

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-7</b>					R-1 ITEM NOMENCLATURE 0204136N F/A-18 SQUADRONS			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	252.854	210.489	179.047	123.041	50.314	11.422	10.997	11.164
E1662 F/A-18 Improvements	137.412	95.079	69.032	44.463	14.701	11.422	10.997	11.164
E2065 F/A-18 RADAR Upgrade	114.294	104.481	110.015	78.578	35.613			
E2130 F/A-18 Follow-On Variant	1.148							
E9267 F414 Engine Durability Improvements		6.832						
E9268 APG-73 Radar Upgrade		4.097						
<p><b>U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> The F/A-18 is capable of using external equipment to perform either fighter or attack missions. The capabilities of the F/A-18 weapon system can be upgraded to accommodate and incorporate new or enhanced weapons as well as advances in technology to respond effectively to emerging future threats. Continued development capability is required to successfully optimize new F/A-18 weapon system capabilities in the Fleet. Additionally, continued improvements in reliability and maintainability are necessary to ensure maximum benefit is achieved through reduced cost of ownership and to provide enhanced availability.</p> <p><b>F/A-18 Improvements:</b> The F/A-18 Naval Strike Fighter program transitioned from full-scale engineering development to operational systems development during FY 1983. As F/A-18 squadrons report discrepancies and new requirements, a continuing capability is needed to perform technical evaluations, investigative flight testing, software support, and incorporate Pre-Planned Product Improvements (P3I) (i.e., capability enhancements).</p> <p><b>F/A-18 Radar Upgrade:</b> The F/A-18 Radar Upgrade, Active Electronically Scanned Array (AESA) development program, beginning in FY 1999, is the last of three pre-planned upgrades to the F/A-18 Type/Model/Series radar. The AESA corrects operational test deficiencies noted in the AN/APG-73. It provides for multi-target tracking, Synthetic Aperture Radar (SAR) imagery, SAR Target Location Error (TLE), and improved spotlight map resolution. In addition, it provides for greater lethality than previous F/A-18 radars by allowing for full tactical support of existing and planned air-to-air (A/A) and air-to-ground (A/G) weapons significantly increases A/A and A/G detection and tracking ranges. The AESA provides greater survivability through self-protection and standoff jamming capabilities, while its greater range allows for reduced detection by enemy radar. The AESA is also more affordable than previous radars. Significant savings in operating and support costs can be realized through a five fold increase in reliability over the AN/APG-73 as well as incorporating open architecture and Higher Order Language software. Additionally, savings can be realized by avoiding parts obsolescence redesign costs that will be experienced on the AN/APG-65 and AN/APG-73.</p>								

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<p><b>F/A-18 Follow-On Variant:</b> The follow-on F/A-18 (E/F version) is an airframe upgrade incorporating increased capabilities, performance, and survivability necessary to satisfy the 41% percent increase in range over the C/D in the high-low-low-high attack/interdiction mission carrying three 480 gallon drop tanks, four 1,000 pound bombs, and two AIM-9 air-to-air missiles. The E/F version has increased internal fuel capacity, increased weapons carriage capability, increased carrier recovery payload, enhanced survivability/vulnerability, increased growth capacity, and increased engine thrust. It retains all of the P3I enhancements developed for the earlier night attack C/D version of the aircraft.</p> <p><b>F414 Engine Durability Improvements:</b> The F414-GE400 used on the F/A-18 E/F aircraft, is a low bypass turbofan engine, with augmented thrust provided by the afterburner. The engine is 155.5 inches long, weighs 2,445 lbs. and has an inlet diameter of 30.6 inches. The engine is rated at 14,770 lbs. thrust at the max power throttle setting without the afterburner, and 21,890 lbs. of thrust at the max afterburner throttle setting given standard day settings of 59°, 0% humidity, and sea level static conditions.</p> <p><b>AN/APG-73 Radar Upgrade:</b> The AN/APG-73 radar will alleviate Electronic CounterCountermeasures (ECCM) deficiencies noted in AN/APG-65 radar. The AN/APG-73 design incorporates hardware and software upgrades which increase ECCM effectiveness and provide growth potential for advance ECCM capabilities. AN/APG-73 provides significant improvements in resolution, dynamic range, processing speed and memory over the AN/APG-65.</p>		

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 2 of 45)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/F/A-18 SQUADRONS				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	137.412	95.079	69.032	44.463	14.701	11.422	10.997	11.164
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18 is a multi-mission strike fighter aircraft that is used in both fighter and attack roles through selected use of external equipment (fuel tanks, targeting/navigation, Forward Looking Infrared (FLIR) pods, and various bomb/missile launching racks). In order to respond effectively to emerging future threats, F/A-18 aircraft capabilities are being upgraded to incorporate new/enhanced weapons systems and avionics including the Joint Helmet Mounted Cueing System (JHMCS), Advanced Targeting Forward Looking Infrared (ATFLIR), development and integration of the Multifunctional Information Distributions System (MIDS), conversion of the System Configuration Set (SCS) to a Higher Order Language (HOL), development of the F/A-18 E/F Advanced Crew Station (ACS), and upgrade of the existing Global Positioning System/Inertial Navigation System in order to meet precision strike/precision approach requirements. Continued hardware/software development is required to successfully optimize fleet F/A-18 weapons systems. As F/A-18 Squadrons report system problems/requirements, a continuing capability is needed to perform technical evaluations/investigative flight testing, provide software support and integrate selected improvements.

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<b>(U) B. Accomplishments/Planned Program</b>																			
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<div>Continue to conduct engineering analysis and develop improvements to existing systems and subsystems for deficiencies identified during development of the aircraft. Provide technical support for the integration of new weapons and systems.</div>																			
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<div>Continue to develop and integrate enhancements to the effectiveness, operability, and safety of the F/A-18 Weapon System (airframe, avionics, and weapons) and subsystems to include MIDS, TAMMAC, and ANAV.</div>																			
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<div>Continue and complete development of JHMCS Front and OPEVAL. Start and complete development of Aft Seat.</div>																			

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**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
APN-1	3100.315	3208.045	3031.145	2981.882	3118.854	3299.491	3391.084	3339.395	5598.169	31068.380
P-1 Line Item 2 F/A-18E/F/G (FIGHTER) HORNET (MYP)										
APN-5	219.768	391.204	335.894	420.620	397.113	460.751	425.465	438.087	1605.855	4694.757
P-1 Line Item 29 F-18 Series Modification										
Related RDT&E										
(U) P.E. 0207163N Advanced Medium Range Air-to-Air Missile (AMRAAM)										
(U) P.E. 0604215N Standards Development										

**(U) E. ACQUISITION STRATEGY:**

The F/A-18 Improvements program consists of extensive development projects and integration of avionics systems onto the F/A-18E/F that were initially developed for incorporation onto the F/A-18C/D as the lead platform.

The major programs within the F/A-18 Improvements Line are as follows:

- \*PIDS. PIDS is a sole source cost plus fixed fee contract on an R&D Basic Ordering Agreement. Will be bought as CFE through the prime contractor.
- \*ANAV. ANAV is a sole source cost plus fixed fee contract on an R&D Basic Ordering Agreement. Will be bought as CFE through the prime contractor
- \*ATFLIR. The ATFLIR development was a sole source incentive fee contract to Boeing. Boeing competed the development contract. The procurement supplier is sole source to Boeing.
- \* Higher Order Language (HOL). The conversion of the System Configuration Set software to HOL will be accomplished by the F/A-18 Advanced Weapons Laboratory at China Lake as the designated Software Support Activity for the F/A-18. The design of the software will be accomplished by Boeing under sole source contracts. The contract vehicle is a Technical Direction Letter contract at China Lake. As the Prime contractor for the aircraft, Boeing is the design agent for software of aircraft in production.
- \* Advanced Crew Station. The design and development of the Advanced Crew Station modification is sole source to Boeing as the Prime aircraft contractor.
- \* MIDS. An acquisition developmental effort supported by SPAWAR (PMW-159), MIDS is being developed by a consortium of international companies.
- \* JHMCS. JHMCS is a sole source award fee Joint Air Force contract to Boeing.

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Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2003</b>				
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Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development PID	SS/CPFF	MDA-ST LOUIS,MO	90.030								90.030	90.030
Primary Hardware Development ATF	SS/CPFF	MDA-ST LOUIS,MO	155.000	8.310	11/02						163.310	163.310
Primary Hardware Development ANAV	SS/CPFF	Northrop-Grumman-LA CA		5.892	02/03	0.148	11/03	0.561	11/04	1.837	8.438	8.438
Primary Hardware Development ACS	SS/CPFF	MDA-ST LOUIS, MO	37.003	10.110	11/02	9.723	11/03	0.179	11/04		57.015	57.015
Primary Hardware Development HOL	SS/CPFF	NAWCWD-CHINA LAKE	117.836	6.290	11/02	1.681	11/03	2.016	11/04		127.823	127.823
Primary Hardware Development JHM	MIPR	WPAFB DAYTON, OHIO	17.582	19.938	02/03	22.727	02/04	11.743	02/05		71.990	
Primary Hardware Development MIS	WX	OTHER FIELD ACTIVITIES	15.391	5.789	11/02	5.341	11/03	8.076	11/04		34.597	
Ancillary Hdw Develop ATFLIR	WX	NAWCAD-LAKEHURST NJ	9.203								9.203	
Subtotal Product Development			442.045	56.329		39.620		22.575		1.837	562.406	
Remarks:												
Development Support MISC	VARIOUS	VARIOUS	33.332	7.785	11/02	4.889	11/03	3.135	11/04	3.854	52.995	
Software Development	WX	NAWCWD-CHINA LAKE	106.244	13.548	11/02	12.984	11/03	11.958	11/04	20.813	165.547	
AWARD FEE ATFLIR (note 1)			1.576								1.576	
Prior Year Costs (Note 2)	Various	Various	2,567.069								2,567.069	
Subtotal Support			2,708.221	21.333		17.873		15.093		24.667	2,787.187	
Remarks: Note 1: FY99 and prior year award fee earned is 74.7% (ATFLIR) Note 2: Prior year costs (FY95 & prior) not broken out into separate categories.												



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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2003				
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RDT&E, N / BA-7			0204136N F/A-18 SQUADRONS			E1662 F/A-18 Improvements						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCAD, PAX RIVER, MD	48.030	9.468	11/02	5.875	11/03	5.721	11/04	17.181	86.275	
Operational Test & Evaluation	WX	OPTEVFOR, NORFOLK, VA	6.721	6.254	11/02	4.365	11/03				17.340	
Subtotal T&E			54.751	15.722		10.240		5.721		17.181	103.615	
Remarks:												
Program Management Sup	VARIOUS	NAVAIR, PAX RIVER, MD	8.750	0.539	11/02	0.415	11/03	0.175	11/04	0.975	10.854	
Travel		NAVAIR, PAX RIVER, MD	3.275	1.156	VAR	0.884	VAR	0.899	VAR	3.595	9.809	
Subtotal Management			12.025	1.695		1.299		1.074		4.570	20.663	
Remarks:												
Total Cost			3,217.042	95.079		69.032		44.463		48.255	3,473.871	
Remarks:												

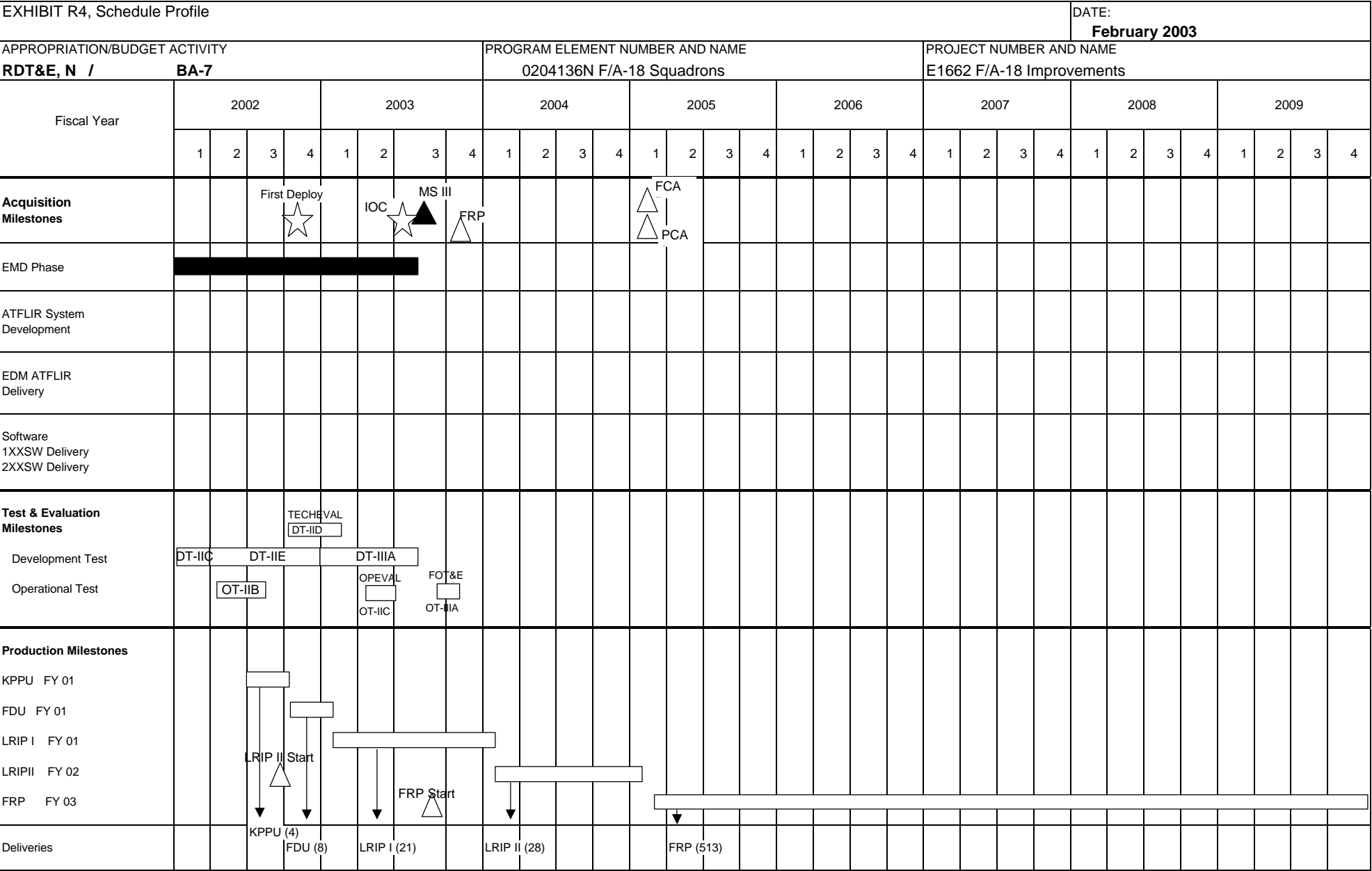
R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 9 of 45)

UNCLASSIFIED

CLASSIFICATION:



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

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

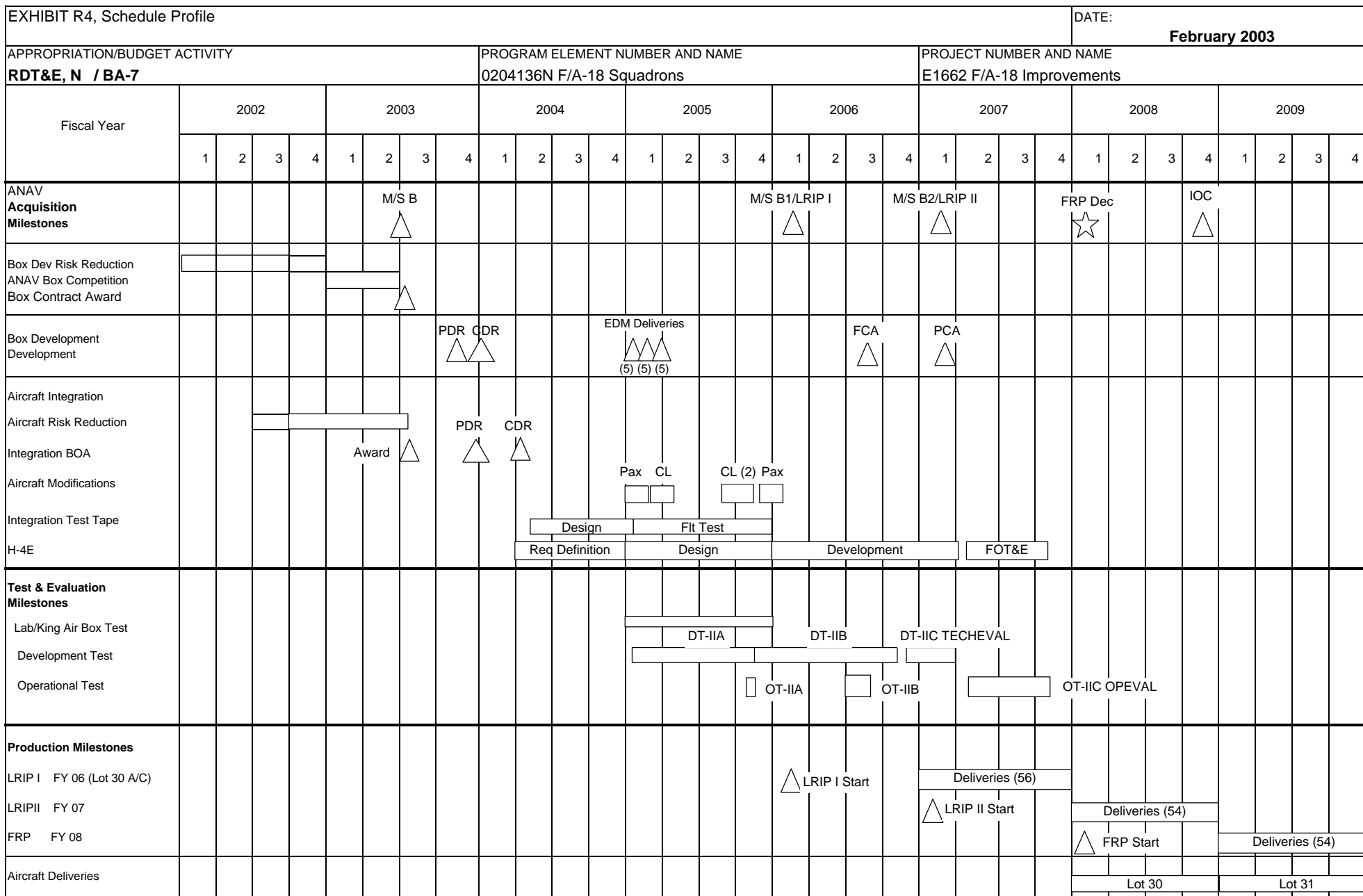
R-1 SHOPPING LIST - Item No. 170

**UNCLASSIFIED**

**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 11 of 45)

CLASSIFICATION:

UNCLASSIFIED



R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 12 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT 0204136N F/A-18 Squadrons				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone B (MS B)		2Q						
Box Competition		1Q-2Q						
Box Development Contract Award		3Q						
Box Preliminary Design Review (PDR)		4Q						
Box Critical Design Review (CDR)			1Q					
Eng Dev Model (EDM) Radar Delivery - Lab				1Q				
Integration Contract Award		3Q						
System Preliminary Design Review (PDR)			1Q					
System Critical Design Review (CDR)			2Q					
Test Tape Development/Test			2Q-4Q	1Q-4Q				
H-4E SCS Development/Test			2Q-4Q	1Q-4Q	1Q-4Q	2Q-4Q		
Aircraft Modification				1Q-4Q	1Q			
Lab/King Air Flt Test				1Q-4Q				
Developmental Testing (DT-IIA)				1Q-4Q				
Operational Testing (OT-IIA)				4Q				
Start Low-Rate Initial Production I (LRIP I)					1Q			
DT-IIB				4Q	1Q-4Q			
OT-IIB					3Q			
Functional Configuration Audit (FCA)					3Q			
LRIP I Delivery						1Q-4Q		
LRIP II						1Q		
Physical Configuration Audit						1Q		
DT-IIC TECHEVAL					4Q	1Q		
OT-IIC OPEVAL						2Q-4Q		
LRIP II Delivery							1Q-4Q	
Full Rate Production (FRP) Decision							1Q	
IOC							4Q	
FRP Deliveries								1Q and out

R-1 SHOPPING LIST - Item No. 170

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Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 13 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R4, Schedule Profile																											DATE:					
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME												
RDT&E, N / BA-7										0204136N F/A-18 Squadrons										E1662 F/A-18 Improvements												
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ACS Acquisition Milestones									FRP Dec △																							
Prototype Phase																																
System Development	CDR △																															
EDM Delivery																																
Software ACS/AESA Test Readiness Review AESA/ACS BRR H3E TRR																																
Test & Evaluation Milestones																																
Development Test																																
Operational Test																																
Production Milestones																																
LRIP I FY 03																																
FRP FY 06																																
Deliveries																																

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 14 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT 0204136N F/A-18 Squadrons				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
Schedule Profile for ACS	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006			
Program Start								
Critical Design Review(CDR)	1Q							
Software Milestones:								
ACS/AESA Test Readiness Review (TRR)	4Q							
H3E Test readiness review (TRR)		4Q						
ACS/AESA Build Readiness Review (BRR)		3Q						
Flight Test Aircraft Modification Period	3Q thru	2Q						
First flight Developmental Testing (DT) for ACS Aircraft		2-3Q						
Operational Testing ACS			1Q thru	2Q				
Techeval				1Q				
OT-IIA				3Q-4Q				
IOC				4Q				
Full Rate Production					1Q			

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Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 15 of 45)

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February 2003

R-1 SHOPPING LIST - Item No. 170



**UNCLASSIFIED**

**CLASSIFICATION:**

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R-1 SHOPPING LIST - Item No. 170

**UNCLASSIFIED**

**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 17 of 45)

**UNCLASSIFIED**

**Exhibit R-4, Schedule Profile**  
(Exhibit R-4, page 18 of 45)

R-1 SHOPPING LIST - Item No. 170

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT 0204136N F/A-18 Squadrons				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
Schedule Profile for JHMCS	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Milestone III (MSIII)		1Q						
Preliminary Design Review (PDR) AFT Seat			1Q					
Critical Design Review (CDR) AFT Seat			3Q					
Test Readiness Review (TRR) Aft Seat			1Q, 3Q					
Developmental Testing (DT-IIA) Aft Seat	4Q	1Q-4Q	1Q-4Q	1Q-3Q				
Software Delivery OFP-19C				3Q				
Low-Rate Initial Production (LRIP II)	1Q-2Q							
Operational Testing (OT-IIB) Front Seat	1Q-2Q							
Operational Evaluation (OT-IIC) (OPEVAL) Front Seat		2Q						
LRIP III	4Q							
Full Rate Production Start		3Q						2Q
First Deployment	4Q							
Retrofit				2Q				

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 19 of 45)

**UNCLASSIFIED**

**UNCLASSIFIED**

## CLASSIFICATION

Exhibit R-4a, Schedule Profile							Date:
							February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E/BA-7		PROGRAM ELEMENT 0204136N F/A-18 Squadrons			PROJECT NUMBER AND NAME E 1662 F/A-18 Improvements		
Fiscal Year							
MIDS LVT F/A-18 Milestones							
MIDS F/A-18 Production Deliveries							
F/A-18C/D MIDS Integration							
C/D DT&E							
C/D OT&E							
F/A-18 E/F MIDS Integration							
E/F DT&E							
E/F OT&E							
F/A-18 MC SW Development							
17C SCS (MIDS C/D IOC Tape)							
19C SCS							
18E (MIDS E/F IOC Tape)							
H1 SCS (High Order Language HOL)							
21C SCS (SAP Block 0) [C/D]							
H4E SCS (SAP Block 0) [E/F]							
					S I A P B L O C K 1		

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						Date: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY RDT&E/BA-7	PROGRAM ELEMENT 0204136N F/A-18 Squadrons				PROJECT NUMBER AND NAME E1662 F/A-18 Improvements			
Schedule Profile	FY2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
MIDS LVT Development								
MIDS LVT F/A-18 Milestones	2Q-3Q	3Q						
MIDS F/A-18 Production Deliveries	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
F/A-18C/D MIDS Integration								
C/D DT&E	1Q-4Q	3Q						
C/D OT&E		1Q-2Q	1Q-2Q					
F/A-18 E/F MIDS Integration								
E/F DT&E	1Q-4Q	3Q						
E/F OT&E		1Q-2Q	1Q-2Q					
F/A-18 MC SW Development								
17C SCS (MIDS C/D IOC Tape)	1Q-4Q	1Q-2Q						
19C SCS	1Q-4Q	1Q-4Q	1Q-2Q					
18E (MIDS E/F IOC Tape)	1Q-4Q	1Q-2Q						
H1 SCS (High Order Language-HOL)	1Q-4Q	1Q-3Q						
21C SCS (SIAP Block 0) [C/D]			1Q-4Q	1Q-4Q	1Q-4Q			
H4E SCS (SIAP Block 0) [E/F]			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q		

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R-1 SHOPPING LIST - Item No. 170

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2A, RDT&E Project Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					0204136N F/A-18 SQUADRONS			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
E2065/RADAR UPGRADE	114.294	104.481	110.015	78.578	35.613			
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b> The F/A-18 Radar Upgrade, Active Electronically Scanned Array (AESA) development program began in FY 1999. It is the last of three pre-planned upgrades to the F/A-18 Type/Model/Series radar. The AESA corrects operational test deficiencies noted in the AN/APG-73. It provides for multi-target tracking, SAR imagery, SAR TLE, and improved spotlight map resolution. In addition, it provides for greater lethality than previous F/A-18 radars by allowing for full tactical support of existing and planned air-to-air (A/A) and air-to-ground (A/G) weapons, significantly increasing A/A and A/G detection and tracking ranges. The AESA provides greater survivability through self-protection and standoff jamming capabilities, while its greater range allows for reduced detection by enemy radar. The AESA is also more affordable than previous radars. Significant savings in operation and support costs can be realized through a five fold increase in reliability over the AN/APG-73 as well as incorporating open architecture and Higher Order Language software. Additionally, savings can be realized by avoiding parts obsolescence redesign costs that will be experienced on the AN/APG-65 and AN/APG-73.								

R-1 SHOPPING LIST - Item No.

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 Exhibit R-2, RDTEN Budget Item Justification  
 (Exhibit R-2, page 22 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
<b>RDT&amp;E, N / BA-7</b>	0204136N F/A-18 SQUADRONS	E2065/RADAR UPGRADE		
<b>B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	111.171	92.887	76.199	44.669
RDT&E Articles Quantity				
Continue EMD effort and radar cross-section assessments.				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.123	11.444	29.966	24.759
RDT&E Articles Quantity				
Continue software development, DT, and systems integration efforts.				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		0.150	3.850	9.150
RDT&E Articles Quantity				
AESA OT&E.				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

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UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 23 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME					
<b>RDT&amp;E, N / BA-7</b>		0204136N F/A-18 SQUADRONS			E2065/RADAR UPGRADE					

**C. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2002	FY 2003	FY 2004	FY 2005	
Previous President's Budget:	110.235	107.050	74.554	67.529	
Current BES/President's Budget	114.294	104.481	110.015	78.578	
Total Adjustments	4.059	-2.569	35.461	11.049	

Summary of Adjustments

Congressional program reductions					
Congressional undistributed reductions		-0.634			
Congressional rescissions	0.033				
SBIR/STTR Transfer	-2.566				
Economic Assumptions	-0.311	-1.935	-2.818	-1.684	
Reprogrammings	6.903				
Other Navy/OSD Adjustments			38.279	12.733	
Congressional increases					
Subtotal	4.059	-2.569	35.461	11.049	

Schedule:

Not Applicable.

Technical:

Not Applicable.

**D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
APN-1										
P-1 Line Item 2 F/A-18E/F/G (FIGHTER) HORNET (MYF	38.082	95.252	104.254	131.702	186.506	248.632	245.800	250.065	338.764	1639.057
APN-5										
P-1 Line Item 29 F/A-18 Series Modification (OSIP XX-07)						30.118	30.667	31.210	219.441	311.436

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# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N F/A-18 SQUADRONS	PROJECT NUMBER AND NAME E2065/RADAR UPGRADE
<p><b>E. ACQUISITION STRATEGY:</b></p> <p>The AESA program employs a two-phase approach with sole source contracts to Boeing, the airframe prime manufacturer. Phase I is a moderate risk reduction phase conducted in FY 1999 and FY 2000. During this phase, Boeing conducted competitive source selection at the radar system subcontract level. A BOA order for RFP development and subcontractor selection was made to conduct this effort. It includes an "845" agreement for prototype development, which includes commercial development/amortization provisions. Conducting the competition early in the program allowed for focused risk reduction and contractor investment. Phase II consisted of a typical System Demonstration program and development contract. The program transitioned to Phase II with a successful Milestone II Decision in FY 2001. Once the program enters production in FY03, the "845" agreement allows the contractor to amortize unreimbursed development costs into the production unit cost. This strategy fully utilizes acquisition reform initiatives such as: early partnering with industry; alpha contracting; leveraging industry investment; optimizing use of Commercial Off-the Shelf software and Non-Developmental Item; Cost as an Independent Variable; and Electronic Data Deliverables.</p>		

R-1 SHOPPING LIST - Item No. 170

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# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0204136N F/A-18 SQUADRONS			E2065/RADAR UPGRADE						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development (EM	SS/CPFF	MDA - St Louis, MO	195.919	92.610	10/02	76.137	10/03	44.628	10/04	21.722	431.016	431.016
Primary Hardware Development (pre	SS/CPFF	MDA - St Louis, MO	4.900								4.900	4.900
GFE	SS	MDA - St Louis, MO	3.517								3.517	3.517
Subtotal Product Development			204.336	92.610		76.137		44.628		21.722	439.433	
Remarks:												
Software Development	WX	NAWCWD China Lake, CA	4.590	4.438	10/02	14.072	10/03	11.714	10/04		34.814	
Integrated Logistics Support	WX	NADEP North Island, CA	0.321	0.050	10/02						0.371	
Integrated Logistic Support	WX	NAWCAD Lakehurst, NJ	0.647	0.158	10/02						0.805	
Subtotal Support			5.558	4.646		14.072		11.714		0.000	35.990	
Remarks:												

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## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDTE, N / BA-7</b>			PROGRAM ELEMENT 0204136N F/A-18 SQUADRONS				PROJECT NUMBER AND NAME E2065/RADAR UPGRADE					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCAD Pax River, MD	5.672	2.567	10/02	1.822	10/03	1.330	10/04		11.391	
Operational Test & Evaluation	WX	OPTEVFOR, Norfolk, VA		0.150	10/02	3.850	10/03	9.150	10/04	13.851	27.001	
Developmental Test & Evaluation	WX	NAWCWD China Lake, CA		4.443	10/02	14.074	10/03	11.716	10/04		30.233	
Subtotal T&E			5.672	7.160		19.746		22.196		13.851	68.625	
Remarks:												
Program Management Support	Various	NAVAIR Pax River, MD	1.652								1.652	
Travel	WX	NAVAIR Pax River, MD	0.295	0.065	10/02	0.060	10/03	0.040	10/04	0.040	0.500	
Subtotal Management			1.947	0.065		0.060		0.040		0.040	2.152	
Remarks:												
Total Cost			217.513	104.481		110.015		78.578		35.613	546.200	
Remarks:												

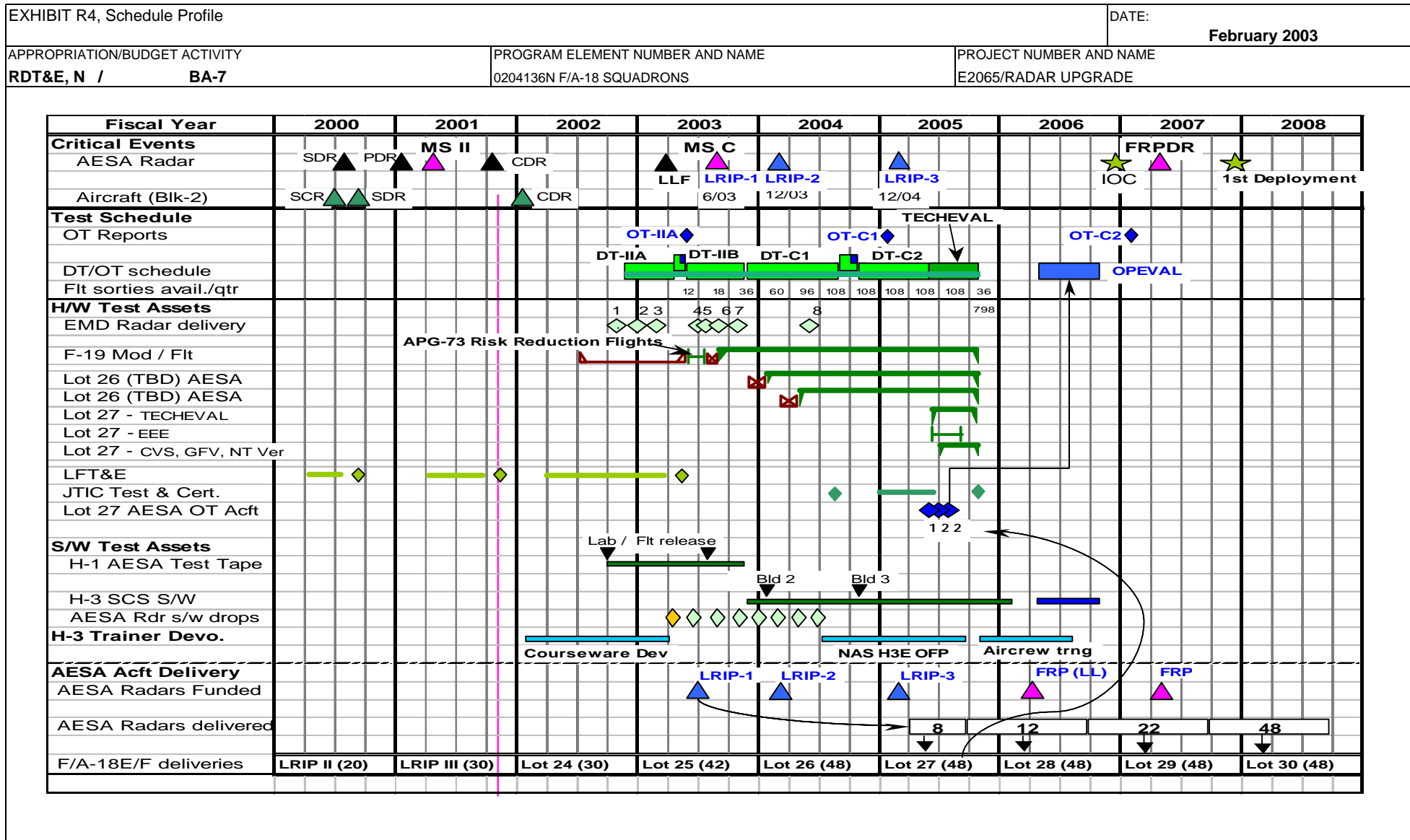
R-1 SHOPPING LIST - Item No. 170

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Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 27 of 45)

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CLASSIFICATION:



R-1 SHOPPING LIST - Item No. 170

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Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 28 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: <b>February 2003</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;BA-7</b>	PROGRAM ELEMENT 0204136N F/A-18 SQUADRONS				PROJECT NUMBER AND NAME E2065/RADAR UPGRADE			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Critical Design Review (CDR)	1Q							
Developmental Testing (DT-IIA)	4Q	1Q-2Q						
Milestone C (MS C)		3Q						
Operational Testing (OT-IIA)		2Q						
Start Low-Rate Initial Production I (LRIP I)		3Q						
Developmental Testing (DT-IIB1)		2Q-4Q						
Start Low-Rate Initial Production II			1Q					
Low-Rate Initial Production I Delivery				2Q-3Q				
Technical Evaluation (TECHEVAL)				2Q-4Q				
Operational Evaluation (OT-IIC) (OPEVAL)					2Q-4Q			
Low-Rate Initial Production II Delivery				4Q	1Q-3Q			
IOC					4Q			
Full Rate Production (FRP) Decision						2Q		
Full Rate Production Start						2Q		
First Deployment						4Q		

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UNCLASSIFIED

Exhibit R-4a, Schedule Detail  
(Exhibit R-4a, page 29 of 45)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>		PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons			PROJECT NUMBER AND NAME E2130/Follow-on Variant			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	1.148							
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18 is a twin-engine, mid-wing multi-mission, tactical aircraft employed Navy and Marine Corps strike fighter squadrons. The F/A-18 through selected use of external equipment is designed for flexibility in fighter, attack, fleet air defense, and close air support roles. The F/A-18E/F variant is an upgrade to the night attack "C" and "D" models. The F/A-18E/F will be the second major upgrade since the program's inception. The F/A-18 continues to adapt its strike fighter role to evolving threats into the next century. The F/A-18E/F E&MD program is under a Congressional mandated cost cap of \$4.883B FY90 dollars. Pre-development efforts of \$36.6M (in FY90 base year dollars), previously funded under the F/A-18C/D program, is reflected in the RDT&E total, but is not included in the approved \$4,883B development cap.

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E2130/Follow-on Variant																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.176</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Completed integration and testing of avionics subsystems.</div>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.176				RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.176																		
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.972</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; height: 60px; margin-top: 10px; padding: 5px;">Completed Test Program Set (TPS) development.</div>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.972				RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.972																		
RDT&E Articles Quantity																			
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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost																			
RDT&E Articles Quantity																			

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E2130/Follow-on Variant

**(U) C. PROGRAM CHANGE SUMMARY:**

(U) Funding:	FY 2002	
Previous President's Budget:	1.136	
Current BES/President's Budget	1.148	
Total Adjustments	0.012	
Summary of Adjustments		
Congressional program reductions		
Congressional undistributed reductions		
Congressional rescissions	-0.003	
SBIR/STTR Transfer	-0.034	
Economic Assumptions	-0.003	
Reprogrammings	0.052	
Other Navy/OSD Adjustments		
Congressional increases	0.012	
Subtotal	0.012	

(U) Schedule:  
Not Applicable.

(U) Technical:  
Not Applicable.

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>			PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons			PROJECT NUMBER AND NAME E2130/Follow-on Variant			

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
APN-1	3100.315	3208.045	3031.145	2981.882	3118.854	3299.491	3391.084	3339.395	5598.169	31068.380
P-1 Line Item No. 2 F/A-18E/F/G (FIGHTER) HORNET (MYP)										
APN-5	11.228	47.352	47.049	48.237	19.065	20.852	21.201	21.865	28.861	265.710
P-1 Line Item No. 29 F-18 Series Modification										

**(U) E. ACQUISITION STRATEGY:**

The July 1992 award of the two RDT&E,N contracts to MDA (airframe) and General Electric (engine), both sole source cost plus incentive fee/award fee, effectively initiated the F/A-18E/F E&MD program. The airframe and engine contracts are incrementally funded through FY00 and FY99, respectively. In March 1997, the F/A-18E/F program received approval to enter the Low Rate Initial Production (LRIP) phase. The airframe and engine contracts for this phase are Cost Plus Incentive Fee (CPIF) for LRIP I and Fixed Price Incentive Fee (FPIF) for LRIP II and LRIP III. LRIP III is a priced option to the LRIP II contract. The LRIP II/III contract possesses a common incentive profit structure which affords contractors maximum opportunity to implement quality, reliability, and producibility improvements. Benefits of the F/A-18E/F LRIP contracts include: 1) a measurable profit incentive across the LRIP period of performance; 2) commercial-like long time relationship

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons				PROJECT NUMBER AND NAME E9267 F414 Engine Durability			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		6.832						
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

F414 Engine Durability Improvements will support testing of engine components applicable to a potential F414 Enhanced Durability Engine (EDE). The improved component efficiency of the EDE could be used to increase life or performance of the F414. The expected improvements will result in in either a projected 2-3X life improvement and associated projected Total Ownership Cost avoidance of \$1 to 2 Billion over the life of the program, or a 15% thrust increase.

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E9267 F414 Engine Durability																	
<b>B. Accomplishments/Planned Program</b>																			
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	FY 02	FY 03	FY 04	FY 05															
Critical Structures Analysis		6.832																	
RDT&E Articles Quantity																			
Start and complete analysis of F414 Engine.																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost					RDT&E Articles Quantity				
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Accomplishments/Effort/Subtotal Cost																			
RDT&E Articles Quantity																			

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E9267 F414 Engine Durability

**C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003
Funding:		
Previous President's Budget:		0.000
Current BES/President's Budget		6.832
Total Adjustments		6.832
Summary of Adjustments		
Congressional program reductions		
Congressional undistributed reductions		-0.041
Congressional rescissions		
SBIR/STTR Transfer		
Economic Assumptions		-0.127
Reprogrammings		
Congressional increases		7.000
Subtotal	0.000	6.832

Schedule:

Not applicable.

Technical:

Not applicable.

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification									DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>			PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons			PROJECT NUMBER AND NAME E9267 F414 Engine Durability				
<b>D. OTHER PROGRAM FUNDING SUMMARY:</b>										
<u>Line Item No. &amp; Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
P-5 line item 4										
P-1 Line Item 2 F/A-18E/F/G (FIGHTER) HORNET	369.996	345.475	321.226	322.681	325.108	343.255	346.087	349.315	595.149	3318.292
APN-1 BLI 014500										
<b>E. ACQUISITION STRATEGY:</b>										
The F414 Engine Durability will employ sole source contract with General Electric, the engine prime manufacture. This analyses will provide expected improvements that will result in either a projected 2-3X life improvement or a 15% thrust increase.										

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons				PROJECT NUMBER AND NAME E9268 Radar Upgrade			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		4.097						
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The F/A-18 APG-73 Radar Upgrade (expand4/5) software development effort will enable aircrew to view Synthetic Aperture Radar (SAR) data in the cockpit and will provide real-time reconnaissance ability. The APG-73 Expand 4/5 Upgrade will fully exploit the previous Radar Upgrade (RUG) Phase II investment by completing the required additional software development, integration, testing, and support structure to realize this capability.

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## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E9268 Radar Upgrade																	
<b>B. Accomplishments/Planned Program</b>																			
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	FY 02	FY 03	FY 04	FY 05															
Critical Structures Analysis		4.097																	
RDT&E Articles Quantity																			
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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost																			
RDT&E Articles Quantity																			
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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost																			
RDT&E Articles Quantity																			

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E9268 Radar Upgrade
<b>C. PROGRAM CHANGE SUMMARY:</b>		
Funding: FY 2003		
Previous President's Budget: 0.000		
Current BES/President's Budget 4.097		
Total Adjustments <u>4.097</u>		
Summary of Adjustments		
Congressional program reductions		
Congressional undistributed reductions -0.025		
Congressional rescissions		
SBIR/STTR Transfer		
Economic Assumptions -0.078		
Reprogrammings		
Congressional increases <u>4.200</u>		
Subtotal 4.097		
Schedule:		
Not applicable.		
Technical:		
Not applicable.		

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2003</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204136N/ F/A-18 Squadrons	PROJECT NUMBER AND NAME E9268 Radar Upgrade
<p><b>D. OTHER PROGRAM FUNDING SUMMARY:</b></p> <p>Not Applicable</p> <p><b>E. ACQUISITION STRATEGY:</b></p> <p>Expand 4/5 Upgrade will develop high resolution and very high resolution radar imagery in the cockpit. Funding will be used to complete phase 1, consisting of system concept development, design, interface control definition, and program risk reduction.</p>		

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDTE, N / BA-7</b>			PROGRAM ELEMENT 0204136N F/A-18 SQUADRONS			PROJECT NUMBER AND NAME E9268 Radar Upgrade						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Software Development	WX	NAWCWD China Lake, CA		2.097	06/03						2.097	
Software Development	WX	NADEP North Island, CA		2.000	06/03						2.000	
Subtotal Support			0.000	4.097		0.000		0.000		0.000	4.097	
Remarks:												

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0204136N F/A-18 SQUADRONS			E9268 Radar Upgrade						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			0.000	4.097		0.000		0.000		0.000	4.097	
Remarks:												

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-7												0204136N F/A-18 Squadrons												E9268 Radar Upgrade											
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4							
Requirements Definition																																			
Development																																			

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[illegible]

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 45 of 45)