CLASSIFICATION: Unclassified

						DATE:					
						February 2003	•				
PROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE											
ON, NAVY /	BA-5			0604366N/STAND	ARD MISSILE IMP	ROVEMENTS					
FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
13.574	20.819	76.927	100.683	189.229	191.916	213.595	207.216				
1.224	15.929	42.717	50.683	23.036	0.986	0.940	0.932				
12.350	0.000	0.000	0.000	0.000	0.000	0.000	0.000				
0.000	4.890	34.210	50.000	166.193	190.930	212.655	206.284				
	FY 2002 13.574 1.224 12.350	FY 2002 FY 2003 13.574 20.819 1.224 15.929 12.350 0.000	FY 2002 FY 2003 FY 2004 13.574 20.819 76.927 1.224 15.929 42.717 12.350 0.000 0.000	FY 2002 FY 2003 FY 2004 FY 2005 13.574 20.819 76.927 100.683 1.224 15.929 42.717 50.683 12.350 0.000 0.000 0.000	FON, NAVY / BA-5 0604366N/STAND FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 13.574 20.819 76.927 100.683 189.229 1.224 15.929 42.717 50.683 23.036 12.350 0.000 0.000 0.000 0.000	R-1 ITEM NOMENCLATURE 0604366N/STANDARD MISSILE IMP	FY 2002 FY 2003 FY 2004 FY 2005 FY 2006 FY 2007 FY 2008 13.574 20.819 76.927 100.683 189.229 191.916 213.595 1.224 15.929 42.717 50.683 23.036 0.986 0.940 12.350 0.000 0.000 0.000 0.000 0.000 0.000				

Defense Emergency Response Funds (DERF) Funds: No DERF funds are associated with this program/project.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

- "...The following capabilities are required:
- "...(6) Effective weapon systems that will deliver timely lethal firepower to the threat systems and supporting structures in hostile territory, provide in-flight destruction capabilities over the total flight path, and provide continuous protection to forward deployed maneuver forces as well as theater rear assets."
- -Mission Need Statement for Joint Theater Air and Missile Defense, May 1999
- "Six critical operational goals...
- "Projecting and sustaining U.S. forces in distant anti-access or area-denial environments and defeating anti-access and area-denial threats;
- "Defenses against known and emerging threats must be developed.

CLASSIFICATION: Unclassified

EXHIBIT R-2, RDT&E Budget Item Justification		DATE:
		February 2003
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5	0604366N/STANDARD MIS	SILE IMPROVEMENTS

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

"The United States must retain the capability to send well-armed and logistically supported forces to critical points around the globe, even in the face of enemy opposition

"The QDR emphasizes the need for new investments that would enable U.S. forces to defeat anti-access and area-denial threats and to operate effectively in critical areas."

- Quadrennial Defense Review Report, September 30, 2001

Standard Missile-2 (SM-2) Block IIIB is the Navy's premier Anti-Air Warfare (AAW) missile, providing both area air defense for the fleet and self defense for individual Aegis CGs and DDGs, as required by the Joint TAMD MNS, DPG, QDR, and Ship Class AAW Self Defense Capstone Requirements Document. Minor agility, fuzing, and computer modifications to SM-2 Block IIIB are under development to restore performance in the near term against a specific existing proliferated ASCM threat. Continuous analysis of missile capabilities vs. ever-evolving and proliferating aircraft and anti-ship cruise missiles and long-range planning are required to keep pace with the threat. A separate, classified, advanced technology effort will begin to transition in FY03, and in FY04 a new program will start to develop a family of advanced surface missile systems. These new missile systems will leverage the Navy investment in the Aegis Weapon System, CEC, and airborne early warning systems, which will be upgraded in concert with missile development to support a fully integrated extended range detect-to-engage capability. Funding for those upgrades are also included in this line. Together, this family of systems will provide the air superiority and the umbrella of protection against the full spectrum of projected future cruise missile (anti-ship and land attack) and manned aircraft threats discussed in the Joint TAMD MNS, DPG, QDR, and TAMD Capstone Requirements Document.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:		
							Februa	ry 2003	
APPROPRIATION/BUDGET ACTIVITY									
RDT&E, N / BA-5	0604366N/STAND	ARD MISSILE IMP	ROVEMENTS		K0439 Standard Missile Improvements				
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	
Project Cost	1.224	15.929	42.717	50.683	23.036	0.986	0.940	0.932	
RDT&E Articles Qty									

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Minor modifications to SM-2 Block IIIB will restore performance in the near term against a specific existing proliferated ASCM threat. These include modifications to the MK45 Target Detection Device (TDD) to improve the lethal radius at low altitudes, guidance software to improve missile agility, and a new digital signal processor. Funding for the MK 45 Mod 14 TDD advanced technology development has been provided under Conventional Munitions, P.E. 0603609N, Project K1821, and the complementary engineering and transition to production efforts is funded in this line. Continuous analysis of missile capabilities vs. evolving and proliferating aircraft and anti-ship cruise missiles and long-range planning are required to keep pace with the threat. A separate, classified, advanced technology effort will begin to transition in FY03, and in FY06 a new program will start to develop a family of advanced surface missile systems. The Aegis Weapon System, CEC, and airborne early warning systems also will be upgraded in concert with missile development to support a fully integrated extended range detect-to-engage capability.

R-1 SHOPPING LIST - Item No.

110

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME
RDT&E, N / BA-5	0604366N/STANDARD MISSILE IMPROVEMENTS	K0439 Standard Missile In	mprovements

B. Accomplishments/Planned Program

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	1.224	0.951	4.811	1.868
RDT&E Articles Quantity				

SM-2 Block IIIB MK 45 Mod 14 TDD. FY02: Engineering and transition to production

FY 03: Round level integration engineering and transition to production

FY 04: Transition to production and flight testing FY 05: Completion of flight testing and analysis

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.145	0.396
RDT&E Articles Quantity				

Failure analyses, technology assessments, analyses of missile capablity vs. threat, and long-range planning to keep pace with the evolving and proliferating threat.

	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	14.978	31.965	39.973
RDT&E Articles Quantity				

Advanced Surface Missile Demonstration. FY03: Transition advanced technology to Advanced Surface Missile System

FY04 and FY05: Continue transition of advanced technology, program definition, risk reduction, and preparation for feasibility demo

CLASSIFICATION: Unclassified

PROGRAM ELEMENT NU			DATE: February 2003	
1604366N/STANDARD MI	IMBER AND NAME	PROJECT NUMBER AND I		
	SSILE IMPROVEMENTS	K0439 Standard Missile I	mprovements	
		•		
FY 02	FY 03	FY 04	FY 05	
		5.796	8.446	
M O Disale IIID - EV 04. Da		aliasia amuuda ai aa		
M-2 Block IIIB. FY 04: Re				
	i i oo. Round level integi	ation, Ontical Design Neview.		
FY 02	FY 03	FY 04	EY 05	
1102	1100	1104	11.00	
	•			
	F)/ 00			
FY 02	FY 03	FY 04	FY 05	
· · · · · · · · · · · · · · · · · · ·	FY 02	M-2 Block IIIB. FY 04: Requirements definition and pr FY 05: Round level integr	M-2 Block IIIB. FY 04: Requirements definition and preliminary design. FY 05: Round level integration, Critical Design Review.	M-2 Block IIIB. FY 04: Requirements definition and preliminary design. FY 05: Round level integration, Critical Design Review.

CLASSIFICATION: Unclassified

&E, N / BA-5 0604366N/STANDARD MISSILE IMPROVEMENTS K0439 Standard Missile Improvements								February 2003
### C. PROGRAM CHANGE SUMMARY: Funding:	OPRIATION/BUDGET ACTIVITY	PROGRAM EL	EMENT NUMBER	AND NAME		PROJECT NUMBER A	AND NAME	
Previous President's Budget: (FY 04/05 Pres Controls)	&E, N / BA-5	0604366N/ST/	ANDARD MISSILE I	MPROVEMEN	TS	K0439 Standard Mis	ssile Improvements	
Previous President's Budget: (FY 04/05 Pres Controls) 1.297 15.288 33.241 41.143 Current BES/President's Budget: (FY 04/05 Pres Controls) 1.224 15.929 42.717 50.683 Total Adjustments Congressional undistributed reductions -0.006 FY 02 Actuals -0.007 Reprogrammings -0.025 SBIR/STTR Transfer -0.035 Business Process Reform -0.036 FI Cost Growth Economic Assumptions Reducted Indirect Costs Overhead and Direct Cost Reductions Fiptint Reductions Single Site Common Suport Reduction in Support Contractors Examine Non Core Competencies PBD 64 NWCF Rates - R&D Fuel NMC Schedule: Schedule:	C. PROGRAM CHANGE SUMMARY:							
Current BES/President's Budget: (FY 04/05 Pres Controls) 7	Funding:		FY 2002	FY 2003	FY 2004	FY 2005		
Summary of Adjustments	Previous President's Budget: (FY 03 Pres Con	trols)	1.297	16.288	33.241	41.143		
Summary of Adjustments	Current BES/President's Budget: (FY 04/05 Pre	es Controls)			42.717			
Congressional undistributed reductions FY 02 Actuals -0.007 Reprogramminongs -0.025 SBIR/STTR Transfer -0.035 Business Process Reform -0.030 Economic Assumptions -0.091 Inflation Savings Reduced Indirect Costs Overhead and Direct Cost Reductions Fyinint Reductions Fyinint Reductions Single Site Common Suport Reduction in Support Contractors Ezamine Non Core Competencies PBD 426 NWCF Rates - R&D Fuel NWCF Rates - R&D Fuel SMZ BLK IIIB Improvements Congressional increases Subtotal Schedule:	Total Adjustments		-0.073	-0.359	9.476	9.540		
FY 02 Actuals Reprogrammiongs -0.025 SBIR/STTR Transfer Business Process Reform IT Cost Growth Economic Assumptions Reduced Indirect Costs Overhead and Direct Cost Reductions Fighir Reductions Single Site Common Suport Reduction in Support Contractors Examine Non Core Competencies PBD 426 NWCF Rates - R&D Fuel PBD 604 NWCF Rates - R&D Fuel Congressional increases Subtotal Schedule:	Summary of Adjustments							
Reprogramminongs -0.025 SBIR/STITR Transfer -0.035 Business Process Reform -0.030 IT Cost Growth -0.030 Economic Assumptions -0.091 -0.057 -0.072 Inflation Savings -0.173 -0.002 Reduced Indirect Costs -0.003 -0.123 Overhead and Direct Cost Reductions -0.003 -0.013 Single Site Common Suport -0.005 -0.005 Single Site Common Suport -0.005 -0.005 Reduction in Support Contractors -0.003 -0.003 Examine Non Core Competencies -0.003 -0.009 PBD 426 -0.004 -0.005 NWCF Rates - R&D Fuel -0.004 0.015 PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements -0.003 -0.985 -2.171 Congressional increases -0.0073 -0.359 9.476 9.540	Congressional undistributed reduct	ions	-0.006					
SBIR/STTR Transfer	FY 02 Actuals		-0.007					
Business Process Reform -0.065	Reprogrammiongs		-0.025					
IT Cost Growth	SBIR/STTR Transfer		-0.035					
Economic Assumptions -0.091 -0.057 -0.072 Inflation Savings -0.173 -0.173 -0.173 -0.072 -0.072 -0.072 -0.073 -0.073 -0.073 -0.073 -0.073 -0.073 -0.073 -0.073 -0.073 -0.073 -0.073 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075 -0.075	Business Process Reform			-0.065				
Inflation Savings Reduced Indirect Costs Overhead and Direct Cost Reductions Ftprint Redu	IT Cost Growth			-0.030				
Reduced Indirect Costs -0.002	Economic Assumptions			-0.091	-0.057	-0.072		
Overhead and Direct Cost Reductions -0.033 -0.123 Ftprint Reductions -0.005 -0.015 Single Site Common Suport -0.005 -0.020 Reduction in Support Contractors -0.036 -0.163 Examine Non Core Competencies -0.003 -0.009 PBD 426 -0.004 -0.015 NWCF Rates - R&D Fuel 0.004 0.015 PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases -0.073 -0.359 9.476 9.540				-0.173				
Ftprint Reductions -0.005 -0.015 Single Site Common Suport -0.005 -0.020 Reduction in Support Contractors -0.036 -0.163 Examine Non Core Competencies -0.003 -0.009 PBD 426 -0.004 -0.004 NWCF Rates - R&D Fuel 0.004 0.015 PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases -0.073 -0.359 9.476 9.540 Schedule:								
Single Site Common Suport -0.005 -0.020 Reduction in Support Contractors -0.036 -0.163 Examine Non Core Competencies -0.003 -0.009 PBD 426 -0.004 0.015 NWCF Rates - R&D Fuel 0.004 0.015 PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases -0.073 -0.359 9.476 9.540 Schedule:								
Reduction in Support Contractors -0.036 -0.163 Examine Non Core Competencies -0.003 -0.009 PBD 426 -0.004 -0.004 NWCF Rates - R&D Fuel 0.004 0.015 PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases -0.073 -0.359 9.476 9.540 Schedule:	•							
Examine Non Core Competencies								
PBD 426 NWCF Rates - R&D Fuel PBD 604 SM2 BLK IIIB Improvements Congressional increases Subtotal -0.073 -0.359 -0.359 -0.476 -0.004 0.015 -0.								
NWCF Rates - R&D Fuel 0.004 0.015 PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases Subtotal -0.073 -0.359 9.476 9.540 Schedule:						-0.009		
PBD 604 -0.985 -2.171 SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases Subtotal -0.073 -0.359 9.476 9.540 Schedule:								
SM2 BLK IIIB Improvements 10.600 12.100 Congressional increases -0.073 -0.359 9.476 9.540 Schedule:								
Congressional increases Subtotal -0.073 -0.359 9.476 9.540 Schedule:								
Subtotal -0.073 -0.359 9.476 9.540 Schedule:					10.600	12.100		
Schedule:			0.070	0.050	0.470	0.540		
	Subtotal		-0.073	-0.359	9.476	9.540		
	Schedule:							
постируновою								
	ног друшавно							

Technical:

Not Applicable

Exhibit R-2a, RDTEN Project Justification

CLASSIFICATION: Unclassified

EXHIBIT R-2a, RDT&E	Project Justification			DATE:
				February 2003
APPROPRIATION/BUDGET		PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NA	
RDT&E, N /	BA-5	0604366N/STANDARD MISSILE IMPROVEMENTS	K0439 Standard Missile Im	provements
D. OTHER PROGRA	M FUNDING SUMMARY: Not Applicable	e		
1				
E. ACQUISITION STR	ATEGY: *			
Not Applicable				
F. MAJOR PERFORM	ERS: **			
Raytheon Missi	ile Systems, Tucson, AZ starting in FY04 v	vill be the Prime contractor in the development of a live fire	demonstration for Advanced Su	urface Missile System. 10/03
1				
* Not required for B ** Required for DON a	udget Activities 1,2,3, and 6 and OSD submit only.			

CLASSIFICATION: Unclassified

	4.							DATE:				
Exhibit R-3 Cost Analysis (p		Innochus				February 2003						
APPROPRIATION/BUDGET ACT	IVIIY		PROGRAM ELEMENT 0604366N/STANDARD MISSILE IMPROVEMENTS				PROJECT NUMBER AND NAME					
RDT&E, N / BA-5	Caratanant							Improvements	FY 05	1	1	
Cost Categories	Contract Method	Performing Activity &	Total PY s	FY 03	FY 03 Award	FY 04	FY 04 Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Design and Analysis		Raytheon	3.911	12.370	10/02	31.317	11/03	41.976	11/04	Continuing	Continuing	
,	PR	JHÚ/APL	0.000	1.000	10/02	5.250	11/03	3.450	11/04	Continuing	Continuing	
	PR	MIT	0.000			0.100	11/03	0.100	11/04	Continuing	Continuing	
	WR	NSWC Dahlgren	785.484	0.150	10/02	0.050	11/03	0.050	11/04	Continuing	Continuing	
	WR	NSWC/IH	0.049			0.100	11/03	0.100	11/04	Continuing	Continuing	
	WR	NAWC China Lake	0.000	0.200	10/02	1.375	11/03	1.200	11/04	Continuing	Continuing	
	WR	NSWC /PHD	0.030	0.090	10/02	0.175	11/03	0.200	11/04	Continuing	Continuing	
	WR	CNO	0.010							Continuing	Continuina	
	PD	CMDP	4.795							Continuing	Continuing	
	PR	CNA	0.000							Continuing	Continuing	
	WR	NSWC Crane	0.000	0.200	10/02	0.050	11/03	0.050	11/04	Continuing	,	
	WR	ONR	0.000	0.250	10/02	0.250	11/03	0.250	11/04	Continuing	ı	
	WR	NWS Earle	0.000			0.050	11/03	0.050	11/04	Continuing		
Subtotal Product Development			794.279	14.260		38.717		47.426		0.000	Continuing	

CLASSIFICATION: Unclassified

									DATE:				
Exhibit R-3 Cost Analysis (p	age 1)										February 200)3	
APPROPRIATION/BUDGET ACT	IVITY		PROGRAM E	LEMENT			PROJECT N						
RDT&E, N / BA-5			0604366N/ST	TANDARD MISS	SILE IMPROVE		K0439 Stan	dard Missile	Improvements				
Cost Categories	Contract			Total		FY 03		FY 04		FY 05			
	Method	Activity &			FY 03	Award	FY 04	Award		Award		Total	Target Value
	& Type	Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete		of Contract
Development Support		 			<u> </u>							0.000	
Software Development		+		 	 	 		 		 		0.000	
Integrated Logistics Support		+		 	 	 						0.000	
Configuration Management				 	 	 		 		_		0.000	1
Technical Data		<u> </u>		_	<u> </u>							0.000	
Studies & Analyses												0.000	
GFE												0.000	ı
Award Fees												0.000	J
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		†		1	1							0.000	
		†		1								0.000	
		+		†		1		1				0.000	
		+		1		,	-	+			-	0.000	
Subtotal Support	_	+		0.000	0.000		0.000	1	0.000		0.000		
Subtotal Support		4		0.000	0.000		0.000	4	0.000	<u> </u>	0.000	0.000	
Remarks:													
ivernarks.													

CLASSIFICATION: Unclassified

											DATE:				
Exhibit R-3 Cost Analysis (pag	e 2)										J		February 2	003	
APPROPRIATION/BUDGET ACTIVI			PROGRAM EL	EMENT						IBER AND I					
RDT&E, N / BA-5			0604366N/ST/	ANDARD MIS	SILE IMPRO	VEMEN	NTS	K0439 St	anda	rd Missile I	mprovemen	ts			
Cost Categories	Contract	Performing		Total		FY (03			Y 04		FY 05			
	Method	Activity &		PY s	FY 03	Awa		FY 04		Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location		Cost	Cost	Date	9	Cost		Date	Cost	Date	Complete	Cost	of Contract
Developmental Test & Evaluation	WR	NSWC Port H	lueneme	0.00	1	45	10/02	1	550	11/03	0.8			Continuing	,
	WR	WSMR		0.00	0			2.	700	11/03	1.6	00 11/04		Continuing	,
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				0.00	0.1	45		3.5	250		2.4	00	0.00	00 Continuing	1
0	0/00045	1	_	0.00	ol o-	,,,,	10/00		050	44/00		57 44/04		O continuity	Oceanica
Contractor Engineering Support	C/CPAF	various		0.00	0 0.7	41	10/02	0.3	350	11/03	0.3	57 11/04		Continuing	,
Government Engineering Support														0.000	
Program Management Support		various		0.00		_	10/02		350	11/03	0.3	-		Continuing	<u> </u>
Travel					0.0)28		0.0	050		0.1	50 11/04		Continuing	T -
Transportation SBIR Assessment														0.000	
Subtotal Management				0.00	0 1.5	524		0.	750		0.8	57	0.00		
Remarks:						•			1						
Total Cost				794.27	9 15.	929		42.	.717		50.6	83	0.00	00 Continuing	
Remarks:															

CLASSIFICATION: Unclassified

EXHIBIT R4, Schedule I	Profile										N	ОТ А	PPLI	CABL	.E										DATE	<u>:</u>	F	ebrua	ry 20	03		
APPROPRIATION/BUDGET											ELEM	ENT N	UMBE	R AND	NAM						PROJ											
RDT&E, N /	BA-5								06043	866N/S	TAND	ARD N	/ISSIL	E IMPF	ROVEN	/ENTS	S				K043	9 Sta	ndard	Missi	le Imp	roven	nents					
Fiscal Year		20	02			20	03			20	04			200	05			20	06			20	07			20	80			200)9	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																																
Prototype Phase																																
Radar System Development																																
EDM Radar Delivery																																
Software 1XXSW Delivery 2XXSW Delivery																																
Test & Evaluation Milestones Development Test Operational Test																																
Production Milestones LRIP I FY 05 LRIPII FY 06 FRP FY 07																																
Deliveries														DDIN																		

 $^{^{\}ast}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION: Unclassified

Exhibit R-4a, Schedule Detail						DATE:		
NOT APPLICABLE							ebruary 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-5	0604366N/ST	ANDARD MISS	SILE IMPROVE	MENTS	K0439 Stand	lard Missile Im	nprovements	
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Prototype Phase								
System Design Review (SDR)								
Milestone II (MSII)								
Contract Preparation								
Software Specification Review (SSR)								
Preliminary Design Review (PDR)								
System Development								
Critical Design Review (CDR)								
Quality Design and Build								
Test Readiness Review (TRR)								
Developmental Testing (DT-IIA)								
Eng Dev Model (EDM) Radar Delivery - Lab								
Software Delivery 1XXSW								
Preproduction Readiness Review (PRR)								
EDM Radar Delivery - Flt Related								
Milestone C (MS C)								
Operational Testing (OT-IIA)								
Start Low-Rate Initial Production I (LRIP I)								
Software Delivery 2XXSW								
Developmental Testing (DT-IIB1)								
Developmental Testing (DT-IIB2)								
Start Low-Rate Initial Production II								
Operational Testing (OT-IIB)								
Developmental Testing (DT-IIC)								
Functional Configuration Audit (FCA)								
Low-Rate Initial Production I Delivery								
Technical Evaluation (TECHEVAL)								
Physical Configuration Audit								
Operational Evaluation (OT-IIC) (OPEVAL)								
Low-Rate Initail Production II Delivery								
IOC								
Full Rate Production (FRP) Decision								
Full Rate Production Start								
First Deployment								

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMI	ENT NUMBER ANI	O NAME		PROJECT NUMBE	ER AND NAME		
RDT&E, N / BA-5	0604366N/STAND	ARD MISSILE IMP	ROVEMENTS		K2639/Standard	Missile Improvem	ents	
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	12.350							
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Minor software modifications are necessary to improve SM-2 Block IIIB's agility and restore performance in the near term against a specific recently proliferated antiship cruise missile threat. Optical correlator is an effort to apply artificial intelligence developments to automatic signal recognition. Continuous analysis of missile capabilities vs. ever-evolving and proliferating aircraft and ASCMs and long-range planning are required to keep pace with the threat.

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION: Unclassified

EXHIBIT R-2a, RDT&E Project Justification				DATE:	
				February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	BER AND NAME	PROJECT NUMBER AND N	AME	
RDT&E, N / BA-5	0604366N/STANDARD MISS	SILE IMPROVEMENTS	K2639/Standard Missile In	nprovements	
B. Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	9.060				
RDT&E Articles Quantity					
SM-2 Block IIIB software modifications to improve ac	ility.				
Accomplishments/Effort/Subtotal Cost	FY 02 1.950	FY 03	FY 04	FY 05]
RDT&E Articles Quantity	1.950				
Optical Correlator Design					
	FY 02	FY 03	FY 04	FY 05]
Accomplishments/Effort/Subtotal Cost	1.340				
RDT&E Articles Quantity					
Future SM Strategy					

CLASSIFICATION: Unclassified

EXHIBIT R-2a, RDT&E Project Justification						DATE:	
							February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEI	MENT NUMBER	AND NAME		PROJECT NUMBER AN	ND NAME	
RDT&E, N / BA-5	0604366N/STAN	DARD MISSILE I	MPROVEMEN	TS	K2639/Standard Miss	ile Improvements	
C. PROGRAM CHANGE SUMMARY:							
Funding:		FY 2002	FY 2003	FY 2004	FY 2005		
Previous President's Budget: (FY 03 Pres Control		12.687					
Current BES/President's Budget: (FY04/05 Pres E	and Controls)	12.350					
Total Adjustments		-0.337	0.000	0.000	0.000		
Summary of Adjustments							
SBIR		-0.276					
Economic Assumptions		-0.061					
Subtota	l	-0.337	0.000	0.000	0.000		
Schedule:							
Not applicable							
∓ at 25 at							
Technical:							
Not Applicable.							
		D 1 SHODDI	NO LIGT. II	N - 44	0		

CLASSIFICATION: Unclassified

EXHIBIT R-2a, RDT&E	Project Justification			DATE:
				February 2003
APPROPRIATION/BUDGET		PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NA	AME
RDT&E, N /	BA-5	0604366N/STANDARD MISSILE IMPROVEMENTS	K2639/Standard Missile In	nprovements
D. OTHER PROGRA	AM FUNDING SUMMARY: Not Applicat	ole		
E. ACQUISITION STR	ATEGY: *			
Not applicable				
F. MAJOR PERFORM	ERS: **			
JHU/APL, Laur	ile Systems, Tucson, Az., Design and Ar el, Md., Design and Analysis, award date en, Dahlgren, Va., Design and Analysis, M	May 2002.		
* Not required for E ** Required for DON a	sudget Activities 1,2,3, and 6 and OSD submit only.			

CLASSIFICATION: Unclassified

UNCLASSIFIED

									DATE:				
Exhibit R-3 Cost Analysis (pag											February 200	3	
APPROPRIATION/BUDGET ACTIV	'ITY		PROGRAM EL	EMENT				JMBER AND N					
RDT&E, N / BA-5			0604366N/STA		ILE IMPROVE		K2639/Stand	lard Missile Im	provements				
Cost Categories	Contract	Performing		Total PY s	EV 02	FY 03	EV 04	FY 04	EV 05	FY 05	Contto	Total	Towart Volus
	Method & Type	Activity & Location		Cost	FY 03 Cost	Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	G) P C				0001	24.0		2410	0001		Complete	0.000	•
Ancillary Hardware Development												0.000	
Component Development												0.000	•
Design and Analysis	PR	JHU/APL		2.417								2.417	
	WR	NSWC/Dahlg	ren	1.800								1.800	•
	SS/CPAF	Raytheon		1.770								1.770	
	PR	MIT/LL		0.240								0.240	
	WR	NSWC/PHD		0.150								0.150	
	WR	NAWC WD C	L	0.200								0.200	
												0.000)
Ship Integration												0.000)
Ship Suitability												0.000)
Systems Engineering												0.000)
Training Development												0.000)
Licenses												0.000)
Tooling												0.000	
GFE												0.000	
Award Fees												0.000)
Subtotal Product Development				6.577	0.000		0.000		0.000		0.000	6.577	•
Remarks:													
Development Support												0.000)
Software Development	SS/CPAF	Raytheon		5.357								5.357	•
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				5.357	0.000		0.000)	0.000		0.000	5.357	•
Remarks:													

UNCLASSIFIED
R-1 SHOPPING LIST - Item No. 110

Exhibit R-3, Project Cost Analysis (Exhibit R-3, page 17 of 28)

CLASSIFICATION: Unclassified

Evhibit D. 2 Coot Analysis (no.	~~ O)								DATE:		Fahruary 20	02	
Exhibit R-3 Cost Analysis (pagappropriation/BUDGET ACTIV			PROGRAM E	LEMENT			PROJECT N	IMPED AND	DNAME		February 20	03	
RDT&E, N / BA-5	/11 Y				SSILE IMPROV	/EMENTS			D NAME le Improvement	c			
Cost Categories	Contract	Performing	060436614/31	Total	SSILE IMPROV	FY 03	N2039/3(a))	FY 04	le improvement	FY 05	1	1	1
Cost Categories	Method	Activity &		PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Developmental Test & Evaluation	WR	NSWC PHD		0.34							· ·	0.34	
•	WR	WSMR										0.00	
Operational Test & Evaluation												0.00	0
Live Fire Test & Evaluation												0.00	0
Test Assets												0.00	o l
Tooling												0.00	0
GFE												0.00	o
Award Fees												0.00	o
Subtotal T&E				0.34	0.00	00	0.00	0	0.00	00	0.000	0.34	6
	T				.1			T				1	
Contractor Engineering Support	CPAF	various		0.05	50							0.050	_
Government Engineering Support		+			_							0.000	
Program Management Support												0.000	
Travel Labor (Research Personnel)				0.02	20							0.020	
SBIR Assessment												0.000	
Subtotal Management				0.07	0.00	10	0.00	n	0.00	00	0.000		
Remarks:													
Total Cost				12.35	0.00	00	0.00	0	0.00	00	0.000	12.35	0
Remarks:													

CLASSIFICATION: Unclassified

EXHIBIT R4, Schedule	Profile								Not	Appl	icabl	e													DATE	Ē:	F	ebrua	ry 20	03		
APPROPRIATION/BUDGET	ACTIVI	ITY							PROC	GRAM	ELEM	ENT N	UMBE	R AND	NAM	E					PROJ	ECT N	NUMBE	R AN	ID NAN	ΛE			, _0			
RDT&E, N /	BA-5	5							06043	866N/S	STAND	ARD N	/ISSIL	E IMPF	ROVE	MENT	S				K263	9/Star	ndard	Missi	le Imp	roven	nents					
Fiscal Year		20	002			20	003			20	04			200	05			20	06			20	07			20	800			200	9	
	1	2	3	4	1	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																																
Radar System Development																																
EDM Radar Delivery																																
Software 1XXSW Delivery 2XXSW Delivery																																
Test & Evaluation Milestones																																
Development Test																																
Operational Test																																
Production Milestones																																
LRIP I FY 05																																
LRIPII FY 06																																
FRP FY 07																																
Deliveries																																

 $^{^{\}star}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION: Unclassified

Exhibit R-4a, Schedule Detail						DATE:		
Not applicable						F	ebruary 20	03
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT			PROJECT NU	MBER AND NA	AME	
RDT&BA-5	0604366N/ST/	ANDARD MISS	SILE IMPROVE	MENTS	K2639/Stand	lard Missile Im	provements	
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Prototype Phase	1 1 2002	1 1 2000	112004	1 1 2000	1 1 2000	1 1 2007	1 1 2000	1 1 2003
System Design Review (SDR)								
Milestone II (MSII)								
Contract Preparation								
Software Specification Review (SSR)								
Preliminary Design Review (PDR)								
System Development								
Critical Design Review (CDR)								
Quality Design and Build								
Test Readiness Review (TRR)								
Developmental Testing (DT-IIA)								
Eng Dev Model (EDM) Radar Delivery - Lab								
Software Delivery 1XXSW								
Preproduction Readiness Review (PRR)								
EDM Radar Delivery - Flt Related								
Milestone C (MS C)								
Operational Testing (OT-IIA)								
Start Low-Rate Initial Production I (LRIP I)								
Software Delivery 2XXSW								
Developmental Testing (DT-IIB1)								
Developmental Testing (DT-IIB2)								
Start Low-Rate Initial Production II								
Operational Testing (OT-IIB)								
Developmental Testing (DT-IIC)								
Functional Configuration Audit (FCA)								
Low-Rate Initial Production I Delivery								
Technical Evaluation (TECHEVAL)								
Physical Configuration Audit								
Operational Evaluation (OT-IIC) (OPEVAL)								
Low-Rate Initail Production II Delivery								
IOC								
Full Rate Production (FRP) Decision								
Full Rate Production Start								
First Deployment								

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							Februa	ry 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMI	ENT NUMBER AND	NAME		PROJECT NUMBE	R AND NAME		
RDT&E, N / BA-5	0604366N/STAND	ARD MISSILE IMP	ROVEMENTS		K3092/SM-5			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	0.000	4.890	34.210	50.000	166.193	190.930	212.655	206.284
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project addresses the Navy's need for extended range shipboard air defense missiles. It leverages existing missile technology as well as classified, advanced technology, and it takes advantage of the Navy's investment in the Aegis Weapon System, CEC, and airborne early warning systems. This missile will provide an extended range engagement capability to provide the air superiority and the umbrella of protection for joint U.S. forces and allies against the full spectrum of projected future cruise missile (anti-ship and land attack) and manned aircraft threats discussed in the Joint TAMD MNS, DPG, QDR, and TAMD Capstone Requirements Document.

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION: Unclassified

	ion			DATE: February 2003	
ROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	BER AND NAME	PROJECT NUMBER AND	NAME	
T&E, N / BA-5	0604366N/STANDARD MISS	SILE IMPROVEMENTS	K3092/SM-5		
Accomplishments/Planned Program					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost			6.400	10.100	
RDT&E Articles Quantity					
	FY 02	FY 03	FY 04	FY 05	
Accomplishments/Effort/Subtotal Cost	0.000	4.890	27.810	39.900	
RDT&E Articles Quantity					
Missile development. FY 03: Planning, require FY 04: Continue property 05: Preliminary D	gram definition, risk reduction, prelin esign Review.				
Accomplishments/Effort/Subtotal Cost	FY 02	FY 03	FY 04	FY 05	

CLASSIFICATION: Unclassified

EXHIBIT R-2a, RDT&E Project Justification						DATE:	
							February 2003
APPROPRIATION/BUDGET ACTIVITY	PROGRAM E	LEMENT NUMBER	AND NAME		PROJECT NUMBER	R AND NAME	
RDT&E, N / BA-5	0604366N/ST	ANDARD MISSILE	IMPROVEMEN				
C. PROGRAM CHANGE SUMMARY:							
Funding:		FY 2002	FY 2003	FY 2004	FY 2005		
Previous President's Budget: (FY 03 Pres Co							
Current BES/President's Budget: (FY04/05 P	Pres Controls)	0.000	4.890	34.210	50.000		
Total Adjustments		0.000	4.890	34.210	50.000		
Summary of Adjustments							
Minor Programmatic Adjustments	S		-0.110	-0.790			
Reprogrammings				35.000	50.000		
Congressional increases			5.000				
Subtotal		0.000	4.890	34.210	50.000		
Schedule:							
TBD.							
Technical:							
TBD.							
155.							

CLASSIFICATION: Unclassified

EXHIBIT R-2a, RDT&E Project	t Justification		DATE:	
				February 2003
APPROPRIATION/BUDGET ACTIVIT		PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N /	BA-5	0604366N/STANDARD MISSILE IMPROVEMENTS	K3092/SM-5	
D. OTHER PROGRAM FUND	DING SUMMARY: Not Applicable			
E. ACQUISITION STRATEGY: *				
TBD				
F. MAJOR PERFORMERS: **				
TBD.				
* Not required for Budget A ** Required for DON and OSD	ctivities 1,2,3, and 6 submit only.			

CLASSIFICATION: Unclassified

UNCLASSIFIED

									DATE:								
Exhibit R-3 Cost Ar									February 2003								
APPROPRIATION/BUD		TY	PROGRAM EI				PROJECT NU		NAME								
RDT&E, N /	BA-5		0604366N/ST				K3092/SM-5										
Cost Categories		Contract	Performing	Total		FY 03	EV 04	FY 04	EV 05	FY 05	0	Tatal	T+ \/-!				
		Method & Type		PY s Cost		Award Date	FY 04 Cost	Award Date	FY 05 Cost	Award Date	Cost to Complete	Total Cost	Target Value of Contract				
Primary Hardware Deve		α rype	Location	Cost	Cosi	Date	Cost	Date	Cosi	Date	Complete	0.000					
Ancillary Hardware Deve												0.000					
Component Developme		PR	ILILI/ADI. Lourel MD	0.000	0.200	10/02	1.750	11/02	2,000	11/04	Continuina	0.000					
Design and Analysis		PR PR	JHU/APL, Laurel MD	0.000	0.200	10/02	1.750		2.000	11/04	Continuing	Continuing	1				
			MIT Lincoln Lab, Lexington, N	0.000	0.000	40/00	0.100		0.100	11/04	Continuing	Continuing					
		WR WR	NAWC WD China Lake, CA	0.000	0.200	10/02			0.700	11/04	Continuing	Continuing	1				
			NSWC Dahlgren, VA	0.000	0.050	10/02	0.100		0.100	11/04	Continuing	Continuing					
		WR	NSWC Indian Head, MD	0.000	0.750	00/00	0.070		0.052	11/04	Continuing	Continuing	1				
		TBD	Contractor TBD	0.000	3.750	03/03	19.700		29.300	11/04	Continuing	Continuing	1				
		WR	NSWC Port Hueneme, CA	0.000			0.150		0.150	11/04	Continuing	Continuing	1				
		WR	NWS Earle, NJ	0.000			0.050		0.052	11/04	Continuing	Continuing	1				
		WR	NSWC Crane, IN	0.000			0.050	11/03	0.051	11/04	Continuing	Continuing					
										_		0.000					
Ship Integration		WR	PMS400	0.000			4.900		7.100	11/04	Continuing	Continuing	1				
		WR	NSWC Dahlgren	0.000			1.500	11/03	3.000	11/04	Continuing	Continuing	1				
Ship Suitability												0.000					
Systems Engineering												0.000					
Training Development												0.000					
Licenses												0.000					
Tooling												0.000					
GFE												0.000					
Award Fees												0.000					
Subtotal Product Deve	lopment			0.000	4.200		29.070		42.605		Continuing	Continuing					
Remarks:																	
Development Support		WR	various	0.000	0.590	10/02	4.180	11/03	6.050	11/04	Continuing	Continuing					
Software Development												0.000					
Training Development												0.000					
Integrated Logistics Suppo	ort											0.000					
Configuration Managemer	nt											0.000					
Technical Data												0.000					
GFE												0.000					
Award Fees												0.000					
Subtotal Support				0.000	0.590		4.180		6.050		Continuing	Continuing					

CLASSIFICATION: Unclassified

									DATE:				
Exhibit R-3 Cost Analysis (pag	ge 2)										February 200	03	
APPROPRIATION/BUDGET ACTIV	'ITY		PROGRAM E	LEMENT			PROJECT NU	JMBER AND	NAME				
RDT&E, N / BA-5			0604366N/ST	ANDARD MISS	SILE IMPROVE	MENTS	K3092/SM-5	5					
Cost Categories	Contract	Performing	•	Total		FY 03		FY 04		FY 05			
	Method	Activity &		PY s	FY 03	Award	FY 04	Award	FY 05	Award	Cost to	Total	Target Value
	& Type	Location		Cost	Cost	Date	Cost	Date	Cost	Date	Complete	Cost	of Contract
Developmental Test & Evaluation	WR	NSWC Port F		0.000	i e		0.200		0.225		Continuing		
	WR	White Sands	Missile Range,	0.000			0.150	11/03	0.500	11/04	Continuing	Continuing	
												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		0.350	D	0.725		Continuing	Continuing	
Contractor Engineering Support	CPAF	various		0.000	0.100	03/03	0.600	11/03	0.600	11/04	Continuing	Continuing	
Government Engineering Support												0.000	
Program Management Support												0.000	
Travel							0.010)	0.020		Continuing	Continuing	
Labor (Research Personnel)												0.000	
SBIR Assessment												0.000	1
Subtotal Management		<u> </u>		0.000	0.100		0.610)	0.620		Continuing	Continuing	
Remarks:													
Total Cost				0.000	4.890		34.210		50.000		Continuing	Continuing	
Remarks:													

CLASSIFICATION: Unclassified

EXHIBIT R4, Schedule	Profile									ТВС)														DATE	<u> </u>	F	ebrua	ry 20	03		
APPROPRIATION/BUDGET										SRAM	ELEM			R AND							PROJ			ER AN	D NAN	ИΕ						
RDT&E, N /	BA-5								06043			DAKD I	/IISSIL	E IMPF		VIENT	5				K309											
Fiscal Year		20	02			20	03	1		20	04	1		200	05			20	06	ı		20	07	ı		20	08	ı		200)9	
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																																
Prototype Phase																																
Radar System Development																																
EDM Radar Delivery																																
Software 1XXSW Delivery 2XXSW Delivery																																
Test & Evaluation Milestones																																
Development Test																																
Operational Test																																
Production Milestones																																
LRIP I FY 05																																
LRIPII FY 06																																
FRP FY 07																																
Deliveries																																

 $^{^{\}star}$ Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION: Unclassified

Exhibit R-4a, Schedule Detail						DATE:						
TBD						February 2003						
APPROPRIATION/BUDGET ACTIVITY	PROGRAM EI	LEMENT	UMBER AND NAME									
RDT&BA-5	0604366N/ST	ANDARD MISS	SILE IMPROVE	MENTS	K3092/SM-5							
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
Prototype Phase												
System Design Review (SDR)												
Milestone II (MSII)												
Contract Preparation												
Software Specification Review (SSR)												
Preliminary Design Review (PDR)												
System Development												
Critical Design Review (CDR)												
Quality Design and Build												
Test Readiness Review (TRR)												
Developmental Testing (DT-IIA)												
Eng Dev Model (EDM) Radar Delivery - Lab												
Software Delivery 1XXSW												
Preproduction Readiness Review (PRR)												
EDM Radar Delivery - Flt Related												
Milestone C (MS C)												
Operational Testing (OT-IIA)												
Start Low-Rate Initial Production I (LRIP I)												
Software Delivery 2XXSW												
Developmental Testing (DT-IIB1)												
Developmental Testing (DT-IIB2)												
Start Low-Rate Initial Production II												
Operational Testing (OT-IIB)												
Developmental Testing (DT-IIC)												
Functional Configuration Audit (FCA)												
Low-Rate Initial Production I Delivery												
Technical Evaluation (TECHEVAL)												
Physical Configuration Audit												
Operational Evaluation (OT-IIC) (OPEVAL)												
Low-Rate Initail Production II Delivery												
IOC												
Full Rate Production (FRP) Decision												
Full Rate Production Start												
First Deployment												