

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - 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		56101	87471	89151	38534	45332	46789	55043	Continuing	Continuing
194	ENGINE DRIVEN GEN ED	7293	7272	5454	7625	9541	2716	3337	Continuing	Continuing
461	MARINE ORIEN LOG EQ ED	30002	61280	65380	3323	5155	5147	2982	Continuing	Continuing
H01	COMBAT ENGINEER EQ ED	5653	4146	4231	4635	4717	3288	3181	Continuing	Continuing
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	1020	1925	2479	2973	2809	9092	21803	Continuing	Continuing
H14	MATERIALS HANDLING EQUIPMENT - ED	493	488	0	496	495	495	495	Continuing	Continuing
L39	FIELD SUSTAINMENT SUPPORT ED	981	8326	4606	9820	11691	14541	11074	Continuing	Continuing
L41	WATER AND PETROLEUM DISTRIBUTION - ED	7468	1672	3063	5574	7199	3580	3651	Continuing	Continuing
L42	CAMOUFLAGE SYSTEM ED	329	660	1603	1638	1155	1870	1723	Continuing	Continuing
L43	ENGINEER SUPPORT EQUIPMENT - ED	2862	1214	1154	1172	1192	4683	5371	Continuing	Continuing
L46	MAINTENANCE SUPPORT EQUIPMENT	0	488	1181	1278	1378	1377	1426	Continuing	Continuing

A. Mission Description and Budget Item Justification: This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

This project supports the Stryker Brigade Combat Team (SBCT), the Current-to-Future Force and the Future Force transition paths of the Army's Transformation Campaign Plan (TCP).

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	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	64808	86288	88153
Current Budget (FY 2005 PB)	56101	87471	89151
Total Adjustments	-8707	1183	998
Congressional program reductions		-917	
Congressional rescissions	-372		
Congressional increases	1143	2100	
Reprogrammings	-7658		
SBIR/STTR Transfer	-1820		
Adjustments to Budget Years			998

FY04 & FY05 increases provided by the Army support of higher Army priorities.

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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
194 ENGINE DRIVEN GEN ED	7293	7272	5454	7625	9541	2716	3337	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs.

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

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Continued hardware system development and testing for 100/200kW TQG.	200	0	0
Completed testing and began transition of 100/200kW TQG to production and deployment.	3067	200	0
Evaluated commercially available components for application to Advanced Medium Mobile Power Sources (AMMPS).	1626	0	0
Completed Performance Specification and MS B IPR package for AMMPS.	300	0	0
Award two or more Phase I contracts for AMMPS and conduct Phase I testing.	0	4804	1919
Award Phase II contract option for AMMPS.	0	0	3535
Initiated 2kW Improvement Program for noise and weight reduction	2100	0	0
Initiate Follow-on 2kW Improvement Program	0	2081	0
Small Business Innovative Research / Small Business Technology Transfer Programs	0	187	0
Totals	7293	7272	5454

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BUDGET ACTIVITY 5 - System Development and Demonstration	PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev	PROJECT 194
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<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	
0603804A - Logistics and Engineer Equipment Adv Dev G11	1481	1484	1510	2879	2495	3072	3257	Continuing	Continuing	
OPA3, MA9800 Generators and Associated Equipment	76088	72418	54397	49681	50191	50667	50850	Continuing	Continuing	

C. Acquisition Strategy:Developmental items in this project will transition into procurement.

ARMY RDT&E COST ANALYSIS(R3)

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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 . 100/200kW TQG	C-CPFF	Fermont, Bridgeport, CT	8618	200	2Q	0		0		Continue	Continue	0
b . AMMPS(5-60kW)	Various	Various	4251	779	2Q	4054	3Q	4334	3Q	Continue	13418	0
c . 2kW Improvement Program (Noise & Weight Reduction	C-FFP	Dewey Electronics, Oakland, NJ	0	1785	4Q	0		0		Continue	Continue	0
d . Follow-on 2kW Improvement Program	Various	Various	0	0		1766	3Q	0		Continue	1766	0
Subtotal:			12869	2764		5820		4334		Continue	Continue	0

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 . 100/200kW TQG	In-house	CECOM, Ft Belvoir, VA	985	250	2Q	100	1Q	0		Continue	Continue	0
b . AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	1425	200	2Q	350	1Q	200	1Q	Continue	Continue	0
c . 2kW Improvement Program (Noise & Weight Reduction(In-house	CECOM, Ft Belvoir, VA	0	65	2Q	0		0		Continue	Continue	0

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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
d . Follow-on 2kW Improvement Program	In-house	CECOM, Ft Belvoir, VA	0	0		65	2Q	0		Continue	Continue	0
Subtotal:			2410	515		515		200		Continue	Continue	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 . 100/200kW	MIPR	Aberdeen Proving Ground, MD	2190	2567	1Q	0		0		Continue	4757	0
b . AMMPS(5-60kW)	Various	Various	230	697	2Q	0		520	2Q	Continue	Continue	0
c . 2kW Improvement Program (Noise & Weight Reduction)	MIPR	CECOM, Fort Belvoir, VA	0	250	4Q	0		0		Continue	Continue	0
d . Follow-on 2kW Improvement Program	MIPR	CECOM, Ft Beloir, VA	0	0		250	2Q	0		Continue	Continue	0
Subtotal:			2420	3514		250		520		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R3)								February 2004					
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT 194			
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 . 100/200kW	In-house	CECOM, Ft Belvoir, VA	772	250	1Q	100	1Q	0		Continue	Continue	0	
b . AMMPS(5-60kW)	In-house	CECOM, Ft Belvoir, VA	907	250	1Q	400	1Q	400	1Q	Continue	Continue	0	
c . SIBR / STTR			0	0	1Q	187		0		0	187	0	
Subtotal:			1679	500		687		400		Continue	Continue	0	
Project Total Cost:				19378	7293		7272		5454		Continue	Continue	0

Schedule Profile (R4 Exhibit)

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Event Name	FY 02				FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
2kW Improv. Prog. (Noise and Weight Reduction)																																
(1) Publish CBD Announcement, (2) Award Contract, (3) Conduct Gov't Testing of Prototypes							▲1	▲2							▲3																	
AMMPS Program																																
(4) Complete Solic., (5) MS B												▲4	▲5																			
Award Phase I / SDD Runoff, Award Phase II / Conduct DT & OT																																
(6) MS C, (7) Production Release, (8) Materiel Release																											▲6	▲7				
100/200kW TQG																																
(9) Complete DT, (10) Complete OT, (11) MS C, (12) Production Release													▲9	▲10		▲11	▲12															
STEP (Small Tact. Electric Power)																																
(13) Prepare Performance Spec., (14) Award Phase I / SDD																											▲13					
																												▲14				
2kW Follow-on Improvement Program																																
(15) Publish CBD Announcement, (16) Award Contract(s), (17) Conduct Gov't Testing of Prototypes														▲15	▲16					▲17												

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT 194	
<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>
Published CBD Announcement requesting White Papers for 2kW Improvement Program	2Q						
Awarded 2kW Improvement Program contract	4Q						
Complete 100/200kW TQG Developmental Test		1Q					
Complete solicitation package for AMMPS		1Q					
Complete 100/200kW TQG Operational Test		1Q					
AMMPS Milestone B		1Q					
Publish CBD Announcement requesting White Papers for Follow-on 2kW Improvement Program		2Q					
Award Follow-on 2kW Improvement Program contract(s)		3Q					
Transition 100/200kW TQG to Procurement (Milestone A)		3Q					
Award two or more Phase I contracts for AMMPS prototype design and build		3Q					
Initiate Phase I testing of AMMPS			1Q				
Conduct Government testing of prototypes of 2kW Improvement Program (Noise & Weight Reduction)			2Q				
Award Phase II contract for AMMPS family			3Q				
Conduct Government testing of prototypes of Follow-on 2kW Improvement Program				2Q			
Initiate DT and OT for AMMPS (Phase II Testing)				3Q			
Begin preparation of Performance Specification for Man Portable Power Program						1Q	
Complete testing of Phase II AMMPS and prepare Milestone C package						2Q	
Transition AMMPS to Procurement (Milestone C) - Production Release						2Q	
Award STEP Phase I contracts							2Q
AMMPS Material Release							4Q

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Eng Dev**

PROJECT

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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
461 MARINE ORIEN LOG EQ ED	30002	61280	65380	3323	5155	5147	2982	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the engineering and pre-production development of equipment for the Army's Logistics-Over-The-Shore (LOTS), In-theatre Port Control, and Riverine logistics missions. Chief among this equipment is the Theater Support Vessel (TSV). The Objective TSV will operate at speeds up to four times greater than the current fleet. This will provide the Army with the capability to support operational maneuver from standoff distance; bypass land-based chokepoints, and reduce the logistics footprint in the Area of Responsibility. This ability to transport both troops and their equipment, and to provide an Enroute Mission Planning and Rehearsal System, does not exist today. This evolutionary acquisition features the current lease of a commercial fast ferry (in cooperation with the U.S. Navy (HSV-X1)), and a lease for another (more capable) fast ferry (TSV-1X), for Technology Demonstration purposes and beginning in FY05, the development of a TSV RDTE "First in Class" vessel.

These systems support the Future Force transition path of the Transformation Campaign Plan (TCP).

<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005
TSV test program.	16412	38855	0
Army support for the HSV Lease.	1938	9000	0
Army support for the TSV Lease.	11652	11653	0
Army support for R&D Vessel	0	0	65380
Small Business Innovative Research/Small Business Technology Transfer Programs	0	1772	0
Totals	30002	61280	65380

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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
RDTE, 0603804A,526, Marine Oriented Logistics, Advanced Development	6443	4707	296	296	297	297	296	Continuing	Continuing
OPA 3, M11200, Logistic Support Vessel (LSV)	10800	2978	0	0	0	0	0	0	39595
OPA 3, M11203, Theatre Support Vessel (TSV)	0	0	0	33177	42714	356529	373837	Continuing	Continuing

C. Acquisition Strategy: The TSV Acquisition Strategy calls for evolutionary development of commercially based technology with military adaptations. TSV will be acquired competitively and production will be based in the United States. The Army will begin development of a "First in Class" TSV RDTE vessel with FY05 RDTE funding and development will be completed using FY06-FY07 RDTE funding. The FY05 budget request reflects a change in the TSV acquisition strategy in that an RDTE vessel will be acquired and the Army will no longer rely on leased vessels. The current HSV-X1 and TSV-1X RDTE leases will expire at the end of FY04. Currently fielded Logistics Support Vessels (LSV) will remain the only Army intra-theater capability until TSV is fielded. The Army is currently developing a TSV Memorandum of Agreement with the Marine Corps to accommodate emerging Marine Corps requirements. Additionally, there is interest from other allies such as the UK.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT 461		
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 . TSV	MIPR	NSWC, Suffolk, VA	1783	1045	1-3Q	2000	2-3Q	0		Continue	4828	0
b . HSV Lease(ARMY portion)	Competitive FFP/Requirements Type Contract	Bollinger/INCAT	3931	1938	1-2Q	9000	1Q	0		0	14869	Continue
c . TSV-X1 Lease	Competitive Fixed Price Contract	Bollinger/INCAT	0	11652	1Q	11653	1Q	0		0	23305	Continue
d . TSV/HSV Modifications	PWD	TBD	5021	10130	1-3Q	2000		0		0	17151	Continue
e . TSV/HSV Operations/Demonstration			0	3800	1-3Q	22127	1-3Q	0		0	25927	0
f . HSV Cargo Handling	MIPR	TBD	0	0		5200	2Q	0		0	5200	0
g . TSV C4I	MIPR	TBD	0	0		5800	2-3Q	0		0	5800	0
h . TSV Helo Operations	MIPR	Ft. Rucker, Alabama	0	0		1000	2-3Q	0		0	1000	0
i . R&D Vessel	PWD	TBD	0	0		0		60734	1-2Q	0	60734	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration					0604804A - Logistics and Engineer Equipment - Eng Dev					461		
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
			10735	28565		58780		60734		Continue	158814	Continue
Subtotal:												
Remarks: Item D: FY04 \$2M for Self Protection												
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 . TSV/Matrix Support	MIPR	TACOM Safety Office	0	15	2Q	50	2-3Q	0		Continue	65	0
b . TSV	MIPR	DRM, Ft Eustis	90	0		0		0		0	90	0
c . TSV	MIPR	NSWC, West Bethesda, MD	100	0		0		0		0	100	0
d . TSV/Matrix Support	MIPR	TACOM, Environmental	0	130	2Q	0		0		0	130	0
e . R&D Vessel/Matrix Support	MIPR	TACOM Safety Office	0	0		0		70	2-3Q	Continue	70	0
f . R&D Vessel/Matrix Support	MIPR	TACOM, Environmental	0	0		0		125	2Q	0	125	0
Subtotal:			190	145		50		195		Continue	580	0

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BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT 461		
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 . HCCC	MIPR	TECOM , ATC, Aberdeen, MD	50	0		0		0		0	50	730
b . TSV/Matrix Support	MIPR	LCCE, TACOM, Warren	0	83	2-3Q	50	2-3Q	0		Continue	133	0
c . TSV	PWD	Tirrenia, Napoli, Italy	0	437	2Q	0		0		0	437	0
d . R&D Vessel/Matrix	MIPR	LCCE, TACOM, Warren	0	0		0		166	2-3Q	Continue	166	0
Subtotal:			50	520		50		166		Continue	786	730
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 . HCCC/Matrix	MIPR	PM Force Projection R&D/TARDEC, TACOM, Warren, MI	212	0		0		0		0	212	0
b . TSV/In-house	MIPR	PM TSV, Warren, MI	0	772	1-4Q	2400	2-3Q	0		Continue	3172	0
c . R&D Vessel/In-house	MIPR	PM TSV, Warren, MI	0	0		0		4285	1-2Q	Continue	4285	0

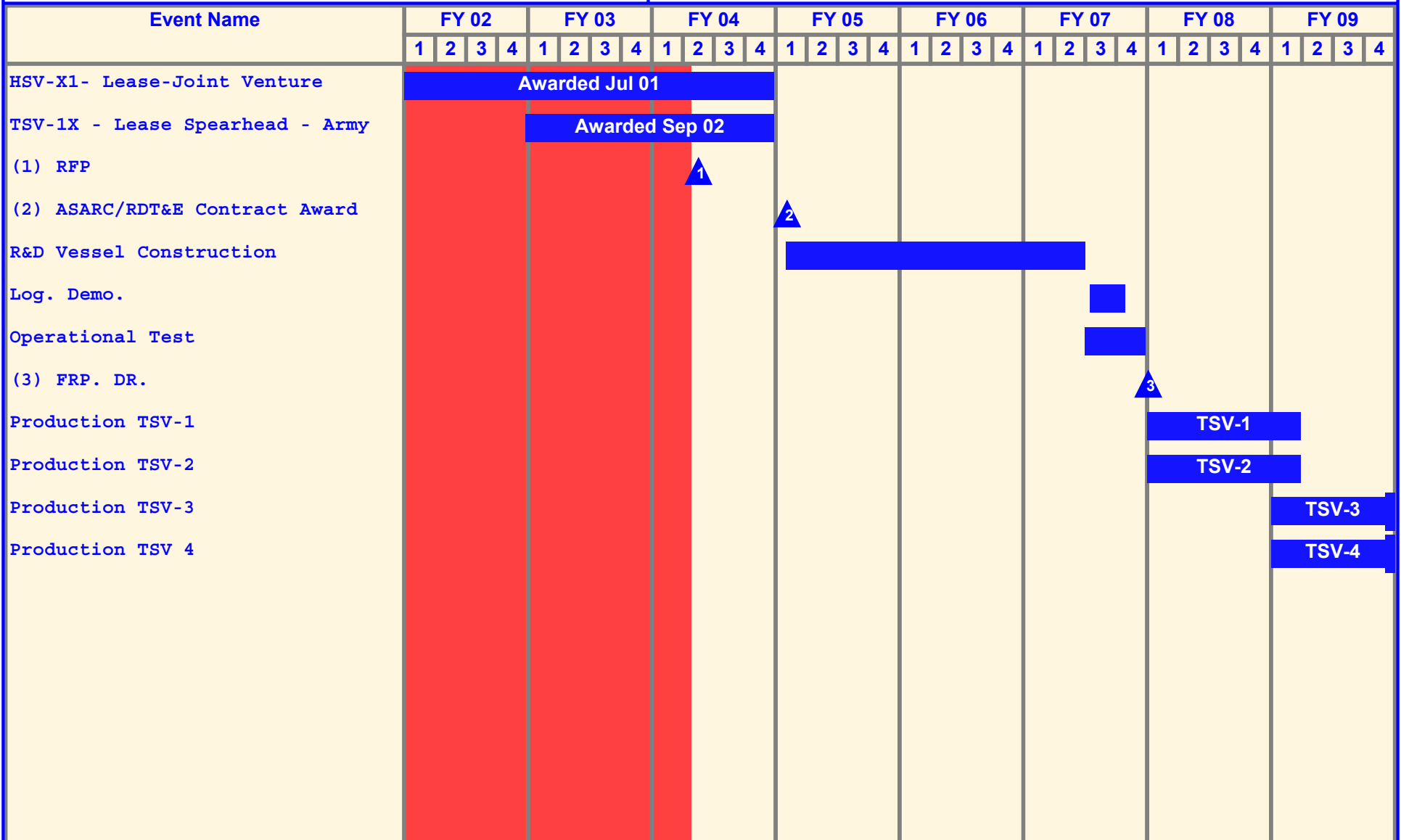
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IV. Management Services (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract	
			212	772		2400		4285		Continue	7669	0	
Subtotal:													
Project Total Cost:										Continue	167849	Continue	

Schedule Profile (R4 Exhibit)

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Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT 461	
<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Spiral Developmental/Design Mods	1-4Q	1-4Q					
Theater Support Vessel Joint Lease/Test program	1-4Q	1-4Q					
Logistic Demonstration					3-4Q		
R&D Vessel			1-4Q	1-4Q	1-2Q		
Operational Test Technical Review					2Q		

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PROJECT

H01

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
H01 COMBAT ENGINEER EQ ED	5653	4146	4231	4635	4717	3288	3181	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration (SDD) of military tactical Construction Equipment (CE) used in support of horizontal construction missions in the Current Force and the transformation of engineers into the unit of action for the Future Force. This project also supports the Army Chief of Staff's focus on joint interdependence through the air and ground line of communication, high speed excavation, infrastructure repair, and restoration integrated concept teams. Equipment includes items such as: High Mobility Engineer Excavator (HMEE); Skid Steer Loader (SSL); Deployable Universal Combat Earthmover (DEUCE); Tracked Tractor; Scrapers, Scoop Loaders and Graders. The DEUCE and HMEE support the Stryker Brigade Combat Team (SBCT). The HMEE is also a part of the unit of employment in the Future Force. All of these systems support the Current Force of Combat Heavy Engineer Battalions, Construction Support Companies, Airborne/Air Assault Units, and the Army's Division Redesign Study (ADRS), which converts National Guard units from Combat to Combat Service Support (CSS) units.

This project supports the Current-to-Future Force transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Conduct market investigations, studies, and update specifications for procurements of supporting future engineer transformation	217	843	370
Develop engineer and acquisition documents required for acquisition Milestone Decision.	407	618	415
Performed test and evaluation of Volvo equipment.	170	0	0
Perform test and evaluation of Family of Loader vehicles.	0	300	0
Perform test and evaluations of future engineer equipment.	0	0	456
Execute SDD contracts for the HMEE.	4771	528	897
HMEE Test and Evaluation (6 prototypes).	20	1236	1493
Non-split rim wheel development for Construction Equipment to address the Army's safety concerns.	0	400	0
Feasibility study for upgrade of Small Emplacement Excavator (SEE) powertrain.	68	0	0
SEE Powertrain Prototype	0	100	0
Cooperative Research with Industry	0	0	600
Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) Programs	0	121	0

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Eng Dev**

PROJECT

H01

Accomplishments/Planned Program (continued)

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
Totals	5653	4146	4231						
<u>B. Other Program Funding Summary</u>									
OPA3, R02800, Scraper, Earthmoving 14-18	0	0	0	0	0	3099	5768	Continuing	Continuing
OPA3, R03801, Grader, Mtzd, Hvy	638	0	0	0	2836	12875	4091	Continuing	Continuing
OPA3, R05900, Stryker High Mobility Engineer Excavator (SHMEE)	2179	4806	0	0	0	0	0	0	19831
OPA3, R05900, High Mobility Engineer Excavator	2179	4806	8675	8458	20970	21316	23550	Continuing	Continuing
OPA3, M06400, Loader, Scoop 2.5 Cu Yd	3957	5402	4041	0	0	0	0	0	14215
OPA3, R03900, Loader Scoop 4-5 Cu Yd	3324	2686	6161	0	0	0	0	0	13962
OPA3, ML5325, Item Less than \$5M (Engineer Support Equipment)	7704	12851	6546	3767	553	10789	9376	Continuing	Continuing

C. Acquisition Strategy: Construction Equipment- All RDT&E followed by competitive procurement.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT H01		
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 . HMEE Matrix Spt	MIPR	TACOM, Warren, MI	760	245	1-2Q	719	1-2Q	315	1-2Q	Continue	2039	Continue
b . HMEE SDD Contract w/ options	FFP	ADI, Australia; JCB, Pooler, GA	179	4771	3Q	528	1-2Q	897	1-2Q	0	6375	7341
c . Research Contracts	FFP	TBD	0	0		0		600	2-4Q	Continue	600	Continue
d . SEE Powertrain Prototype	FFP	TBD	0	0		100	3-4Q	0		0	100	0
e . Feasibility Study	FFP	International Consultants, Inc., Dayton, OH	0	68	3Q	0		0		0	68	0
f . Non-split rim development	FFP	TBD	0	0		400	3-4Q	0		0	400	0
Subtotal:			939	5084		1747		1812		Continue	9582	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT H01		
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 . Matrix Support	MIPR	TARDEC, Warren, MI	8533	186	1-2Q	291	1-2Q	270	1-4Q	Continue	9280	Continue
b . Engineering Operational Integrator Support	MIPR	DA/Pentagon, Washington, DC	0	0		156	2Q	0		0	156	0
c . Construction Equipment Lease Study	MIPR	DA/Pentagon, Washington, DC	0	0		200	2Q	0		0	200	0
Subtotal:			8533	186		647		270		Continue	9636	Continue
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 . HMEE Test and Prep	MIPR	ATEC, Aberdeen, MD	28	20	2Q	1236	1-2Q	1493	1-2Q	0	2777	2048
b . System and Component testing	MIPR	ATEC, Aberdeen, MD	1121	170	1Q	300	4Q	456	1-4Q	Continue	2047	Continue
Subtotal:			1149	190		1536		1949		Continue	4824	Continue

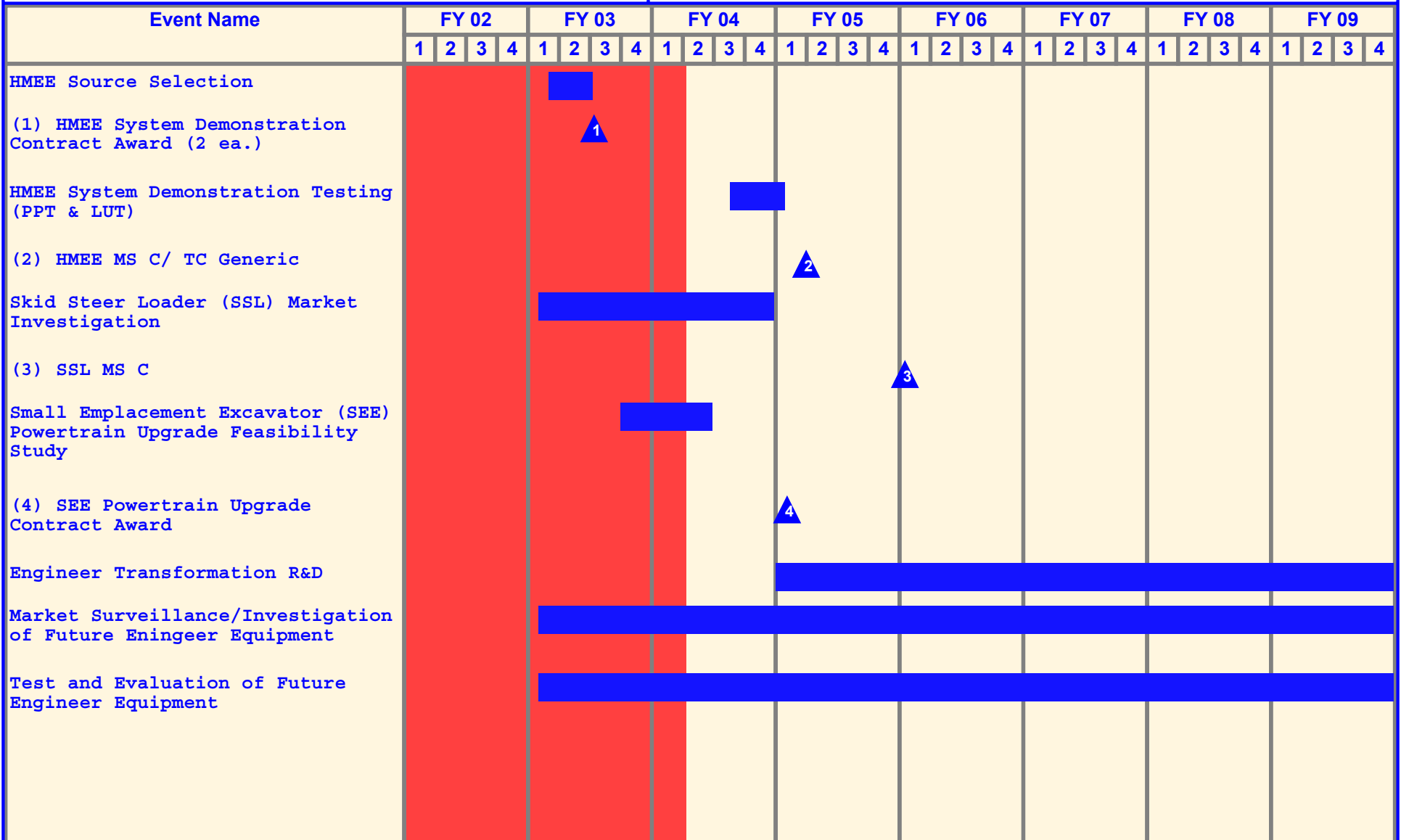
ARMY RDT&E COST ANALYSIS(R3)										February 2004		
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration					0604804A - Logistics and Engineer Equipment - Eng Dev					H01		
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total 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 . Program Mgt	In-house	PM CE, Warren, MI	150	193	1-2Q	216	1-2Q	200	1-2Q	Continue	759	Continue
Subtotal:			150	193		216		200		Continue	759	Continue
Project Total Cost:			10771	5653		4146		4231		Continue	24801	Continue

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev
PROJECT
H01



Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

H01

<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Market Surveillance/Investigation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Acquisition documents supporting Milestone Decisions	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Test and Evaluation of Volvo equipment	1Q						
Test and Evaluation of Family of Loaders vehicles		4Q					
Test and Evaluation of Future Engineer Equipment			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
HMEE SDD Contracts	2-3Q	1-4Q	1-2Q				
HMEE Testing		3-4Q	1Q				
Coop Research Industry			2-4Q	1-4Q	1-4Q	1-4Q	1-4Q
HMEE MS C			1-3Q				
SEE Feasibility Study	4Q	1-2Q					
SEE Prototype Award		3-4Q					
SSL MS C				1Q			

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604804A - Logistics and Engineer Equipment -
Eng Dev**

PROJECT

H02

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
H02	TACTICAL BRIDGING - ENGINEERING DEVELOPMENT	1020	1925	2479	2973	2809	9092	21803	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the engineering, system development and demonstration, and transition to procurement of Future Force tactical bridge systems. Efforts supported include: the assessment of the Rapidly Emplaced Bridging System (REBS) for the Stryker Brigade Combat Team (SBCT) and its integration into the Future Combat System (FCS) chassis; the upgrade and testing of the Bridge Erection Boat (BEB) and the REBS; and development of new composite technology for the REBS and the Dry Support Bridge (DSB).

This project supports the Stryker Brigade Combat Team (SBCT) and the Current-to-Future Force transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Testing of the Improved Bridge Anchorage System	41	0	0
Procure representative samples of Improved Bridge Anchorage System.	149	0	0
Initiate Operational Testing on the REBS	150	1594	0
Future Bridging Requirements Documentation	150	0	0
Perform Limited User Test on the Bridge Erection Boat.	530	0	0
Plan and develop a composite integrated bridge for testing on the Rapidly Emplaced Bridging System (REBS)	0	0	1370
Develop a new composite launch beam for the Dry Support Bridge	0	275	1109
Small Business Innovative Research/Small Business Technology Transfer Programs	0	56	0
Totals	1020	1925	2479

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604804A - Logistics and Engineer Equipment -
Eng Dev**

PROJECT

H02

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
OPA3, MA8890, Tactical Bridge, Float Ribbon	70576	62426	17360	5126	7404	5040	25523	Continuing	Continuing
OPA3, MX0100, Tactical Bridging	68994	42223	34137	26611	28730	23181	42867	Continuing	Continuing

C. Acquisition Strategy: Limited RDTE effort to support testing and follow-on production.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT H02		
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 . Anchorage System Sample	SS-FFP	General Dynamics SBS, Kaiserslautern, GE	0	149	3Q	0		0		0	149	0
b . PM/Matrix Support	MIPR	TACOM, Warren, MI	968	0		0		0		0	968	0
c . REBS Composite Bridge	SS-CPFF	General Dynamics SBS, Kaiserslautern, GE	0	0		0		1370	1-2Q	0	1370	0
d . DSB Composite Beam	SS-CPFF	WFEL, Stockport, England	0	0		275	2Q	1109	2-3Q	0	1384	0
e . Future Bridging Requirements Documentation	MIPR		0	150	3Q	0		0		0	150	0
Subtotal:			968	299		275		2479		0	4021	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604804A - Logistics and Engineer Equipment - Eng Dev					H02			
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 . Anchorage System	MIPR	APG, Aberdeen, MD	0	41	2Q	0		0		Continue	41	0	
b . REBS OT	MIPR	HQ OTC, Ft Hood, TX	0	150	3Q	1650	2Q	0		0	1800	0	
c . BEB LUT	MIPR	ATC, Aberdeen Proving Ground, MD	0	530	3Q	0		0		0	530	0	
Subtotal:			0	721		1650		0		Continue	2371	0	

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT H02			
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:			968	1020		1925		2479		Continue	6392	0	

Schedule Profile (R4 Exhibit)																February 2004																
BUDGET ACTIVITY												PE NUMBER AND TITLE																PROJECT				
5 - System Development and Demonstration												0604804A - Logistics and Engineer Equipment - Eng Dev																H02				
Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
BEB Limited User Test																																
REBS Operational Test																																
BEB Electronic Controlled Engine Test																																
Test DSB Composite Beam																																
Test REBS Composite Bridge																																
Test REBS Fully Automatic Launch/Retrieve																																
Develop and Integrate REBS on FCS Chassis																																

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT H02	
<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>
Procure Anchorage System Representatives Samples	3Q						
Anchorage System Testing	3-4Q	1-2Q					
REBS Operational Test	2Q	3Q					
BEB Limited User Test		2Q					
Develop REBS Composite Bridge			1-2Q				
Integrate REBS Composite Bridge			3-4Q	1-4Q			
Test New REBS Composite Bridge					1-3Q		
Develop DSB Composite Beam		4Q	1-3Q				
Integrate New DSB Composite Beam			4Q	1-4Q			
Test DSB Composite Beam					1-3Q		
Develop and Integrate BEB Electronic Controlled Engine				3-4Q			
Procure and Install BEB Electronic Controlled Engine					1-3Q		
Test BEB Electronic Controlled Engines					4Q	1-3Q	
Planning and Development of the REBS Fully Automated Launch/Retrieve					2-4Q	1-4Q	
Development of the REBS into Future Combat System (FCS) Chassis					2-4Q	1-3Q	
Integrate the REBS into the FCS Chassis						4Q	1-3Q
Integration of REBS Fully Automated							1-3Q
Testing of the REBS fully automated Launch/Retrieve							4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L39	
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
L39 FIELD SUSTAINMENT SUPPORT ED	981	8326	4606	9820	11691	14541	11074	Continuing	Continuing
<p>A. Mission Description and Budget Item Justification: This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include field shelters, showers, latrines, heaters, environmental control units, mortuary affairs, organizational equipment, and other combat service support equipment to improve unit sustainability and combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety and efficiency of airborne operations. Project supports development of tactical field shelters including a series of shelter systems and support equipment for Tactical Operation Centers with added capabilities and enhanced survivability. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and The Army's Future Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment through aerial delivery initiatives and by reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands in lift, combat zone footprint, and costs for logistical support.</p> <p>This project supports the Stryker Brigade Combat Team (SBCT) and Future Force Capabilities for the transition path of the Transformation Campaign Plan (TCP) for projecting and sustaining Joint Expeditionary Forces.</p>									
Accomplishments/Planned Program							FY 2003	FY 2004	FY 2005
FY 03: Completed Developmental Testing (DT) and coordinated Operational Test (OT) activities for Large Capacity Field Heater (LCFH). FY04: Conduct OT of LCFH and obtain Milestone C decision.							298	500	0
Fabricated 9k, 18k, and 36k British Thermal Unit (BTU) Improved Environmental Control Unit (IECU) prototypes for initial evaluation of operational suitability and contract down-select.							393	0	0
Completed updates to Acquisition Program Baseline (APB), Test and Evaluation Master Plan (TEMP) and Life Cycle Cost Estimate (LCCE) for rebaselining of IECU program. FY 04: Due to the loss of centralized funding for ECU's in FY 05 and beyond, contract was terminated. Actions (internal/external) resulting from termination to be completed in FY 04.							290	595	0
Award development contract for the Mobile Integrated Remains Collection System (MIRCS) and initiate prototype fabrication.							0	1314	0
Complete prototype fabrication and initiate Developmental Testing for MIRCS.							0	0	1100

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604804A - Logistics and Engineer Equipment -
Eng Dev**

PROJECT

L39

Accomplishments/Planned Program (continued)

	FY 2003	FY 2004	FY 2005
Acquire 60k British Thermal Unit (BTU) Space Heater Convective Developmental Test (DT) and Operational Test (OT) prototypes. Conduct DT/OT. FY05 - Complete Milestone C decision to transition into production. Prepare for and obtain Milestone B for 120k SHC.	0	785	631
Purchase Operational Test items for 500' Low Velocity Airdrop System (LVADS).	0	1089	0
Initiate Operational Testing for 500' LVADS.	0	600	0
Purchase data rights for 500' LVADS.	0	0	1600
Obtain Milestone C type classification for 500' LVADS.	0	0	300
Purchase test items on the Enhanced Container Delivery System (ECDS).	0	433	0
Conduct DT/OT on the ECDS.	0	850	0
Obtain Milestone C type classification for ECDS.	0	0	225
Purchase data rights for ECDS.	0	0	500
Complete DT and OT on the Trailer Mounted Support System (TMSS) for Stryker Brigade Combat Team (SBCT).	0	1218	0
FY 04 Conduct testing of Extraction Parachute Jettison System (Heavy) (EPJS(H))to evaluate the integration of subsystems and components coupled with aircraft compatibility. FY 05: Conduct Milestone C.	0	700	250
Small Business Innovative Research/Small Business Technology Transfer Program	0	242	0
Totals	981	8326	4606

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L39	
<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
OPA3, MF9000, Environmental Control Units (ECU)	15126	21194	17554	1998	2000	2000	14	Continuing	Continuing
<p><u>C. Acquisition Strategy:</u> Accelerate product development and testing to transition into production.</p>									

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L39		
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 . Soldier Support Equipment	In-House	PM FSS, Natick	0	0		1005	1-4Q	426	1-4Q	Continue	1431	3241
b . Soldier Support Equipment	In-House	CECOM, FT Belvoir	0	981	1-4Q	460	1-4Q	227	1-4Q	Continue	1668	0
c . Soldier Support Equipment	Contracts	Various	974	0		3000	1-2Q	2345	1-2Q	Continue	6319	0
Subtotal:			974	981		4465		2998		Continue	9418	3241
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
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 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L39		
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 . Soldier Support Equipment	MIPR	DTC, MD and ATC, MD	0	0		580	1-4Q	132	1-4Q	Continue	712	130
b . Soldier Support Equipment	MIPR	Yuma Proving Ground, AZ	0	0		2188	1-4Q	676	1-4Q	Continue	2864	76
Subtotal:			0	0		2768		808		Continue	3576	206
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 . Project Management Support		PM FSS, Natick	0	0		1093	1-4Q	800	1-4Q	Continue	1893	0
Subtotal:			0	0		1093		800		Continue	1893	0
Project Total Cost:			974	981		8326		4606		Continue	14887	3447

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L39

Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) MS B for SHC 120K BTU, (2) LVADS (H)											▲1				▲2																	
(3) MS C on LCFH, (4) EPJS-H, (5) 60K BTU SHC, (6) LVADS, (7) ECDS, (8) MIRCS, (9) SHC BTU 120K, (10) PEGASYS 2K, (11) Chameleon, (12) PEGASYS 10K							▲3			▲4	▲5	▲6	▲7				▲8	▲9				▲10				▲11	▲12					
DT/OT on ECDS, DT on MIRCS																																
DT/OT on LVADS, DT/OT on LVADS (H)																																
DT on PEGASYS 10K, OT on PEGASYS 10 K																																
DT on 60K BTU SHC, DT on SHC 120K BTU																																
Operational Field Evaluation for SHC 120K BTU																																
DT/OT on PEGASYS 2K, DT/OT on Chameleon Family of Shelters																																
(13) MI for LVADS (H), (14) and Contract Award for LVADS (H)												▲13																				

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY			PE NUMBER AND TITLE				PROJECT
5 - System Development and Demonstration			0604804A - Logistics and Engineer Equipment - Eng Dev				L39
Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Conduct Milestone C Decision on the 9k, 18k, and 36k Improved Environmental Control Units (IECU).		3Q					
Conduct Milestone C Decision on the Large Capacity Field Heater .		3Q					
Initiate Developmental Testing (DT) on the Mobile Integrated Remains Collection System (MIRCS).			4Q				
Complete DT on MIRCS.				2Q			
Conduct Milestone C Decision on the MIRCS and transition into production.					1Q		
Complete DT/Operational Testing (OT) on 60k British Thermal Unit (BTU) Space Heater Convective (SHC)		3-4Q					
Conduct Milestone C Decision on the 60k BTU SHC.			2Q				
Initiate DT and OT on Advanced Low Velocity Airdrop System (LVADS).		1Q					
Complete DT and OT on LVADS.			3Q				
Conduct Milestone C Decision on the LVADS.			4Q				
Conduct Market Investigation for LVADS (H).			1Q				
Obtain Milestone B approval for LVADS (H).				3Q			
Conduct contract award for LVADS (H).					3Q		
Conduct DT for LVADS (H).						2Q	
Conduct OT for LVADS (H).							2Q
Initiate DT and OT on Enhanced Containerized Delivery System (ECDS).		1Q					
Complete DT and OT on ECDS.		4Q					
Conduct Milestone C Decision on ECDS.			4Q				
Conduct Milestone C Decision of The Extraction Parachute Jettison System - Heavy			2Q				
Conduct DT on PEGASYS 2k.					1Q		
Conduct OT for PEGASYS 2k.						1Q	

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L39
<u>Schedule Detail (continued)</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>
Obtain Milestone C for PEGASYS 2k.						4Q	
Conduct DT for PEGASYS 10k.						1-2Q	
Conduct OT for PEGASYS 10k.							1-2Q
Obtain Milestone C decision for PEGASYS 10k.				2Q			4Q
Conduct Milestone B for SHC 120k BTU.			2Q				
Conduct DT on SHC 120k BTU.				2Q			
Conduct Operational Field Evaluation on SHC 120k British Thermal Unit (BTU).				3Q			
Conduct Milestone C on SHC 120k BTU.					2Q		
Conduct DT on Chameleon family of shelters.							2-4Q

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L41

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
L41	WATER AND PETROLEUM DISTRIBUTION - ED	7468	1672	3063	5574	7199	3580	3651	Continuing	Continuing

A. Mission Description and Budget Item Justification: All services depend on ample supplies of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to its soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and the Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and dispensing in support of tactical operations, including rapid refueling of aircraft. The Rapidly Installed Fluid Transfer System (RIFTS) is being developed to replace the Inland Petroleum Distribution System (IPDS). RIFTS can be deployed at a rate of 20-30 miles per day as compared to 2-3 miles per day for IPDS. Petroleum, Oils and Lubricant (POL) Quality Analysis System (PQAS) replaces the air mobile lab and reduces the number of operators. Furthermore, the mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These R&D missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve its transformation vision by providing it with the means to be highly mobile and self-sustaining in very hostile theatres of operation. These systems support the Current-to-Future Force transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Continue Petroleum, Quality Analysis System (PQAS) Pre-Planned Product Improvements (P3I).	100	82	0
Evaluated commercial water treatment components for P3I for water purification systems.	647	200	0
Continue PQAS prototype fabrication and testing.	637	300	0
Rapidly Installed Fuel Transfer System (RIFTS) development, prototype design, fabrication, and test.	2776	997	2832
Develop purchase description for Versatile Tank & Pump Unit (VTUPU) and prepare program management documents.	70	0	0
Program management and support.	0	50	72
Develop Load Handling System (LHS) Modular Fuel Farm (LMFF) prototype and conduct road test/stability test on existing prototype units.	155	0	0
Conduct 1500 Tactical Water Purification System (TWPS) Operational Test (OT).	700	0	0
Lightweight Water Purifier (LWP) Operational Test (OT).	597	0	0

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L41

Accomplishments/Planned Program (continued)

	FY 2003	FY 2004	FY 2005
Conducted Heavy Expanded Mobile Tactical Truck (HEMTT)-Load Handling System (LHS) Compatible Water Tankrack (HIPPO) technical and operational testing.	270	0	0
Unit Water Pod System (CAMEL) coupled simulation testing.	16	0	0
Initiated SDD contract for CAMEL.	1500	0	0
Conduct Market Investigation and requirements definition of advanced mobile aviation refueling system.	0	0	159
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)	0	43	0
Totals	7468	1672	3063

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development	3948	472	3990	3382	4461	3508	3427	Continuing	Continuing
OPA 3, R67500, Quality Surveillance Equipment	1083	0	0	0	0	0	0	Continuing	Continuing
OPA 3, R05200, Water Purification Systems	6551	9927	4013	11342	7070	0	0	Continuing	Continuing
OPA 3, MA6000, Distribution Systems, Petroleum & Water	24881	24475	38091	46656	80451	93924	150310	Continuing	Continuing

C. Acquisition Strategy: Development of and transition to competitive procurement for most items under this project. Exceptions include the use of procurement 8A Disadvantaged Set Aside for the HIPPO and Small Business Set Aside for the CAMEL.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L41		
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 . PQAS	In-House	TARDEC, Warren, MI	703	107	2Q	82	1Q	0		Continue	892	Continue
b . PQAS	MIPR	Rock Island Arsenal, Rock Island, IL	2290	107	3Q	0		0		Continue	2397	Continue
c . RIFTS	In-House	TARDEC, Warren, MI	281	124	2Q	0		300	1-4Q	Continue	705	Continue
d . RIFTS	C-CPFF	Southwest Research Institute, San Antonio, TX	3007	2576	2Q	0		0		0	5583	0
e . RIFTS	C-CPFF	Southwest Research Institute, San Antonio, TX	0	0		640	2Q	1632	2Q	Continue	2272	Continue
f . 1500 GPH TWPS	Task Order Contract	ICI, Dayton, OH	370	0		0		0		0	370	365
g . 1500 GPH TWPS hardware	C-CPFF	SFA, Inc, Frederick, MD	4240	0		0		0		0	4240	4240
h . Water Purification P3I	In-House	TARDEC, Warren, MI	175	0		50	1Q	0		0	225	190
i . Water Purification P31	Purchase Orders	TBD	100	0		150	1-3Q	0		0	250	100
j . CAMEL	Purchase Order	Southwest Research Institute, San Antonio, TX	126	0		0		0		0	126	125

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L41		
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
k . LWP	MIPR	TEXCOM, Ft. Hood, TX	0	597	2Q	0		0		Continue	597	Continue
l . HIPPO	FFP	Mil-Mar Century Corp, Dayton, OH	712	0		0		0		0	712	740
m . CAMEL	CPFF	Radian, Troy, MI	0	1500	3Q	0		0		0	1500	739
n . VTPU	In-House	TARDEC, Warren, MI	0	70	2Q	0		0		0	70	0
o . LMFF	In House	TARDEC, Warren, MI	0	55	1Q	0		0		0	55	0
Subtotal:			12004	5136		922		1932		Continue	19994	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L41		
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 . PQAS	In-House	TACOM, Warren, MI	130	34	2Q	0		0		Continue	164	Continue
b . Water Purification P3I	MIPR	CHPPM, APG, MD	25	0		0		0		0	25	25
c . Water Purification P31	In-House	TACOM, Warren, MI	50	200	1Q	0		0		0	250	50
d . LMFF	In-House	TACOM, Warren, MI	0	50	2Q	0		0		Continue	50	Continue
e . HIPPO	FFP	TBD	250	0		0		0		0	250	250
f . CAMEL	In-House	TARDEC, Warren, MI	147	0		0		0		0	147	147
g . CAMEL	MIPR	APG, Aberdeen, MD	10	0		0		0		0	10	10
h . RIFTS	In-House	TACOM, Warren, MI	0	76	2Q	100	2Q	300	2Q	0	476	0
i . Advanced Mobile Aviation Refueling System	In House	TACOM, Warren, MI	0	0		0		159	2Q	0	159	0
Subtotal:			612	360		100		459		Continue	1531	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L41		
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 . PQAS DT/OT	MIPR	TECOM, Aberdeen, MD	523	22	2Q	300	2Q	0		Continue	845	Continue
b . PQAS	MIPR	APG, Aberdeen, MD	0	0	2-3Q	0		0		0	0	25
c . RIFTS DT/OT	MIPR	TECOM, Aberdeen, MD	0	0		300	3Q	600	2Q	0	900	Continue
d . 1500 GPH TWPS	MIPR	NFESC, Port Huaneme, CA	340	0		0		0		0	340	340
e . Water Purification P3I	In-House	TARDEC, Warren, MI	210	247	1Q	0		0		0	457	200
f . Water Purification P3I	MIPR	Dugway PG, Dugway, MD	200	20	2Q	0		0		0	220	200
g . Water Purification P3I	MIPR	NFESC, Port Hueneme, CA	35	0		0		0		0	35	35
h . 1500 GPH TWPS	MIPR	ATC, APG, MD	71	0		0		0		0	71	71
i . 1500 GPH TWPS	MIPR	TEXCOM, Ft. Hood, TX	4	700	2-3Q	0		0		Continue	704	Continue
j . LMFF	In House	TARDEC, Warren, MI	0	100	3Q	0		0		Continue	100	Continue
k . HIPPO	MIPR	APG, Aberdeen, MD	161	270	2-4Q	0		0		0	431	64
l . CAMEL	MIPR	YPG, Yuma, AZ	0	0		0		0		0	0	254
m . LWP	MIPR	TEXCOM	0	597	2-4Q	0		0		0	597	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604804A - Logistics and Engineer Equipment - Eng Dev					L41			
III. Test and Evaluation (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	
n . CAMEL	In House	TARDEC, Warren, MI	0	16	2Q	0		0		0	16	0	
Subtotal:			1544	1972		600		600		Continue	4716	Continue	
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 . PQSL	In-House	TARDEC, Warren, MI	211	0		0		0		0	211	0	
b . Program Management Support	In-House	TACOM, Warren, MI	877	0	1Q	50	1Q	72	1Q	Continue	999	0	
Subtotal:			1088	0		50		72		Continue	1210	0	
Remarks: Not Applicable													
Project Total Cost:			15248	7468		1672		3063		Continue	27451	Continue	

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY

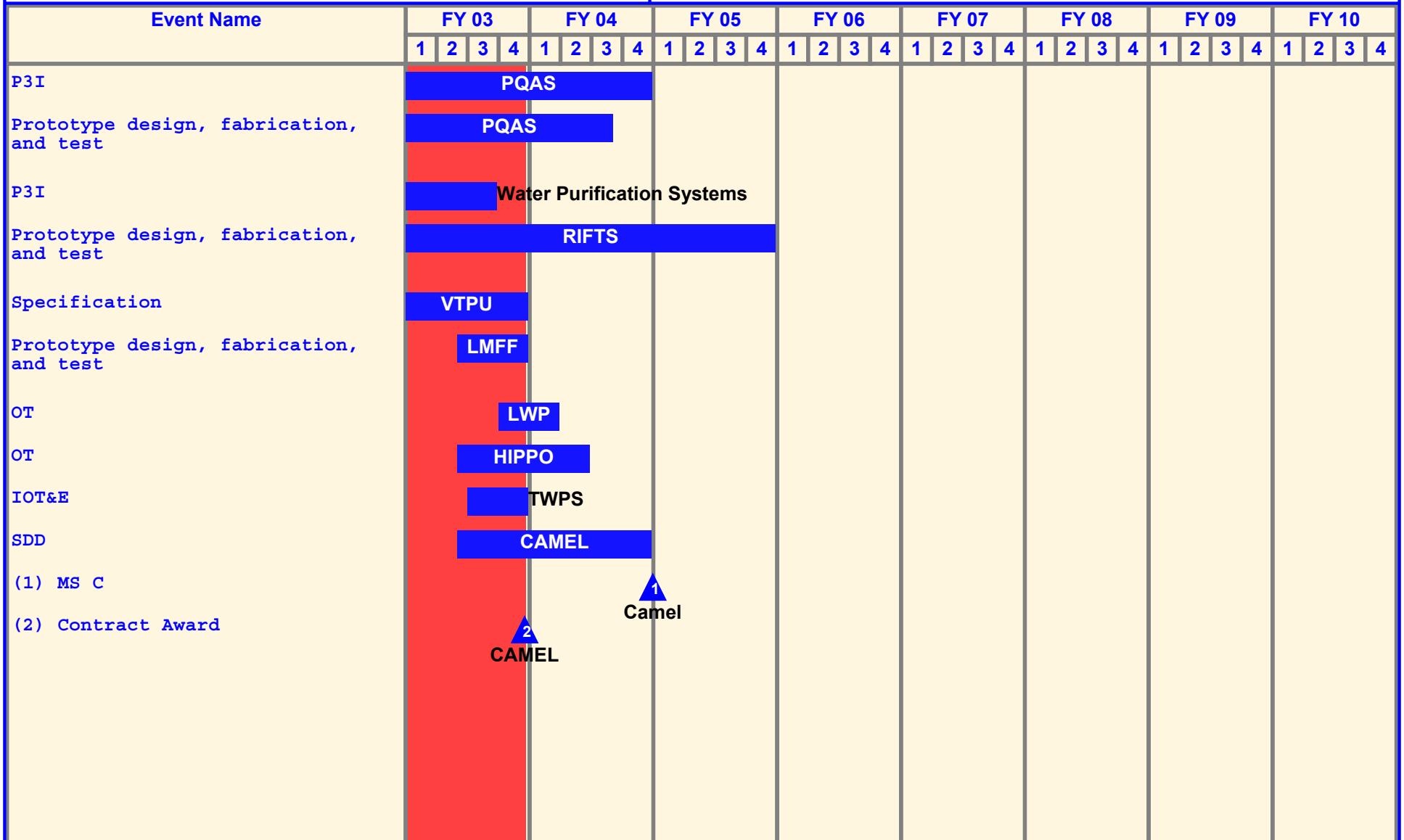
5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L41



Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L41	
<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>
Conduct PQAS P3I.	1-4Q	1-4Q					
Continue PQAS prototype fabrication and testing.	1-4Q	1-3Q					
Evaluate commercial water treatment components for P3I for water purification systems.	1-3Q						
RIFTS development, prototype design, fabrication, and test.	1-4Q	1-4Q	1-4Q				
Develop VTPU specification and prepare program management documents.	1-4Q						
Develop LMFF prototype and conduct road test/stability test on existing prototype units.	3-4Q						
LWP OT	4Q	1Q					
Conduct HIPPO technical and operational testing	2-4Q	1-2Q					
TWPS IOTE	3-4Q						
Camel Contract Award	4Q						
Camel SDD	2-4Q	1-4Q					
Camel MS C decision		4Q					

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L42

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
L42 CAMOUFLAGE SYSTEM ED	329	660	1603	1638	1155	1870	1723	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides for system development and demonstration of camouflage equipment that will transition into procurement providing low cost, low observable systems for suppression of visual, near-infrared, thermal, radar, and acoustic signatures of highly mobile and semi-mobile weapon assets. This program procures and fields a critical capability that supports the Army's Future Force Capabilities by maintaining readiness through fielding and integrating new equipment by reducing sustainment requirements, related Combat Support/Combat Service Support (CS/CSS) demands on lift, combat zone footprint, and costs for logistical support, and by reducing vulnerability to detection by advanced sensors.

This project supports the Stryker Brigade Combat Team (SBCT) and Future Force Capabilities for the transition path of the Transformation Campaign Plan (TCP) for projecting and sustaining Joint Expeditionary Forces.

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Support transition of Ultra Lightweight Camouflage Net System (ULCANS) Desert Radar Scattering, Desert Radar Transparent, and Woodland Radar Transparent into production phase.	329	0	0
FY 04 - Prepare Milestone B and initiate development of Arctic/Snow ULCANS variants. FY 05 - Complete Developmental Testing (DT) and Operational Testing (OT). Conduct Milestone C on Arctic/Snow ULCANS variants.	0	641	495
Prepare Milestone B and initiate development and testing of Urban and Aviation Camouflage System.	0	0	296
Initiate product improvement effort to counter emerging technologies in FY 2005 for all variants, Woodland, Desert, Snow, Urban and Aviation ULCANS.	0	0	812
Small Business Innovative Research/Small Business Technology Transfer Program	0	19	0
Totals	329	660	1603

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

**0604804A - Logistics and Engineer Equipment -
Eng Dev**

PROJECT

L42

B. Other Program Funding Summary

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
RDTE, 0602712.AH35, Camouflage Technology	2417	2643	2735	2830	2881	2938	3002	Continuing	Continuing

C. Acquisition Strategy: Develop camouflage systems for Services and transition developmental items into procurement with a competitive award. Continual upgrade to counter technology improvements of sensors, and to counter new emerging technologies. Continual leveraging of technology with other special operations programs.

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L42		
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 . Camouflage Equipment	MIPR	CECOM, FT Belvoir	0	144	1-4Q	0		0		0	144	0
b . ULCANS Arctic/Snow	MIPR	CECOM, FT Monmouth	0	0		100	1-2Q	307	1-4Q	0	407	0
c . ULCANS Urban/Aviation	MIPR	CECOM, FT Monmouth	0	0		0		307	1-4Q	Continue	307	0
d . ULCANS Technology Insertion	CPFF	CECOM, FT Monmouth	0	144	1-4Q	100	1-4Q	457	1-4Q	Continue	701	0
Subtotal:			0	288		200		1071		Continue	1559	0
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
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 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L42		
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 . ULCANS, Arctic/Snow	MIPR	TECOM, WSMR	15	0		50	1-2Q	0		0	65	0
b . ULCANS, Urban/Aviation			0	0		50	1-4Q	102	2-3Q	Continue	152	0
Subtotal:			15	0		100		102		Continue	217	0
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 . Engineering Support	MIPR	CECOM, FT Belvoir	199	41	1-4Q	240	1-4Q	300	1-4Q	Continue	780	0
b . Program Support	Contract	Radian, INC	100	0		120	1-4Q	130	1-4Q	Continue	350	0
Subtotal:			299	41		360		430		Continue	1130	0
Project Total Cost:			314	329		660		1603		Continue	2906	0

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L42

Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
(1) Conduct MS B for Arctic/Snow ULCANS								▲1																								
Conduct DT/OT for Arctic/Snow ULCANS																																
(2) Conduct MS C on Arctic/Snow ULCANS																																
(3) Technology Enhancement to Woodland ULCANS/Desert ULCANS																																
(4) Conduct MS B and begin Development on Urban ULCANS																																
Conduct DT/OT on Urban ULCANS																																
(5) Conduct MS C on Urban ULCANS																																
(6) Conduct MS B and begin Development on Aviation ULCANS																																
Conduct DT/OT on Aviation ULCANS																																
(7) Conduct MS C on Aviation ULCANS																																

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev			PROJECT L42	
<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>
Conduct Milestone B of Arctic/Snow Ultra Lightweight Camouflage Net System (ULCANS).		2Q					
Initiate Developmental Testing (DT) and Operational Testing (OT) of Arctic/Snow ULCANS.			1Q				
Complete DT and OT of Arctic/Snow ULCANS.			3Q				
Conduct Milestone C on Arctic/Snow ULCANS.			4Q				
Technology Enhancement to Woodland ULCANS/Desert ULCANS.				4Q			
Conduct Milestone B and begin development of Urban ULCANS.			2Q				
Initiate DT and OT of Urban ULCANS.				2Q			
Complete DT and OT of Urban ULCANS.					2Q		
Conduct Milestone C on Urban ULCANS.					4Q		
Conduct Milestone B and begin development of Aviation ULCANS.			2Q				
Initiate DT and OT of Aviation ULCANS.				1Q			
Complete DT and OT of Aviation ULCANS.				3Q			
Conduct Milestone C on Aviation ULCANS.				4Q			

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

February 2004

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT
L43

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
L43 ENGINEER SUPPORT EQUIPMENT - ED	2862	1214	1154	1172	1192	4683	5371	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports systems development and demonstration within the Engineer Support Equipment (ESE) arena for small boats, diving equipment, well drilling modules, woodworking shops, tool outfits, large power generator plants, electrical distribution systems, and floodlights, which are used for field operations in support of the Future and Joint Expeditionary Force. This project also develops Maintenance equipment associated with Sets, Kits, Outfits and Tools (SKOTs).

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

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Conducted market investigation, develop performance specifications and conduct pre-production award effort for diving equipment.	576	529	590
Award System Development & Demonstration contract for well drilling module.	60	0	0
Conduct market investigation, engineering effort, and develop performance specifications for woodworking shop.	168	0	0
Fabrication of prototype for woodworking shop.	208	0	0
Conduct market investigation, engineering effort, and develop performance specifications for maintenance equipment (tools).	1662	0	0
Allied Trade effort to conduct market investigation, engineering effort, and develop performance specifications for Organizational / General Purpose Shop Set.	128	268	171
Conduct Life Cycle Modernization Analyses for Engineer Support Equipment (ESE) Sets, Kits, Outfits and Tools (SKOTs).	60	132	143
Developing scope of work for major product improvement for the newly, re-designed Hydraulic System Test and Repair Unit (HYSTRU)	0	250	250
Small Business Innovative Research/Small Business Technology Transfer Program	0	35	0
Totals	2862	1214	1154

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L43	
<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
OPA 3, ML5325, Items Less than \$5.0M (Engineering Support Equipment)	7704	12851	6546	3767	553	10789	9376	Continuing	Continuing
<p><u>C. Acquisition Strategy:</u>Programs will progress from System Development and Demonstration (SDD) and transition into production.</p>									

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration					0604804A - Logistics and Engineer Equipment - Eng Dev					L43		
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 . Diving equipment product development	IN-HOUSE	Rock Island Arsenal, Rock Island, IL	249	576	2Q	564	2Q	590	2Q	Continue	1979	Continue
b . Generator production development	IN-HOUSE	CECOM, Ft Belvoir, VA	319	0		0		0		0	319	319
c . Well drilling module product development	IN-HOUSE	TACOM, Warren, MI	719	32	4Q	0		0		0	751	751
d . Well drilling System Development and Demonstration contract	Competitive Cost Plus Fixed Fee	Radian, Warren, MI	0	28	4Q	0		0		0	28	28
e . Woodworking shop product development	IN-HOUSE	Rock Island Arsenal, Rock Island, IL	0	376	1-4Q	0		0		0	376	376
f . Maintenance Equipment (Tools)	IN-HOUSE	Rock Island Arsenal, Rock Island, IL	0	1662	1-4Q	0		0		0	1662	162
g . Organizational / General Purpose Shop Set	IN-HOUSE	Rock Island Arsenal, Rock Island, IL	0	128	1-4Q	268	1-2Q	171	1-2Q	Continue	567	Continue
h . Hydraulic System Test and Repair Unit (HYSTRU) scope of work development	IN-HOUSE	Rock Island Arsenal, Rock Island, IL	0	0		250	1-2Q	250	1-2Q	Continue	500	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L43		
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
i . Conduct Life Cycle Modernization Analyses for Engineer Support Equipment (ESE) SKOTs			0	60	2Q	132	2Q	143	2Q	0	335	0
Subtotal:			1287	2862		1214		1154		Continue	6517	Continue
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
Subtotal:			0	0		0		0		0	0	0

ARMY RDT&E COST ANALYSIS(R3)									February 2004				
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT			
5 - System Development and Demonstration					0604804A - Logistics and Engineer Equipment - Eng Dev					L43			
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:			1287	2862		1214		1154		Continue	6517	Continue	

Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L43

Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Conduct Market Investigations, Develop Specs, Program Support for Diving																																
(1) Conduct Market Inv, Dev Specs, Concept Dev for Watercraft Systems																																
(2) Conduct System Demonstration for modernization of HYSTRU																																
Woodworking Shop Set Prototype Fabrication																																
ENG SKOT LC Modernization Analyses for SBCT Transformation																																
Conduct Market Investigation ORG /Gen Purp Shop Set																																

Configu

Schedule Detail (R4a Exhibit)						February 2004	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L43
<u>Schedule Detail</u>	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Conduct market investigation, develop performance specs, and program support	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct market investigation, develop performance specs, and concept development for watercraft.		2Q			1Q		
Conduct Systems Demonstration for modernization of HYSTRU.		2Q	1Q				
Fabrication of prototype for woodworking shop.	1-4Q						
Life Cycle modernization analyses for ENG SKOT SBCT Transformation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Conduct market investigation for Organizational / General Purpose Shop Set	1-4Q	1-4Q	1-4Q				

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

February 2004

BUDGET ACTIVITY

5 - System Development and Demonstration

PE NUMBER AND TITLE

0604804A - Logistics and Engineer Equipment - Eng Dev

PROJECT

L46

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
L46 MAINTENANCE SUPPORT EQUIPMENT	0	488	1181	1278	1378	1377	1426	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports systems development and demonstration within the Maintenance Support Equipment (MSE) arena for automotive tool sets, forward repair mobile maintenance systems, individual & unit tool kits, ground & aviation shop sets and allied trades SKO (Sets Kits and Outfits) and Tools used in support of Current-to-Future Force and Stryker Brigade Combat Team (SBCT) transition paths of the Transformation Campaign Plan (TCP).

<u>Accomplishments/Planned Program</u>	FY 2003	FY 2004	FY 2005
Conduct Maintenance SKOT Modernization Improvements, Perf Spec Dev, Tech & Program support for Joint Expeditionary and Stryker Brigade Combat Team (SBCT) transition path of the Transformation Campaign Plan (TCP).	0	300	1008
Standard Automotive Tool System (SATS) advanced development.	0	173	173
Small Business Innovative Research/Small Business Technology Transfer Program	0	15	0
Totals	0	488	1181

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2004		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L46	
<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
ML5345 - Maint Items Less Than \$5M, DL5110, MA9650 - Maint Less Than \$5M,D164,D615,M627	5428	3972	5439	6631	7904	7181	7532	Continuing	Continuing
<u>C. Acquisition Strategy:</u> Programs will progress from System Development and Demonstration(SDD) and transition into production.									

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L46		
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 . MSE LC Configuration Analyses and Initial Capabilities Document (ICD) Development Support	In-House	PM SKOT Rock Island	0	0		171	1-2Q	398	1-2Q	Continue	569	Continue
b . Standardized Automotive Tool System Prototype Dev	In-House	PM SKOT Rock Island	0	0		173	2Q	173	1Q	Continue	346	Continue
Subtotal:			0	0		344		571		Continue	915	Continue
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 . Life Cycle Configuration Analyses & ICD Dev	In-House	PM SKOT Rock Island	0	0		15	1-2Q	37	1-2Q	Continue	52	Continue
Subtotal:			0	0		15		37		Continue	52	Continue

ARMY RDT&E COST ANALYSIS(R3)									February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev					PROJECT L46		
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 . Configuration Analyses (ICD for Allied Trades)	MIPR	CASCOM Ord Cntr & School, Ft Lee	0	0		0		430	1-2Q	Continue	430	Continue
Subtotal:			0	0		0		430		Continue	430	Continue
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 . Conduct SKO Modernization Efforts			0	0		129	1-2Q	143	1-2Q	0	272	0
Subtotal:			0	0		129		143		0	272	0
Project Total Cost:			0	0		488		1181		Continue	1669	Continue

Schedule Profile (R4 Exhibit)	February 2004
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February 2004

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE	PROJECT
0604804A - Logistics and Engineer Equipment - Eng Dev	L46

PROJECT

PROJECT L46

Event Name	FY 03				FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4								
Configuration Analyses & ICD Suport for Current-to- Future and SBCT SKO																																				
(1) Standard Automotive Tool System (SATS) Award for Prototype Dev					▲1																															

Schedule Detail (R4a Exhibit)						February 2004			
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604804A - Logistics and Engineer Equipment - Eng Dev				PROJECT L46		
<u>Schedule Detail</u>			FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Configuration Analyses for Current-to-Future and SBCT SKO and ICD Support				1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Standard Automotive Tool Systems (SATS) Award for Prototype Dev				2Q					