

EXHIBIT R-2, RDT&E Budget Item Justification					DATE: May 2008			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT (PE) NAME AND NO.							
<b>RDT&amp;E, N /BA-4 Advanced Component Development</b>	<b>0603611M Marine Corps Assault Vehicles</b>							
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2010 OCO	FY 2010 Total			
Total PE Cost	240.532	255.264	293.466	0.000	293.466			
C0020 Advanced Amphibious Assault Vehicle (AAAV)	240.532	255.264	293.466	0.000	293.466			
Quantity of RDT&E Articles								
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>								
<p>This Program Element (PE) includes funds for the Expeditionary Fighting Vehicle (EFV) Program which will field a successor to the Marine Corps' current amphibious vehicle, the Assault Amphibious Vehicle Model 7A1 (AAV7A1). The EFV will provide the principal means of tactical surface mobility for the Marine Air Group Task Force (MAGTF) during both ship-to-objective maneuvers and sustained combat operations ashore. The EFV will provide the Marine Corps with the capability to execute the full spectrum of military missions from humanitarian operations to conventional combat operations. The EFV replaces the AAV7A1 Vehicle, which was originally fielded in the early 1970s. The EFV 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.</p>								
<b>B. PROGRAM CHANGE SUMMARY</b>								
	FY2008	FY2009	FY2010					
Funding:								
FY 2009 President's Budget:	247.207	316.052	236.874					
FY 2010 President's Budget:	<u>240.532</u>	<u>255.264</u>	<u>293.466</u>					
Total Adjustments:	-6.675	-60.788	56.592					
Summary of Adjustments:								
a. Congressional Program Adjustment	0.000	-60.000	0.000					
b. SBIR/STTR Transfer:	-1.450	0.000	0.000					
c. Program Adjustments	-5.225	0.000	59.616					
d. Rate Adjustments	<u>0.000</u>	<u>-0.788</u>	<u>-3.024</u>					
Subtotal	-6.675	-60.788	56.592					

EXHIBIT R-2a, RDT&E Project Justification						DATE: MAY 2009			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT AND NAME				PROJECT NUMBER AND NAME:			
RDT&E, N /BA-4 Advanced Component Dev. and Prototypes		0603611M Marine Corps Assault Vehicles				C0020 Advanced Amphibious Assault Vehicle (AAAV)			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010	FY 2010 OCO	FY 2010 Total			
TOTAL Program Element (PE)		240.532	255.264	293.466	0.000	293.466			
0020 EXPEDITIONARY FIGHTING VEHICLE (EFV)		240.532	255.264	293.466	0.000	293.466			
RDT&E Article Quantities		7							
<b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>									
<p>The Expeditionary Fighting Vehicle (EFV) Program will field a successor to the Marine Corps' current amphibious vehicle, the Assault Amphibious Vehicle Model 7A1 (AAV7A1). The EFV will provide the principal means of tactical surface mobility for the Marine Air-Ground Task Force (MAGTF) during both ship-to-objective maneuvers and sustained combat operations ashore. The EFV will provide the Marine Corps with the capability to execute the full spectrum of military missions from humanitarian operations to conventional combat operations. The EFV replaces the AAV7A1 Vehicle, which was originally fielded in the early 1970s. The EFV 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.</p> <p>The EFV program is a ACAT-1D program managed by the Marine Corps. The EFV is the next generation of Marine Corps Assault Vehicles being developed to satisfy the requirements of the 21st Century Marine War Fighters. Along with the Landing Craft Air Cushion (LCAC) and the MV-22 Osprey, the EFV will provide the Marine Corps with the tactical mobility assets required within the Expeditionary Maneuver Warfare capstone. Acquisition of the EFV is critical to the Marine Corps. The total EFV requirement is for 573 weapon systems.</p> <p>The program received approval to enter the System Development and Demonstration (SDD) Phase of the 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 initial SDD Phase (2001 through 2008) included validation of manufacturing and production processes, fabrication and testing of SDD vehicles, and finalizing and implementing the Life Cycle Management for EFV. A follow-on SDD Phase beginning in FY 2008 will include continued design, development, and reliability upgrades; increased RAM testing; modification of existing SDD prototypes; and manufacture and testing of up to seven additional SDD prototype vehicles.</p>									
<b>(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>									
COST (\$ in Millions)		FY2008	FY2009	FY2010	FY2010 OCO				
Accomplishment/Effort Subtotal Cost		189.280	204.456	244.212	0.000				
RDT&E Articles Qty		7							
(U) Design development, developmental testing, operational testing, and survivability program.									
<p>FY08: Continued engineering and logistics efforts to support design development, manufacturing planning, and design enhancements of the EFV(P) and EFV(C) designs. Continued the EFV survivability program. Continued developmental and reliability test support, and design, integration and testing of MS-C OA identified modifications. Continued development of Integrated Electronic Technical Manuals (IETMs). Continued Developmental Testing (DT) and Reliability/Availability/Maintainability (RAM) testing. Continued design and development of follow-on reliability enhancements, subsystem design modifications, and modification of existing vehicles integrating reliability design changes. Procured test spares. Began manufacture of new SDD prototypes.</p> <p>FY09: Continue engineering and logistics efforts to support design development, manufacturing planning, and design enhancements of the EFV(P) and EFV(C) designs. Continue the EFV survivability program. Continue developmental and reliability test support, and design, integration and testing of MS-C OA identified modifications. Continue development of Integrated Electronic Technical Manuals (IETMs). Continue Developmental Testing (DT) and Reliability/Availability/Maintainability (RAM) testing. Continue design and development of follow-on reliability enhancements, subsystem design modifications, and modification of existing vehicles integrating reliability design changes. Procure test spares. Continue design, development and manufacture of new SDD prototypes.</p> <p>FY10: Continue engineering and logistics efforts to support design development, manufacturing planning, and design enhancements of the EFV(P) and EFV(C) designs. Continue the EFV survivability program. Continue developmental and reliability test support, and design, integration and testing of MS-C OA identified modifications. Continue development of Integrated Electronic Technical Manuals (IETMs). Continue Developmental Testing (DT) and begin Reliability Growth Testing (RGT). Continue design and development of follow-on reliability enhancements, subsystem design modifications, and modification of existing vehicles integrating reliability design changes. Procure test spares. Continue design, development and manufacture of new SDD prototypes, and begin delivery of prototype vehicles.</p>									

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			MAY 2009	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT AND NAME	PROJECT NUMBER AND NAME:		
RDT&E, N /BA-4 Advanced Component Dev. and Prototypes	0603611M Marine Corps Assault Vehicles	C0020 Advanced Amphibious Assault Vehicle (AAAV)		
COST (\$ in Millions)	FY2008	FY2009	FY2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	9.839	9.775	9.551	0.000
RDT&E Articles Qty				
(U) Perform developmental testing, operational testing, RAM-D testing, and Reliability Growth Testing. FY08: Continue to perform developmental/operational testing and RAM-D testing. FY09: Continue to perform developmental/operational testing and RAM-D testing. FY10: Continue to perform developmental/operational testing and RAM-D testing. Begin Reliability Growth Testing (RGT).				
COST (\$ in Millions)	FY2008	FY2009	FY2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	3.241	5.470	7.733	0.000
RDT&E Articles Qty				
(U) Provide program support for Training Development, Technical Publications and IETMS. FY08-FY10: Provide program support for training systems development and technical publications and IETMS; development of training systems courseware.				
COST (\$ in Millions)	FY2008	FY2009	FY2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	15.002	16.018	11.875	0.000
RDT&E Articles Qty				
FY08 - FY10: Provide contractor technical, engineering and management support for program planning, analysis and execution. Continue to provide software design, development and integration support.				
COST (\$ in Millions)	FY2008	FY2009	FY2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	23.170	19.545	20.096	0.000
RDT&E Articles Qty				
FY08-FY10: Provide In-House technical engineering and integrated logistics support for program planning, analysis and execution. Procure ammunition in support of the EFV test program. Perform in-house software design, development, and analysis efforts.				
	FY2008	FY2009	FY2010	FY2010 OCO
(U) Total \$	240.532	255.264	293.466	0.000
(U) PROJECT CHANGE SUMMARY:				
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
FY 2009 President's Budget:	247.207	316.052	236.874	
a. Congressional Program Reduction	0.000	-60.000	0.000	
b. Congressional Misc. Adjustments	0.000	-0.693	0.000	
c. SBIR/STTR Transfer	-1.450	0.000	0.000	
d. Program Adjustments	-5.225	-0.095	59.616	
e. Rate/Misc. Adjustments	0.000	0.000	-3.024	
f. FY 2010 President's Budget:	240.532	255.264	293.466	

EXHIBIT R-2a, RDT&E Project Justification			DATE:		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-4 Advanced Component Dev. and Prototypes			PROGRAM ELEMENT AND NAME 0603611M Marine Corps Assault Vehicles		
			PROJECT NUMBER AND NAME: C0020 Advanced Amphibious Assault Vehicle (AAAV)		
CHANGE SUMMARY EXPLANATION:					
(U) Funding:					
(U) Schedule: A schedule slip as a result of delayed Preliminary Design Review (PDR) to increase vehicle reliability resulted in the delay of program milestones as indicated below. The detailed program schedule is provided in Exhibit R-4.					
	<u>FY09 President's Budget</u>	<u>FY10 President's Budget</u>			
SDD-2 Contract Award	2Q, FY08	4Q, FY08			
CDR	4Q, FY08	1Q, FY09			
DT II and RAM-D	thru 4Q, FY09	thru 1Q, FY10			
(U) Technical: Not Applicable					
<b>(U) C. OTHER PROGRAM FUNDING SUMMARY:</b>					
	<u>Prior Yrs.</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2010 OCO</u>
<u>Line Item No. &amp; Name</u>					
(U) PANMC, BLI #147500, EFV	0.000	0.004	0.000	0.000	0.000
(U) PMC BA2, BLI #202200, EFV Regular Procurement	176.044				
(U) PMC BA2, BLI #202200, EFV Adv Proc Credit	0.000				
(U) PMC BA2, BLI #202200, EFV Adv Proc	9.754				
(U) PMC BA7, BLI #700000, Initial EFV Spares	7.057				
(U) PMC, Total	192.855	0.000	0.000	0.000	0.000
(U) Related RDT&E: None					

EXHIBIT R-2a, RDT&E Project Justification		DATE: MAY 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT AND NAME	PROJECT NUMBER AND NAME:
RDT&E, N /BA-4 Advanced Component Dev. and Prototypes	0603611M Marine Corps Assault Vehicles	C0020 Advanced Amphibious Assault Vehicle (AAAV)
<p><b>(U) D. ACQUISITION STRATEGY:</b></p> <p>The EFV 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), and control vehicle unit cost. Three fully functional PDRR prototypes were developed and have undergone extensive developmental testing to further vehicle maturity. During the initial SDD phase of the program, nine prototype vehicles were manufactured and tested extensively in developmental and operational tests. A tenth vehicle was manufactured for use during Full Up System Level Lethality testing. A follow-on SDD phase contract was awarded in Jul 08 to incorporate major reliability modifications into existing prototypes, and manufacture and test seven new SDD prototypes.</p> <p>The EFV management strategy is event driven, designed to ensure a logical progression through the EFV acquisition to reduce risk, ensure affordability, and provide adequate information to decision makers regarding acquisition progress. The EFV 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 EFV 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.</p> <p>Cost as an independent variable (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 simulation techniques which is intended to continue throughout SDD. As a Program Management Oversight for Life Cycle Support pilot program, the program office management 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.</p> <p>The program's contracting approach for the EFV is to award the vast majority of the work to one prime contractor, competitively selected in 1996. GDLS operating through its division General Dynamics Amphibious System will be responsible for designing and producing the vehicle and providing support for testing from PDRR through LRIP. 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 was competitively awarded in December 2008 as a firm fixed price contract and will continue through FY10.</p> <p><b>(U) E. MAJOR PERFORMERS:</b></p> <p>General Dynamics, Woodbridge, VA. Validation of manufacturing and production processes, fabrication and testing of SDD vehicles, and finalizing and implementing Life Cycle Management. Initial SDD contract awarded Feb 01.</p>		

Exhibit R-3 Cost Analysis						DATE: MAY 2009					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME					
RDT&E, N /BA-4 Advanced Component Development and Prototypes			0603611M Marine Corps Assault Vehicles			C0020 Advanced Amphibious Assault Vehicle (AAAV)					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total	FY 08		FY 09		FY 10			
			PY s	FY 08	Award	FY 09	Award	FY10	Award		
Product Development			Cost	Cost	Date	Cost	Date	Cost	Date		
PDRR Contract	CPAF	GDLS - Woodbridge, VA	399.703	0.000		0.000		0.000			
System Design and Development	CPAF	GDLS - Woodbridge, VA	1,268.379	145.495	1Q-2Q	66.000	1Q-2Q	0.000			
System Design and Development	CPAF	GDLS - Woodbridge, VA	11.618	42.330	4Q	136.189	1Q-2Q	226.918	1Q-2Q		
Other Product Development	TBD	TBD	0.000	0.000	N/A	1.432	3Q	16.094	2Q		
Follow-On Product Development	TBD	TBD	0.000	0.000	N/A	0.000	N/A	0.000	N/A		
Regenerative Filtration	CPAF	Army, Edgewood Chem/Bio Ctr	3.327	0.000		0.000		0.000			
Survivability Contract	Classified	NSMA, Arlington, VA	26.028	1.455	2Q	0.834	2Q	1.200	2Q		
Display Technology	CPFF	ISR Corp	1.640	0.000		0.000		0.000			
Intelligent Machining of Advanced Defense Materials	CP	GDLS - Woodbridge, VA	2.914	0.000		0.000		0.000			
Digital Facsimile Upgrade	TBD	TBD	2.816	0.000		0.000		0.000			
<b>Sub Total Product Development</b>			<b>1,716.425</b>	<b>189.280</b>		<b>204.456</b>		<b>244.212</b>			
Remarks:											
Cost Categories	Contract Method & Type	Performing Activity & Location	Total	FY 08		FY 09		FY 10			
			PY s	FY 08	Award	FY 09	Award	FY10	Award		
Program Support			Cost	Cost	Date	Cost	Date	Cost	Date		
Integrated Logistics Support	Various	Various	10.617	6.702	2Q	3.655	2Q	4.014	2Q		
Training Devices/Simulators	CPAF	GDLS	49.397	2.495	2Q	5.160	3Q	7.383	2Q		
Tech Data & Pubs Development	Various	Various	0.690	0.315	2Q	0.310	2Q	0.350	2Q		
Support Equipment Development	Various	Various	0.000	0.431	2Q	0.000	2Q	0.000	2Q		
<b>Subtotal Program Support</b>			<b>60.704</b>	<b>9.943</b>		<b>9.125</b>		<b>11.747</b>			
Remarks:											
Cost Categories	Contract Method & Type	Performing Activity & Location	Total	FY 08		FY 09		FY 10			
			PY s	FY 08	Award	FY 09	Award	FY10	Award		
Test & Evaluation			Cost	Cost	Date	Cost	Date	Cost	Date		
Developmental, Operational and Live Fire Test & Evaluation	Various	Various	85.771	9.839	1Q-2Q	9.776	1Q-2Q	9.551	1Q-2Q		
<b>Sub Total Test &amp; Evaluation</b>			<b>85.771</b>	<b>9.839</b>		<b>9.776</b>		<b>9.551</b>			
Remarks:											
Cost Categories	Contract Method & Type	Performing Activity & Location	Total	FY 08		FY 09		FY 10			
			PY s	FY 08	Award	FY 09	Award	FY10	Award		
Contract Advisory & Asst Svc (A&AS)			Cost	Cost	Date	Cost	Date	Cost	Date		
Engineering and Technical Services	RCP / MIPR	Various	25.456	6.735	2Q	8.851	2Q	5.352	2Q		
Management Support Services	RCP / MIPR	Various	44.433	8.168	1Q	6.648	1Q	6.057	1Q		
Studies and Analyses	RCP / MIPR	Various	0.000	0.098	2Q	0.519	2Q	0.465	2Q		
<b>Sub Total A&amp;AS</b>			<b>69.890</b>	<b>15.002</b>		<b>16.018</b>		<b>11.875</b>			
Remarks:											
Management Support	Contract Method & Type	Performing Activity & Location	Total	FY 08		FY 09		FY 10			
			PY s	FY 08	Award	FY 09	Award	FY10	Award		
			Cost	Cost	Date	Cost	Date	Cost	Date		
In-House Technical Support	Various	Various	105.958	15.150	1Q-3Q	14.359	1Q-3Q	14.441	1Q-3Q		
Program Management Support	Various	Various	22.869	0.201	2Q	0.331	2Q	0.306	2Q		
Travel		Various	3.497	1.118	1-4Q	1.200	1-4Q	1.335	1-4Q		
<b>Sub Total Management Support</b>			<b>132.324</b>	<b>16.468</b>		<b>15.891</b>		<b>16.081</b>			
Remarks:											
<b>Total Cost</b>			<b>2,065.114</b>	<b>240.532</b>		<b>255.264</b>		<b>293.466</b>			

# EFV (AAAV) PROGRAM SCHEDULE

FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
<div style="display: flex; flex-direction: column; gap: 10px;"> <div style="display: flex; justify-content: space-between;"> <span>MDA Decision ▲</span> <span></span> </div> <div style="display: flex; justify-content: space-between;"> <span></span> <span>▲ CDR</span> </div> <div style="display: flex; justify-content: space-between;"> <span></span> <span>▲ SDD-2 Award</span> </div> <div style="display: flex; justify-content: space-between;"> <span>▲▲ (C) (P) User Juries</span> <span></span> </div> <div style="display: flex; justify-content: space-between;"> <span>■ MS C OA</span> <span></span> </div> <div style="display: flex; justify-content: space-between;"> <span>■ Manufacture 9 SDD Prototypes</span> <span></span> </div> <div style="display: flex; justify-content: space-between;"> <span>■ Manufacture Live Fire Test Vehicle</span> <span></span> </div> <div style="display: flex; justify-content: space-between;"> <span>Developmental II &amp; RAM-D Testing</span> <span></span> </div> <div style="display: flex; justify-content: space-between;"> <span>Manufacture &amp; Deliver 7 SDD-2 Prototypes</span> <span>DT/RGT ■</span> </div> </div>																				

Exhibit R-4/4a Schedule Profile/Detail							DATE: MAY 2009			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME				
RDT&E, N /BA-4 Advanced Component Development and Pro	0603611M Marine Corps Assault Vehicles					C0020 Advanced Amphibious Assault Vehicle (AAAV)				
	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
<b>SCHEDULE DETAIL</b>										
<b>MS C</b>										
<b>FRP Decision</b>										
<b>IOC</b>										
Operational Assessments										
Developmental II & RAM-D Testing	1-4Q	1-4Q	1Q							
CDR		1Q								
<b>SDD-2 Contract Award</b>	4Q									
<b>LRIP Contract Award</b>										
LRIP Deliveries Lot 1										
LRIP Deliveries Lot 2										
<b>IOT&amp;E</b>										
Full Up System Level Live Fire Test										
<b>Ready for Training</b>										
<b>Full Rate Contract Award</b>										