

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5						R-1 ITEM NOMENCLATURE 0604373N Airborne Mine Countermeasures					
COST (\$ in Millions)	Prior Years Cost		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Total PE Cost	298.742		73.600	90.981	50.514	25.807	18.138	11.351	3.908		573.041
Airbone Mine Hunt System / 0529	172.164		16.508	18.461	4.798	3.420	4.807	3.406	0.805		224.369
ALMDS / 2047	53.263		17.787	10.670	3.541	7.503	11.775	6.579	1.795		112.913
OASIS / 2427/2883*	25.435		13.762	14.625	11.215	0.773					65.810
AMNS / 2473	47.880		21.851	47.225	29.671	12.288					158.915
C4I, Tactics and Mission Planning / 4026					1.289	1.823	1.556	1.366	1.308		7.342
SNIUTT / 9179			3.692								3.692
Quantity of RDT&E Articles	3		2	1	5						11
* FY03 Congressional Add: Remote Technical Assistant Support System (RTASS); FY04 Congressional Adds: RAMICS and AQS-20											
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Airborne Mine Countermeasures (AMCM) programs will deploy to the fleet as sensors integrated into the MH-53E and MH-60S platforms in order to provide Mine-Like Object Detection/classification/localization, Mine Identification, mine reacquisition and neutralization, and influence clearance capabilities. The "Next Generation" AMCM systems will provide this set of capabilities to the Carrier Strike Group/Expeditionary Strike Group (CSG/ESG) beginning in Calendar Year 2005. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). Some interest in the following areas has been expressed: search and rescue; Surface fire support; ASW operations; Protection/offense against small craft/vehicles; Air to air operations; Very shallow water MCM; Swimmer defense and Torpedo defense.											

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 48)

UNCLASSIFIED

CLASSIFICATION:

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APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /BA-5	R-1 ITEM NOMENCLATURE 0604373N Airborne Mine Countermeasures																																									
<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"></td> <td style="width: 15%; text-align: center;"><u>FY 2003</u></td> <td style="width: 15%; text-align: center;"><u>FY 2004</u></td> <td style="width: 15%; text-align: center;"><u>FY 2005</u></td> </tr> <tr> <td> (U) B. PROGRAM CHANGE SUMMARY:</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Previous President's Budget PB-04</td> <td style="text-align: right;">73.728</td> <td style="text-align: right;">88.514</td> <td style="text-align: right;">49.954</td> </tr> <tr> <td> Current President's Budget PB-05</td> <td style="text-align: right;">73.600</td> <td style="text-align: right;">90.981</td> <td style="text-align: right;">50.514</td> </tr> <tr> <td> Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">(0.128)</td> <td style="text-align: right; border-top: 1px solid black;">2.467</td> <td style="text-align: right; border-top: 1px solid black;">0.560</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">Summary of Adjustment</td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> <td style="width: 15%;"></td> </tr> <tr> <td> Congressional Add</td> <td></td> <td style="text-align: right;">3.500</td> <td></td> </tr> <tr> <td> SBIR/STTR Transfer</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Misc Adjustments</td> <td style="text-align: right;">(.128)</td> <td style="text-align: right;">(1.033)</td> <td style="text-align: right;">.560</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">(.128)</td> <td style="text-align: right; border-top: 1px solid black;">2.467</td> <td style="text-align: right; border-top: 1px solid black;">.560</td> </tr> </table> <p>Schedule: Acquisition Strategy for the Organic Airborne Mine Countermeasure (OAMCM) programs has changed in order to reflect restructuring to integrate the MH-60S assets availability to support testing. AN/AQS-20A In response to a delay in a test ready MH-60S (deployment platform) and expansion of test/integration requirements, from PB04, the program schedule has been modified to incorporate platform of opportunity (MH-53) CT & DT testing during FY03 through early FY04 to mitigate impacts of MH-60S availability. MH-60S DT and MH-60S OT testing will be conducted during FY04 and completed in FY05 in support of achieving a scheduled FY05 FRPD and IOC. ALMDS Following Congressional reduction of FY04 procurement units, MH-60S Developmental Testing (DT) is scheduled for FY04 and Operational Testing (OT) is on schedule for FY05. MS C and LRIP decision is scheduled for early FY05 to support IOC. A revised Acquisition Program Baseline is currently in route with updated schedule parameters. OASIS The program is currently in the SD&D phase where three engineering development models (EDMs) will be developed for test and evaluation. Production is planned for FY06 thru FY10 to meet the inventory requirement of 44 units over a five-year period. AMNS will provide the MH-60S with the capability to neutralize bottom and moored mines using an airborne delivered expendable mine neutralization device. The AMNS is being tested on the MH-53E to prove out the neutralization effectiveness. The system will also be deployed from the MH-60S helicopter and will provide organic airborne mine defense for Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). RAMICS The system will be deployed from the MH-60S helicopter and will provide organic airborne mine defense for Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). Some interest in the following areas has been expressed: search and rescue; Surface fire support; Protection/offense against small craft/vehicles; Air to air operations; Very shallow water MCM; Swimmer defense and Torpedo defense; and ASW capabilities</p>				<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	(U) B. PROGRAM CHANGE SUMMARY:				Previous President's Budget PB-04	73.728	88.514	49.954	Current President's Budget PB-05	73.600	90.981	50.514	Total Adjustments	(0.128)	2.467	0.560	Summary of Adjustment				Congressional Add		3.500		SBIR/STTR Transfer				Misc Adjustments	(.128)	(1.033)	.560		(.128)	2.467	.560
	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>																																							
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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N/Airborne Mine Countermeasures					PROJECT NUMBER AND NAME 0529 Airborne Mine Hunt Systems					
COST (\$ in Millions)	Prior Years Cost		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	172.164		16.508	18.461	4.798	3.420	4.807	3.406	0.805	0.000	224.369
RDT&E Articles Qty	3										3

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

This project includes a sonar for mine detection, classification and identification. The Navy does not possess a capability to conduct minefield reconnaissance (mine density and location) at high area search rates. The AN/AQS-20A is being developed to address the emergent requirements for mine identification and to integrate AMCM systems with a MH-60S platform. The AN/AQS-20A will also be the minehunting sonar component for the Remote Minehunting System (RMS). The AN/AQS-20A will be developed to meet the requirements of the Organic MCM platforms. Note: The AN/AQS-20/X nomenclature designation to AN/AQS-20A was approved May 02.

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 3 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N , BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures	PROJECT NUMBER AND NAME 0529 Airborne Mine Hunt Systems																						
B. Accomplishments/Planned Program																								
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RDT&E Articles Quantity																								
<div style="border: 1px solid black; padding: 5px; min-height: 60px;"> Complete EDM fabrication, including incorporation of Electro-Optic Identification (EOID) sensor capabilities. Conduct EDM testing with maintainability requirements also refurb EDMs. Acquire EOID test units. </div>																								
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<div style="border: 1px solid black; padding: 5px; min-height: 60px;"> Continued integration of towed body with MH-60S console and parallel towed body/MH-60S Console hardware-software integration and testing. Conduct MH-60S DT and begin OT. Continue interface/integration with MH-60S, C4I Interface and MEDAL. Continue development of ILS & supportability products, training materials. Conduct single-site (alternative site) CAD/CAC testing and initiate CAIDC. Conduct parallel MH-60S Console test and common console/Aircraft Integration. Conduct platform of opportunity (MH-53) testing, i.e, CT, DT, AUTEK Tests in addition to WSIT CT and AFCS. </div>																								
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		FY 03	FY 04	FY 05																				
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RDT&E Articles Quantity																								
Total		16.508	18.461	4.798																				
<div style="border: 1px solid black; padding: 5px; min-height: 60px;"> Support completion of MH-60S OT events. Develop documentation in support of FRPDR. Continue development of ILS & supportability products and engineering support. Finalize documentation in support of MS-C requirements. </div>																								

R-1 SHOPPING LIST - Item No.

107

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 4 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME					
RDT&E, N , BA-5		0604373N Airborne Mine Countermeasures			0529 Airborne Mine Hunt Systems					
(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>
424800 OPN										
AQS-20	22.864	13.061								
AQS-20A				47.950	25.493	64.251	61.200	50.810	CONT.	CONT.
(U) E. ACQUISITION STRATEGY: *										
Procure two (2) AN/AQS-20 towed bodies in FY02 to be modified to AN/AQS-20A units. Upon successful completion of DT and MS C, Sole Source MH-60S systems procurement will begin in FY05 with a Full Rate Procurement contract following a Full Rate Production Decision Review (FRPDR).										
(U) F. MAJOR PERFORMERS: **										
Raytheon Corp, Portsmouth, RI - Prime development contractor. Software and hardware developer for AN/AQS-20A towed body and integration with MH-60S platform. Arete Corp, Tucson, Arizona - Major Subcontractor to Raytheon Corp. Responsible for design and development of Electro-Optic Identification (EOID) capability within AN/AQS-20A towed body. CSS Panama City, Fl. - Technical Design Agent. Provide AN/AQS-20A system design, development, integration and contractor oversight; ensure operational requirements are satisfied during all SD&D test events.										

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 0529 Airborne Mine Hunt 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/Software Development	SS/CPIF	Raytheon, Portsmouth, RI	15.834	6.097	10/02	4.469	10/03	0.581	10/04	4.235	31.216	
Hardware/Software Development	C/CPFF	Raytheon, Portsmouth, RI	60.150								60.150	
Hardware/Software Development	WR	CSS Panama City, FL	4.966							0.630	5.596	
Hardware/Software Development	C/FP	Northrop, Grumman	4.572								4.572	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			85.522	6.097		4.469		0.581		4.865	101.534	
Remarks:												
Engineering Services	WR	CSS Panama City, FL	22.003	2.276	10/02	4.100	10/03	1.567	10/04	0.520	30.466	
Engineering Services	C/CPFF	Raytheon, Portsmouth, RI	1.500	0.500	10/02	1.286	01/04				3.286	
Engineering Services	VAR	Various	49.889	1.908	10/02	1.757	10/03	0.250	10/04		53.804	
Engineering Services	SS/CPIF	Raytheon, Portsmouth, RI	1.941			1.323	10/03	0.300	10/04	1.600	5.164	
											0.000	
ILS Functions	WR	CSS Panama City, FL	4.269	0.600	10/02	0.900	10/03		10/04	0.607	6.376	
ILS Functions	SS/CPIF	Raytheon, Portsmouth, RI	0.326	0.500	10/02					1.480	2.306	
ILS Functions	VAR	Various	0.736					0.700	10/04		1.436	
Subtotal Support			80.664	5.784		9.366		2.817		4.207	102.838	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE, N / BA-5			0604373N Airborne Mine Countermeasures			0529 Airborne Mine Hunt 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
T&E Functions	WR	CSS Panama City	3.397	3.367	10/02	3.104	10/03	0.400	10/04	0.500	10.768	
T&E Functions	SS/CPIF	Raytheon, Portsmouth, RI	0.422			0.562	10/03	0.300	10/04	1.250	2.534	
T&E Functions	VAR	Various	0.543	0.700	10/02	0.200	10/03	0.140	10/04		1.583	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			4.362	4.067		3.866		0.840		1.750	14.885	
Remarks:												
Management Support			1.287	0.500	10/02	0.700	10/03	0.500	10/04	1.390	4.377	
Travel			0.329	0.060	10/02	0.060	10/03	0.060	10/04	0.226	0.735	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			1.616	0.560		0.760		0.560		1.616	5.112	
Remarks:												
Total Cost			172.164	16.508		18.461		4.798		12.438	224.369	
Remarks:												

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 7 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																				DATE:															
APPROPRIATION/BUDGET ACTIVITY																				PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME							
RDT&E, N / BA-5																				0604373N Airborne Mine Countermeasures								0529 Airborne Mine Hunt Systems							
Fiscal Year	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							
Acquisition Milestones										MS C △			FRP △	IOC ★																					
SD&D Phase																																			
EDMs Delivery		△		△																															
Software Delivery V 5.X SW Delivery				Final Delivery △																															
Test & Evaluation Milestones																																			
Development Test				CT ▽		MH-53E Sys DT ▽	▽			MH-60S Int DT ▽	▽																								
Operational Test													MH-60S OT ▽	▽																					
Production Milestones																																			
LRIP I FY 05																																			
FRP FY 06																																			
Deliveries																																			

R-1 SHOPPING LIST - Item No. 107

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

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 8 of 48)

UNCLASSIFIED

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R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 9 of 48)

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures				PROJECT NUMBER AND NAME 2047 Airborne Laser Mine Detection System					
COST (\$ in Millions)	Prior Years Cost		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	53.263		17.787	10.670	3.541	7.503	11.775	6.579	1.795	0.000	112.913
RDT&E Articles Qty	3										3
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>The Airborne Laser Mine Detection System (ALMDS), designation AN/AES-1, is a non-acoustic Airborne Mine Countermeasures (AMCM) high area coverage system that detects, classifies, and localizes floating, drifting, and near-surface moored sea mines. The system is deployed from the MH-60S helicopter and will provide organic airborne mine defense for the Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG). The system represents a capability that does not exist in the current Mine Countermeasures (MCM) inventory.</p>											

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 10 of 48)

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures	PROJECT NUMBER AND NAME 2047 Airborne Laser Mine Detection System																						
(U) B. Accomplishments/Planned Program																								
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		FY 03	FY 04	FY 05																				
Accomplishments/Effort/Subtotal Cost		7.724	4.763	1.329																				
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		FY 03	FY 04	FY 05																				
Accomplishments/Effort/Subtotal Cost		1.427	1.030	0.198																				
RDT&E Articles Quantity																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 10%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">8.636</td> <td style="text-align: center;">4.877</td> <td style="text-align: center;">2.014</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td style="text-align: center;">17.787</td> <td style="text-align: center;">10.670</td> <td style="text-align: center;">3.541</td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Contractor Testing, Developmental Testing-IIB/Operational Assessment on platform of opportunity (FY03) Developmental Testing-IIC Operational Testing (OPEVAL) (FY05) </div>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		8.636	4.877	2.014	RDT&E Articles Quantity					Total		17.787	10.670	3.541
		FY 03	FY 04	FY 05																				
Accomplishments/Effort/Subtotal Cost		8.636	4.877	2.014																				
RDT&E Articles Quantity																								
Total		17.787	10.670	3.541																				

R-1 SHOPPING LIST - Item No.

107

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 11 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2047 Airborne Laser Mine Detection System			

(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>
424800 OPN	0.000	0.000	0.000	21.307	23.304	52.267	53.524	66.569	0.000	216.971

(U) E. ACQUISITION STRATEGY: *

In April 2000, the ALMDS program received MS II approval to enter the Engineering and Manufacturing Development (E&MD) phase. Northrop Grumman won the competitively awarded E&MD contract.

The ALMDS E&MD contract with Northrop Grumman has 3 types of incentives: schedule incentive for early delivery of EDM units; technical incentive for performance reliability and maintainability; and a cost incentive - a cost sharing percentage both for an overrun and an underrun. Successful completion of DT-IIB, on an alternate platform (SH-60F), will support a Low-Rate Initial Production (LRIP) decision, which will be an option to the current E&MD contract. After a successful OPEVAL on the intended deployment platform (MH-60S), Full-Rate Production will begin. The first full-rate production lot will be an option to the current E&MD contract to prove out the producibility of the system. The remaining 38 production units will be awarded after a full and open competition.

(U) F. MAJOR PERFORMERS: **

Northrop Grumman, Melbourne, FL - Prime Contractor for Engineering, Manufacture Development, awarded 4/00.
 Costal Systems Station, Panama City, FL - Technical Direction Agent

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2047 Airborne Laser Mine Detection 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
Hardware/Software Development	WR	CSS, Panama City	0.465	0.050	10/02	0.190	10/03				0.705	
Hardware/Software Development	RCP	CSS, (Prime Contractor)	19.086	1.500	10/02	1.500	10/03			4.804	26.890	
Hardware/Software Development	RCP	Metron	0.625								0.625	
Hardware/Software Development	RCP	SAIC		0.200	10/02						0.200	
Hardware/Software Development											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			20.176	1.750		1.690		0.000		4.804	28.420	
Remarks:												
Engineering Services	WR	CSS, Panama City	7.441	1.008	10/02	0.702	10/03	0.252	10/04	3.760	13.163	
Engineering Services	RCP	CSS, (Prime Contractor)	9.632	0.898	10/02					3.195	13.725	
Engineering Services	VAR	Various	4.080	2.204	10/02	1.491	10/03	0.629	10/04	5.017	13.421	
Engineering Services	RCP	Various	2.871	0.251	10/02	0.200	10/03	0.050	10/04	1.100	4.472	
ILS Functions	WR	CSS, Panama City	1.097	0.249	10/02	0.225	10/03	0.045	10/04		1.616	
ILS Functions	RCP	CSS, (Prime Contractor)	4.405	1.078	10/02	0.730	10/03	0.103	10/04	0.500	6.816	
ILS Functions	VAR	Various/NRL Stennin	1.062								1.062	
ILS Functions	RCP	CSS, Panama City		0.100	10/02	0.075		0.050	10/04		0.225	
Subtotal Support			30.588	5.788		3.423		1.129		13.572	54.500	
Remarks:												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures				PROJECT NUMBER AND NAME 2047 Airborne Laser Mine Detection 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
Testing and Evaluation	RCP	CSS, (Prime Contractor)	1.008	5.249	10/02	1.671	10/03	0.215	10/04	3.456	11.599	
Testing and Evaluation	WR	CSS, Panama City	0.199	2.787	10/02	2.806	10/03	1.617	10/04	3.300	10.709	
Testing and Evaluation	VAR	Various	0.392								0.392	
Testing and Evaluation	RCP	CSS, Panama City		0.600	10/02	0.400	10/03	0.150	10/04	0.200	1.350	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.599	8.636		4.877		1.982		6.956	24.050	
Remarks:												
Management Support		Travel	0.200	0.030	10/02	0.050	10/03	0.030	10/04	0.180	0.490	
Management Support	VAR	Various	0.700	0.700	10/02	0.310	10/03	0.180	10/04	1.100	2.990	
Management Support	RCP	CSS, (Prime Contractor)		0.579	10/02	0.000	10/03			0.800	1.379	
Management Support	WR	CSS, Panama City		0.304	10/02	0.320	10/03	0.220	10/04	0.240	1.084	
											0.000	
											0.000	
Subtotal Management			0.900	1.613		0.680		0.430		2.320	5.943	
Remarks:												
Total Cost			53.263	17.787		10.670		3.541		27.652	112.913	
Remarks:												

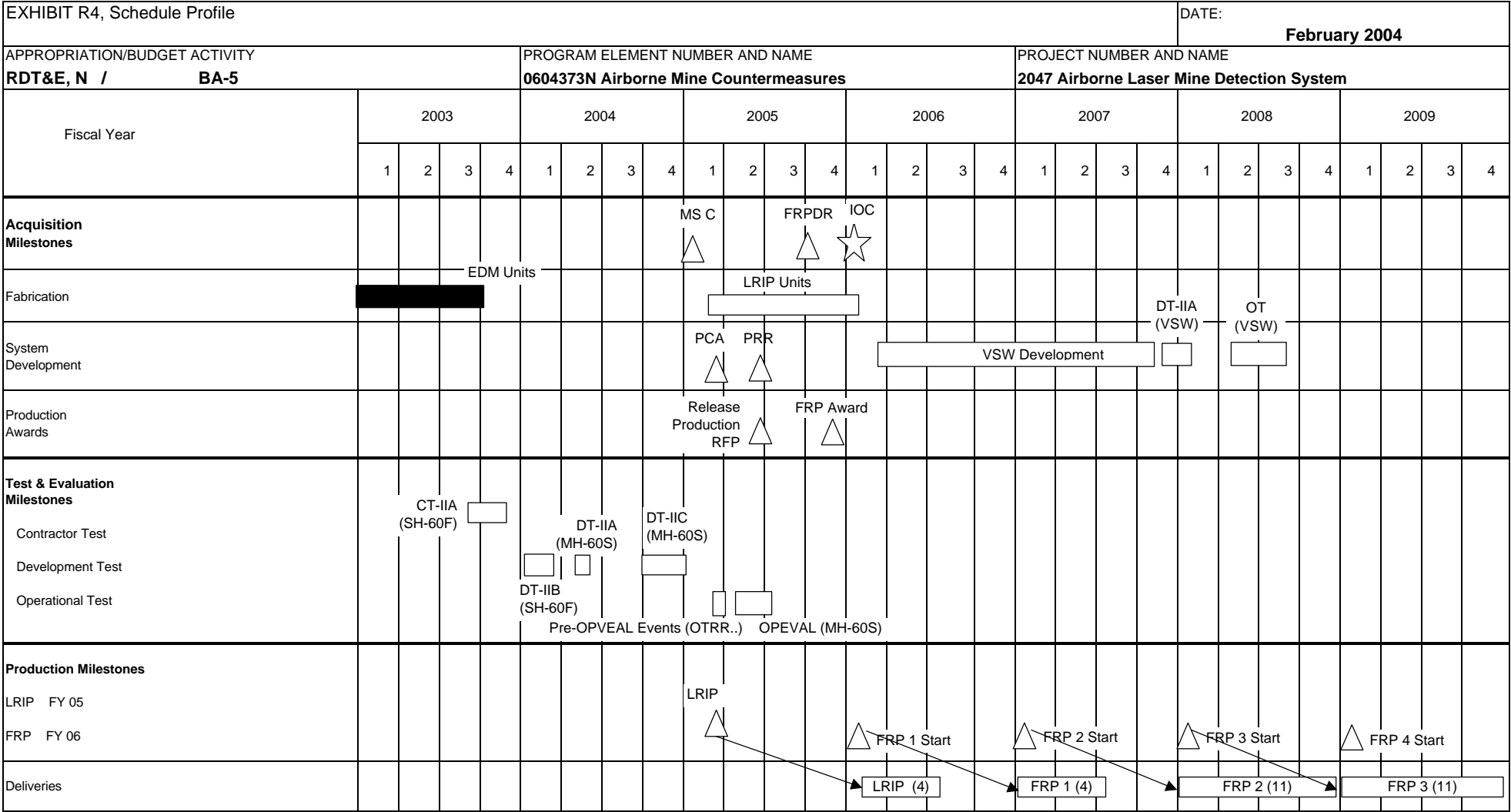
R-1 SHOPPING LIST - Item No. 107

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 14 of 48)

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R-1 SHOPPING LIST - Item No. 107

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

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R-1 SHOPPING LIST - Item No. 107

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 16 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures					PROJECT NUMBER AND NAME 2427/2883 Organic Airborne and Surface Influence Sweep					
COST (\$ in Millions)	Prior Years Cost		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	25.435		13.762	14.625	11.215	0.773	0.000	0.000	0.000	0.000	65.810
RDT&E Articles Qty					3						3

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

The OASIS system is a towed Minesweeping System that is deployed from specially configured MH-60S helicopters or surface craft in support of the Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG). The system provides a rapid response sweeping capability against bottom and moored, acoustic and magnetic, or combination acoustic/magnetic influence mines in support of mine clearance operations where mine hunting is ineffective. The system consists of a towed body, a magnetic/acoustic influence capability, a control/monitoring system under software control and interfaces to the helicopter Carriage, Stream, Tow, and Recovery System and the Common Console. The program is currently in the SD&D phase where three engineering development models (EDMs) will be developed for test and evaluation. Production is planned for FY06 thru FY10 to meet the inventory requirement of 44 units over a five-year period.

R-1 SHOPPING LIST - Item No. 107

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 17 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																					
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures	PROJECT NUMBER AND NAME 2427/2883 Organic Airborne and Surface Influence Sweep																						
B. Accomplishments/Planned Program																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 10%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">4.796</td> <td style="text-align: center;">1.827</td> <td style="text-align: center;">0.969</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		4.796	1.827	0.969	RDT&E Articles Quantity									
		FY 03	FY 04	FY 05																				
Accomplishments/Effort/Subtotal Cost		4.796	1.827	0.969																				
RDT&E Articles Quantity																								
<div style="border: 1px solid black; padding: 5px;"> Continue SD&D contract to complete Design, Conduct CDR, Fabricate 3 EDM, and begin to integrate EDMs into platform. Conduct technical reviews such as PDR, SRDR, and CDR. Congressional Add. - Investigate development of the RTASS system. </div>																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 10%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">7.724</td> <td style="text-align: center;">11.433</td> <td style="text-align: center;">9.252</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		7.724	11.433	9.252	RDT&E Articles Quantity									
		FY 03	FY 04	FY 05																				
Accomplishments/Effort/Subtotal Cost		7.724	11.433	9.252																				
RDT&E Articles Quantity																								
<div style="border: 1px solid black; padding: 5px;"> Conduct technical studies on MHC60S interface and other technical studies.(Cong. add) Conducted remote technical assistance to MCM ship. Conduct TECHEVAL and prepare for OPEVAL Conducted shock test and other technical studies. Conduct studies on C4I Interface and MEDAL. Conduct engineering and desing work. </div>																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 10%;"></td> <td style="width: 20%; text-align: center;">FY 03</td> <td style="width: 20%; text-align: center;">FY 04</td> <td style="width: 20%; text-align: center;">FY 05</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">1.242</td> <td style="text-align: center;">1.365</td> <td style="text-align: center;">0.994</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td style="text-align: center;">13.762</td> <td style="text-align: center;">14.625</td> <td style="text-align: center;">11.215</td> </tr> </table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		1.242	1.365	0.994	RDT&E Articles Quantity					Total		13.762	14.625	11.215
		FY 03	FY 04	FY 05																				
Accomplishments/Effort/Subtotal Cost		1.242	1.365	0.994																				
RDT&E Articles Quantity																								
Total		13.762	14.625	11.215																				
<div style="border: 1px solid black; padding: 5px;"> Monitored Contractor performance and techincal review of CDRLs. Conduct HCDR and PDR. Continue to monitor Contractor performance and technical review of CDRLs. Support platform integration. </div>																								

R-1 SHOPPING LIST - Item No.

107

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 18 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2427/2883 Organic Airborne and Surface Influence Sweep					
(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>
424800 OPN	0.000	0.000	0.000	0.000	11.003	28.388	29.038	29.632	CONT.	CONT.
 (U) E. ACQUISITION STRATEGY:										
After Milestone B review in FY02, a SD&D contract was awarded. In FY06, following a successful DT and MS C, procurement options will be exercised.										
 (U) F. MAJOR PERFORMERS:										
EDO Corporation, Amityville, NY. - Production of EDM units, participate in engineering, system integration, and meeting ILS requirements. Coastal Systems Station, Panama City, FL. - Contributing to ILS, program management, engineering, and system integration.										

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT Airborne Mine Countermeasures/0604373N			PROJECT NUMBER AND NAME 2427/2883 Organic Airborne and Surface Influence Sweep						
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/Software Development	C/CPFF	EDO Corp.	1.722								1.722	
Hardware/Software Development	C/CPIF	EDO Corp.	2.200	3.845	10/02	1.827	10/03	0.969	10/04	0.000	8.841	
Hardware/Software Development	SS/CPFF	Aeptec Microsystems Inc	5.123	0.775	08/03						5.898	
		Rockville, MD									0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			9.045	4.620		1.827		0.969		0.000	16.461	
Remarks:												
Engineering Services	WR	NUWC Keyport	0.483	0.176	06/03						0.659	
Engineering Services	C/CPIF	EDO Corp	3.663	1.993	10/02	4.558	10/03	0.125	10/04		10.339	
Engineering Services	WR	CSS Panama City	5.208	2.003	10/02	0.813	10/03	0.826	10/04	0.367	9.217	
Engineering Services	WR	NSWC Carderock MD	0.725								0.725	
Engineering Services/ILS	VAR	Various	0.548	0.000	10/02		10/03		10/04		0.548	
Engineering Services	PD	ONR	1.367	0.000		2.135	10/03	1.683	10/04	0.100	5.285	
ILS Functions	C/CPIF	EDO Corp	0.732	0.664	10/02	1.023	10/03	1.299	10/04	0.157	3.875	
ILS Functions	WR	CSS Panama City	0.876	0.305	10/02	0.053	10/03	0.125	10/04		1.359	
Subtotal Support			13.602	5.141		8.582		4.058		0.624	32.007	
Remarks:												

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CLASSIFICATION:

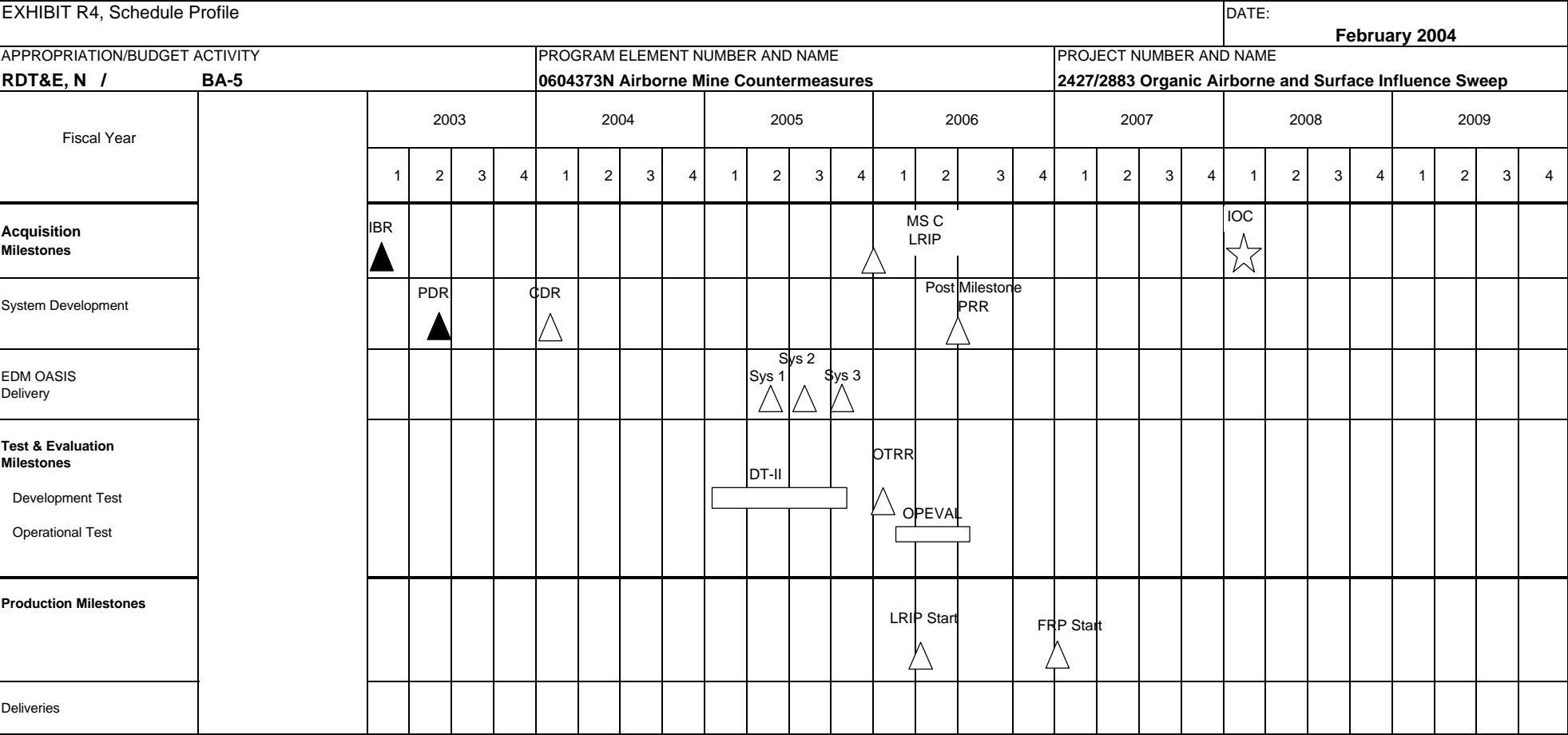
Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2427/2883 Organic Airborne and Surface Influence Sweep						
Cost Categories	Contract Method & Type	Performing 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
Test and Evaluation Functions											0.000	
T&E Functions	C/CPIF	EDO Corp		2.659	10/02	1.299	10/03	1.897	10/04		5.855	
T&E Functions	WR	CSS Panama City, FL	1.186	0.100	10/02	1.552	10/03	3.297	10/04		6.135	
T&E Functions	VAR	Various	0.554								0.554	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.740	2.759		2.851		5.194		0.000	12.544	
Remarks:												
Management Support											0.000	
Management Support	VAR	Various	0.913	1.212	10/02	1.365	10/03	0.994	10/04	0.149	4.633	
Management Support		Travel	0.135	0.030	10/02		10/03		10/04		0.165	
											0.000	
											0.000	
											0.000	
Subtotal Management			1.048	1.242		1.365		0.994		0.149	4.798	
Remarks:												
Total Cost			25.435	13.762		14.625		11.215		0.773	65.810	
Remarks:												

R-1 SHOPPING LIST - Item No. 107

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Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 21 of 48)

CLASSIFICATION:



R-1 SHOPPING LIST - Item No. 107

Note: This Program Schedule reflects the revised APB change 1. A Program Deviation Notification letter has been submitted for approval.

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CLASSIFICATION:

[illegible]

R-1 SHOPPING LIST - Item No. 107

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 23 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-5	0604373N Airborne Mine Countermeasures					2473 Airborne Mine Neutralization Systems					
COST (\$ in Millions)	Prior Years Cost		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	47.880		21.851	47.225	29.671	12.288	0.000	0.000	0.000	0.000	158.915
RDT&E Articles Qty			AMNS 2	AMNS 1	RAMICS 2						5

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

The **Airborne Mine Neutralization Systems (AMNS)** research and development effort was restarted in FY97 in Project Q0529 P.E. 0604373N. AMNS will provide the MH-60S with the capability to neutralize bottom and moored mines using an airborne delivered expendable mine neutralization device. The AMNS is being tested on the MH-53E to prove out the neutralization effectiveness. The system will also be deployed from the MH-60S helicopter and will provide organic airborne mine defense for Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA).

The **Rapid Airborne Mine Clearance System (RAMICS)** MIW program began Concept & Technology Development phase in FY00. RAMICS will satisfy the U.S. Navy's need for a rapid mine clearance capability required to neutralize near-surface and surface (floating) moored sea mines. RAMICS will use geo-location data provided by other minehunting and mine reconnaissance systems, use a laser system to reacquire targets and to direct the fire of supercavitating projectiles that will render the mines inoperable. RAMICS includes the following major subsystems and components:

- (a) Gun Subsystem (including gun and turret)
- (b) Munition Subsystem - MK258 Mod 1 Armor Piercing, Fin Stabilized, Discarding Sabot-Tracer (APFSDS-T)
- (c) Targeting Sensor Subsystem.
- (d) Fire Control Subsystem.
- (e) Software

The system will be deployed from the MH-60S helicopter and will provide organic airborne mine defense for Carrier Strike Groups (CSG) and Expeditionary Strike Groups (ESG). This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). Some interest in the following areas has been expressed: search and rescue; Surface fire support; Protection/offense against small craft/vehicles; Air to air operations; Very shallow water MCM; Swimmer defense and Torpedo defense; and ASW capabilities. RAMICS received Below Threshold Reprogramming (BTR) in FY03 (\$.6M) and Congressional Add in FY04 (\$2M) for RAMICS ASW capabilities. RAMICS ASW capabilities will provide a reliable rapid response weapon system to effectively defeat large surface, near surface, and underwater targets in the littorals.

R-1 SHOPPING LIST - Item No. 107

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 24 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures	PROJECT NUMBER AND NAME 2473 Airborne Mine Neutralization Systems		

(U) B. Accomplishments/Planned Program

AMNS		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		11.434	14.368	15.576
RDT&E Articles Quantity		2	1	

FY03 ACCOMPLISHMENTS:
Awarded SD&D contract, initiated design and developed software. Completed MH-53E TECHEVAL.

FY04 PLAN: Continue design, develop software, and integrate aboard MH-60S, conduct 2105 testing and environmental testing. Continue to monitor Contractor performance and technical review of CDRLs.

FY05 PLAN: Prepare documentation for MH-60S contract award (production), conduct contractor test, MH-60S TECHEVAL, initiate MH-60S OPEVAL. Continue to monitor Contractor performance and technical review of CDRLs. Develop program documentation to achieve MS-C.

RAMICS		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		10.417	32.857	14.095
RDT&E Articles Quantity				2
Total		21.851	47.225	29.671

FY03 ACCOMPLISHMENTS:
Conducted Rig and Munition Tests. Continue RAMICS MIW design and development under SD&D contract. Conducted Preliminary Design Review (PDR) in August 2003 and Independent Cost Assessment (ICA) update review in September 2003. Conduct RAMICS ASW capability study, preliminary CONOPs, and drafted Classified Guide.

FY04 PLAN: Continue RAMICS MIW design, development under SD&D contract. Conduct DT-IIA and Critical Design Review (CDR). Start RAMICS ASW capabilities design. Support DODIG audit.

FY05 PLAN: Complete RAMICS design, develop, and fabrication of Engineering Development Models (EDMs). Complete Contractor's Testing (CT) and initiate Technical Evaluation (TECHEVAL).

R-1 SHOPPING LIST - Item No.

107

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 25 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2473 Airborne Mine Neutralization System				

(U) D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</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>
AMNS									
424800 OPN	2.594	0.000	0.000	4.350	11.204	14.911	17.103	CONT.	CONT.
AMNS									
422500 WPN	0.720	0.000	0.000	2.845	7.145	3.843	3.918	CONT.	CONT.

(U) E. ACQUISITION STRATEGY: *

Procurement for seven (7) MH-53E system in FY03 as a Rapid Deployment Capability (RDC). In FY06, following a successful DT and MS-C, an LRIP award is planned for two (2) MH-60S systems. FRPDR is planned for FY06. Full and open competition is planned for the AMNS (MH-60S) FRP contract.

(U) F. MAJOR PERFORMERS: **

Lockheed Martin Corporation (Ocean, Radar, & Sensor Systems) Syracuse, NY Modification and fabrication of a non-developmental item (NDI) AMNS prototype system and the design, construction, and integration of AMNS equipment into the MH-53E helicopter Actual OTA Award: 12/98 Actual Production RDC Contract Award: 5/03

Raytheon Company (Integrated Defense Systems) Portsmouth, RI Fabrication of a non-developmental item (NDI) AMNS prototype system, and the design, construction, and integration of AMNS equipment into the MH-60S helicopter. Actual SD&D contract award: 1/03.

Naval Surface Warfare (Center Coastal Systems Station) Panama City, FL Serves as the Technical Direction Agent (TDA) for the AMNS program.

AMNS ONLY

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:		
								February 2004		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
RDT&E, N / BA-5			0604373N Airborne Mine Countermeasures			2473 Airborne Mine Neutralization 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
RAMICS 422500 WPN	0.000	0.000	0.000	0.000	10.482	24.427	19.632	30.478	CONT	CONT
RAMICS 0019600 PANMC	0.000	0.000	0.000	0.000	0.222	0.673	0.687	0.700	CONT	CONT
(U) E. ACQUISITION STRATEGY:										
RAMICS: Achieved MS B in July 2002 and awarded SD&D contract in August 2002 based on a full and open competition. Following a successful DT and MS C in FY06 , a FY06 LRIP award is planned for two (2) systems for fleet use. Full Rate Production (FRP) is scheduled to start in FY07.										
(U) F. MAJOR PERFORMERS:										
SD&D Contractor, Northrop Grumman Melbourne, FL - Awarded RAMICS SD&D contract in August 2002 for two RAMICS Engineering Development Models (EDMs) scheduled for delivery in FY05.										
Alliant TechSystems (ATK) - Awarded RAMICS Gun Subsystem contract in July 2001 via NSWC Crane. Performed PDR, CDR, and Acceptance Testing in FY02. The contract has option for production units.										
NSWC CSS, Panama City, FL - As Technical Design Agent (TDA) for RAMICS; supported successful completion of CTD Phase, prepared draft Request For Proposal (RFP) for the SD&D contract, supported the proposal evaluation, and conducted a series of risk reduction tests in FY00 - FY02 and plans to conduct additional tests .										
NSWC Crane, Crane IN - As a Weapon System Development, Crane is responsible for definition and selection of the RAMICS Gun Subsystem. Accordingly, awarded contract to ATK.										
NAWC Pax, Pautaxant River, MD - As Aircraft(A/C) Integration Agent, coordinates all tests with A/C Integration.										
RAMICS ONLY										

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 27 of 48)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2473 Airborne Mine Neutralization 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
Hardware/Software Development	C/845	Lockheed Syracuse, NY	3.331								3.331	
Hardware/Software Development	VAR	Various	3.359								3.359	
Hardware/Software Development	WR	CSS Panama City, FL	0.290	0.471	12/02	0.478	10/03	0.243	10/04		1.482	
Hardware/Software Development	C/CPIF	Raytheon, Portsmouth RI		6.009	01/03	5.093	10/03	1.564	10/04		12.666	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			6.980	6.480		5.571		1.807		0.000	20.838	
Remarks: AMNS Only												
Engineering Services	VAR	Various	2.718	0.582	12/02	1.072	10/03	1.153	10/04	0.153	5.678	
Engineering Services	WR	CSS Panama City, FL	7.096	1.278	12/02	3.045	10/03	2.039	10/04	0.262	13.720	
Engineering Services	C/CPIF	Raytheon, Portsmouth RI		1.951	01/03	2.077	10/03	1.219	10/04	0.067	5.314	
											0.000	
ILS Functions	WR	CSS Panama City, FL	2.908	0.153	12/02	0.165	10/03	0.121	10/04	0.094	3.441	
ILS Functions	SS/BOA	Lockheed Syracuse, NY	0.227								0.227	
ILS Functions	C/CPIF	Raytheon, Portsmouth RI		0.561	01/03	0.734	10/03	0.498	10/04	0.336	2.129	
											0.000	
Subtotal Support			12.949	4.525		7.093		5.030		0.912	30.509	
Remarks: AMNS ONLY												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 2473 Airborne Mine Neutralization 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	VAR	Various	0.300								0.300	
Developmental Test & Evaluation	WR	CSS Panama City, FL	8.647					2.878	10/04		11.525	
Developmental Test & Evaluation	SS/BOA	Lockheed Syracuse, NY	1.254								1.254	
Developmental Test & Evaluation	C/CPIF	Raytheon, Portsmouth RI				1.168	10/03	2.878	10/04		4.046	
Operational Test & Evaluation	WR	COTF Norfolk, VA	1.388					2.396	10/04	1.044	4.828	
Operational Test & Evaluation	SS/BOA	Lockheed Syracuse, NY	0.767								0.767	
											0.000	
Subtotal T&E			12.356	0.000		1.168		8.152		1.044	22.720	
Remarks:												
Program Management Support	VAR	Various	0.649	0.389	10/02	0.496	10/03	0.547	10/04	0.075	2.156	
Travel			0.094	0.040	10/02	0.040	10/03	0.040	10/04	0.010	0.224	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.743	0.429		0.536		0.587		0.085	2.380	
Remarks:												
Total Cost			33.028	11.434		14.368		15.576		2.041	76.447	
Remarks: AMNS ONLY												

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 29 of 48)

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 30 of 48)

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																		DATE:				February 2004									
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME																
RDT&E, N / BA-5					0604373N Airborne Mine Countermeasures										2473 Airborne Mine Neutralization System																
Fiscal Year	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			
Acquisition Milestones												MS C △		FRPDR (MH-60S) △				IOC ★	First Deployment ★												
Prototype Phase					SD&D Phase (MH-60S)																										
EDM Contract Award					Contract Award (MH-60S)																										
Significant Events																															
EDM Deliveries																															
Test & Evaluation Milestones																															
Development Test																															
Operational Test																															
Production Milestones																															
PROD (MH-53E) FY 03																															
LRIP (MH-60S) FY 06																															
FRP (MH-60S) FY 07																															
Deliveries																															

AMNS ONLY

R-1 SHOPPING LIST - Item No. 107

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

UNCLASSIFIED

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 31 of 48)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604373N Airborne Mine Countermeasures			2473 Airborne Mine Neutralization 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
Hardware/Software Development	C/CPIF	Northrop Grumman, FL	1.032	4.207	10/02	13.691	10/03	5.626	10/04	4.364	28.920	
Hardware/Software Development	Various	CSS - Panama City, FL	1.634								1.634	
Hardware/Software Development	RCP	Crane - Crane, IN	1.381								1.381	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			4.047	4.207		13.691		5.626		4.364	31.935	
Remarks: This is RAMICS only .												
Engineering Services	C/CPIF	Northrop Grumman, FL	0.553	1.624	10/02	5.205	10/03	1.290	10/04	1.293	9.965	
Engineering Services	Various	CSS - Panama City, FL	3.923	1.037	10/02	1.545	10/03	0.466	10/04	0.322	7.293	
Engineering Services	Various	Crane - Crane, IN	2.200								2.200	
Engineering Services	WR	Various	0.725			0.781	10/03			0.880	2.386	
											0.000	
ILS Functions	C/CPIF	Northrop Grumman, FL		1.309	10/02	2.957	10/03	1.783	10/04	0.943	6.992	
ILS Functions	Various	CSS Panama City, FL	0.350	0.134	10/02	0.401	10/03	0.260	10/04	0.255	1.400	
ILS Functions	Various	Various				1.500	10/03	1.000	10/04	0.280	2.780	
Subtotal Support			7.751	4.104		12.389		4.799		3.973	33.016	
Remarks: This is RAMICS only .												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604373N Airborne Mine Countermeasures			2473 Airborne Mine Neutralization 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
Test & Evaluation	C/CPIF	Northrop Grumman, FL		0.082	10/02	2.248	10/03	0.489	10/04	0.087	2.906	
Test & Evaluation	WR	CSS - Panama City, FL	0.930	0.200	10/02	0.100	10/03	0.661	10/04	0.600	2.491	
Test & Evaluation	WR	Crane - Crane, IN		0.500	10/02						0.500	
Test & Evaluation	Various	Various	0.893	0.753	10/02	3.975	10/03	2.199	10/04	0.893	8.713	
											0.000	
											0.000	
											0.000	
Subtotal T&E			1.823	1.535		6.323		3.349		1.580	14.610	
Remarks: This is RAMICS only .												
Management Support	Various	Various	1.143	0.541	10/02	0.420	10/03	0.300	10/04	0.300	2.704	
Management Support		Travel	0.088	0.030	10/02	0.034	10/03	0.021	10/04	0.030	0.203	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			1.231	0.571		0.454		0.321		0.330	2.907	
Remarks: This is RAMICS only .												
Total Cost			14.852	10.417		32.857		14.095		10.247	82.468	
Remarks: This is RAMICS only .												

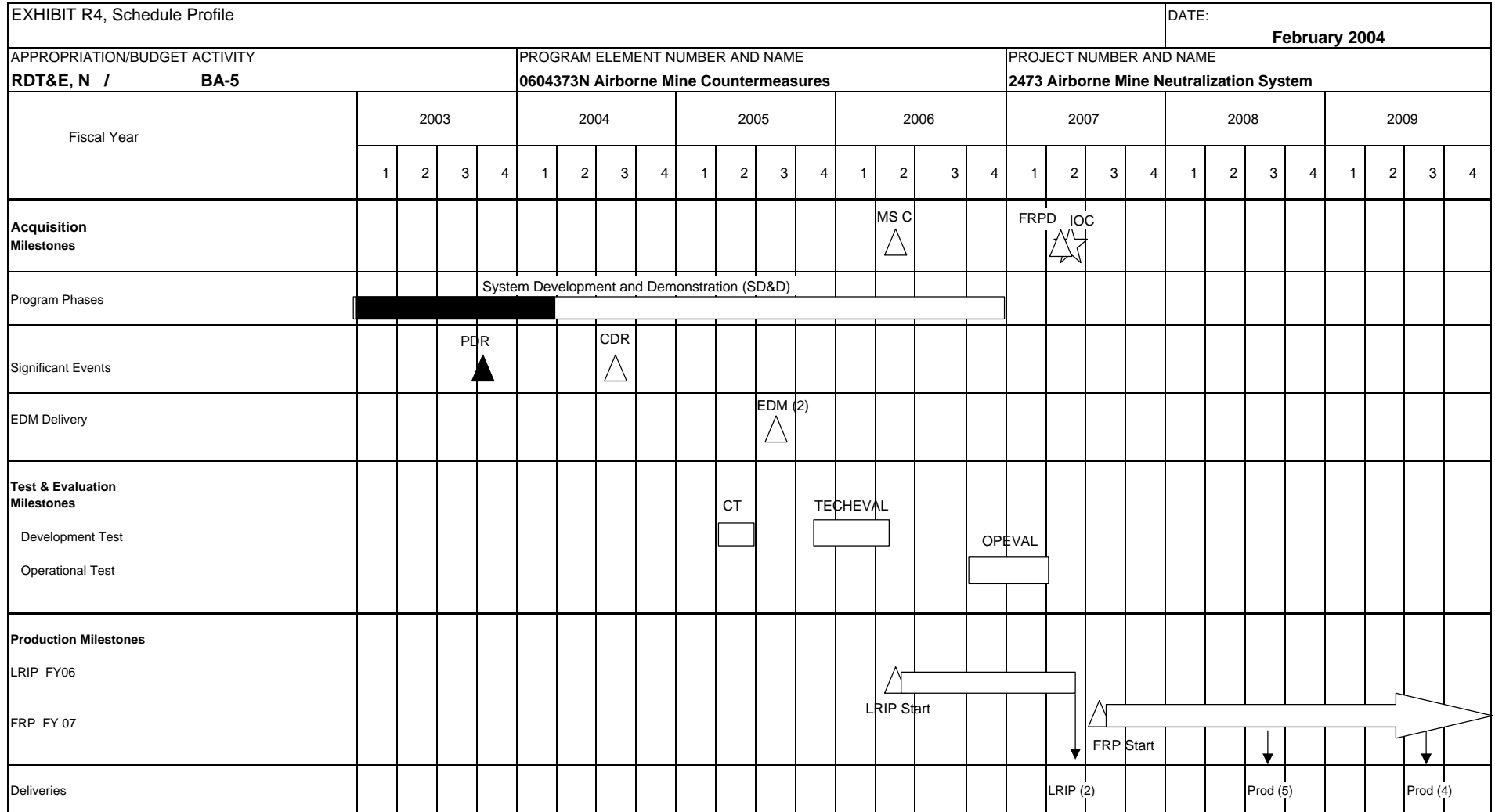
R-1 SHOPPING LIST - Item No. 107

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 33 of 48)

UNCLASSIFIED

CLASSIFICATION:



RAMICS ONLY

R-1 SHOPPING LIST - Item No. 107

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

UNCLASSIFIED

UNCLASSIFIED

DATE: **February 2004**

R-1 SHOPPING LIST - Item No. 107

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 35 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-5	0604373N Airborne Mine Countermeasures					4026 - C4I, Tactics, and Mission Planning					
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	0.000	0.000	0.000	0.000	1.289	1.823	1.556	1.366	1.308	Continuing	Continuing
RDT&E Articles Qty											0

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

The PMS210 C4I, Tactics, Mission Planning, and Post-Mission Analysis (CTMP) program began in FY97 as an initiative to provide near-real-time data linking of mine sensor data between the MH-53E aircraft and ship-and/or shore-based command centers. Additionally, the program began to develop MEDAL modules for each "Next Generation" system; and plans to develop "Next Generation" tactics; provide threat data and system requirements and capabilities to the MEDAL software development effort; and develop a common post-mission analysis tool for "Next Generation" systems. This program was previously funded under PE-0603502N/PU-Q1233.

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 36 of 48)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures	PROJECT NUMBER AND NAME 4026 - C4I, Tactics, and Mission Planning		

(U) B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				0.657
RDT&E Articles Quantity				

Mission Planning and Post Mission Analysis (MEDAL)

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				0.310
RDT&E Articles Quantity				

Common PMA

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				0.322
RDT&E Articles Quantity				

Total
1.289

Tactics Evaluation, Data Bases, and Algorithms
 Tactics Documentation and Training

R-1 SHOPPING LIST - Item No.

107

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 4026 - C4I, Tactics, and Mission Planning				
(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>	To Complete	Total Cost
(U) E. ACQUISITION STRATEGY: *										
(U) F. MAJOR PERFORMERS: **										
SAIC - MEDAL Development.										
Coastal Systems Station, Panama City, FL - Technical Direction Agent										
Northrop Grumman, Annapolis, MD - Q-14/Q-24 Data Link										

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT 0604373N Airborne Mine Countermeasures			PROJECT NUMBER AND NAME 4026 - C4I, Tactics, and Mission Planning						
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/Software Development	RCP	SAIC						0.300	10/04	Continuing	Continuing	
Hardware/Software Development	RCP	Northrop Grumman						0.295	10/04	Continuing	Continuing	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.595		0.000	0.595	
Remarks:												
Engineering Services	WR	CSS, Panama City						0.322	10/04	Continuing	Continuing	
Engineering Services	RCP	SAIC						0.230	10/04	Continuing	Continuing	
Engineering Services	WR	NAVO						0.015	10/04	Continuing	Continuing	
Engineering Services											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			0.000	0.000		0.000		0.567		0.000	0.567	
Remarks:												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604373N Airborne Mine Countermeasures			4026 - C4I, Tactics, and Mission Planning						
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
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Management Support	RCP	SAIC						0.127	10/04	Continuing	Continuing	
Management Support											0.000	
Management Support											0.000	
Management Support											0.000	
											0.000	
											0.000	
Subtotal Management			0.000	0.000		0.000		0.127		Continuing	Continuing	
Remarks:												
Total Cost			0.000	0.000		0.000		1.289			1.289	
Remarks:												

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UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																			DATE:									
February 2004																												
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME													
RDT&E, N / BA-5					0604373N Airborne Mine Countermeasures										4026 - C4I, Tactics, and Mission Planning													
Fiscal Year	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
MEDAL																												
Common PMA																												
NATOPS Supplements																												
Tactics																												
MIW Commanders Handbook																												
Reachback support OAMCM																												
OAMCM Integrated TACMEMO																												
Issue TACMEMO																												
Transition to doctrine																												

R-1 SHOPPING LIST - Item No. 107

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

UNCLASSIFIED

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 42 of 48)

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures				PROJECT NUMBER AND NAME Q9179 Surface Navy Integrated Undersea Tactical Technology					
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	0.000	0.000	3.692	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.692
RDT&E Articles Qty											0

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

This congressional add for Surface Navy Integrated Undersea Tactical Technology (SNIUTT) will be used to develop an AN/AQS-20A sensor training module for the Carrier Vessel - Tactical Support Center (CV-TSC) LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).

R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 43 of 48)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA -5	PROGRAM ELEMENT NUMBER AND NAME 0604373N Airborne Mine Countermeasures	PROJECT NUMBER AND NAME Q9179 Surface Navy Integrated Undersea Tactical Technology		
B. Accomplishments/Planned Program				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		3.692	0.000	0.000
RDT&E Articles Quantity				
<div>Congressional Add. - Investigate development of an AN/AQS-20A sensor training module for the Carrier Vessel - Tactical Support Center (CV-TSC) LAN-based Surface Network Embedded Analysis and Tactical Trainer (SNEATT).</div>				

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604373N Airborne Mine Countermeasures			9179 Surface Navy Integrated Undersea Tactical Technology (SNIUTT)						
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/Software Development	C/CPFF	AAC, Ronkonkoma, NY		3.359	08/03						3.359	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			0.000	3.359		0.000		0.000		0.000	3.359	
Remarks:												
Development Support	WR	CSS Panama City, FL		0.333	06/03						0.333	
Software Development											0.000	
Training Development											0.000	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			0.000	0.333		0.000		0.000		0.000	0.333	
Remarks:												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604373N Airborne Mine Countermeasures			9179 Surface Navy Integrated Undersea Tactical Technology (SNIUTT)						
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											0.000	
Operational Test & Evaluation											0.000	
Live Fire Test & Evaluation											0.000	
Test Assets											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support											0.000	
Travel											0.000	
Labor (Research Personnel)											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			0.000	3.692		0.000		0.000		0.000	3.692	
Remarks:												

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																				DATE:				February 2004				
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME													
RDT&E, N / BA-5					0604373N Airborne Mine Countermeasures										9179 SNIUTT													
Fiscal Year	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
Acquisition Milestones																												
Prototype Phase																												
EDM Contract Award																												
Significant Events																												
EDM Deliveries																												
Test & Evaluation Milestones																												
Development Test																												
Operational Test																												
Production Milestones																												
LRIP (MH-60S) FY 06																												
FRP (MH-60S) FY 07																												
Deliveries																												

R-1 SHOPPING LIST - Item No. 107

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 47 of 48)

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R-1 SHOPPING LIST - Item No. 107

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 48 of 48)