CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification									DATE: **June 2001**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N /BA-4 Demonstration/Validation**	PROGRAM ELEMENT NUMBER AND NAME **0603611M Marine Corps Assault Vehicles**					PROJECT NUMBER AND NAME **B0020 Advanced Amphibious Assault Vehicle (AAAV)**					
COST ($ in Millions)	Prior Yrs Cost	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
B0020 ADVANCED AMPHIBIOUS ASSAULT VEHICLE	**279.200**	**110.937**	**147.100**	**263.066**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**Cont.**
Quantity of RDT&E Articles		**1**									

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) The Advanced Amphibious Assault Vehicle (AAAV) Program will field a successor to the Marine Corps' current amphibious vehicle, the Assault Amphibious Vehicle Model 7A1 (AAV7A1). The AAAV will provide the principal means of tactical surface mobility for the Marine Air Group Task Force (MAGTF) during both ship-to-objective maneuvers and subsequent combat operations ashore as part of the Navy and Marine Corps concept of Operational Maneuver from the Sea (OMFTS). The AAAV will provide the Marine Corps with the capability to execute the full spectrum of military missions from humanitarian operations to conventional combat operations. The AAAV replaces the AAV7A1 Vehicle, which was originally fielded in the early 1970's. The AAAV is a self-deploying, high-water speed, amphibious, armored, tracked vehicle capable of operating in all weather as well as Nuclear, Biological, and Chemical (NBC) environments.

The AAAV program is the only ACAT-1D program managed by the Marine Corps. The AAAV is the next generation of Marine Corps Assault Vehicles being developed to satisfy the requirements of the 21st Century Marine Warfighters. Along with the Landing Craft Air Cushion (LCAC) and the MV-22 Osprey, the AAAV will provide the Marine Corps with the tactical mobility assets required to spearhead the OMF concept. Acquisition of the AAAV is critical to the Marine Corps. The total AAAV requirement is for 1,013 weapon systems. The AAAV program remains the Marine Corps number one priority ground system acquisition.

The program received approval to enter the Systems Development and Demonstration (SDD) Phase (formerly Engineering and Manufacturing Development) of acquisition process during the Milestone II Defense Acquisition Board Readiness Meeting held on 26 November 2000. All program exit criteria were successfully met or exceeded. The SDD Phase (2001 through 2006) will include validation of manufacturing and production processes, fabrication and testing of SDD vehicles, and finalizing and implementing the Life Cycle Management for AAAV.

PROGRAM ACCOMPLISHMENTS AND PLANS:

FY 2000 Accomplishments:

- (U) $ 90.054 Continued PDRR phase. Completed assembly of second and third prototypes. Continued extensive contractor testing of all three prototypes. Continued AAAV(C) system development. Continued AAAV Survivability program. Demonstrated the final Milestone II exit criteria.
- (U) $ 9.833 Continued to provide in-house technical support.
- (U) $ 5.332 Continued to provide program support to coordinate and update program planning, program analysis, and program execution. Prepared for the FY01 Defense Acquisition Board review.
- (U) $ 5.718 Initiated combined government/contractor Developmental Testing-I (DT-I). Initiated Ballistic Hull and Turret test planning.

(U) Total $ 110.937

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FY 2001 Planned Program:

- (U) $ 24.497 Complete PDRR phase. Continue AAAV (C) system development and AAAV survivability program.
- (U) $ 99.133 Transit Milestone II DAB and award the System Development and Demonstration contract. Initiate material procurement for SDD phase prototypes. Continue design development of the AAAV. Continue Developmental testing of PDRR prototype
- (U) $ 10.366 Continue to provide in-house technical support.
- (U) $ 5.411 Continue to provide program support to coordinate and update program planning, program analysis, and program execution.
- (U) $ 3.856 Conduct and complete Early Operational Assessment (EOA) testing on PDRR prototype. Conduct EOA assessment on AAAV © mock-ups. Complete Ballistic Hull and Turret testing.

(U) $ 3.837 Portion extramural program reserved of Small Business Innovation Research assessment in accordance with 15 USC 638.

(U) Total $ 147.100

FY 2002 Planned Program:

- (U) $ 240.196 Initiate fabrication of the SDD phase prototypes. Continue design development of the AAAV (P) and AAAV (C). Continue developmental testing of PDRR prototypes. Continue AAAV survivability program. Initiate contractor/government shakedown testing of SDD prototypes
- (U) $ 10.029 Continue to provide in-house technical support.
- (U) $ 7.691 Continue to provide program support to coordinate and update program planning, program analysis, and program execution.
- (U) $ 0.800 Initiate development of AAAV training courseware.
- (U) $ 4.350 Initiate Ballistic Vulnerability testing of one PDRR prototype. Conduct RAM-D testing of PDRR prototypes.

(U) Total $ 263.066

B. (U) PROJECT CHANGE SUMMARY

	FY2000	FY2001	FY2002
(U) FY 2001 President's Budget:	114.210	137.981	178.680
(U) Adjustments from the President's Budget:			
(U) SBIR/STTR Transfer	-2.822		
(U) Execution Adjustment			
(U) Minor Affordability Adjustment			
(U) Program Adjustment	-0.451	9.119	84.386
(U) FY 2002 President's Budget:	110.937	147.100	263.066

CHANGE SUMMARY EXPLANATION:

(U) Funding: FY 2000 reflects a decrease of $2.822M for SBIR and $.451M for program adjustments. FY 2001 reflects a Congressional increase of $12.5M, pro-rata reductions of $1.053M and $.328M, and a below-threshold reduction of $2M. FY 2002 reflects internal Marine Corps reprogramming of $84.386M.

(U) Schedule: Not Applicable.

(U) Technical: Not Applicable.

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(U) B. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
(U) PANMC, BLI #147500, AAAV									Continuing	Continuing
(U) PMC, BLI #202200, AAAV			1.512						Continuing	Continuing

(U) Related RDT&E: Not Applicable.
(U) PE 0206623M (Marine Corps Ground Combat/Supporting Arms Systems), Project C0021, AAV7A1.
(U) PE 0206623M (Marine Corps Ground Combat/Supporting Arms Systems), Project C2237, AVTB.

(U) C. ACQUISITION STRATEGY: * An explanation of acquistion, management, and contracting strategies shall be provided for each project.

The AAAV Program acquisition strategy includes the extensive use of test assets, models, simulation, and advanced technology research to optimize vehicle design, reduce Total Ownership Cost (TOC), vehicle unit cost, and add flexibility to the program schedule. Three mature PDRR prototypes were developed and are currently undergoing developmental testing to further vehicle maturity. During the SDD phase of the program, nine vehicles will be manufactured. A tenth vehicle will be manufactured for use during Full Up System Level Live Fire testing planned to being in FY04. LRIP vehicles will be developed following the LRIP decision review in FY04 for use during Initial Operational Test and Evaluation (IOT&E). Initial Operational Capability (IOC) and Full Operational Capability (FOC) will occur in FY06 and FY16, respectively.

The AAAV management strategy is event driven, designed to ensure a logical progression through the AAAV acquisition to reduce risk, ensure affordability, and provide adequate information to decision makers regarding acquisition progress. The AAAV Program team is a partnership of government and industry experts, committed to developing the most versatile combat vehicle, providing the optimum balance of combat effectiveness, affordability, innovation, and technology. The program Integrated Product Teams (IPTs), composed of contractors, sub-contractors, Marines, and government civilians, are the foundation of the AAAV acquisition management process. The government, prime contractor, and major subcontractors are co-located in a highly integrated communication environment that facilitates proactive decision-making processes and flexible execution of plans to support these teams and product development. CAIV has been institutionalized throughout the program and as such is an integral consideration in all trade studies and decisions. The program has had a highly integrated and extensive test approach since its inception which has included a very strong engineering-model and prototype testing program supported by extensive modeling and simul

strategy includes planning for life cycle support once the system is fielded to more efficiently manage and optimize operating and support requirements and reduce overall program cost.

The program's contracting approach for the AAAV is to award the vast majority of the work to one prime contractor, competitively selected in 1996. GDLS operating through its division GDAMS will be responsible for designing and producing the vehicle and providing support for testing from PDRR through LRIP. The contracting strategy for full rate production and subsequent operation and support is to encourage competition during the SDD phase. Contracts for Government Furnished Property will be kept to a minimum and will include only property which could not otherwise be available to the contractor. Local Area Network support contract is currently provided by an 8(a) firm. Contract support for programmatic and technical support is currently provided by a competitively awarded firm-fixed price, level of effort contract and will be recompeted during FY03. The Life Cycle Support Contract is scheduled for award during FY05 for a portion of the initial operations and maintenance support for the fielded AAAVs.

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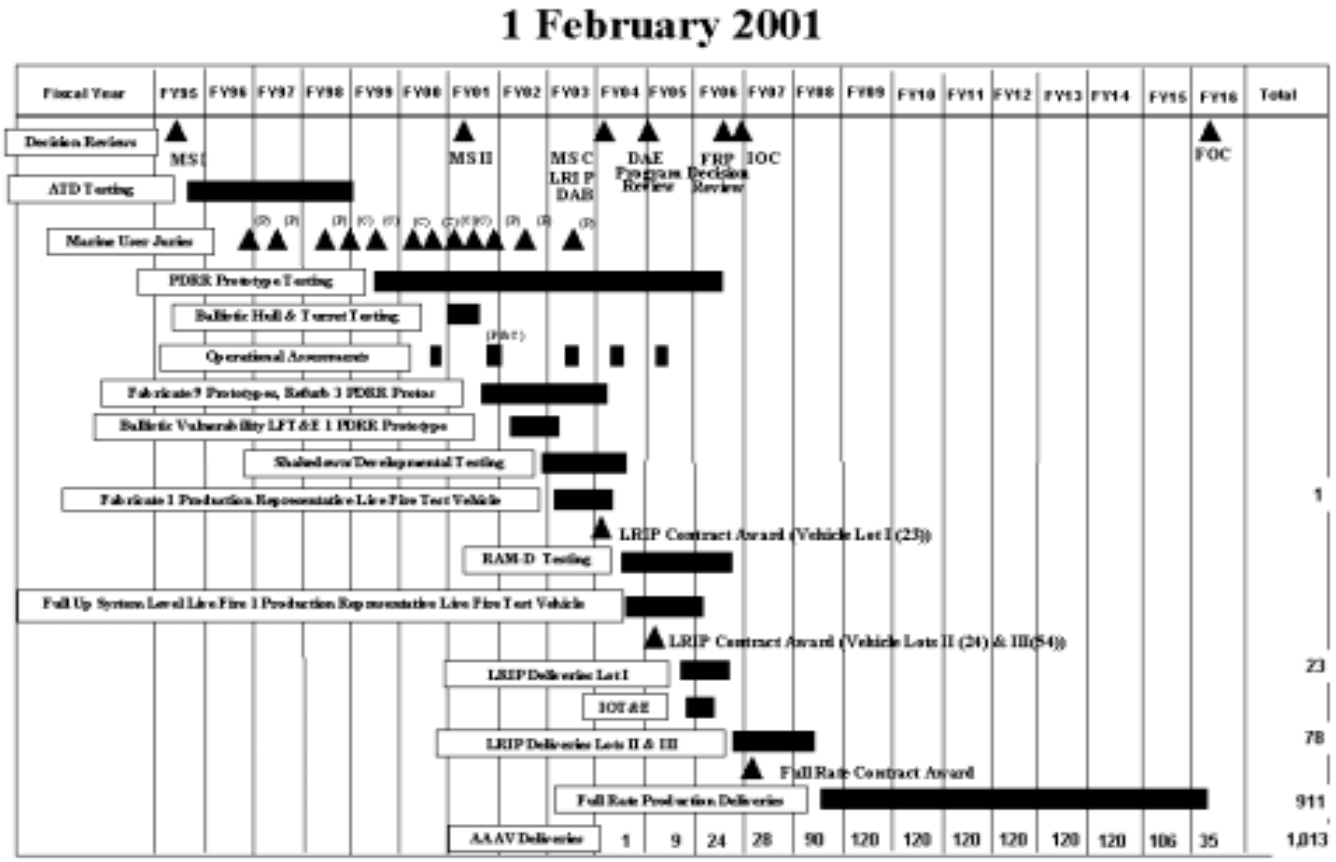
(U) D. SCHEDULE PROFILE:



CLASSIFICATION:

Exhibit R-3 Cost Analysis											DATE: **June 2001**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N /BA-4 Demonstration/Validation**		PROGRAM ELEMENT **0603611M Marine Corps Assault Vehicles**					PROJECT NUMBER AND NAME **B0020 Advanced Amphibious Assault Veh.(AAAV)**						
Cost Categories (Tailor to WBS, or Sys/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PDRR Contract	CPAF	GDLS - PDRR Award	216.715	90.058	1/	24.497	1/			Continuing	Continuing	$332M
SDD Contract	CPAF	GDLS - SDD Award	0.000	0.000		99.133	2/	240.196	2/	Continuing	Continuing	2/
										Continuing	Continuing	
Subtotal Program Dev Spt			216.715	90.058		123.630		240.196		Continuing	Continuing	

Remarks:

1/ The PDRR contract was awarded June 1996. The contract award is for the entire PDRR effort and is incrementally funded.

2/ The projected contract award date for the SDD effort is June 2001. The SDD contract is for the entire SDD effort and is incrementally funded.

Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Program Support		EG&G, Manassas, VA	3.793	4.247	3/	4.366	3/	4.497	3/	Continuing	Continuing	$23M
Program Support		Misc. Government Contracts	7.677	1.085	4/	1.045	4/	3.194	4/	Continuing	Continuing	
Training		Misc. Government Contracts	0.000	0.000		0.000		0.800	4/	0.000	0.800	
Subtotal Program Support			11.470	5.332		5.411		8.491		0.000	0.800	

3/ EG&G contract (FFP with options) was awarded August 1998 for contract performance thru 2003.
4/ Various contract award dates.

Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Testing		Miscellaneous	2.029	5.718	4/	3.856	4/	4.350	4/	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
Subtotal T&E			2.029	5.718		3.856		4.350		Continuing	Continuing	

Remarks:

4/ Various contract award dates.

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Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
In-house technical support		Various Government Labs	17.962	9.833		10.366		10.029			48.190	
SBIR IAW USC 638						3.837					3.837	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			17.962	9.833		14.203		10.029		0.000	52.027	
Remarks:												
Total Cost				110.941		147.100		263.066		Continuing	Continuing	