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ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)	DATE February 2000
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604642A Light Tactical Wheeled Vehicle
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COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	0	7441	9893	979	0	0	0	18313	18313
DE40 High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) Prototype	0	4503	7444	979	0	0	0	12926	12926
DE46 HMMWV Recapitalization Program	0	2938	2449	0	0	0	0	5387	5387

A. Mission Description and Budget Item Justification: This Program Element supports all Light Tactical Wheeled Vehicles such as the High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), HMMWV Recapitalization Program and the Armored Security Vehicle (ASV). In FY 2000 through FY 2002, Project DE40 funds the RDT&E effort leading to the HMMWV A4 Block Improvement Program through technology integration into the HMMWV. Project DE46 funds the RDT&E effort for the HMMWV Recapitalization Program, which will provide operational and safety improvements to the current fleet of vehicles by component refurbishment, replacement and enhanced performance characteristics.

B. Program Change Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
Previous President's Budget (FY 2000/2001 PB)	0	7498	9954
Appropriated Value	0	7498	
Adjustments to Appropriated Value			
a. Congressional General Reductions			
b. SBIR / STTR			
c. Omnibus or Other Above Threshold Reductions		-31	
d. Below Threshold Reprogramming			
e. Rescissions		-26	
Adjustments to Budget Years Since FY 2000/2001 PB			-61
Current Budget Submit (FY 2001 PB)	0	7441	9893

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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604642A Light Tactical Wheeled Vehicle	PROJECT DE40
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<i>COST (In Thousands)</i>	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DE40 High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) Prototype	0	4503	7444	979	0	0	0	12926	12926

A. Mission Description and Budget Item Justification: The HMMWV is a lightweight, high performance, four-wheel drive, air transportable and air droppable, high mobility tactical wheeled vehicle. The HMMWV consists of a basic design with several variants including Cargo/Utility, Armament Carrier, Ambulance, Shelter Carrier and Armored Armament Carrier. FY 2000 through FY 2002 funds the HMMWV A4 block improvement development effort. This effort will meet the key HMMWV ORD requirements focusing on the primary goal of restoring the mobility and reliability of the original HMMWV models at the higher payload and mission requirements of the Army Force XXI. Key performance parameters (KPP) will be addressed by the development of technologies for central tire inflation, steering gear, suspension and corrosion prevention enhancements. The effort will address changes to the Federal Motor Vehicle Safety Standards (FMVSS), including anti-lock brakes and changes to environmental requirements for the engine. The HMMWV development effort will incorporate, where appropriate, commercial light truck technology now being evaluated in National Automotive Center (NAC) programs. New commercial technology, combined with greater achievement of user requirements, will result in a block-improved HMMWV. Developmental testing in FY 2001 will be required. Testing will include reliability, availability, maintainability (RAM), environmental, and transportability.

FY 1999 Accomplishments: Project not funded in FY 1999

FY 2000 Planned Program:

- 3582 HMMWV Development Contract
 - 300 Support Costs (Engineering/Quality/Matrix)
 - 500 Assemble and test up to five prototype vehicles
 - 121 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)
- Total 4503

FY 2001 Planned Program:

- 5044 HMMWV Development Contract
 - 2100 Assemble and test up to eight prototype vehicles
 - 300 Support Costs (Engineering/Quality/Matrix Support)
- Total 7444

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B. <u>Other Program Funding Summary</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	To <u>Compl</u>	Total <u>Cost</u>
OPA1 Hi Mob Multi-Purp Whld Veh (HMMWV) D15400	73557	91704	110746	109145	111159	127271	127136	Cont	Cont
OPA4 Initial Spares – TSV DS1030	77	72						149	149

C. Acquisition Strategy: The acquisition strategy for the HMMWV is to award a prototype contract for the HMMWV block improvement and a five-year requirement type production contract.

D. <u>Schedule Profile</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Award HMMWV Development		2Q00	1Q01					
Developmental Test & Evaluation			2Q01					
IPR Decision			3Q01					
Award Production Contract				2Q02				

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ARMY RDT&E COST ANALYSIS (R-3)	DATE February 2000
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604642A Light Tactical Wheeled Vehicle	PROJECT DE40
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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Development Contract	SS/CPIF	AM General		3582	2Q00	5044	1Q01	829	9455	9455
b. In-House Support (TACOM)	N/A	Warren, MI		300	1Q00	300	1Q01	150	750	750
c. SIBR/STTR				121					121	121
Subtotal Product Development:				4003		5344		979	10326	10326

Remark: Development Contract includes cost of a Technical Data Package (TDP) upon completion of the R&D Phase.

II. Support Costs: Not applicable

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Developmental Testing	N/A	ATC		500	4Q00	2100	2Q01		2600	2600
Subtotal Test and Evaluation:				500	4Q00	2100			2600	2600

Remark: Testing will include RAM, environmental, transportability, and automotive testing.

IV. Management Services: Not applicable

Project Total Cost:				4503		7444		979	12926	12926
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BUDGET ACTIVITY 5 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604642A Light Tactical Wheeled Vehicle	PROJECT DE46
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COST (In Thousands)	FY1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY2004 Estimate	FY2005 Estimate	Cost to Complete	Total Cost
DE46 HMMWV Recapitalization Program	0	2938	2449	0	0	0	0	5387	5387

A. Mission Description and Budget Item Justification: The HMMWV Recapitalization Program is a remanufacture program to extend the life of the over age HMMWVs. The HMMWV fleet is experiencing increased Operation and Support (O&S) costs, excessive wear, or corrosion. These HMMWVs, which are in need of replacement/remanufacture, include the Cargo/Utility, Armament, Ambulance and Shelter Carrier. The HMMWV Recapitalization Program will provide operational and safety improvements to the current fleet of vehicles and will correct imbalances in required vs on hand quantities. The recapitalized HMMWVs will include enhanced performance characteristics. These improvements will be achieved by a combination of component remanufacture and replacement. Components, which have been improved during the evolution of the HMMWV and the Commercially Based Tactical Truck (COMBATT) demonstration of commercial technology, will be incorporated in the recapitalized vehicles where technically and economically feasible. The objective of the HMMWV Recapitalization Program is to extend the useful service life of the vehicles. In FY 2005, 60% of the HMMWV fleet will be over-aged. Technology insertion opportunities will be developed, targeted on reducing overall O&S costs and improving performance. Examples are corrosion protection, digitization requirements, data bus integration and other O&S cost drivers.

FY 1999 Accomplishments: Project not funded in FY 1999

FY 2000 Planned Program:

- 2509 Prototype contract(s)
 - 350 Support Costs (engineering/quality/matrix support)
 - 79 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)
- Total 2938

FY 2001 Planned Program:

- 1794 Prototype contract(s)
 - 525 Test up to eighteen prototype vehicles
 - 130 Support Costs (engineering/quality/matrix support)
- Total 2449

B. Other Program Funding Summary	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To</u>	<u>Total</u>
HMMWV Recapitalization Program (DV0230)				15453	36641	44571	44524	<u>Cont</u>	<u>Cont</u>

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C. Acquisition Strategy: The HMMWV Recapitalization program acquisition strategy consists of three parts: (1) leveraging the value of the current fleet by assessing its condition, developing rates and schedules, and completing risk assessments; (2) gaining input from industry by using a Government-prepared Statement of Objectives (SOO) to solicit contractor-prepared Scopes of Work (SOW) and proposals for award of Prototype and Test (PAT) contracts; and (3) awarding a single contract for production of recapitalized vehicles. It is the Government's plan to competitively award up to three PAT contracts based upon best value source selection procedures. This phase will use Cost as An Independent Variable (CAIV) principles to establish cost thresholds. During PAT, each contractor will be provided nine candidates HMMWV's as Government Furnished Equipment (GFE) to build six recapitalized prototype vehicles, which will undergo testing. The three contractors will be permitted to compete for award of the follow-on-production contract. The PAT test results will be considered during the best value source selection for the production contract. The production contract will be a five-year requirements type contract.

D. Schedule Profile	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2004</u>	<u>FY 2005</u>
Award Prototype Contract(s)		3Q00	1Q01					
Developmental Test & Evaluation			1Q01					
Production Contract Award				2Q02				

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Prototype Contract(s)	C/CPIF	TBD		2509	3Q00	1794	1Q01		4303	4303
b. In-House Support	N/A	Warren, MI		350	1Q00	130	1Q01		480	480
c. SIBR/STTR				79					79	79
Subtotal Product Development:				2938		1924			4862	4853

Remark: Prototype contract(s) includes cost of Technical Data Package (TDP) upon completion of the R&D Phase.

II. Support Costs: Not applicable

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2000 Cost	FY 2000 Award Date	FY 2001 Cost	FY 2001 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a. Test & Evaluation	N/A	ATC				525	1Q01		525	525
Subtotal Test and Evaluation:						525			525	525

IV. Management Services: Not applicable

Project Total Cost:				2938		2449			5387	5387
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