CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5**					R-1 ITEM NOMENCLATURE 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		**37.599**	**33.550**	**11.513**	**18.602**	**20.237**	**20.651**	**19.034**
0954 Shipboard EW Improvements		**20.569**	**22.662**	**10.537**	**17.605**	**19.222**	**19.620**	**17.981**
2190/2441/Nulka Decoy		**3.825**	**0.988**	**0.976**	**0.997**	**1.015**	**1.031**	**1.053**
9244 / Surface Ship EW R&D Improvements (SBIR Phase III)		**9.836**						
9591/Shipboard Leverage EW System		**3.369**						
9999/Congressional Adds			**9.900**					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

0954 - The Surface Electronic Warfare Improvement Program (SEWIP) is an evolutionary acquisition and spiral development program of Block upgrades to the AN/SLQ-32(V) family of passive and active shipboard electronic warfare (EW) systems. It replaces the AN/SLY-2(V) Advanced Integrated Electronic Warfare System (AIEWS) program, which was cancelled in April 2002 due to cost growth and development delay issues. SEWIP will provide necessary EW capabilities and will incorporate technology advances as they become available to provide incremental upgrades in capability and improvements in performance. Continuous technology reviews will be in progress, potential alternate element and component surveys performed, and ongoing Cost As an Independent Variable (CAIV) efforts will be employed throughout to aid decision-making. Threat system technologies will be examined and compared against program planning to achieve best capability within available resources. The capabilities and subsystems included in Blocks can change as technology matures for integration.

2190/2441 - The Offboard Active Decoy (NULKA) is a joint cooperative program between the United States and Australia that developed an active offboard decoy that utilizes a broadband radio frequency repeater mounted atop a hovering rocket. NULKA is designed to counter a wide variety of present and future radar guided Anti-Ship Missiles (ASMs) by radiating a large radar cross section while flying a ship-like trajectory. The United States developed the electronic payload and fire control system, while Australia developed the hovering rocket. Currently NULKA is undergoing a P3I program to integrate the Mk 53 Decoy Launching System with Ship Self Defense System (SSDS) and the ship combat systems, maintain electromagnetic compatibility with shipboard emitters, integrate with future electronic warfare system upgrades, and to upgrade the Inertial Measurement Unit (IMU).

9244 - Congressional Add for Surface ship electronic warfare (EW) R&D Improvements (Note: only for Surface Ship EW SBIR Phase III improvements.)

9591 - Congressional Add for Shipboard Leveraged Electronic Warfare System (SLEWS)

9855N - Congressional Add of $1.5M for Radar Absorbing Tiles

2441C - Congressional Add of $2.0M for NULKA Decoy System

9856N - Congressional Add of $2.5M for Sea Raptor,

9244C - Congressional Add of $3.9M for Surface Ship EW Improvement Program (Note: Only for continuation of SBIR phase III follow-On).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **February 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)				PROJECT NUMBER AND NAME 0954/9244 Shipboard EW Improvements			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		**33.774**	**22.662**	**10.537**	**17.605**	**19.222**	**19.620**	**17.981**
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Surface Electronic Warfare Improvement Program (SEWIP) is an evolutionary acquisition and spiral development program of Block upgrades to the AN/SLQ-32(V) family of passive and active shipboard electronic warfare (EW) systems. It replaces the AN/SLY-2(V) Advanced Integrated Electronic Warfare System (AIEWS) program, which was cancelled in April 2002 due to cost growth and development delay issues. SEWIP will provide necessary EW capabilities and will incorporate technology advances as they become available to provide incremental upgrades in capability and improvements in performance. Continuous technology reviews will be in progress, potential alternate element and component surveys performed, and ongoing Cost As an Independent Variable (CAIV) efforts will be employed throughout to aid decision-making. Threat system technologies will be examined and compared against program planning to achieve best capability within available resources. The capabilities and subsystems included in Blocks can change as technology matures for integration.

The initial SEWIP plan (Block 1, ACAT II) is segmented into 3 sub-blocks: 1A, 1B and 1C. Block 1A is for SLQ-32 sustainment by updating the display console and display/pulse-processing computers, allowing the system to more quickly identify threats and better display the information to the operator. The new display console and processing computers will partially open the system architecture to support subsequent block upgrades. Block 1A is planned to begin at-sea testing in FY04 and to go into production in FY05. Block 1B currently adds Specific Emitter Identification (SEI) via integration of stand-alone Small Ship Electronic Support Measures (SS ESM), and display of combat systems tracks to the operator to improve threat correlation and situational awareness. Block 1B could add other capabilities if they mature in time. Block 1B is planned to begin at-sea testing in FY05. Block 1C currently will add initial High Gain High Sensitivity (HGHS) capability to SEI, and will allow the operator to launch both Nulka and passive on combat systems tracks, thereby improving effectiveness. Block 1C is planned to begin at-sea testing before the end of the FYDP.

The next Block upgrade (Block 2) will lay the groundwork for more significant improvements; including a major receiver upgrade to improve system sensitivity, provide precision measurement of Angle of Arrival, and improve Electromagnetic Interference (EMI) immunity. Block 3 will significantly improve the Electronic Attack (EA) capabilities of the SLQ-32; Block 4 will add an Infrared (IR) jamming capability.

FY05 funding includes 2 Congressional Adds: $3.5M for Shipboard Leverage Electronic Warfare System (SLEWS), and $10.2M for Surface Ship EW SBIR Phase III Research and Development improvements.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)	0954/9244 Shipboard EW Improvements

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		1.337	0.927	0.370
RDT&E Articles Quantity				

The Surface Electronic Warfare Improvement Program (SEWIP) is an evolutionary acquisition and spiral development program of Block upgrades to the AN/SLQ-32(V) family of passive and active shipboard electronic warfare (EW) systems. The program will incorporate technology advances as they become available to provide incremental upgrades in capability and improvements in performance. Continuous technology reviews, potential alternate element and component surveys, and ongoing Cost As an Independent Variable (CAIV) efforts will be used throughout to aid decision-making. Threat system technologies will be examined and compared against program planning to achieve best capability within available resources to rapidly deliver affordable, sustainable capability to the warfighter that meets the warfighter's needs. This includes funding studies and analysis of other service capabilities and future capabilities for interoperability.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		4.080	0.000	0.000
RDT&E Articles Quantity				

Block 1A includes development of Electronic Support Enhancements (ESE) and Improved Control and Display (ICAD). This enhanced functionality increases Anti-Ship Missile Defense (ASMD) capabilities, allowed for proper identification of Anti Ship Missile threats, and increased the system's ability to handle the significantly increased emitter density. ICAD will provide the tools necessary to significantly improve tactical performance and battle readiness by processing information rapidly through predetermined automation routines. Integrate and test ESE, ICAD, and Block 1A. Conduct preliminary and operational assessment at-sea for integrated ESE and ICAD (Block 1A) Transition ESE and ICAD to production. Prepare for a limited rate production decision for ICAD. Lab/Field activity support included.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		12.240	10.260	5.861
RDT&E Articles Quantity				

The Systems Integrator contract is currently performing system level technical design, technical coordination, integration, and testing of SEWIP . The System Integrator is responsible for developing the overall technical roadmap for SEWIP, including the detailed technical plan for each block upgrade. The System Integrator will perform any required CAIV analysis, develop overall technical performance requirements, perform system level functional allocations, coordinate the execution of the block upgrades. The System Integrator is responsible for the overall integration of the portions of the system and performing element testing as well as system level performance testing.

R-1 SHOPPING LIST - Item No. 128

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)	PROJECT NUMBER AND NAME 0954/9244 Shipboard EW Improvements

B. Accomplishments/Planned Program (Cont.)

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		10.353	10.019	3.725
RDT&E Articles Quantity				

Block 1B development currently includes Specific Emitter Identification (SEI) by integrating the existing Small Ship ESM (SSESM) system with SEWIP and the incorporation of partial High Gain High Sensitivity (HGHS) capability . It also includes the transfer of CS tracks to the EW system to enhance the display of combat systems tracks in order to improve classification and situational awareness. Block 1B could add other capabilities if they mature in time. Task include the Integration and test Block 1B efforts. Transition Block 1B to production. Lab/Field activity support included. Development for related CS track data usage, RDDL,HGHS, DPU/DTU, ICAD Upgrades and LAMPS Interface Upgrades.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.395	0.000	0.000
RDT&E Articles Quantity				

Block 1C currently includes the incorporation of full High Gain High Sensitivity (HGHS) capability, the ability for the operator to launch Nulka on combat systems tracks, the adaptation of SEWIP to work on carriers, and the modifications of ICAD to operate with on-board active countermeasures. RDDL development, ILS engineering, CONOPS and related engineering development are a part of Block 1C. ICAD Phase II, requirements definition , specifications, and development, DPU/DTU upgrades for V4 ships. These efforts include CONOPS development, specification development, contracts preparation, testing and materials., DDI refresh, PW measurement enhancements. LAMPS interface upgrade concept development will be included. IRS/IDD development, SW development and factory testing are also included. Lab/Field activity support included.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		2.000	1.456	0.581
RDT&E Articles Quantity				

Program office and Systems Engineering of SEWIP program includes contract management, field activity management, risk management, SBIR employment, M&S, cost estimates, development of program requirements, acquisition, logistics and other documentation (ORD & Capabilities Documents, TEMP, AP, SAMP, CMP, ILSP, NTSP,PLCCE, APB, etc) to meet statutory and regulatory requirements.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		3.369	0.000	0.000
RDT&E Articles Quantity				

Receiver Replacement Studies, which includes the Shipboard Leverage Electronic Warfare System and Sea Raptor

R-1 SHOPPING LIST - Item No. 128

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)	0954/9244 Shipboard EW Improvements

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY06 PB controls):	38.094	23.008	10.568
Current Budget (FY07 PB controls):	33.774	22.662	10.537
Total Adjustments	-4.320	-0.346	-0.031
Summary of Adjustments			
General Provisions	-0.031	-0.346	
Programatic Changes	-3.514		-0.092
SBIR	-0.775		
Revised rates & inflation indices			0.061
Subtotal	-4.320	-0.346	-0.031

Schedule:

See attached schedule.

Technical:

See attached Schedule

R-1 SHOPPING LIST - Item No. 128

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)	0954/9244 Shipboard EW Improvements

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Complete	Cost
OPN BA-2 AN/SLQ-32(V) (2312)	19.900	24.721	30.955	32.064	31.729	35.468	34.584	TBD	TBD
O&M,N AN/SLQ-32 (12CR0/1C2C)	1.317	5.761	5.455	5.192	5.525	5.696	5.833	TBD	TBD
O&M,N AN/SLQ-32 (14DX0/1D4D)	8.015	0.000	0.000	0.000	0.000	0.000	0.000	TBD	TBD

E. ACQUISITION STRATEGY:

The Surface EW Improvement Program (SEWIP) will accomplish Block upgrades based on integrating technology advances and adding functional capabilities in an incremental fashion. Each Block and sub-Block will be developed and contracted in an individual yet coordinated and overlapping fashion. Blocks will be fielded on ships to meet battle group schedule requirements and make best use of available improvements and resources.

F. MAJOR PERFORMERS:

Northrop Grumman PRB (Compete) Goleta, CA - ESE development contract
GD-AIS Fairfax, VA - System Integrator development contract
Lockheed Martin/Eagan MN - Q-70 console modifications
Naval Research Laboratory DC - Technical support for development and testing efforts
Naval Surface Warfare Center Dahlgren VA - Scenario/Library Testing of ESE, support for all DT/OT events
Naval Surface Warfare Center Crane IN - Lead for HW/SW ESE development, support for all DT/OT events, system engineering support for ESE and ICAD

R-1 SHOPPING LIST - Item No. 128

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2006**						
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)					PROJECT NUMBER AND NAME 0954/9244 Shipboard EW Improvements						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Ancillary Hardware Development			151.420										151.420	
ESE Development	SS / FFP	Northrop Grumman	5.001									TBD	TBD	TBD
ESE Development	SS / CPFF	Northrop Grumman	0.471									TBD	TBD	TBD
ICAD Development-SBIR Phase III	SS / CPAF	GD-AIS	10.936			0.811	03/05					TBD	TBD	TBD
System Integrator	SS / CPAF	GD-AIS	22.261			12.240	11/04	10.260	11/05	5.861	11/06	TBD	TBD	TBD
SSESM rehost/HGHS	WX	NRL	5.332			3.700	11/05					TBD	TBD	N/A
Q-70 Mods	SS / CPFF	LM-EAGAN	2.091									TBD	TBD	TBD
Subtotal Product Development			197.512			16.751		10.260		5.861		TBD	TBD	
Remarks:														
Integrated Logistics Support	WX	NSWC Crane, DD, NRL	2.243			1.322	11/04	1.500	11/05	0.894	11/06	TBD	TBD	N/A
Government Engineering Support	WX	NSWC Crane, DD, NRL	10.191			6.478	11/04	6.983	11/05	1.741	11/05	TBD	TBD	N/A
Tech Eng Svcs, Studies & Analyses	WX, MP	Crane, DD, NRL, BAE	2.884			2.910	11/04	1.329	11/05	0.595	11/06	TBD	TBD	N/A
Miscellaneous	WX	NSWC Crane, DD, NRL												
Subtotal Support			15.318			10.710		9.812		3.230		TBD	TBD	
Remarks:														

R-1 SHOPPING LIST - Item No. 128

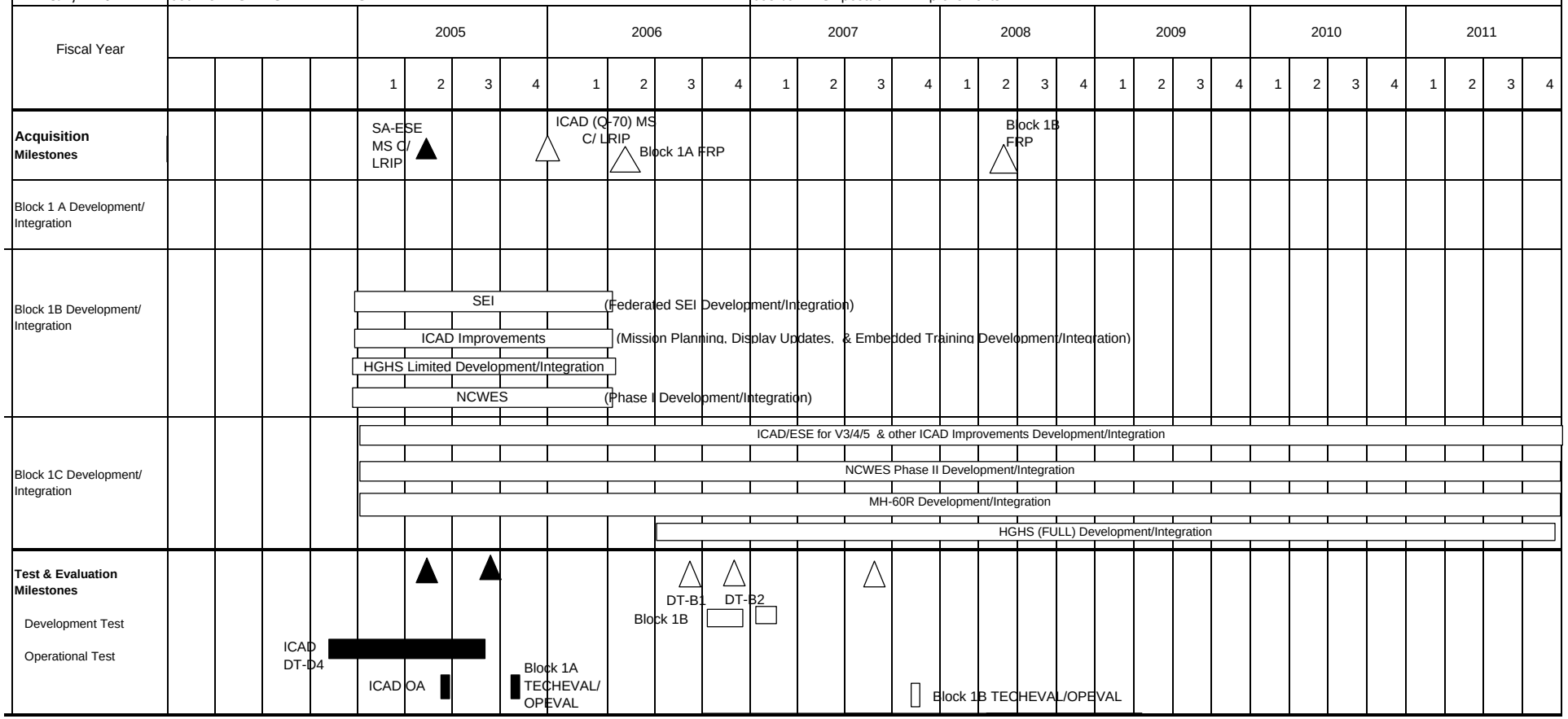
CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2006**						
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)				PROJECT NUMBER AND NAME 0954/9244 Shipboard EW Improvements								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various	8.958										8.958	
Block 1A Test Planning/T&E Events	WX	NSWC Crane, DD, NRL	9.457			2.143	01/05					TBD	TBD	
Block 1B Test Planning/T&E Events	WX	NSWC Crane, DD, NRL	0.931			2.003	01/05	0.500	11/05	0.200	11/05	TBD	TBD	
Block 1C Test Planning/T&E Events												TBD	TBD	
												TBD	TBD	
												TBD	TBD	
												TBD	TBD	
Subtotal T&E			19.346			4.146		0.500		0.200		TBD	TBD	
Remarks:														
Program Management Support	FFP	SEAPORT	22.855			1.094	11/04	0.890	11/05	0.595	11/06	TBD	TBD	
Program Management Support	WX	NSWC/Crane & DD, NRL	5.276			0.973	11/04	1.100	11/05	0.551	11/06	TBD	TBD	
Travel			0.205			0.100		0.100		0.100		TBD	TBD	
Subtotal Management			28.336			2.167		2.090		1.246		TBD	TBD	
Remarks:														
Total Cost			260.512			33.774		22.662		10.537		CONT	CONT	
Remarks:														

CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2006**

APPROPRIATION/BUDG: **RDT&E, N /** | PROGRAM ELEMENT NUMBER AND NAME: 0604757N SHIP SELF DEFENSE | PROJECT NUMBER AND NAME: 0954/9244 Shipboard EW Improvements



CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT 0604757N SHIP SELF DEFENSE				PROJECT NUMBER AND NAME 0954/9244 Shipboard EW Improvements			
Schedule Profile		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
RDC Approval								
Stand Alone ESE Development/Integration								
ICAD (Integrated ESE & Q-70) Development/Integration								
AN/SSX-1 RDC (Stand Alone SEI) Lab Development Transition								
SEI (Federated SEI) Development/Integration		1Q						
ICAD Improvements (Mission Planning, Display Updates, Embedded Training) Development/Integration		1Q-4Q	1Q					
HGHS Limited Development/Integration		1Q-4Q	1Q					
NCWES (Phase I) Development/Integration		1Q-4Q	1Q					
ESE Developmental Testing (DT-D2B)								
Developmental Test Readiness Review (ESE)								
ESE Developmental Testing (DT-D3)								
Developmental Test Readiness Review (ICAD)								
ESE Operational Test Readiness Review								
ESE Operational Test (OA) (OT-D1)								
Stand Alone-ESE Milestone C LRIP		2Q						
ICAD/Q-70 Milestone C LRIP		4Q	1Q					
ICAD Operational Test Readiness Review								
ICAD Operational Test (DT-D4)		1Q-3Q						
Operational Test Readiness Review (ICAD)		2Q						
ICAD Operational Testing (OA)		2Q						
Operational Test Readiness Review (Block 1A)		3Q						
Block 1A TECHEVAL/OPEVAL								
ICAD/ESE for V3/4/5 & other ICAD Improvements Development/Integration		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
NCWES (Phase II) Development/Integration		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
MH-60R Development/Integration		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
HGHS Development/Integration			3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Block 1A FRP			2Q					
Developmental Test Readiness Review (Block 1B)			2Q					
Block 1B Developmental Test (DT-B1)			3Q					
Developmental Test Readiness Review (Block 1B)			4Q					
Block 1B Developmental Test (DT-B2)				1Q				
Operational Test Readiness Review (Block 1B)				3Q				
Block 1B Operational Test (OA) (OT-B1)				4Q				
Block 1B FRP					2Q			

R-1 SHOPPING LIST - Item No. 128

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **FEBRUARY 2006**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)				PROJECT NUMBER AND NAME 2190/2441/Nulka Decoy			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		**3.825**	**0.988**	**0.976**	**0.997**	**1.015**	**1.031**	**1.053**
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Offboard Active Decoy (NULKA) is a joint cooperative program between the United States and Australia that developed an active offboard decoy that utilizes a broadband radio frequency repeater mounted atop a hovering rocket. NULKA is designed to counter a wide variety of present and future radar guided Anti-Ship Missiles (ASMs) by radiating a large radar cross section while flying a ship-like trajectory. The United States developed the electronic payload and fire control system, while Australia developed the hovering rocket. Currently NULKA is undergoing a P3I program to integrate the Mk 53 Decoy Launching System with Ship Self Defense System (SSDS) and the ship combat systems, maintain electromagnetic compatibility with shipboard emitters, integrate with future electronic warfare system upgrades, and to upgrade the Inertial Measurement Unit (IMU).

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KIL	2190/2441/Nulka Decoy

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.500	0.000	0.000
RDT&E Articles Quantity				

Continue development of anti-tampering system for payload.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.671	0.000	0.339
RDT&E Articles Quantity				

Continue Inertial Measurement Unit (IMU) evaluation. The current system design has identified limitations at some air speeds which introduce errors into flight trajectories. The incorporation of an IMU within the FCU will eliminate these limitations, make the EDC more effective against current ASM threats, more capable of defeating emerging advanced ASM threats, increase system reliability and eliminate the pending obsolescence issue (pressure air data assembly and gyroscopes).

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.949	0.000	0.000
RDT&E Articles Quantity				

Refresh Decoy Launch Processor (DLP)/Decoy Launch System (DLS) technology. The current DLP software environment is obsolete and compromises the ability to respond to threat evolution. The components need to be replaced with tools that will support the NULKA program through the program lifecycle.

R-1 SHOPPING LIST - Item No. 128

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KIL	2190/2441/Nulka Decoy

B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		1.705	0.988	0.637
RDT&E Articles Quantity				

NULKA decoy subsystem integration and improvements to include Dual RF, EMC, Effectiveness Studies, Flyable Cartridge, Engineering Studies and Fly Out Tactics.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)	2190/2441/Nulka Decoy

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2005	FY 2006	FY2007
FY 2006 President's Budget:	3.894	1.004	1.016
FY 2007 PRESBUD:	3.825	0.988	0.976
Total of adjustment	-0.069	-0.016	-0.040

Summary of Adjustments			
General Provisions	-0.003	-0.016	
Programatic Changes	-0.001		-0.046
SBIR	-0.065		
Revised rates & inflation indices			0.006
	-0.069	-0.016	-0.040

Schedule:

Not Applicable

Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE	2190/2441 NULKA DECOY

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY2011	To Complete	Total Cost
OPN: Anti-Ship Missile Decoy System/5530 (In Millions)	54.476	42.901	54.131	55.525	57.180	58.546	59.522	205.800	821.500

E. ACQUISITION STRATEGY:

Not Applicable

F. MAJOR PERFORMERS:

NSWC Crane , IN Product Development
NSWC Dahlgren, VA Product Development
NRL Washington, DC Product Development
Lockheed Martin, Marion, MA Product Development
Baes, Australia Product Development

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)									DATE: **FEBRUARY 2006**					
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)							PROJECT NUMBER AND NAME 2190/2441/Nulka Decoy					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	RC	NSWC Crane, IN	3.000										3.000	
	RX	BAES/Sippican	4.232			1.424	01/05		03/06				5.656	
	MIPR	BAES	3.563			0.670	11/04			0.339	11/05	Continuing	Continuing	
Ship Suitability														
Systems Engineering	WX	NRL	0.558			0.522	10/04	0.492	10/04	0.576	10/05	Continuing	Continuing	
Systems Engineering	WX	NWAD China Lake	0.070			0.050	11/04	0.000	10/04	0.000	10/05	Continuing	Continuing	
MK 53 Sys Engineering Change	FFP	Sechan	0.150											
Systems Engineering	RX	NSWC Dahlgren, VA	0.044			0.400								
Systems Engineering	WX	NSWC Crane, IN				0.227								
Subtotal Product Development			11.617			3.293		0.492		0.915		Continuing	Continuing	
Remarks:														
Development Support	RX	NRL	1.214			0.100	10/04			0.000	10/05	Continuing	Continuing	
Software Development	WX	NSWC Dahlgren	1.819			0.275	10/04	0.433		0.000	10/05	Continuing	Continuing	
Training Development														
Integrated Logistics Support														
Configuration Management														
Technical Data														
GFE														
Award Fees														
Subtotal Support			3.033			0.375		0.433		0.000		Continuing	Continuing	

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)									DATE: **FEBRUARY 2006**					
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)						PROJECT NUMBER AND NAME 2190/2441/Nulka Decoy					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost			FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation														
Operational Test & Evaluation														
Live Fire Test & Evaluation														
Test Assets														
Tooling														
GFE														
Award Fees														
Subtotal T&E			0.000			0.000		0.000		0.000		0.000	0.000	
Remarks:														
Contractor Engineering Support														
Government Engineering Support														
Program Management Support	FFP	SEAPORT	0.294			0.100	11/04					Continuing	Continuing	
Travel			0.233			0.057	various	0.063		0.061		Continuing	Continuing	
Labor (Research Personnel)														
SBIR Assessment														
Subtotal Management			0.527			0.157		0.063		0.061		Continuing	Continuing	
Remarks:														
Total Cost			15.177			3.825		0.988		0.976		Continuing	Continuing	
Remarks:														

EXHIBIT R4, Schedule Profile | DATE: FEBRUARY 2006

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE	2190/2441 NULKA DECOY

Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
					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																												
Production Milestones												△ DLP v. 6.3																△ LHA 6 Install Cert
Test & Evaluation Milestones											LPD 18 DT				USCG Deepwater DT						IMU Land Based Test							IMU AT-SEA Test
Development Test											△				△		△										△	
Operational Test															△ LSD 41/49 Class DT													

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **FEBRUARY 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E BA-5**		PROGRAM ELEMENT 0604757N SHIP SELF DEFENSE (ENGAGE: SOFT KILL)			PROJECT NUMBER AND NAME 2190/2441/Nulka Decoy			
Schedule Profile		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY2010	FY 2011
LPD 18 DT			4Q					
DLP v 6.3			4Q					
LSD 41/49 Class DT					1Q			
USCG Deepwater DT				4Q				
IMU Land Based Test						1Q		
IMU At-SEA Test								2Q
LHA 6 Install Cert								2Q

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604757N SHIP SELF DEFENSE	Various Congressional Adds

CONGRESSIONAL PLUS-UPS:

	FY 06			
9244C	3.900			
Surface Ship EW Improvement Program				

The Systems Integrator contract is currently performing system level technical design, technical coordination, integration, and testing of SEWIP . The System Integrator is responsible for developing the overall technical roadmap for SEWIP, including the detailed technical plan for each block upgrade. The System Integrator will perform any required CAIV analysis, develop overall technical performance requirements, perform system level functional allocations, coordinate the execution of the block upgrades. The System Integrator is responsible for the overall integration of the portions of the system and performing element testing as well as system level performance testing.

	FY 06			
9856N	2.500			
SEA RAPTOR				

Receiver Replacement Studies, which includes the Shipboard Leverage Electronic Warfare System and Sea Raptor

	FY 06			
9855N	1.500			
Advanced Radar absorbing tiles for surface ships				

Develop an advanced radar absorbing material

	FY 06			
2441C/Nulka Decoy System	2.000			
Nulka Decoy System				

Nulka research for development of additional capability against anti-ship missiles.

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