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DEPARTMENT OF THE NAVY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1987



SUBMITTED TO CONGRESS FEBRUARY 1986

PROCUREMENT

WEAPONS PROCUREMENT, NAVY

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4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S)			
6a. NAME OF PERFORMING ORGANIZATION OFFICE OF THE NAVY COMPTROLLER NCBG-2		6b. OFFICE SYMBOL (If applicable)	7a. NAME OF MONITORING ORGANIZATION SAME AS 6a			
6c. ADDRESS (City, State, and ZIP Code) OFFICE OF THE NAVY COMPTROLLER PROGRAM/ BUDGET COORDINATION BRANCH WASHINGTON, D.C. 20350			7b. ADDRESS (City, State, and ZIP Code) SAME AS 6c			
8a. NAME OF FUNDING / SPONSORING ORGANIZATION SAME AS 6a		8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER			
8c. ADDRESS (City, State, and ZIP Code) SAME AS 6c			10. SOURCE OF FUNDING NUMBERS			
		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.	
11. TITLE (Include Security Classification) DEPT OF THE NAVY JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1987 WEAPONS PROCUREMENT, NAVY						
12. PERSONAL AUTHOR(S)						
13a. TYPE OF REPORT FINAL		13b. TIME COVERED FROM 86-10-1 TO 87-9-30		14. DATE OF REPORT (Year, Month, Day) FEBRUARY, 1986		15. PAGE COUNT 53
16. SUPPLEMENTARY NOTATION						
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)			
FIELD	GROUP	SUB-GROUP				
19. ABSTRACT (Continue on reverse if necessary and identify by block number) THIS VOLUME CONTAINS JUSTIFICATION MATERIAL SUPPORTING THE PRESIDENT'S FISCAL YEAR 1987 BUDGET PRESENTATION TO CONGRESS.						
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input type="checkbox"/> UNCLASSIFIED/UNLIMITED <input checked="" type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS				21. ABSTRACT SECURITY CLASSIFICATION		

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DEPARTMENT OF THE NAVY
WEAPONS PROCUREMENT, NAVY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1987 AND 1988

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Unannounced	<input type="checkbox"/>
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Availability Codes	
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WEAPONS PROCUREMENT, NAVY

For construction, procurement, production, modification, and modernization of missiles, torpedoes, other weapons, and related support equipment including spare parts, and accessories therefor; expansion of public and private plants, including the land necessary therefor, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway, [as follows: Poseidon, \$5,001,000; Trident I, \$36,226,000; Trident II, \$581,986,000; Support equipment and facilities, \$17,107,000; Tomahawk, \$724,804,000; AIM/RIM-7 F/M Sparrow, \$359,200,000; AIM-9 L/M Sidewinder, \$125,800,000; AIM-54 A/C Phoenix, \$343,600,000; AIM-54 A/C Phoenix advance procurement, \$24,800,000; AGM-84A Harpoon, \$314,873,000; AGM-88A HARM, \$236,000,000; SM-1 MR, \$20,300,000; SM-2MR, \$509,719,000; SM-2ER, \$303,200,000; Sidarm, \$30,500,000; Hellfire, \$51,768,000; Laser Maverick, \$173,458,000; IIR Maverick, \$27,809,000; Aerial Targets, \$105,600,000; Drones and decoys, \$29,400,000; Other missile support, \$12,309,000; Modification of missiles, \$64,933,000; Support equipment and facilities, \$86,210,000; Ordnance Support equipment, \$16,289,000; MK-48 ADCAP torpedo program, \$417,437,000; MK-46 torpedo program, \$125,115,000; MK-60 CAPTOR mine program, \$59,600,000; MK-30 mobile target program, \$18,600,000; MK-38 mini mobile target program, \$3,499,000; Antisubmarine rocket (ASROC) program, \$15,551,000; Modification of torpedoes, \$115,055,000; Torpedo support equipment program, \$70,575,000; MK-15 close-in weapons system program, \$150,146,000; MK-75 gun mount program \$17,905,000; MK-19 machine gun program, \$1,196,000; 25mm gun mount, \$5,501,000; Small arms and weapons, \$11,305,000; Modification of guns and gun mounts, \$58,117,000; Guns and gun mounts support equipment program, \$1,200,000; Spares and repair parts, \$166,601,000; In all: \$5,227,795,000]; \$6,095,400,000 to remain available for obligation until September 30, [1988: Provided, That within the total amount appropriated, the subdivisions within this appropriation shall be reduced by \$210,500,000.] 1989. (10 U.S.C. 5012, 5031, 7201; Department of Defense Appropriation Act, 1986, as included in Public Law 99-190; additional authorizing legislation to be proposed.)

Weapons Procurement, Navy
 Program and Financing (in Thousands of dollars)

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Identification code	Budget plan (amounts for PROCUREMENT actions programed)				Obligations	
	1985 actual	1986 est.	1987 est.	1985 actual	1986 est.	1987 est.
Program by activities:						
Direct program:						
00.0101	322,749	602,560	1,437,037	264,611	591,960	1,200,920
00.0201	3,104,351	3,455,859	3,343,063	2,822,752	3,330,843	3,370,047
00.0301	724,200	782,732	971,364	597,452	676,690	840,962
00.0401	229,111	223,447	193,202	188,414	166,492	203,415
00.0501		151,497	150,734		128,772	147,399
00.9101	4,380,411	5,216,095	6,095,400	3,873,229	4,894,757	5,762,743
01.0101	1,461	30,000	31,000	45,049	37,387	31,000
10.0001	4,381,872	5,246,095	6,126,400	3,918,278	4,932,144	5,793,743
Financing:						
Offsetting collections from:						
11.0001	-2,878	-29,000	-29,000	1,000	-29,000	-29,000
13.0001	1,413	-1,000	-2,000	34,787	-1,000	-2,000
14.0001	4			-59		
17.0001				-672		
Unobligated balance available, start of year:						
21.4002				-1,894,853	-2,098,824	-2,493,575
21.4003	-28,400	-54,000		-28,400	-54,000	
21.4007	-223,106	80,800				
22.4001	132,115	-26,800		132,115	-26,800	
Unobligated balance transferred to other acc						
24.4002				2,098,824	2,493,575	2,826,232
24.4003	54,000			54,000		
25.0001	38,591			38,591		
39.0001	4,353,611	5,216,095	6,095,400	4,353,611	5,216,095	6,095,400
Budget authority:						
40.0001						
41.0001	4,353,611	5,227,795	6,095,400	4,353,611	5,227,795	6,095,400
43.0001		-11,700			-11,700	
Transferred to other accounts(-)						
43.0001	4,353,611	5,216,095	6,095,400	4,353,611	5,216,095	6,095,400
Appropriation (adjusted)						
Relation of obligations to outlays:						
71.0001				3,954,006	4,902,144	5,762,743
72.4001				4,092,675	5,155,924	6,238,618
74.4001				-5,155,924	-6,238,618	-8,045,325
77.0001				51,336		
78.0001				-672		
90.0001				2,941,421	3,819,450	3,956,036
Outlays						

Weapons Procurement, Navy
Object Classification (in Thousands of dollars)

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Identification code	17-1507-0-1-051	1985 actual	1986 est.	1987 est.
Direct obligations:				
122.001	Transportation of things	1,911	2,706	3,392
Other services:				
125.003	Contracts	19,107	27,064	33,927
125.004	Other	57,320	81,193	101,781
126.001	Supplies and materials	517,376	754,155	722,499
131.001	Equipment	3,277,515	4,029,639	4,901,144
199.001	Total Direct obligations	3,873,229	4,894,757	5,762,743
Reimbursable obligations:				
226.001	Supplies and materials	251	275	300
231.001	Equipment	44,798	37,112	30,700
299.001	Total Reimbursable obligations	45,049	37,387	31,000
999.901	Total obligations	3,918,278	4,932,144	5,793,743

Weapons Procurement, Navy
Program and Financing (in thousands of dollars) FISCAL YEAR 1983

Budget Plan (amounts for PROCUREMENT actions programmed)

Identification Code	1985 actual	1986 est.	1987 est.	1985 actual	1986 est.	1987 est.
Program by activities:						
Direct program:						
00.0101				29,758		
00.0201				270,319		
00.0301				21,818		
00.0401				538		
00.9101				322,433		
01.0101				2,336		
10.0001				324,769		
Financing:						
Offsetting collections from:						
11.0001				3,708		
13.0001				6,234		
14.0001				-63		
17.0001				-668		
21.4002				-465,886		
21.4007						
22.4001				93,315		
23.0001				38,591		
39.0001						

Weapons Procurement, Navy
Program and Financing (in Thousands of dollars) FISCAL YEAR 1984

Budget Pier (amounts for PROCUREMENT actions programmed)

Identification code	17-1507-0-1-C51	1985 actual	1986 est.	1987 est.	1988 actual	1989 est.	1990 est.
Program by activities:							
Direct program:							
00.0101	Ballistic missiles	21,673	85,183				
00.0201	Other missiles	651,186	356,154				
00.0301	Torpedoes and related equipment	95,343	77,729				
00.0401	Other weapons	52,770	12,584				
00.9101	Total direct program	810,972	531,650				
01.0101	Reimbursable program	42,713	5,926				
10.0001	Total	853,685	537,576				

Financing:

11.0001	Federal funds(-)	170					
12.0001	Trust funds(-)	27,140					
13.0001	Reserve of prior year obligations	-4					
21.4001	Unobligated balance available, start of year:						
21.4002	For completion of prior year budget plans						
21.4003	Available to finance new budget plans						
21.4004	Reprogramming from/to prior year budget plan						
22.4001	Unobligated balance transferred to other accounts						
24.4002	For completion of prior year budget plans						
30.0001	Budget authority						

Budget Plan (amounts for PROCUREMENT actions programmed)

Identification code	17-1507-0-1-051	1985 actual	1987 est.	1985 actual	1987 est.	1986 est.	1987 est.
Program by activities:							
Direct program:							
00 0101	Ballistic missiles		1,437,037		1,049,618		1,049,618
00 0201	Other missiles		3,543,063		2,083,079		2,083,079
00 0301	Torpedoes and related equipment		971,364		583,403		583,403
00 0401	Other weapons		133,202		102,611		102,611
00 0501	Spare and repair parts		150,734		132,249		132,249
00 9101	Total direct program		6,095,400		3,951,160		3,951,160
01 0101	Reimbursable program		31,000		31,000		31,000
10 0001	Total		6,126,400		3,982,160		3,982,160
Financing:							
Offsetting collections from:							
11 00 01	Federal funds(-)		-29,000		-29,000		-29,000
13 00 01	Trust funds(-)		-2,000		-2,000		-2,000
14 4002	Unobligated balance available, end of year:						
	For completion of prior year budget plans				2,144,240		2,144,240
10 0001	Budget authority (Appropriation)		6,095,400		6,095,400		6,095,400

Appropriation Introduction
(In Thousands of Dollars)

	FY 1987 <u>Estimate</u>	FY 1988 <u>Estimate</u>
Appropriation	\$6,095,400	\$7,873,482
Total Direct Obligations	5,762,743	-
Total Direct Budget Plan	6,095,400	7,873,482

The Weapons Procurement, Navy appropriation finances the procurement of ballistic, strategic and tactical missiles, torpedoes, mines, guns and support equipment for Naval, Coast Guard and Marine Aviation forces. Support equipment includes: equipment for modification of in-service missiles, torpedoes, mines, guns, and gun mounts; aerial and underwater targets used in training exercises and evaluation; hardware for Navy Navigation and Defense Meteorological satellite programs; spare parts; ground support and training equipment; and industrial facilities and tools required for the production and maintenance of missiles, torpedoes, mines and guns.

Fiscal Year 1987 and 1988 Highlights

The budget programs for the Weapons Procurement, Navy appropriation total \$6,095.4 million in FY 1987 and \$7,873.5 million in FY 1988. Significant features of these requests are:

- (a) A TRIDENT II (D-5) missile request of \$1,424.4 million in FY 1987 and \$2,283.7 million in FY 1988 for production support and initial production of 21 and 66 missiles respectively.
- (b) \$12.6 million in FY 1987 and \$29.7 million in FY 1988 is requested for ongoing weapons system support and for equipment procurements associated with flight test programs for the Poseidon and Trident I missiles, ballistic missile modifications and support equipment and facilities.
- (c) A TOMAHAWK Cruise Missile request of \$ 721.7 million for 324 missiles in FY 1987 and \$817.9 million for 410 missiles in FY 1988 plus \$68.8 million in FY 1987 and \$90.2 million in FY 1988 for advance procurement to support the FY 1988 and FY 1989 procurements, respectively.

(d) Tactical Missile procurements include an FY 1987 request of \$279.4 million for 1716 SPARROW missiles, \$47.0 million for 627 SIDEWINDER missiles, \$289.3 million for 205 PHOENIX missiles, \$128.4 million for 94 HARPOON missiles, \$256.7 million for 1,110 HARM missiles, \$198.8 million for 1,800 LASER MAVERICK missiles, \$730.6 million for 1,194 STANDAKD missiles, \$63.2 million for 50 RAM missiles, \$51.9 million for 685 STINGER missiles, \$52.1 for 419 IIR MAVERICK missiles, and \$22.9 million for 256 SIDEARM missiles, plus \$28.4 million for advance procurement for the PHOENIX missile to support the FY 1988 procurement. The FY 1987 request contains \$29.1 million to support surge programs for the SIDEWINDER and HARPOON missile programs. The FY 1988 request accelerates the Tactical Missile procurement over the FY 1987 level by procuring 1,594 SPARROW missiles for \$271.6 million, 430 PHOENIX missiles for \$431.8 million, 204 HARPOONS for \$197.1 million, 927 IIR MAVERICK missiles for \$91.3 million, 102 RAM missiles for \$78.4 million, 1,250 STANDARD missiles for \$747.3 million, and 1,492 HARM missiles for \$336.6 million, plus \$9.1 million for advance procurement to support the FY 1989 PHOENIX procurement.

(e) \$241.9 million in FY 1987 and \$328.8 million in FY 1988 is requested for Aerial Targets, Fleet Satellite Communications, Defense Meteorological Satellite Program, Drones and Decoys, missile modifications, and other items required to support the tactical missile procurements.

(f) An Anti-Submarine Warfare program consisting of a request of \$74.1 million for 500 MK-46 Torpedoes in FY 1987 and \$87.7 million for 500 MK-46 Torpedoes in FY 1988, as well as advance procurement of \$23.8 million in FY 1987 in support of the multi-year procurement of this weapon; and \$508.4 million for 227 MK-48 ADCAP Torpedoes in FY 1987 and \$552.6 million for 296 MK-48 ADCAP Torpedoes in FY 1988. Three Anti-Submarine Warfare programs commence initial production in FY 1987. The budget request includes \$17.0 million for 34 Anti-Surface Warfare (ASUM) torpedoes in FY 1987 and \$30.9 million for 110 ASUM torpedoes in FY 1988; \$109.9 million for 84 MK 50 Advanced Lightweight Torpedoes (ALMT) in FY 1987 and \$346.9 million for 204 MK 50 ALMT torpedoes in FY 1988 and \$74.3 million for 200 Vertical Launched ASROCs (VLA) in FY 1987 and \$73.5 million for 300 VLA's in FY 1988.

(g) \$193.2 million in FY 1987 and \$132.4 million in FY 1988 is requested for guns, gun mounts and related support equipment which primarily funds the Close-In-Weapons Systems procurement of 27 systems in FY 1987 for \$105.6 million and 9 in FY 1988 for \$43.1 million.

(h) \$150.7 million in FY 1987 and \$162.1 million in FY 1988 is requested for the procurement of spares and repair parts for all equipments, weapon systems, and support equipment procured under the Weapons Procurement, Navy appropriation which require support by the Hardware Systems Commands prior to the Navy Supply System Material Support Date.

Financing

The FY 1987 plan of \$6,095.4 million and the FY 1988 plan of \$7,873.5 million for this appropriation are to be financed by new obligational authority.

Summary of Requirements
(In Thousands of Dollars)

	<u>FY 1985 Actual</u>	<u>FY 1986 Estimate</u>	<u>FY 1987 Estimate</u>
Ballistic Missiles	322,749	602,560	1,437,037
Other Missiles	3,104,351	3,455,859	3,343,063
Torpedoes and Related Equipment	724,200	782,732	971,364
Other Weapons	229,111	223,447	193,202
Spares and Repair Parts	(171,325)	151,497	150,734
TOTAL Direct Program	4,380,411	5,216,095	6,095,400
Reimbursable Program	1,461	30,000	31,000
TOTAL Program Requirements	4,381,872	5,246,095	6,126,400
Less: Portion of program to be obligated in subsequent fiscal year	1,642,048	1,836,133	2,144,240
Plus: Obligations incurred against prior year program funds	1,178,454	1,522,182	1,811,583
TOTAL Obligations	3,918,278	4,932,144	5,793,743

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Summary of Requirements

(In Thousands of Dollars)

	<u>FY 1988 Estimate</u>
1. Ballistic Missiles	2,313,465
2. Other Missiles	3,998,565
3. Torpedoes and Related Equipment	1,266,996
4. Other Weapons	132,400
5. Spares and Repair Parts	162,056
<hr/>	
TOTAL Direct Program	7,873,482

BUDGET ACTIVITY 1: BALLISTIC MISSILES

(\$ In Thousands)
FY 1988 Estimate - \$2,313,465
FY 1987 Estimate - \$1,437,037
FY 1986 Estimate - \$ 602,560
FY 1985 Actuals - \$ 322,749

Purpose and Scope of Work: These funds provide for the procurement of fleet ballistic missiles, ancillary checkout and test equipment, missile modifications, and support equipment and facilities required to outfit and support the submarines assigned to the seabased strategic deterrent forces.

Justification of Funds: Of the \$1,437.0 million requested in FY 1987, \$1,433.1 million is for ballistic missiles, \$0.1 million is for modification of missiles, and \$3.8 million is for support equipment and facilities.

Of the \$2,313.5 million requested in FY 1988, \$2,305.5 million is for ballistic missiles, \$5.2 million is for modification of missiles, and \$2.8 million is for support equipment and facilities.

BALLISTIC MISSILES

(\$ In Thousands)
FY 1988 Estimate - \$2,305,464
FY 1987 Estimate - \$1,433,152
FY 1986 Estimate - \$ 590,097
FY 1985 Actuals - \$ 291,630

Of the \$1,433.1 million requested for ballistic missiles in FY 1987, \$4.0 million is for POSEIDON, \$4.7 million is for TRIDENT I, \$1,124.4 million is for TRIDENT II, and \$300.0 million is for TRIDENT II Advance Procurement.

Of the \$2,305.5 million requested for ballistic missiles in FY 1988, \$3.4 million is for POSEIDON, \$18.3 million is for TRIDENT I, \$1,913.7 million is for TRIDENT II, and \$370.0 million is for TRIDENT II Advance Procurement.

POSEIDON Missile

		(\$ In Thousands)	
		FY 1987	FY 1988
Procurement Cost	Qty	Amount	Qty
	-	\$3,974	-
			Amount
			\$3,382

To maintain the effectiveness of the Fleet Ballistic System against postulated enemy defensive capabilities of the next decade, the Navy was directed in FY 1966 to develop and deploy the POSEIDON weapon system. The principal advantage of the POSEIDON over its predecessor, the POLARIS, is its adaptability to overcome a broad spectrum of defenses, as they may materialize from Soviet Anti-Submarine Warfare (ASW) and Anti-Ballistic Missile (ABM) development programs. POSEIDON missiles are no longer being procured; however, funding is required to support missile flight tests which will continue throughout the operational life of the weapon system. This testing is necessary in order to continue to evaluate the readiness of deployed missiles in accordance with Joint Chiefs of Staff test criteria.

The POSEIDON procurement requests of \$4.0 million in FY 1987 and \$3.4 million in FY 1988 are for procurement of reentry system components for use in the C-3 flight test program and for ongoing weapon system support.

TRIDENT I Missile

		(\$ In Thousands)	
		FY 1987	FY 1988
Procurement Cost	Qty	Amount	Qty
	-	\$4,739	-
			Amount
			\$16,344

The TRIDENT mission is to provide an undersea missile system in order to ensure that the U.S. continues to maintain a credible deterrent independent of foreseeable threats in the 1990's and beyond. To accomplish this mission, the TRIDENT I missile was developed to support two separate systems. The TRIDENT system is comprised of Continental United States based nuclear powered submarines equipped with long range TRIDENT I strategic missiles and associated direct support shore facilities. The TRIDENT I Backfit system provides TRIDENT I missiles for backfit into existing POSEIDON submarines which gives these submarines a greater range of patrol in order to insure their survivability in the event of unforseeable enemy breakthroughs in ASW capabilities.

Within the current TRIDENT I missile program of 570 missiles procured between FY 1977 and FY 1984, missile production deliveries have been scheduled at quantities necessary to maintain quality and a smooth production rate and to provide for submarine requirements, replacement of missiles returned from the fleet for repair and surveillance, and expenditures during demonstration firings and operational testings. Based on current program guidance, TRIDENT I missile procurements will support the ultimate deployment of eight TRIDENT submarines, twelve Backfit submarines and additional missiles to continue the Fleet Return and Evaluation Program (FREP) and DASO/FOT programs. Although FY 1984 marked the final year of TRIDENT I missile procurement, funding is required in FY 1985 and subsequent years to support missile flight tests which will continue throughout the operational life of the weapon system. This testing is essential in order to continue to evaluate the readiness of deployed missiles in accordance with Joint Chiefs of Staff test criteria.

The FY 1987 and FY 1988 TRIDENT I missile requests of \$4.7 million and \$18.4 million respectively will provide for the procurement of reentry system components for use in the flight test program and for ongoing weapon system support.

TRIDENT II MISSILE

(\$ In Thousands)		
	FY 1987	FY 1988
Procurement Cost	Qty	Amount
	21	\$1,124,439
	66	\$1,913,738

The TRIDENT II missile will be carried on TRIDENT Fleet Ballistic Missile Submarines, ensuring that the United States will continue to maintain a highly survivable strategic deterrent for the 1990's and beyond. Deployment of the TRIDENT II missile will (1) enhance Fleet Ballistic Missile Submarine survivability by increasing Sea Launched Ballistic Missile range at full payload to exploit the total patrol area available to the TRIDENT submarine, (2) minimize total weapon system costs by increasing Sea Launched Ballistic missile payload to the level permitted by the size of the TRIDENT submarine launch tube, thereby allowing mission capability to be achieved with a lesser number of submarines, (3) balance the Triad by adding efficient hard target kill capability to the Sea Launched Ballistic Missile, and (4) enhance essential equivalence with the Soviets in accordance with perceived needs to increase our warhead inventory, throw weight, and accuracy in the presence of increasing Soviet capabilities and force levels.

Funding in this line is required to support the procurement of an all new TRIDENT II missile, initial production of which commences in FY 1987 and to which the following key program milestones apply:

- o First Performance Evaluation Missile (PEM) flight test - March 1989
- o Start PEM missile processing at Strategic Weapons Facility, Atlantic (SMFLANT) - July 1988
- o SMFLANT installation, test, checkout and equipment/facility integration beginning in FY 1987
- o Equipment procurements in FY 1985 through FY 1988 based on leadtime away requirements

The FY 1987 funding request of \$1,124.4 million will support the initial production of 21 TRIDENT II missiles and associated guidance and flight test instrumentation systems; procurement of IK-4 and IK-5 reentry systems; and SMFLANT production planning, activation, and initial equipment outfitting essential to establishing a TRIDENT II missile processing capability. The FY 1988 funding request of \$1,913.7 million will support the first full year's production of 66 TRIDENT II missiles; production of associated guidance and flight test instrumentation systems; procurement of IK-4 and IK-5 reentry systems; tooling and test equipment at contractors' facilities; and additional SMFLANT production planning, activation, and initial equipment outfitting.

TRIDENT II Missile Advance Procurement

	(\$ In Thousands)
FY 1987	FY 1988
Amount	Amount
Advance Procurement Cost	\$370,000

Funding in this line item is required to support the advance procurement of those commodities, components, subassemblies and materials having longer manufacturing leadtimes than the TRIDENT II end items. Advance procurement requirements for these long lead commodities are budgeted one year in advance of the using end items, which are fully funded in the procurement line, and funding levels are established commensurate with the quantity of end items to be procured.

The FY 1987 request of \$300.0 million and the FY 1988 request of \$370.0 million will provide for procurement of long lead items required to support production in FY 1988 and FY 1989 respectively of TRIDENT II missiles, IK-6 guidance systems, IK-4 and IK-5 reentry systems and flight test instrumentation kits.

MODIFICATION OF MISSILES

(\$ In Thousands)
FY 1988 Estimate - \$ 5,178
FY 1987 Estimate - \$ 95
FY 1986 Estimate - \$ -0-
FY 1985 Actuals - \$ 10,294

Requirements for POSEIDON missile alterations (SPALTS) are determined only after thorough investigation has established the need for a change in system or equipment configuration, the total estimated cost and the impact of the proposed change have been defined, and the proposal has been subjected to intense screening to determine a positive advantage to the system. POSEIDON SPALTS are funded only when correction of a known deficiency is required, a component is no longer procureable in its original configuration, or it is necessary to accept a substitute part of an existing subassembly.

POSEIDON Modifications

(\$ In Thousands)
FY 1987 Amount \$ 95
FY 1988 Amount \$ 5,178

Procurement Cost

The FY 1987 and FY 1988 requests of \$0.1 million and \$5.2 million respectively provide funding in support of the Thrust Vector Control (TVC) Gas Generator SPALT and the First-Stage Motor Nozzle SPALT. Failure to provide the funding requested would increase the potential risk of deterioration in POSEIDON weapon system performance reliability.

SUPPORT EQUIPMENT AND FACILITIES

(\$ In Thousands)
FY 1988 Estimate - \$ 2,823
FY 1987 Estimate - \$ 3,790
FY 1986 Estimate - \$12,463
FY 1985 Actuals - \$20,825

The support equipment and facilities requests provide for the procurement of missile industrial facilities.

Missile Industrial Facilities

(\$ In Thousands)
FY 1987 Amount FY 1988 Amount
\$3,790 \$2,525

Procurement Cost

Funding for Missile Industrial Facilities provides for capital rehabilitation of civil works and equipment, equipment and civil works improvements, and emergency repair and modification to production equipment and accessories at the Navy-owned Naval Industrial Reserve Ordnance Plant (NIROP) at Sunnyvale, California; for capital rehabilitation and civil works improvements at the NIROP at Bacchus, Utah; and for civil works improvements at Air Force Plant 78 near Brigham City, Utah.

Capital rehabilitation and improvement requirements in FY 1987 and FY 1988 include the following: non-severable civil works additions and modifications to Navy and Air Force owned buildings; improvements to building equipments that are generated as a result of safety and security requirements; rehabilitation and environmental equipment to control the discharge of pollutants into the atmosphere; and fire protection equipment to support more efficient production and test operations.

BUDGET ACTIVITY 2: OTHER MISSILES

(\$ In Thousands)
FY 1988 Estimate - \$ 3,998,565
FY 1987 Estimate - \$ 3,343,063
FY 1986 Estimate - \$ 3,455,859
FY 1985 Actual - \$ 3,104,351

Purpose and Scope of Work

Funds budgeted under this activity finance the procurement and modification of strategic and tactical guided missiles, drones and decoys, and aerial targets. In addition, funds provide for other missile support, ordnance support equipment, weapons industrial facilities and for the support of satellites, launches, and associated equipment for the Fleet Satellite Communication System and the Defense Meteorological Satellite program.

Guided missiles are procured for operational inventory requirements to meet combat sustainability objectives, combat usage, quality assurance testing, and training purposes. Aerial targets are required to support training programs and to permit evaluation of missile performance. Drones and decoys are procured to improve the survivability of Navy aircraft, and to provide gunfire support and essential relays in tactical situations. Procurement funds provide for (1) the components that comprise the end-items, such as guidance, control, motors, warheads, and fuzes, (2) effort and hardware associated with the production and assembly of these items, such as production engineering, production proofing, and (3) special handling and test equipment, training materials and other specialized items required for operational Fleet support of the item.

Justification of Funds

The Chief of Naval Operations establishes operational and training objectives consistent with the Navy's assigned role in national defense. These objectives are translated into annual procurement programs in accordance with logistics guidance set forth by the Secretary of Defense, taking into account available fiscal resources. The resultant procurement plan is designed to maintain an effective mix of weapons in the combat inventory, and to provide weapons and targets in support of training, evaluation, and pipeline requirements. In developing the plan, the Navy considers production feasibility and assures that missile deliveries are compatible with aircraft and ship testing, production, development, and deployment schedules.

The following paragraphs provide justification for the Other Missiles procurement programs. Initial spare parts amounts are included for information under each missile but are separately addressed in the spares and repair parts section of the Budget Activity 5 justification.

Strategic Missiles

(\$ In Thousands)
FY 1988 Estimate - \$ 908,099
FY 1987 Estimate - \$ 790,536
FY 1986 Estimate - \$ 724,804
FY 1985 Actual - \$ 553,343

BGM-109 TOMAHAWK Cruise Missile

FY 1987		FY 1988	
Qty	Amt	Qty	Amt
324	\$721,736	410	\$817,914
	68,800		90,185
	45,117		50,332
	<u>\$835,653</u>		<u>\$958,431</u>

Procurement
Advance Procurement
Initial Spares
Procurement Cost

The TOMAHAWK Cruise Missile provides an attack capability against targets at sea (anti-ship TOMAHAWK) and on land (land-attack TOMAHAWK). TOMAHAWK is capable of being launched from aircraft, ships, submarines, and ground launchers. The cruise missile can be fitted with either a conventional high explosive or nuclear warhead, and is propelled in flight by a small turbofan engine. The FY 1987 request of \$790.5 million, which includes \$68.8 million of advance procurement for FY 1988, will procure 120 anti-ship and 204 land-attack missiles. The Tomahawk missile is designed to be deployed in submarines and surface ships in a variety of launchers.

Tactical Missiles

(\$ In Thousands)
FY 1988 Estimate - \$2,548,877
FY 1987 Estimate - \$2,333,249
FY 1986 Estimate - \$2,568,524
FY 1985 Actual - \$2,301,991

Funds budgeted under this category finance the procurement of air-, surface-, and submarine-launched missiles, other missile support, aerial targets, and drones and decoys.

AIM/RIM-7F/M SPARROW Missile

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
1,716	1,594
\$279,394	\$271,642
1,000	2,577
\$280,394	\$274,219

Procurement
Initial Spares
Procurement Cost

SPARROW is both a supersonic, all-weather, all-aspect-capable, air-to-air missile employed by F-4, F-14, F-15, and F-18 aircraft against high performance aircraft and a surface-to-air missile employed with the NATO SEASPARROW system on various Naval vessels. The monopulse seeker (AIM-7M), which has improved electronic countermeasures, fuzing and look down/clutter capability, was introduced into the FY 1980 procurement. The RIM-7M for surface launch will eventually replace both the RIM-7E and RIM-7H. Initial procurement of 80 RIM-7M's was in FY 1981. The \$279.4 million requested in FY 1987 provides for the procurement of 1,451 AIM-7M and 265 RIM-7M missiles. The FY 1987 AIM/RIM-7M procurement of 2,095 missiles (1,716 missiles for Navy and 379 missiles for Air Force) will be produced through a competition between Raytheon and General Dynamics. The requested procurement of 1,716 missiles in FY 1987 is needed to build up the operational inventory, to meet combat sustainability objectives and to replace missiles in inventory, as earlier, less capable versions of SPARROW are expended in training.

AIM-120A AMRAAM

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
-	-
\$ -	\$ 9,899
-	3,000
-	-
\$ -	\$12,899

Procurement
Advance Procurement
Initial Spares
Procurement Cost

The AMRAAM (Advanced Medium Range Air-to-Air Missile) is the successor to the SPARROW missile being procured jointly by the Air Force and the Navy. The Air Force serves as executive service. The missile will provide an all-weather, all-aspect, beyond visual range air-to-air missile compatible with the F-14, F-15, F-16, F/A-18, and A-6E upgrade aircrafts. The \$12.9 million requested in FY 1988 will be used to procure special tooling and test equipment, and non-recurring start-up costs required to support the initial procurement of AMRAAM missiles planned for FY 1989 and includes \$3.0 million for advance procurement of long lead materials to support the FY 1989 procurement. The AMRAAM missile will enhance Navy war fighting capability in the 1990's and beyond through significant improvements in operational utility and combat effectiveness.

AIM-9L/M SIDEWINDER Missile

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
627	488
\$46,977	\$52,178
17,641	-
615	475
\$65,233	\$52,653

Procurement
Advance Procurement
Initial Spares
Procurement Cost

The SIDEWINDER AIM-9L/M is a joint Navy and Air Force short-range, air-to-air, infrared (IR), dogfight missile employed by both fighter and attack aircraft. The all-aspect launch capability is a significant improvement over previous SIDEWINDER versions and greatly increases the firing envelope. The AIM-9M, a product improvement of the AIM-9L, provides for improved counter-countermeasures capability and an improved ability to acquire targets in a high IR clutter background. The procurement of 2,337 guidance units (627 missiles for Navy and 1,710 missiles for Air Force) in FY 1987 will be competed between the two mobilization base producers, Ford Aerospace and Raytheon, with the winner being awarded a larger quantity. The \$64.6 million requested in FY 1987 will procure 627 missiles that are required to continue inventory build up of the AIM-9M version, which will be the first-line short-range air-defense missile through the 1990's and includes \$17.6 million for advance procurement of key guidance and control section parts required to provide production surge capability.

AIM-54A/C PHOENIX Missile

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
205	430
\$289,272	\$431,777
28,400	9,100
3,810	988
\$321,482	\$441,865

Procurement
Advance procurement
Initial Spares
Procurement Cost

The PHOENIX missile system is comprised of a long-range airborne weapon control system (AN/AWG-9) with multiple target-handling capabilities and long-range missiles utilizing semi-active mid-course and active terminal guidance. Its mission is to kill multiple air targets with conventional warheads. Six such missiles can be carried aboard the F-14 aircraft. Near simultaneous launch is possible against six targets in an all-weather and heavy-jamming environment. The improved PHOENIX missile, the AIM-54C, provides improved lethality, stream raid discrimination, electronic counter countermeasure (ECCM) performance, high- and low-altitude performance, and improved reliability and maintainability. As a result of these improvements, the missile has greater capability to counter the projected MIG-25

FOXBAT aircraft and cruise missile threats. The PHOENIX does not replace any other missile. The \$317.7 million requested in FY 1987, which includes \$28.4 million of advance procurement for FY 1988, will finance the procurement of 205 PHOENIX missiles configured in the improved AIM-54C version including 56 validation missiles from the planned second source contractor. Competitive procurement of the PHOENIX missile is scheduled to begin in FY 1989. The FY 1987 missiles are needed to increase the number of operational PHOENIX missiles in the active inventory, and to offset the loss of older AIM-54A missiles that are expended or suffer irreparable failure.

AGM/RGM/UGM-84A/E HARPOON Missile

	(\$ In Thousands)	
	FY 1987	FY 1988
	Qty	Amt
Procurement	94	\$128,387
Advance Procurement		11,476
Initial Spares		13,905
Procurement Cost		\$216,221

The HARPOON is an air-, surface-, and submarine-launched cruise missile that provides an attack capability against targets at sea and on land. It uses an active or passive seeker, radar altimeter, and attitude reference assembly in conjunction with a small digital computer for missile guidance and control. It is propelled by a turbo-jet sustainer engine augmented by a solid booster for ship and submarine launch. The missile has a standard 13.5-inch diameter with a weight of 1,100 pounds for air launch and 1,500 pounds for ship launch. It is compatible with the TARTAR, TERRIER, and ASROC ship launchers as well as with aircraft and submarine launch systems. The missile is planned for use aboard the FF-1052, DDG and DD-963, CG, CGN, PHM, BB and FFG class ships, the P-3, S-3, A-6, F/A-18, and B-52G aircraft and nuclear attack submarines. The 1987 request of \$139.9 million provides for procurement of 94 HARPOON missiles (75 air-launch anti-ship and 19 air-launch land-attack missiles) and includes \$11.5 million for advance procurement of key guidance and control section parts required to provide production surge capability. These weapons are requested to ensure adequate availability of weapons as new platforms become operational, and to offset missile expenditures due to training and test requirements.

AGM-88A HARM Missile (MYP)

(\$ In Thousands)	
FY 1987	
Qty	Amt
1,110	\$256,682
	5,568
	<u>\$262,250</u>
FY 1988	
Qty	Amt
1,492	\$336,559
	12,031
	<u>\$348,590</u>

Procurement
Initial Spares
Procurement Cost

The High Speed Anti-Radiation Missile (HARM) is a joint Navy and Air Force air-to-surface missile designed to suppress or destroy land- and sea-based radars supporting enemy air defense systems. HARM is a design evolution of anti-radiation missiles (ARM) such as SHRIKE and STANDARD ARM, and is planned to replace both missiles in the Navy inventory. HARM characteristics include: high speed, large-launch envelope, wide-band-frequency coverage in a single head, high sensitivity, and compatibility with various naval aircraft. The HARM has evolved from known and predicted deficiencies in SHRIKE and STANDARD ARM missiles in defeating current and future enemy air defense systems. Initial procurement commenced in FY 1981. The FY 1987 request of \$256.7 million will procure 1,110 HARM missiles for the Navy. Failure to provide the requested number of missiles will seriously degrade the Navy's ability to counter the threat to aircraft and aircrews posed by enemy air defense systems during combat. This procurement in FY 1987 will also significantly increase the number of missiles in the inventory. The FY 1987 procurement represents the first year of a proposed three year multiyear joint Navy and Air Force procurement program. In FY 1987, 3,240 HARM missiles will be produced (1,110 missiles for Navy and 2,130 missiles for Air Force).

STANDARD MISSILE MEDIUM RANGE (MR) SM-2

(\$ In Thousands)	
FY 1987	
Qty	Amt
844	\$513,611
	10,959
	<u>\$524,570</u>
FY 1988	
Qty	Amt
850	\$512,734
	9,112
	<u>\$521,846</u>

Procurement
Initial Spares
Procurement Cost

The STANDARD MR (SM-2) is a solid-propellant, tail-controlled, surface-to-air and surface-to-surface missile with mid-course guidance, semi-active homing guidance and home-on-jamming capability, and proximity and contact fuzing for use on TARTAR, AEGIS, and DDG-51 Class Ships. The FY 1987 request of \$513.6 million for 844 missiles supports AEGIS and TARTAR cruisers. To reduce the procurement cost of this missile, a second production source will be evaluated in FY 1986, leading to a directed buy. The FY 1987 budget request includes funding to combine development of a second production source.

STANDARD MISSILE EXTENDED RANGE (ER) SM-2

(\$ In Thousands)	
FY 1987	
Qty	Amt
350	\$217,017
	6,011
	<u>\$223,028</u>
FY 1988	
Qty	Amt
400	\$234,519
	5,156
	<u>\$239,675</u>

Procurement
Initial Spares
Procurement Cost

The STANDARD ER (SM-2) is a solid-propellant, tail-controlled, surface-to-air and surface-to-surface missile with mid-course guidance, semi-active homing guidance and home-on-jamming capability, and proximity and contact fuzing for use on TERRIER missile ships. The FY 1987 request of \$217.0 million for procurement of 350 Block II ER missiles will provide additional assets to meet sustaining requirements in support of TERRIER Guided Missile Cruiser/New Threat Upgrade (CG/NTU) ships.

RIM-116A ROLLING AIRFRAME MISSILE (RAM)

(\$ In Thousands)	
FY 1987	
Qty	Amt
50	\$63,209
	-
	<u>\$63,209</u>
FY 1988	
Qty	Amt
102	\$78,418
	844
	<u>\$79,262</u>

Procurement
Initial Spares
Procurement Cost

The Rolling Airframe Missile (RAM) is a high-power, low-cost, lightweight, complementary self-defense system to engage anti-ship capable missiles. It has dual-mode passive radar-frequency/infrared guidance and will be fired from two launching systems: the NATO SEASPARROW Surface Missile System (NSSMS), of which two cells of the NSSMS system will be modified to hold five (5) RAM rounds each; and a RAM stand-alone Command and Launch System that holds 21 missiles. Components of the missile will be procured competitively between a U.S. and a German Prime contractor. The FY 1987 budget request of \$63.2 million will provide for the manufacture of 50 production missiles, and associated support costs.

FIM-92A STINGER Missile

		(\$ In Thousands)		
		FY 1987	FY 1988	
	Qty	Amt	Qty	Amt
Procurement	685	\$51,940	-	-
Initial Spares				
Procurement Cost		\$51,940		\$ -

STINGER is an advanced man-portable air defense system. It provides Navy forces with low-altitude and close-range self-defense against aircraft and helicopters. STINGER utilizes a passive infrared homing guidance system that operates independently after initial aiming and launching by the operator. The system is composed of the missile and launcher, unit trainers and ancillary equipment. The STINGER replaces the REDEYE weapon system.

AGM-122A SIDEARM Missile

		(\$ In Thousands)		
		FY 1987	FY 1988	
	Qty	Amt	Qty	Amt
Procurement	256	\$22,858	256	\$23,726
Initial Spares		55		25
Procurement Cost		\$22,913		\$23,751

The SIDEARM is a short-range, limited frequency-band, anti-radiation missile developed to counter point defenses. The Marine Corps plans to primarily use the missile system as a quick reaction, point and shoot weapon from the AH-1 attack helicopter. Future plans are to launch the SIDEARM from SIDEARMER configured AV-8B, F/A-18, and OV-10D aircraft. No modifications to existing rotary and fixed wing avionics interface are required. The SIDEARM uses converted AIM-9C guidance and control section (GCS), integrated with components (motor, fuze, warhead, and safe and arm device) from current production AIM-9M SIDEARMER missiles. There are approximately 1,000 GCS assets, currently in storage of which it is estimated that 885 will be suitable for conversion to the SIDEARM configuration. Procurement commences in FY 1986 with an initial production of 200 missiles. The FY 1987 request of \$22.9 million is required for follow-on procurement of 256 missiles.

AGM-114A HELLFIRE Missile

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
-	1,824
\$ -	\$62,483
1,172	2,173
\$1,172	\$64,656

Procurement
Initial Spares
Procurement Cost

HELLFIRE, developed by the Army, provides the Marine Corps with an extremely effective anti-armor weapon for use on AH-1T/J helicopters. From FY 1984 through FY 1986, 1,961 missiles were procured to build up the inventory of HELLFIRE to satisfy Marine Corps requirements. Although there is no Navy procurement planned for FY 1987, procurement resumes in FY 1988 for 1824 missiles.

AGM-65E LASER MAVERICK Missile

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
1,800	575
\$198,791	\$72,017
2,930	9,670
\$201,721	\$81,687

Procurement
Initial Spares
Procurement Cost

The LASER MAVERICK is a forward-fired, laser-guided missile that can be employed from land- or carrier-based aircraft and will be delivered primarily for A-4M, AV-8B, F/A-18, and A-6E Marine Corps aircrafts. It will be used for interdiction, close-air support and strike requirements against both land and sea targets. In FY 1987, \$198.8 million is requested for follow-on procurement of 1,800 LASER MAVERICK missiles. The FY 1987 procurement is required to build inventory levels of LASER MAVERICK to satisfy interdiction, close-air support, and strike requirements.

AGM-65F IIR MAVERICK Missile

(\$ In Thousands)	
FY 1987	FY 1988
Qty	Qty
Amt	Amt
419	927
\$52,055	\$91,323
250	911
\$52,305	\$92,234

Procurement
Initial Spares
Procurement Cost

The Imaging Infrared (IIR) MAVERICK missile has been developed as a joint service program with the Air Force as executive service. The Navy version of the weapon utilizes an IIR guidance unit optimized for ship tracking, a 300-pound penetrating blast/fragment warhead with cockpit-selectable fuzing, and a reduced-smoke rocket motor. The IIR MAVERICK missile will provide the Navy and Marine Corps with the capability to attack land and sea targets

from a more survivable position below and outside of close-in air defense systems. The FY 1987 request of \$52.1 million will provide for the procurement of 419 IIR MAVERICK missiles to improve the inventory position. Failure to add the weapon to the inventory will require that attack aircraft utilize munitions with less stand-off capability that will decrease aircraft survivability and increase the likelihood of aircraft loss.

PENGUIN Missile

	FY 1987		FY 1988	
	Qty	Amt	Qty	Amt
Procurement	-	\$ -	35	\$18,574
Initial Spares	-	-	-	1,675
Procurement Cost	-	\$ -	-	\$20,249

The PENGUIN missile is an autonomous short-range, air-to-surface weapon that is controlled by an infrared countermeasures resistant seeker, which is automatically activated when the missile reaches a preset range from the predicted position of the target. The missile is planned for use on the LAMPS MK III SH-60B helicopter as an anti-ship weapon. The MK 2 Mod 7 PENGUIN missile is a modification of the surface-launched MK 2 Mod 3 missile. The FY 1988 request of \$18.6 million provides for the initial procurement of 35 PENGUIN missiles.

Aerial Targets

	FY 1987				FY 1988			
	QTY	AMT	TOTAL	INITIAL	QTY	AMT	TOTAL	INITIAL
			SPARES	SPARES			SPARES	SPARES
AQM-37C	80	\$16,202	80	80	-	\$16,571	84	\$16,655
BQM-74C	-	1,186	-	-	-	-	-	-
BQM-34S	97	47,371	-	-	-	1,360	-	1,360
BQM-126A	-	-	-	-	200	62,500	1,399	63,899
Tow Targets	700	12,585	335	12,920	1,100	8,100	90	8,190
All Other Targets	-	20,042	460	20,502	-	15,434	271	15,705
		\$97,386	\$875	\$98,261		\$103,965	\$1,844	\$105,809

Aerial targets provide representative threats needed to properly evaluate weapons systems and to provide for an effective Fleet training program. The BQM-74C and the BQM-34S are both recoverable, subsonic targets that are required for both surface-to-air and air-to-air missile and gunnery exercises. The AQM-37C is a non-recoverable, supersonic target, which replicates high speed threats. In FY 1987, the AQM-37C and BQM-34S

procurements, and the tow targets procurement and modification program costs \$76.2 million of the total \$97.4 million. The remaining \$21.2 million finances the material costs for the conversion of F-86 aircraft into QF-86 full-scale aerial targets and TALOS missiles into MQM-8X supersonic full-scale targets, and target auxiliary equipment required for target control and augmentation, and BQM-74C support costs.

Drones and Decoys

(\$ In Thousands)

FY 1987	FY 1988
<u>\$36,136</u>	<u>\$18,169</u>

Analysis of the successful use of small-scale, air-launched decoys has revealed a continuing requirement for these devices. Tactical decoys have been proven effective against air defenses and will significantly improve the survivability of Navy aircraft. The Tactical Air-Launched Decoy is a high speed preprogrammed tactical decoy carried on A-6 and A-7 aircraft. It provides passive and active radar cross-section signature augmentation for use as a force-multiplier. Remotely Piloted Vehicles are low-speed, long-endurance systems that provide intelligence, battlefield surveillance, Naval/artillery gunfire support, and communication relays. In FY 1987, \$36.1 million finances the continued procurement of needed drones and decoys.

Other Missile Support

(\$ In Thousands)

FY 1987	FY 1988
<u>\$22,017</u>	<u>\$21,662</u>
991	2,113
<u>\$23,008</u>	<u>\$23,775</u>

Procurement
Initial Spares
Procurement Cost

The Other Missile Support program provides fleet support material for SUBROC, an inertially guided anti-submarine warfare (ASW) missile employing a nuclear warhead that is launched from conventional torpedo tubes, and for procurement of Vertical Launching System (VLS) canisters, which are used as shipping containers, to house the missiles in the VLS cells, and to act as a launching tube. SUBROC fleet support includes items required to support the missile system readiness in the fleet such as material for maintenance, testing, missile assembly, repair, and overhaul. The VLS is a missile launching system for surface combatants capable of launching missiles for all warfare areas and adaptable to present and future weapons control systems.

Modification of Missiles

(\$ In Thousands)

FY 1988 Estimate - \$37,614
FY 1987 Estimate - \$13,692
FY 1986 Estimate - \$59,603
FY 1985 Actual - \$32,017

The FY 1987 budget request for missile modifications is \$13.7 million and includes funds for air-launched and surface-launched missile modifications. Funds requested provide for the procurement of modification kits only; all installation costs are budgeted in the Operation and Maintenance, Navy appropriation.

FY 1987 Modification Programs

(\$ In Thousands)

Air-Launched Missiles
SPARROW* \$1,233
SIDEWINDER 3,131
TOTAL \$4,364

Surface-Launched Missiles
STANDARD Missiles \$2,093
TOMAHAWK 7,235
TOTAL \$9,328

* SPARROW can also be surface launched.

Funds for FY 1987 air-launched missile modification programs are required to improve and update the operational characteristics of SPARROW and SIDEWINDER missiles. The SPARROW missile modification program, budgeted at \$1.2 million, provides for AIM/RIM-7M improvements to correct deficiencies found in Technical Evaluation/Initial Operational Test and Evaluation (TECHEVAL/IOT&E) and AIM-7F battery and shear wafer changes. The SIDEWINDER missile modification program, budgeted at \$3.1 million, provides for modification of the missile airframe to improve reliability, producibility, and maintainability.

The FY 1987 STANDARD missile modification program request is \$2.1 million. Funding is required to procure warhead/safety & arming devices to accompany the MK 45 target detection device Mod 6 fuzes for SM-1 MR. The fuze package provides the missile with improved performance against low-altitude threats.

The TOMAHAWK missile modification program budgeted at \$7.2 million provides for continued improvement of the guidance set flight computer that allows anti-ship TOMAHAWK missiles to operate from a wider range of launch platforms.

FY 1988 Modification Program

(\$ In Thousands)

<u>Air-Launched Missiles</u>	
SPARROW*	\$ 3,696
SIDEWINDER	3,295
PHOENIX	3,388
HARPOON*	11,416
TOTAL	<u>\$21,795</u>

<u>Surface-Launched Missiles</u>	
STANDARD Missiles	\$ 7,722
TOMAHAWK	8,097
TOTAL	<u>\$15,819</u>

* SPARROW and HARPOON can also be surface launched.

The FY 1988 funds required for the air-launched missile modification programs are budgeted at \$21.8 million and continue required modifications for SPARROW, SIDEWINDER, PHOENIX and HARPOON missiles.

The FY 1988 STANDARD missile modification program, budgeted at \$7.7 million, continues the required modifications of STANDARD MR and ER rocket motors and sustainer sections.

The FY 1988 TOMAHAWK missile modification program is budgeted at \$8.1 million to continue the improved guidance set flight computer modification and initiate signal certification device modification.

Support Equipment and Facilities

(\$ In Thousands)

FY 1988 Estimate	- \$503,975
FY 1987 Estimate	- \$205,586
FY 1986 Estimate	- \$102,928
FY 1985 Actual	- \$217,000

Support Equipment and Facilities include the Weapons Industrial Facilities, the Defense Metrological Satellite, and the Fleet Satellite Communications, and Ordnance Support Equipment programs. Initial and replenishment spares are included in FY 1985, but beginning in FY 1986, Initial and replenishment spares are budgeted in Budget Activity 5.

Weapons Industrial Facilities

(\$ In Thousands)

FY 1987	FY 1988
<u>\$7,490</u>	<u>\$10,259</u>

The FY 1987 and 1988 estimates of \$7.5 million and \$10.3 million, respectively, for missile and other ordnance producing industrial facilities include funds for capital maintenance, emergency repairs, fire protection improvements, and energy conservation. These funds provide for nonrecurring capital maintenance at government-owned missile and weapon producing industrial plants as well as emergency repairs and improvements designed to reduce fire and other safety hazards.

Defense Meteorological Satellite

(\$ In Thousands)

FY 1987	FY 1988
\$ -	\$18,793

The Defense Meteorological Satellite program funds the Navy's procurement of microwave imagers. The imager has been developed and previously procured under a joint Navy/Air Force program. The imager is a new sensor tailored for operation onboard a new series of spacecraft that will fulfill Navy data requirements for surface wind speed, precipitation intensity and identification of ice edge, ice coverage and ice age in polar areas. The \$18.8 million requested in FY 1988 will procure two imagers for the Navy.

Fleet Satellite Communications

(\$ In Thousands)	
<u>FY 1987</u>	<u>FY 1988</u>
\$65,138	\$118,297

The Fleet Satellite Communications (FLTSATCOM) system satisfies the Navy's urgent worldwide Ultra High Frequency (UHF) mobile user communication requirements. This includes protected fleet broadcast service to all Navy ships plus a vital command control service to all Anti-Submarine Warfare (ASW) platforms, Fleet Ballistic Missile (FBM) submarines, aircraft carriers, cruisers and other selected aircraft, ships and submarines. The system also satisfies the Air Force equatorial satellite communication requirements including presidential airborne command posts, Strategic Air Command and emergency mission support communications. A constellation of channelized satellites, placed in geo-stationary orbits, is used to meet Navy and Air Force UHF communications requirements. The worldwide four satellite constellation FLTSATCOM system is fully operational and is meeting or exceeding performance requirements.

The \$37.0 million requested for FY 1987 provides for the launch, launch support, and initial on-orbit test, checkout and acceptance for operational use, of replenishment spacecraft F-7 and F-8. The remaining \$28.1 million in FY 1987 and \$118.3 million in FY 1988 pay for acquisition of the follow-on replenishment spacecraft to be launched in the early 1990s.

Ordnance Support Equipment

(\$ In Thousands)	
<u>FY 1987</u>	<u>FY 1988</u>
\$132,958	\$356,626

No justification materials are submitted due to security considerations.

Budget Activity 3: Torpedoes and Related Equipment

(\$ in Thousands)
FY 1988 Estimate - 1,266,996
FY 1987 Estimate - 971,364
FY 1986 Estimate - 782,732
FY 1985 Actual - 724,200

Purpose and Scope of Work: These funds provide for the procurement of anti-submarine/ship weapons such as torpedoes, mines and underwater targets, torpedo and mine modifications, and associated support equipment items related to production, as well as acquisition of other equipment and support necessary to maintain fleet readiness.

Justification of Funds: Of the \$971.4 million requested in FY 1987, \$821.1 million is for procurement of torpedoes and related equipment, \$97.7 million is for modification of torpedoes and related equipment, and \$52.6 million is for procurement of support equipment.

Of the \$1,267.0 million requested in FY 1988, \$1,145.7 million is for procurement of torpedoes and related equipment, \$63.0 million is for modification of torpedoes and related equipment, and \$59.3 million is for procurement of support equipment.

Initial spares and repair parts are provided for informational purposes and are included in Budget Activity 5 beginning in FY 1986.

Torpedoes and Targets

(\$ in Thousands)
FY 1988 Estimate - 1,144,684
FY 1987 Estimate - 821,049
FY 1986 Estimate - 606,398
FY 1985 Actual - 596,000

Of the \$821.1 million requested in FY 1987, \$508.4 million is for procurement of 227 MK-48 ADCAP torpedoes, \$17.0 million is for procurement of 34 Anti-Surface Warfare (ASUW) torpedoes, \$74.1 million is for procurement of 500 MK-46 NEARTIP torpedoes, \$23.8 million is for procurement of MK-46 long lead material (Advance Procurement) \$109.9 million is for procurement of 84 MK-50 Advanced Lightweight Torpedoes, \$13.6 million is for procurement of ASROC replacement components, and \$74.3 million is for procurement of 200 Vertical Launched ASROC weapons.

Of the \$1,144.7 million requested in FY 1988, \$552.6 million is for the procurement of 296 MK-48 ADCAP torpedoes, \$30.9 million is for procurement of 110 Anti-Surface Warfare (ASUW) torpedoes, \$87.7 million is for the procurement of 500 MK-46 NEARTIP torpedoes, \$39.4 million is for procurement of 12 MK-30 Mobile Targets, \$13.7 million is for procurement of ASROC replacement components, \$73.5 million for 300 Vertical Launch ASROC missiles (less warheads), and \$346.9 million is for procurement of 204 MK 50 Advanced Lightweight Torpedoes.

The following paragraphs provide justification for the FY 1987 and FY 1988 Torpedoes and Related Equipment request.

Torpedo MK-48 Advanced Capability (ADCAP)

	(\$ in Thousands)	
	FY 1987	FY 1988
	QTY	QTY
	AMT	AMT
Procurement	227	296
Initial Spares	508,370	552,562
Procurement Cost	22,500	11,730
	530,870	564,292

Torpedo MK 48 ADCAP (Advanced Capability) was developed as an improvement to the Torpedo MK-48 to counter enemy submarine threats through the 1990's. The improvements in the guidance and control systems will allow the ADCAP torpedo to operate against targets with reduced sonar target strength and targets which present a low doppler profile and improvements in the propulsion system will allow the torpedo to go faster, deeper and farther than the current MK 48 torpedo. These improvements will allow the ADCAP torpedo to operate in adverse environments such as shallow water, high sea conditions, strong thermal gradients and under ice. FY 1987 and FY 1988 provide for procurement of 227 and 296 ADCAP torpedoes, respectively, production support equipment, production support and continuation of competition for the Afterbody/Tailcone (second source).

ASUW Torpedo

	(\$ in Thousands)	
	FY 1987	FY 1988
	QTY	QTY
	AMT	AMT
Procurement	34	110
Initial Spares	16,995	30,851
Procurement Cost	16,995	30,851

The ASUW torpedo will be a lower cost weapon designed to be effective in anti-surface ship engagements. This weapon is intended to provide a cheap alternative to attack targets that do not warrant a more expensive weapon. FY 1987 funding is to procure 34 anti-surface ship torpedoes. FY 1988 provides for on-going procurement of 110 ASUW torpedoes.

Torpedo MK-46 (MYP)

	(\$ in Thousands)	
	FY 1987	FY 1988
Procurement	QTY	QTY
Initial Spares	AMT	AMT
Procurement Cost	500	500
	74,061	87,746
	2,842	-
	<u>76,903</u>	<u>87,746</u>

The Torpedo MK-46 is a lightweight ASW torpedo launched from surface ship torpedo tubes, ASROC launchers, fixed wing and rotary wing aircraft. The Torpedo MK-46 (NEARTIP) is an improved version of the MK-46 Torpedo Mod 1 and features improved countermeasures resistance and an improved acoustic system. FY 1987 and FY 1988 resources provide for continued production of the NEARTIP (Mod 5) version of the Torpedo MK-46, fleet support items, production support and proofing under a three-year multiyear procurement (FY 1986 through FY 1988). Long lead materials are being procured under the Torpedo MK-46 Advance Procurement line item; Mod 5 kits, procured under the Torpedo MK-46 Mods line item, also will be included in the multiyear procurement.

Torpedo MK-46 (MYP) Advance Procurement

	(\$ in Thousands)	
	FY 1987	FY 1988
Procurement	QTY	QTY
Initial Spares	AMT	AMT
Procurement Cost	23,800	-
	-	-
	<u>23,800</u>	<u>-</u>

FY 1987 funding provides for procurement of long lead material required to implement the latter year of a three-year multiyear procurement program for the Torpedo MK-46, FY 1986 through FY 1988. This multiyear procurement approach, which includes MK-46 ORDALT kits, separately justified under the Torpedo MK-46 Mods line item, is expected to effect total cost savings of \$51.4 million for both torpedoes and kits over the three year period.

Torpedo IK-50 Advanced Lightweight Torpedo

	(\$ in Thousands)			
	FY 1987	FY 1988		
	QTY	AMT	QTY	AMT
Procurement	84	109,937	204	346,880
Initial		8,805		9,826
Procurement Cost		118,742		356,706

\$109.9 million is requested in FY 1987 for 84 ALMT weapons with follow-on procurement in FY 1988 of 204 units for a total of \$346.9 million. ALMT will provide an ASW torpedo for the surface and ASW air weapon systems, providing an underwater submarine destination capability to meet the Navy's needs in the late 1980's and 1990's period. ALMT will provide a replacement for the existing Torpedo MK-46 currently in the Navy inventory.

Mobile Target MK-30

	(\$ in Thousands)			
	FY 1987	FY 1988		
	QTY	AMT	QTY	AMT
Procurement		-	12	39,431
Initial Spares		-		-
Procurement Cost		-		39,431

The MK-30 Mobile Target provides air, surface and submarine ASW units with the means to conduct realistic exercise firings on three-dimensional underwater ranges. This target provides the basic training capability to exercise surface ship and submarine sonars, actively and passively fired torpedoes, and aircraft equipped with sonobuoys and Magnetic Anomaly Detection (MIAD) gear. The procurement of targets in FY 1988 continues the build up of assets to support achievement of 2,400 MK-30 in-water runs per year at four underwater sites.

ASROC Component Replacement

	(\$ in Thousands)			
	FY 1987	FY 1988		
	QTY	AMT	QTY	AMT
Procurement	-	13,597	-	13,672
Initial Spares		-		-
Procurement Cost		13,597		13,672

The ASROC (Anti-Submarine Rocket) is a weapon system designed around a range-controlled, unguided rocket missile which carries a torpedo or a depth charge as a payload. ASROC is utilized by most surface combatants to defend against high performance enemy submarines. The

FY 1987 and FY 1988 requests provide for procurement of ASROC components to replace those that were expended during fleet training exercises. The principal element of cost in FY 1987 and FY 1988 is the continued procurement of rocket motor and Ignition Separation Assemblies MK-4 (ISA). The ISAs are being procured in a new design which makes them safe from the hazards of accidental detonation caused by shipboard electromagnetic equipment (designated HERO: Hazards of Electromagnetic Radiation to Ordnance). Procurement of the HERO-safe MK-4 ISA is required in order to replenish inventories of the older non-HERO safe MK-3 ISAs depleted by training losses and will eventually replace the entire inventory of the older components.

Vertical Launch ASROC

	(\$ in Thousands)	
	FY 1987	FY 1988
	QTY	QTY
	AMT	AMT
Procurement	200	300
Initial Spares	74,289	73,542
Procurement Cost	75,045	73,677

Vertical Launch ASROC is a replacement system for the older ASROC weapon system. It will provide a vertically launched weapon to a greater distance with equal accuracy utilizing the latest torpedo/depth charge configuration. The FY 1987 request is for procurement of a limited initial quantity of 200 units with a follow-on in FY 1988 of 300 units.

Modification of Torpedoes and Related Equipment

	(\$ in Thousands)
FY 1988 Estimate	- 63,050
FY 1987 Estimate	- 97,705
FY 1986 Estimate	- 109,505
FY 1985 Actual	- 32,200

The \$97.7 million in FY 1987 and the \$124.6 million in FY 1988 are requested to fund the following modification programs.

	(\$ in Thousands)	
	FY 1987	FY 1988
MK46 Torpedo Mods	76,975	49,275
MK-46 Torpedo Mods	5,200	-
Advance Procurement	11,619	12,301
CAPTOR Mods	3,911	1,474
Swimmer Weapon System		

Torpedo MK-46 Mods (MYP)

\$77.0 million is requested in FY 1987 and \$49.3 million for procurement of 672 and 319 NEARTIP modification kits respectively in the latter two years of a three-year multiyear contract, FY 1986 through FY 1988. The MK 46 Mods and the purchase of new MK 46 Torpedoes will be combined into a single multiyear contract to generate maximum savings. These NEARTIP kits will be installed in existing MK-46 Mod 1 (non-CAPTOR) torpedoes to convert them to Mod 5 torpedoes. Long lead materials are being procured under the Torpedo MK-46 Mods (MYP) Advance Procurement line item.

Torpedo MK-46 Mods (MYP) Advance Procurement

FY 1987 funding of \$5.2 million provides for procurement of long lead material required to implement a three-year multiyear procurement program for the Torpedo MK-46 Mod 5 kits (FY 1986 through FY 1988). This multiyear procurement approach, which includes MK-46 torpedoes separately justified under the Torpedo MK-46 line item, is expected to effect total cost savings of \$51.4 million for both kits and torpedoes over the three-year period.

CAPTOR Mods

\$11.6 million is requested in FY 1987 and \$12.3 million is requested in FY 1988 in order to support procurement of modifications for MK-60 CAPTOR mines currently in the fleet. These modifications will update the older mines to the latest approved production baseline configuration.

Swimmer Weapon System

\$3.9 million is requested in FY 1987 and \$1.5 million is requested in FY 1988 in order to provide for continued procurement of unique weapons and equipment required by the Navy Special Warfare Groups One and Two (SEAL teams) to carry out beach clearance, underwater and direct action missions. Currently, there are eight SEAL teams deployed within the Fleet. The major special warfare system is the stand-off weapon assembly MK-32 which is comprised of the stand-off weapon MK-31 and weapon control system MK-5.

Support Equipment

	(\$ in Thousands)
FY 1988 Estimate	- 59,262
FY 1987 Estimate	- 52,610
FY 1986 Estimate	- 66,829
FY 1985 Actual	- 96,000

Of the \$52.6 million requested in FY 1987, \$32.5 million is for Torpedo Support Equipment, and \$20.1 million is for ASW Range Support.

Of the \$59.3 million requested in FY 1988, \$36.1 million is for Torpedo Support Equipment, and \$23.2 million is for ASW Range Support.

Torpedo Support Equipment

		(\$ in Thousands)
	FY 1987	FY 1988
Procurement	32,496	36,092
Initial Spares	-	-
Procurement Cost	32,496	36,092

This line item provides the fleet with the components necessary to restore weapons used to conduct training exercises (which involves actually firing the torpedoes) back to a ready-for-issue warshot status. Thus this request supports combat-ready deployment of anti-submarine warfare forces. The funds requested provide for procurement of components expended during torpedo firings such as batteries, pressure cylinders, propellant assemblies and various air-launch accessories; equipment and components worn out or lost during repeated service such as exercise heads and fuel tanks; and production support efforts associated with the above procurements. Procurement quantities of these items vary each year and are dependent upon fleet training requirements and the tempo of operations. The FY 1987 and FY 1988 resources procure the material required to support fleet training exercises and operational inventories for the MK-46, MK-48/MK-48 ADCAP Torpedoes and exercise turnaround kits of the MK-50 Advanced Lightweight Torpedoes.

ASW Range Support

		(\$ in Thousands)
	FY 1987	FY 1988
Procurement	20,114	23,170
Initial Spares	906	905
Procurement Cost	21,020	24,075

The Anti-Submarine Warfare Range Support Program provides for the procurement of range proofing and fleet support equipments required for use on the Navy's underwater ranges and for the fixed costs of on-range proofing services. This includes the procurement of pingers, transponders, MK-30 and MK-27 Target exercise components and other related items. This line item supports Fleet exercises and torpedo firings and provides equipment for ASW readiness assessment.

Budget Activity 4: Other Weapons

(\$ In Thousands)
FY 1988 Estimate - \$132,400
FY 1987 Estimate - \$193,202
FY 1986 Estimate - \$223,447
FY 1985 Actual - \$229,111

Purpose and Scope of Work

These funds provide for the procurement of guns and gun mounts for U.S. Navy and Coast Guard Ships. This budget activity also provides for the associated modifications and support equipment.

Justification of Funds

Of the \$193.2 million requested in FY 1987, \$135.1 million is for 27 Close-In Weapon Systems, 5 MK-75/76MM Gun Mounts, 25 MK-19 Mod 3 40MM Machine Guns, 22 25MM Gun Mounts, and Small Arms and Weapons. \$57.2 million is for Gun and Gun Mount modification and \$.9 million is for support equipment.

Of the \$132.4 million requested in FY 1988, \$58.6 million is for 9 Close-In Weapon Systems, 25 MK-19 Mod 3 40MM Machine Guns, 22 25MM Gun Mounts, and Small Arms and Weapons. \$73.1 million is for Gun and Gun Mount modification and \$.7 million is for support equipment.

The following paragraphs provide justification for Other Weapons. Initial spare parts amounts are included for information under each weapon system, but are separately justified in Budget Activity 5.

Guns and Gun Mounts

(\$ In Thousands)
FY 1988 Estimate - \$ 58,644
FY 1987 Estimate - \$135,114
FY 1986 Estimate - \$173,270
FY 1985 Actual - \$188,111

Of the \$135.1 million requested for Guns and Gun Mounts in FY 1987 \$105.6 million is for 27 MK-15 Close-In Weapon Systems \$14.9 million is for 5 MK-75/76MM Gun Mounts, \$.6 million is for 25 MK-19 Mod 3 40MM Machine Guns, \$3.9 million is for 22 25MM Gun Mounts, and \$10.1 million is for Small Arms and Weapons.

Of the \$58.6 million requested for Guns and Gun Mounts in FY 1988, \$43.1 million is for 9 MK-15 Close-In Weapon Systems, \$.6 million is for 25 MK-19 Mod 3 40MM Machine Guns, \$4.2 million is for 22 25MM Gun Mounts, and \$10.7 million is for Small Arms and Weapons.

MK-15 Close-In Weapon System (PHALANX)

	(\$ In Thousands)	
	FY 1987	FY 1988
	QTY	QTY
	AMT	AMT
Procurement	27	9
Initial Spares		
Procurement Cost	\$105,606	\$43,065
	801	586
	\$106,407	\$43,651

The PHALANX is a fast reaction, last ditch defense against low flying aircraft and anti-ship missiles penetrating other Fleet defensive weapon envelopes. The system is an automatic self-contained unit consisting of search and track radar, digital fire control system and a 20MM M51A1 gun all mounted in a single above deck structure requiring a minimum of interface with other ship systems. It automatically detects, evaluates, tracks, engages, assesses kill and returns to search mode. The system will be installed in over 300 ships, both new construction and retrofit. Commencing in FY 1986, improvements will be incorporated and will result in increased magazine capacity and increased search elevation. The requests represent funds for 27 systems in FY 1987 and 9 systems in FY 1988 for backfit onto active Fleet ships.

MK-75/76MM Gun Mount

	(\$ In Thousands)	
	FY 1987	FY 1988
	QTY	QTY
	AMT	AMT
Procurement	5	-
Initial Spares		
Procurement Cost	\$14,875	3,354
	3,832	\$3,354
	\$ 18,707	

This gun is an OTU MELARA designed, 76MM/62 caliber, dual purpose, high rate of fire gun being installed in new construction hulls, Coast Guard cutters, Navy Patrol boats and frigates and as part of the Mid-Life Conversion of Hamilton Class Coast Guard cutters.

This request provides for the procurement of 5 gun systems, 1 for the Hamilton Class, and 4 for rotatable pool mounts in FY 1987.

MK-19 40MM Machine Gun

	(\$ In Thousands)	
	FY 1987	FY 1988
	QTY	QTY
	AMT	AMT
Procurement	25	25
Initial Spares		
Procurement Cost	\$632	\$635
	0	0
	\$632	\$635

The MK-19 Mod 3 40MM Machine Gun program is required to provide a more effective, safe and reliable 40MM grenade firing weapon for arming ships and crafts. The MK-19 Mod 3 is planned as an initial issue and replacement weapon for the Navy's present inventory of MK-19 Mod 1 40MM Machine Guns.

25MM Gun Mount

	FY 1987		FY 1988	
	QTY	AMT	QTY	AMT
Procurement	22	3,919	22	4,247
Initial Spares	-	135	-	141
Procurement Cost	22	\$4,054	22	\$4,388

This line provides for the procurement of MK 38 25MM M242 guns and mounts to replace MK-16 Mods 4/5 20MM Gun Mounts. The MK 38 25MM M242 Gun Systems are required by Navy to meet defense requirements for craft and ships as short range armament.

Small Arms and Weapons

	FY 1987		FY 1988	
	QTY	AMT	QTY	AMT
Procurement	-	\$10,082	-	\$10,697

This line provides for initial procurement, modernization, standardization, and stock replenishment procurement of a wide variety of Small Arms and Weapons (.50 Caliber and below) including required gun mounts and associated support components to meet wartime allowances, inventory objective quantities and the increased demands for small arms weapons by the Fleet Commanders and the Shore Establishment to counter the world-wide terrorist threats. This line also provides for procurement of sufficient types and quantities of weapons to support training, ship security, afloat and ashore missions of approximately 2676 ships and ashore activities Navy-wide, as well as specially equipped weapons to support the SEAL Teams, Mobile Construction Battalions, other Special Warfare Units and crisis response teams. Additionally, the funding provides for continued procurement of the 9MM handgun.

Modification of Guns and Gun Mounts

	(\$ In Thousands)
FY 1988 Estimate	- \$73,050
FY 1987 Estimate	- \$57,215
FY 1986 Estimate	- \$49,077
FY 1985 Actual	- \$27,800

Of the \$57.2 million requested for modification of guns and gun mounts in FY 1987, \$43.0 million is for MK-15 Close-In Weapon System modification, \$6.1 million is for 5"/54 Gun Mount modification, \$4.1 million is for MK-75/75MM Gun Mount modification, \$1.6 million is for 3"/50 Gun Mount modification, and \$2.4 million is for ^{for} ³ modifications under \$900,000.

Of the \$73.1 million requested for modification of guns and gun mounts in FY 1988, \$54.7 million is for MK-15 Close-In Weapon System modification, \$10.7 million is for 5"/54 Gun Mount modification, \$5.7 million is for MK-75/76MM Gun Mount modification, \$.2 million is for 3"/50 Gun Mount modification, and \$1.7 million is for Modifications under \$900,000.

MK-15 Close-In Weapons System (PHALANX) Modification

(\$ In Thousands)	
FY 1987	FY 1988
QTY	QTY
AMT	AMT
Procurement	
-	-
\$42,965	\$54,706

The \$43.0 million in FY 1987 and \$54.7 million in FY 1988 are requested for improvements to the Close-In Weapon System. This will result in increased magazine capacity, increased search elevation angle and adaptive firing rate. Additionally, reliability and maintainability improvements are included. Funds requested are to adapt previously procured units to incorporate these improvements. Systems being procured in FY 1985 and subsequent years will incorporate these improvements.

5"/54 Gun Mount Modifications

(\$ In Thousands)	
FY 1987	FY 1988
QTY	QTY
AMT	AMT
Procurement	
-	-
\$6,128	\$10,656
\$4,195	\$3,855
\$10,323	\$14,511

Of the funds requested, \$6.1 million in FY 1987 and \$10.7 million in FY 1988 are required for continuation of the 5"/54 ORDALT Program which provides hardware to correct deficiencies and improve operability, reliability, maintainability and system availability of all in-service 5"/54 Gun Mounts.

3"/50 Gun Mount Modifications

(\$ In Thousands)	
FY 1987	FY 1988
QTY	QTY
AMT	AMT
Procurement	
-	-
\$1,637	\$239

The \$1.6 million in FY 1987 and \$.2 million in FY 1988 are requested for major reliability, maintainability, and availability improvements for 3"/50 Gun Mounts.

MK-75/76MM Gun Mount Modifications

	(\$ In Thousands)	
	FY 1987	FY 1988
Procurement	<u>\$4,101</u>	<u>\$5,730</u>
Initial Spares	429	468
Procurement Cost	<u>\$4,530</u>	<u>\$6,198</u>

The \$4.1 million in FY 1987 and \$5.7 million in FY 1988 are requested to procure safety, operability, reliability, reliability, shock, vibration improvements, and survivability modifications to correct in-service MK-75/76MM Gun Mount deficiencies.

Modifications Under \$900,000

	(\$ In Thousands)	
	FY 1987	FY 1988
Procurement	<u>\$2,384</u>	<u>\$1,719</u>
Initial Spares	-	-
Procurement Cost	<u>\$2,384</u>	<u>\$1,719</u>

The \$2.4 million in FY 1987 and \$1.7 million in FY 1988 are requested to procure a variety of ordnance alteration materials for in-service 16"/50 gun turrets, gun mounts, and 20MM through 40MM minor caliber ordnance.

Support Equipment

	(\$ In Thousands)	
	FY 1988 Estimate	- \$
	FY 1987 Estimate	- \$ 706
	FY 1986 Estimate	- \$ 873
	FY 1985 Actual	- \$ 1,100
		- \$ 600

The \$.9 million requested for support equipment in FY 1987 and the \$.7 million requested for support equipment in FY 1988 will provide for a variety of ordnance in support of Surface Gun Systems.

Gun Support Equipment

	(\$ In Thousands)	
	FY 1987	FY 1988
Procurement	<u>\$.9</u>	<u>\$.7</u>

The \$.9 million in FY 1987 and \$.7 million in FY 1988 are requested to procure a variety of ordnance in support of Surface Gun Systems. This includes training aids and specialized small arms.

Budget Activity 5 - Spares and Repair Parts

(\$ In Thousands)
FY 1988 Estimate - \$162,056
FY 1987 Estimate - \$150,734
FY 1986 Estimate - \$151,497
FY 1985 Actual - \$ 0 1/

Purpose and Scope of Work: These funds provide for the procurement of spares and repair parts for all equipments, weapon systems and support equipment procured under the Weapons Procurement, Navy (WPN) appropriation which require support by the Hardware Systems Command prior to the Navy Supply System Material Support Date (MSD).

Justification of Funds: Of the \$150.7 million requested in FY 1987, \$140.1 million is for Initial spares and \$10.7 million is for Replenishment spares.

Of the \$162.1 million requested in FY 1988, \$151.5 million is for Initial spares and \$10.5 million is for Replenishment spares.

The following paragraphs provide the justification for each program.

Initial Spares

(\$ In Thousands)
FY 1987 FY 1988
\$140,059 \$151,523

The requested funding provides for the procurement of initial spares and repair parts to support missile, ASW and other weapons/support equipment procured in this appropriation. Requirements for Navy initial spares procurement are determined by detailed provisioning procedures that consider a wide range of factors including the use of the end item, usage rate trends, engineering judgement and repairable item turnaround time.

Replenishment Spares

(\$ In Thousands)
FY 1987 FY 1988
\$10,675 \$10,533

The requested funding provides for the procurement of replenishment spares and repair parts requirements utilizing a stratification technique which considers the number of equipments/weapon systems installed in the Fleet, repair part usage data, Ready-For-Issue (RFI) spares returning from rework/repair programs and equipment leadtimes to derive net fiscal year budget requirements.

1/ \$171.3 million in FY 1985 for spares and repair parts are included in the totals for Budget Activities 1 through 4.

Comparison of FY 1986 Program Requirements as Reflected
in FY 1986 Budget With FY 1986 Program Requirements as
Shown in FY 1987 Budget

Summary of Requirements (In Thousands of Dollars)

	Total Program Requirements Per FY 1986 Budget	Program Requirements Per FY 1987 Budget	Increase (+) or Decrease (-)
Ballistic Missiles	685,326	602,560	-82,766
Other Missiles	3,730,458	3,455,859	-274,599
Torpedoes and Related Equipment	798,045	782,732	-15,313
Other Weapons	247,470	223,447	-24,023
Spares and Repair Parts	166,601	151,497	-15,104
Reimbursable Program	30,000	30,000	-
Total Fiscal Year Program	5,657,900	5,246,095	-411,805

Explanation by Budget Activity

1. Ballistic Missiles (\$-82,766)

The decrease results from the following specific Congressional reductions: Trident I, \$-30,000; Poseidon modifications, \$-15,006; the application of the Congressional inflation and undistributed reductions, \$-31,160; and the identification of savings which will be utilized for planned DD 1415 reprogramming actions, \$-6,600.

2. Other Missiles (\$-274,599)

The FY 1986 Other Missile program was impacted by the following specific Congressional actions: Tomahawk advance procurement, \$-10,000; Sparrow advance procurement \$-9,500; Sidewinder, \$+32,000; Phoenix advance procurement, \$-13,500; Harm, \$-22,000; SM-1 MR, \$-15,638; SM-2 ER, \$-9,035; RAM, \$-44,713; Sidarm, \$+10,000; Hellfire, \$-3,300; Laser Maverick, \$-20,800; Sidewinder modifications, \$-10,000; Weapons Industrial Facilities, \$+6,000; Defense Meteorological Satellite Program, \$-3,800; and Ordnance Support Equipment, \$-55,600. Congressional inflation and undistributed reductions of \$-103,259 were applied to this budget activity. Planned net DD 1415 reprogrammings in this budget activity total \$-1,454 million.

3. Torpedoes and Related Equipment (\$-15,313)

The decrease reflects specific Congressional reductions of \$-32,213 for the following programs: \$-4,000 for the MK-46 Torpedo MYP; \$-2,000 for the MK-30 Mobile Target, \$-20,013 for the MK-67 Mobile Mine; and \$-6,200 for the MK-46 Torpedo Mods (MYP) program. The change in funding in this budget activity can also be attributed to the addition of 150 MK-60 Captor mines (\$+59,600) by the Appropriation Conference and the application of Congressional undistributed and inflation reductions of \$-42,700.

4. Other Weapons (\$-24,023)

The decrease is the result of a specific Congressional reduction to the MK-75/76MM gun mount program of \$2.1 million and the application of Congressional undistributed and inflation reductions of \$-21,923.

5. Spares and Repair Parts (\$-15,104)

The decrease results from the application of Congressional undistributed and inflation reductions.

Comparison of FY 1986 Financing As Reflected
In FY 1986 Budget With FY 1986 Financing As
Shown in FY 1987 Budget

	Financing Per FY 1986 Budget	Financing Per FY 1987 Budget	Increase (+) or Decrease (-)
Program Requirements (Total)	5,657,900	5,246,095	-411,805
Program Requirements (Service Account)	5,627,900	5,216,095	-411,805
Program Requirements (Reimbursable)	30,000	30,000	-
Less:			
Anticipated Reimbursements	-30,000	-30,000	-
Reprogramming from prior year budget plans			
Unobligated balance available from prior			
year to finance new budget plans			
Transferred from other accounts			
Add:			
Unobligated balance available to finance			
subsequent year budget plans	5,627,900	5,227,795	-400,105
Appropriation	-	-11,700	-11,700
Transferred to other accounts	5,627,900	5,216,095	-411,805
Appropriation (Adjusted)			

Explanation of Changes in Financing

The FY 1986 DOD Appropriations Act reduced the FY 1986 President's Budget request by \$400,105. A DD 1415 for the RDT&E,N Standoff Land Attack Missile (SLAM) Harpoon is reflected in the FY 1986 column of the FY 1987 President's Budget request.

Comparison of FY 1985 Program Requirements as Reflected
In FY 1986 Budget With FY 1985 Program Requirements as
Shown in FY 1987 Budget

Summary of Requirements (In Thousands of Dollars)

	Total Program Requirements Per FY 1986 Budget	Program Requirements Per FY 1987 Budget	Increase (+) or Decrease (-)
Ballistic Missiles	340,629	322,749	-17,880
Other Missiles	3,046,671	3,104,351	+57,680
Torpedoes and Related Equipment	724,200	724,200	-
Other Weapons	242,111	229,111	-13,000
Reimbursable Program	25,000	1,461	-23,539
Total Fiscal Year Program	4,378,611	4,381,872	+3,261

Explanation by Budget Activity

1. Ballistic Missiles (\$-17,880)

The net decrease results from a DD 1415 Reprogramming action to the RDT&E,N appropriation (\$-27,880), and the reinstatement of \$9,800 planned for transfer to other accounts.

2. Other Missiles (\$+57,680)

The net increase is the result of several actions: A DD 1415 for the Phoenix missile has been reflected in the FY 1985 column of the FY 1987 budget (\$+80,800); an amount planned for transfer to the Standard missile was removed from the program when the DD 1415 was forwarded for approval (\$-9,800); the Harpoon missiles and Sidewinder Mods program have been reduced for a DD 1415 to the RDT&E,N appropriation for RAM missiles (\$-11,320); funds were removed from the program in accordance with the Authorization Conference (\$-15,000); and programs within the budget activity were increased for minor reprogrammings (\$+13,000).

Explanation by Budget Activity

4. Other Weapons (\$-13,000)

The decrease is due to minor reprogramings of \$-13,000.

Comparison of FY 1985 Financing As Reflected
In FY 1986 Budget With FY 1985 Financing As
Shown in FY 1987 Budget

	Financing Per FY 1986 Budget	Financing Per FY 1987 Budget	Increase (+) Or Decrease (-)
Program Requirements (Total)	4,378,611	4,381,872	+3,261
Program Requirements (Service Account)	4,353,611	4,380,411	+26,800
Program Requirements (Reimbursable)	25,000	1,461	-23,539
Less:			
Anticipated Reimbursements	-25,000	-1,461	-23,539
Reprogramming from prior year budget plans		-80,800	-80,800
Unobligated balance available from prior year to finance new budget plans			
Transferred from other accounts			
Add:			
Unobligated balance available to finance subsequent year budget plans		54,000	54,000
Appropriation (Adjusted)	4,353,611	4,353,611	-

Explanation of Changes in Financing

The net increase of \$3,261 in program requirements has been financed by several DD 1415 reprogrammings which were not reflected in the FY 1985 column of the FY 1986 President's Budget, including DD 85-65 PA for the Phoenix missile (\$+80,800), and DOD 85-91 PA to RDT&E, N for the RAM missile (\$-39,000). \$15,000 has also been removed from the WPN program in accordance with the direction of the Authorization Conference. The adjustment for reimbursables reflects an anticipated \$23,539 decrease in reimbursable orders.