

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE:			
								February 2003			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE					
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4						0603502N/Surface and Shallow Water Mine Countermeasure					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Total PE Cost	602.950	137.208	148.356	140.731	101.076	91.843	92.314	82.709	92.370	Continuing	Continuing
Remote Minehunting System/Q0260/Q2387	271.007	55.630	60.792	55.516	14.677	0.000	0.000	0.000	0.000	0.000	457.622
Integrated Combat Weapons System/Q1233/Q2388	47.522	14.036	12.477	3.758	2.823	3.625	3.243	4.256	4.199	Continuing	Continuing
Unmanned Underwater Vehicle/Q2094/Q2852	106.483	62.499	74.425	81.457	65.956	55.877	47.936	48.093	57.822	Continuing	Continuing
Shallow Water Mine Countermeasure/Q2131	177.938	5.043	0.662	0.000	17.620	32.341	41.135	30.360	30.349	Continuing	Continuing
											0.000
											0.000
Quantity of RDT&E Articles											0.000
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:											
The program provides for developments to combat the threat of known and projected foreign mines against U.S. Naval and merchant shipping in harbors, channels, choke points, sea lines of communications and amphibious and other fleet operating areas. It develops: (1) organic remote minehunting capability for surface platforms; (2) the integration and improvement of systems and support for systems which will detect, localize and classify moored, bottom, and close-tethered mines for use in Mine Countermeasure (MCM) MCM-1 Class, Mine Hunter Coastal (MHC) MHC-51 Class, and other surface ships; (3) systems for neutralizing mines and light obstacles from shallow water, very shallow water, surf zones, and beach landing craft zones in support of amphibious operations; (4) Unmanned Undersea Vehicle (UUV) systems for clandestine mine reconnaissance.											
(U) B. JUSTIFICATION FOR BUDGET ACTIVITY:											
This program is funded under DEMONSTRATION AND VALIDATION because it develops and integrates hardware for experimental test related to specific ship or aircraft applications.											

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 46)

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM				PROJECT NUMBER AND NAME Q0260/Q2387, Remote Minehunting Systems					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	271.007	55.630	60.792	55.516	14.677	0.000	0.000	0.000	0.000	0.000	457.622
RDT&E Articles Qty		2	1	1	0	0					4
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>The Remote Minehunting System (RMS), AN/WLD-1(V)1, program develops a new remotely operated minehunting system for surface ships. This effort includes development and integration of a remote minehunting vehicle, minehunting sensors, mission command and control, and installation into the DDG-51 Class Flight IIA Baseline 7 and AN/SQQ-89(V)15 Undersea Warfare Combat System.</p>											

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Exhibit R-2a, RDTEEN Project Justification
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<p>(U) B. Accomplishments/Planned Program</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">28.642</td> <td style="text-align: center;">40.314</td> <td style="text-align: center;">41.775</td> <td style="text-align: center;">8.384</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <p>Complete Critical Design and continue fabrication of Engineering Development Models (EDMs) for the RMS. Conduct Functional/Physical Configuration Audit of Data Link Subsystem and Launch and Recovery Subsystem. Continue with the fabrication of Engineering Development Models (EDMs) for the RMS and begin Pilot Line Proofing of system hardware. Complete fabrication of Engineering Development Models (EDMs) for the RMS including Physical Configuration Audit (PCA) and continue Pilot Line Proofing of system hardware. Completion of the Engineering Manufacturing and Development Phase, of pilot line proofing, and Engineering Change Proposals (ECPs) resulting from OPEVAL.</p> <p>Continue System Engineering for the RMS EDMs including supporting Critical Design Review.</p> <p>Determine Award Fee</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">14.100</td> <td style="text-align: center;">10.645</td> <td style="text-align: center;">5.476</td> <td style="text-align: center;">3.619</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 10px;"> <p>Continue software Design/Code/Test for the RMS. Continue Integrated Logistics Support (ILS) Planning and Integrated Electronic Technical Manual (IETM) Development for RMS. Continue Integration Support for the RMS .</p> </div>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	28.642	40.314	41.775	8.384	RDT&E Articles Quantity	2	1	1			FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	14.100	10.645	5.476	3.619	RDT&E Articles Quantity	2	1	1	
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(U) D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
Line 262200, OPN										
RMS	0	0	0	33.836	35.839	0	0	0		
Support	0	0	0	1.879	4.568	0	0	0		
Total	0	0	0	35.715	40.407	0	0	0		76.122
(U) RDT&E, Line 0604373, Q0529	8.544	17.178	17.878	5.187	0	0	0	0	Continuing	Continuing

(U) E. ACQUISITION STRATEGY:

The government issued a series of contract modifications to Lockheed Martin to complete efforts through the System Design Review. Based upon the approved Milestone II decision the program office issued the contract modification to complete the Critical Design Review (CDR); upon completion of CDR a CPIF sole source contract was awarded to Lockheed Martin to complete the development, fabrication, and testing of the engineering development models, initial pilot line/tooling, and timed phased procurement of initial systems to meet ship delivery schedules. The government has worked with the contractor in an IPT environment to refine the specification and Statement of Work for the overall development effort. The IPT pricing process was used to generate the cost estimates against Navy requirements. The government will pursue commonality between the AN/AQS-20A airborne minehunting system and the AN/WLD-1(V)1. The AN/WLD-1(V)1 contract plan is for the development of EDMs, system interactive electronic technical manual (IETM), provisioning data, technical drawings and data, and engineering services. The AN/WLD-1(V)1 program plans to update the acquisition strategy in accordance with the new POM 04 guidance, that includes integration of the AN/WLD-1(V)1 on DDG-51 Class Flight IIA ships beginning with DDG 91. The 4 EDM remote minehunting vehicles are required to meet ship schedules for DDG ship deliveries prior to receiving follow-on production units and to support the stand-up of the maintenance and training facilities.

(U) F. MAJOR PERFORMERS:

- Lockheed Martin, Syracuse, NY: Primary hardware development and integration, system engineering, software development, ship integration, and integrated logistic support.
- NSWC, CSS, Panama City, FLA: Hardware development and integration, system engineering, software development, integrated logistic support, and ship integration.

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Exhibit R-2a, RDTEN Project Justification
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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			Q0260/Q2387, Remote Minehunting Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Hardware Development & Integration	CPIF	Lockheed Martin	149.992								149.992	N/A
Hardware Development & Integration	CPIF	Lockheed Martin	13.939	35.763	11/02	38.545	11/03	6.445	11/04		94.692	N/A
Hardware Development & Integration	WR	NWSC, CSS	4.000	1.781	10/02	1.935	10/03	0.969	10/04		8.685	N/A
Systems Engineering	CPIF	Lockheed Martin	8.426								8.426	N/A
Systems Engineering	CPIF	Lockheed Martin	2.736	2.473	11/02	0.811	11/03	0.485	11/04		6.505	N/A
Systems Engineering	WR	NWSC, CSS	1.000	0.297	10/02	0.484	10/03	0.485	10/04		2.266	N/A
Award Fees			8.457								8.457	N/A
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Software Development	CPIF	Lockheed Martin	10.935								10.935	N/A
Software Development	CPIF	Lockheed Martin	3.700	3.759	11/02	0.414	11/03	0.388	11/04		8.261	N/A
Software Development	WR	NSWC, CSS	2.101	0.198	10/02	0.290	10/03	0.291	10/04		2.880	N/A
ILS	CPIF	Lockheed Martin	8.760								8.760	N/A
ILS	CPIF	Lockheed Martin	3.540	3.636	11/02	3.009	11/03	1.163	11/04		11.348	N/A
ILS	WR	NSWC, CSS	2.150	0.099	10/02	0.290	10/03	0.291	10/04		2.830	N/A
Ship Integration	CPIF	Lockheed Martin	1.940								1.940	N/A
Ship Integration	CPIF	Lockheed Martin	0.660	1.385	11/02	0.677	11/03	0.388	11/04		3.110	N/A
Ship Integration**	Various	Various	15.401	1.568	12/02	0.796	12/03	1.098	12/04		18.863	N/A
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R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 8 of 46)

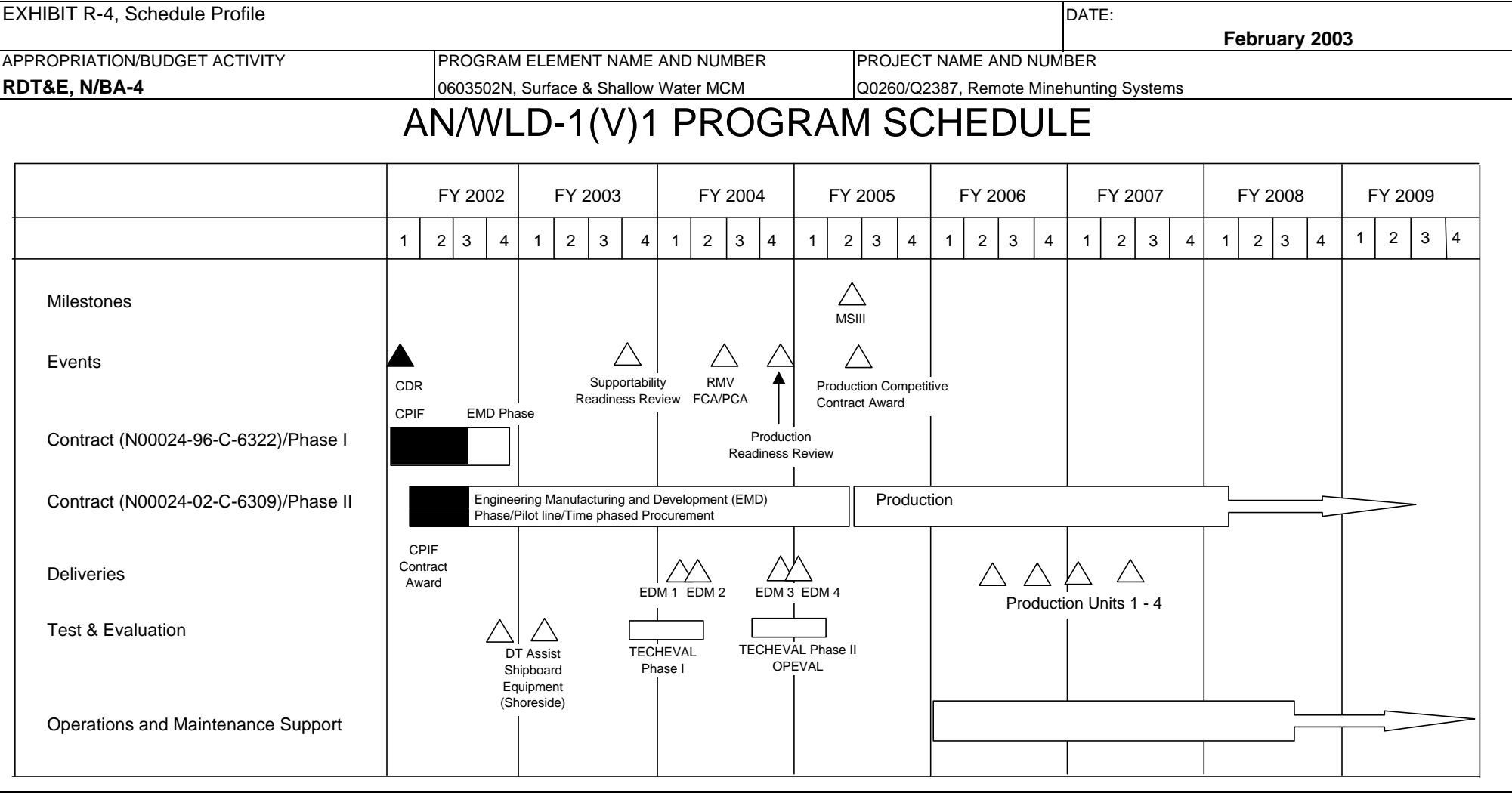
UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE, N / BA-4			0603502N, Surface and Shallow Water MCM			Q0260/Q2387, Remote Minehunting Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	CPIF	Lockheed Martin	28.476								28.476	N/A
Developmental Test & Evaluation	CPIF	Lockheed Martin	6.144	7.122	11/02	2.513	11/03	0.590	11/04		16.369	N/A
Developmental Test & Evaluation	WR	NSWC, CSS	2.500	1.484	10/02	4.519	11/03	1.419	10/04		9.922	N/A
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			37.120	8.606		7.032		2.009		0.000	54.767	
Remarks:												
Contractor Engineering Support	CPIF	Lockheed Martin	4.500								4.500	N/A
Government Engineering Support	WR	NSWC, CSS	34.525								34.525	N/A
Program Management Support	CPFF	Vredenburg	2.677	1.138	11/02	1.146	11/03	0.578	11/04		5.539	N/A
Travel	Various	NAVSEA	0.270	0.089	Various	0.087	Various	0.087	Various		0.533	N/A
SBIR Assessment	Various	Various	9.808								9.808	N/A
											0.000	
Subtotal Management			51.780	1.227		1.233		0.665		0.000	54.905	
Remarks: Award dates for management are various because multiple activities are receiving tasks at different times during the fiscal year.												
Total Cost			326.637	60.792		55.516		14.677		0.000	457.622	
Remarks:												

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R-1 SHOPPING LIST - Item No. 41

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CLASSIFICATION:

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R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 11 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM					Q1233/Q2388, Integrated Combat Weapons System					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	47.522	14.036	12.477	3.758	2.823	3.625	3.243	4.256	4.199	Continuing	Continuing
RDT&E Articles Qty											0

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

(1) Integrated Combat Weapon System (ICWS) is an open architecture system which will demonstrate common control of multiple unmanned systems with optimal manning and provide a foundation for future improvement / modernization of Combat Systems on MCM and MHC class ships and future mine warfare platforms. (2) Mine Warfare and Environmental Decision Aids Library (MEDAL) is a software segment on the Global Command and Control System – Maritime (GCCS-M). MEDAL provides mine and mine warfare planning and evaluation tools and databases to the MCM Commander. (3) Organic MCM C4I connectivity to the rest of the fleet is provided through GCCS-M; design and implement MIW C4I Surveillance and Reconnaissance (C4ISR) architecture to fully integrate and optimize organic and dedicated systems within the Navy's C4ISR architecture.

R-1 SHOPPING LIST - Item No. 41

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Exhibit R-2a, RDTEEN Project Justification
(Exhibit R-2a, page 12 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM	Q1233/Q2388, Integrated Combat Weapons System		
(U) B. Accomplishments/Planned Program				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	4.499	2.542	0.372	0.000
RDT&E Articles Quantity				
<div><u>ICWS Block I</u> Continue / complete hardware design for ICWS.</div> <div><u>ORGANIC MCM C4I</u> Complete MUW data content standards characterization. Complete MUW C4ISR architecture/data requirements. Continue MOD/SIM effort. Initiate and implement Phase 1 of the design of MUW Network Centric Warfare database and support network. Initiate and complete MEDAL/TEDS integration, MUW network centric warfare collaborative planning tools, and MCM/MHC classified LAN integration design. Initiate organic/dedicated MUW tactics development. Begin planning and evaluation models/algorithms. Update C4I SR assessment plan. Continue organic/dedicated MUW tactics development. Initiate the development of thru sensor technology. Continue planning and evaluation of models/algorithms. Initiate advanced MUW TDA development. Continue organic/dedicated MUW tactics development. Continue thru sensor technology development. Continue advanced MUW TDA development.</div>				

R-1 SHOPPING LIST - Item No.

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 13 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																															
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME Q1233/Q2388, Integrated Combat Weapons System																																
(U) B. Accomplishments/Planned Program																																		
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"><tr><td style="width: 30%;"></td><td style="width: 15%;">FY 02</td><td style="width: 15%;">FY 03</td><td style="width: 15%;">FY 04</td><td style="width: 15%;">FY 05</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">6.629</td><td style="text-align: center;">7.889</td><td style="text-align: center;">2.911</td><td style="text-align: center;">2.343</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"><p><u>ICWS Block I</u> Complete software design/code/test for ICWS, complete subsystem integration and testing, and begin EDM 1 integration and testing in the laboratory. Complete EDM 1 integration and testing in the laboratory. Install on ship of opportunity.</p><p><u>MEDAL</u> Complete Build 8. Initiate development of Build 9 and initiate integration and testing. Complete integration and testing of Build 9. Complete Build 9. Initiate the development of Build 10. Complete development of Build 10. Initiate integration and testing of Build 10. Complete integration and testing of Build 10. Initiate development of Build 11. Complete development of Build 11. Initiate integration and testing of Build 11. Initiate development of Build 12.</p><p><u>ORGANIC MCM C4I</u> Complete the development of phase 1 MUW Network Centric Warfare database and support network. Initiate development of Phase II MUW network centric warfare database and support network.</p></div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"><tr><td style="width: 30%;"></td><td style="width: 15%;">FY 02</td><td style="width: 15%;">FY 03</td><td style="width: 15%;">FY 04</td><td style="width: 15%;">FY 05</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">2.908</td><td style="text-align: center;">2.046</td><td style="text-align: center;">0.475</td><td style="text-align: center;">0.480</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></table> <div style="border: 1px solid black; padding: 10px; min-height: 60px;">Provide program management support and travel for ICWS Block I, MEDAL, and ORGANIC MCM C4I programs.</div>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	6.629	7.889	2.911	2.343	RDT&E Articles Quantity						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	2.908	2.046	0.475	0.480	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05																														
Accomplishments/Effort/Subtotal Cost	6.629	7.889	2.911	2.343																														
RDT&E Articles Quantity																																		
	FY 02	FY 03	FY 04	FY 05																														
Accomplishments/Effort/Subtotal Cost	2.908	2.046	0.475	0.480																														
RDT&E Articles Quantity																																		

R-1 SHOPPING LIST - Item No.

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 14 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME Q1233/Q2388, Integrated Combat Weapons System	

(U) C. PROGRAM CHANGE SUMMARY:

	FY 2002	FY 2003	FY 2004	FY 2005
(U) Funding:				
FY03 President's Controls:	14.619	12.758	6.501	6.216
FY04 President's Controls:	14.036	12.477	3.758	2.823
Total Adjustments	-0.583	-0.281	-2.743	-3.393
Summary of Adjustments				
FY02 BTR July 02	-0.288			
Sec. 313, PL 107-206 - Revised	-0.031			
Economic Assumptions	-0.039	-0.072		
Misc Adjustments	-0.225	-0.209	-2.743	-3.393
Subtotal	-0.583	-0.281	-2.743	-3.393

(U) Schedule:

Because of program restructure and funding issues, EDM-2 and 3 will not be procured.

(U) Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 15 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM			PROJECT NUMBER AND NAME Q1233/Q2388, Integrated Combat Weapons System			

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
Line 262200, OPN ICWS	2.477	1.383	2.724	5.099	1.503	1.679	13.677	23.332	Continuing	Continuing

(U) E. ACQUISITION STRATEGY:

ICWS is a series of major incremental upgrades to the current systems. The original equipment manufacturers have teamed with the Navy to develop the changes. FY 00 through FY 05 tasks will be accomplished under Firm Fixed Price (FFP) contract. Contract was awarded in FY00. MEDAL is an evolutionary program with a development cycle of one year per software build to coincide with GCCS-M build schedule.

(U) F. MAJOR PERFORMERS:

- Lockheed Martin, Manassas, VA: Primary hardware contractor for ICWS Block 1.
- NSWC, CSS, Panama City, FLA: System Engineering Support.
- ONR/SAIC, Arlington, VA: Primary software developer for MEDAL.

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			0603502N, Surface and Shallow Water MCM			Q1233/Q2388, Integrated Combat Weapons System						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPIF	Raytheon, RI	2.960								2.960	N/A
Primary Hardware Development	SS/FFP	Lockheed Martin	3.484								3.484	N/A
Primary Hardware Development	WR/RCP	NSWC, CSS/NAWC	2.705	0.701	11/02						3.406	N/A
Systems Engineering	Various	NSWC, CSS/NAVAIR	10.777	1.841	11/02	0.372	11/03			Continuing	Continuing	N/A
Award Fees	SS/CPIF		0.439								0.439	N/A
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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 17 of 46)

UNCLASSIFIED

February 2003

R-1 SHOPPING LIST - Item No. 41

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 18 of 46)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE, N / BA-4			0603502N, Surface and Shallow Water MCM			Q1233/Q2388, Integrated Combat Weapons System						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	CPIF	Lockheed Martin	0.200								0.200	N/A
Operational Test & Evaluation	CPIF	Lockheed Martin	1.592								1.592	N/A
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.792	0.000		0.000		0.000		0.000	1.792	
Remarks:												
Contractor Engineering Support			0.153								0.153	N/A
Government Engineering Support			0.500								0.500	N/A
Program Management Support	Various	NAVSEA	4.858	1.751	11/02	0.233	11/03	0.220	11/04	Continuing	Continuing	N/A
Program Management Support	CPFF	Vredenburg	0.506	0.234	11/02	0.181	11/03	0.197	11/04	Continuing	Continuing	N/A
Travel			0.160	0.061	11/02	0.061	11/03	0.063	11/04	Continuing	Continuing	N/A
SBIR Assessment			0.196								0.196	N/A
Subtotal Management			6.373	2.046		0.475		0.480		0.000	9.374	
Remarks: Award dates for management are various because multiple activities are receiving tasks at different times during the fiscal year.												
Total Cost			61.558	12.477	0.000	3.758	0.000	2.823	0.000	0.000	80.616	
Remarks:												

R-1 SHOPPING LIST - Item No. 41

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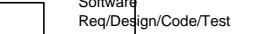

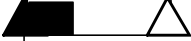



Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 19 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile			DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4		PROGRAM ELEMENT NAME AND NUMBER 0603502N, Surface & Shallow Water MCM		PROJECT NAME AND NUMBER Q1233/Q2388, Integrated Combat Weapons System	

ICWS BLOCK 1 PROGRAM SCHEDULE

	FY 2002				FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Events									Software Req/Design/Code/Test																							
									Subsystem Integration and Test																							
									EDM 1 Laboratory Integration and Testing																							
									EDM1 Ship Install/Checkout																							
									Ship board test Dockside/at-sea																							
Contract																																

R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

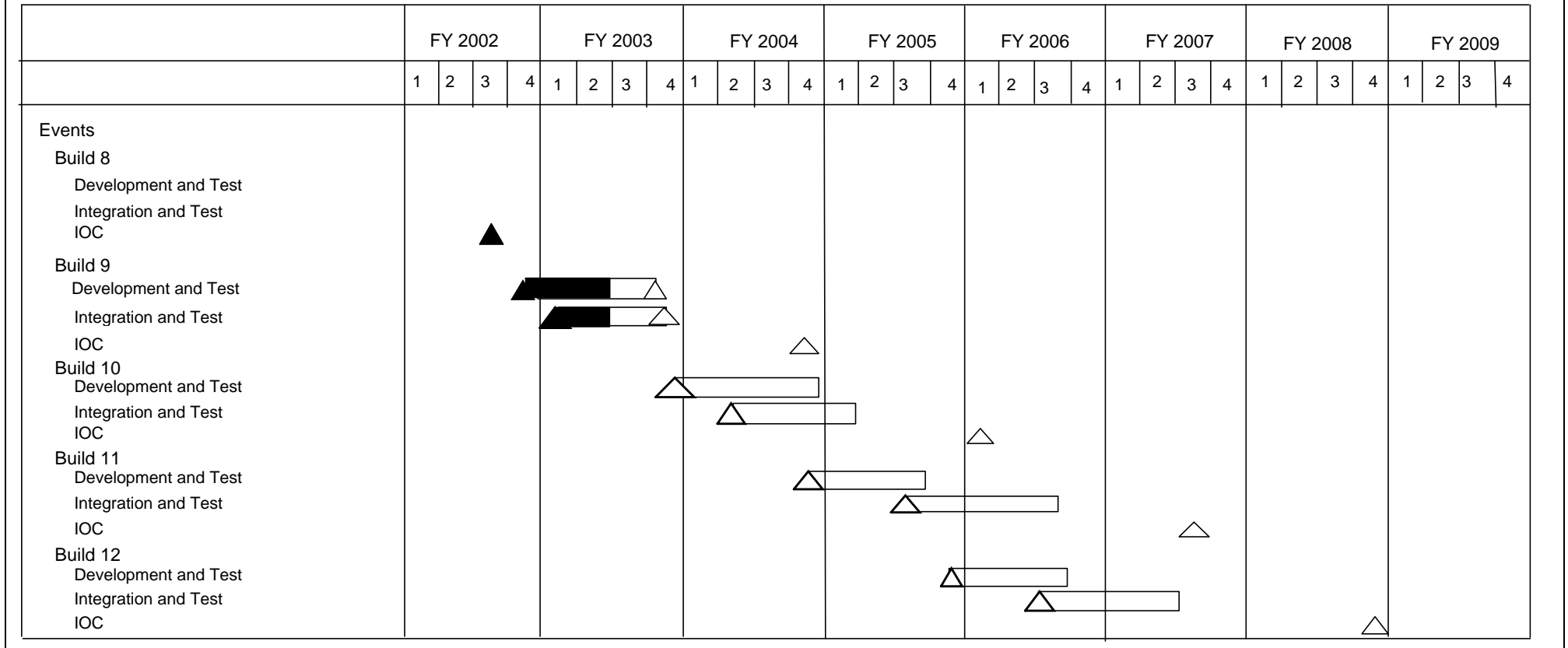
Exhibit R-4, Schedule Profile
(Exhibit R-4, page 20 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile			DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER		PROJECT NAME AND NUMBER		
RDT&E, N/BA-4	0603502N, Surface & Shallow Water MCM		Q1233/Q2388, Integrated Combat Weapons System		

MEDAL PROGRAM SCHEDULE



R-1 SHOPPING LIST - Item No. 41

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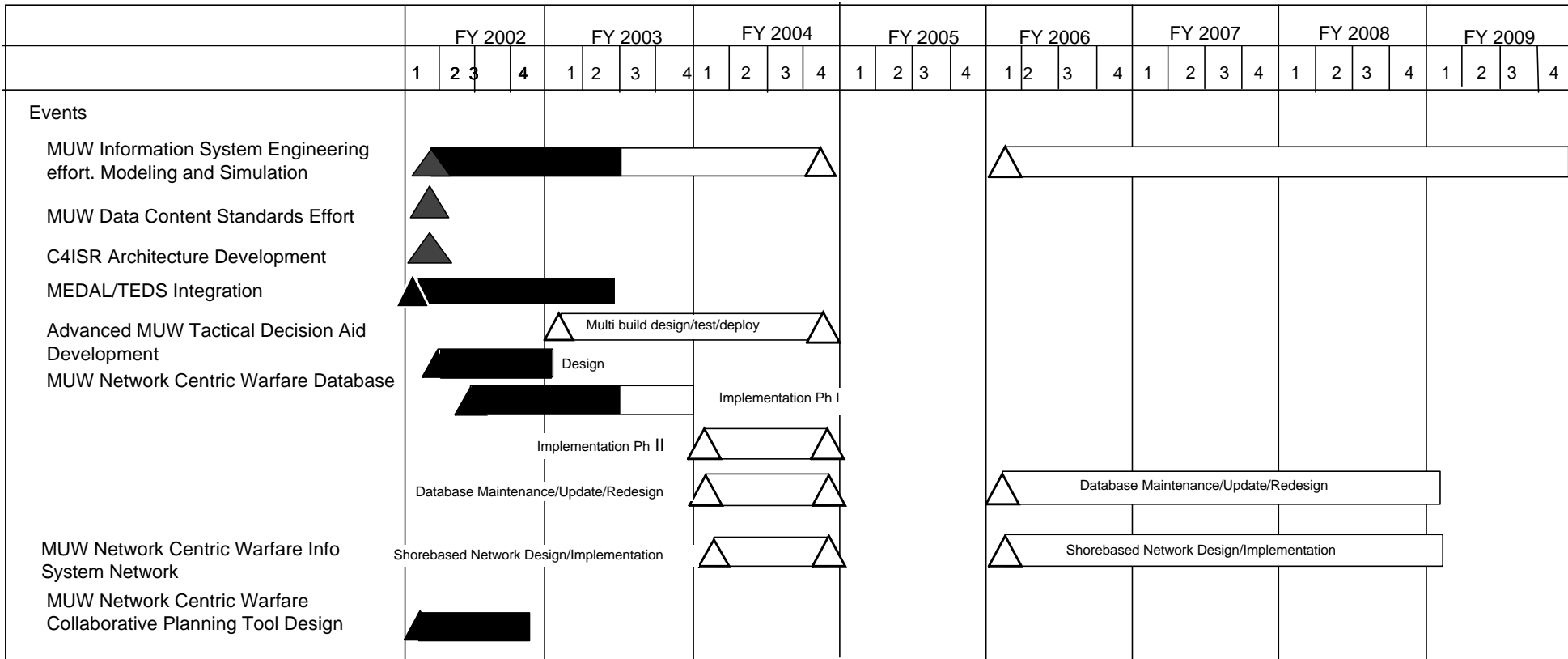
Exhibit R-4, Schedule Profile
(Exhibit R-4, page 21 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile		DATE: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4	PROGRAM ELEMENT NAME AND NUMBER 0603502N, Surface & Shallow Water MCM	PROJECT NAME AND NUMBER Q1233/Q2388, Integrated Combat Weapons System

MUW C4ISR PROGRAM SCHEDULE



R-1 SHOPPING LIST - Item No. 41

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 22 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-4, Schedule Profile			DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/BA-4		PROGRAM ELEMENT NAME AND NUMBER 0603502N, Surface & Shallow Water MCM		PROJECT NAME AND NUMBER Q1233/Q2388, Integrated Combat Weapons System	

MUW C4ISR PROGRAM SCHEDULE CONT'D

	FY 2002				FY 2003				FY 2004				FY 2005				FY 2006				FY 2007				FY 2008				FY 2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Events cont'd																																
Organic/Dedicated MUW Tactics Development	▲																▲															
Planning & Evaluation Models/Algorithms	▲																▲															
MCM/MHC Classified LAN Integration Design	▲																															
Develop TEDS/PBU Thru Sensor Technology																	▲															
C4ISR Assessment Plan Update	▲																▲															

R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 23 of 46)

UNCLASSIFIED

CLASSIFICATION:

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R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 24 of 46)

UNCLASSIFIED

CLASSIFICATION:

[illegible]

R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 25 of 46)

UNCLASSIFIED

CLASSIFICATION:

[illegible]

R-1 SHOPPING LIST - Item No.

41

UNCLASSIFIED

Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 26 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	0603502N, Surface and Shallow Water MCM					Q2131, Assault Breaching Systems					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	177.938	5.043	0.662	0.000	17.620	32.341	41.135	30.360	30.349	Continuing	Continuing
RDT&E Articles Qty											0

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

This program provides for a combination of joint US Marine Corps and US Navy projects planned to counter the threat to amphibious landing forces from known and projected foreign land/sea mines and obstacles in the beach zone and surf zone approaches to amphibious assault areas. It develops a family of systems (Countermines/Counter Obstacle, Intelligence/Surveillance/reconnaissance/targeting, Navigation/Virtual Marking/Integration, C4I/Data Fusion) to provide a full assault breaching capability .

R-1 SHOPPING LIST - Item No. 41

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 27 of 46)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME Q2131, Assault Breaching Systems																	
(U) B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">0.200</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">11.335</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.200	0.000	0.000	11.335	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.200	0.000	0.000	11.335															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> Product Development: <u>Primary Hardware Development \$11.535:</u> Component Advanced Development for ABS Counter Mine-Counter Obstacle System (\$4.569 FY05), ISR/Targeting Development (\$3.516 FY05). Government Furnished Equipment (GFE): Mine Threat Procurement for Development (\$0.200 FY02, \$ 1.000 FY05), Nav System acquisition/integration (\$2.250 FY05) </div>																			
<p>* FY04 funding in 0603782N.</p>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;"></th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">0.593</td> <td style="text-align: center;">0.375</td> <td style="text-align: center;">0.000</td> <td style="text-align: center;">2.075</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.593	0.375	0.000	2.075	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.593	0.375	0.000	2.075															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"> Support: <u>Development Support Equipment \$0.825:</u> Tactical Decision Aid Development (\$0.825 FY05) <u>System Engineering, \$0.593:</u> Systems Effectiveness Model for MAA/AOA Preparation (\$0.593 FY02). <u>Studies and Analysis \$1.625:</u> ABS Mission Area Analysis (MAA) (\$0.375 FY03). Modeling and Simulation in support of Far-Term Development (\$0.250 FY05). Mine Migration Studies in support of requirements development (\$0.200 FY05). Mine Vulnerability Studies (\$0.200 FY05). C4I/Data Fusion (\$0.200 FY05), ABS Scalability study (\$0.400 FY05) </div>																			

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 28 of 46)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME Q2131, Assault Breaching Systems																
(U) B. Accomplishments/Planned Program																		
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	FY 02	FY 03	FY 04	FY 05														
Accomplishments/Effort/Subtotal Cost	1.953	0.000	0.000	0.010														
RDT&E Articles Quantity																		
<div style="border: 1px solid black; padding: 10px; margin-top: 10px;">Test and Evaluation: <u>Developmental Test and Evaluation, \$1.963:</u> Tests/studies in support of requirements development include: lane width study, mine burial/migration, mine burial effects, mine vulnerability(\$1.953 FY02). Navigation Operational Test Support (\$0.010 FY05).</div>																		
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	FY 02	FY 03	FY 04	FY 05													
Accomplishments/Effort/Subtotal Cost	2.297	0.287	0.000	4.200													
RDT&E Articles Quantity																	

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Exhibit R-2a, RDTEN Project Justification
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM	PROJECT NUMBER AND NAME Q2131, Assault Breaching Systems		

(U) C. PROGRAM CHANGE SUMMARY:

	FY 2002	FY 2003	FY 2004	FY 2005
(U) Funding:				
FY03 President's Budget:	5.235	4.698	4.811	9.906
FY04 President's Budget	5.043	0.662	0.000	17.620
Total Adjustments	-0.192	-4.036	-4.811	7.714
Summary of Adjustments				
SBIR	-0.073			
BTR Threshold Adj.		0.699		
Economic Assumptions	-0.014	-0.026		
Misc Adjustments	-0.105	-4.709	-4.811	7.714
Subtotal	-0.192	-4.036	-4.811	7.714

(U) Schedule:

Schedule is restored to show full ABS capability development.

(U) Technical:

Not Applicable

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-4			PROGRAM ELEMENT NUMBER AND NAME 0603502N, Surface and Shallow Water MCM		PROJECT NUMBER AND NAME Q2131, Assault Breaching Systems		

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
0603782N Shallow Water MCM Demos			12.0*							
*\$12M is ABS specific. Funding exists across the FYDP in this PE for other mine warfare efforts.										

(U) E. ACQUISITION STRATEGY:

The FY03 and FY04 MAA, MNS and ORD tasks specifically complete the requirements generation process for the overarching mission area of Amphibious Operations in a Mined Environment leading to a MS B decision during 2Q FY05. The MAA will provide the foundation for the "family of systems MNSs/ORDs" required for Amphibious Operations in a Mined Environment. The FY03 and FY04 tasks will also allow the Navy to demonstrate the viability of concepts for Far Term Family of Systems capabilities and justify the need for future funding. The FY03 and FY04 funding is crucial to maintaining a pool of experienced ABS team members at the government labs and industry and for the program to maintain its inventory of threat mines that will be required for future mine lethality and vulnerability tests. The FY03 and FY04 tasks will develop ISR/Targeting systems and Navigation systems to support the Assault Breaching Mission.

(U) F. MAJOR PERFORMERS:

- NSWC, IH: Provide system engineering and test and evaluation support.
- NSWC, CSS: Provide Technical Direction Agent , systems engineering and test and evaluation support.
- TBD: Far Term ABS System contractor

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 33 of 46)

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-??			0603502N, Surface and Shallow Water MCM			Q2131, Assault Breaching Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development Support Equipment	WR	IH, CSS, TBD	11.721					0.825	11/04	Continuing	Continuing	N/A
Software Development	WR	CSS	8.037								8.037	N/A
Integrated Logistics Support	WR	IH, CSS	2.712								2.712	N/A
Configuration Management	WR	IH, CSS	3.744								3.744	N/A
Technical Data	WR	IH, CSS	2.588								2.588	N/A
Studies & Analysis	WR	IH,CSS		0.375	11/2002			1.250	11/04	Continuing	Continuing	
GFE	WR	IH, CSS	0.400								0.400	N/A
Award Fees											0.000	
											0.000	
											0.000	
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Subtotal Support			29.202	0.375		0.000		2.075		0.000	31.652	
Remarks:												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)									DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE, N / BA-4			0603502N, Surface and Shallow Water MCM			Q2131, Assault Breaching Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR, PD	IH, CSS, ONR, TBD	24.893					0.010	11/04	Continuing	Continuing	N/A
Operational Test & Evaluation	WR	IH, CSS, TBD	8.655								8.655	N/A
Live Fire Test & Evaluation											0.000	
Test Assets											0.000	
Tooling	WR	IH, CSS, TBD	0.700								0.700	N/A
GFE	WR	IH, CSS, TBD	0.400								0.400	N/A
Award Fees											0.000	
Subtotal T&E			34.648	0.000		0.000		0.010			34.658	
Remarks:												
Contractor Engineering Support	CPFF	Vredenburg, Northrup Grum	2.679	0.000				0.600	11/04	Continuing	Continuing	N/A
Government Engineering Support	WR	IH, CSS	17.884	0.247	11/02			1.220	11/04	Continuing	Continuing	N/A
Program Management Support	WR	IH, CSS, NAVSEA	11.281	0.000				2.305	11/04	Continuing	Continuing	N/A
Travel	PD	NAVSEA	0.837	0.040	11/02			0.075	11/04	Continuing	Continuing	N/A
Transportation											0.000	
SBIR Assessment	Various	Various	0.073								0.073	N/A
Subtotal Management			32.754	0.287		0.000		4.200			37.241	
Remarks:												
Total Cost			183.301	0.662		0.000		17.620		0.000	201.583	
Remarks:												

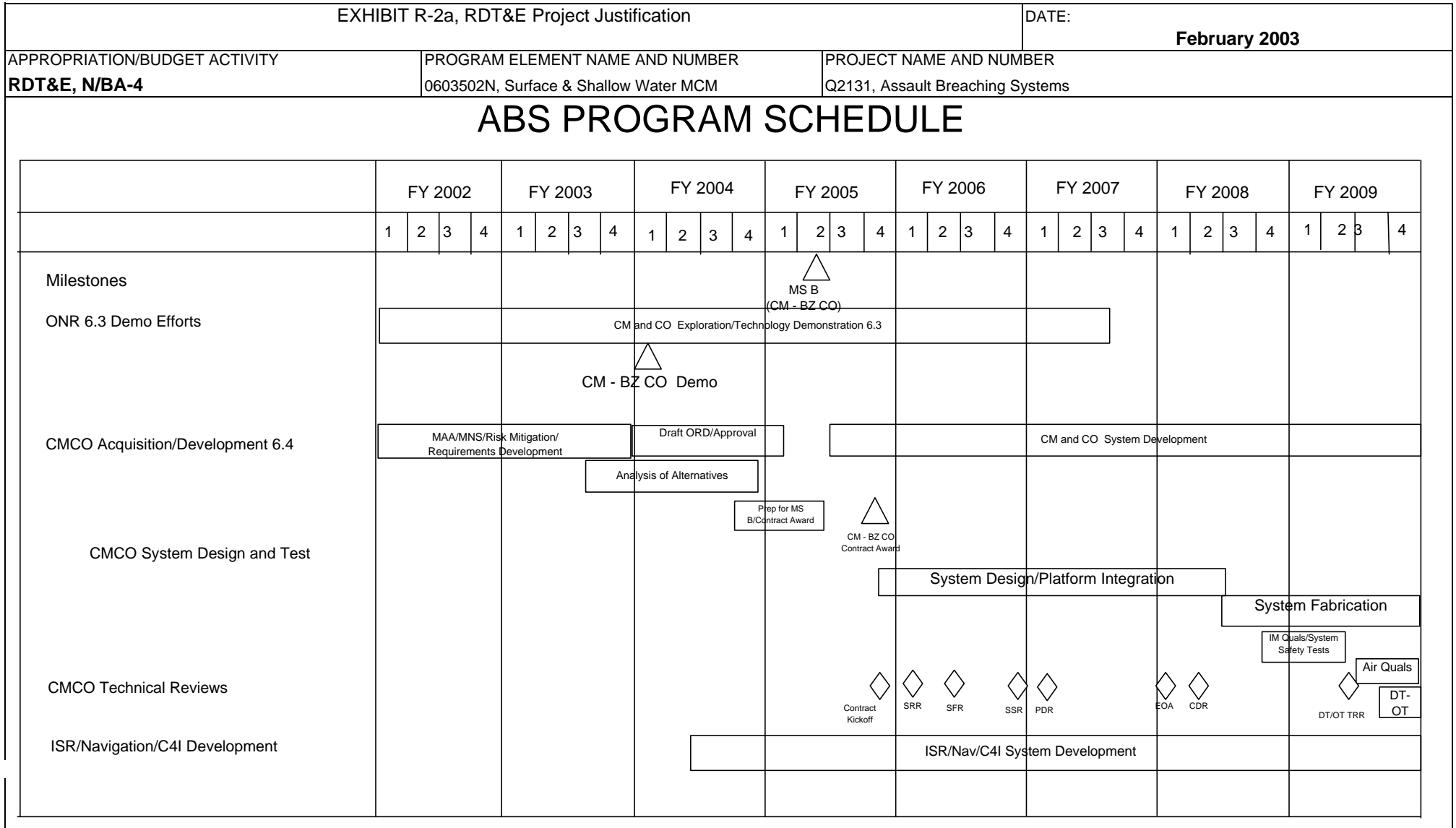
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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 35 of 46)

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 36 of 46)

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 37 of 46)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME Surface & Shallow Water MCM, 0603502N				PROJECT NUMBER AND NAME Unmanned Undersea Vehicle Q2094/Q2852					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	106.483	62.499	74.425	81.457	65.956	55.877	47.936	48.093	57.822	Continuing	Continuing
RDT&E Articles Qty					1						1

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project was completely restructured in FY 1994 in response to Congressional direction provided in the FY 1994 DOD Appropriations Act. Specifically, the office of the Secretary of Defense and the Navy were directed to (1) establish priorities among various proposed UUV programs, (2) focus on near-term mine countermeasures issues, and (3) establish affordable, cost-effective programs. The Navy developed an overall UUV Program Plan, which was approved by ASN(RD&A) June 1994, endorsed by USD(A&T) and forwarded to Congress to support FY 1995 budget deliberations.

The UUV Program Plan establishes a clandestine, near-term mine reconnaissance capability as the Navy's top UUV priority; a long term-mine reconnaissance system as priority two; the conduct of surveillance, intelligence and tactical oceanography missions as priority three; and exploring advanced UUV designs for the future as priority four.

The UUV project funds development of the UUV Program Plan. The Near-Term Mine Reconnaissance System (NMRS) is a minehunting UUV system launched and recovered from an SSN-688 class submarine capable of mine detection, classification, and localization. One NMRS Operational Prototype (OP) system was made available to the Commander Submarine Development Squadron-Five in FY 1999. No further development/production of the NMRS is planned. The AN/BLQ-11 Long-Term Mine Reconnaissance System (LMRS) is being developed to provide a robust, long-term Fleet capability to conduct clandestine minefield reconnaissance. A quantity of 10 LMRSs will be procured in the FYDP beginning in FY05. The LMRS Inventory Objective is TBD. The Navy's third priority is the conduct of surveillance, intelligence and tactical oceanography. To meet this requirement the Navy will develop a Mission Reconfigurable UUV (MRUUV) system that is capable of performing different missions. It is envisioned that this system will adapt elements of the LMRS design to develop a more modular UUV capable of accomodating multiple payload sensors appropriate to meet various mission requirements. ONR will develop technologies for payload sensors and increased autonomy under the Autonomous Operations Future Naval Capability (FNC) programs to support risk mitigation for the MRUUV program. Technologies from these systems will transition to MRUUV during the FNC demonstration year. Technology Transition agreements between the Program office and ONR have been signed.

Congress appropriated \$1.5M in FY01 and \$6.1M in FY02 for a National Unmanned Underwater Vehicle Test Center (NUTEC) at NUWC DIVKPT. Funds are being used to develop a program plan to define current and future UUV testing requirements. Begining in FY03 NUTEC was transferred to a new PE.

The Long-Term Mine Reconnaissance System (LMRS) is currently in development. The fabrication of a prototype system began in FY02 and will transition to fleet operations in FY05.

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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	4.753	21.950	24.998	10.700															
RDT&E Articles Quantity	0	0	0	0															

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RDT&E Articles Quantity																			
NUTEC FY 2002 National UUV Test Center																			
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Accomplishments/Effort/Subtotal Cost	1.000	0.000	0.000	0.000															
RDT&E Articles Quantity																			
FY 2002 UUV Standardization Studies																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	0.000	RDT&E Articles Quantity				
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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																																														
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME Surface & Shallow Water MCM, 060325N	PROJECT NUMBER AND NAME Unmanned Undersea Vehicle Q2094/ Q2852																																															
<p>(U) C. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 35%;"></th> <th style="text-align: right; width: 15%;">FY 2002</th> <th style="text-align: right; width: 15%;">FY 2003</th> <th style="text-align: right; width: 15%;">FY 2004</th> <th style="text-align: right; width: 15%;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>(U) Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>FY03 President's Controls:</td> <td style="text-align: right;">61.619</td> <td style="text-align: right;">76.108</td> <td style="text-align: right;">16.421</td> <td style="text-align: right;">22.979</td> </tr> <tr> <td>FY04 President's Controls:</td> <td style="text-align: right;">62.499</td> <td style="text-align: right;">74.425</td> <td style="text-align: right;">81.457</td> <td style="text-align: right;">65.956</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">0.880</td> <td style="text-align: right; border-top: 1px solid black;">-1.683</td> <td style="text-align: right; border-top: 1px solid black;">65.036</td> <td style="text-align: right; border-top: 1px solid black;">42.977</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>FY2003 SBIR</td> <td style="text-align: right;">-1.343</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Misc Adjustments</td> <td style="text-align: right;">2.223</td> <td style="text-align: right;">-1.683</td> <td style="text-align: right;">65.036</td> <td style="text-align: right;">42.977</td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">0.880</td> <td style="text-align: right; border-top: 1px solid black;">-1.683</td> <td style="text-align: right; border-top: 1px solid black;">65.036</td> <td style="text-align: right; border-top: 1px solid black;">42.977</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Not Applicable</p> <p style="margin-top: 20px;">(U) Technical: Not Applicable</p>						FY 2002	FY 2003	FY 2004	FY 2005	(U) Funding:					FY03 President's Controls:	61.619	76.108	16.421	22.979	FY04 President's Controls:	62.499	74.425	81.457	65.956	Total Adjustments	0.880	-1.683	65.036	42.977	Summary of Adjustments					FY2003 SBIR	-1.343				Misc Adjustments	2.223	-1.683	65.036	42.977	Subtotal	0.880	-1.683	65.036	42.977
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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-4			PROGRAM ELEMENT NUMBER AND NAME Surface & Shallow Water MCM, 0603502N			PROJECT NUMBER AND NAME Unmanned Undersea Vehicle Q2094/Q2852			

(U) D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
OPN PE 020481N; Line Item 217100	0.000	0.000	0.000	61.391	49.153	63.461	63.606	64.326	Continuing	Continuing

(U) E. ACQUISITION STRATEGY: *

The LMRS acquisition strategy is structured to maximize competition during system development. In FY97 three one year contracts were awarded for development of preliminary design. In early FY98, two of the preliminary design contractors were selected to continue development through a critical design review. Selection of these two contractors was based primarily on the contractor's performance during the preliminary design contract. In early FY00, Boeing was selected to complete the LMRS design, fabricate a prototype system and support in-water testing. Procurement of the LMRS will be sole source to Boeing. A competitive procurement is not cost effective due to the limited (6-12) number of systems planned for procurement. PBD 130C added \$40M to FY03 to accelerate the development of more advanced UUVs. Funding will be used to accelerate the development of Synthetic Aperture Sonar (SAS), LMRS Precision Underwater Mapping (L-PUMA), and Mission Reconfigurable UUV (MRUUV) to address multiple missions. The MRUUV project is conducting an AOA and has commenced acquisition planning and specification development in

(U) F. MAJOR PERFORMERS: **

Boeing - Anaheim, CA - Design and fabrication of prototype LMRS.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-4			PROGRAM ELEMENT Surface & Shallow Water MCM, 0603502N			PROJECT NUMBER AND NAME Unmanned Undersea Vehicle Q2094/Q2852						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
LMRS	CPAF/IF	Boeing	74.069	13.016	N/A	8.129	N/A	0.842	N/A	Continuing	Continuing	
Fees			5.937	2.977	N/A	1.940	N/A	1.353	N/A	Continuing	Continuing	
LMRS	Various	Various	34.168	4.951	N/A	8.317	N/A	2.893	N/A	Continuing	Continuing	
MRUUV	Various	Various	2.100	20.375	N/A	25.400	N/A	42.580	N/A	Continuing	Continuing	
UUV P31	Various	Various	9.153	21.950	N/A	24.998	N/A	10.700	N/A	Continuing	Continuing	
UUV Test center	Various	Various	7.502	0.000	N/A	0.000	N/A	0.000	N/A	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			132.929	63.269		68.784		58.368		0.000	323.350	
Remarks:												
Development Support											0.000	
Software Development											0.000	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
Studies & Analyses											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME							
RDTE&E, N / BA-4			Surface & Shallow Water MCM, 0603502N			Unmanned Undersea Vehicle Q2094/Q2852							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation	CPAF/IF	Boeing	0.340	2.555	N/A	1.186	N/A	0.000	N/A	0.000	4.081	N/A	
Operational Test & Evaluation	WR	Various	0.000	0.000	N/A	0.657	N/A	0.000	N/A	0.000	0.657	N/A	
GFE/GFF	Various	Various	0.644	0.195	N/A	0.100	N/A	0.000	N/A	Continuing	Continuing	N/A	
TTLRF	WR	Various	4.476	0.821	N/A	0.200	N/A	0.100	N/A	Continuing	Continuing	N/A	
											0.000		
											0.000		
Award Fees											0.000		
Subtotal T&E			5.460	3.571		2.143		0.100		0.000	11.274		
Remarks:													
Contractor Engineering Support			4.204	0.660	N/A	1.000	N/A	1.000	N/A	Continuing	Continuing		
Government Engineering Support			16.030	0.965	N/A	0.869	N/A	2.661	N/A	Continuing	Continuing		
Program Management Support			4.304	0.650	N/A	0.650	N/A	0.650	N/A	Continuing	Continuing		
Overhead			6.055	5.310	N/A	8.011	N/A	3.177	N/A	Continuing	Continuing		
											0.000		
											0.000		
Subtotal Management			30.593	7.585		10.530		7.488		Continuing	Continuing		
Remarks:													
Total Cost			168.982	74.425		81.457		65.956		Continuing	Continuing		
Remarks:													

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EXHIBIT R4, Schedule Profile																								DATE:									
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME									
RDT&E, N / BA-4												Surface & Shallow Water MCM, 0603502N												Unmanned Undersea Vehicle Q2094/Q2852									
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
LMRS Program Milestones				Development Phase									MS III																				
EVENTS													IOC	Production contract award																			
Test & Evaluation Milestones																																	
PRODUCTION																																	
SAS Program Milestones																																	
Test & Evaluation																																	
L-PUMA Milestones																																	
Test & Evaluation																																	
MRUUV Requirments Definition, Risk Reduction and Pre-design																																	
Development Phase																																	
Deliveries																																	

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* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 45 of 46)

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 46 of 46)