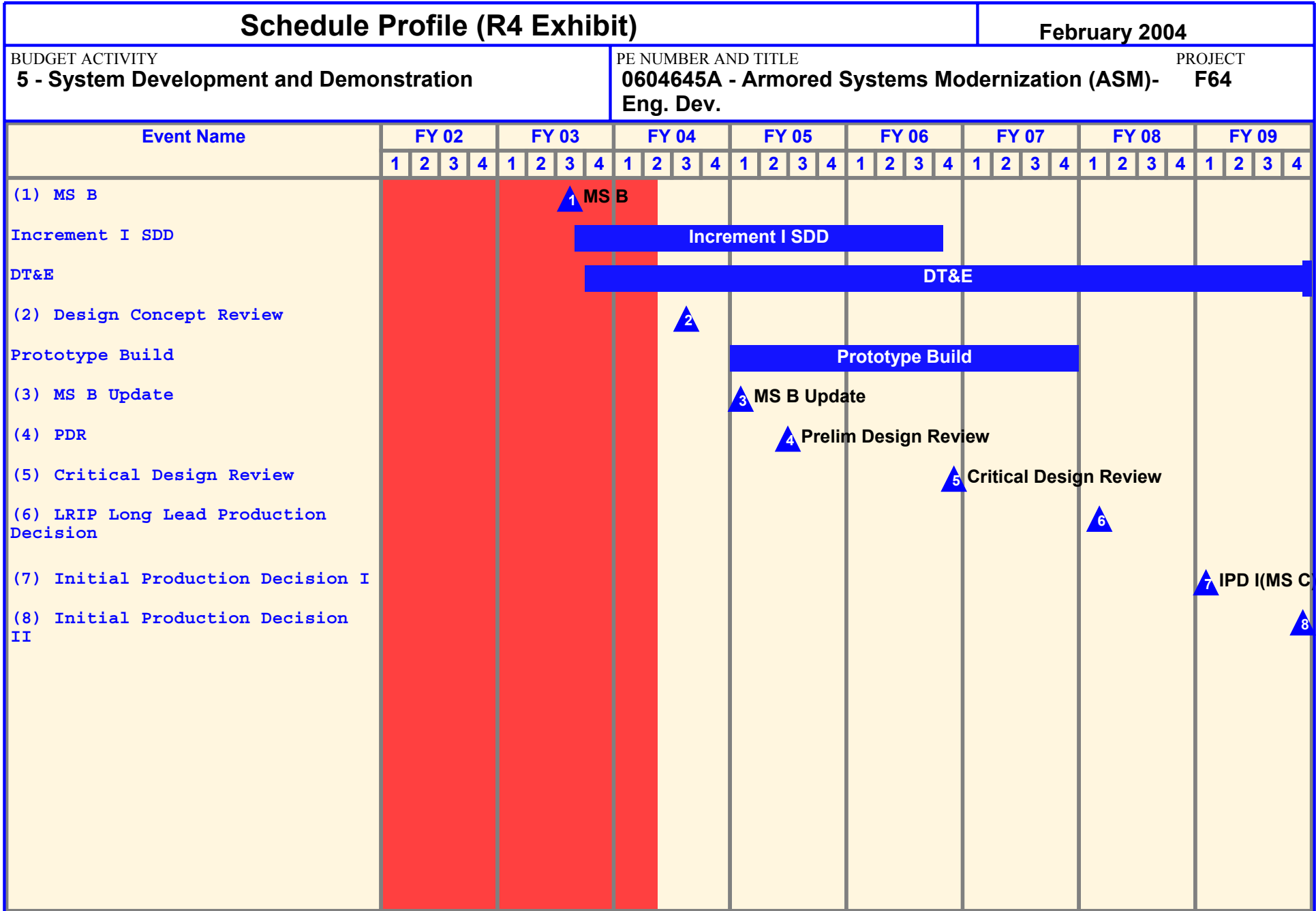
	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F64
<p><u>C. Acquisition Strategy:</u>On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirments Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration						PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.				PROJECT F64		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Undistributed Budget and Management Reserve	OTA	The Boeing Company, Seattle, Washington	0	0		57712	1-3Q	0		0	57712	0
b . Termination Liability	OTA	The Boeing Company, Seattle, Washington	0	0		109300	1-3Q	131000	1-3Q	0	240300	0
c . Fee and Indirect Support Cost (i.e. G&A)	OTA	The Boeing Company, Seattle, Washington	0	0		162489	1-3Q	115935	1-3Q	0	278424	0
Subtotal:			0	0		329501		246935		0	576436	0
<p>Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with the Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.</p> <p>All funding reserved for statutory reductions (SIBR/STTR) are accounted for the in Program Element 0604645A, Project 61, Government Support Costs.</p> <p>Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).</p>												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F64		
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government Support costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation costs are included in Program Element (PE) 060454A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F64		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
Project Total Cost:			0	0		329501		246935		0	576436	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F64	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirement Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes		1Q	1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery 3Q 07					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision 1Q 08							
Network Maturity Milestone 4Q 08						4Q	
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004					
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F65				
COST (In Thousands)				FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F65 S OF S ENGR & PROG MGT				0	200023	461924	436673	365618	270763	180889	Continuing	1915890
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contract efforts for this project are found in the Work Breakdown Structure (WBS 1.1.1).</p> <p>This project supports the System of Systems (SoS) engineering and program management activities necessary to ensure that the FCS design and processes support the objective capability as defined by the requirements documents and will be integrated and synchronized with the larger Unit of Action (UA) and Unit of Employment (UE). This project reflects budget breakout negotiated with the Congressional staffers of the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees. This project includes the following:</p> <p>SoS Engineering - Conducting SoS reviews, the top level trade studies and architectural design of the SoS including requirements flowdown, configuration management oversight, specialty engineering and the analysis and verification of integrated force effectiveness. This effort includes: SoS Architecture Management, SoS Requirements Analysis Management, SoS Configuration Management, SoS Manpower and Personnel Integration (MANPRINT), SoS Performance Assurance, SoS Verification, SoS Trade Study Management, and SoS Technology Management & FCS Spiral Development.</p> <p>Force Requirements - Support the development of UA User Requirements, including definition of operational interfaces, definition of joint operational concepts, analysis and flow down of these requirements to SOS engineering, and onsite support to the Army.</p> <p>SoS Software Management - Establishment of software processes and management to provide the overarching program wide coordination and coherent guidance in matters relating to software. This team will ensure that the proper policies, processes, procedures, tools, and training are in place to provide an integrated coherent software management approach across all elements of the program.</p> <p>Simulation and modeling for acquisition, requirements, and training (SMART) - Management, coordination, and as required, development, in collaboration with the Government and suppliers, SoS and FoS performance level modeling and simulation (M&S) capability for use in requirements analysis, design performance evaluation, and supporting SoS and system level testing.</p> <p>Advanced Collaborative Environment (ACE) - Provision for a real-time, electronic collaborative access to a single integrated source of management information product information, and technical data. Development, maintainance, and maturation of the FCS ACE which is the primary means of creating, sharing, reporting, collecting, recording, and accessing program information between the LSI, authorized FCS major/critical subcontractors, and</p>												

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2004****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.****PROJECT****F65**

authorized U.S. Government personnel connected with the FCS program.

Program Management and Control - Provision for an integrated program management (i.e. planning, directing, tools and controlling functions, for all development activities invoked by LSI processes, including data and subcontractor management), program control, procurement and contracts management, data management, and operations management associated with the LSI overarching management of the OTA.

SoS Logistics Management - Provision for the planning, management, integration, and oversight of all logistics functions to include the implementation of Performance Based Logistics. Conduct performance based logistics planning, analyses, and testing. Development and recommendation of the processes, procedures, and performance metrics to ensure logistics and readiness requirements are met.

SoS Product Assurance Management - Planning of a successful production transition from SDD to Low Rate Initial Production (LRIP) and then to Full Rate Production (FRP). The plan will detail quantities and processes for providing the necessary Long Lead items and provide product assurance and quality support at all levels of product development and manufacture. Assurance that production planning supports program objectives, risks, lean manufacturing, commonality, best practices, logistics production, production readiness and ensure facility planning support program requirements throughout the program lifecycle.

This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).

<u>Accomplishments/Planned Program</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
SoS Engineering	0	23092	203793
Force Requirements	0	11512	83411
SoS Software Management	0	6674	4556
SMART	0	26100	62808
ACE	0	21818	36007
Program Management and Control	0	99623	64426
SoS Logistics Management	0	3243	502
SoS Product Assurance	0	7961	6421
Totals	0	200023	461924

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F65

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S & T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 COMMON COMPONENTS	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F65
<p>on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F65		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . SoS Engineering	OTA	The Boeing Company, Seattle, Washington	0	0		23092	1-3Q	203793	1-3Q	0	226885	0
b . Force Requirements	OTA	The Boeing Company, Seattle, Washington	0	0		11512	1-3Q	83411	1-3Q	0	94923	0
c . SoS Software Management	OTA	The Boeing Company, Seattle, Washington	0	0		6674	1-3Q	4556	1-3Q	0	11230	0
d . SMART	OTA	The Boeing Company, Seattle, Washington	0	0		26100	1-3Q	62808	1-3Q	0	88908	0
e . ACE	OTA	The Boeing Company, Seattle, Washington	0	0		21818	1-3Q	36007	1-3Q	0	57825	0
f . Program Management and Control	OTA	The Boeing Company, Seattle, Washington	0	0		99623	1-3Q	64426	1-3Q	0	164049	0
g . SoS Logistics Management	OTA	The Boeing Company, Seattle, Washington	0	0		3243	1-3Q	502	1-3Q	0	3745	0
h . SoS Product Assurance	OTA	The Boeing Company, Seattle, Washington	0	0		7961	1-3Q	6421	1-3Q	0	14382	0
Subtotal:			0	0		200023		461924		0	661947	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F65

Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.

All funding reserved for statutory reductions are accounted for in Program Element 0604645A, Project 61, Government Support Costs. Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).

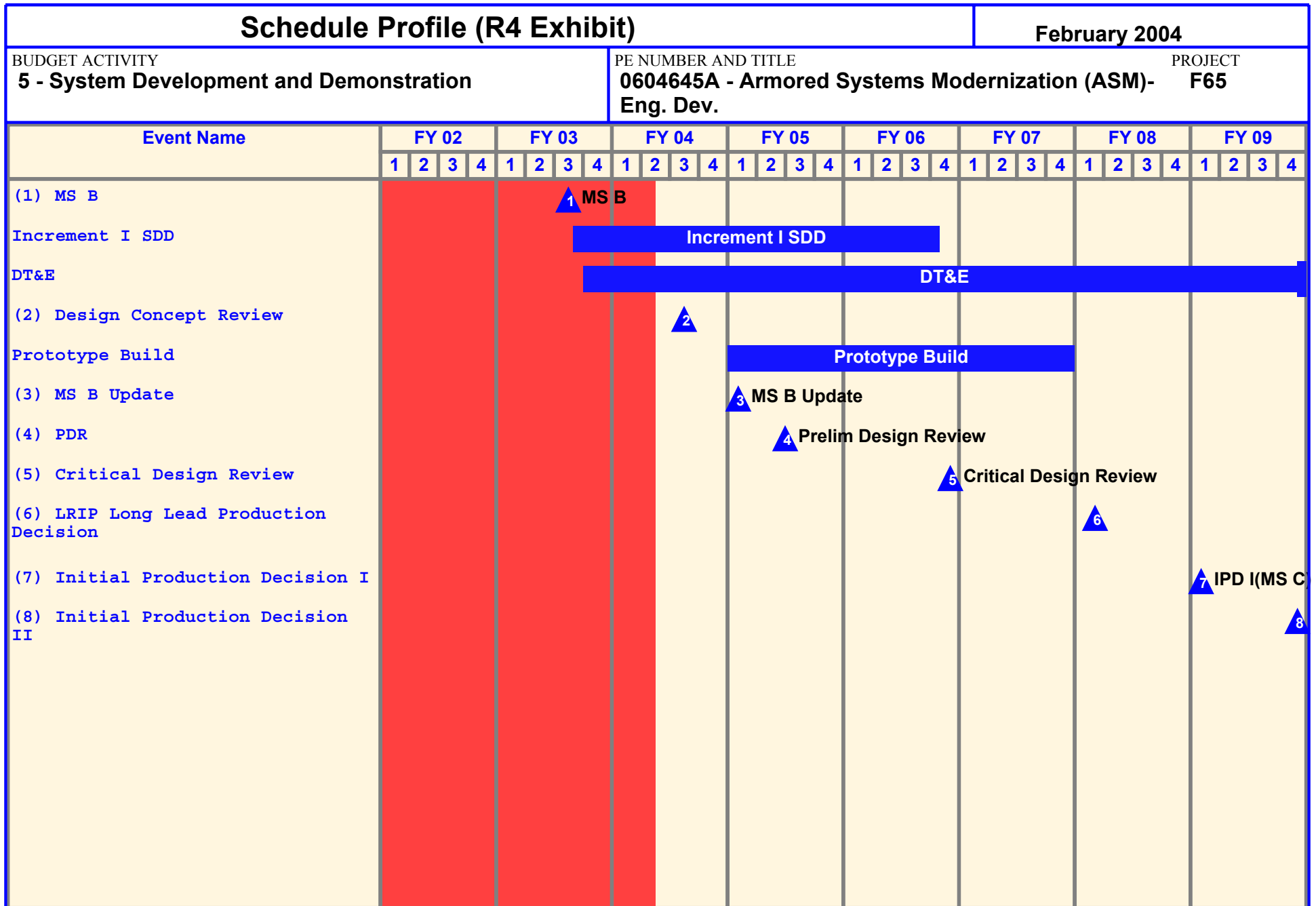
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Government Support costs are included in Program Element 0604645A, Project F61, Government Support Costs.

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Government System Test & Evaluation costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F65		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Program Element 0604645A, Project F61, Government Support Costs.												
Project Total Cost:			0	0		200023		461924		0	661947	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F65	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision							
Network Maturity Milestone						4Q	
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)						February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F66		
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F66 S OF S TEST AND EVALUATION	0	59216	54802	80083	94624	74414	83109	Continuing	446248
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contractor efforts for this project are found in the Work Breakdown Structure (WBS 1.1.3).</p> <p>System of Systems (SoS) Test and Evaluation includes contractor test and analysis to ensure SoS and Family of Systems (FoS) performance is effectively and efficiently achieved to specific criteria. This includes SoS test management, test planning, design, integration, execution, assessment and reporting, and verification analysis. It also includes funding for contractor test resources, facilities, and data management. This project reflects the budget breakout negotiated with the Congressional staffers of the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees.</p> <p>This project supports the development of verification requirements for constructive and virtual simulations in support of trade studies, SoS force effectiveness and performance assessment, requirement validation, and design analysis, as well as development of architecture design alternatives for virtual (real-time) and non-real-time SoS simulations is also supported. Performance of SoS level integrated test and evaluation to verify SoS and system level performance in accordance with the Operational Requirements Document (ORD) requirements allocated to the SDD Increment 1 design in support of the initial Production Decision Reviews (PDR) are included. This responsibility includes facilities, resources, test phases, planning, execution, evaluation, and reporting as described below and in accordance with the test and evaluation master plan (TEMP). These Models and Simulations (M&S) shall include representations of components, systems, forces (Unit of Action (UA), Unit of Employment (UE), Joint, and opposing), and threats; scenario generators; environmental simulators; synthetic stimuli; and event controllers. These M&S shall serve as input or nodes on the system integration labs (SILs) and System of Systems Integration Labs (SoSIL) and wrap-arounds or players.</p> <p>The effort uses integrated real and virtual test and evaluation to obtain and validate engineering data and design for the FCS equipped portion of the UA and interfaces with the non-FCS equipped portion of UA. Also the coordination of test and evaluation activities across systems and components.</p> <p>This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).</p>									

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F66	
Accomplishments/Planned Program							FY 2003	FY 2004	FY 2005
Management							0	1560	1058
Planning and Execution							0	57656	53744
Totals							0	59216	54802
B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
647603005A 53G FCS S&T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F66
<p>C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F66

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			0	0		0		0		0	0	0
Subtotal:												

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			0	0		0		0		0	0	0
Subtotal:												

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Management	OTA	The Boeing Company - Seattle, WA	0	0		1560	1-3Q	1058	1-3Q	0	2618	0
b . Planning and Execution	OTA	The Boeing Company - Seattle, WA	0	0		57656	1-3Q	53744	1-3Q	0	111400	0

Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with the Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.

Since the FCS Program is creating all budget justifications from the contractor's EVMS baseline and this baseline only includes contractor direct cost, all contractor projects will not include associated government personnel and test costs plus anticipated taxes.

All funding reserved for statutory reductions are accounted for the in Program Element (PE) 0604645A, Project 61, Government Support Cost. Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).

0604645A (F66)

S OF S TEST AND EVALUATION

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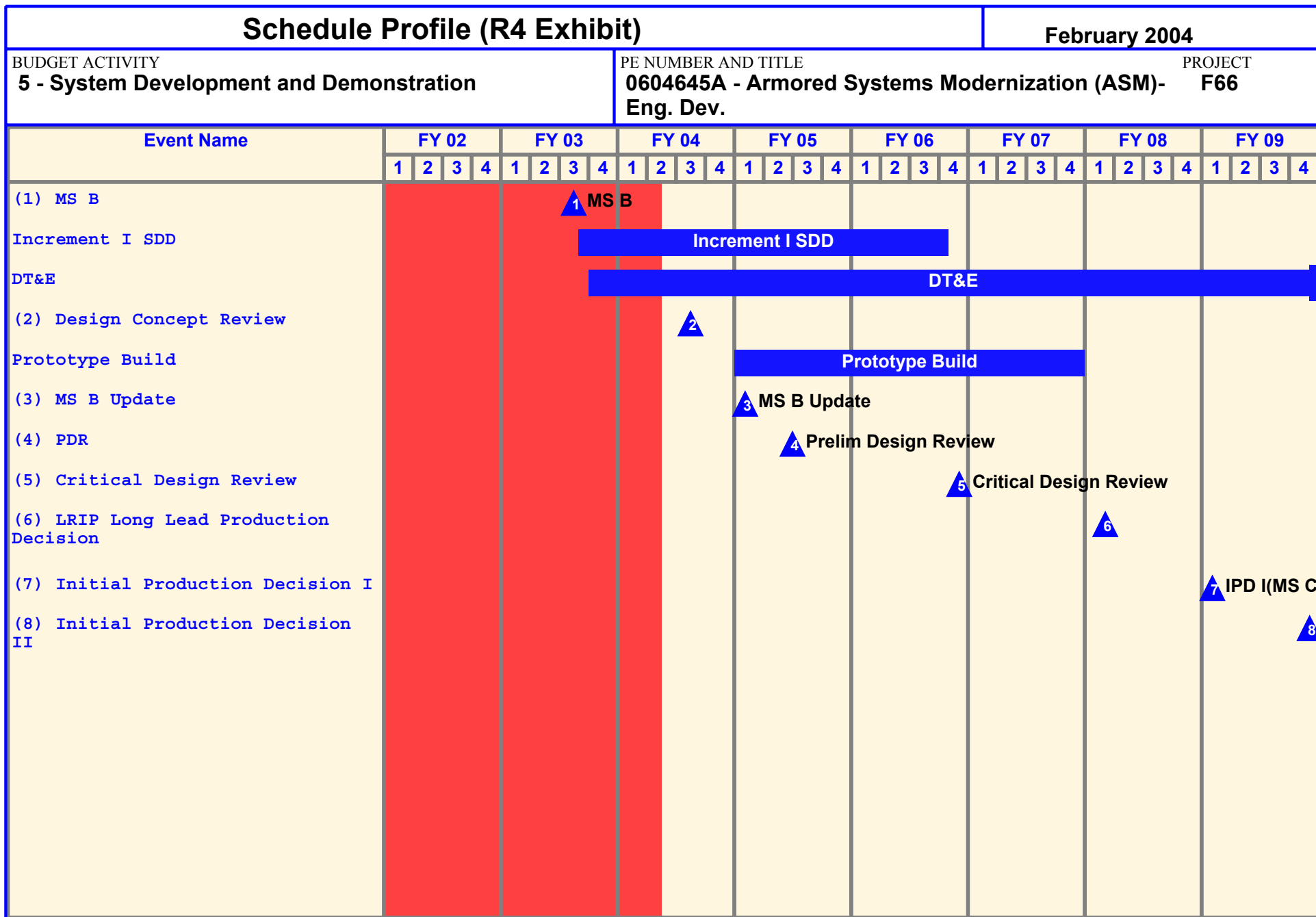
Exhibit R-3

Cost Analysis

Since the FCS Program is creating all budget justifications from the contractor's EVMS baseline and this baseline only includes contractor direct cost, all contractor projects will not include associated government personnel and test costs plus anticipated taxes.

All Government test costs are included in Project F61, Government Support Costs.

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F66			
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
Project Total Cost:						59216		54802		0	114018	0	



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F66	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision							
Network Maturity Milestone						4Q	
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.				PROJECT F67	
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F67 SUPPORTABILITY	0	5518	31754	55324	55160	38191	28813	Continuing	214760
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contractor efforts for this project are found in the Work Breakdown Structure (WBS 1.1.2.4).</p> <p>This effort includes the development of the management, products, and services required to design, develop, assemble, integrate, and test the supportability processes and supporting automated applications within the FCS System of Systems (SoS). It also funds, analysis to aid in life cycle product support decision making to include developing and implementing metrics, performance standards, and warranty requirements. Definition of the Performance Based Logistics (PBL) business processes, performance metrics, standards, data management and analysis process, and the PBL concept for sustainment in accordance with the FCS supportability strategy is also included in this project.</p> <p>This project also includes the integration of the products and services generated by the Product Support Provider (PSP) in order to meet SoS requirements for the Unit of Action (UA). This project reflects the budget breakout negotiated with the congressional staffers from the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees. This project includes the following:</p> <p>Test Support and Demonstration - Provision of test support for equipment testing and demonstration for SoS and Family of Systems (FoS) supportability performance verification. Validation of maneuver sustainment, PBL, and other applicable support concepts during testing, demonstrations, and validations. Assurance of sensor collection of data for logistics decision support system software is adequate to support logistics modeling verification and validation efforts as well as operational PBL.</p> <p>Logistics Support Analysis and Engineering - Utilization of a progressive assurance approach to plan, implement, and manage a supportability and reliability, availability, maintainability, and testability (RAM-T) program. Assurance that the suppliers use best commercial engineering approaches to design RAM into the platforms and systems early in the design process. Establishment of supportability metrics necessary to gauge the maturation and completion of supportability designs. Performance of logistics support analyses, power management analyses, and engineering design analyses for manned/unmanned platform vehicle (MUPV) systems, common and unique support equipment, and source and level of repair for SoS implementation. Assurance that technical operational and maintenance procedures are planned, developed, implemented, coordinated, verified and validated for each system. Development of draft embedded Class V Interactive Electronic Technical Manuals (IETMs) to support each SDD vehicle system type. Also includes reliability growth testing, environmental stress screening, and other reliability assurance efforts as appropriate.</p>									

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)**February 2004****BUDGET ACTIVITY****5 - System Development and Demonstration****PE NUMBER AND TITLE****0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.****PROJECT****F67**

Logistics Management Product Integration - Provides support integration of supportability products into the SoS elements including diagnostics/prognostics functions. Conduction of logistics technical reviews at the system, vehicle, and component levels. Includes fielding analyses and recommendation of the most suitable fielding methodology for the Increment 1 of FCS into the UA.

Fielding - Development of process for deploying vehicles to home base locations to include facilities analysis. Also includes the use of integrated real and virtual test and evaluation to obtain and validate engineering data and design for the FCS equipped portion of the UA and interfaces with the non-FCS equipped portion of UA.

This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).

<u>Accomplishments/Planned Program</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Test and Demonstration	0	37	6020
Logistics Support and Analysis	0	1979	5049
Logistics Management	0	3343	16250
Fielding	0	159	4435
Totals	0	5518	31754

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F67

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S&T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F67
<p><u>C. Acquisition Strategy:</u>On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirments Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F67

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test and Demonstration	OTA	The Boeing Company, Seattle, Washington	0	0		37	1-3Q	6020	1-3Q	0	6057	0
b . Logistics Support and Analysis	OTA	The Boeing Company, Seattle, Washington	0	0		1979	1-3Q	5049	1-3Q	0	7028	0
c . Logistics Management	OTA	The Boeing Company, Seattle, Washington	0	0		3343	1-3Q	16250	1-3Q	0	19593	0
d . Fielding	OTA	The Boeing Company, Seattle, Washington	0	0		159	1-3Q	4435	1-3Q	0	4594	0
Subtotal:			0	0		5518		31754		0	37272	0

Remarks: All estimates are based on the LSI proposal. As discussed with the Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.

All funding reserved for statutory reductions are accounted for the in "Government cost" project.

Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-					PROJECT F67		
					Eng. Dev.							
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government Support costs are included in Project F61, Government Support Costs.												
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Project F66, System of Systems Test & Evaluation.												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F67		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Project F61, Government Support Costs.												
Project Total Cost:			0	0		5518		31754		0	37272	0

Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F67

<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision						4Q	
Network Maturity Milestone							1Q
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.			PROJECT F68		
COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F68 SYS INTEGRATION MGT	0	0	51861	54602	44555	32126	31034	Continuing	214178
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contractor efforts for this project are found in the Work Breakdown Structure (WBS 1.1.2.3.1). This project covers the management activities required to ensure the integration of the various Family of Systems (FoS) components and elements into the FCS System of Systems (SoS). Systems Integration Management includes the management of engineering activities for: sensors, communication systems, crew stations, avionics, computers, survivability suites, suspension, powertrain, structure, vehicle utility systems, autonomous navigation, common software, and other common and vehicle unique components. This project affects the budget breakout negotiated with Congressional staffers from all four defense committees. The same level of management data will be reviewed quarterly with the four defense committees.</p> <p>This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).</p>									
<u>Accomplishments/Planned Program</u>							<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
System Integration Platforms - Management							0	0	51861
Totals							0	0	51861

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F68

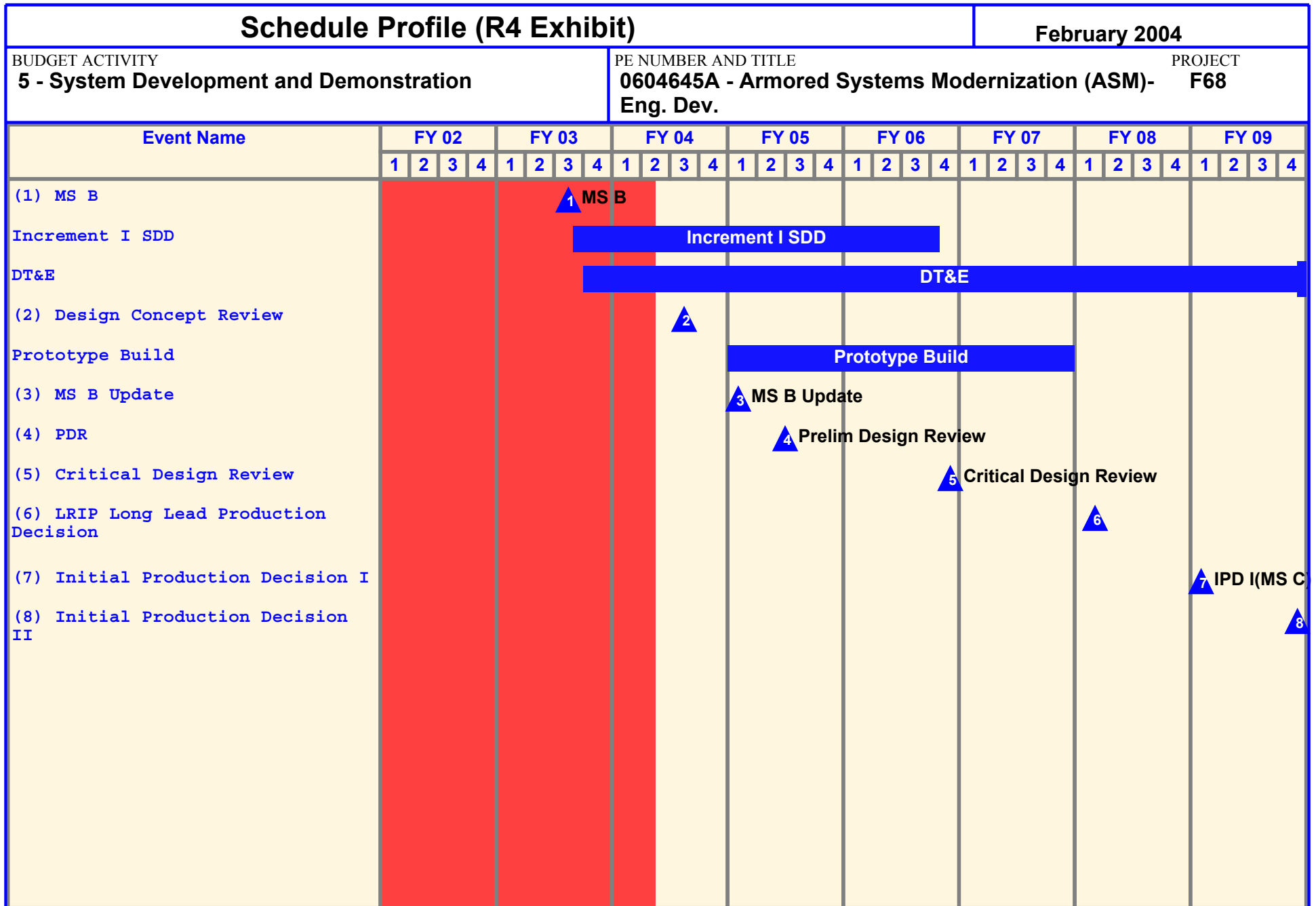
B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S&T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F68
<p><u>C. Acquisition Strategy:</u>On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved Operational Requirements Document (ORD) and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F68		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . System Integration Management	OTA	The Boeing Company, Seattle, Washington	0	0		0		51861	1-3Q	0	51861	0
Subtotal:			0	0		0		51861		0	51861	0
<p>Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.</p> <p>All funding reserved for statutory reductions (SIBR/STTR) are accounted for the in "Government Support Cost" project.</p> <p>Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).</p>												
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
<p>Remarks: * All Government Support costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs.</p>												

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F68		
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Government System Test & Evaluation Costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Program Element (PE) 0604645A, Project F66, System of Systems Test & Evaluation.												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs.												
Project Total Cost:			0	0		0		51861		0	51861	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F68	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision						4Q	
Network Maturity Milestone							1Q
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.			PROJECT F69			
COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F69 TRAINING		0	8151	21797	30876	26346	14606	12208	Continuing	113983
<p><u>A. Mission Description and Budget Item Justification:</u> This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).</p> <p>The contract efforts for this project are found in the Work Breakdown Structure (WBS 1.1.2.5).</p> <p>Training includes contractor analysis to support training for the System of Systems (SoS). This effort includes the design and development engineering, integration, embedded training, and testing of unique training devices, training systems engineering, training products, training support packages, and training integration. This project reflects the budget breakout negotiated with the Congressional staffers from the four defense committees. The same level of management data will be reviewed quarterly with the four defense committees.</p> <p>Provides for the management, plans, products, verification and validation, and services required to ensure design, development, fabrication, integration, and test of a Unit of Action (UA) training program and FCS training system capable of meeting Operational Requirements Document (ORD) objectives. Assurance that the training system is designed as an integral part of the overall SoS design to meet Increment 1 requirements and provides for future increment upgrades. Identification, assessment, and mitigation of training risks as part of the SDD risk reduction effort and coordination of these risk reduction efforts with the SoS Engineering technical risk manager. Support for the distributed network and platform development efforts required to implement embedded and stand alone training designs within Family of Systems (FoS) products necessary to ensure these designs meet ORD requirements. Also includes training product design/interfaces as required to address U.S. Army training implementation beyond the SoS and/or FoS levels for consistency with the existing/planned U.S. Army training infrastructure. Applies a common systematic approach to identify, define, and assess training system technologies and training environments for potential application to FCS training requirements. This includes both current and emerging technology.</p> <p>This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).</p>										
<u>Accomplishments/Planned Program</u>							FY 2003	FY 2004	FY 2005	
Engineering							0	6405	7059	
Planning							0	1746	14738	
Totals							0	8151	21797	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F69

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	162000	112659	109360	48188	0	0	0	0	432207
603005A 53G FCS S&T Activities for Future Spirals	0	0	0	0	0	0	0	0	0
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F69
<p><u>C. Acquisition Strategy:</u>On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F69		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering	OTA	The Boeing Company, Seattle, Washington - See Remark 1	0	0		6405	1-3Q	7059	1-3Q	0	13464	0
b . Planning	OTA	The Boeing Company, Seattle, Washington - See Remark 1	0	0		1746	1-3Q	14738	1-3Q	0	16484	0
Subtotal:			0	0		8151		21797		0	29948	0
<p>Remarks: All estimates are based on the Lead System Integrator (LSI) proposal. As discussed with the Congressional staffers of the four defense committees, the proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.</p> <p>All funding reserved for statutory reductions (SIBR/STTR) are accounted for the in "Government Support Cost" project. Funding in FY07-FY09 is being revised in the Army Program Objective Memorandum (POM) to reflect the Total Obligation Authority (TOA) required as reflected in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).</p> <p>Remark 1 - Subcontractors:</p> <ul style="list-style-type: none"> - Computer Science Corporation, Federal Sector Defense Group - Hampton, VA. - Dynamics Research Corporation Systems Division - Andover, MA. - Northrop Grumman, Information Technology, Defense Enterprise Solutions Division - McLean, VA. 												

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization (ASM)-
Eng. Dev.**

PROJECT

F69

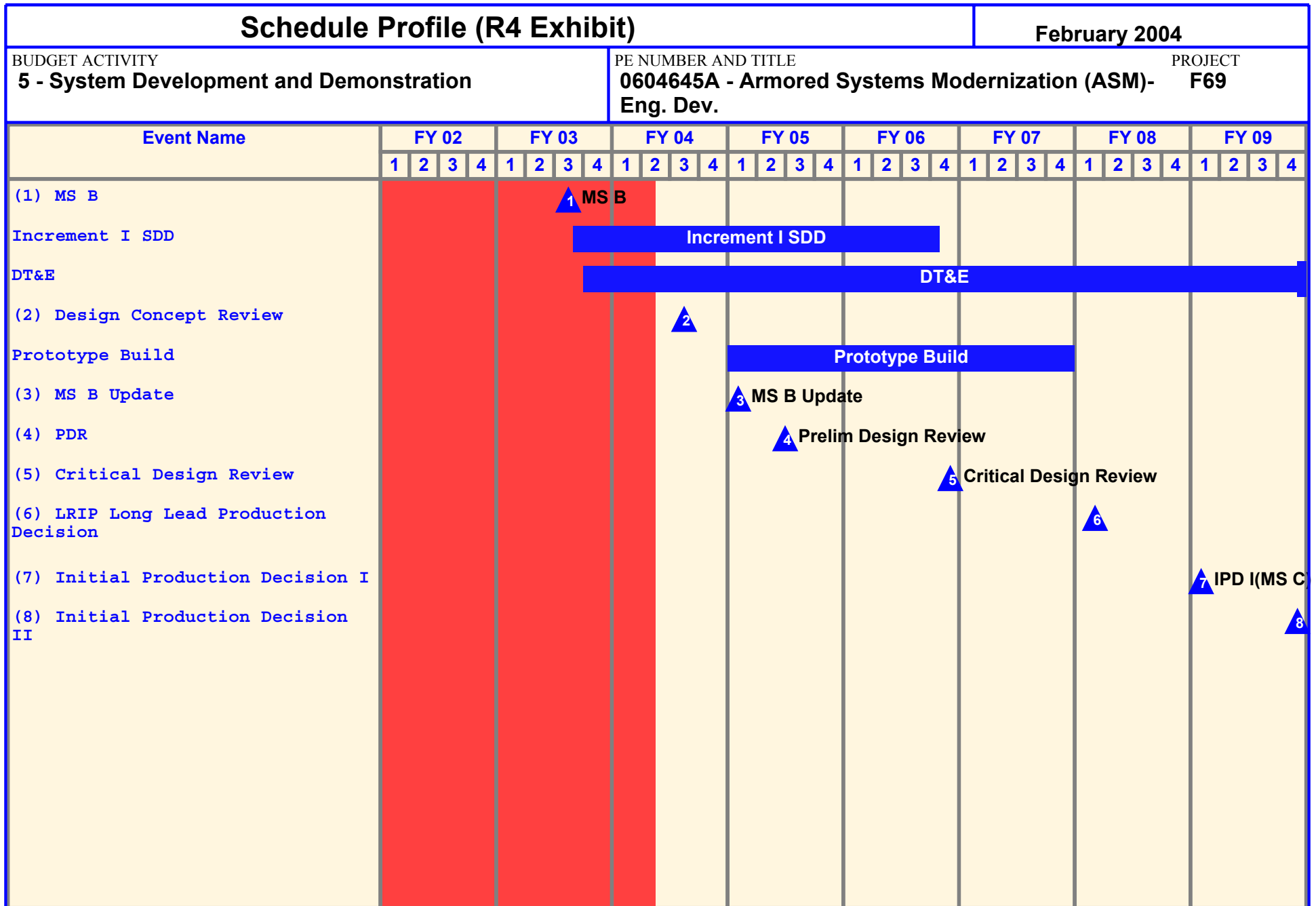
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Government Support costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs.

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0

Remarks: * All Government System Test & Evaluation are included in Program Element (PE) 0604645A, Project F61, Government Support Costs. Contractor System Test & Evaluation costs are included in Program Element (PE) 0604645AF66, Project F66, System of Systems Test & Evaluation.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F69		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . *			0	0		0		0		0	0	0
Subtotal:			0	0		0		0		0	0	0
Remarks: * All Management Services costs are included in Program Element (PE) 0604645A, Project F61, Government Support Costs.												
Project Total Cost:			0	0		8151		21797		0	29948	0



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.			PROJECT F69	
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MS B	3Q						
SDD Ceiling Price OTA Award for FCS	3Q						
SDD Definitization of OTA		1Q					
SoS Requirements Review (RR)		1Q					
EVMS Integrated Baseline Review (IBR)		3Q					
SoS Functional Review (FR)		4Q					
ADM Required MS B Update			1Q				
Long Lead for Prototypes			1Q				
SoS Preliminary Design Review (PDR)			2Q				
Phase 1 Integration at Test Completion			4Q				
Prototype Manufacturing				2Q			
Phase 2 Integration at Test Completion				4Q			
SoS Critical Design Review (CDR)				4Q			
First Prototype Delivery					3Q		
Phase 3 Integration at Test Completion					4Q		
Low Rate Initial Production (LRIP) Long Lead						1Q	
Production Decision						4Q	
Network Maturity Milestone							1Q
Initial Production Decision 1							1Q
Initial Production Decision 2							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F70

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F70 NLOS LAUNCH SYSTEM	0	52022	76445	168278	311203	374630	267590	Continuing	1250168

A. Mission Description and Budget Item Justification: This project is part of the System Development and Demonstration (SDD) Program Element (PE) funding for the Future Combat Systems (FCS).

This project focuses on the development of a materiel solution to meet the Non-Line of Sight - Launch System (NLOS-LS) operational need as delineated in the Future Combat System (FCS) Operational Requirements Document (ORD). NLOS-LS provides enabling lethality for the FCS Unit of Action (UA). NLOS-LS consists of a family of missiles and a highly deployable, platform-independent Container Launch Unit (CLU) with self-contained technical fire control, electronics, and software for remote, unmanned operations. The NLOS-LS Increment I configuration will consist of Precision Attack Missiles (PAMs) focused on defeating hard targets and Loitering Attack Missiles (LAMs) focused on defeating fleeting, high-value targets as well as supporting both targeting information and Battle Damage Assessment. Each of the missiles will be vertically launched directly from the CLU based on fire missions received via the FCS Unit of Action (UA) network and are capable of being updated in-flight via on-board Joint Tactical Radio Set (JTRS) Cluster 5 radios by the network. The vertical launch capability permits a system that is highly deployable as well as the ability to engage a wide spectrum of targets in diverse environments and terrain. Both Increment I missiles will have limited Automatic Target Recognition (ATR) capability which can be upgraded in future versions.

The FY 04-05 budget supports the initiation of an SDD program and conduct of a Preliminary Design Review for NLOS-LS. Efforts will focus on maturing the Defense Advanced Research Project Agency (DARPA) Netfires technology for qualification, producibility, and meeting Army requirements; developing warheads and Electronic Safe and Arm Devices (ESAD) for PAM and LAM; performing component level testing; and designing interfaces for NLOS-LS to integrate into FCS platforms and the network.

This system supports the Future Force transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
PAM detailed system design, software engineering, prototype manufacturing	0	20662	30935
LAM detailed system design, software engineering, prototype manufacturing	0	18264	27334
CLU detailed system design, software engineering, prototype manufacturing	0	4325	7118
NLOS-LS System Integration, system level engineering and test and evaluation	0	8771	11058
Totals	0	52022	76445

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

F70

B. Other Program Funding Summary

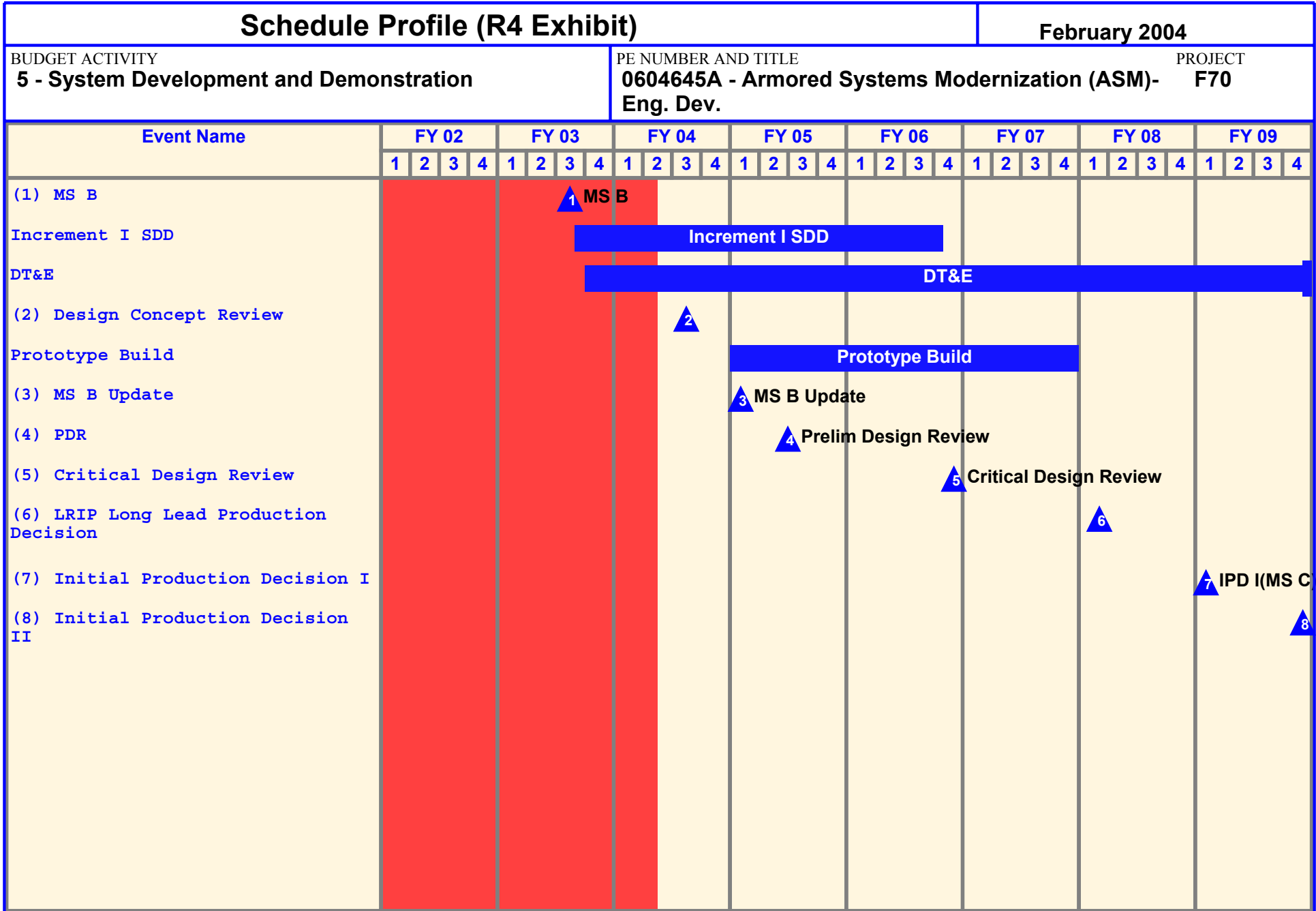
	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306778	0	0	0	0	0	0	0	306778
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G S&T Activities for Future Spirals	162000	112659	109360	48188	0	0	0	0	432207
604647A F58 Non-Line of Sight - Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)		February 2004
BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F70
<p>on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. The Army plans to award the NLOS-LS SDD contract sole source to Netfires LLC, Grand Prairie, TX, second quarter FY04.</p>		

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					PROJECT F70		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PAM	CPIF	Netfires, LLC - Grand Prairie, Texas, VARIOUS	0	0		20662	2Q	30935	1Q	426587	478184	0
b . LAM	CPIF	Netfires, LLC - Grand Prairie, Texas, VARIOUS	0	0		18264	2Q	27334	1Q	403207	448805	0
c . CLU	CPIF	Netfires, LLC - Grand Prairie, Texas , VARIOUS	0	0		4325	2Q	7118	1Q	105989	117432	0
d . NLOS-LS System Integration	CPIF	Netfires, LLC - Grand Prairie, Texas, VARIOUS	0	0		8771	2-4Q	11058	1-4Q	185918	205747	0
Subtotal:			0	0		52022		76445		1121701	1250168	0
<p>Remarks: The proposal data will be modified into an earned value management (EVM) program baseline at the end of February 2004. After the baseline is finalized, the Army will provide the four defense committees with the updated baseline and R-forms to the agreed upon format.</p> <p>All funding reserved for statutory reductions (SBIR/STTR) are accounted for in the project "Government Support Cost".</p> <p>Funding in FY07-FY09 is being revised to reflect the Total Obligation Authority (TOA) required in the Army Cost Position (ACP) as directed in the Acquisition Decision Memorandum (ADM).</p>												

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604645A - Armored Systems Modernization (ASM)- Eng. Dev.					F70			
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			0	0		0		0		0	0	0	
Subtotal:													
Project Total Cost:			0	0		52022		76445		1121701	1250168	0	



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)- Eng. Dev.				PROJECT F70
<u>Schedule Detail</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Risk Reduction Contracts	2Q						
Risk Reduction IPR	3-4Q						
Increment 1 SDD Contract Award		2Q					
Integration Phase SDD (IPS1)			1-4Q				
Critical Design Review				4Q			
Integration Phase SDD (IPS2)				1-4Q			
Integration Phase SDD (IPS3)					1-4Q		
Integration Phase SDD (IPS4)						1-4Q	
Milestone C						4Q	
LRIP Award							1Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)	February 2004
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ernization	PROJECT F71
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5 - System Development and Demonstration

0604645A - Armored Systems Modernization (ASM)-Eng. Dev.

F71

[illegible]

A. Mission Description and Budget Item Justification: The Joint Military Intelligence Program (JMIP) Project is intended to highlight Work Breakdown Structure (WBS) elements that affect multiple user/Joint Service support. The appropriate WBS elements that will make up this project have not been identified yet, but by the budget baseline update in March 2004 this project will be tied to the appropriate WBS elements.

Accomplishments/Planned Program Not applicable for this item.

<u>Accomplishments/Planned Program</u>	Not applicable for this item.

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BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604645A - Armored Systems Modernization
(ASM)-Eng. Dev.**

PROJECT

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B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
603645A F48 Networked Fires (FY03 only)	127951	0	0	0	0	0	0	0	127951
603854A F47 Non-Line of Sight – Cannon (FY03 only)	306159	0	0	0	0	0	0	0	306159
604645A 470 FCS SDD (FY03 only)	159175	0	0	0	0	0	0	0	159175
604645A F49 Non-Line of Sight – Launch System (FY03 only)	0	0	0	0	0	0	0	0	0
603005A 53G FCS S&T Activities for Future Spiral	162000	0	0	0	0	0	0	0	162000
604647A F58 Non-Line of Sight – Cannon	0	260495	497643	459084	285095	104452	32388	0	1639157
604645A F59 Common Components	0	32548	115163	136561	100357	47645	27481	0	459755
604645A F60 Family of Systems Analysis & Integration	0	173719	135903	168624	172187	115959	108354	0	874746
604645A F61 Government Support Costs	0	305728	488750	615028	547652	456057	409729	0	2822944
604645A F62 Mission Equipment Platforms	0	139286	634630	1208793	953321	367634	139362	0	3443026
604645A F63 Network Software	0	117434	380491	500953	386237	220761	155530	0	1761406
604645A F64 Other Contract Costs	0	329501	246935	336042	277395	149082	114361	0	1453316
604645A F65 System of Systems Engineering & Program Management	0	200023	461924	436673	365618	270763	180889	0	1915890
604645A F66 System of Systems Test & Evaluation	0	59216	54802	80083	94624	74414	83109	0	446248
604645A F67 Supportability	0	5518	31754	55324	55160	38191	28813	0	214760
604645A F68 Integration Management	0	0	51861	54602	44555	32126	31034	0	214178
604645A F69 Training	0	8151	21797	30876	26346	14606	12208	0	113984
604645A F70 Non-Line of Sight–Launch System	0	52022	76445	168278	311203	374630	267590	0	1250168
WTCV G86100 FCS Production	0	0	0	0	752324	3187371	3153325	0	7093020

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BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604645A - Armored Systems Modernization (ASM)-Eng. Dev.	PROJECT F71
<p>C. Acquisition Strategy: On 14 May 2003, the Defense Acquisition Board (DAB) approved the program's Milestone (MS) B decision based on a Joint Requirement Oversight Committee (JROC) approved ORD and an approved Army Cost Position (ACP). As a result of the DAB review, an Acquisition Decision Memorandum (ADM) was approved by the Defense Acquisition Executive (DAE) on 17 May 2003. This ADM approved the Army's entrance in SDD and directed the Army to fully fund FCS and complementary Army programs across the FY05-09 Future Years Defense Program (FYDP) to the Army's costs estimates. Based on the ADM, the Army signed a ceiling price Other Transaction Agreement (OTA) with the Lead Systems Integrator (LSI) on 30 May 2003. On 10 December 2003, the Army definitized the SDD OTA with the LSI.</p>		