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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				PE 0206623M: MC Ground Cmbt Spt Arms Sys							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	103.050	108.857	100.424	0.000	100.424	169.193	174.711	134.455	102.586	Continuing	Continuing
0021: Assault Amphibious Vehicle 7A1	30.465	44.817	1.887	0.000	1.887	1.955	2.051	2.079	2.197	Continuing	Continuing
1555: Lt Armored Vehicle Prog	10.429	6.608	14.760	0.000	14.760	17.032	10.864	2.331	2.393	Continuing	Continuing
1901: MC Grnd Wpnry Prod Improvement	5.265	9.809	11.514	0.000	11.514	10.863	8.805	7.788	7.383	Continuing	Continuing
2086: Soldier/Marine Enhancement	5.346	3.366	4.534	0.000	4.534	4.657	4.783	4.922	5.055	Continuing	Continuing
2112: Lightweight 155mm Howitzer	0.000	1.394	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.394
2237: Amphibious Vehicle Test	0.892	0.902	0.929	0.000	0.929	0.944	0.947	0.967	0.984	Continuing	Continuing
2315: Training Devices/Simulators	19.131	13.218	2.226	0.000	2.226	7.039	17.774	14.159	10.802	Continuing	Continuing
2503: Initial Issue	16.326	9.823	12.271	0.000	12.271	12.509	14.733	13.488	13.567	Continuing	Continuing
2928: Exp Indirect Fire Gen Supt Wpn Sys	2.233	1.943	1.542	0.000	1.542	2.109	2.395	2.447	2.500	Continuing	Continuing
3098: Fire Support System	8.078	6.005	20.559	0.000	20.559	28.260	25.512	19.043	9.122	Continuing	Continuing
4002: Family of Raid Reconnaissance	0.896	4.027	3.391	0.000	3.391	0.809	0.425	0.435	0.444	Continuing	Continuing
9999: Congressional Adds	3.989	3.824	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	58.967
9C85: Marine Personnel Carrier (MPC)	0.000	3.121	26.811	0.000	26.811	83.016	86.422	66.796	48.139	Continuing	Continuing

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>
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**A. Mission Description and Budget Item Justification**

This PE provides modification to Marine Corps Expeditionary Ground Force Weapon Systems to increase lethality, range, survivability and operational effectiveness. It also provides for the development of AAV7A1 reliability, maintainability, operational and safety modifications, improvements in command and control, and product improvements to the family of LAVs. The AVTB provides facilities and personnel which perform a broad range of testing, repair and technical services to amphibious vehicles. This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing and manufacturing development for upgrades of existing systems.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	119.007	120.379	0.000	0.000	0.000
Current President's Budget	103.050	108.857	100.424	0.000	100.424
Total Adjustments	-15.957	-11.522	100.424	0.000	100.424
• Congressional General Reductions		-0.455			
• Congressional Directed Reductions		-14.900			
• Congressional Rescissions	0.000	-0.007			
• Congressional Adds		3.840			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-5.952	0.000			
• SBIR/STTR Transfer	-10.005	0.000			
• Program Adjustments	0.000	0.000	100.424	0.000	100.424

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Congressional Adds*

- Congressional Add: *Expandable Rigid Wall Composite Shelter*
- Congressional Add: *Remote Aiming and Sighting Optical Retrofit*
- Congressional Add: *MARCOM Computer Research*
- Congressional Add: *Marine Corps Shotgun Modernization Program*

Congressional Add Subtotals for Project: 9999

	<u>FY 2009</u>	<u>FY 2010</u>
	0.000	0.797
	0.000	3.027
	0.997	0.000
	2.992	0.000
	3.989	3.824

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>
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<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add Totals for all Projects	3.989	3.824

**Change Summary Explanation**

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0021: <i>Assault Amphibious Vehicle 7A1</i>	30.465	44.817	1.887	0.000	1.887	1.955	2.051	2.079	2.197	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b> (U) PM AAV lifecycle support and Primary Item Control Agent (PICA) functions. Funding to integrate Survivability, C4I & Environment/Habitability upgrades to the AAV.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
*AAV (FOV) Survivability, C4I, Environment/Habitability (SCE) Upgrade Program <i>FY 2009 Accomplishments:</i> AAV (FOV) Survivability, C4I, Environment/Habitability (SCE) Upgrade Program: Capabilities based upgrade program centered on material upgrades in survivability, C4I and Environment/Habitability.  <i>FY 2010 Plans:</i> AAV (FOV) Survivability, C4I, Environment/Habitability (SCE) Upgrade Program: Capabilities based upgrade program centered on material upgrades in survivability, C4I and Environment/Habitability.							30.465	42.504	0.000	0.000	0.000
*PM AAV Operations Support: PM AAV Operations Support: Evaluation and testing of safety improvements and fact of life changes to maintain the AAV Family of Vehicles (FOV).  <i>FY 2010 Plans:</i> Continued research and development for the AAV SCE upgrade effort and engineering and safety improvements to the FOV.							0.000	2.313	1.887	0.000	1.887

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys			<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>					
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> Engineering and safety fact of life changes to the FOV.											
Accomplishments/Planned Programs Subtotals							30.465	44.817	1.887	0.000	1.887
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/BLI 202100: AAV7A1	5.462	6.135	7.749	0.000	7.749	9.915	10.145	10.504	10.878	0.000	60.788
<b>D. Acquisition Strategy</b> TBD											
<b>E. Performance Metrics</b> Milestone Reviews											

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>										<b>DATE: February 2010</b>				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>					<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>					<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>				

**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Safety Analysis	WR	NSWC Dahlgren VA	0.175	0.175	Feb 2010	0.000		0.000		0.000	0.000	0.350	Continuing
RAM/Safety	WR	SPAWAR Charleston SC	0.080	0.000		0.000		0.000		0.000	0.000	0.080	Continuing
Fire Supression/KIDDIE	WR	SPAWAR Charleston SC	0.035	0.000		0.000		0.000		0.000	0.000	0.035	Continuing
SCE Dev/Eval	C/CPFF	TBD TBD	0.705	0.000		0.000		0.000		0.000	0.000	0.705	Continuing
Comp ID/Demo-Tests	C/CPFF	NSWC Dahlgren	0.578	4.825	Feb 2010	0.000		0.000		0.000	0.000	5.403	Continuing
Comp ID/Demo-Tests	C/CPFF	BAE Systems Triangle VA	9.354	0.600	Feb 2010	0.000		0.000		0.000	0.000	9.954	Continuing
Integration/APU	C/CPFF	BAE Systems Triangle VA	0.659	0.000		0.000		0.000		0.000	0.000	0.659	Continuing
Safety Analysis	C/CPFF	BAE Systems Triangle VA	1.500	5.650	Feb 2010	0.000		0.000		0.000	0.000	7.150	Continuing
RAM Safety	C/CPFF	BAE Systems Triangle VA	1.500	0.000		0.000		0.000		0.000	0.000	1.500	Continuing
Safety Analysis	WR	NWSC Crane IN	0.000	0.400	Feb 2010	0.000		0.000		0.000	0.000	0.400	Continuing
Comp ID/Demo-Tests	WR	NWSC Crane IN	0.000	0.800	Feb 2010	0.000		0.000		0.000	0.000	0.800	Continuing
Test Analysis	WR	AVTB Camp Pendleton	0.000	0.350	Jun 2010	0.000		0.000		0.000	0.000	0.350	Continuing
Analysis/Product Dev	C/FP	MITRE	0.000	0.120	Jun 2010	0.000		0.000		0.000	0.000	0.120	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Stafford VA											
SCE Comp Dev	C/CPFF	BAE Systems Stafford VA	0.000	6.000	Feb 2010	0.000		0.000		0.000	0.000	6.000	Continuing
<b>Subtotal</b>			14.586	18.920		0.000		0.000		0.000	0.000	33.506	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical \$ Engineering Spt	WR	SPAWAR Charleston SC	0.063	0.000		0.162	Feb 2011	0.000		0.162	0.000	0.225	Continuing
Technical \$ Engineering Spt	WR	NSWC Dahlgren/Crane	3.649	6.800	Feb 2010	0.000		0.000		0.000	0.000	10.449	Continuing
Technical \$ Engineering Spt	C/CPFF	BAE Systems Triangle VA	3.035	5.580	Feb 2010	0.000		0.000		0.000	0.000	8.615	Continuing
Documentation	C/CPFF	BAE Sysrtems Triangle VA	1.132	1.000	Feb 2010	0.100	Feb 2011	0.000		0.100	0.000	2.232	Continuing
Support	C/CPFF	BAE Systems Triangle VA	2.000	0.531	Feb 2010	0.150	Feb 2011	0.000		0.150	0.000	2.681	Continuing
Documentation	C/FP	CEOss	0.000	0.200	May 2010	0.000		0.000		0.000	0.000	0.200	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Quantico VA											
<b>Subtotal</b>			9.879	14.111			0.412			0.000	0.412	0.000	24.402

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TEMP/LCCE/CDD	WR	MCCDC Quantico VA	0.740	0.000		0.000		0.000		0.000	0.000	0.740	Continuing
EMI Evaluation	PO	SPAWAR Charleston SC	5.993	0.250	Feb 2010	0.000		0.000		0.000	0.000	6.243	Continuing
Field Test	PO	29 Palms MCB CA	0.035	0.000		0.000		0.000		0.000	0.000	0.035	Continuing
Field Test	PO	Camp LeJeune MCB NC	0.030	0.000		0.000		0.000		0.000	0.000	0.030	Continuing
Test and Eval	PO	MCOTEA Quantico VA	1.028	0.000		0.000		0.000		0.000	0.000	1.028	Continuing
Decon Verification	C/CPFF	BAE Systems Stafford VA	0.000	0.100	Feb 2010	0.000		0.000		0.000	0.000	0.100	Continuing
Testing	C/CPFF	BAE Systems	0.000	4.000	Feb 2010	0.000		0.000		0.000	0.000	4.000	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Stafford VA											
Testing	WR	NWSC Dahlgren VA	0.000	3.000	Apr 2010	0.000		0.000		0.000	0.000	3.000	Continuing
DT Testing	C/CPFF	MCOTEA Quantico VA	0.000	1.000	Jan 2010	0.000		0.000		0.000	0.000	1.000	Continuing
<b>Subtotal</b>			7.826	8.350		0.000		0.000		0.000	0.000	16.176	

Remarks

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management	C/CPFF	BAE Systems Triangle VA	2.100	2.000	Feb 2010	1.275	Feb 2011	0.000		1.275	0.000	5.375	Continuing
Various Management	WR	Government Various	12.448	1.000	Apr 2010	0.000		0.000		0.000	0.000	13.448	Continuing
Travel	Allot	Government Various	0.000	0.436	Oct 2009	0.200	Oct 2010	0.000		0.200	0.000	0.636	Continuing
<b>Subtotal</b>			14.548	3.436		1.475		0.000		1.475	0.000	19.459	

Remarks

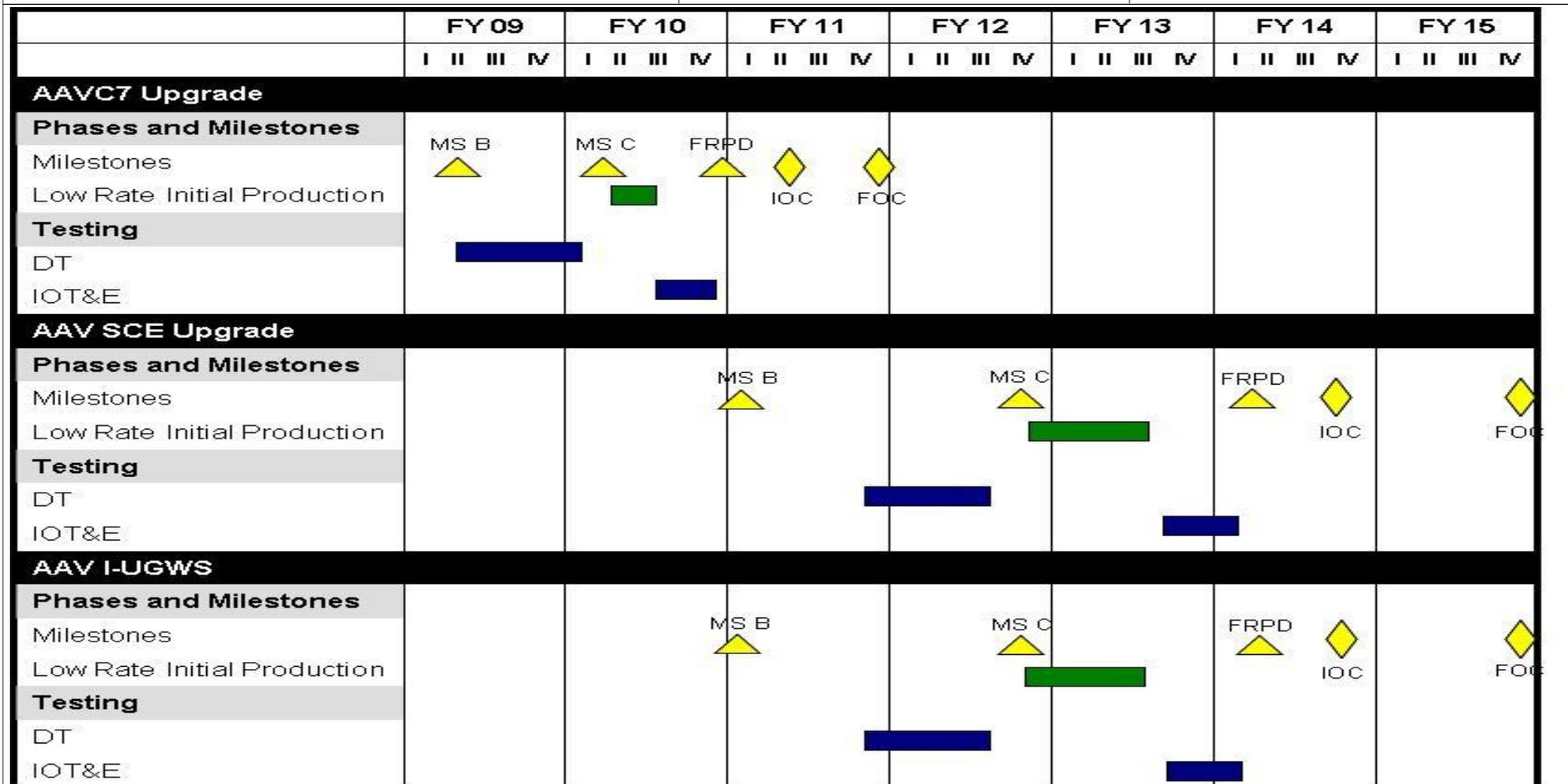
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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>
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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2011 Navy</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 0021: <i>Assault Amphibious Vehicle 7A1</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
AAVC7 Upgrade MSB	2	2009	2	2009
AAVC7 Upgrade MSC	2	2010	2	2010
AAVC7 Upgrade LRIP	2	2010	3	2010
AAVC7 DT	2	2009	1	2010
AAVC7 IOT&E	3	2010	4	2010
AAV SCE Upgrade MSB	1	2011	1	2011
AAV SCE Upgrade MSC	4	2012	4	2012
AAVSCE LRIP	4	2012	3	2013
AAV SCE DT	4	2011	3	2012
AAV SCE IOT&E	3	2013	1	2014
AAV I-UGWS MSB	4	2010	1	2011
AAV I-UGWS MSC	3	2012	4	2012
AAV I-UGWS LRIP	4	2012	3	2013
AAV I-UGWS DT	4	2011	3	2012
AAV I-UGWS IOT&E	3	2013	1	2014

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys				<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1555: <i>Lt Armored Vehicle Prog</i>	10.429	6.608	14.760	0.000	14.760	17.032	10.864	2.331	2.393	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b>											
<p>The Light Armored Vehicle Family of Vehicles (LAV FOV) consists of six fielded LAV configurations, and one communications/intelligence-configured asset on a LAV chassis. The LAV FOV provides a logistically self-contained, highly mobile, and lethal combined arms combat system to the Marine Air-Ground Task Force (MAGTF). The LAV Product Improvement Program funds the development and testing of modifications of two programs; the LAV Modification Program and the LAV Anti-Tank System Program . These programs will ensure that the LAV FOV will be capable of conducting its assigned missions by enhancing lethality and survivability; reliability, availability, maintainability and durability; as well as reducing operations and support costs. The MPC program moved to a separate line (C9C85) in FY10. Since PB10 submission, the Indirect Fire Modernization program was cancelled and replaced by the Anti-Tank System.</p>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
MARINE PERSONNEL CARRIER - MPC							5.524	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> Develop Marine-PC test bed, develop life cycle cost estimate, Milestone A documentation											
LAV MODIFICATIONS							4.905	0.531	2.251	0.000	2.251
<i>FY 2009 Accomplishments:</i> Research and development of numerous LAV Modification projects to address minor modifications, safety, and obsolescence issues. (Cooling Vests, MRV Mounts, Weight Reduction and Portable Welder)											

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<b>Exhibit R-2A, RDT&amp;E Project Justification: PB 2011 Navy</b>							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>			<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>					
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
<p><i>FY 2010 Plans:</i> Research and development of numerous LAV Modification projects to address minor modifications, safety, and obsolescence issues. (Lifting Eye/Tiedown Redesign)</p> <p><i>FY 2011 Base Plans:</i> Research and development of numerous LAV Modification projects to address minor modifications, safety, and obsolescence issues. (Slip Ring, Electrical Upgrade)</p>											
LAV ANTI-TANK SYSTEM						0.000	6.077	12.509	0.000	12.509	
<p><i>FY 2010 Plans:</i> LAV-AT - Develop Milestone B documentation, and complete Analysis of Alternatives.</p> <p><i>FY 2011 Base Plans:</i> LAV-AT - Engineering &amp; Manufacturing Development contract award, Preliminary Design Review and Critical Design Review.</p>											
Accomplishments/Planned Programs Subtotals						10.429	6.608	14.760	0.000	14.760	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/2038: LAV	231.031	74.219	41.277	152.333	193.610	16.439	5.993	145.213	142.616	Continuing	Continuing
• PMC/7000: LAV SPARES	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
	0.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.997

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0206623M/C9E22A: <i>MARINE CORPS COMMON HARDWARE</i>											

**D. Acquisition Strategy**

The LAV Modification program funds numerous low-dollar, yet extremely important minor modifications, support equipment and tools and other projects that increase LAV reliability and readiness while simultaneously reducing operations and support costs. The Marine Corps, PM-LAV Sustainment Readiness Team uses multi-disciplined integrated project teams consisting of engineering, logistical, contracting and financial personnel to manage Modification projects. The majority of contracts issued under the Modification line are subject to the competitive acquisition process.

"(U) D. ACQUISITION STRATEGY: The LAV Anti-Tank System program will focus on full and open competition to integrate a new turret into the LAV-AT variant with options for production. The LAV-ATM is a replacement for the M901A1 turret to correct operational and readiness deficiencies. It will be capable of firing the current family of TOW missiles and be forward compatible with the next generation of heavy anti armor missiles. The program was approved in December of 2009 as part of the Material Development Decision to enter at MS-B based on the technical maturity of the capabilities required, schedule, and budget. Milestone B is scheduled for May 2010, leading to the Engineering & Manufacturing Development (EMD) phase. Once the EMD phase is complete, a combined MS C and Full Rate Production Review (FRPR) are planned to be followed by a tailored Production and Deployment Phase and Operations and Support Phase.

**E. Performance Metrics**

Milestone Reviews

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>					

**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PRODUCT DEV. (MOD)	Various/ TBD	Various Various	4.539	0.337	Mar 2010	1.826	Mar 2010	0.000		1.826	Continuing	Continuing	Continuing
SYSTEM DEV (Anti-Tank)	Various/ TBD	Various Various	0.000	2.905	May 2010	10.713	Nov 2010	0.000		10.713	13.531	27.149	Continuing
<b>Subtotal</b>			4.539	3.242		12.539		0.000		12.539			

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Mgmt (MOD)	Various/ Various	TACOM Warren, MI	0.079	0.053	Dec 2009	0.160	Oct 2010	0.000		0.160	Continuing	Continuing	Continuing
Program Mgmt (Anti-Tank)	Various/ Various	TACOM Warren, MI	0.000	0.926	Jan 2010	0.769	Oct 2010	0.000		0.769	2.235	3.930	Continuing
<b>Subtotal</b>			0.079	0.979		0.929		0.000		0.929			

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Devl/Oper. T&E (MOD)	Various/ Various	Various Various	0.567	0.075	Mar 2010	0.195	Mar 2011	0.000		0.195	Continuing	Continuing	Continuing
Devl/Oper. T&E (Anti-Tank)	Various/ Various	Various Various	0.000	0.000		0.000		0.000		0.000	7.313	7.313	Continuing
<b>Subtotal</b>			0.567	0.075		0.195		0.000		0.195			

**Remarks**

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Tech. Eng. Services (MOD)	C/FP	SURVICE Bellcamp, MD	0.063	0.066	Jan 2010	0.070	Jan 2011	0.000		0.070	Continuing	Continuing	Continuing
Tech. Eng. Services (Anti-Tank)	C/FP	SURVICE Bellcamp, MD	0.000	2.246	Jan 2010	1.027	Jan 2011	0.000		1.027	0.174	3.447	Continuing
<b>Subtotal</b>			0.063	2.312		1.097		0.000		1.097			

**Remarks**

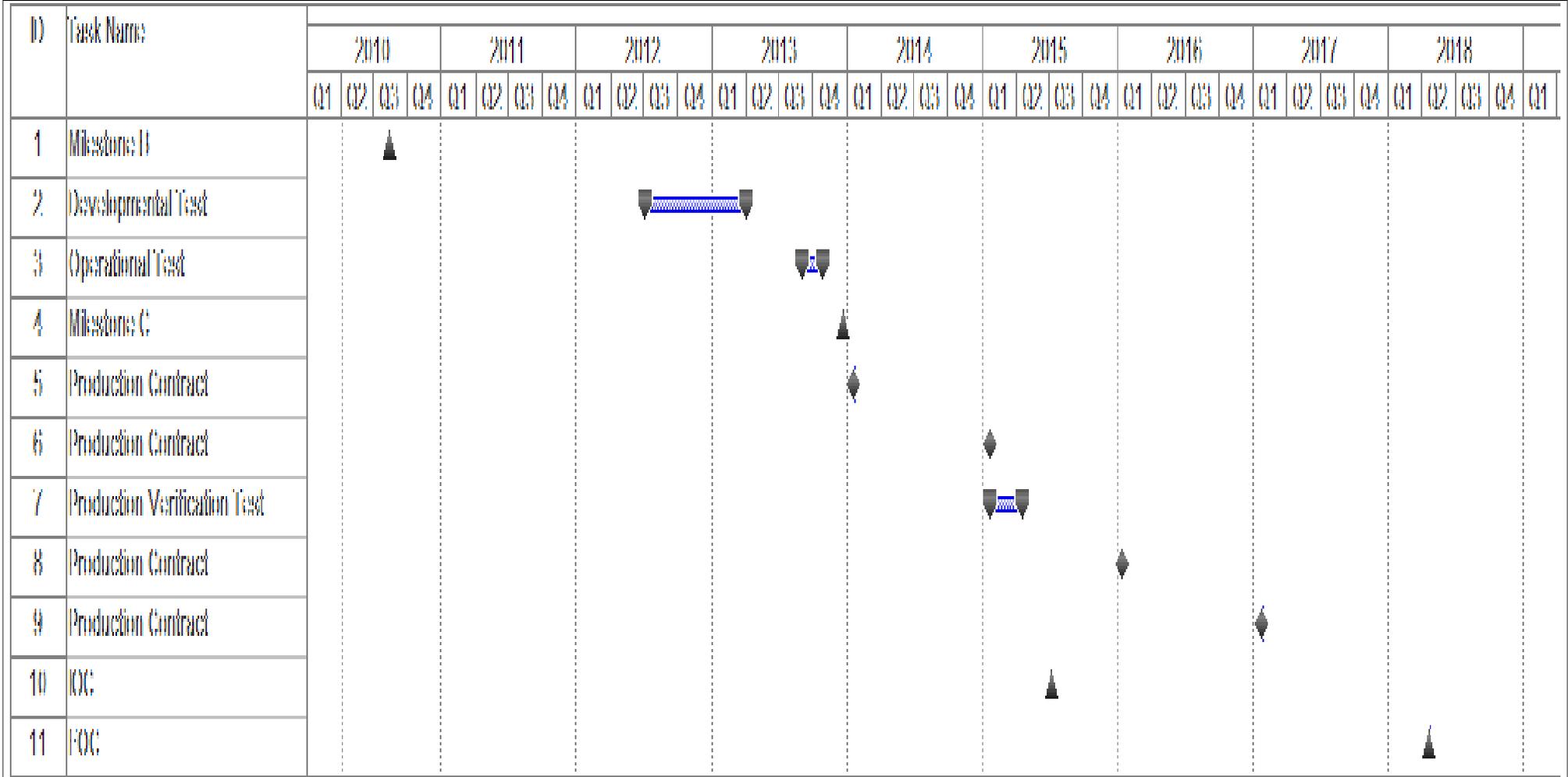
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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1555: <i>Lt Armored Vehicle Prog</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Anti-Tank MS-B	3	2010	3	2010
Ant-Tank Devl Test	3	2012	1	2013
Anti-Tank Oper. Test	3	2013	4	2013
Anti-Tank MS-C	4	2013	4	2013
Anti-Tank Contract Award	1	2014	1	2014

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
1901: <i>MC Grnd Wpnry Prod Improvement</i>	5.265	9.809	11.514	0.000	11.514	10.863	8.805	7.788	7.383	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
<b>A. Mission Description and Budget Item Justification</b>												
This project develops joint and Marine Corps unique improvements to infantry weapons technology, non-lethal systems technology, improvements for Night Vision Equipment, Rifle Combat Optics, Family of Individual Optics, and monitors national and international weapons development.												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
Company and Battalion Mortars. <i>FY 2009 Accomplishments:</i> This funding will be used to provide system development and demonstration, pre-Milestone C activities, and purchasing Non-developmental Items (NDI) for testing and evaluation of candidate systems and modifications.  <i>FY 2010 Plans:</i> This funding will be used to provide system development and demonstration, pre-Milestone C activities, and purchasing Non-developmental Items (NDI) for testing and evaluation of candidate systems and modifications.  <i>FY 2011 Base Plans:</i> This funding will be used to provide system development and demonstration, pre-Milestone C activities, and purchasing Non-developmental Items (NDI) for testing and evaluation of candidate systems and modifications.						0.373	0.934	0.501	0.000	0.501		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy				<b>DATE:</b> February 2010							
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>		<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>							
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>			
<p><i>FY 2011 Base Plans:</i> The Sniper System Capability Sets (SSCS) program supports the development, acquisition and sustainment of the Scout Sniper suite of equipment which provides the scout sniper team with the following capabilities: long-range precision rifle, semi-automatic precision rifle, improved observation capability during the day, night and during obscure battlefield conditions, improved communications, improved target identification and designation for indirect fires and close air support, improved concealability, and improved transportability.</p>											
<p>Family of Optical Systems</p> <p>Family of Optical Systems (FOS). Transitions Family of Individual Optics to Family of Optical Systems to encompass all Optical Systems into this program. Provides handheld, helmet mounted and weapons optics systems including various thermal, image intensifier, magnified optical, laser range-finding, illuminating, and pointer functionalities. Replaces multiple single-purpose night vision equipment (NVE) fielded to the marine Corps.</p> <p><i>FY 2011 Base Plans:</i> This funding will be utilized to support improvements on the technology that is currently used. Research efforts will evaluate the possibility of combining / integrating disparate sensor technology to increase the overall capability. One example will be combining the Infrared (IR) and Image Intensifier (I2) technologies into one system.</p>				0.000	0.000	2.518	0.000	2.518			
Accomplishments/Planned Programs Subtotals				5.265	9.809	11.514	0.000	11.514			
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• RDTEN/0603851M/2319: <i>CBG Non Lethal Weapons</i>	3.800	2.060	3.046	0.000	3.046	0.000	0.000	0.000	0.000	0.000	8.906

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**Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PMC/2208001: <i>Weapons Enhncmnt Program (OOTW)</i>	8.241	9.652	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.893
• PMC/2208002: <i>Weapons Enhncmnt Program (MPM)</i>	0.000	0.000	0.000	0.000	0.000	0.928	3.926	3.972	0.000	0.000	8.826
• PMC/2208003: <i>Weapons Enhncmnt Program (OI)</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.497	15.331	Continuing	Continuing
• PMC/4930001: <i>Night Vision Equipment (NVM)</i>	8.950	8.033	0.000	0.000	0.000	4.510	6.318	8.490	8.780	Continuing	Continuing
• PMC/4930002: <i>Night Vision Equipment (FOIO)</i>	18.376	2.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.671
• PMC/2220003: <i>Under \$5 Million ( Com &amp; Batt Mortars)</i>	4.929	2.195	2.178	0.000	2.178	3.226	3.311	3.405	3.493	Continuing	Continuing
• PMC/2220004: <i>Under \$5 Million ( IW Mods)</i>	6.454	9.085	6.217	6.765	12.982	3.008	3.049	3.132	3.220	Continuing	Continuing
• PMC/2220005: <i>Under \$5 Million ( SSCS)</i>	0.000	4.293	1.096	0.000	1.096	1.123	1.150	1.182	0.000	0.000	8.844
• PMC/700000: <i>Spares (SSCS)</i>	0.000	1.494	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.494
• PMC/493000: <i>Family of Optical Systems (FOS)</i>	0.000	0.000	0.000	0.000	0.000	4.185	4.287	4.361	4.437	Continuing	Continuing
• PMC/2208008: <i>Escalation of Forces Equipment</i>	0.000	0.000	0.682	18.571	19.253	1.372	1.393	1.429	1.462	Continuing	Continuing

**D. Acquisition Strategy**

These programs range from off-the-shelf modifications to developmental items for safety, reliability, and technology up-grades to meet Marine Corps requirements.

**E. Performance Metrics**

Milestone Reviews

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Ocular Interruption	Various/ Various	Various Contract Industry	0.000	0.000		1.851	Jan 2011	0.000		1.851	0.000	1.851	Continuing
Mission Payload Module	Various/ Various	AFRL San Antonio, TX	0.000	0.663	Nov 2009	1.145	Nov 2010	0.000		1.145	0.000	1.808	Continuing
Family of Individual Optics	Various/ Various	Night Vision Lab Ft. Belvoir, VA	3.352	0.368	Jan 2009	0.000		0.000		0.000	0.000	3.720	Continuing
Night Vision Mod	Various/ Various	Various (Contract Industry) TBD	1.560	0.975	Dec 2009	0.980	Dec 2010	0.000		0.980	0.000	3.515	Continuing
Night Vision Mod	Various/ Various	Night Vision Lab Ft. Belvoir, VA	2.918	0.250	Dec 2009	0.957	Dec 2010	0.000		0.957	0.000	4.125	Continuing
Family of Individual Optics	Various/ Various	Contract Industry TBD	0.622	1.129	Jan 2010	0.000		0.000		0.000	0.000	1.751	Continuing
Company/Battalion Mortar	Various/ Various	NSWC Crane, IN	2.484	0.934	Mar 2010	0.501	Mar 2011	0.000		0.501	Continuing	Continuing	Continuing
Sniper System Cap Sets	Various/ Various	Various (Contract Industry) TBD	0.368	0.250	Mar 2010	0.253	Mar 2011	0.000		0.253	Continuing	Continuing	Continuing
Family of Optical Systems	Various/ Various	Night Vision Lab Ft. Belvoir, VA	0.000	0.000		1.230	Dec 2010	0.000		1.230	0.000	1.230	Continuing
Family of Optical Systems	Various/ Various	Contract Industry TBD	0.000	0.000		0.917	Jan 2011	0.000		0.917	0.000	0.917	Continuing
<b>Subtotal</b>			11.304	4.569		7.834		0.000		7.834			

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mission Payload Module	Various/ Various	MCSC Quantico, VA	0.000	1.275	Nov 2009	1.200	Nov 2010	0.000		1.200	0.000	2.475	Continuing
Family of Individual Optics	Various/ Various	MCSC Quantico, VA	1.347	0.408	Jan 2010	0.000		0.000		0.000	0.000	1.755	Continuing
Night Vision Mod	Various/ Various	CEOSS Quantico, VA	1.581	0.407	Jan 2010	0.375	Jan 2011	0.000		0.375	0.000	2.363	Continuing
Infantry Weapons Mods	Various/ Various	MCSC Quantico, VA	2.146	0.301	Jun 2010	0.360	Jun 2011	0.000		0.360	Continuing	Continuing	Continuing
Family of Optical Systems	Various/ Various	MCSC Quantico, VA	0.000	0.000		0.371	Jan 2011	0.000		0.371	0.000	0.371	Continuing
<b>Subtotal</b>			5.074	2.391		2.306		0.000		2.306			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mission Payload Module	Various/ Various	MCOTE Quantico, VA	0.000	1.955	Nov 2009	0.375	Nov 2010	0.000		0.375	0.000	2.330	Continuing
Escalation of Force Equipment	Various/ Various	TBD TBD	0.000	0.000		0.049	Jan 2011	0.000		0.049	0.000	0.049	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Night Vision Mod	Various/ Various	NSWC, Dahlgren, VA	0.869	0.020	Jan 2010	0.021	Dec 2010	0.000		0.021	0.000	0.910	Continuing
Infantry Weapons Mods	Various/ Various	MCOTEA Quantico, VA	0.010	0.066	Feb 2010	0.150	Dec 2010	0.000		0.150	Continuing	Continuing	Continuing
Infantry Weapons Mods	Various/ Various	NSWC Crane, IN	1.341	0.508	Jun 2010	0.460	Jun 2011	0.000		0.460	Continuing	Continuing	Continuing
Infantry Weapons Mods	C/FFP	MCSC Quantico, VA	0.779	0.250	Jun 2010	0.270	Jun 2011	0.000		0.270	Continuing	Continuing	Continuing
Sniper System Cap Sets	Various/ Various	MCOTEA Quantico, VA	0.000	0.050	Mar 2010	0.049	Mar 2011	0.000		0.049	Continuing	Continuing	Continuing
<b>Subtotal</b>			2.999	2.849		1.374		0.000		1.374			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		19.377	9.809	11.514	0.000	11.514		

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy**

**DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**

1319: *Research, Development, Test & Evaluation, Navy*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**

PE 0206623M: *MC Ground Cmbt Spt Arms Sys*

**PROJECT**

1901: *MC Grnd Wpnry Prod Improvement*

# SNIPER SYSTEM CAPABILITY SET (SSCS)

Fiscal Year		FY09	FY10	FY11	FY12	FY13	FY14	FY15
Pre-Planned Product Improvement (P3I) for SSCS items.								
Procurement of SSCS Rifles, Optics, Ancillary Equipment								
Rapid Engagement Precision Rifle (REPR) Procurement								

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>

# MISSION PAYLOAD MODULE

Fiscal Year	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Technology Development Phase	████████████████████					
Engineering & Manufacturing Phase			████████████████████			
Low Rate Initial Production (LRIP)						████████
Production & Deployment Phase						████████
TD Contract Award	◆ C					
EMD Contract Award			◆			
LRIP Contract Award						◆
Full Rate Production Contract Award						FRP ◆
IOC						
FOC						

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 Navy</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>

## Ocular Interruption

Ocular Interruption	FY10	FY11	FY12	FY13	FY14	FY15
<b>PHASES AND MILESTONES</b>						
Engineering and Manufacturing Dev.			[Bar]			
Low Rate Initial Production (LRIP)					[Bar]	
Production & Deployment						[Bar]
Milestones			MS B ▲		MS C ▲	FRP ▲
						IOC ▲
<b>CONTRACTUAL ACTIVITIES</b>						
EMD Contract Award			▲			
LRIP Option Award					▲	
FRP RFP Release						▲
FRP Contract Award						▲
<b>TECHNICAL REVIEWS</b>						
Preliminary Design Review		▲				
Critical Design Review / DRR			▲			
Test Readiness Review				▲		
System Verification Review				▲		
Production Readiness Review				▲		
<b>TESTING</b>						
DT						
Subsystem Qualification				[Bar]		
System Qualification					[Bar]	
IOT&E						

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>

**FAMILY OF INDIVIDUAL OPTICS**

Fiscal Year	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Fused Optic Pre-MS A Activities (ongoing)	█	█					
FOIO Analysis of Alternatives		█	█				
Fused Optic Systems MS A			█				
Component Development & Tech Demonstrators				█	█	█	█
Helmet Mounted Fused Optic System (HMFOS) HMFOS MS B							█
Crew Served Fused Optic System (CSFOS) CSFOS MS B						█	
Individual Weapon Fused Optic System (IWFOS) HHFOS MS B							█
Hand-Held Fused Optic System (HHFOS) HHFOS MS B						█	
AAO Increase/Technology Refresh Procurements	█	█	█	█	█	█	█

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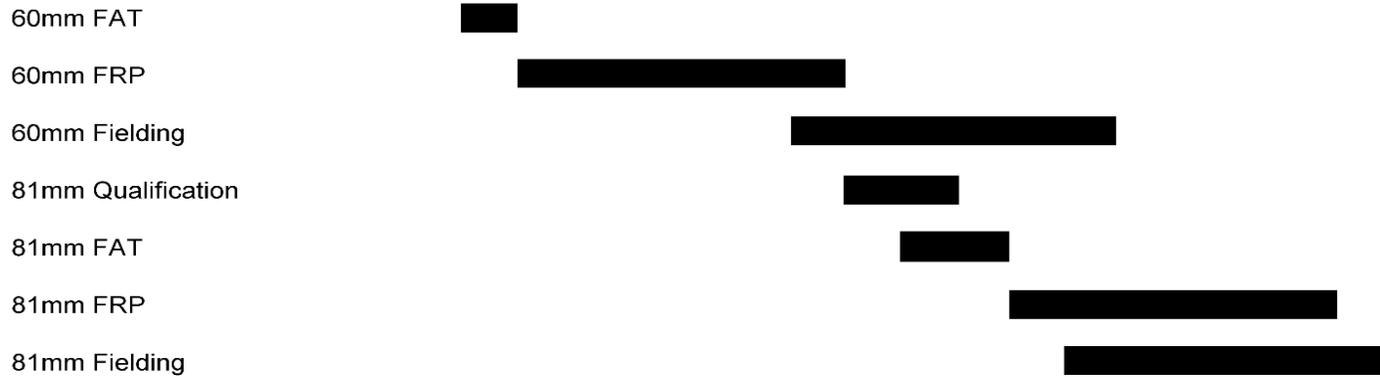
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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 Navy</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>

Mortar Schedule 2010-01-11

Fiscal Year	FY09				FY10				FY11				FY12				FY13				FY14				FY15			
	1Q	2Q	3Q	4Q																								

**Mortar Cannons**



**Mortar Fire Control System**



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**Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SSCS	4	2009	2	2015
SSCS - Pre-Planned Product Improvement (P31) for SSCS Items.	4	2009	2	2015
SSCS - Procurement of SSCS Rifles, Optics, Ancillary Equipment	3	2009	2	2015
SSCS - Rapid Engagement Precision Rifle (REPR) Procurement	1	2013	2	2014
MPM	4	2009	2	2015
MPM - Technology Development Phase	1	2010	4	2011
MPM - Engineering & Manufacturing Phase	1	2012	4	2014
MPM - Low Rate Initial Production (LRIP)	1	2015	3	2015
MPM - Production & Deployment Phase	3	2015	4	2015
MPM - TD Contract Award	2	2010	2	2010
MPM - EMD Contract Award	1	2012	1	2012
MPM - LRIP Contract Award	1	2015	1	2015
MPM - Full Rate Production Contract Award	4	2015	4	2015
Ocular Interruption	2	2012	2	2012
Ocular Interruption - Eng and Manufacturing Development	2	2012	1	2014
Ocular Interruption - Low rate Initial Production (LRIP)	2	2014	2	2014
Ocular Interruption - Production & Development	4	2014	4	2014
Ocular Interruption - EMD Contract Award	2	2012	2	2012

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**Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
Ocular Interruption - LRIP Option Award	2	2014	2	2014
Ocular Interruption - FRP RFP Release	4	2014	1	2015
Ocular Interruption - FRP Contract Award	2	2015	2	2015
Ocular Interruption - Preliminary Design Review	4	2011	4	2011
Ocular Interruption - Critical Design Review / DRR	2	2012	2	2012
Ocular Interruption - Test Readiness Review	4	2012	4	2012
Ocular Interruption - System Verification Review	4	2012	4	2012
Ocular Interruption - Production readiness Review	4	2012	4	2012
Ocular Interruption - System Qualification	3	2012	1	2013
Ocular Interruption - IOT&E	2	2014	2	2014
FOIO	1	2009	4	2015
FOIO - Fused Optic Pre-MS A Activities (ongoing).	1	2009	2	2010
FOIO - Analysis of Alternatives	3	2010	3	2011
FOIO - MS A	4	2011	4	2011
FOIO - Component Development & Tech Demonstrators	1	2012	3	2015
FOIO - Helmet Mounted Fused Optic System (HMFOS) MS B	4	2015	4	2015
FOIO - Individual Weapon Fused Optic (IWFOS) MS B	4	2014	4	2014
FOIO - Hand-Held Fused Optic Systems (HHFOS)	4	2014	4	2014
FOIO - AAO Increase/Technology Refresh Procurements	1	2009	1	2009
Mortar Cannons	1	2009	1	2009

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 1901: <i>MC Grnd Wpnry Prod Improvement</i>

Event	Start		End	
	Quarter	Year	Quarter	Year
Mortar Cannons - 60mm FAT	1	2009	1	2009
Mortar Cannons - 60mm FRP	2	2009	3	2010
Mortar Cannons - 60mm Fielding	3	2010	4	2011
Mortar Cannons - 81mm Qualification	4	2010	2	2011
Mortar Cannons - 81mm FAT	1	2009	1	2009
Mortar Cannons - 81mm FRP	3	2010	4	2011
Mortar Cannons - 81mm Fielding	4	2010	1	2012
Mortar Fire Control System	2	2009	4	2009
Mortar Fire Control Systems - Business Case Analysis	2	2009	4	2009
Mortar Fire Control Systems - Baseline Development	1	2010	3	2011
Mortar Fire Control Systems - Phase I: Baseline Capability	4	2011	4	2013
Mortar Fire Control Systems - Phase II: Baseline Upgrades	1	2014	3	2015

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 2086: <i>Soldier/Marine Enhancement</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
2086: <i>Soldier/Marine Enhancement</i>	5.346	3.366	4.534	0.000	4.534	4.657	4.783	4.922	5.055	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

Marine Expeditionary Rifle Squad (MERS) mission is to manage the infantry squad "squad as a system" by conducting integration, systems engineering, human factors, and modernization efforts across all the products that are worn, carried and consumed by the rifle squad. Physical integration, capability analysis, modeling and simulation, ergonomics, and configuration management are facilitated by this program in working with the various program managers and project officer in the development of their unique items that contribute to the squads overall capabilities. Weight and volume management are fundamental considerations in the insertion or modernization of any squad equipment. MERS works with Joint and NATO soldier modernization programs to harvest new technologies to increase the capability of the rifle squad. The program also ensures the integration of the rifle squad into the various mobility platforms currently in service and being developed to ensure a Marine and his equipment can operate effectively. This program is essential to ensure the combined synergistic equipment effects enhance the warfighting functions of the Marine rifle squad towards the strategic Marine Corps warfighting vision for the future.

Marine Enhancement Program (MEP) provides Research, Development, Test and Evaluation funding for low visibility, low cost items. It focuses on items of equipment which will benefit the individual Marine by reducing the load, increasing survivability, enhancing safety and improving combat effectiveness. The emphasis of the program is on non-developmental item / commercial off the shelf (NDI/COTS) available items which can be quickly evaluated and fielded. This program is coordinated with the Army's Soldier Enhancement Program (SEP).

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
*MEP	2.529	1.996	2.780	0.000	2.780
<i>FY 2009 Accomplishments:</i> MEP has funded several critical programs, including: Improved Military Eye Protection, M203 Grip Pod, Collapsible Water Bag, Individual Water Purification Block I (Miox Pen), Flame-Resistant					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys			<b>PROJECT</b> 2086: <i>Soldier/Marine Enhancement</i>					
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
thermal and I2 sensors as components of an integrated Headborne System. Continue to manage the Squad as a System and quantify weight, thermal and ergonomic effects in operational conditions. Continue efforts resident in 2010 that will include recommendations and implementation of the various studies conducted. Provide a Marine Corps position on level of involvement with Ground Soldier System.											
Accomplishments/Planned Programs Subtotals						5.346	3.366	4.534	0.000	4.534	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC BLI 220800: <i>Weapons Enhancement Program</i>	4.107	3.480	3.261	0.000	3.261	4.296	4.380	4.495	4.621	0.000	28.640
<b>D. Acquisition Strategy</b> NDI/COTS											
<b>E. Performance Metrics</b> N/A											

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2086: <i>Soldier/Marine Enhancement</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MERS Product Development	Various/ Various	Various Various	1.270	0.505		0.715		0.000		0.715	0.000	2.490	Continuing
MEP Product Development	Various/ Various	Various Various	1.371	0.441		0.560		0.000		0.560	0.000	2.372	Continuing
<b>Subtotal</b>			2.641	0.946		1.275		0.000		1.275	0.000	4.862	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MEP Operational Test & Eval	WR	Various Various	0.860	0.304		0.350		0.000		0.350	0.000	1.514	Continuing
<b>Subtotal</b>			0.860	0.304		0.350		0.000		0.350	0.000	1.514	

**Remarks**

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 2086: <i>Soldier/Marine Enhancement</i>					

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MERS Developmental Test & Eval	Various/ Various	Various Various	1.287	0.265		0.320		0.000		0.320	0.000	1.872	Continuing
MEP Developmental Test & Eval	Various/ Various	Various Various	1.854	0.751		1.187		0.000		1.187	0.000	3.792	Continuing
<b>Subtotal</b>			3.141	1.016		1.507		0.000		1.507	0.000	5.664	

**Remarks**

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MERS Program Mgmt/ Tech Spt	Various/ Various	Various Various	1.215	0.600		0.719		0.000		0.719	0.000	2.534	Continuing
MEP Program Mgmt/ Tech Spt	Various/ Various	Various Various	0.942	0.500		0.683		0.000		0.683	0.000	2.125	Continuing
<b>Subtotal</b>			2.157	1.100		1.402		0.000		1.402	0.000	4.659	

**Remarks**

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R-1 Line Item #184

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**Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2112: <i>Lightweight 155mm Howitzer</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2112: <i>Lightweight 155mm Howitzer</i>	0.000	1.394	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.394
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The Lightweight 155mm Howitzer (LW155), also known as the M777A2, provides direct, reinforcing, and general support fires to maneuver forces. It replaces all howitzers in all missions in the USMC and replaces the M198 howitzer as the general support artillery for light forces in the Army. The LW155 fires unassisted projectiles to a range of 15 miles and assisted projectiles to 19 miles, but the addition of the digital fire control system enables the weapon to program and fire the improved Excalibur precision-guided munition to ranges in excess of 25 miles with better than 10-meter Circular Error Probable (CEP) accuracy. The LW155 is the first ground combat system whose major structures are made of high strength titanium alloy and the system makes extensive use of hydraulics to operate the breech, load tray, recoil and wheel arms. The combination of titanium structures and the use of hydraulic systems resulted in a significant weight savings over the M198 system (~7000 lbs.). Compared to the M198, the LW155 emplaces three-times faster and displaces four-times faster. It traverses 32 percent more terrain worldwide and is 70 percent more survivable than the M198. The LW155 was first introduced into the Marine Corps in April 2005 and since then 10th, 11th, 12th and 14th Marines and the schoolhouses have been fielded. The Army has been fielding the system to its Stryker Brigades and Fires Brigades. The LW155 is currently in OEF with both Services.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*LW155 Test and Evaluation <i>FY 2010 Plans:</i> System Test and Evaluation	0.000	1.394	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	0.000	1.394	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2112: <i>Lightweight 155mm Howitzer</i>

**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PMC BLI 218500: <i>155MM Lightweight Towed Howitzer</i>	188.654	61.397	10.356	103.600	113.956	5.564	5.559	0.000	0.000	0.000	375.130
• PMC BLI 700000: <i>SPARES</i>	4.674	2.904	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.578

**D. Acquisition Strategy**

This effort shall design, integrate and qualify a Laser Ignition System for the M777A2 Lightweight 155mm Howitzer (LW155) that will replace the current Primer Feed Mechanism (PFM) and M82 percussion primers. This product improvement will eliminate problems which have been experienced in OEF and OIF and result in significant life cycle cost savings by eliminating the needs for the acquisition of primers to fire artillery rounds.

**E. Performance Metrics**

N/A

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2237: <i>Amphibious Vehicle Test</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>2237: Amphibious Vehicle Test</i>	0.892	0.902	0.929	0.000	0.929	0.944	0.947	0.967	0.984	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

(U) The Amphibious Vehicle Test Branch (AVTB) is a one-of-a-kind Department of Defense test facility for amphibious vehicles and supports the requirements of all services. The AVTB conducts developmental, combined developmental/operational, and follow-on testing and evaluation of production hardware. It also conducts Product Assurance Testing and Substitute or alternative parts and material testing for amphibious vehicles and associated equipment. Because of its year-round temperate climate, diverse terrain, and 17 miles of coastline, the AVTB is ideal for the amphibious vehicle, as well as ship related testing. The AVTB is in close proximity to San Clemente Island which is used frequently for live fire sea-to-shore testing and high-speed water testing. The AVTB is committed to testing product improvement programs, engineering change proposal design changes, and field change requests. The Amphibious Vehicle Test Branch (AVTB) serves as the primary Test & Evaluation facility for the Expeditionary Fighting Vehicle (EFV) Program, the Marine Corps' number one priority ground weapon system acquisition program.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Contracts  <i>FY 2009 Accomplishments:</i> Provide the necessary support assets required to conduct safe and accurate simultaneous developmental testing on EFV prototypes. Provide the maintenance, refurbishment, upgrade, and replacement of test equipment and instrumentation as necessary to provide program support, supplies, and services at the AVTB test site as well as various off-site testing locations to support scheduled EFV Developmental Testing. This includes the upgrade of instrumentation for over the horizon (OTH) capability in developing weapons systems to support operational maneuver from the sea, providing organic supply support including management operations, general accounting, and a maintenance float of equipment; and providing intermediate maintenance (third echelon) of organic non-developmental communication electronic and ordnance equipment.	0.539	0.709	0.476	0.000	0.476

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>		<b>PROJECT</b> 2237: <i>Amphibious Vehicle Test</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
funding for calibration of laboratory test equipment and maintenance services provided by MCLB Barstow and 1st Force Service Support Group (FSSG).  <i>FY 2010 Plans:</i> Provide funding for necessary services provided by Marine Corps Base, Camp Pendleton, California for electricity, heating, and other power charges; and long distance telephone support. Provide funding for calibration of laboratory test equipment and maintenance services provided by MCLB Barstow and 1st Force Service Support Group (FSSG).  <i>FY 2011 Base Plans:</i> Provide funding for necessary services provided by Marine Corps Base, Camp Pendleton, California for electricity, heating, and other power charges; and long distance telephone support. Provide funding for calibration of laboratory test equipment and maintenance services provided by MCLB Barstow and 1st Force Service Support Group (FSSG).								
Accomplishments/Planned Programs Subtotals				0.892	0.902	0.929	0.000	0.929
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
Work will be led in-house. Necessary contractor support will be provided by Marine Corps Base Camp Pendleton via existing contracts. General Services Administration will be used for vehicle leasing contract.								
<b>E. Performance Metrics</b>								
N/A								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 2315: <i>Training Devices/Simulators</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
2315: <i>Training Devices/Simulators</i>	19.131	13.218	2.226	0.000	2.226	7.039	17.774	14.159	10.802	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
<b>A. Mission Description and Budget Item Justification</b>												
<p>(U) Training simulators supported by this program element include Combined Arms Command &amp; Control Training Upgrade System (CACCTUS), Deployable Virtual Training Environment (DVTE), Multiple Integrated Laser Engagement System (MILES) 2000, Marine Air-Ground Task Force (MAGTF) Tactical Warfare Simulation (MTWS) Enhancements, Range Modernization/Transformation (RM/T) and Training Support. These training systems provide tactical weapons and decision-making skill training from entry level through (MAGTF) staff level. Systems will be interoperable and will allow for mission planning, mission rehearsal and concept evaluation in a valid synthetic environment with objective, and timely feedback. Through live, virtual and constructive simulation, the Marine Corps will have the means to train jointly, educate, develop doctrine and tactics, formulate and assess operational plans, assess warfighting situations, and define operational requirements.</p>												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
Combined Arms Command and Control Trainer Upgrade System (CACCTUS)  <i>FY 2009 Accomplishments:</i> Completed all developmental and testing activities in preparation for Initial Operational Capability (IOC) Government Acceptance Testing at Camp Lejeune, NC.  <i>FY 2010 Plans:</i> Continue the incremental development and user prioritized CACCTUS simulation product developments and all required testing coupled to fielding of systems to three Combined Arms Staff Trainer (CAST) training facilities at: Camp Pendleton, CA, Marine Corps Base Hawaii, Camp Courtney, and Okinawa, Japan. Install and upgrade of previously fielded sites with same newly developed system.						5.699	4.630	0.236	0.000	0.236		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy										<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys				<b>PROJECT</b> 2315: <i>Training Devices/Simulators</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
additional war fighting capabilities to this system such as Call for Fire, Pilot in the loop for joint force operation (JFO) certification, and Combined Arms Network (CAN).											
Accomplishments/Planned Programs Subtotals						19.131	13.218	2.226	0.000	2.226	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/BLI#6532001: <i>Training Devices, CACCTUS</i>	4.801	4.101	0.174	5.960	6.134	1.313	4.705	4.829	3.815	999.999	1,051.924
• PMC/BLI#6532002: <i>Training Devices, MILES</i>	0.682	0.012	0.013	0.000	0.013	0.000	0.000	0.000	0.000	0.000	23.950
• PMC/BLI#6532003: <i>Training Devices, RM/T</i>	100.803	99.637	0.408	18.826	19.234	2.883	29.704	30.294	23.733	999.999	1,369.506
• PMC/BLI#6532004: <i>Training Devices, Training Sys Spt an Tails</i>	0.000	0.000	0.000	0.000	0.000	2.714	2.705	1.927	0.000	0.000	7.346
<b>D. Acquisition Strategy</b>											
(U) CACCTUS - Competitive Cost plus Fixed Fee contract (CPFF).											
(U) DVTE - Competitively award development contract.											
(U) MILES - Competitively awarded Broad Agency Announcement (BAA) Experimentation/Development contracts.											
(U) MTWS Enhancements - Competitively award Cost Plus Incentive Fee (CPIF) development contract.											
(U) RM/T - Competitive Cost plus Fixed Fee contract (CPFF) and Competitively awarded Broad Agency Announcement (BAA) Experimentation/Development contracts.											
(U) Training Support - Competitive Cost plus Fixed Fee contract (CPFF).											
<b>E. Performance Metrics</b>											
N/A											

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2315: <i>Training Devices/Simulators</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MILES	Various/ Various	Various Not Specified	1.331	0.099	Apr 2010	0.050	Feb 2011	0.000		0.050	0.000	1.480	Continuing
RM/T TAC Dev	WR	NSWC Corona, CA	2.619	0.000		0.000		0.000		0.000	0.000	2.619	Continuing
RM/T OV-1 Dev	TM	MITRE Orlando, FL	0.073	0.000		0.000		0.000		0.000	0.000	0.073	Continuing
RM/T APELL	C/CPFF	SARNOFF Princeton, NJ	3.952	0.000		0.000		0.000		0.000	0.000	3.952	Continuing
RM/T PLI Integration	C/FP	CTC Orlando, FL	1.278	0.000		0.000		0.000		0.000	0.000	1.278	Continuing
RM/T Range Safety Test	WR	US Army Aberdeen Proving Ground	0.274	0.000		0.000		0.000		0.000	0.000	0.274	Continuing
RM/T DITS	C/FP	SAAB USA Orlando, FL	1.045	0.000		0.000		0.000		0.000	0.000	1.045	Continuing
RM/T Competitive BAA	C/FP	Various Not Specified	0.235	1.018	Mar 2010	0.098	Feb 2011	0.000		0.098	0.000	1.351	Continuing
Training Support	C/CPFF	Competitive Acquisition Not Specified	0.000	0.000		1.715	Apr 2011	0.000		1.715	0.000	1.715	Continuing
<b>Subtotal</b>			10.807	1.117		1.863		0.000		1.863	0.000	13.787	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2315: <i>Training Devices/Simulators</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
S/W Dev -CACCTUS	C/CPFF	Cole Engineering Systems Inc. (CES) Orlando, FL	11.366	3.230	Oct 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
S/W Dev - CACCTUS	WR	NAWC Orlando, FL	1.244	0.200	Oct 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
S/W Dev - CACCTUS	Various/ Various	Various Not Specified	1.440	1.200	May 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
S/W Dev - DVTE	MIPR	PEOSTRI Orlando, FL	2.222	0.000		0.000		0.000		0.000	0.000	2.222	Continuing
S/W Dev - DVTE	Various/ FFP	Bohemia Interactive Not Specified	1.368	5.293	Jun 2010	0.000		0.000		0.000	0.000	6.661	Continuing
S/W Dev - DVTE	Various/ Various	Various Not Specified	1.739	0.000		0.000		0.000		0.000	0.000	1.739	Continuing
S/W Dev - MTWS	Various/ CPIF	L-3 Communications San Diego, CA	7.911	2.159	Mar 2010	0.127	Mar 2011	0.000		0.127	Continuing	Continuing	Continuing
S/W Dev -MTWS	C/CPIF	Department of Energy (DOE) Livermore, CA	0.302	0.019	Mar 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			27.592	12.101		0.127		0.000		0.127			

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2315: <i>Training Devices/Simulators</i>
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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CACCTUS Labor (Research PERS)	C/CPFF	Cole Engineering Systems Inc. (CES) Orlando, FL	0.000	0.000		0.236	Nov 2011	0.000		0.236	0.000	0.236	Continuing
<b>Subtotal</b>			0.000	0.000		0.236		0.000		0.236	0.000	0.236	

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	38.399	13.218		2.226		0.000		2.226

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 Navy</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2315: <i>Training Devices/Simulators</i>

Training Support  
PROGRAM SCHEDULE

		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Training Support Contract Award				◊	◊	◊	◊	◊
Program Support								

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 Navy

**DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**

1319: *Research, Development, Test & Evaluation, Navy*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**

PE 0206623M: *MC Ground Cmbt Spt Arms Sys*

**PROJECT**

2315: *Training Devices/Simulators*

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Training Support Contract Award	3	2011	1	2015
Program Support	1	2011	4	2014

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2503: <i>Initial Issue</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2503: <i>Initial Issue</i>	16.326	9.823	12.271	0.000	12.271	12.509	14.733	13.488	13.567	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The Family of Combat Equipment Support and Services provides research, development, test and evaluation on low cost items with emphasis on non-developmental/commercially available items. Much of the RDT&E is conducted in coordination/concert with other services and joining organizations, and in consideration of RDT&E efforts being pursued by the other services. Items approved for procurement will transition into Procurement Marine Corps and Operation and Maintenance Marine Corps lines for Individual Combat Equipment, Medical Equipment and Shelters. The focus is to provide state of the art combat equipment (e.g. lightweight helmet, sleeping bags, load bearing systems, etc.), medical equipment (e.g. Authorized Medical Allowance (AMAL)/Authorized Dental Allowance (ADAL), Enroute Care, Mobile Medical Monitors, etc.), and Family of Shelters (softwall, different frames and fabrics, etc.). The benefit will be reduced logistics, less weight, improved combat effectiveness, better echelon I and II care for Marines, improved individual and unit protection, tactical mobility, etc. The employment of state-of-the art equipment will ensure Marines are equipped with the best items that technology can offer.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*Family of Ballistic Protection Systems <i>FY 2009 Accomplishments:</i> Explored new commercial technologies to be inserted into current body armor to reduce weight, increase survivability, lethality and mobility. Both torso and head/neck ballistic studies were conducted to assess blunt trauma/shock forces on the body and how ballistic materials/designs could afford the most protection while reducing weight. Modeling and simulation initiatives were used to baseline current equipment and enabled configuration/compatibility management of new equipment.	8.869	4.258	5.296	0.000	5.296

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys		<b>PROJECT</b> 2503: <i>Initial Issue</i>		
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
reduce the logistics footprint of USMC medical equipment. Plan to complete testing and initiation of technology insertion.						
*Family of Shelters and Shelter Equipment  <i>FY 2009 Accomplishments:</i> Family of Shelters and Shelter Equipment: Command and Control Systems have out grown the current Modular Command Post Shelter in size and performance. Changing operational doctrine, logistic support systems and advances in technology require development of an advanced lightweight rapid deploying tactical shelter with a minimum of 420 sq. ft. Design and engineering to increase capability, reduce weight, cost and cube of soft wall shelters. Explore and test new technologies in coordination with the US. Army for insertion into the shelter.  <i>FY 2010 Plans:</i> Family of Shelters and Shelter Equipment: Command and Control Systems have out grown the current Modular Command Post Shelter in size and performance. Changing operational doctrine, logistic support systems and advances in technology require development of an advanced lightweight rapid deploying tactical shelter with a minimum of 420 sq. ft. Design and engineering to increase capability, reduce weight, cost and cube of soft wall shelters. Explore and test new technologies in coordination with the US. Army for insertion into the shelter.  <i>FY 2011 Base Plans:</i> Family of Shelters and Shelter Equipment: Command and Control Systems have out grown the current Modular Command Post Shelter in size and performance. Changing operational doctrine, logistic support systems and advances in technology require development of an advanced lightweight rapid deploying tactical shelter with a minimum of 420 sq. ft. Design and engineering to increase capability, reduce weight, cost and cube of soft wall shelters. Explore and test new technologies in coordination with the US. Army for insertion into the shelter.		0.147	0.132	0.149	0.000	0.149
Family of Combat Field Feeding		0.336	0.480	0.607	0.000	0.607

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>		<b>PROJECT</b> 2503: <i>Initial Issue</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2009 Accomplishments:</i> Improvements on current technology for heating individual rations was explored to test individual ration heater concepts and equipment. Although some progress has been made in recent years to improve field feeding equipment, most current field messing equipment consists of manpower and maintenance intensive M59 ranges utilizing M2 burners setup within tents. The current Tray Ration Heater System has a large footprint, lacks a quick displacement capability, includes unsafe and hazardous components (specifically the M2 burners), and does not conform to the single fuel concept. Also, this current system is not compatible with tenets of Operational Maneuver from the Sea (OMFTS) and does not facilitate maneuverable warfare operations. Current cookware sanitizing equipment consists of 30 gallon containers used in consonance with immersion water heaters, fueled by gasoline (MOGAS).</p> <p><i>FY 2010 Plans:</i> Improvements on current technology for heating individual rations are being explored to test individual ration heater concepts and equipment. Although some progress has been made in recent years to improve field feeding equipment, most current field messing equipment consists of manpower and maintenance intensive M59 ranges utilizing M2 burners setup within tents. The current Tray Ration Heater System has a large footprint, lacks a quick displacement capability, includes unsafe and hazardous components (specifically the M2 burners), and does not conform to the single fuel concept. Also, this current system is not compatible with tenets of Operational Maneuver from the Sea (OMFTS) and does not facilitate maneuverable warfare operations. Current cookware sanitizing equipment consists of 30 gallon containers used in consonance with immersion water heaters, fueled by gasoline (MOGAS).</p> <p><i>FY 2011 Base Plans:</i> Improvements on current technology for heating individual rations will be explored to test individual ration heater concepts and equipment. Although some progress has been made in recent years to improve field feeding equipment, most current field messing equipment consists of manpower</p>								

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2503: <i>Initial Issue</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and maintenance intensive M59 ranges utilizing M2 burners setup within tents. The current Tray Ration Heater System has a large footprint, lacks a quick displacement capability, includes unsafe and hazardous components (specifically the M2 burners), and does not conform to the single fuel concept. Also, this current system is not compatible with tenets of Operational Maneuver from the Sea (OMFTS) and does not facilitate maneuverable warfare operations. Current cookware sanitizing equipment consists of 30 gallon containers used in consonance with immersion water heaters, fueled by gasoline (MOGAS).					
<b>Accomplishments/Planned Programs Subtotals</b>	16.326	9.823	12.271	0.000	12.271

**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/652200: <i>Field Medical Equipment</i>	21.980	3.384	3.432	0.000	3.432	3.501	3.586	3.684	3.784	0.000	177.051
• PMC/661300: <i>Combat Field Feeding System</i>	4.625	2.207	4.283	0.000	4.283	5.037	5.124	5.213	5.303	0.000	55.692

**D. Acquisition Strategy**

Family of Ballistic Protection Systems, Family of Mountain Cold Weather Clothing and Equipment, Family of Improved Load Bearing Equipment, Family of Combat Support Equipment, Clothing & Flame Resistant Organizational Gear, and Combat Field Feeding Systems items utilize various acquisition strategies. These programs leverage heavily on current developments and technology in commercial industry. As a result, the government's R&D phase is relatively short. Contracting is performed by either Marine Corps Systems Command Contracting Directorate, the Naval Research Laboratory or the U.S. Army Natick Research, Development & Engineering Center via Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts. ID/IQ contracts are used to decrease the government risk, allow maximum contract flexibility and capitalize on the savings realized by utilizing Economic Order Quantities.

Shelters: The Shelter acquisition strategy is to modify non-developmental items (NDI) to further meet the requirements of the Marine Corps, to support development of multi-service items through inter-service agreements and to adopt Commercial-Off-the-Shelf (COTS) items.

Family of Field Medical Equipment: These programs leverage heavily on current development and technology in the commercial medical industry. The field medical acquisition strategy is to modify non-developmental items (NDI) and adopt Commercial-Off-the-Shelf (COTS) items.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 2503: <i>Initial Issue</i>

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2503: <i>Initial Issue</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Family of Field Medical 1	MIPR	USAMRMC FT DETRICK,MD	0.000	0.106	Dec 2009	0.105	Dec 2010	0.000		0.105	0.000	0.211	Continuing
Family of Field Medical 2	MIPR	USAMRMC FT DETRICK,MD	0.000	0.159	Dec 2009	0.157	Dec 2010	0.000		0.157	0.000	0.316	Continuing
Family of Field Medical	WR	NMRC Maryland	0.000	0.517	Dec 2009	0.525	Dec 2010	0.000		0.525	0.000	1.042	Continuing
Family of Field Medical	MIPR	AFMESA FT DETRICK, MD	0.000	1.373	Mar 2010	1.775	Mar 2011	0.000		1.775	0.000	3.148	Continuing
Family of Ballistic Protection Systems	MIPR	USASSCOM Natick, MA	5.524	0.809	Mar 2010	0.835	Feb 2011	0.000		0.835	0.000	7.168	Continuing
Family of Ballistic Protection Systems	WR	NRL Washington, DC	11.287	1.918	Mar 2010	2.888	Feb 2011	0.000		2.888	0.000	16.093	Continuing
Family of Ballistic Protection Systems	WR	ONR Arlington, VA	0.156	0.090	Mar 2010	0.100	Feb 2011	0.000		0.100	0.000	0.346	Continuing
Improved Load Bearing Equipment	MIPR	USASSCOM Natick, MA	1.873	0.341	Mar 2010	0.512	Mar 2011	0.000		0.512	0.000	2.726	Continuing
Family of Mountain Cold Weather	MIPR	USASSCOM Natick, MA	3.573	0.210	Mar 2010	0.500	Mar 2011	0.000		0.500	0.000	4.283	Continuing
Combat Field Feeding System	MIPR	USASSCOM Natick, MA	1.041	0.292	Apr 2010	0.394	Apr 2011	0.000		0.394	0.000	1.727	Continuing
Individual Warfighter Equipment	MIPR	USASSCOM Natick, MA	0.000	0.070	Jan 2010	0.062	Jun 2011	0.000		0.062	0.000	0.132	Continuing
Clothing & FR Organizational Gear	MIPR	USSASSCOM Natick, MA	1.961	0.349	Mar 2010	0.554	Dec 2010	0.000		0.554	0.000	2.864	Continuing
<b>Subtotal</b>			25.415	6.234		8.407		0.000		8.407	0.000	40.056	

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2503: <i>Initial Issue</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Family of Field Medical	WR	NHRC SAN DIEGO, CA	0.352	0.360	Dec 2009	0.376	Dec 2010	0.000		0.376	0.000	1.088	Continuing
<b>Subtotal</b>			0.352	0.360		0.376		0.000		0.376	0.000	1.088	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Family of Field Medical 1	MIPR	USAMRMC FT DETRICK	0.000	0.060	Jun 2010	0.075	Jun 2011	0.000		0.075	0.000	0.135	Continuing
Family of Field Medical 2	MIPR	USAMRAA	0.000	0.532	Jun 2010	0.608	Jun 2011	0.000		0.608	0.000	1.140	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 2503: <i>Initial Issue</i>					

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		FT DETRICK											
Family of Shelters & Shelter Equipment	MIPR	USA NSRDEC Natick, MA	0.000	0.132	Mar 2010	0.149	Mar 2011	0.000		0.149	0.000	0.281	Continuing
Family of Ballistic Protection Systems	MIPR	USASSCOM Natick, MA	5.312	0.931	Mar 2010	0.958	Nov 2010	0.000		0.958	0.000	7.201	Continuing
Family of Ballistic Protection Systems	SS/TBD	MCSC Quantico VA	1.834	0.510	Mar 2010	0.515	Dec 2010	0.000		0.515	0.000	2.859	Continuing
Family of Mountain Cold Weather	MIPR	USASSCOM Natick, MA	2.142	0.402	Mar 2010	0.425	Dec 2010	0.000		0.425	0.000	2.969	Continuing
Family of Mountain Cold Weather	C/FP	MCSC Quantico, VA	0.000	0.030	Mar 2010	0.040	Dec 2010	0.000		0.040	0.000	0.070	Continuing
Individual Warfighter Equipment	MIPR	USASSCOM Natick, VA	0.287	0.000		0.013	Dec 2010	0.000		0.013	0.000	0.300	Continuing
<b>Subtotal</b>			9.575	2.597		2.783		0.000		2.783	0.000	14.955	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2503: <i>Initial Issue</i>
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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FAMILY OF FIELD MEDICAL	Various/ Various	MCSC QUANTICO, VA	0.000	0.030	Mar 2010	0.030	Mar 2011	0.000		0.030	0.000	0.060	Continuing
Family of Mountain Cold Weather	C/FP	MCSC Quantico, VA	1.274	0.278	Jun 2010	0.269	Jun 2011	0.000		0.269	0.000	1.821	Continuing
Individual Warfighter Equipment	C/FP	MCSC Quantico, VA	0.218	0.023	Mar 2010	0.061	Mar 2011	0.000		0.061	0.000	0.302	Continuing
Combat Field Feeding Systems	C/FP	MCSC Quantico, VA	0.097	0.188	Mar 2010	0.213	Dec 2010	0.000		0.213	0.000	0.498	Continuing
Clothing & FR Organizational Gear	MIPR	USASSCOM Natick, VA	0.828	0.113	Jun 2010	0.132	Dec 2010	0.000		0.132	0.000	1.073	Continuing
<b>Subtotal</b>			2.417	0.632		0.705		0.000		0.705	0.000	3.754	

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	37.759	9.823	12.271	0.000	12.271	0.000	59.853	

**Remarks**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>	2.233	1.943	1.542	0.000	1.542	2.109	2.395	2.447	2.500	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

HIMARS is a C-130 transportable, wheeled, indirect fire, rocket/missile system capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System Family of Munitions (MFOM). The system includes one launcher, two Re-Supply Systems, and the MFOM. HIMARS will provide the Fleet Marine Force with 24 hour ground-based, responsive General Support/General Support Reinforcing (GS/GSR) indirect fires which accurately engage targets at long range (60+km) with high volumes of lethal fire under all weather conditions throughout all phases of combat operations ashore to include irregular warfare and distributed operations. HIMARS is a significant improvement over currently fielded ground fire support systems. During a 24 hour period, the system will be expected to conduct multiple moves and multiple fire missions. HIMARS will satisfy the Marine Corps requirement for an indirect fire system that is responsive, maneuverable, and is capable of engaging targets at long range.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*HIMARS Systems Engineering  Primary and Ancillary Hardware Development and Systems Engineering Support, includes Navy, Marine Corps, Army and contractor R&D efforts. The U.S. Army Program Office continues to provide system updates to accommodate emerging requirements such as armor upgrades, and enhanced communications. This element provides engineering support for integration of the changes into the U.S.M.C. inventory.  <i>FY 2009 Accomplishments:</i> Primary and Ancillary Hardware Development and Systems Engineering Support, includes Navy, Marine Corps, Army and contractor R&D efforts. The U.S. Army Program Office continues to provide	1.777	1.393	1.184	0.000	1.184

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i> Program Management at Quantico, USMC Liaison Office at Army Program, USMC Test Unit at Ft Sill, and contractor support. HIMARS is a joint program run from the Army Program Office at Huntsville, AL. U.S.M.C. provides onsite liaison with the Army at Huntsville to support joint acquisition and program planning.</p> <p><i>FY 2011 Base Plans:</i> Program Management at Quantico, USMC Liaison Office at Army Program, USMC Test Unit at Ft Sill, and contractor support. HIMARS is a joint program run from the Army Program Office at Huntsville, AL. U.S.M.C. provides onsite liaison with the Army at Huntsville to support joint acquisition and program planning.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	2.233	1.943	1.542	0.000	1.542

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PMC/BLI 221200: <i>HIMARS SYSTEMS AN ROCKETS</i>	135.107	71.256	22.230	145.533	167.763	14.727	6.757	6.873	6.994	0.000	399.477

**D. Acquisition Strategy**

USMC HIMARS is procuring the Army rocket launcher, the current / future Multiple Launch Rocket System Family of Munitions (MFOM) and developing an Medium Tactical Vehicle Replacement (MTVR)-based Resupply System (truck(s) with associated trailer(s)). The Marine Corps launcher and ammo requirements closely match U.S. Army requirements. The US Army HIMARS program received increased funding so that it is now an Acquisition Category ACAT IC level program. Marine Corps Resupply System requirements are unique. Accordingly, the Marine Corps is an integrator and must ensure the required warfighting capability is fielded to the Marine Corps operating forces. The USMC has aligned funds to reflect an emphasis on not only hardware development, but also the integration of these principle end items while providing associated evaluation and oversight. Additionally, the Marine Corps program is establishing the training and support methodologies that will result in

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>	<b>PROJECT</b>
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>

associated skill sets required within the Marine Corps. The Marine Corps strategy is incorporating Evolutionary Acquisition and capability upgrades to both the systems and rocket munitions. These improvements parallel the US Army's acquisition strategy.

**E. Performance Metrics**

Milestone Reviews

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Dev	C/FP	Lockheed Martin Dallas, TX	14.242	0.985	Nov 2009	0.646	Nov 2010	0.000		0.646	0.000	15.873	Continuing
Ancillary Hardware Dev	C/FP	RTTC Redstone, AL	1.519	0.234	Dec 2009	0.262	Dec 2010	0.000		0.262	0.000	2.015	Continuing
Systems Engineering	C/FP	NSWC Dahlgren, VA	3.567	0.174	Dec 2009	0.276	Dec 2010	0.000		0.276	0.000	4.017	Continuing
Systems Engineering	C/FP	NSWC Earle, NJ	0.896	0.000		0.000		0.000		0.000	0.000	0.896	Continuing
Systems Engineering	C/FP	Lockheed Martin Dallas, TX	0.720	0.000		0.000		0.000		0.000	0.000	0.720	Continuing
<b>Subtotal</b>			20.944	1.393		1.184		0.000		1.184	0.000	23.521	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
INteg Logistics Support	WR	NSWCIHD Earle, NJ	0.140	0.000		0.000		0.000		0.000	0.000	0.140	Continuing
<b>Subtotal</b>			0.140	0.000		0.000		0.000		0.000	0.000	0.140	

**Remarks**

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>					

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Dev Test & Eval	WR	NSWC Dahlgren, VA	2.737	0.123	Nov 2009	0.073	Nov 2010	0.000		0.073	0.000	2.933	Continuing
Dev Test & Eval	WR	Redstone Test Ctr Redstone, AL	1.516	0.274	Dec 2009	0.132	Dec 2010	0.000		0.132	0.000	1.922	Continuing
Dev Test & Eval	WR	NSWC Carderock, MD	0.094	0.000		0.000		0.000		0.000	0.000	0.094	Continuing
Dev Test & Eval	MIPR	DAC McCallister, OK	0.145	0.000		0.000		0.000		0.000	0.000	0.145	Continuing
Operational Test & Eval	WR	MCOTEA Quantico, VA	1.074	0.000		0.000		0.000		0.000	0.000	1.074	Continuing
<b>Subtotal</b>			5.566	0.397		0.205		0.000		0.205	0.000	6.168	

**Remarks**

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Mngmnt	WR	MCSC Quantico, VA	2.146	0.030	Oct 2009	0.030	Oct 2010	0.000		0.030	0.000	2.206	Continuing
Program Mngmnt	C/FFP	CEOSS Quantico, VA	5.154	0.123	Oct 2009	0.123	Oct 2010	0.000		0.123	0.000	5.400	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>
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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total		Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date			
<b>Subtotal</b>			7.300	0.153		0.153		0.000		0.153	0.000	7.606		

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	33.950	1.943		1.542		0.000		1.542	0.000	37.435	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

**APPROPRIATION/BUDGET ACTIVITY**

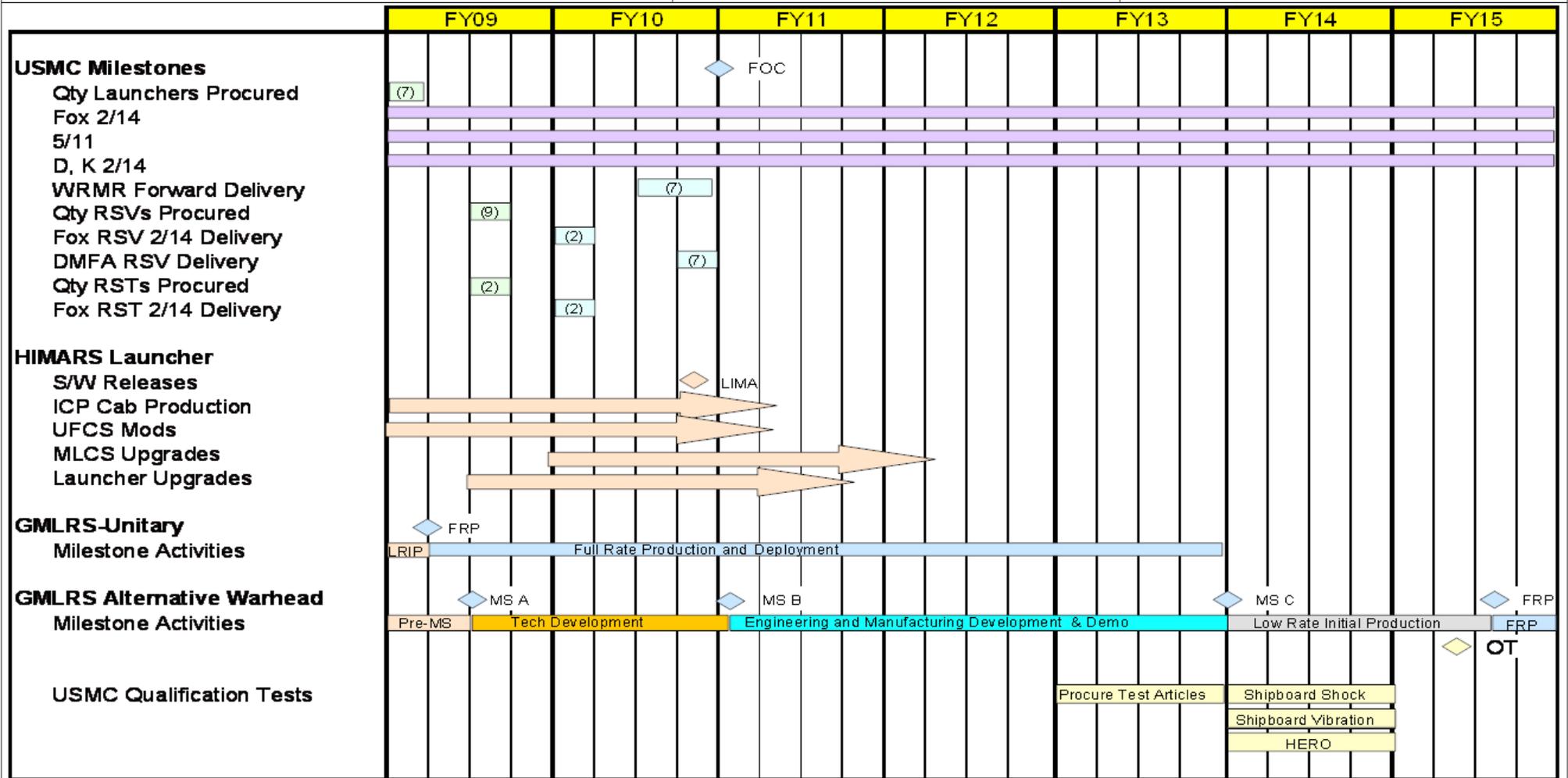
1319: Research, Development, Test & Evaluation, Navy  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

PE 0206623M: MC Ground Cmbt Spt Arms Sys

**PROJECT**

2928: Exp Indirect Fire Gen Supt Wpn Sys



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 2928: <i>Exp Indirect Fire Gen Supt Wpn Sys</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Full Operational Capability	4	2010	4	2010
GMLRS Unitary Full Rate Production	1	2009	1	2009
GMLRS Alternative Warhead Milestone A	3	2009	3	2009
GMLRS Alternative Warhead Milestone B	1	2011	1	2011
GMLRS Alternative Warhead Milestone C	1	2014	1	2014
GMLRS Alternative Warhead Operational Test	2	2015	2	2015
GMLRS Alternative Warhead Full Rate Production	3	2015	3	2015

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**Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 3098: <i>Fire Support System</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3098: <i>Fire Support System</i>	8.078	6.005	20.559	0.000	20.559	28.260	25.512	19.043	9.122	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

This project develops joint and Marine Corps unique improvements to artillery technology, USMC unique Amphibious Armor Systems (AAS), and international weapons development. Two new initiatives have been approved, Common Laser Range Finder (CLRF) and MAGTF Meteorological Information Manager (MIMM). The CLRF Pre-Planned Product Improvement (P3I) is a Research and Development initiative to develop a lightweight, man-portable, True North Azimuth Determination System (TNADS). MIMM sustains the capability of Marine artillerymen to obtain accurate meteorological (Met) information through the development of 30 MMIM systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*Common Laser Range Finder (CLRF)  <i>FY 2011 Base Plans:</i> The Joint Effects Targeting System (JETS) is a System of Systems (SoS) that will provide Marine, Army, Air Force and Special Operations units the ability to perform target location, identification, designation and coordination of joint fires by utilizing a handheld, lightweight, accurate, and responsive reconnaissance, surveillance, target acquisition and target engagement coordination system.	0.000	0.000	5.871	0.000	5.871
*Meterological Measuring Sets (MMS)  <i>FY 2009 Accomplishments:</i> The RDT&E dollars will be utilized to adapt the Air Force Weather Agency Predictive Weather Model as required input to howitzer fire control. It will also be used to develop meteorological sensors conducive to battlefield operations.	0.929	0.000	0.000	0.000	0.000
*Modeled Meteorological Information Manager (MMIM)	0.000	1.477	0.980	0.000	0.980

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>		<b>PROJECT</b> 3098: <i>Fire Support System</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2010 Plans:</i> R&amp;D dollars in the budget required for the following: EFSS weapon system upgrades, specifically digitization (there is currently a communications gap to the system) to support the guided rounds. Extended range guided ammunition development. Develop and produce hardware for the guided rounds and have the various field activities test the hardware. Integration to ballistics and firing tables (software development) and qualification of energetics. In addition, system weight reduction and armoring development are outyear candidates. EFSS supports irregular warfare and distributed operations.</p> <p><i>FY 2011 Base Plans:</i> R&amp;D dollars in the budget required for the following: EFSS weapon system upgrades, specifically digitization (there is currently a communications gap to the system) to support the guided rounds. Extended range guided ammunition development. Develop and produce hardware for the guided rounds and have the various field activities test the hardware. Integration to ballistics and firing tables (software development) and qualification of energetics. In addition, system weight reduction and armoring development are outyear candidates. EFSS supports irregular warfare and distributed operations.</p>								
<p>*Fire Support Mods (FSM)</p> <p><i>FY 2009 Accomplishments:</i> (Formerly known as Sustainment / Readiness) Joint participation in artillery and fire support improvement projects for replacement capabilities. Projects include the Digital Aiming Circle, the M198 Howitzer, LW 155mm Howitzer and more accurate gun laying technology.</p> <p><i>FY 2010 Plans:</i> (Formerly known as Sustainment / Readiness) Joint participation in artillery and fire support improvement projects for replacement capabilities. Projects include the Digital Aiming Circle, the M198 Howitzer, LW 155mm Howitzer and more accurate gun laying technology.</p>				2.486	0.849	1.844	0.000	1.844

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys			<b>PROJECT</b> 3098: <i>Fire Support System</i>					
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
to facilitate knowledge dominance. MAKE provides the enterprise web based access to data and information to enable the decision making process.											
<i>FY 2011 Base Plans:</i> Two programs are included in the IM funding line, Insensitive Munitions and Marine Ammunition Knowledge Enterprise (MAKE). IM R&D initiative will focus on the development of improved packaging materials/design, venting technology, development/ incorporation of a less sensitive propelling charge and all associated munitions qualification testing of the incorporated technologies. The R&D initiative of MAKE is the enterprise knowledge repository designed, evolved and updated to facilitate knowledge dominance. MAKE provides the enterprise web based access to data and information to enable the decision making process.											
Accomplishments/Planned Programs Subtotals						8.078	6.005	20.559	0.000	20.559	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/BLI 473300: <i>Fire Support Mod</i>	5.151	1.886	2.448	4.710	7.158	3.153	3.023	4.110	4.430	0.000	28.911
• PMC/4733001: <i>MMM</i>	0.000	0.686	1.458	0.000	1.458	1.939	1.449	0.481	0.480	0.000	6.493
• PMC/4733002: <i>CLRF</i>	0.000	0.000	0.000	0.000	0.000	0.000	3.816	10.085	13.320	0.000	27.221
• PMC/206400: <i>Expeditionary Fire Support Systems</i>	21.497	19.531	9.723	0.000	9.723	1.987	0.000	0.000	0.000	0.000	52.738
<b>D. Acquisition Strategy</b>											
These programs range from off-the-shelf modifications to developmental items. Fire power enhancement used selected upgrades from Army developmental programs to create a system that more readily meets Marine Corps requirements.											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 3098: <i>Fire Support System</i>

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 3098: <i>Fire Support System</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EFSS	Various/ Various	GDOTS St. Petersburg, FL	19.339	0.000		3.851	May 2011	0.000		3.851	0.000	23.190	Continuing
EFSS	Various/ Various	VARIOUS Not Specified	2.711	0.169	Apr 2010	0.631	Apr 2011	0.000		0.631	0.000	3.511	Continuing
Fire Support Mods	Various/ Various	VARIOUS Not Specified	5.704	0.515	Jun 2010	1.844	Jun 2011	0.000		1.844	0.000	8.063	Continuing
CLRF	Various/ Various	VARIOUS Not Specified	0.000	0.000		3.183	Jun 2011	0.000		3.183	0.000	3.183	Continuing
MMIM	Various/ Various	VARIOUS Not Specified	0.000	1.387	Dec 2009	0.300	Jun 2011	0.000		0.300	0.000	1.687	Continuing
MMS	Various/ Various	NAVMAR San Diego, CA	2.168	0.000		0.000		0.000		0.000	0.000	2.168	Continuing
Insensitive Munitions1	Various/ Various	GDOTS Not Specified	0.000	0.650	Mar 2010	1.170	Jun 2011	0.000		1.170	0.000	1.820	Continuing
Insensitive Munitions2	Various/ Various	GDOTS Not Specified	0.000	0.406	May 2010	0.000		0.000		0.000	0.000	0.406	Continuing
<b>Subtotal</b>			29.922	3.127		10.979		0.000		10.979	0.000	44.028	

**Remarks**  
FY10 \$2.7M Congressional (SAC-D) mark against BTID was incorrectly taken from the wrong PE (it was taken from PE 0206623M, Project Code C3098/EFSS vice PE 0206313M, Project Code C2273. The funds will be restored to the correct PE/Project Code but not until after submission of PB-11.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 3098: <i>Fire Support System</i>					

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EFSS	Various/ Various	CTQ Quantico, VA	3.563	0.000		0.000		0.000		0.000	0.000	3.563	Continuing
EFSS	WR	NSWCDD Dahlgren, VA	2.564	0.400	Mar 2010	0.600	Dec 2010	0.000		0.600	0.000	3.564	Continuing
Fam Artillery Munitions	WR	BAEST Stafford, VA	1.079	0.308	Jun 2010	0.312	Jun 2011	0.000		0.312	0.000	1.699	Continuing
Fire Support Mods	Various/ Various	VARIOUS Not Specified	4.576	0.334	Jun 2010	0.000	Jun 2011	0.000		0.000	0.000	4.910	Continuing
CLRF	Various/ Various	VARIOUS Not Specified	0.000	0.000		0.588	Jun 2011	0.000		0.588	0.000	0.588	Continuing
<b>Subtotal</b>			11.782	1.042		1.500		0.000		1.500	0.000	14.324	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EFSS	WR	NSWCDD Dahlgren, VA	2.462	0.400	Mar 2010	1.000	Mar 2011	0.000		1.000	0.000	3.862	Continuing
EFSS	WR	MCPD Fallbrook, CA	3.013	0.746	Mar 2010	2.500	Mar 2011	0.000		2.500	0.000	6.259	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 3098: <i>Fire Support System</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MMS	WR	MCOTEA MCTSSA	0.110	0.000		0.000		0.000		0.000	0.000	0.110	Continuing
MMIM	WR	MCOTEA MCTSSA	0.000	0.090	Jun 2010	0.680	Jun 2011	0.000		0.680	0.000	0.770	Continuing
CLRF	Various/ Various	VARIOUS Not Specified	0.000	0.000		1.100	Jun 2011	0.000		1.100	0.000	1.100	Continuing
<b>Subtotal</b>			5.585	1.236		5.280		0.000		5.280	0.000	12.101	

**Remarks**

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EFSS	Various/ Various	GDOTS St. Petersburg, FL	5.393	0.600	Mar 2010	1.800	Dec 2010	0.000		1.800	0.000	7.793	Continuing
CLRF	Various/ Various	Not Specified Not Specified	0.000	0.000		1.000	Jun 2011	0.000		1.000	0.000	1.000	Continuing
<b>Subtotal</b>			5.393	0.600		2.800		0.000		2.800	0.000	8.793	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 3098: <i>Fire Support System</i>
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Milestones and Phases	FY09	FY10	FY11	FY12	FY13	FY14	FY15
	<b>Pro duct ion</b>	<b>Operations &amp; Support</b>					
<b>EFSS</b>	<b>IOC</b>			<b>FOC</b>			
Contract Awards	▲	▲	▲				
Test							
Developmental							
Operational							
Production	<b>FULL RATE</b>						

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy**

**DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**

1319: *Research, Development, Test & Evaluation, Navy*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**

PE 0206623M: *MC Ground Cmbt Spt Arms Sys*

**PROJECT**

3098: *Fire Support System*

## Modeled Meterological Information Manager

	FY09	FY10	FY11	FY12	FY13	FY14	FY15
MMIM AAP MS B	◆						
System Integration		■					
System Demo		■					
MMIM MS C		◆					
LRIP		■					
IOT&E			■				
FRPD			◆				
IOC			◆				
MSG Phase Out			■	■			
FOC (FY12)				◆			

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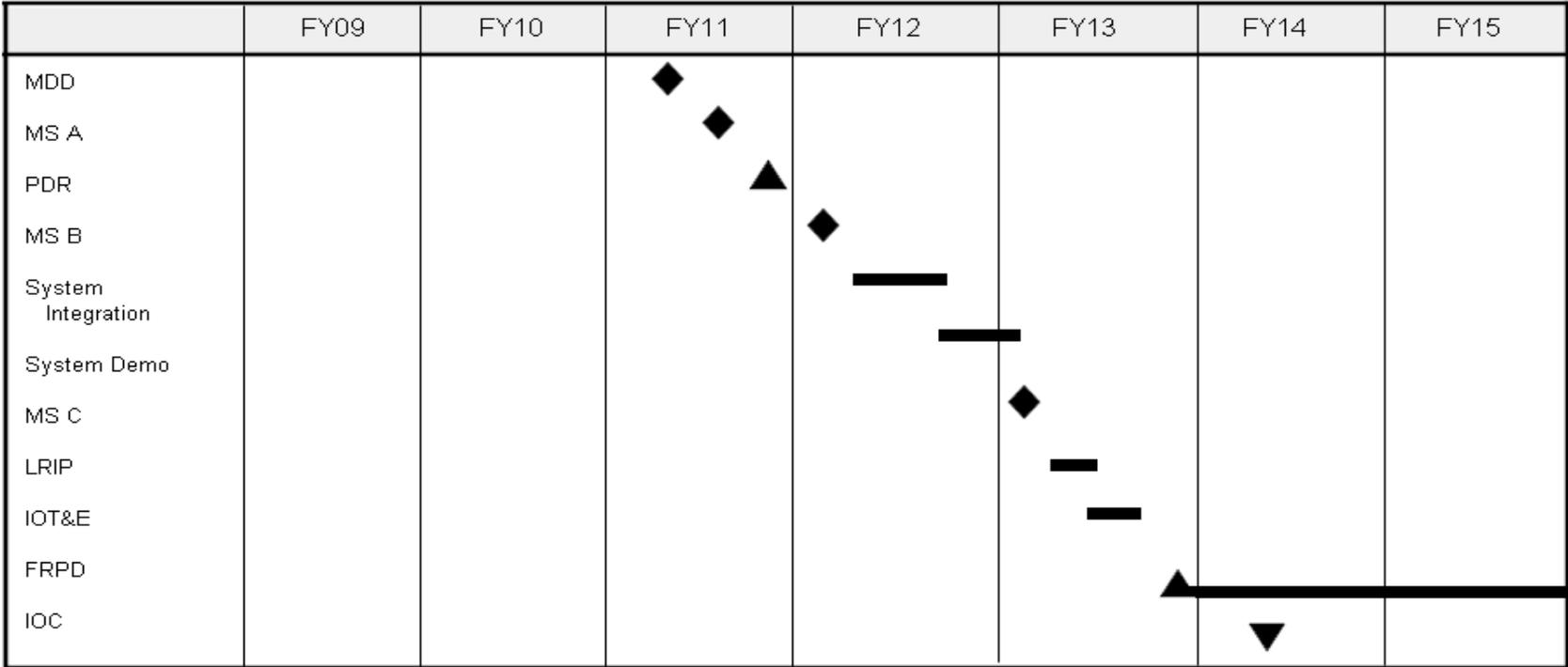
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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 Navy</b>		<b>DATE:</b> February 2010
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**Common Laser Range Finder (CLRF) Refresh**



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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2011 Navy</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 3098: <i>Fire Support System</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
EFSS Initial Operational Capability	2	2009	2	2009
EFSS Full Operation Capability	3	2012	3	2012
MMIM User Evaluations	2	2009	2	2009
MMIM AAP MS B	4	2009	4	2009
MMIM System Integration	2	2010	2	2010
MMIM System Demo	3	2010	3	2010
MMIM MS C	3	2010	3	2010
MMIM LRIP	4	2010	4	2010
MMIM IOT&E	1	2011	1	2011
MMIM FRPD	2	2011	2	2011
MMIM IOC	2	2011	2	2011
MMIM MSG Phase Out	3	2011	3	2011
MMIM FOC (FY12)	4	2012	4	2014
CLRF MDD	2	2011	2	2011
CLRF MS A	3	2011	3	2011
CLRF PDR	4	2011	4	2011
CLRF MS B	1	2012	1	2012
CLRF System Intregation	2	2012	3	2012

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2011 Navy</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 3098: <i>Fire Support System</i>

Event	Start		End	
	Quarter	Year	Quarter	Year
CLRF System Demo	3	2012	1	2013
CLRF MS C	1	2013	1	2013
CLRF LRIP	2	2013	2	2013
CLRF IOT&P	3	2013	3	2013
CLRF FRPD	4	2013	4	2013
CLRF IOC	2	2014	2	2014

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
4002: <i>Family of Raid Reconnaissance</i>	0.896	4.027	3.391	0.000	3.391	0.809	0.425	0.435	0.444	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b>											
Project supports multiple airborne/parachuting and specialized reconnaissance related programs focusing on immediate capability enhancements to numerous insertion and personnel equipment shortfalls currently existing in reconnaissance units throughout the operating forces. This includes improving airborne capability equipment and items for direct action missions that use specialized raid equipment.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
*Family of Raid/Reconnaissance Equipment (FRRE)							0.896	1.071	1.135	0.000	1.135
<i>FY 2009 Accomplishments:</i> Efforts included: Development of evaluation/test plans for Joint Precision Airdrop System Ultra Light Weight Airdrop System (JPADS-ULW); an increment of JPADS family of steerable, extended glide aerial delivery systems to deliver critical supplies/equipment when precision and standoff required for ground threat/terrain/winds; and evaluation of improvements to Parachutist's Individual Equipment Kit (PIEK).  <i>FY 2010 Plans:</i> FY10 efforts include upgrading high pressure Parachutist's High Altitude Oxygen System (PHAOS) mask and development of 3000psi bottle and improvements to Parachutist's Individual Equipment Kit (PIEK).											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys			<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>					
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2011 Base Plans:</i> FY11 efforts include integrating new materials into Multi-Mission Parachute System family of canopies for improved performance; evaluation of next generation Automatic Activation Device (AAD) for parachuting safety; incorporate fire resistance into clothing; develop new Tandem Offset Resupply Delivery System (TORDS) reserve canopy; integrate canopy safety release system; integrate signature reduction technologies to Full Spectrum Battle Equipment; update High Altitude High Opening Parachute Navigation System software to provide position data on other parachutists; and evaluate life cycle replacement for the Military Tandem Tethered Bundle (MTTB) System.</p>											
<p>*Underwater Reconnaissance Capability (URC)</p> <p><i>FY 2010 Plans:</i> FY10 plans include procurement of prototypes for the Tactical Underwater Locator Beacon and support.</p> <p><i>FY 2011 Base Plans:</i> FY11 plans include procurement of prototypes for pre-planned product improvement of the heads-up display for the Combatant Diver Full Face Mask (CDFFM). Other efforts include external diver warming systems; evaluation of reliability challenges presented by fielded systems; and hardening of the PVS-14 for underwater use.</p>							0.000	2.956	2.256	0.000	2.256
Accomplishments/Planned Programs Subtotals							0.896	4.027	3.391	0.000	3.391
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PMC/0206211M: 6518 AMPHIB SPT EQUIP	24.745	28.787	11.718	0.000	11.718	5.545	10.923	6.344	5.248	0.000	93.310

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PMC/70000: <i>7000 URC</i>	0.000	0.254	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.254

**D. Acquisition Strategy**

(U) FRRE: Acquisition strategy for Joint Precision Airdrop System (JPADS) Ultra Light Weight (ULW) includes market research survey to reveal commercially available systems with potential to meet requirements, followed by evaluation to further refine concept of operations and tailor performance specification requirements and avoid non-essential attributes. Full and open competition for production systems is planned. Base production contract with First Article Test will integrate Selective Availability Anti-Spoofing Module (SAASM) Global Positioning System (GPS) into the vendor's system, as well as optimize system for use with Marine Corps canopies. Options on contract will provide for procurement of production systems and supporting logistics elements upon successful completion of integration efforts. Planned FirmFixed-Price Independent-Deliverables Independent-Quantities (IDIQ) contract will allow other DoD elements to procure systems using the Marine Corps contract vehicle if desired. In FY10/11, acquisition strategy is to fund engineering changes and product upgrade testing and development for Parachutist's High Altitude Oxygen System (PHAOS), Automatic Activation Device (AAD), High Altitude High Opening Parachute Navigation System (HAHOPNS), and Tandem Offset Resupply Delivery System (TORDS)/Military Tandem Tethered Bundle (MTTB) system.

(U) URC: The acquisition strategy consists of market surveys to identify off-the-shelf/non-developmental item baseline competitions followed by release of desired capabilities/specifications and establishment of the trade space parameters. Project dependent, expect to down-select to best value. Follow-on testing/evaluations as required to be conducted. For the Combatant Diver Full Face Mask (CDFFM), the "head's up display" will be a development effort. A Request For Information will be issued to identify companies with a demonstrated ability to develop the display. Responding companies will be visited to evaluate capabilities, followed by issuance of Request For Proposal and evaluation of best value and demonstrated performance. For technology upgrades to existing projects during FY10/11, engineering changes and product upgrade development and testing is planned.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FRRE Hardware Development/Sys Engineering	C/FP	MARCORSYSCOM QUANTICO VA	2.573	0.301		0.000		0.000		0.000	0.000	2.874	Continuing
URC Hardware Development/Sys Engineering	C/FP	MARCORSYSCOM QUANTICO VA	0.000	0.706		0.950		0.000		0.950	0.000	1.656	Continuing
<b>Subtotal</b>			2.573	1.007		0.950		0.000		0.950	0.000	4.530	

**Remarks**  
Various award dates, unless otherwise indicated.

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FRRE Development Support	Various/Various	VARIOUS VARIOUS	0.605	0.360	Dec 2009	0.788		0.000		0.788	0.000	1.753	Continuing
URC Development Support	Various/Various	VARIOUS VARIOUS	0.415	1.000	Dec 2009	1.017		0.000		1.017	0.000	2.432	Continuing
<b>Subtotal</b>			1.020	1.360		1.805		0.000		1.805	0.000	4.185	

**Remarks**  
Various award dates, unless otherwise indicated.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FRRE Developmental/Operational Test & Eval	Various/ Various	VARIOUS VARIOUS	1.374	0.367		0.300		0.000		0.300	0.000	2.041	Continuing
URC Developmental/Operational Test & Eval	Various/ Various	VARIOUS VARIOUS	0.133	1.155	Dec 2009	0.250		0.000		0.250	0.000	1.538	Continuing
<b>Subtotal</b>			1.507	1.522		0.550		0.000		0.550	0.000	3.579	

**Remarks**  
Various award dates, unless otherwise indicated.

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
URC Government Engineering Support	WR	NAVSEA WASH DC	0.000	0.055	Sep 2010	0.000		0.000		0.000	0.000	0.055	Continuing
FRRE Travel	Various/ Various	MARCORSYSCOM QUANTICO VA	0.236	0.043		0.047		0.000		0.047	0.000	0.326	Continuing
URC Travel	Various/ Various	MARCORSYSCOM QUANTICO VA	0.080	0.040		0.039		0.000		0.039	0.000	0.159	Continuing
<b>Subtotal</b>			0.316	0.138		0.086		0.000		0.086	0.000	0.540	

**Remarks**  
Various award dates, unless otherwise indicated.

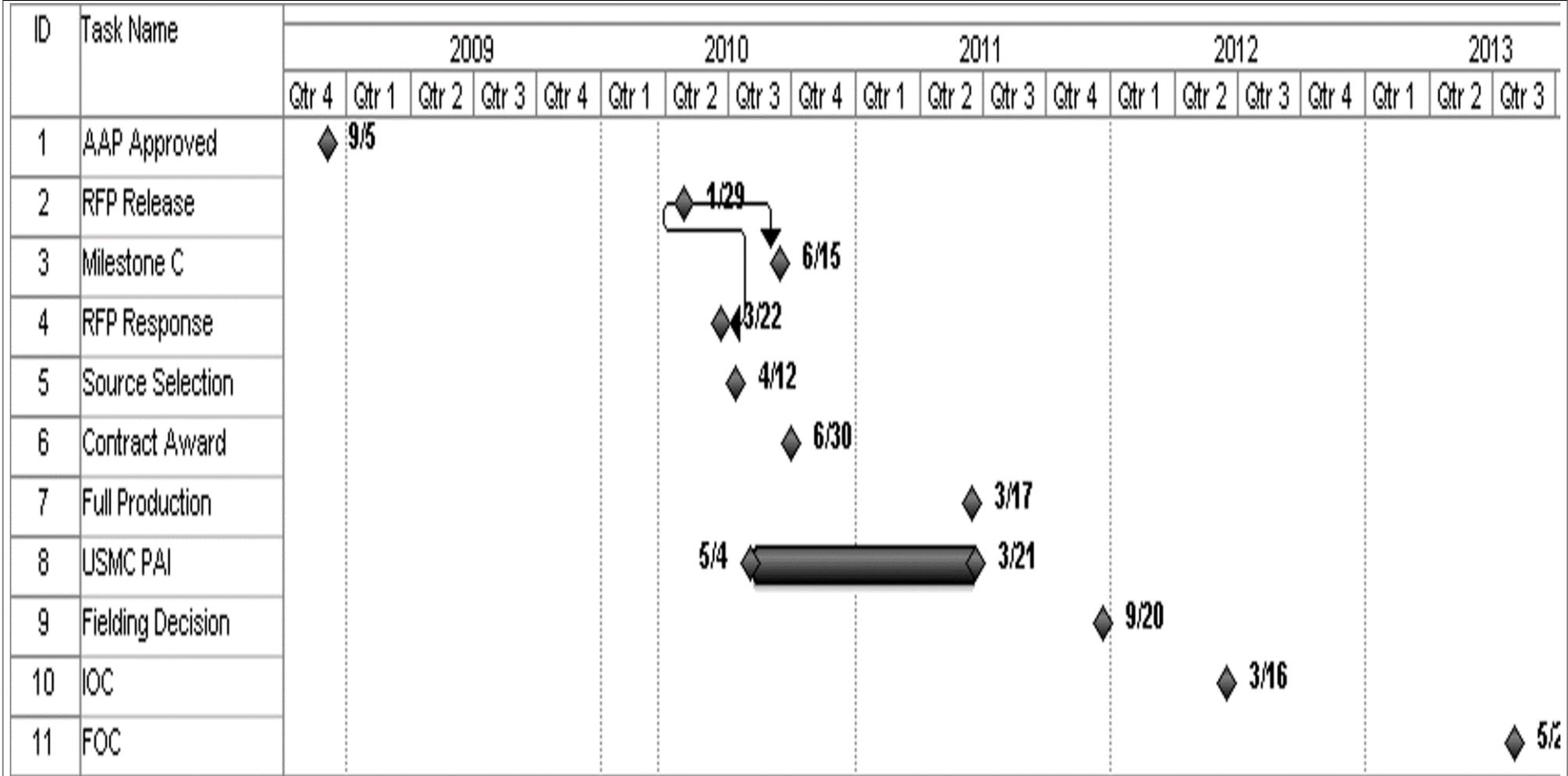
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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
FRRE JPADS	1	2009	3	2013
FRRE JPADS-ULW RFP Release	2	2010	2	2010
FRRE JPADS-ULW RFP Response	2	2010	2	2010
FRRE JPADS-ULW Source Selection	3	2010	3	2010
FRRE JPADS-ULW Milestone C	3	2010	3	2010
FRRE JPADS-ULW Contract Award	3	2010	3	2010
FRRE JPADS-ULW USMC PAI	2	2010	2	2011
FRRE JPADS-ULW Full Rate Production	2	2010	2	2010
FRRE JPADS-ULW Fielding Decision	4	2011	4	2011
FRRE JPADS-ULW IOC	2	2012	2	2012
FRRE JPADS-ULW FOC	3	2013	3	2013
URC THSE	1	2009	1	2013
URC THSE-DARPA Deliver 2 Production Items	3	2010	3	2010
URC THSE-Milestone C Preparation	1	2009	3	2011
URC THSE-Systems Engineering	2	2010	1	2011
URC THSE-Milestone C	3	2011	3	2011
URC THSE-Contracting	3	2011	4	2011
URC THSE-Program Reviews	1	2012	3	2012

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 4002: <i>Family of Raid Reconnaissance</i>

Event	Start		End	
	Quarter	Year	Quarter	Year
URC THSE-Logistic Support	4	2011	1	2013
URC THSE-System Deliveries	2	2012	1	2013
URC THSE-Fielding Decision Preparation	2	2012	1	2013
URC THSE-Fielding Decision	1	2013	1	2013
URC THSE-IOC	1	2013	1	2013
URC THSE-FOC	1	2013	1	2013

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**Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 9999: <i>Congressional Adds</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	3.989	3.824	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	58.967
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

Congressional Add

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Expandable Rigid Wall Composite Shelter <i>FY 2010 Plans:</i> Expandable Rigid Wall Composite Shelter (C10C188)	0.000	0.797
Congressional Add: Remote Aiming and Sighting Optical Retrofit <i>FY 2010 Plans:</i> (C10C189) The program will execute in late FY 10 with an anticipated 12 month technology development effort to modify currently fielded analog Passive Viewing System-14 (PVS-14) optics with appropriate digital imaging, display and referencing modifications to make the PVS-14 compatible with the rest of the SFAS concept.	0.000	3.027
Congressional Add: MARCOM Computer Research	0.997	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy		<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms</i> Sys	<b>PROJECT</b> 9999: <i>Congressional Adds</i>	
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2009 Accomplishments:</i> MARCORP Computer Research C9E22A: Design, development of a joint ruggedized modular processing computer portable maintenance (PMA) for use as a hand-held device to enable enhanced access to total life cycle management tools and data.			
Congressional Add: Marine Corps Shotgun Modernization Program <i>FY 2009 Accomplishments:</i> Marine Corps Shotgun Modernization Program C9E23A: Spiral development effort for a M-1014 dedicated field retrofit conversion kit to transition the LRLX-7000 technology to the M-1014 combat shotgun platform.		2.992	0.000
Congressional Adds Subtotals		3.989	3.824
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>D. Acquisition Strategy</b> N/A			
<b>E. Performance Metrics</b> Congressional Add			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>				<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
9C85: <i>Marine Personnel Carrier (MPC)</i>	0.000	3.121	26.811	0.000	26.811	83.016	86.422	66.796	48.139	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
<b>A. Mission Description and Budget Item Justification</b>												
<p>The Marine Personnel Carrier (MPC) is part of a portfolio of capabilities that provide closure to real world operational gaps and shortfalls in the ability of the MAGTF to conduct ground based maneuver tasks. The MPC, as the medium capability category platform, provides a bridge in capability between the EFV and JLTV and a balance between the performance, protection and payload attributes. The MPC family of vehicles includes the baseline armored personnel carrier and two supporting mission role variants: a command &amp; control variant and a recovery &amp; maintenance variant. (MPC was previously funded under project C1555).</p>												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
Marine Personnel Carrier (MPC)						0.000	3.121	26.811	0.000	26.811		
<i>FY 2010 Plans:</i> MCP - Continue pre-Milestone A documentation and pass Milestone A gate, release technology development request for proposal.												
<i>FY 2011 Base Plans:</i> MCP - Source Selection Evaluation Board, Technology Development contract award and execution and Milestone B documentation preparation.												
Accomplishments/Planned Programs Subtotals						0.000	3.121	26.811	0.000	26.811		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Navy **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0206623M/C1555G: <i>Marine Personnel Carrier - MPC</i>	5.524	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.265

**D. Acquisition Strategy**

The Marine Personnel Carrier (MPC) program will utilize Full and Open competition. The MPC is a family of vehicles consisting of a personnel carrier, a command and control platform and a maintenance and recovery vehicle. After Milestone A, a source selection will be held to select up to three contractors. Each of these contractors will provide a prototype personnel carrier vehicle that will be subjected to Government evaluation. The results of this evaluation will be used to support both a Milestone B decision as well as another source selection to choose the two best competitors that will be carried through the Engineering & Manufacturing Development (EMD) phase (on the personnel carrier only). The results of the two competitors EMD efforts will be used to support a Milestone C decision as well as another source selection to choose the ultimate personnel carrier source for Low Rate Initial Production. The selected source will also be tasked to perform EMD on the command and control and maintenance and recovery vehicles.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Development	Various/ Various	Various Various	0.000	0.373	Mar 2010	11.662	Mar 2011	0.000		11.662	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.373		11.662		0.000		11.662			

**Remarks**  
Technology Development contracts will be awarded to 3 contractors. Each contractor will build a full-up MPC prototype vehicle plus one ballistic hull to be subjected to Government testing.

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	Various/ Various	TACOM Warren, MI	0.000	1.411	Dec 2009	10.539	Oct 2010	0.000		10.539	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	1.411		10.539		0.000		10.539			

**Remarks**  
In-House PM costs for ACAT I MPC program, Source Selection Evaluation Board for the selection of 3 contractors in the technology development.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Devlp/Oper. T&E	Various/ Various	TBD Various	0.000	0.000		2.638	Mar 2011	0.000		2.638	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.000		2.638		0.000		2.638			

**Remarks**

Testing of the Technology Development prototype vehicles and ballistic hulls provided by each of the three contractors.

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical Eng. Services	Various/ TBD	TBD Various	0.000	1.337	Mar 2010	1.972	Mar 2011	0.000		1.972	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	1.337		1.972		0.000		1.972			

**Remarks**

Milestone B documentation preparation.

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	3.121		26.811		0.000		26.811			

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>							<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>			<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>			
	<b>Total Prior Years Cost</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
<b>Remarks</b>									

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>
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ID	Task Name	2010				2011				2012				2013				2014				2015			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		1	Milestone A		▲																				
2	Developmental Test																								
3	Operational Test																								
4	Milestone B											▲													
5	Milestone C																								▲
6	Production Contract																								
7	IOC																								
8	FOC																								

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0206623M: <i>MC Ground Cmbt Spt Arms Sys</i>	<b>PROJECT</b> 9C85: <i>Marine Personnel Carrier (MPC)</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
MS-A	2	2010	2	2010
MS-B	2	2012	2	2012
DT	4	2013	2	2015
MS-C	4	2015	4	2015

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